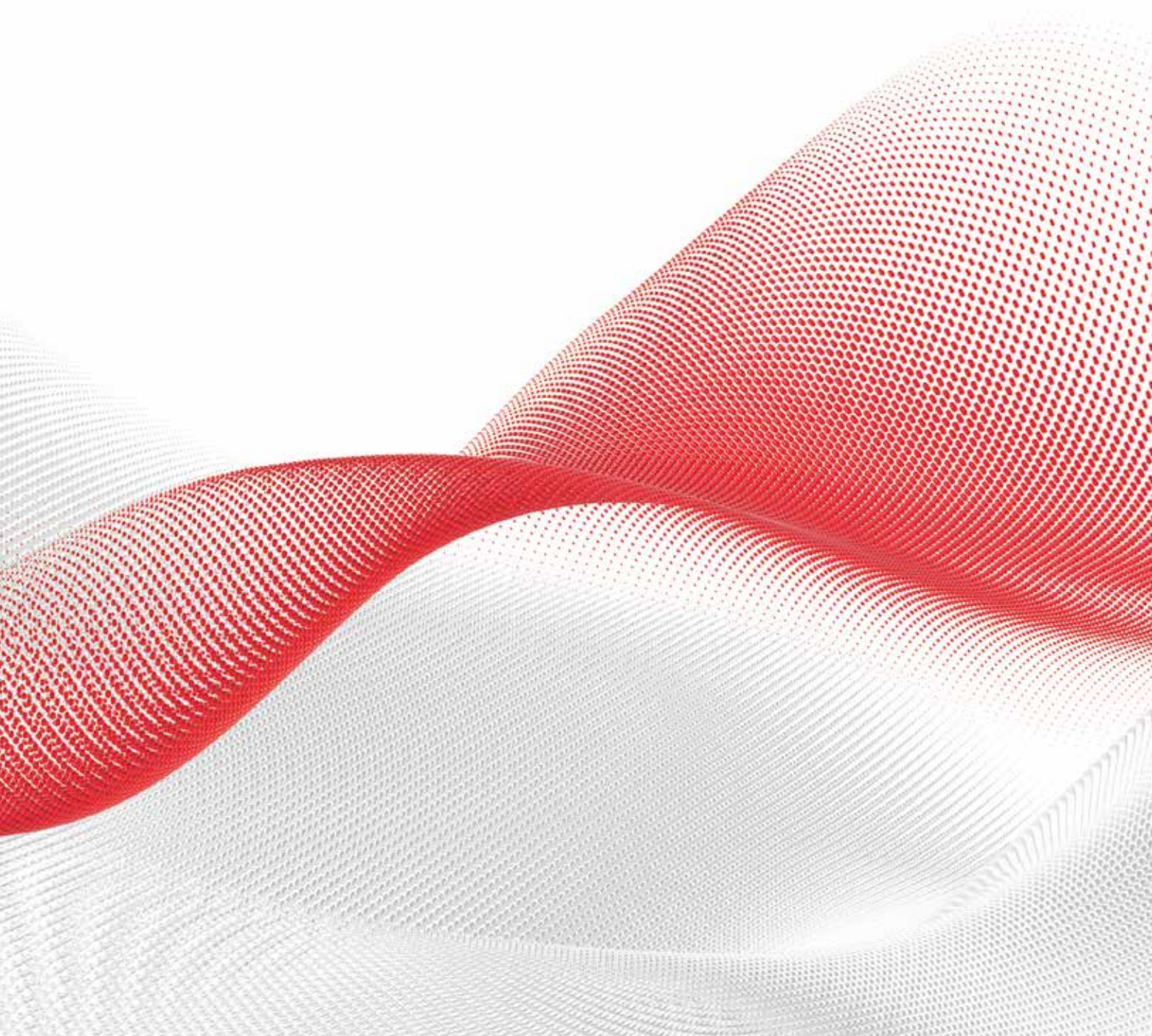


WITH EFFECT FROM 10<sup>TH</sup> JANUARY, 2019

# **Electrification products**

## **Price list (₹)**



# Electrification products

ABB is a global leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. ABB in India serves customers in process, manufacturing and consumer industries, utilities, the oil & gas sector and infrastructure markets through a wide manufacturing and marketing network.

ABB offers a full range of low- and medium-voltage solutions to connect, protect, control and measure a wide range of electrical systems for all major industries, including the residential sector.

The business improves the reliability and efficiency of electrical installations through modular substation packages, distribution automation products, switchgear, circuit breakers, measuring and sensing devices, control products, wiring accessories, and enclosures and

cabling systems, including KNX systems designed to integrate and automate a building's lighting, ventilation, heating, security and data communication networks.

ABB's product range serves the diverse needs of customers, offering value-for-money and high levels of quality and reliability. These products are backed by the technological expertise of ABB's centres of excellence across the globe, each of which excel in a specific range of low voltage products.

ABB's electrification products offering in India are designed, manufactured and tested in-house in conformance with requirements of the ISO 9000 series. These products conform to the latest IEC standards, EN specifications, national standards such as IS, BS, VDE, etc., in addition to the "CE" mark.

# Electrification products

## Price list (₹)

|                               |   |
|-------------------------------|---|
| Protection and connection     | 1 |
| Building products             | 2 |
| Installation products         | 3 |
| Capacitors and filter modules | 4 |
| Distribution automation       | 5 |
| Other details                 | 6 |

New

Click on the Individual product ordering codes/ type references for more detail as most of them are linked with online data sheets in this price list.

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**ABB Ability™** Electrical distribution control system is the innovative cloud-computing platform designed to monitor, optimize, predict and control the electrical system.

**ABB Ability™** Electrical distribution control system is built on a state-of-the-art cloud architecture for data collection, processing and storage.

This cloud architecture has been developed together with Microsoft in order to enhance performance and guarantee the highest reliability and security.

# Architecture

## Truly plug & play

**Embedded solution with Ekip Com Hub**  
Emax 2, Ekip UP and TruONE equipped with the new Ekip Com Hub establishes the cloud connection for the whole switchboard.

This dedicated cartridge-type communication module just needs to be inserted into the terminal box and connected to the internet.

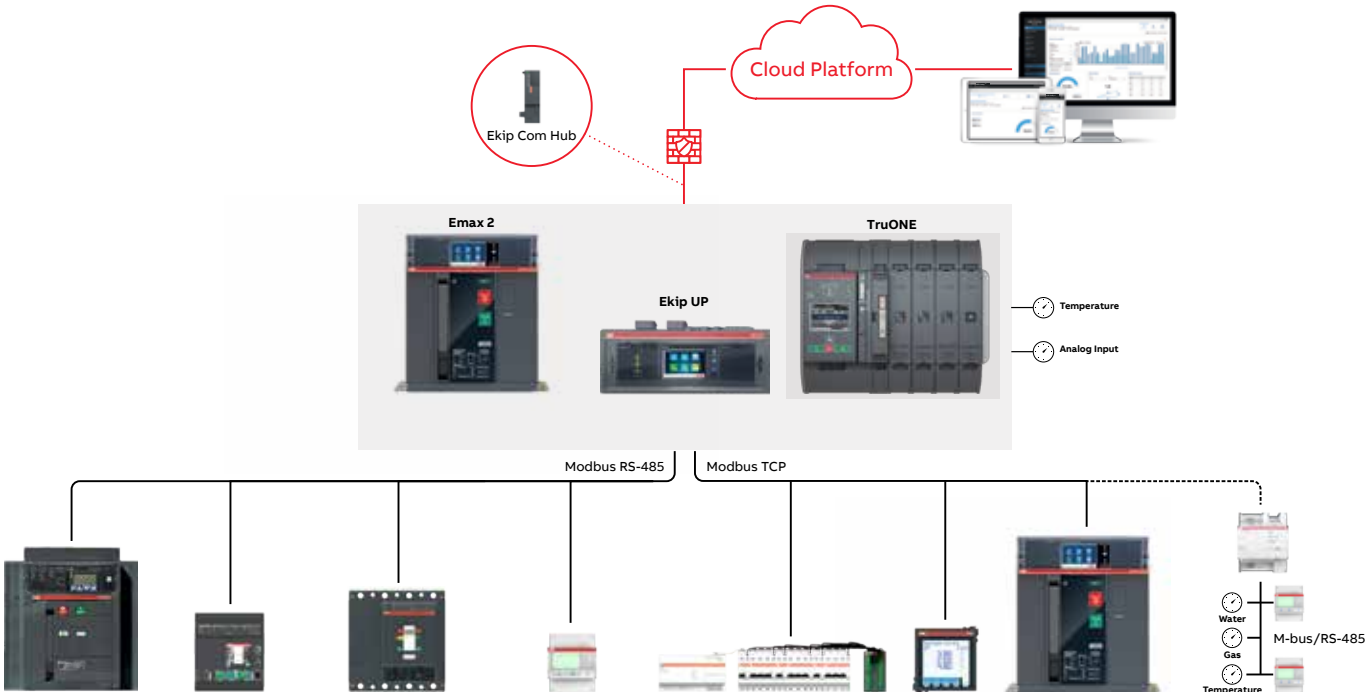


ABB showcases a further evolution in the low-voltage distribution business, setting a new benchmark in terms of simplicity and performance.

ABB Ability™ Electrical Distribution Control System enables the collection of relevant information from the ABB devices installed in the low-voltage power distribution system.

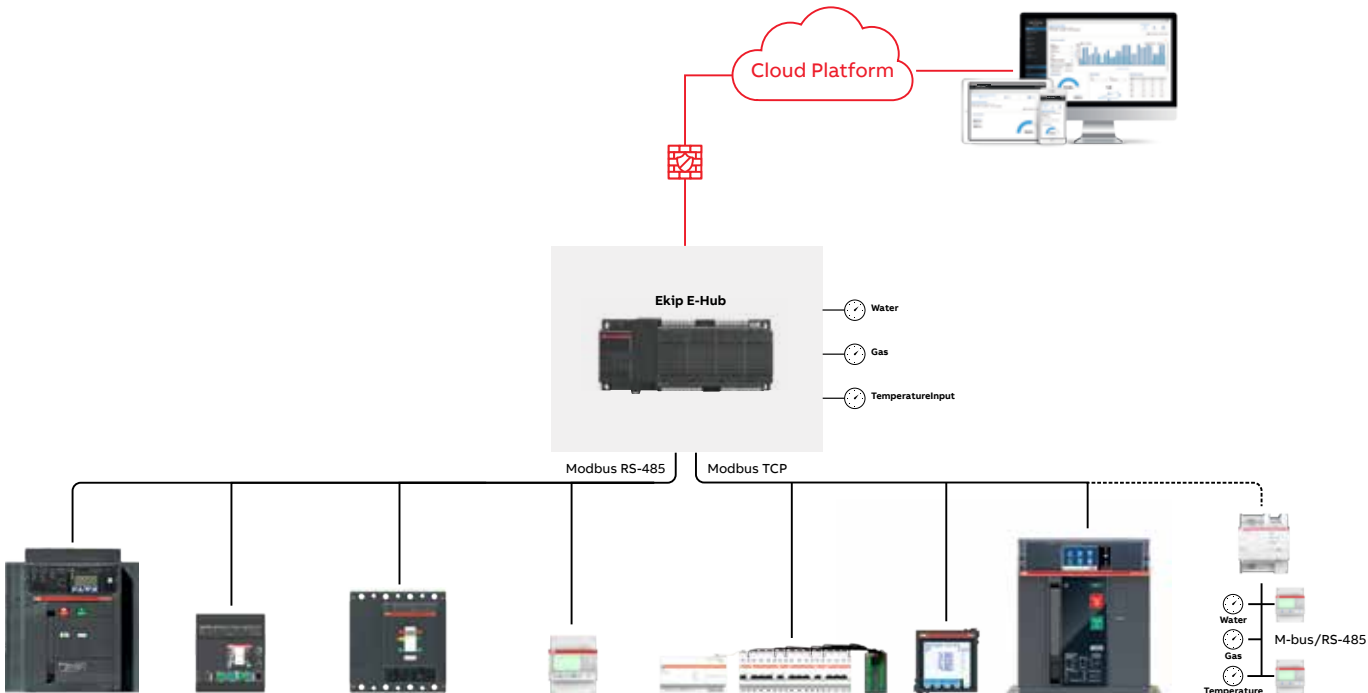
These devices can be connected, plug & play, to the cloud-computing platform by sharing data either with Emax 2 (equipped with Ekip Com Hub) or with Ekip E-Hub via Modbus RS-485, Modbus TCP and Ekip Link.

| Family                            | Device                     |
|-----------------------------------|----------------------------|
| Low voltage MCCB                  | Tmax XT                    |
|                                   | Tmax T                     |
| Low voltage ACB                   | New Emax                   |
|                                   | Emax 2                     |
| Digital units                     | Ekip UP                    |
| Low voltage switches and fusegear | TruONE ATS                 |
|                                   | Slimline XR ITS 2.1        |
| Digital inputs interface          | Ekip Signalling MODBUS TCP |
| Sub-Metering                      | EQ Meters                  |
| Power meters                      | M2M                        |
| Branch monitoring                 | CMS700                     |
| Medium voltage relays             | REF 542 Plus               |
| And many others to come...        |                            |

External solution with Ekip E-Hub

The Ekip E-Hub module can be mounted on DIN rail to collect data throughout the system. Moreover, it is possible to connect sensors for

environmental parameters (temperature, water, gas) via both analog and digital I/O. Modules for Wi-Fi or GPRS connection are provided as optional features.



| INFORMATION                                                                                                               |         |          |       |        |              |               |                           |                 |                                 |                                        | COMMUNICATION |
|---------------------------------------------------------------------------------------------------------------------------|---------|----------|-------|--------|--------------|---------------|---------------------------|-----------------|---------------------------------|----------------------------------------|---------------|
| State                                                                                                                     | Current | Voltages | Power | Energy | Power factor | Power quality | Maintenance & Diagnostics | Load management | Analog or pulse/ digital inputs | Protocol                               |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485, Modbus TCP, Ekip Com Hub |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485                           |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485                           |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485, Modbus TCP, Ekip Com Hub |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485, Modbus TCP, Ekip Com Hub |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485, Modbus TCP, Ekip Com Hub |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485                           |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus TCP                             |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485                           |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus RS485, Modbus TCP               |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus TCP                             |               |
| .                                                                                                                         | .       | .        | .     | .      | .            | .             | .                         | .               | .                               | Modbus TCP                             |               |
| * Provided the product with dedicated accessories for communication and metering functions ** only with Ekip E-Hub module |         |          |       |        |              |               |                           |                 |                                 |                                        |               |

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ABB Ability Electrical Distribution Control System brings advantages to customers from the design to the operations stage.

The digital solution adds value to facilities, meeting customer demands and enabling them to comply with higher energy efficiency standards.

Real time analysis of valuable data from field devices enables customers to closely monitor the performance of multiple installations with a single supervision system.

Clear information about consumption and improvement opportunities makes cutting waste and improving energy efficiency simple. Customers also benefit from lower energy bills and reductions in unplanned downtime.

ABB's "plug and play" devices make installation quick and easy. Customers can make existing installations smart with no need to replace components. New and retrofitted solutions are up and running in no time, immediately starting to collect data.



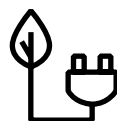
### Speed up your projects

- Increase the facility's value by 5%
- Reduce investment in supervision systems by 15%
- Achieve compliance or higher class of energy efficiency standards
- Faster payback



### Easy to install

- Connect to the cloud in only 10 minutes
- Reduce cabling by 60% and connectivity components by 25%
- Upgrade in 1 day the existing installation
- Upgrade with zero component replacement and existing installation



### Energy efficiency

- Save up to 20% on maintenance costs
- Save up to 20% on energy bill
- Get proactive alerts and guarantee operations in 1 minute
- Remove energy inefficiency by up to 10%



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Global website for  
ABB Ability™ EDCS





# ABB's comprehensive range of breakers and switches

The range of ABB breakers and switches ranks amongst the most extensive on the market with a full range of innovative solutions for various applications, helping to optimise resources, reduce energy costs, boost productivity.

- Moulded case circuit breakers
- Air circuit breakers
- HRC fuse & fuse base
- Switch disconnecter fuse
- Switch disconnectors
- Changeover switches - manual & motorized
- Auto transfer switches
- Cam switches
- Cable distribution cabinet - Kabeldon
- Fuse gear - easyline and inline (Fuse switch disconnecter)
- Switch disconnecter for DC and photovoltaic application
- MCCB for DC and photovoltaic application





...it should be  
monitorable from  
anywhere. }

{ To keep a system  
under control...

---

## Introducing new **SACE Tmax XT** with cloud-connected moulded case circuit breakers.

### **SACE Tmax XT**

Plant management of the future – SACE Tmax XT sets standards in modern plant and energy management. Access, monitor and control information remotely, anywhere, at any time. Improving efficiency and saving energy. [go.abb/xt](https://go.abb/xt)



## ArTu. Born certified

Fully checked and certified (IEC 60439-1 and IEC 61439-1 and 2 Standard) by an external independent organisation (Acea Lovag), the ArTu switchgear is a synonym of safety and quality. The certification is the fruit of severe tests carried out on the whole configuration, consisting of metalwork structures, circuit-breakers and busbar system.

The ArTu K series switchgear is ideal for primary distribution switchgear (PowerCenter type) upto 6300A with air and moulded-case circuit-breakers and any internal segregations up to Form 4, and for floor-mounted secondary distribution switchgear with moulded-case and modular circuit-breakers. The switchgear has been tested for Internal Arc and Seismic.



### The ArTu switchgear is noted for the following features:

- Integrated range of modular metalwork structures up to 6300 A with common accessories;
- Possibility of fulfilling all application requirements in terms of installation (floorstanding, Modular and corner versions) and degree of protection (IP31, IP41, IP54 & IP65)
- Maximum integration with modular apparatus and the moulded-case and air circuit-breakers, so that additional drilling or adaptations are not required
- Minimum switchgear assembly time, thanks to the simplicity of the kits, standardization of the small assembly items, self-supporting elements and the presence of clear reference points for assembly of the plates and panels – Segregations in kits up to Form 4.

The use and installation of the kits according to the instructions provided means that assembly and cabling times can be reduced to a minimum, for example thanks to the reference points for positioning the panels and plates, and that respect of the insulation distances and the rated characteristics of the circuit-breakers are guaranteed.



# Emax - Low voltage air circuit breakers

- CT (Rogowski coil) range of 400 - 6300A (E1, E2, E3, E4 and E6) with breaking capacity range of 42-150KA
  - Configured breakers are now available in E1, E2 and E3 frames
  - SACE Emax circuit-breakers and their accessories conform to the international IEC 60947, EN 60947 CEI EN 60947 and IEC 61000 standards and comply with following EC directives "Low Voltage Directive" (LVD) no 73/23 EEC
  - "Electromagnetic Compatibility Directive" (EMC) nr. 89/336 EEC
  - Complete range of common accessories
  - Double insulation
  - Same height and depth for the whole range
  - Protection releases provide complete set of standard protection function, advanced protection functions, measurement functions
  - Optional modules (measurements, signalling, communication, wireless com) to upgrade the protection releases
  - Neutral protection from OFF to 200%
  - Interchangeability of releases
  - Low voltage switch disconnectors upto 6300 amps and automatic circuit breakers upto 5000 amps in 1000V DC
- Note : Prices on request



Extremely Simple Installation



Completely re-engineered protection releases



Fully Modular construction

# Emax - Low voltage air circuit breakers

| Configured breaker                          |                         | Pole | PR121 LI       | PR121 LSIG   | PR122 LSIG   |
|---------------------------------------------|-------------------------|------|----------------|--------------|--------------|
| Frame                                       | Rating                  |      |                |              |              |
| E1 - 50KA -Withdrawable moving part - WMP   | 800A Manual             | 3P   | 1SDA055712R1   | 1SDA055714R1 | 1SDA055717R1 |
|                                             | 1000A Manual            |      | 1SDA059214R1   | 1SDA059222R1 | 1SDA059234R1 |
|                                             | 1250A Manual            |      | 1SDA055744R1   | 1SDA055746R1 | 1SDA055749R1 |
|                                             | 1600A Manual            |      | 1SDA055776R1   | 1SDA055778R1 | 1SDA055781R1 |
| E2 - 65KA -Withdrawable moving part - WMP   | 2000A Manual            |      | 1SDA055936R1   | 1SDA055938R1 | 1SDA055941R1 |
| E3 - 65KA -Withdrawable moving part - WMP   | 2500A Manual            |      | 1SDA056128R1   | 1SDA056130R1 | 1SDA056133R1 |
|                                             | 3200A Manual            |      | 1SDA056160R1   | 1SDA056162R1 | 1SDA056165R1 |
| E4 - 75KA -Withdrawable moving part - WMP   | 4000A Manual            |      | 1SDA056800R1   | 1SDA056802R1 | 1SDA056805R1 |
|                                             |                         |      |                |              |              |
| E1 - Withdrawable fixed part - WFP - HR-HR  | FIXED PART<br>WFP HR-HR | 3P   | 1SDA059666R1 ■ |              |              |
| E2 - Withdrawable fixed part - WFP - HR-HR  |                         |      | 1SDA059667R1 ■ |              |              |
| E3 - Withdrawable fixed part - WFP - HR-HR  |                         |      | 1SDA059669R1 ■ |              |              |
| E4 - Withdrawable fixed part - WFP - HR-HR  |                         |      | 1SDA059670R1 ■ |              |              |
|                                             |                         |      |                |              |              |
| E1 - 50KA -Withdrawable moving part - WMP   | 800A Manual             | 4P   | 1SDA055720R1   | 1SDA055722R1 | 1SDA055725R1 |
|                                             | 1000A Manual            |      | 1SDA059216R1   | 1SDA059224R1 | 1SDA059236R1 |
|                                             | 1250A Manual            |      | 1SDA055752R1   | 1SDA055754R1 | 1SDA055757R1 |
|                                             | 1600A Manual            |      | 1SDA055784R1   | 1SDA055786R1 | 1SDA055789R1 |
| E2S - 65KA -Withdrawable moving part - WMP  | 2000A Manual            |      | 1SDA055944R1   | 1SDA055946R1 | 1SDA055949R1 |
| E3 - 65KA -Withdrawable moving part - WMP   | 2500A Manual            |      | 1SDA056136R1   | 1SDA056138R1 | 1SDA056141R1 |
|                                             | 3200A Manual            |      | 1SDA056168R1   | 1SDA056170R1 | 1SDA056173R1 |
| E4 - 75KA -Withdrawable moving part - WMP   | 4000A Manual            |      | 1SDA056808R1   | 1SDA056810R1 | 1SDA056813R1 |
|                                             |                         |      |                |              |              |
| E1 - Withdrawable fixed oart - WFP - HR-HR  | FIXED PART<br>WFP HR-HR | 4P   | 1SDA059762R1 ■ |              |              |
| E2 - Withdrawable fixed part - WFP - HR-HR  |                         |      | 1SDA059763R1 ■ |              |              |
| E2S - Withdrawable fixed part - WFP - HR-HR |                         |      | 1SDA059764R1 ■ |              |              |
| E3 - Withdrawable fixed part - WFP - HR-HR  |                         |      | 1SDA059765R1 ■ |              |              |
| E4 - Withdrawable fixed part - WFP - HR-HR  |                         |      | 1SDA059766R1 ■ |              |              |

\* All the configured breaker will have accessories fitted from the factory

- Note:**
1. Withdrawable fixed parts (WFP) and withdrawable moving parts (WMP) are to be ordered together for a draw out complete breaker.
  2. To convert the breaker from manual operated (MDO or MF) to electrical operated (EDO or EF), order MDO/EDO conversion kit which comprises closing coil, opening coil and motor operator. Suitable operating voltage for the conversion kit has to be mentioned.
  3. For other current rating and breaking capacity, ACB requirement, contact our nearest sales office.

# Tmax moulded case circuit breakers

Tmax moulded-case circuit-breakers guarantee an extremely high performance level while being progressively smaller in size, simple to install and able to provide increasingly better safety guarantees for the operator. In addition to being ideal for the secondary distribution of alternate and direct current, they feature dedicated solutions for all application requirements.

Moulded-case circuit-breakers can be used in low voltage civil and industrial installations with 1 to 3200 A operating current. The Tmax family includes 9 circuit-breaker sizes in three- or four-pole versions:

- XT1, XT2, XT3 and XT4 up to 250A;
- T4, T5 and T6 up to 1000A;
- T7 and T8 up to 3200A.

The ultimate short-circuit breaking capacity ( $I_{cu}$ ) at 415V ranges from 18kA to 200kA, or up to 100kA for 690V. The following ranges are available:

- Circuit-breakers for AC and DC power distribution;
- Circuit-breakers for zone selectivity;
- Circuit-breakers for motor protection;
- Circuit-breakers for application up to 1150V AC and 1500V DC
- Switch-disconnectors.

Tmax circuit-breakers can be equipped with thermomagnetic, magnetic only or electronic trip units; all of which are interchangeable. Since assembly instructions are simple, trip units can quickly and easily be replaced; even in the field. All this makes the circuit-breakers very easy to operate with considerable savings due to rationalized stock management.

All Tmax circuit breakers can be enhanced with a vast range of standardized accessories. This convenience not only cuts down on inventory, but creates an extremely flexible and easily managed solution.





# Tmax circuit breakers

| Type | Iu (40° C)<br>[A]           | Ue [V]      |             | Category                       | Release                                                                                                                                                | Icu (380 - 415 V AC) [kA] |    |    |    |    |    |     |     |     |     |
|------|-----------------------------|-------------|-------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----|----|----|----|----|-----|-----|-----|-----|
|      |                             | AC          | DC          |                                |                                                                                                                                                        | 16                        | 25 | 36 | 50 | 70 | 85 | 100 | 120 | 150 | 200 |
| XT1  | 160                         | 690         | 500         | A                              | TMD/TMF<br>MF/MA                                                                                                                                       | B                         | C  | N  | S  | H  |    |     |     |     |     |
| XT2  | 160                         | 690         | 500         | A                              | TMD/TMA<br>MF/MA<br>Ekip LS/I<br>Ekip I<br>Ekip LSI<br>Ekip LIG<br>Ekip LSIG<br>Ekip M-I<br>Ekip M-LIU<br>Ekip M-LRIU<br>Ekip N-LS/I                   |                           |    | N  | S  | H  |    |     | L   | V   |     |
| XT3  | 250                         | 690         | 500         | A                              | MF/MA<br>TMD<br>TMG                                                                                                                                    |                           |    | N  | S  |    |    |     |     |     |     |
| XT4  | 250                         | 690         | 500         | A                              | TMD/TMA<br>MF/MA<br>Ekip LS/I<br>Ekip I<br>Ekip LSI<br>Ekip LIG<br>Ekip LSIG<br>Ekip E-LSIG<br>Ekip M-LIU<br>Ekip M-LRIU<br>Ekip G-LS/I<br>Ekip N-LS/I |                           |    | N  | S  | H  |    |     | L   | V   |     |
| T5   | 400<br>630                  | 690<br>1150 | 750<br>1000 | B (400 A)<br>A (630 A)         | TMA (500 A)<br>TMG (500 A)<br>PR221DS<br>PR222DS<br>Ekip M<br>Ekip E-LSIG                                                                              |                           |    | N  | S  | H  |    |     | L   |     | V   |
| T6   | 630<br>800<br>1000          | 690<br>1150 | 750<br>1000 | B (630A - 800 A)<br>A (1000 A) | TMA (800 A)<br>PR221DS<br>PR222DS<br>Ekip M                                                                                                            |                           |    | N  | S  | H  |    |     | L   |     | V   |
| T7   | 800<br>1000<br>1250<br>1600 | 690         |             | B                              | PR231/P<br>PR232/P<br>PR331/ P<br>PR332/P                                                                                                              |                           |    |    | S  | H  |    |     | L   | V   |     |

## Trip Units

### Thermal magnetic trip units

- MA - Magnetic only trip unit with adjustable magnetic thresholds for motor protection
- TMF - Fixed thermal and fixed magnetic for power distribution
- TMD - Adjustable thermal (70-100%of In) and fixed magnetic (10 x In) for power distribution
- TMA - Adjustable thermal (70-100% of In) and adjustable magnetic (5-10 of In) for power distribution
- TMG - Adjustable thermal (70-100% of In) and low fixed magnetic (3 x In) for generator protection

### Microprocessor based electronic trip units

|                          |                    |                               |                    |                             |                    |               |                    |                   |                   |
|--------------------------|--------------------|-------------------------------|--------------------|-----------------------------|--------------------|---------------|--------------------|-------------------|-------------------|
| Ekip LS/I or<br>Ekip LSI | L = 0.40 - 1 of In | Ekip<br>LIG<br><div>New</div> | L = 0.40 - 1 of In | Ekip LSIG or<br>Ekip E-LSIG | L = 0.4 - 1 of In  | Ekip<br>M-LIU | L = 0.4 - 1 of In  | Ekip<br>M-LRIU    | L = 0.4 - 1 of In |
|                          | S = 1 - 10 of In   |                               | I = 1 - 10 of In   |                             | S = 0.6 - 10 of In |               | I = 6 - 13 of In   |                   | R = 3 - 9 of In   |
|                          | I = 1 - 10 of In   |                               | G = 0.2 - 1 of In  |                             | I = 1.5 - 12 of In |               | U* = ON or OFF     |                   | I = 6 - 13 of In  |
|                          |                    |                               |                    |                             | G = 0.2 - 1 of In  |               |                    |                   | G = 0.2 - 1 of In |
|                          |                    |                               |                    |                             |                    |               |                    |                   |                   |
| PR221                    | L = 0.40 - 1 of In | PR222                         | L = 0.4 - 1 of In  | PR231                       | L = 0.4 - 1 of In  | PR331         | L = 0.4 - 1 of In  |                   |                   |
|                          | S = 1 - 10 of In   |                               | S = 0.6 - 10 of In |                             | S = 1 - 10 of In   |               | S = 0.6 - 10 of In |                   |                   |
|                          | I = 1 - 10 of In   |                               | I = 1.5 - 12 of In |                             | I = 1 - 12 of In   |               | I = 1.5 - 15 of In |                   |                   |
|                          |                    |                               |                    |                             |                    |               |                    | G = 0.2 - 1 of In |                   |

L = Overload      S = Short circuit      I = Instantaneous short circuit      G = Earth fault

U = phase loss (U): With selector in ON position, circuit breaker trips if at least one current phase is lower than 0.1xIn and at least a second one higher than 0.25xIn;

Ekip N-LS/I : Neutral can be set in the OFF or ON positions, at 100% or at 160% of the phases

Ekip G-LS/I : Neutral, in four-pole circuit-breakers, can be set in the OFF, ON positions at 50% or 100% of the phases;

Note: For detailed information about trip units, refer technical catalogue.





# Tmax power distribution circuit breakers

## XT1



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| B | 18kA | 100%      |
| C | 25kA | 100%      |
| N | 36kA | 100%      |

| TMD     |        |       | B              |         | C              |         | N              |         |
|---------|--------|-------|----------------|---------|----------------|---------|----------------|---------|
| Frame   | In (A) | Poles | Ordering code  | L.P.(₹) | Ordering code  | L.P.(₹) | Ordering code  | L.P.(₹) |
| XT1 160 | 16     | 3     | 1SDA066799R1   | 6,410   | 1SDA080825R1 * | 6,890   | 1SDA080827R1 * | 9,290   |
|         | 20     |       | 1SDA066800R1   |         | 1SDA080826R1 * |         | 1SDA080828R1 * |         |
|         | 25     |       | 1SDA066801R1   |         | 1SDA067391R1   |         | 1SDA080829R1   |         |
|         | 32     |       | 1SDA066802R1   |         | 1SDA067392R1   |         | 1SDA067411R1   |         |
|         | 40     |       | 1SDA066803R1 ■ |         | 1SDA067393R1 ■ |         | 1SDA067412R1 ■ |         |
|         | 50     |       | 1SDA066804R1 ■ |         | 1SDA067394R1 ■ |         | 1SDA067413R1 ■ |         |
|         | 63     |       | 1SDA066805R1 ■ |         | 1SDA067395R1 ■ |         | 1SDA067414R1 ■ |         |
|         | 80     |       | 1SDA066806R1 ■ |         | 1SDA067396R1 ■ |         | 1SDA067415R1 ■ |         |
|         | 100    |       | 1SDA066807R1 ■ |         | 1SDA067397R1 ■ |         | 1SDA067416R1 ■ |         |
|         | 125    |       | 1SDA066808R1 ■ | 9,060   | 1SDA067398R1 ■ | 10,610  | 1SDA067417R1 ■ | 10,720  |
|         | 160    |       | 1SDA066809R1 ■ | 10,400  | 1SDA067399R1 ■ | 13,690  | 1SDA067418R1 ■ | 14,290  |
|         | 16     | 4     | 1SDA066810R1   | 8,840   | 1SDA080840R1 * | 9,990   | 1SDA080842R1 * | 11,740  |
|         | 20     |       | 1SDA066811R1   |         | 1SDA080841R1 * |         | 1SDA080843R1 * |         |
|         | 25     |       | 1SDA066812R1   |         | 1SDA067400R1   |         | 1SDA080844R1 ■ |         |
|         | 32     |       | 1SDA066813R1 ■ |         | 1SDA067401R1 ■ |         | 1SDA067419R1 ■ |         |
|         | 40     |       | 1SDA066814R1 ■ |         | 1SDA067402R1 ■ |         | 1SDA067420R1 ■ |         |
|         | 50     |       | 1SDA066815R1   |         | 1SDA067403R1 ■ |         | 1SDA067421R1   |         |
|         | 63     |       | 1SDA066816R1 ■ |         | 1SDA067404R1 ■ |         | 1SDA067422R1 ■ |         |
|         | 80     |       | 1SDA066817R1 ■ |         | 1SDA067405R1 ■ |         | 1SDA067423R1 ■ |         |
|         | 100    |       | 1SDA066818R1 ■ |         | 1SDA067406R1 ■ |         | 1SDA067424R1 ■ |         |
|         | 125    |       | 1SDA066888R1 ■ | 11,200  | 1SDA067409R1 ■ | 12,620  | 1SDA067427R1 ■ | 13,790  |
|         | 160    |       | 1SDA066821R1 ■ | 14,290  | 1SDA067410R1 ■ | 16,340  | 1SDA067428R1 ■ | 17,360  |

\*TMF trip unit

# Tmax power distribution circuit breakers

## XT1



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| S | 50kA | 75%       |
| H | 70kA | 50%       |

### TMD / TMF\*

| Frame   | In (A) | Poles |
|---------|--------|-------|
| XT1 160 | 16     | 3     |
|         | 20     |       |
|         | 25     |       |
|         | 32     |       |
|         | 40     |       |
|         | 50     |       |
|         | 63     |       |
|         | 80     |       |
|         | 100    |       |
|         | 125    |       |
|         | 160    |       |
|         | 16     | 4     |
|         | 20     |       |
|         | 25     |       |
|         | 32     |       |
|         | 40     |       |
|         | 50     |       |
|         | 63     |       |
|         | 80     |       |
|         | 100    |       |
|         | 125    |       |
|         | 160    |       |

### S

| Ordering code  | L.P.(₹) |
|----------------|---------|
| 1SDA080830R1*  | 10,210  |
| 1SDA080831R1*  |         |
| 1SDA080832R1   |         |
| 1SDA080833R1 ■ |         |
| 1SDA080834R1 ■ |         |
| 1SDA067431R1   |         |
| 1SDA067432R1 ■ |         |
| 1SDA067433R1 ■ |         |
| 1SDA067434R1 ■ |         |
| 1SDA067435R1 ■ |         |
| 1SDA067436R1 ■ | 16,340  |
| 1SDA080845R1*  | 14,810  |
| 1SDA080846R1*  |         |
| 1SDA080847R1   |         |
| 1SDA080848R1   |         |
| 1SDA080849R1   |         |
| 1SDA067439R1   |         |
| 1SDA067440R1 ■ |         |
| 1SDA067441R1   |         |
| 1SDA067442R1 ■ |         |
| 1SDA067445R1 ■ | 17,360  |
| 1SDA067446R1   | 19,400  |

### H

| Ordering code | L.P.(₹) |
|---------------|---------|
| 1SDA080835R1* | 12,260  |
| 1SDA080836R1* |         |
| 1SDA080837R1  |         |
| 1SDA080838R1  |         |
| 1SDA080839R1  |         |
| 1SDA067449R1  |         |
| 1SDA067450R1  |         |
| 1SDA067451R1  |         |
| 1SDA067452R1  |         |
| 1SDA067453R1  |         |
| 1SDA067454R1  | 20,430  |
| 1SDA080850R1* | 16,850  |
| 1SDA080851R1* |         |
| 1SDA080852R1  |         |
| 1SDA080853R1  |         |
| 1SDA080854R1  |         |
| 1SDA067457R1  |         |
| 1SDA067458R1  |         |
| 1SDA067459R1  |         |
| 1SDA067460R1  |         |
| 1SDA067463R1  | 19,400  |
| 1SDA067464R1  | 21,450  |

\*TMF trip unit

## XT3

Breaking capacity at 415VAC

|   | Icu  | Ics(Icu) |
|---|------|----------|
| N | 36kA | 75%      |
| S | 50kA | 50%      |

### TMD

| Frame   | In (A) | Poles |
|---------|--------|-------|
| XT3 250 | 200    | 3     |
|         | 250    |       |
|         | 200    | 4     |
|         | 250    |       |

### N

| Ordering code  | L.P.(₹) |
|----------------|---------|
| 1SDA068058R1 ■ | 16,870  |
| 1SDA068059R1 ■ | 19,350  |
| 1SDA068069R1 ■ | 21,820  |
| 1SDA068070R1 ■ | 24,810  |

### S

| Ordering code  | L.P.(₹) |
|----------------|---------|
| 1SDA068220R1 ■ | 18,620  |
| 1SDA068221R1 ■ | 22,620  |
| 1SDA068231R1 ■ | 25,200  |
| 1SDA068232R1 ■ | 26,690  |

■ Stock items

# Tmax power distribution circuit breakers

Protection: TMD/TMA

## XT2/XT4/T5/T6



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36kA | 100%      |
| S | 50kA | 100%      |
| H | 70kA | 100%      |



### TMD / TMA\*

|         |        |       | N              |         | S              |         | H              |         |
|---------|--------|-------|----------------|---------|----------------|---------|----------------|---------|
| Frame   | In (A) | Poles | Ordering code  | L.P.(₹) | Ordering code  | L.P.(₹) | Ordering code  | L.P.(₹) |
| XT2160  | 1.6    | 3     | 1SDA067000R1   | 11,850  | 1SDA067540R1   | 12,970  | 1SDA067584R1   | 17,970  |
|         | 2      |       | 1SDA067001R1   |         | 1SDA067541R1   |         | 1SDA067585R1   |         |
|         | 2.5    |       | 1SDA067002R1   |         | 1SDA067542R1   |         | 1SDA067586R1   |         |
|         | 3.2    |       | 1SDA067003R1   |         | 1SDA067543R1   |         | 1SDA067587R1   |         |
|         | 4      |       | 1SDA067004R1   |         | 1SDA067544R1   |         | 1SDA067588R1   |         |
|         | 5      |       | 1SDA067005R1   |         | 1SDA067545R1   |         | 1SDA067589R1   |         |
|         | 6.3    |       | 1SDA067006R1   |         | 1SDA067546R1   |         | 1SDA067590R1   |         |
|         | 8      |       | 1SDA067007R1   |         | 1SDA067547R1   |         | 1SDA067591R1   |         |
|         | 10     |       | 1SDA067008R1   |         | 1SDA067548R1 ■ |         | 1SDA067592R1   |         |
|         | 12.5   | 3     | 1SDA067009R1   | 11,340  | 1SDA067549R1   | 12,460  | 1SDA067593R1   | 17,460  |
|         | 16     |       | 1SDA067010R1 ■ |         | 1SDA067550R1 ■ |         | 1SDA067594R1   |         |
|         | 20     |       | 1SDA067011R1 ■ |         | 1SDA067551R1   |         | 1SDA067595R1   |         |
|         | 25     |       | 1SDA067012R1   |         | 1SDA067552R1 ■ |         | 1SDA067596R1   |         |
|         | 32     |       | 1SDA067013R1 ■ |         | 1SDA067553R1 ■ |         | 1SDA067597R1   |         |
|         | 40     |       | 1SDA067014R1 ■ |         | 1SDA067554R1 ■ |         | 1SDA067598R1   |         |
|         | 50     |       | 1SDA067015R1   |         | 1SDA067555R1 ■ |         | 1SDA067599R1   |         |
|         | 63     |       | 1SDA067016R1 ■ |         | 1SDA067556R1 ■ |         | 1SDA067600R1 ■ |         |
|         | 80     |       | 1SDA067017R1   |         | 1SDA067557R1 ■ |         | 1SDA067601R1   |         |
|         | 100    |       | 1SDA067018R1 ■ |         | 1SDA067558R1 ■ |         | 1SDA067602R1 ■ |         |
| XT4 250 | 125    | 3     | 1SDA067019R1 ■ | 13,790  | 1SDA067559R1 ■ | 15,940  | 1SDA067603R1 ■ | 24,210  |
|         | 160    |       | 1SDA067020R1 ■ | 16,850  | 1SDA067560R1 ■ | 19,710  | 1SDA067604R1   | 27,670  |
|         | 200    |       | 1SDA068090R1 ■ | 20,430  | 1SDA068310R1 ■ | 22,980  | 1SDA068343R1   | 29,100  |
|         | 225    |       | 1SDA068091R1   | 22,980  | 1SDA068311R1   | 23,480  | 1SDA068344R1   | 30,640  |
|         | 250    |       | 1SDA068092R1 ■ | 23,480  | 1SDA068312R1 ■ | 24,610  | 1SDA068345R1 ■ | 31,150  |
|         | 320    |       | 1SDA054436R1 ■ | 29,210  | 1SDA054440R1 ■ | 30,890  | 1SDA054444R1 ■ | 38,370  |
| T5      | 400    |       | 1SDA054437R1 ■ |         | 1SDA054441R1 ■ |         | 1SDA054445R1 ■ |         |
|         | 500    |       | 1SDA054456R1 ■ | 35,750  | 1SDA054461R1 ■ | 38,840  | 1SDA054465R1   | 49,530  |
| T6      | 630    | 3     | 1SDA060202R1 ■ | 41,150  | 1SDA060204R1 ■ | 42,360  | 1SDA060206R1   | 50,450  |
|         | 800    |       | 1SDA060214R1 ■ | 53,140  | 1SDA060216R1 ■ | 55,720  | 1SDA060218R1 ■ | 56,890  |

\* 40 A onwards

# Tmax power distribution circuit breakers

Protection: TMA

## XT2/XT4/T5/T6



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36kA | 100%      |
| S | 50kA | 100%      |
| H | 70kA | 100%      |



### TMD / TMA\*

|         |        |       | N              |         | S              |         | H              |         |
|---------|--------|-------|----------------|---------|----------------|---------|----------------|---------|
| Frame   | In (A) | Poles | Ordering code  | L.P.(₹) | Ordering code  | L.P.(₹) | Ordering code  | L.P.(₹) |
| XT2160  | 1.6    | 4     | 1SDA067021R1   | 15,730  | 1SDA067561R1   | 17,060  | 1SDA067605R1   | 21,960  |
|         | 2      |       | 1SDA067022R1   |         | 1SDA067562R1   |         | 1SDA067606R1   |         |
|         | 2.5    |       | 1SDA067023R1   |         | 1SDA067563R1   |         | 1SDA067607R1   |         |
|         | 3.2    |       | 1SDA067024R1   |         | 1SDA067564R1   |         | 1SDA067608R1   |         |
|         | 4      |       | 1SDA067025R1   |         | 1SDA067565R1   |         | 1SDA067609R1   |         |
|         | 5      |       | 1SDA067026R1   |         | 1SDA067566R1   |         | 1SDA067610R1   |         |
|         | 6.3    |       | 1SDA067027R1   |         | 1SDA067567R1   |         | 1SDA067611R1   |         |
|         | 8      |       | 1SDA067028R1   |         | 1SDA067568R1   |         | 1SDA067612R1   |         |
|         | 10     |       | 1SDA067029R1   |         | 1SDA067569R1   |         | 1SDA067613R1   |         |
|         | 12.5   |       | 1SDA067030R1   |         | 1SDA067570R1   |         | 1SDA067614R1   |         |
|         | 16     |       | 1SDA067031R1   | 15,220  | 1SDA067571R1   | 16,540  | 1SDA067615R1   | 21,560  |
|         | 20     |       | 1SDA067032R1   |         | 1SDA067572R1   |         | 1SDA067616R1   |         |
|         | 25     |       | 1SDA067033R1   |         | 1SDA067573R1   |         | 1SDA067617R1   |         |
|         | 32     |       | 1SDA067034R1   |         | 1SDA067574R1 ■ |         | 1SDA067618R1   |         |
|         | 40     |       | 1SDA067035R1   |         | 1SDA067575R1   |         | 1SDA067619R1   |         |
|         | 50     |       | 1SDA067036R1   |         | 1SDA067576R1   |         | 1SDA067620R1   |         |
|         | 63     |       | 1SDA067037R1 ■ |         | 1SDA067577R1 ■ |         | 1SDA067621R1   |         |
|         | 80     |       | 1SDA067038R1   |         | 1SDA067578R1   |         | 1SDA067622R1   |         |
|         | 100    |       | 1SDA067039R1 ■ |         | 1SDA067579R1 ■ |         | 1SDA067623R1   |         |
| XT4 250 | 125    | 4     | 1SDA067042R1 ■ | 18,390  | 1SDA067582R1 ■ | 20,730  | 1SDA067626R1   | 26,550  |
|         | 160    |       | 1SDA067043R1 ■ | 21,960  | 1SDA067583R1 ■ | 24,500  | 1SDA067627R1   | 32,470  |
|         | 200    |       | 1SDA068109R1 ■ | 27,580  | 1SDA068329R1 ■ | 31,150  | 1SDA068362R1   | 35,740  |
|         | 225    |       | 1SDA068110R1   | 28,070  | 1SDA068330R1   | 31,660  | 1SDA068363R1   | 36,250  |
|         | 250    |       | 1SDA068111R1 ■ | 28,590  | 1SDA068331R1 ■ | 32,170  | 1SDA068364R1   | 37,690  |
| T5      | 320    | 4     | 1SDA054477R1 ■ | 35,390  | 1SDA054479R1 ■ | 37,640  | 1SDA054481R1   | 44,530  |
|         | 400    |       | 1SDA054478R1 ■ |         | 1SDA054480R1 ■ |         | 1SDA054482R1 ■ |         |
|         | 500    |       | 1SDA054487R1 ■ |         | 1SDA054489R1 ■ |         | 1SDA054491R1 ■ |         |
| T6      | 630    | 4     | 1SDA060210R1 ■ | 49,340  | 1SDA060211R1 ■ | 54,380  | 1SDA060212R1   | 62,750  |
|         | 800    |       | 1SDA060222R1 ■ | 60,040  | 1SDA060223R1 ■ | 65,790  | 1SDA060224R1   | 68,340  |

\* 40 A onwards

■ Stock items

# Tmax power distribution circuit breakers

Protection: LS/I

## XT2/XT4/T5/T6



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36kA | 100%      |
| S | 50kA | 100%      |
| H | 70kA | 100%      |



### Protection : LS/I

| Frame    | In (A) | Poles |
|----------|--------|-------|
| XT2 160  | 10     | 3     |
|          | 25     |       |
|          | 63     |       |
|          | 100    |       |
|          | 160    |       |
| XT4 250  | 250    | 3     |
| T5 400   | 400    |       |
| T5 630   | 630    |       |
| T6 800   | 800    |       |
| T6 1000* | 1000   |       |

| N             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA067054R1  | 18,680   |
| 1SDA067055R1  |          |
| 1SDA067056R1  | 16,640   |
| 1SDA067057R1  |          |
| 1SDA067058R1  | 20,730   |
| 1SDA068126R1  | 27,780   |
| 1SDA054317R1  | 37,770   |
| 1SDA054396R1  | 40,220   |
| 1SDA060268R1  | 61,790   |
| 1SDA060537R1  | 95,070   |

| S             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA067800R1  | 22,460   |
| 1SDA067801R1  |          |
| 1SDA067802R1  | 20,430   |
| 1SDA067803R1  |          |
| 1SDA067804R1  | 27,170   |
| 1SDA068475R1  | 32,680   |
| 1SDA054333R1  | 39,500   |
| 1SDA054404R1  | 42,000   |
| 1SDA060278R1  | 68,500   |
| 1SDA060547R1  | 1,02,580 |

| H             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA067857R1  | 25,130   |
| 1SDA067858R1  |          |
| 1SDA067859R1  | 23,080   |
| 1SDA067860R1  |          |
| 1SDA067861R1  | 31,240   |
| 1SDA068515R1  | 37,730   |
| 1SDA054349R1  | 50,120   |
| 1SDA054412R1  | 53,340   |
| 1SDA060289R1  | 85,060   |
| 1SDA060561R1  | 1,22,590 |

| Frame    | In (A) | Poles |
|----------|--------|-------|
| XT2 160  | 10     | 4     |
|          | 25     |       |
|          | 63     |       |
|          | 100    |       |
|          | 160    |       |
| XT4 250  | 250    | 4     |
| T5 400   | 400    |       |
| T5 630   | 630    |       |
| T6 800   | 800    |       |
| T6 1000* | 1000   |       |

| N             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA067090R1  | 23,700   |
| 1SDA067091R1  |          |
| 1SDA067092R1  | 21,650   |
| 1SDA067093R1  |          |
| 1SDA067095R1  | 29,200   |
| 1SDA068147R1  | 36,250   |
| 1SDA054325R1  | 46,910   |
| 1SDA054400R1  | 54,780   |
| 1SDA060273R1  | 70,750   |
| 1SDA060542R1  | 1,37,590 |

| S             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA067833R1  | 27,980   |
| 1SDA067834R1  |          |
| 1SDA067835R1  | 25,930   |
| 1SDA067836R1  |          |
| 1SDA067838R1  | 36,350   |
| 1SDA068495R1  | 40,490   |
| 1SDA054341R1  | 53,600   |
| 1SDA054408R1  | 59,650   |
| 1SDA060283R1  | 86,320   |
| 1SDA060556R1  | 1,43,840 |

| H             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA067890R1  | 31,350   |
| 1SDA067891R1  |          |
| 1SDA067892R1  | 29,300   |
| 1SDA067893R1  |          |
| 1SDA067895R1  | 39,420   |
| 1SDA068535R1  | 43,800   |
| 1SDA054357R1  | 62,650   |
| 1SDA054416R1  | 69,570   |
| 1SDA060294R1  | 1,05,310 |
| 1SDA060566R1  | 1,75,120 |

Note: XT2/XT4 with Ekip LS/I release ; T5-T6 with PR221 LS/I release  
\*Extended front (EF) terminals are supplied as standard in T6 1000A MCCB



# Tmax power distribution circuit breakers

Protection: LSIG

## XT2/XT4/T5/T6



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36kA | 100%      |
| S | 50kA | 100%      |
| H | 70kA | 100%      |



### Ekip LSIG

| Frame   | In (A) | Poles |
|---------|--------|-------|
| XT2 160 | 10     | 3     |
|         | 25     |       |
|         | 63     |       |
|         | 100    |       |
|         | 160    |       |
| XT4 250 | 250    | 4     |
| XT2 160 | 10     |       |
|         | 25     |       |
|         | 63     |       |
|         | 100    |       |
|         | 160    |       |
| XT4 250 | 250    |       |

| N              |          |
|----------------|----------|
| Ordering code  | L.P. (₹) |
| 1SDA067072R1   | 36,770   |
| 1SDA067073R1   |          |
| 1SDA067074R1 ■ | 34,720   |
| 1SDA067075R1 ■ |          |
| 1SDA067076R1 ■ | 37,280   |
| 1SDA068141R1 ■ | 38,810   |
| 1SDA067108R1   | 43,710   |
| 1SDA067109R1   |          |
| 1SDA067110R1 ■ | 41,660   |
| 1SDA067111R1 ■ |          |
| 1SDA067113R1 ■ | 44,730   |
| 1SDA068162R1 ■ | 46,560   |

| S              |          |
|----------------|----------|
| Ordering code  | L.P. (₹) |
| 1SDA067815R1   | 39,310   |
| 1SDA067816R1 ■ |          |
| 1SDA067817R1 ■ | 37,280   |
| 1SDA067818R1 ■ |          |
| 1SDA067819R1 ■ | 40,340   |
| 1SDA068490R1 ■ | 41,360   |
| 1SDA067851R1   | 46,760   |
| 1SDA067852R1   |          |
| 1SDA067853R1 ■ | 44,730   |
| 1SDA067854R1 ■ |          |
| 1SDA067856R1 ■ | 48,410   |
| 1SDA068510R1 ■ | 49,630   |

| H              |          |
|----------------|----------|
| Ordering code  | L.P. (₹) |
| 1SDA067872R1   | 47,480   |
| 1SDA067873R1   |          |
| 1SDA067874R1   | 45,440   |
| 1SDA067875R1   |          |
| 1SDA067876R1   | 48,510   |
| 1SDA068530R1 ■ | 50,550   |
| 1SDA067908R1   | 56,580   |
| 1SDA067909R1   |          |
| 1SDA067910R1   | 54,530   |
| 1SDA067911R1   |          |
| 1SDA067913R1   | 58,200   |
| 1SDA068550R1   | 60,660   |

### PR222DS/P-LSIG

| Frame    | In (A) | Poles |
|----------|--------|-------|
| T5 400   | 400    | 3     |
| T5 630   | 630    |       |
| T6 800   | 800    |       |
| T6 1000* | 1000   |       |
| T5 400   | 400    | 4     |
| T5 630   | 630    |       |
| T6 800   | 800    |       |
| T6 1000* | 1000   |       |

| N              |          |
|----------------|----------|
| Ordering code  | L.P. (₹) |
| 1SDA054323R1 ■ | 56,090   |
| 1SDA054399R1 ■ | 59,650   |
| 1SDA060271R1 ■ | 92,020   |
| 1SDA060540R1   | 1,25,090 |
| 1SDA054331R1 ■ | 63,800   |
| 1SDA054403R1 ■ | 69,210   |
| 1SDA060276R1 ■ | 1,06,330 |
| 1SDA060545R1 ■ | 1,66,380 |

| S              |          |
|----------------|----------|
| Ordering code  | L.P. (₹) |
| 1SDA054339R1 ■ | 58,480   |
| 1SDA054407R1 ■ | 62,050   |
| 1SDA060281R1 ■ | 96,320   |
| 1SDA060554R1 ■ | 1,37,590 |
| 1SDA054347R1 ■ | 65,630   |
| 1SDA054411R1 ■ | 76,360   |
| 1SDA060286R1 ■ | 1,08,820 |
| 1SDA060559R1   | 1,75,120 |

| H              |          |
|----------------|----------|
| Ordering code  | L.P. (₹) |
| 1SDA054355R1   | 72,680   |
| 1SDA054415R1 ■ | 75,180   |
| 1SDA060292R1   | 1,07,250 |
| 1SDA060564R1   | 1,68,870 |
| 1SDA054363R1   | 81,450   |
| 1SDA054419R1   | 1,02,740 |
| 1SDA060297R1   | 1,26,220 |
| 1SDA060569R1   | 2,12,650 |

Note: \*Extended front (EF) terminals are supplied as standard in T6 1000A MCCB

■ Stock items



# Tmax power distribution circuit breakers

## For MODBUS communication

### XT2/XT4/T5/T6



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36kA | 100%      |
| S | 50kA | 100%      |
| H | 70kA | 100%      |



#### Ekip LSIG

|         |        |       | N              |          | S              |          | H              |          |
|---------|--------|-------|----------------|----------|----------------|----------|----------------|----------|
| Frame   | In (A) | Poles | Ordering code  | L.P. (₹) | Ordering code  | L.P. (₹) | Ordering code  | L.P. (₹) |
| XT2 160 | 10     | 3     | 1SDA067072R1   | 36,770   | 1SDA067815R1   | 39,310   | 1SDA067872R1   | 47,480   |
|         | 25     |       | 1SDA067073R1   |          | 1SDA067816R1 ■ |          | 1SDA067873R1   |          |
|         | 63     |       | 1SDA067074R1 ■ | 34,720   | 1SDA067817R1 ■ | 37,280   | 1SDA067874R1   | 45,440   |
|         | 100    |       | 1SDA067075R1 ■ |          | 1SDA067818R1 ■ |          | 1SDA067875R1   |          |
|         | 160    |       | 1SDA067076R1 ■ |          | 1SDA067819R1 ■ |          | 1SDA067876R1   |          |
| XT4 250 | 250    | 4     | 1SDA068141R1 ■ | 38,810   | 1SDA068490R1 ■ | 41,360   | 1SDA068530R1 ■ | 50,550   |
| XT2 160 | 10     |       | 1SDA067108R1   | 43,710   | 1SDA067851R1   | 46,760   | 1SDA067908R1   | 56,580   |
|         | 25     |       | 1SDA067109R1   |          | 1SDA067852R1   |          | 1SDA067909R1   |          |
|         | 63     |       | 1SDA067110R1 ■ | 41,660   | 1SDA067853R1 ■ | 44,730   | 1SDA067910R1   | 54,530   |
|         | 100    |       | 1SDA067111R1 ■ |          | 1SDA067854R1 ■ |          | 1SDA067911R1   |          |
| XT4 250 | 160    |       | 1SDA067113R1 ■ | 44,730   | 1SDA067856R1 ■ | 48,410   | 1SDA067913R1   | 58,200   |
|         | 250    |       | 1SDA068162R1 ■ | 46,560   | 1SDA068510R1 ■ | 49,630   | 1SDA068550R1   | 60,660   |

Note : Consider ordering "Ekip Com" for MODBUS communication (Refer page no 43)

#### PR222DS/PD-LSIG

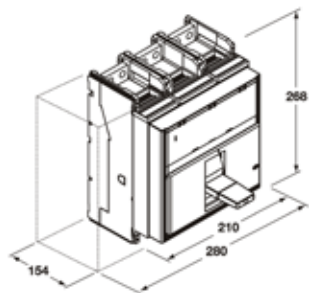
| Frame    | In (A) | Poles | Ordering code | L.P. (₹) | Ordering code  | L.P. (₹) | Ordering code | L.P. (₹) |
|----------|--------|-------|---------------|----------|----------------|----------|---------------|----------|
| T5 400   | 400    | 3     | 1SDA081522R1  | 81,830   | 1SDA081525R1 ■ | 84,200   | 1SDA081528R1  | 98,410   |
| T5 630   | 630    |       | 1SDA081523R1  | 85,390   | 1SDA081526R1 ■ | 87,770   | 1SDA081529R1  | 1,00,910 |
| T6 800   | 800    |       | 1SDA081540R1  | 1,17,020 | 1SDA081546R1   | 1,21,320 | 1SDA081552R1  | 1,32,250 |
| T6 1000* | 1000   |       | 1SDA081541R1  | 1,50,090 | 1SDA081547R1   | 1,62,590 | 1SDA081553R1  | 1,93,870 |
| T5 400   | 400    |       | 1SDA081531R1  | 85,350   | 1SDA081534R1   | 91,360   | 1SDA081537R1  | 1,07,180 |
| T5 630   | 630    | 4     | 1SDA081532R1  | 94,940   | 1SDA081535R1   | 1,02,100 | 1SDA081538R1  | 1,28,480 |
| T6 800   | 800    |       | 1SDA081543R1  | 1,31,330 | 1SDA081549R1   | 1,33,830 | 1SDA081555R1  | 1,51,240 |
| T6 1000* | 1000   |       | 1SDA081544R1  | 1,91,380 | 1SDA081550R1   | 2,00,110 | 1SDA081556R1  | 2,35,580 |

Note: Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG  
\*Extended front (EF) terminals are supplied as standard in T6 1000A MCCB

■ Stock items

# Tmax power distribution circuit breakers

## T7



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| S | 50kA | 100%      |
| H | 70kA | 100%      |



### T7 1250/1600 PR231/P LS/I

| In (A) | Poles |
|--------|-------|
| 1250   | 3     |
| 1600   |       |
| 1250   | 4     |
| 1600   |       |

S

| Ordering code  | L.P. (₹) |
|----------------|----------|
| 1SDA062866R1   | 1,31,140 |
| 1SDA062994R1 ■ | 1,50,990 |
| 1SDA062874R1 ■ | 1,64,730 |
| 1SDA063002R1   | 1,81,310 |

H

| Ordering code | L.P. (₹) |
|---------------|----------|
| 1SDA062898R1  | 1,77,940 |
| 1SDA063026R1  | 1,95,480 |
| 1SDA062906R1  | 2,12,580 |
| 1SDA063034R1  | 2,35,850 |

### PR331/P LSIG

|      |   |
|------|---|
| 1250 | 3 |
| 1600 |   |
| 1250 | 4 |
| 1600 |   |

|                |          |
|----------------|----------|
| 1SDA062868R1 ■ | 1,68,620 |
| 1SDA062996R1   | 1,75,210 |
| 1SDA062876R1   | 1,87,280 |
| 1SDA063004R1   | 2,06,080 |

|              |          |
|--------------|----------|
| 1SDA062900R1 | 2,02,300 |
| 1SDA063028R1 | 2,21,670 |
| 1SDA062908R1 | 2,38,650 |
| 1SDA063036R1 | 2,58,020 |

### PR332/P LSIG

|      |   |
|------|---|
| 1250 | 3 |
| 1600 |   |
| 1250 | 4 |
| 1600 |   |

|              |          |
|--------------|----------|
| 1SDA062871R1 | 1,75,210 |
| 1SDA062999R1 | 1,90,110 |
| 1SDA062879R1 | 1,99,990 |
| 1SDA063007R1 | 2,18,760 |

|              |          |
|--------------|----------|
| 1SDA062903R1 | 2,16,570 |
| 1SDA063031R1 | 2,34,770 |
| 1SDA062911R1 | 2,51,210 |
| 1SDA063039R1 | 2,75,990 |

### T7 1250M/1600M PR231/P LS/I

| In (A) | Poles |
|--------|-------|
| 1250   | 3     |
| 1600   |       |
| 1250   | 4     |
| 1600   |       |

S

| Ordering code | L.P. (₹) |
|---------------|----------|
| 1SDA062882R1  | 1,50,990 |
| 1SDA063010R1  | 1,67,460 |
| 1SDA062890R1  | 1,68,370 |
| 1SDA063018R1  | 2,02,190 |

H

| Ordering code | L.P. (₹) |
|---------------|----------|
| 1SDA062914R1  | 1,97,200 |
| 1SDA063042R1  | 2,20,480 |
| 1SDA062922R1  | 2,37,030 |
| 1SDA063050R1  | 2,63,650 |

### PR331/P LSIG

|      |   |
|------|---|
| 1250 | 3 |
| 1600 |   |
| 1250 | 4 |
| 1600 |   |

|              |          |
|--------------|----------|
| 1SDA062884R1 | 1,76,270 |
| 1SDA063012R1 | 1,92,320 |
| 1SDA062892R1 | 2,04,910 |
| 1SDA063020R1 | 2,27,570 |

|              |          |
|--------------|----------|
| 1SDA062916R1 | 2,24,480 |
| 1SDA063044R1 | 2,44,940 |
| 1SDA062924R1 | 2,63,120 |
| 1SDA063052R1 | 2,89,850 |

### PR332/P LSIG

|      |   |
|------|---|
| 1250 | 3 |
| 1600 |   |
| 1250 | 4 |
| 1600 |   |

|              |          |
|--------------|----------|
| 1SDA062887R1 | 1,87,280 |
| 1SDA063015R1 | 2,04,910 |
| 1SDA062895R1 | 2,17,600 |
| 1SDA063023R1 | 2,38,590 |

|              |          |
|--------------|----------|
| 1SDA062919R1 | 2,35,850 |
| 1SDA063047R1 | 2,58,020 |
| 1SDA062927R1 | 2,77,290 |
| 1SDA063055R1 | 3,02,950 |

Note : For Motorizable T7 M frame, order along with above code, motor operator, shunt opening coil & shunt closing coil of required voltage.

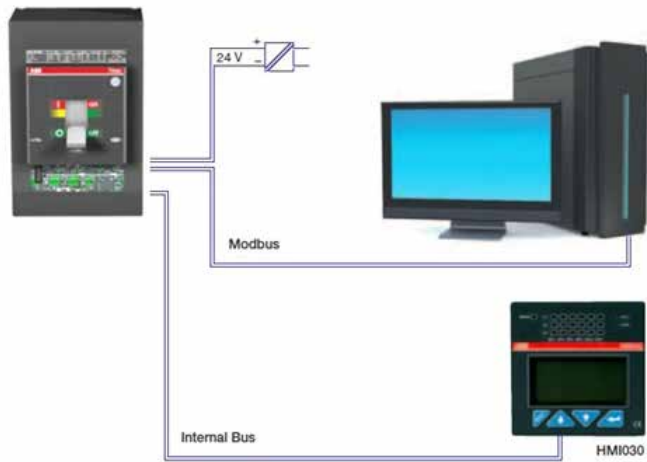
■ Stock items

# Tmax power distribution circuit breakers

## Ekip E-LSIG

New integrated solution for energy measurement

- Integrated Energy Metering
- Individual protection LEDs
- Internal Bus for HMI connectivity
- Advance measurements such as Power factor, Frequency, peak factor, Energy, Power Harmonic analysis and THD



## XT4

|         |        |       | N             |              | S             |              | H             |              |
|---------|--------|-------|---------------|--------------|---------------|--------------|---------------|--------------|
| Frame   | In (A) | Poles | Ordering code | L.P.(₹)      | Ordering code | L.P.(₹)      | Ordering code | L.P.(₹)      |
| XT4 160 | 40     | 3     | 1SDA069601R1  | Upon request | 1SDA069611R1  | Upon request | 1SDA069621R1  | Upon request |
|         | 63     |       | 1SDA069602R1  |              | 1SDA069612R1  |              | 1SDA069622R1  |              |
|         | 100    |       | 1SDA069603R1  |              | 1SDA069613R1  |              | 1SDA069623R1  |              |
|         | 160    |       | 1SDA069604R1  |              | 1SDA069614R1  |              | 1SDA069624R1  |              |
| XT4 250 | 250    | 4     | 1SDA069605R1  | Upon request | 1SDA069615R1  | Upon request | 1SDA069625R1  | Upon request |
| XT4 160 | 40     |       | 1SDA069606R1  |              | 1SDA069616R1  |              | 1SDA069626R1  |              |
|         | 63     |       | 1SDA069607R1  |              | 1SDA069617R1  |              | 1SDA069627R1  |              |
|         | 100    |       | 1SDA069608R1  |              | 1SDA069618R1  |              | 1SDA069628R1  |              |
| XT4 250 | 160    |       | 1SDA069609R1  |              | 1SDA069619R1  |              | 1SDA069629R1  |              |
|         | 250    |       | 1SDA069610R1  |              | 1SDA069620R1  |              | 1SDA069630R1  |              |

## T5

|        |        |       | N             |              | S             |              | H             |              |
|--------|--------|-------|---------------|--------------|---------------|--------------|---------------|--------------|
| Frame  | In (A) | Poles | Ordering code | L.P.(₹)      | Ordering code | L.P.(₹)      | Ordering code | L.P.(₹)      |
| T5 400 | 320    | 3     | 1SDA081043R1  | Upon request | 1SDA081044R1  | Upon request | 1SDA081045R1  | Upon request |
|        | 400    |       | 1SDA081048R1  |              | 1SDA081049R1  |              | 1SDA081050R1  |              |
| T5 630 | 630    | 4     | 1SDA081063R1  | Upon request | 1SDA081064R1  | Upon request | 1SDA081065R1  | Upon request |
| T5 400 | 320    |       | 1SDA081053R1  |              | 1SDA081045R1  |              | 1SDA081055R1  |              |
|        | 400    |       | 1SDA081058R1  |              | 1SDA081059R1  |              | 1SDA081060R1  |              |
| T5 630 | 630    |       | 1SDA081068R1  |              | 1SDA081069R1  |              | 1SDA081070R1  |              |

# Tmax motor protection circuit breakers

Characteristics of circuit-breakers for protecting motors in three pole versions.

## Tmax Motor Protection Trip units

➤ Magnetic trip units:

| Frame   | Protection                    | Range         |
|---------|-------------------------------|---------------|
| XT2 160 | MF ( $I_n \leq 12.5A$ )       | 14 x $I_n$    |
|         | MA ( $12.5A < I_n \leq 160$ ) | 6..14 x $I_n$ |
| XT3 250 | MA                            | 6..12 x $I_n$ |
| XT4 250 | MA                            | 5..10 x $I_n$ |

MF – Magnetic fix

MA- Magnetic Adjustable

➤ Microprocessor trip units:

o Only Short circuit protection release

| XT2/XT4  |                     | T5/T6      |                     | T7/T7M   |                     |
|----------|---------------------|------------|---------------------|----------|---------------------|
| Ekip M-I | I = 6 - 14 of $I_n$ | PR221 DS-I | I = 1 - 10 of $I_n$ | PR231P-I | I = 1 - 10 of $I_n$ |

o Advanced Motor protection release

| XT2/XT4    |                      | XT2/XT4/T5/T6 |                      |
|------------|----------------------|---------------|----------------------|
| Ekip M-LIU | L = 0.4 - 1 of $I_n$ | Ekip M-LRIU   | L = 0.4 - 1 of $I_n$ |
|            | I = 6 - 13 of $I_n$  |               | R = 3 - 9 of $I_n$   |
|            | U*=ON or OFF         |               | I = 6 - 13 of $I_n$  |
|            |                      |               | G = 0.2 - 1 of $I_n$ |
|            |                      |               | U* = ON or OFF       |

L = Overload; R = Protection against rotor blockage; I = Instantaneous short circuit; G = Earth fault  
U = phase loss (U): With selector in ON position, circuit breaker trips if at least one current phase is lower than 0.1 $I_n$  and at least a second one higher than 0.25 $I_n$ .



# Tmax motor protection circuit breakers

## Advantages of Ekip M-LRIU protection unit:

### Duty mode setting (Normal/Heavy):

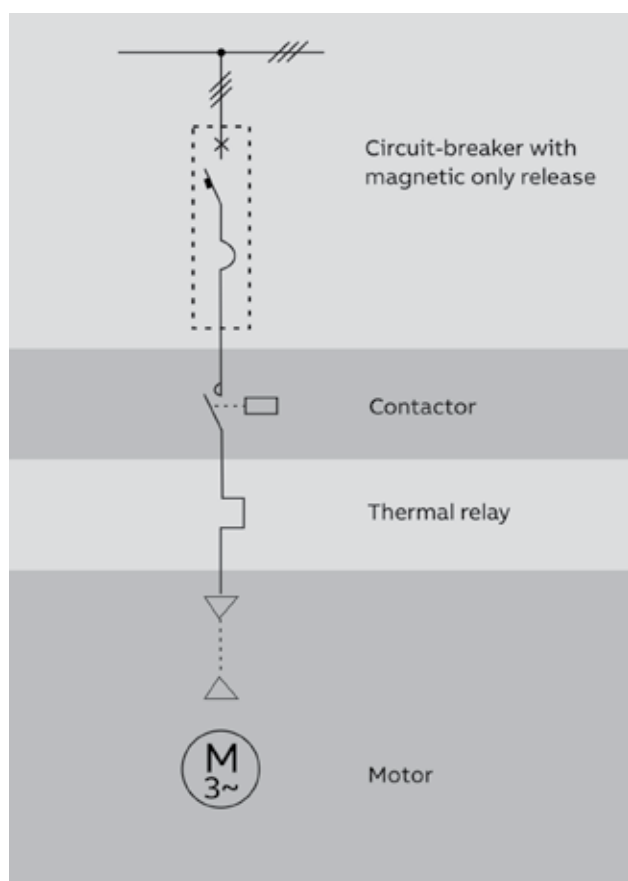
- Normal duty mode requires use of a circuit-breaker and a contactor. In the case of tripping, the Ekip M-LRIU release commands the opening of the contactor via PR212/CI;
- Heavy duty mode foresees circuit-breaker opening for all overcurrent conditions, and just the function of motor operation is entrusted to the contactor

### PTC protection setting:

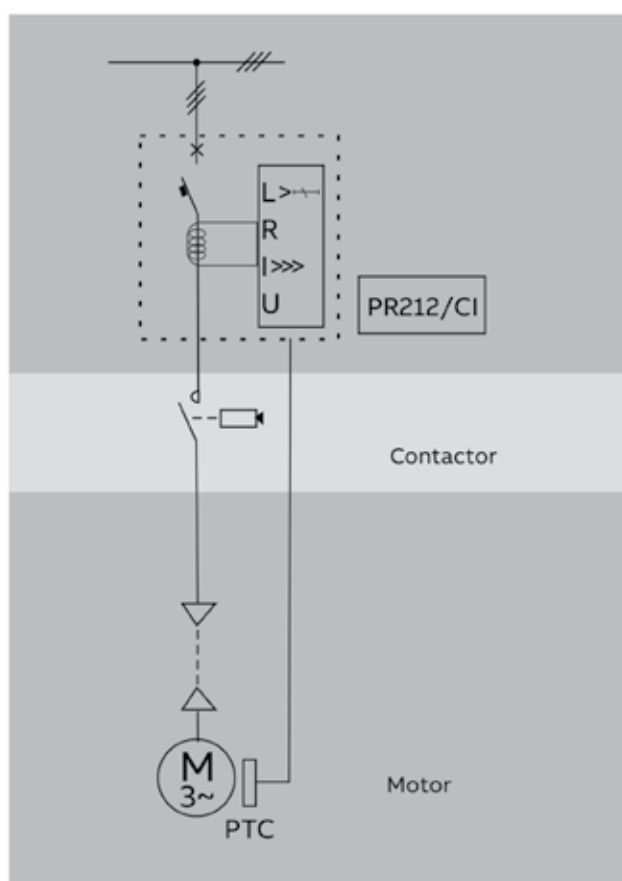
- PTC: this protection, monitors the temperature inside the protected motor by means of a PTC sensor.

### ❖ ABB Solutions for Starting, switching and protection of three-phase asynchronous motors

- o A traditional system
- o A system of integrated protection



Traditional System



System of integrated protection



# Tmax motor distribution circuit breakers

Protection: Magnetic Only

## XT2/XT4



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36kA | 100%      |
| S | 50kA | 100%      |
| H | 70kA | 100%      |

MF/MA\*

|         |        |       | N              |          | S              |          | H             |          |
|---------|--------|-------|----------------|----------|----------------|----------|---------------|----------|
| In (A)  | In (A) | Poles | Ordering code  | L.P. (₹) | Ordering code  | L.P. (₹) | Ordering code | L.P. (₹) |
| XT2 160 | 1      | 3     | 1SDA067044R1   | 12,860   | 1SDA067760R1   | 13,900   | 1SDA067770R1  | 15,260   |
|         | 2      |       | 1SDA067045R1   |          | 1SDA067761R1   |          | 1SDA067771R1  |          |
|         | 4      |       | 1SDA067046R1   |          | 1SDA067762R1   |          | 1SDA067772R1  |          |
|         | 8.5    |       | 1SDA067047R1   |          | 1SDA067763R1 ■ |          | 1SDA067773R1  |          |
|         | 12.5   |       | 1SDA067048R1 ■ |          | 1SDA067764R1 ■ |          | 1SDA067774R1  |          |
|         | 20     |       | 1SDA067049R1 ■ | 12,660   | 1SDA067765R1 ■ | 13,700   | 1SDA067775R1  | 15,060   |
|         | 32     |       | 1SDA067050R1 ■ |          | 1SDA067766R1 ■ |          | 1SDA067776R1  |          |
|         | 52     |       | 1SDA067051R1 ■ |          | 1SDA067767R1 ■ |          | 1SDA067777R1  |          |
|         | 80     |       | 1SDA067052R1 ■ |          | 1SDA067768R1 ■ |          | 1SDA067778R1  |          |
|         | 100    |       | 1SDA067053R1 ■ |          | 1SDA067769R1 ■ |          | 1SDA067779R1  |          |
| XT4 250 | 160    | 3     | 1SDA076529R1   | 15,220   | 1SDA076530R1 ■ | 15,940   | 1SDA076535R1  | 20,930   |
|         | 200    |       | 1SDA068121R1   | 26,910   | 1SDA068440R1 ■ | 29,300   | 1SDA068450R1  | 35,170   |

\* 20 amps onwards

## XT3



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36KA | 75%       |
| S | 50KA | 50%       |

MA

|         |        |       | N             |         | S              |         |
|---------|--------|-------|---------------|---------|----------------|---------|
| Frame   | In (A) | Poles | Ordering code | L.P.(₹) | Ordering code  | L.P.(₹) |
| XT3 250 | 100    | 3     | 1SDA068071R1  | 15,220  | 1SDA068279R1   | 15,830  |
|         | 125    |       | 1SDA068072R1  |         | 1SDA068280R1   |         |
|         | 160    |       | 1SDA068073R1  |         | 1SDA068281R1   |         |
|         | 200    |       | 1SDA068074R1  | 17,460  | 1SDA068282R1 ■ | 17,970  |

■ Stock items

# Tmax motor protection circuit breakers

## Microprocessor based Short circuit protection MCCBs

### XT2/XT4/T5/T6/T7/T7M



| Breaking capacity at 415VAC |      |           |
|-----------------------------|------|-----------|
|                             | Icu  | Ics (Icu) |
| N                           | 36KA | 100%      |
| S                           | 50KA | 100%      |
| H                           | 70KA | 100%      |



Ekip M-I

| In (A)  | In (A) | Poles |
|---------|--------|-------|
| XT2 160 | 20     | 3     |
|         | 32     |       |
|         | 52     |       |
|         | 100    |       |
|         | 160    |       |
| XT4 250 | 250    |       |

| N              |          |
|----------------|----------|
| Ordering code  | L.P. (₹) |
| 1SDA067086R1   | 17,000   |
| 1SDA067087R1   |          |
| 1SDA067088R1   |          |
| 1SDA067089R1   |          |
| 1SDA067063R1   | 21,040   |
| 1SDA068131R1 ■ | 32,170   |

| S              |          |
|----------------|----------|
| Ordering code  | L.P. (₹) |
| 1SDA067829R1   | 20,430   |
| 1SDA067830R1   |          |
| 1SDA067831R1   |          |
| 1SDA067832R1   |          |
| 1SDA067809R1   | 27,580   |
| 1SDA068480R1 ■ | 34,920   |

| H             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA067886R1  | 21,560   |
| 1SDA067887R1  |          |
| 1SDA067888R1  |          |
| 1SDA067889R1  |          |
| 1SDA067866R1  | 29,620   |
| 1SDA068520R1  | 41,360   |

T5  
PR221 DS-I

| In (A) | Poles |
|--------|-------|
| 400    | 3     |
| 630    |       |

| N              |         |
|----------------|---------|
| Ordering code  | L.P.(₹) |
| 1SDA054319R1   | 37,040  |
| 1SDA054397R1 ■ | 39,450  |

| S              |         |
|----------------|---------|
| Ordering code  | L.P.(₹) |
| 1SDA054335R1 ■ | 40,600  |
| 1SDA054405R1 ■ | 44,190  |

| H             |         |
|---------------|---------|
| Ordering code | L.P.(₹) |
| 1SDA054351R1  | 49,150  |
| 1SDA054413R1  | 52,320  |

T6 800  
PR221 DS-I

| In (A) | Poles |
|--------|-------|
| 800    | 3     |
| 1000   |       |

| N             |         |
|---------------|---------|
| Ordering code | L.P.(₹) |
| 1SDA060269R1  | 63,790  |
| 1SDA060538R1  | 97,840  |

| S             |          |
|---------------|----------|
| Ordering code | L.P.(₹)  |
| 1SDA060279R1  | 71,500   |
| 1SDA060548R1  | 1,05,570 |

| H             |          |
|---------------|----------|
| Ordering code | L.P.(₹)  |
| 1SDA060290R1  | 87,540   |
| 1SDA060562R1  | 1,34,560 |



T7 1250/1600  
PR231/P I

| In (A) | Poles |
|--------|-------|
| 1250   | 3     |
| 1600   | 3     |

| S             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA062865R1  | 1,28,180 |
| 1SDA062993R1  | 1,54,190 |

| H             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA062897R1  | 1,81,890 |
| 1SDA063025R1  | 2,00,060 |

T7 1250M/1600M  
PR231/P I

| In (A) | Poles |
|--------|-------|
| 1250   | 3     |
| 1600   | 3     |

| S             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA062881R1  | 1,58,500 |
| 1SDA063009R1  | 1,71,260 |

| H             |          |
|---------------|----------|
| Ordering code | L.P. (₹) |
| 1SDA062913R1  | 2,01,830 |
| 1SDA063041R1  | 2,25,790 |

■ Stock items

# Tmax motor protection circuit breakers

## Advanced Motor Protection MCCBs

### XT2/XT4



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36kA | 100%      |
| S | 50kA | 100%      |
| H | 70kA | 100%      |



#### Breaking Part

| Frame   | Poles |
|---------|-------|
| XT2 160 | 3     |
| XT4 160 |       |
| XT4 250 |       |

N

| Ordering code | L.P. (₹)     |
|---------------|--------------|
| 1SDA068163R1  | Upon request |
| 1SDA068289R1  |              |
| 1SDA068173R1  |              |

S

| Ordering code | L.P. (₹)     |
|---------------|--------------|
| 1SDA068164R1  | Upon request |
| 1SDA068290R1  |              |
| 1SDA068174R1  |              |

H

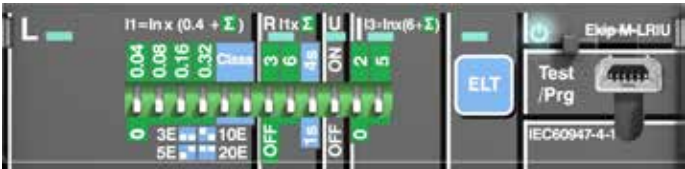
| Ordering code | L.P. (₹)     |
|---------------|--------------|
| 1SDA068165R1  | Upon request |
| 1SDA068291R1  |              |
| 1SDA068175R1  |              |

#### Loose trip units

##### EKIP M-LIU

| In (A) | In (A) | Poles |
|--------|--------|-------|
| XT2    | 25     | 3     |
|        | 63     |       |
|        | 100    |       |
|        | 160    |       |

| Ordering code | L.P. (₹)     |
|---------------|--------------|
| 1SDA067352R1  | Upon request |
| 1SDA067353R1  |              |
| 1SDA067354R1  |              |
| 1SDA067355R1  |              |



##### Ekip M-LRIU

| In (A) | In (A) | Poles |
|--------|--------|-------|
| XT2    | 25     | 3     |
|        | 63     |       |
|        | 100    |       |
| XT4    | 160    | 3     |
|        | 200    |       |

| Ordering code | L.P. (₹)     |
|---------------|--------------|
| 1SDA067357R1  | Upon request |
| 1SDA067358R1  |              |
| 1SDA067359R1  |              |
| 1SDA068036R1  |              |
| 1SDA068037R1  |              |



# Tmax motor protection circuit breakers

## Advanced Motor Protection MCCBs

### T5/T6



Breaking capacity at 415VAC

|   | Icu  | Ics (Icu) |
|---|------|-----------|
| N | 36kA | 100%      |
| S | 50kA | 100%      |
| H | 70kA | 100%      |



#### T5 Ekip M-LRIU

| In (A) | Poles |
|--------|-------|
| 320    | 3     |
| 400    | 3     |

#### N

| Ordering code | L.P.(₹) |
|---------------|---------|
| 1SDA054551R1  | 59,680  |
| 1SDA064157R1  |         |

#### S

| Ordering code | L.P.(₹) |
|---------------|---------|
| 1SDA054553R1  | 66,940  |
| 1SDA064158R1  |         |

#### T6 Ekip M-LRIU

| In (A) | Poles |
|--------|-------|
| 630    | 3     |

#### N

| Ordering code | L.P.(₹) |
|---------------|---------|
| 1SDA060311R1  | 83,920  |

#### S

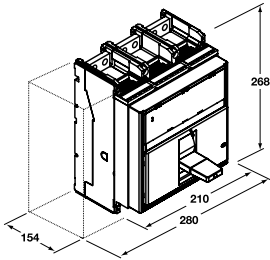
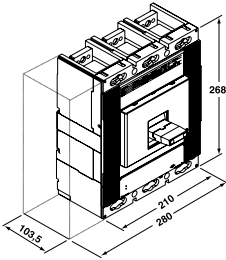
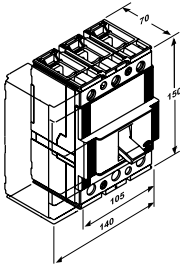
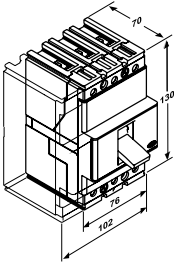
| Ordering code | L.P.(₹) |
|---------------|---------|
| 1SDA060312R1  | 91,750  |

#### H

| Ordering code | L.P.(₹)  |
|---------------|----------|
| 1SDA060313R1  | 1,06,550 |



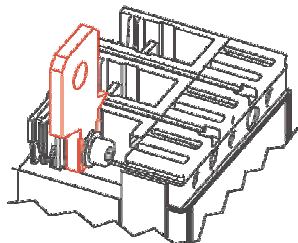
# Tmax switch disconnectors



| SD Frame | In(A) | Icw kA (1s) | Poles | Ordering Code | L.P.(₹)  |
|----------|-------|-------------|-------|---------------|----------|
| XT1D     | 160   | 2           | 3     | 1SDA068208R1  | 8,270    |
| XT3D     | 250   | 3           |       | 1SDA068210R1  | 18,640   |
| XT4D     | 250   | 3.6         |       | 1SDA068212R1  | 21,110   |
| T5D      | 400   | 3.6         |       | 1SDA054599R1  | 27,450   |
| T5D      | 500   | 3.6         |       | 1SDA054601R1  | 33,420   |
| T6D      | 630   | 15          |       | 1SDA060343R1  | 37,820   |
| T6D      | 630   | 15          |       | 1SDA060345R1  | 41,770   |
| T6D      | 800   | 15          |       | 1SDA060594R1  | 72,790   |
| T7D      | 1000  | 20          |       | 1SDA062032R1  | 82,630   |
| T7D      | 1250  | 20          |       | 1SDA062036R1  | 1,12,540 |
| T7D      | 1600  | 20          |       | 1SDA062040R1  | 1,17,270 |
| T7D M    | 1000  | 20          |       | 1SDA062034R1  | 1,02,010 |
| T7D M    | 1250  | 20          |       | 1SDA062038R1  | 1,29,040 |
| T7D M    | 1600  | 20          |       | 1SDA062042R1  | 1,42,050 |

| SD Frame | In(A) | Icw kA (1s) | Poles | Ordering Code | L.P.(₹)  |
|----------|-------|-------------|-------|---------------|----------|
| XT1D     | 160   | 2           | 4     | 1SDA068209R1  | 12,350   |
| XT3D     | 250   | 3           |       | 1SDA068211R1  | 22,320   |
| XT4D     | 250   | 3.6         |       | 1SDA068213R1  | 28,050   |
| T5D      | 400   | 3.6         |       | 1SDA054600R1  | 34,860   |
| T5D      | 500   | 3.6         |       | 1SDA054602R1  | 42,610   |
| T6D      | 630   | 15          |       | 1SDA060344R1  | 45,470   |
| T6D      | 630   | 15          |       | 1SDA060346R1  | 68,260   |
| T6D      | 800   | 15          |       | 1SDA060595R1  | 90,930   |
| T7D      | 1000  | 20          |       | 1SDA062033R1  | 1,05,330 |
| T7D      | 1250  | 20          |       | 1SDA062037R1  | 1,38,430 |
| T7D      | 1600  | 20          |       | 1SDA062041R1  | 1,44,340 |
| T7D M    | 1000  | 20          |       | 1SDA062035R1  | 1,29,100 |
| T7D M    | 1250  | 20          |       | 1SDA062039R1  | 1,58,810 |
| T7D M    | 1600  | 20          |       | 1SDA062043R1  | 1,77,600 |

# Tmax accessories



## Accessories for T-Max MCCBs

### Extended spreaded terminals - ES

| Frame | Description     | Ordering code  | L.P. (₹) |
|-------|-----------------|----------------|----------|
| XT1   | KIT ES XT1 6pcs | 1SDA066891R1 ■ | 1,740    |
|       | KIT ES XT1 8pcs | 1SDA066892R1 ■ | 2,350    |
| XT2   | KIT ES XT2 6pcs | 1SDA066895R1 ■ | 2,370    |
|       | KIT ES XT2 8pcs | 1SDA066896R1 ■ | 2,910    |
| XT3   | KIT ES XT3 6pcs | 1SDA066899R1 ■ | 2,550    |
|       | KIT ES XT3 8pcs | 1SDA066900R1 ■ | 3,270    |
| XT4   | KIT ES XT4 6pcs | 1SDA066903R1 ■ | 2,960    |
|       | KIT ES XT4 8pcs | 1SDA066904R1 ■ | 3,730    |
| T5    | Kit EST5 6pcs   | 1SDA055038R1 ■ | 4,240    |
|       | Kit EST5 8pcs   | 1SDA055039R1 ■ | 5,640    |

Note: Phase barrier supplied as standard with above copper spreaders.



### Separator - PB

| Frame   | Description                     | Ordering code     | L.P. (₹) |
|---------|---------------------------------|-------------------|----------|
| XT1-XT3 | PB 100mm 4pcs XT1-XT3 3p        | 1SDA066676R1      | 690      |
|         | PB 200mm 4pcs XT1-XT3 3p        | 1SDA066678R1      | 870      |
|         | PB 100mm 6pcs XT1-XT3 4p        | 1SDA066681R1      | 1,030    |
|         | PB 200mm 6pcs XT1-XT3 4p        | 1SDA066683R1      | 1,300    |
| XT2-XT4 | PB 100mm 4pcs XT2-XT4 3p        | 1SDA066675R1      | 730      |
|         | PB 200mm 4pcs XT2-XT4 3p        | 1SDA066677R1 ■    | 1,110    |
|         | PB 100mm 6pcs XT2-XT4 4p        | 1SDA066680R1      | 1,110    |
|         | PB 200mm 6pcs XT2-XT4 4p        | 1SDA066682R1      | 1,670    |
| T5      | PB100 4 pcs - Low T4, T5        | 1SYN850207R0001   | 980      |
|         | PB100mm 4pcs T4-5-T7-A3 3P      | 1SDA054970R1      | 910      |
|         | PB 100mm 6pcs T4-5-T7-A3 3P     | 1SDA054971R1      | 1,330    |
|         | PB100 4 pcs - Low T4, T5        | 1SYN850207R0001   | 980      |
|         | PB100 6 pcs - Low T4, T5 - 400A | 1SYN850210R0001 ■ | 1,400    |

Note: For T5 630A contact the nearest sales office

## Rotary handle operating mechanism



### Direct - RHD

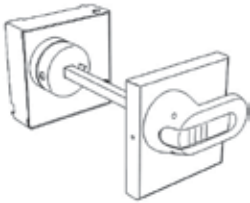
| Frame     | Description                        | Ordering code  | L.P. (₹) |
|-----------|------------------------------------|----------------|----------|
| XT1...XT4 | RHD XT1-XT3 F/P STANDARD DIRECT    | 1SDA066475R1 ■ | 1,630    |
|           | RHD XT2-XT4 F/P STANDARD DIRECT    | 1SDA069053R1 ■ | 1,950    |
|           | RHD XT2-XT4 W STANDARD DIRECT      | 1SDA066476R1   | 1,950    |
| T5        | RHD Normal for Fixed/Plug-in T4-T5 | 1SDA054926R1 ■ | 3,490    |
|           | RHD Normal for withdrawble T4-T5   | 1SDA054928R1   | 3,870    |
| T6        | RHD Normal for fixed T6            | 1SDA060405R1 ■ | 4,780    |
|           | RHD Normal for withdrawble T6      | 1SDA060407R1   | 6,030    |
| T7        | RHD Normal for Fixed/Plug-in T7    | 1SDA062120R1   | 6,220    |

Note:- F/P: Fixed/Plug-in ; W:Withdrawable





# Tmax accessories



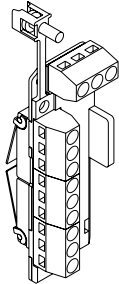
| Transmitted - RHE |                                           |                |          |
|-------------------|-------------------------------------------|----------------|----------|
| Frame             | Description                               | Ordering code  | L.P. (₹) |
| XT1...XT4         | RHE XT1-XT3 F/P STANDARD RETURNED(250mm)  | 1SDA082810R1 ■ | 1,520    |
|                   | RHE XT1-XT3 F/P STANDARD RETURNED (500mm) | 1SDA066479R1   | 1,740    |
|                   | RHE XT2-XT4 F/P STANDARD RETURNED (250mm) | 1SDA082811R1 ■ | 2,020    |
|                   | RHE XT2-XT4 F/P STANDARD RETURNED (500mm) | 1SDA069055R1   | 2,240    |
|                   | RHE XT2-XT4 W STANDARD RETURNED           | 1SDA066480R1 ■ | 2,240    |
|                   | RHS L XT2-XT4 F/P STAND. SX LATERAL       | 1SDA069058R1   | 3,580    |
|                   | RHS R XT2-XT4 F/P STAND. DX LATERAL       | 1SDA069060R1   | 3,520    |
| T5                | RHE Normal for Fixed/Plug-in T4-T5 250mm  | 1SDA070447R1 ■ | 3,260    |
|                   | RHE Normal for Withdrawable T4-T5         | 1SDA054933R1 ■ | 5,950    |
| T6                | RHE Normal for Fixed T6                   | 1SDA060409R1 ■ | 6,230    |
|                   | RHE Normal for Withdrawable T6            | 1SDA060411R1   | 7,230    |
| T7                | RHE Normal for Fixed/Plug-in T7           | 1SDA062122R1 ■ | 7,550    |

Note:- F/P: Fixed/Plug-in ; W: Withdrawable



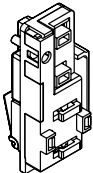
## Electrical signals

| Auxillary contact - AUX (Uncabled version) |                            |                |          |
|--------------------------------------------|----------------------------|----------------|----------|
| Frame                                      | Description                | Ordering code  | L.P. (₹) |
| XT1....XT4                                 | AUX 1Q 250Vac/dc XT1...XT4 | 1SDA066422R1 ■ | 920      |
|                                            | AUX 1Q 24Vdc XT1...XT4     | 1SDA066423R1   | 1,430    |



| Auxillary contact - AUX |                                   |                |          |
|-------------------------|-----------------------------------|----------------|----------|
| Frame                   | Description                       | Ordering code  | L.P. (₹) |
| T5..T6(1)               | AUX 1Q 1SY 250V AC/DC T1...T6 (1) | 1SDA051368R1 ■ | 1,620    |
|                         | AUX 3Q 1SY 250V AC/DC T1...T6 (1) | 1SDA051369R1   | 2,610    |
|                         | AUX 3Q 1SY 24V DC T1...T6 (1)     | 1SDA054914R1   | 2,520    |
| T5                      | AUX-SA 1 S51 T4-T5                | 1SDA055050R1   |          |
| T7M                     | AUX 2Q 24V DC T7M-X1              | 1SDA062101R1   | 1,620    |
|                         | AUX 2Q 400V AC T7M-X1             | 1SDA062102R1   |          |
| T7M                     | AUX SA T7M-X1 S51 24VDC           | 1SDA066100R1   | 6,210    |
|                         | AUX SA T7M-X1 S51 250VAC          | 1SDA063553R1   | 7,220    |
| T7                      | AUX 1Q + 1SY 24V DC T7            | 1SDA062103R1   |          |
|                         | AUX 1Q + 1SY 400V AC T7           | 1SDA062104R1 ■ | 2,520    |

Note : Q=Changeover contact;SY= Trip indication contact  
For T7 / T7M in Withdrawable version sliding contact blocks for fixed and moving parts are necessary.

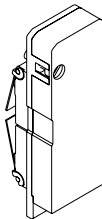


| Cabled contact in electronic version |                      |               |          |
|--------------------------------------|----------------------|---------------|----------|
| Frame                                | Description          | Ordering code | L.P. (₹) |
| T5                                   | AUX-E-C 1Q 1SY T4-T5 | 1SDA054916R1  | 5,330    |
| T6                                   | AUX-E-C 1Q 1SY T6    | 1SDA064161R1  | 6,220    |

■ Stock items



# Tmax accessories



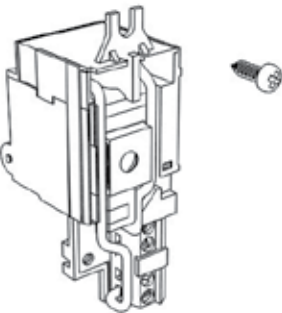
| Auxiliary contact cabled-version - AUX - C |                                         |                |          |
|--------------------------------------------|-----------------------------------------|----------------|----------|
| Frame                                      | Description                             | Ordering code  | L.P. (₹) |
| XT1....XT4                                 | AUX-C 1Q+1SY 250V AC/DC XT1..XT4 F/P    | 1SDA066431R1 ■ | 1,530    |
|                                            | AUX-C 2Q+1SY 250VAC/DC XT1..XT4 F/P     | 1SDA066433R1 ■ | 2,450    |
|                                            | AUX-C 3Q+1SY 250VAC/DC XT2..XT4 F/P     | 1SDA066434R1 ■ | 2,910    |
|                                            | AUX-C 3Q+2SY 250VAC/DC XT2-XT4 F/P      | 1SDA066436R1   | 3,580    |
|                                            | AUX-C 2Q+2SY+1S51 250VAC/DC XT2-XT4 F/P | 1SDA066438R1   | 3,870    |
|                                            | AUX-C 2Q 400V AC XT2-XT4 F/P            | 1SDA066440R1   | 1,840    |
|                                            | AUX-C 1Q+1SY 400Vac XT2-XT4 F/P         | 1SDA066444R1   | 2,930    |
|                                            | AUX-C 1Q+1SY 24Vdc XT1..XT4 F/P         | 1SDA066446R1 ■ | 2,150    |
|                                            | AUX-C 3Q+1SY 24VDC XT2..XT4 F/P         | 1SDA066448R1   | 3,370    |
| T5-T6                                      | AUX-C 1Q 1SY 250V AC/DC C T4-T5-T6      | 1SDA054910R1   | 2,150    |
|                                            | AUX-C 1Q 1SY 400V AC C T4-T5-T6         | 1SDA054912R1   | 3,160    |
|                                            | AUX-C 2Q 400V AC C T4-T5-T6             | 1SDA054913R1   | 3,630    |
|                                            | AUX-C 3Q 1SY 24VDC C T4-T5-T6           | 1SDA054915R1   | 3,400    |
|                                            | AUX-C 3Q 1SY 250V AC/DC C T4-T5-T6      | 1SDA054911R1 ■ | 4,020    |

Note : Q=Changeover contact;SY= Trip indication contact ;F/P: Fixed/Plug-in ; W:Withdrawable

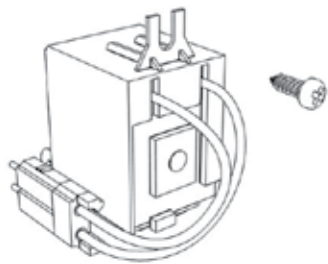
## Opening release

| Shunt opening release - SOR (Un-cabled version - For Fixed and Plug-in circuit breakers) |                                            |                |          |
|------------------------------------------------------------------------------------------|--------------------------------------------|----------------|----------|
| Frame                                                                                    | Description                                | Ordering code  | L.P. (₹) |
| XT1....XT4                                                                               | SOR XT1..XT4 12 VDC                        | 1SDA066313R1   | 2,150    |
|                                                                                          | SOR XT1..XT4 24-30 V AC/DC                 | 1SDA066314R1 ■ |          |
|                                                                                          | SOR XT1..XT4 48-60 V Ac/DC                 | 1SDA066315R1   |          |
|                                                                                          | SOR XT1..XT4 110...127 V ac-110...125 V dc | 1SDA066316R1   |          |
|                                                                                          | SOR XT1..XT4 220...240 V ac-220...250 V dc | 1SDA066317R1 ■ |          |
|                                                                                          | SOR XT1..XT4 380-440 V ac                  | 1SDA066318R1   |          |
|                                                                                          | SOR XT1..XT4 480-525 V ac                  | 1SDA066319R1   |          |
| T5-T6                                                                                    | SOR 12V DC T4-T5-T6                        | 1SDA054862R1   | 3,250    |
|                                                                                          | SOR 24V AC/DC T4-T5-T6                     | 1SDA054863R1   |          |
|                                                                                          | SOR 48...60V AC/DC T4-T5-T6                | 1SDA054864R1   |          |
|                                                                                          | SOR 110...120V AC-110...125V DC T4-T5-T6   | 1SDA054865R1 ■ |          |
|                                                                                          | SOR 220...240V AC-220...250V DC T4-T5-T6   | 1SDA054866R1   |          |
|                                                                                          | SOR 380...440V AC T4-T5-T6                 | 1SDA054867R1   |          |
|                                                                                          | SOR 480...500V AC T4-T5-T6                 | 1SDA054868R1   |          |
| T7-T7M-X1                                                                                | SOR 24V AC/DC T7-T7M-X1                    | 1SDA062065R1   | 6,360    |
|                                                                                          | SOR 30V AC/DC T7-T7M-X1                    | 1SDA062066R1   |          |
|                                                                                          | SOR 48V AC/DC T7-T7M-X1                    | 1SDA062067R1   |          |
|                                                                                          | SOR 60V AC/DC T7-T7M-X1                    | 1SDA062068R1   |          |
|                                                                                          | SOR 110...120V AC/DC T7-T7M-X1             | 1SDA062069R1   |          |
|                                                                                          | SOR 120...127V AC/DC T7-T7M-X1             | 1SDA063547R1   |          |
|                                                                                          | SOR 220...240V AC/DC T7-T7M-X1             | 1SDA063548R1   |          |
|                                                                                          | SOR 240...250V AC/DC T7-T7M-X1             | 1SDA062070R1   |          |
|                                                                                          | SOR 380...400V AC T7-T7M-X1                | 1SDA062071R1   |          |
|                                                                                          | SOR 415...440V AC T7-T7M-X1                | 1SDA062072R1   |          |

Note: For T7 / T7M in Withdrawable version sliding contact blocks for fixed and moving parts are necessary.



Tmax accessories



| Shunt opening release - SOR - C (Cabled version) |                                            |                |          |
|--------------------------------------------------|--------------------------------------------|----------------|----------|
| Frame                                            | Description                                | Ordering code  | L.P. (₹) |
| XT1...XT4                                        | SOR-C XT1...XT4 F/P 12 Vdc                 | 1SDA066321R1   | 3,270    |
|                                                  | SOR-C XT1...XT4 F/P 24-30 Vac/dc           | 1SDA066322R1   |          |
|                                                  | SOR-C XT1...XT4 F/P 48-60 Vac/dc           | 1SDA066323R1   |          |
|                                                  | SOR-C XT1...XT4 F/P 110-127Vac-110-125Vdc  | 1SDA066324R1   |          |
|                                                  | SOR-C XT1...XT4 F/P 220-240Vac-220-250Vdc  | 1SDA066325R1   |          |
|                                                  | SOR-C XT1...XT4 F/P 380-440 Vac            | 1SDA066326R1   |          |
|                                                  | SOR-C XT1...XT4 F/P 480-525 Vac            | 1SDA066327R1   | 3,830    |
|                                                  | SOR-C XT2-XT4 W 12 Vdc                     | 1SDA066328R1   |          |
|                                                  | SOR-C XT2-XT4 W 24-30 Vac/dc               | 1SDA066329R1   |          |
|                                                  | SOR-C XT2-XT4 W 48-60 Vac/dc               | 1SDA066330R1   |          |
|                                                  | SOR-C XT2-XT4 W 110-127Vac-110-125Vdc      | 1SDA066331R1   |          |
|                                                  | SOR-C XT2-XT4 W 220-240Vac-220-250Vdc      | 1SDA066332R1   |          |
|                                                  | SOR-C XT2-XT4 W 380-440 Vac                | 1SDA066333R1   |          |
|                                                  | SOR-C XT2-XT4 W 480-525 Vac                | 1SDA066334R1   |          |
| T5-T6                                            | SOR-C 12V DC T4-T5-T6                      | 1SDA054869R1   | 5,740    |
|                                                  | SOR-C 24V AC/DC T4-T5-T6                   | 1SDA054870R1   |          |
|                                                  | SOR-C 48...60V AC/DC T4-T5-T6              | 1SDA054871R1   |          |
|                                                  | SOR-C 110...120V AC-110...125V DC T4-T5-T6 | 1SDA054872R1   |          |
|                                                  | SOR-C 220...240V AC-220...250V DC T4-T5-T6 | 1SDA054873R1 ■ |          |
|                                                  | SOR 380...440V AC T4-T5-T6                 | 1SDA054875R1   |          |
|                                                  | SOR 480...500V AC T4-T5-T6                 | 1SDA054868R1   |          |

Note:- F/P: Fixed/Plug-in ; W: Withdrawable

Test unit- SOR

| Frame          | Description                  | Ordering code | L.P. (₹) |
|----------------|------------------------------|---------------|----------|
| T7-T7M-X1-E1/6 | SOR test unit T7-T7M-X1-E1/6 | 1SDA050228R1  | 29,820   |

| Under voltage release - UVR (Un-cabled version - For Fixed and Plug-in circuit breakers) |                                          |                |          |
|------------------------------------------------------------------------------------------|------------------------------------------|----------------|----------|
| Frame                                                                                    | Description                              | Ordering code  | L.P. (₹) |
| XT1....XT4                                                                               | UVR XT1...XT4 24-30 VAC/DC               | 1SDA066389R1   | 4,030    |
|                                                                                          | UVR XT1...XT4 48 VAC/DC                  | 1SDA069064R1   |          |
|                                                                                          | UVR XT1...XT4 60 VAC/DC                  | 1SDA066390R1   |          |
|                                                                                          | UVR XT1...XT4 110-127Vac-110-125Vdc      | 1SDA066391R1   |          |
|                                                                                          | UVR XT1...XT4 220-240Vac-220-250Vdc      | 1SDA066392R1 ■ |          |
|                                                                                          | UVR XT1...XT4 380-440 Vac                | 1SDA066393R1 ■ |          |
|                                                                                          | UVR XT1...XT4 480-525 Vac                | 1SDA066394R1   |          |
| T5-T6                                                                                    | UVR 24V AC/DC T4-T5-T6                   | 1SDA054880R1   | 7,520    |
|                                                                                          | UVR 48V AC/DC T4-T5-T6                   | 1SDA054881R1   |          |
|                                                                                          | UVR 60V AC/DC T4-T5-T6                   | 1SDA054882R1   |          |
|                                                                                          | UVR 110...120V AC-110...125V DC T4-T5-T6 | 1SDA054883R1 ■ |          |
|                                                                                          | UVR 220...240V AC-220...250V DC T4-T5-T6 | 1SDA054884R1 ■ |          |
|                                                                                          | UVR 380...440V AC T4-T5-T6               | 1SDA054885R1 ■ |          |
|                                                                                          | UVR 480...500V AC T4-T5-T6               | 1SDA054886R1   |          |
| T7-T7M                                                                                   | UVR 24V AC/DC T7-T7M-X1                  | 1SDA062087R1   | 8,460    |
|                                                                                          | UVR 30V AC/DC T7-T7M-X1                  | 1SDA062088R1   |          |
|                                                                                          | UVR 48V AC/DC T7-T7M-X1                  | 1SDA062089R1   |          |
|                                                                                          | UVR 60V AC/DC T7-T7M-X1                  | 1SDA062090R1   |          |
|                                                                                          | UVR 110...120V AC/DC T7-T7M-X1           | 1SDA062091R1   |          |
|                                                                                          | UVR 120...127V AC/DC T7-T7M-X1           | 1SDA063551R1   |          |
|                                                                                          | UVR 220...240V AC/DC T7-T7M-X1           | 1SDA063552R1   |          |
|                                                                                          | UVR 240...250V AC/DC T7-T7M-X1           | 1SDA062092R1   |          |
|                                                                                          | UVR 380...400V AC T7-T7M-X1              | 1SDA062093R1   |          |
|                                                                                          | UVR 415...440V AC T7-T7M-X1              | 1SDA062094R1   |          |

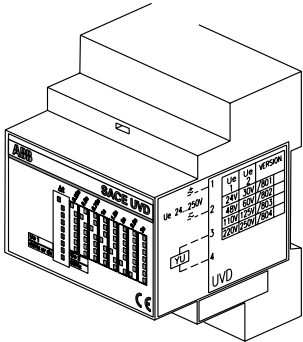
Note: For T7 TM in Withdrawable version sliding contact blocks for fixed and moving parts are necessary.



# Tmax accessories

| Under voltage release C - UVR - C (Cabled version) |                                          |                |          |
|----------------------------------------------------|------------------------------------------|----------------|----------|
| Frame                                              | Description                              | Ordering code  | L.P. (₹) |
| XT1....XT4                                         | UVR-C XT1..XT4 F/P 24-30 VAC/DC          | 1SDA066396R1   | 6,280    |
|                                                    | UVR-C XT1..XT4 F/P 48 Vac/dc             | 1SDA069065R1   |          |
|                                                    | UVR-C XT1..XT4 F/P 60 Vac/dc             | 1SDA066397R1   |          |
|                                                    | UVR-C XT1..XT4 F/P 110-127Vac-110-125Vdc | 1SDA066398R1   |          |
|                                                    | UVR-C XT1..XT4 F/P 220-240Vac-220-250Vdc | 1SDA066399R1 ■ |          |
|                                                    | UVR-C XT1..XT4 F/P 380-440 Vac           | 1SDA066400R1   |          |
|                                                    | UVR-C XT1..XT4 F/P 480-525 Vac           | 1SDA066401R1   | 6,800    |
|                                                    | UVR-C XT2-XT4 W 24-30 Vac/dc             | 1SDA066403R1   |          |
|                                                    | UVR-C XT2-XT4 W 48 Vac/dc                | 1SDA069066R1   |          |
|                                                    | UVR-C XT2-XT4 W 60 Vac/dc                | 1SDA066404R1   |          |
|                                                    | UVR-C XT2-XT4 W 110-127Vac-110-125Vdc    | 1SDA066405R1   |          |
|                                                    | UVR-C XT2-XT4 W 220-240Vac-220-250Vdc    | 1SDA066406R1   |          |
|                                                    | UVR-C XT2-XT4 W 380-440 Vac              | 1SDA066407R1   |          |
|                                                    | UVR-C XT2-XT4 W 480-525 Vac              | 1SDA066408R1   | 10,160   |
|                                                    | UVR-C 24V AC/DC T4-T5-T6                 | 1SDA054887R1   |          |
| T5-T6                                              | UVR-C 48V AC/DC T4-T5-T6                 | 1SDA054888R1   |          |

Note:- F/P: Fixed/Plug-in ; W: Withdrawable



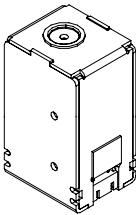
| Time delay device for under voltage release- UVD |                                          |               |          |
|--------------------------------------------------|------------------------------------------|---------------|----------|
| Frame                                            | Description                              | Ordering code | L.P. (₹) |
| XT1....XT4                                       | UVD T1...T6 - XT1...XT4 24...30 Vac/dc   | 1SDA051357R1  | 34,340   |
|                                                  | UVD T1...T6 - XT1...XT4 48...60 Vac/dc   | 1SDA051358R1  |          |
|                                                  | UVD T1...T6 - XT1...XT4 110...125 Vac/dc | 1SDA051360R1  |          |
|                                                  | UVD T1...T6 - XT1...XT4 220...250 Vac/dc | 1SDA051361R1  |          |
| T5...T6                                          | UVD 24...30V AC/DC T1...T6               | 1SDA051357R1  | 11,820   |
|                                                  | UVD 48...60V AC/DC T1...T6               | 1SDA051358R1  |          |
|                                                  | UVD 110...125V AC/DC T1...T6             | 1SDA051360R1  |          |
| T7-T7M                                           | UVD 220...250V AC/DC T1...T6             | 1SDA051361R1  | 11,820   |
|                                                  | UVD 24/30V AC/DC E1/6 - T7-T7M-X1        | 1SDA038316R1  |          |
|                                                  | UVD 48V AC/DC E1/6 - T7-T7M-X1           | 1SDA038317R1  |          |
|                                                  | UVD 60V AC/DC E1/6 - T7-T7M-X1           | 1SDA038318R1  |          |
|                                                  | UVD 110...125V AC/DC E1/6 - T7-T7M-X1    | 1SDA038319R1  |          |
|                                                  | UVD 220...250V AC/DC E1/6 - T7-T7M-X1    | 1SDA038320R1  |          |

Note: Order along with relative UV release

## Shunt closing release

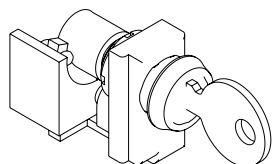
| Frame | Description                 | Ordering code | L.P. (₹) |
|-------|-----------------------------|---------------|----------|
| T7M   | SCR 24V AC/DC T7M-X1        | 1SDA062076R1  | 8,040    |
|       | SCR 30V AC/DC T7M-X1        | 1SDA062077R1  |          |
|       | SCR 48V AC/DC T7M-X1        | 1SDA062078R1  |          |
|       | SCR 60V AC/DC T7M-X1        | 1SDA062079R1  |          |
|       | SCR 110...120V AC/DC T7M-X1 | 1SDA062080R1  |          |
|       | SCR 120...127V AC/DC T7M-X1 | 1SDA063549R1  |          |
|       | SCR 220...240V AC/DC T7M-X1 | 1SDA063550R1  |          |
|       | SCR 240...250V AC/DC T7M-X1 | 1SDA062081R1  |          |
|       | SCR 380...400V AC T7M-X1    | 1SDA062082R1  |          |
|       | SCR 415...440V AC T7M-X1    | 1SDA062083R1  |          |

Note: For T7 M in withdrawable version sliding blocks for fixed and moving parts are necessary.



# Tmax accessories

## Key lock



| Key Lock - KLC                  |                                                                        |                |          |
|---------------------------------|------------------------------------------------------------------------|----------------|----------|
| Frame                           | Description                                                            | Ordering code  | L.P. (₹) |
| KLC for Manual Breaker          |                                                                        |                |          |
| XT1.....XT4                     | KLC XT1 KEY LOCK RONIS ON CB DIFF.KEY                                  | 1SDA066593R1   | 1,950    |
|                                 | KLC XT1 KEY LOCK RONIS ON CB TYPE A                                    | 1SDA066594R1   |          |
|                                 | KLC XT1 KEY LOCK RONIS ON CB TYPE B                                    | 1SDA066595R1   |          |
|                                 | KLC XT1 KEY LOCK RONIS ON CB TYPE C                                    | 1SDA066596R1   |          |
|                                 | KLC XT1 KEY LOCK RONIS ON CB TYPE D                                    | 1SDA066597R1   |          |
|                                 | KLC XT1 KEY LOCK RONIS EQ.FEL.A OP/CL                                  | 1SDA066598R1   |          |
|                                 | KLC XT2-XT4 KEY LOCK RONIS SE.OP.xC.BRE.                               | 1SDA066599R1   |          |
|                                 | KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE A                                | 1SDA066600R1 ■ |          |
|                                 | KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE B                                | 1SDA066601R1   |          |
|                                 | KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE C                                | 1SDA066602R1   |          |
|                                 | KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE D                                | 1SDA066603R1   |          |
|                                 | KLC XT2-XT4 KEY LOCK RONIS EQ.FE.A OP/CL                               | 1SDA066604R1   |          |
|                                 | KLC XT3 KEY LOCK RONIS SEV.OP. X C.BREA.                               | 1SDA066605R1   |          |
|                                 | KLC XT3 KEY LOCK RONIS ON CB TYPE A                                    | 1SDA066606R1   |          |
|                                 | KLC XT3 KEY LOCK RONIS ON CB TYPE B                                    | 1SDA066607R1   |          |
|                                 | KLC XT3 KEY LOCK RONIS ON CB TYPE C                                    | 1SDA066608R1   |          |
|                                 | KLC XT3 KEY LOCK RONIS ON CB TYPE D                                    | 1SDA066609R1   |          |
|                                 | KLC XT3 KEY LOCK RONIS EQ.FEL.A OP/CL                                  | 1SDA066610R1   |          |
| T7                              | KLC-D Key Lock - Different Key in Open Position T7                     | 1SDA062134R1   | 3,390    |
|                                 | KLC-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7  | 1SDA062135R1   |          |
|                                 | KLC-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7  | 1SDA062136R1   |          |
|                                 | KLC-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7  | 1SDA062137R1   |          |
|                                 | KLC-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7  | 1SDA062138R1   |          |
|                                 | KLC Arrangment for Ronis Key Lock T7                                   | 1SDA062139R1   |          |
| T7 M                            | KLC Arrangment for Profalux Key Lock T7                                | 1SDA062140R1   | 3,590    |
|                                 | KLC-D Different Key in open Position T7M                               | 1SDA062141R1   |          |
|                                 | KLC-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7M | 1SDA062142R1   |          |
|                                 | KLC-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7M | 1SDA062143R1   |          |
|                                 | KLC-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7M | 1SDA062144R1   |          |
|                                 | KLC-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7M | 1SDA062145R1   |          |
| KLC Same Key Ronis-Profalux T7M |                                                                        | 1SDA062146R1   |          |



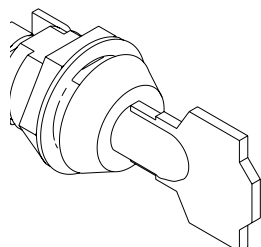
| Pad Lock - KLC         |                                         |               |          |
|------------------------|-----------------------------------------|---------------|----------|
| Frame                  | Description                             | Ordering code | L.P. (₹) |
| KLC for Manual breaker |                                         |               |          |
| XT1.....XT4            | PLL XT1-XT3 REMOV.PADL.DEVICE OPEN PLUG | 1SDA066588R1  | 1,430    |
|                        | PLL XT1-XT3 PADLOCKS DEVICE OPEN        | 1SDA066589R1  |          |
|                        | PLL XT2-XT4 PADLOCKS DEVICE OPEN        | 1SDA066590R1  |          |
|                        | PLL XT1-XT3 PADLOCKS DEVICE OP/CL       | 1SDA066591R1  |          |
|                        | PLL XT2-XT4 PADLOCKS DEVICE OP/CL       | 1SDA066592R1  |          |



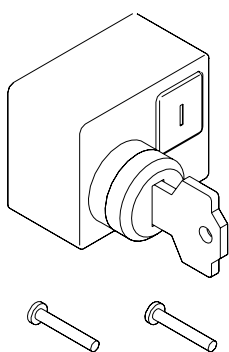
| Key Lock for Rotary Handle - RHL |                                          |                |          |
|----------------------------------|------------------------------------------|----------------|----------|
| Frame                            | Description                              | Ordering code  | L.P. (₹) |
| XT1.....XT4                      | RHL XT1..XT4 KEY LOCK RONIS SEVERAL      | 1SDA066617R1 ■ | 1,530    |
|                                  | RHL XT1..XT4 KEY LOCK RONIS TYPE A       | 1SDA066618R1 ■ |          |
|                                  | RHL XT1..XT4 KEY LOCK RONIS TYPE B       | 1SDA066619R1   |          |
|                                  | RHL XT1..XT4 KEY LOCK RONIS TYPE C       | 1SDA066620R1   |          |
|                                  | RHL XT1..XT4 KEY LOCK RONIS TYPE D       | 1SDA066621R1   |          |
|                                  | RHL XT1..XT4 KEY LOCK RONIS SEVER. OP/CL | 1SDA066622R1   |          |
|                                  | RHL XT1..XT4 KEY LOCK RONIS SEVER. OP/CL | 1SDA069182R1   |          |
|                                  | MOL-D XT1-XT3 KEY LOCK RONIS DIFF. KEY   | 1SDA066623R1   |          |

■ Stock items

# Tmax accessories



| Key Lock for Front/Rotary/Fixed Part- KLF |                                                                           |                |          |
|-------------------------------------------|---------------------------------------------------------------------------|----------------|----------|
| Frame                                     | Description                                                               | Ordering code  | L.P. (₹) |
| T5                                        | KLF-D Lock for Front/Rotary Handle - Different Key in open Position T4-T5 | 1SDA054939R1   | 3,230    |
|                                           | KLF-S Block for Front/Rotary Handle - Same Key (N. 20005) T4-T5           | 1SDA054940R1 ■ |          |
|                                           | KLF-S Block for Front/Rotary Handle - Same Key (N. 20006) T4-T5           | 1SDA054941R1   |          |
|                                           | KLF-S Block for Front/Rotary Handle - Same Key (N. 20007) T4-T5           | 1SDA054942R1   |          |
|                                           | KLF-S Block for Front/Rotary Handle - Same Key (N. 20008) T4-T5           | 1SDA054943R1   |          |
| T5-T6                                     | KLF-D FP Different Key for Each Circuit Breaker T4-T5-T6                  | 1SDA055230R1   | 3,050    |
|                                           | KLF-D FP Same Key for Different Groups of Circuit Breaker T4-T5-T6        | 1SDA055231R1   |          |
|                                           | KLF-D Ronis Fixed Part- Lock Type Ronis T4-T5-T6                          | 1SDA055233R1   |          |
| T6                                        | KLF-D Different Key in open Position T6                                   | 1SDA060658R1   | 3,140    |
|                                           | KLF-S Same Key for Different Groups of Circuit Breakers (N. 20005) T6     | 1SDA060659R1   |          |
|                                           | KLF-S Same Key for Different Groups of Circuit Breakers (N. 20006) T6     | 1SDA060660R1   |          |
|                                           | KLF-S Same Key for Different Groups of Circuit Breakers (N. 20007) T6     | 1SDA060661R1   |          |
|                                           | KLF-S Same Key for Different Groups of Circuit Breakers (N. 20008) T6     | 1SDA060662R1   |          |
| T7                                        | KLF-D Different Key in open Position T7                                   | 1SDA063555R1   | 3,140    |
|                                           | KLF-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7     | 1SDA063556R1   |          |
|                                           | KLF-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7     | 1SDA063557R1   |          |
|                                           | KLF-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7     | 1SDA063558R1   |          |
|                                           | KLF-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7     | 1SDA063559R1   |          |
|                                           | KLF Arrangement for Ronis key lock T7                                     | 1SDA063560R1   |          |
|                                           | KLF Arrangement for Profalux key lock T7                                  | 1SDA063561R1   |          |



## Key lock for motor operated- MOL

| Frame   | Description                                                                | Ordering code  | L.P. (₹) |
|---------|----------------------------------------------------------------------------|----------------|----------|
| XT1-XT3 | MOL-S XT1-XT3 KEY LOCK RONIS TYPE A                                        | 1SDA066624R1   | 3,260    |
|         | MOL-S XT1-XT3 KEY LOCK RONIS TYPE B                                        | 1SDA066625R1   |          |
|         | MOL-S XT1-XT3 KEY LOCK RONIS TYPE C                                        | 1SDA066626R1   |          |
|         | MOL-S XT1-XT3 KEY LOCK RONIS TYPE D                                        | 1SDA066627R1   |          |
| XT2-XT4 | MOL-D XT2-XT4 KEY LOCK RONIS DIFF. KEY                                     | 1SDA066629R1   |          |
|         | MOL-S XT2-XT4 KEY LOCK RONIS TYPE A                                        | 1SDA066630R1   |          |
|         | MOL-S XT2-XT4 KEY LOCK RONIS TYPE B                                        | 1SDA066631R1   |          |
|         | MOL-S XT2-XT4 KEY LOCK RONIS TYPE C                                        | 1SDA066632R1   |          |
|         | MOL-S XT2-XT4 KEY LOCK RONIS TYPE D                                        | 1SDA066633R1   |          |
|         | MOL-M XT2-XT4 KEY LOCK RONIS MAN. OPER.                                    | 1SDA066634R1   |          |
| T5      | MOL-D - Same Key T4-T5                                                     | 1SDA054904R1   |          |
|         | MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T4-T5 | 1SDA054905R1 ■ |          |
|         | MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T4-T5 | 1SDA054906R1   |          |
|         | MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T4-T5 | 1SDA054907R1   |          |
|         | MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T4-T5 | 1SDA054908R1   |          |
| T5-T6   | MOL-M - Lock only on Manual Operation - Same Key T4-T5-T6                  | 1SDA054909R1   |          |
|         | MOL-D - Different Key T6                                                   | 1SDA060611R1   |          |
| T6      | MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T6    | 1SDA060612R1   |          |
|         | MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T6    | 1SDA060613R1   |          |
|         | MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T6    | 1SDA060614R1   |          |
|         | MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T6    | 1SDA060615R1   |          |



## Motor operator with direct action - MOD

| Frame     | Description                   | Ordering code  | L.P. (₹) |
|-----------|-------------------------------|----------------|----------|
| XT1 - XT3 | MOD XT1-XT3 24 V dc           | 1SDA066457R1   | 21,450   |
|           | MOD XT1-XT3 48...60 V dc      | 1SDA066458R1   |          |
|           | MOD XT1-XT3 110...125 V ac/dc | 1SDA066459R1   | 18,390   |
|           | MOD XT1-XT3 220...250 V ac/dc | 1SDA066460R1 ■ |          |
|           | MOD XT1-XT3 380...440 V ac    | 1SDA066461R1   | 21,450   |
|           | MOD XT1-XT3 480...525 V ac    | 1SDA066462R1   |          |

■ Stock items



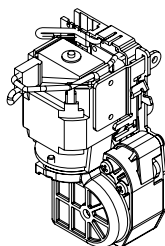
# Tmax accessories



| Stored Energy Motor Operator - MOE |                               |                |          |
|------------------------------------|-------------------------------|----------------|----------|
| Frame                              | Description                   | Ordering code  | L.P. (₹) |
| XT2-XT4                            | MOE XT2-XT4 24 V dc           | 1SDA066463R1   | 31,660   |
|                                    | MOE XT2-XT4 48...60 V dc      | 1SDA066464R1   |          |
|                                    | MOE XT2-XT4 110...125 V ac/dc | 1SDA066465R1   | 27,580   |
|                                    | MOE XT2-XT4 220...250 V ac/dc | 1SDA066466R1 ■ |          |
|                                    | MOE XT2-XT4 380...440 V ac    | 1SDA066467R1   | 31,660   |
| T5                                 | MOE XT2-XT4 480...525 V ac    | 1SDA066468R1   |          |
|                                    | MOE 24 V DC T4-T5             | 1SDA054894R1   | 32,430   |
|                                    | MOE 48...60 V DC T4-T5        | 1SDA054895R1   |          |
|                                    | MOE 110...125 V AC / DC T4-T5 | 1SDA054896R1   |          |
|                                    | MOE 220...250 V AC / DC T4-T5 | 1SDA054897R1 ■ |          |
|                                    | MOE 380 V AC T4-T5            | 1SDA054898R1   |          |
| T6                                 | MOE 24 V DC T6                | 1SDA060395R1   | 40,380   |
|                                    | MOE 48...60 V DC T6           | 1SDA060396R1   |          |
|                                    | MOE 110...125 V AC/DC T6      | 1SDA060397R1   |          |
|                                    | MOE 220...250 V AC/DC T6      | 1SDA060398R1 ■ |          |
|                                    | MOE 380 V AC T6               | 1SDA060399R1   |          |



| Stored energy motor operator with electronics - MOE-E |                                          |                |          |
|-------------------------------------------------------|------------------------------------------|----------------|----------|
| Frame                                                 | Description                              | Ordering code  | L.P. (₹) |
| XT2 - XT4                                             | MOE-E XT2-XT4 24V dc X REM.CONTR.        | 1SDA066469R1   | 33,190   |
|                                                       | MOE-E XT2-XT4 48...60V dc X REM.CONTR.   | 1SDA066470R1   |          |
|                                                       | MOE-E XT2-XT4 110..125V ac/d X REM.CONT. | 1SDA066471R1   |          |
|                                                       | MOE-E XT2-XT4 220..250V ac/dc X REM.CONT | 1SDA066472R1   |          |
|                                                       | MOE-E XT2-XT4 380...440V ac X REM.CONTR  | 1SDA066473R1   |          |
| T5                                                    | MOE-E XT2-XT4 480..525V ac X REM.CONTR   | 1SDA066474R1   | 42,520   |
|                                                       | MOE-E 24 V DC T4-T5                      | 1SDA054899R1   |          |
|                                                       | MOE-E 48...60 V DC T4-T5                 | 1SDA054900R1   |          |
|                                                       | MOE-E 110...125 V AC / DC T4-T5          | 1SDA054901R1   |          |
|                                                       | MOE-E 220...250 V AC / DC T4-T5          | 1SDA054902R1 ■ |          |
| T6                                                    | MOE-E 380 V AC T4-T5                     | 1SDA054903R1   | 52,480   |
|                                                       | MOE-E 24 V DC T6                         | 1SDA060400R1   |          |
|                                                       | MOE-E 48...60 V DC T6                    | 1SDA060401R1   |          |
|                                                       | MOE-E 110...125 V AC/DC T6               | 1SDA060402R1   |          |
|                                                       | MOE-E 220...250 V AC/DC T6               | 1SDA060403R1   |          |
|                                                       | MOE-E 380 V AC T6                        | 1SDA060404R1   |          |



| Spring charging motor- M |                        |               |          |
|--------------------------|------------------------|---------------|----------|
| Frame                    | Description            | Ordering code | L.P. (₹) |
| T7M                      | M 24...30V AC/DC T7M   | 1SDA062113R1  | 40,380   |
|                          | M 48...60V AC/DC T7M   | 1SDA062114R1  | 42,520   |
|                          | M 100...130V AC/DC T7M | 1SDA062115R1  | 40,380   |
|                          | M 220...250V AC/DC T7M | 1SDA062116R1  |          |
|                          | M 380...415V AC T7M    | 1SDA062117R1  |          |



| High insulating terminal covers - HTC |                                      |               |          |
|---------------------------------------|--------------------------------------|---------------|----------|
| Frame                                 | Description                          | Ordering code | L.P. (₹) |
| XT1...XT4                             | HTC XT1 3p TERMINAL COVERS HIGH 2pcs | 1SDA066664R1  | 2,550    |
|                                       | HTC XT2 3p TERMINAL COVERS HIGH 2pcs | 1SDA066666R1  | 2,910    |
|                                       | HTC XT3 3p TERMINAL COVERS HIGH 2pcs | 1SDA066668R1  | 3,160    |
|                                       | HTC XT4 3p TERMINAL COVERS HIGH 2pcs | 1SDA066670R1  | 3,520    |
|                                       | HTC XT1 4p TERMINAL COVERS HIGH 2pcs | 1SDA066665R1  | 3,420    |
|                                       | HTC XT2 4p TERMINAL COVERS HIGH 2pcs | 1SDA066667R1  | 3,870    |
|                                       | HTC XT3 4p TERMINAL COVERS HIGH 2pcs | 1SDA066669R1  | 4,240    |
|                                       | HTC XT4 4p TERMINAL COVERS HIGH 2pcs | 1SDA066671R1  | 4,700    |

■ Stock items





# Tmax accessories



| Low insulating terminal covers - LTC |                                     |               |          |
|--------------------------------------|-------------------------------------|---------------|----------|
| Frame                                | Description                         | Ordering code | L.P. (₹) |
| XT1....XT4                           | LTC XT1 3p TERMINAL COVERS LOW 2pcs | 1SDA066655R1  | 1,840    |
|                                      | LTC XT2 3p TERMINAL COVERS LOW 2pcs | 1SDA066657R1  |          |
|                                      | LTC XT3 3p TERMINAL COVERS LOW 2pcs | 1SDA066660R1  | 1,950    |
|                                      | LTC XT4 3p TERMINAL COVERS LOW 2pcs | 1SDA066662R1  |          |
|                                      | LTC XT1 4p TERMINAL COVERS LOW 2pcs | 1SDA066656R1  | 2,150    |
|                                      | LTC XT2 4p TERMINAL COVERS LOW 2pcs | 1SDA066659R1  |          |
|                                      | LTC XT3 4p TERMINAL COVERS LOW 2pcs | 1SDA066661R1  | 2,400    |
|                                      | LTC XT4 4p TERMINAL COVERS LOW 2pcs | 1SDA066663R1  | 2,750    |
| T5                                   | LTC 3p T5                           | 1SDA054968R1  | 2,610    |
|                                      | LTC 4p T5                           | 1SDA054969R1  | 3,440    |
| T6                                   | LTC 3p T6                           | 1SDA014038R1  | 2,850    |
|                                      | LTC 4p T6                           | 1SDA014039R1  | 3,800    |
| T7-T7M                               | LTC 3p T7-T7M                       | 1SDA063093R1  | 4,370    |
|                                      | LTC 4p T7-T7M                       | 1SDA063094R1  | 5,610    |

| Dialogue unit - PR 222/DS-PD |                          |               |          |
|------------------------------|--------------------------|---------------|----------|
| Frame                        | Description              | Ordering code | L.P. (₹) |
| T5-T6                        | PR222DS/PD LSI T4-T5-T6  | 1SDA055066R1  | 27,130   |
|                              | PR222DS/PD LSIg T4-T5-T6 | 1SDA055067R1  | 28,320   |

Note : Order X3 connector along with dialogue unit

| Dialogue unit - Ekip E-LSIG |                                  |               |          |
|-----------------------------|----------------------------------|---------------|----------|
| Frame                       | Description                      | Ordering code | L.P. (₹) |
| T5                          | DIALOG Ekip E-LSIG MOD.T5 (EXTR) | 1SDA081094R1  | 23,480   |

| X3 connector |                                                           |               |          |
|--------------|-----------------------------------------------------------|---------------|----------|
| Frame        | Description                                               | Ordering code | L.P. (₹) |
| T5-T6        | X3 Connector for fixed circuit-breaker PR222DS or PR223DS | 1SDA055059R1  | 3,580    |
|              | X3 Connector for plug-in/withdrawable circuit-breaker     | 1SDA055061R1  |          |

| X4 Connector |                                                       |               |          |
|--------------|-------------------------------------------------------|---------------|----------|
| Frame        | Description                                           | Ordering code | L.P. (₹) |
| T5-T6        | X4 Connector for fixed circuit-breaker                | 1SDA055060R1  | 3,580    |
|              | X4 Connector for plug-in/withdrawable circuit-breaker | 1SDA055062R1  |          |

# Tmax accessories



| Residual current devices |                       |               |          |
|--------------------------|-----------------------|---------------|----------|
| Frame                    | Description           | Ordering code | L.P. (₹) |
| XT1                      | RC Inst x XT1 3p F    | 1SDA067122R1  | 20,430   |
|                          | RC Sel x XT1 3p F     | 1SDA067123R1  |          |
|                          | RC Sel 200 x XT1 4p F | 1SDA067121R1  | 29,620   |
|                          | RC Inst x XT1 4p F    | 1SDA067124R1  | 23,700   |
|                          | RC Sel x XT1 4p F     | 1SDA067125R1  |          |
| XT2                      | RC Sel x XT2 4p F     | 1SDA067126R1  | 43,600   |
|                          | RC Inst x XT3 3p F    | 1SDA067127R1  | 51,160   |
| XT3                      | RC Sel x XT3 3p F     | 1SDA067128R1  | 56,870   |
|                          | RC Inst x XT3 4p F    | 1SDA067129R1  | 55,040   |
|                          | RC B Type x XT3 4p F  | 1SDA067132R1  | 85,670   |
|                          | RC Sel x XT3 4p F     | 1SDA067130R1  | 60,600   |
| T5                       | RC222/5 4p Fixed T5   | 1SDA054955R1  | 50,240   |



## Automation transfer switch - ATS

| Automatic transfer switch |             |               |          |
|---------------------------|-------------|---------------|----------|
| Frame                     | Description | Ordering code | L.P. (₹) |
| XT2-XT4/ T5-T7/ E1-E6     | ATS021      | 1SDA065523R1  | 83,740   |
|                           | ATS022      | 1SDA065524R1  | 91,910   |

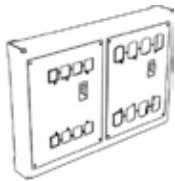
Note : ATS will be used along with either two motorized ACB or MCCBs with required interlocking and changeover base plate as per the requirement.



| Mechanical interlock between circuit breakers |                                            |               |          |
|-----------------------------------------------|--------------------------------------------|---------------|----------|
| Frame                                         | Description                                | Ordering code | L.P. (₹) |
| XT1....XT4                                    | MIR-HR XT1..XT4 MECH INTERLOCK HOR. 2 CB** | 1SDA066637R1  | 13,790   |
|                                               | MIR-VR XT1..XT4 MECH INTERLOCK VER. 2 CB** | 1SDA066638R1  |          |
|                                               | MIR-P PLATE x XT1 F                        | 1SDA066639R1  | 4,610    |
|                                               | MIR-P PLATE x XT2 F                        | 1SDA066641R1  |          |
|                                               | MIR-P PLATE x XT3 F                        | 1SDA066643R1  |          |
|                                               | MIR-P PLATE x XT4 F                        | 1SDA066645R1  |          |

Note : \*\* Following must be ordered to make the rear interlock.

1. A MIR-HR or MIR-VR
2. A plate MIR-P for each circuit breaker to be interlocked



| Mechanical interlock between circuit breakers - MIR - to be used with copper spreaders only |                                                                                            |               |          |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------|----------|
| Frame                                                                                       | Description                                                                                | Ordering code | L.P. (₹) |
| T5                                                                                          | MIR-HB Horizontal Interlock Frame Unit T4-T5                                               | 1SDA054946R1  | 10,390   |
|                                                                                             | MIR-VB Vertical Interlock Frame Unit T4-T5                                                 | 1SDA054947R1  |          |
|                                                                                             | MIR-P Plate for Interlock Type D T5 400 (F-P-W) or T5 630 (F)+T5 400 (F-P-W) or T5 630 (F) | 1SDA054951R1  | 5,200    |
|                                                                                             | MIR-P Plate for Interlock Type E T5 400 (F-P-W) or T5 630 (F) + T5 630 (P-W)               | 1SDA054952R1  |          |
|                                                                                             | MIR-P Plate for Interlock Type F T5 630 (P-W) + T5 630 (P-W)                               | 1SDA054953R1  |          |
| T6                                                                                          | MIR-H Horizontal Mechanical Interlock T6                                                   | 1SDA060685R1  | 16,460   |
|                                                                                             | MIR-V Vertical Mechanical Interlock T6                                                     | 1SDA060686R1  |          |

Note: For interlocking in T4-T5, Order both frame and plate unit

| Mechanical interlock with cables between 2 circuit breakers |                                         |               |          |
|-------------------------------------------------------------|-----------------------------------------|---------------|----------|
| Frame                                                       | Description                             | Ordering code | L.P. (₹) |
| T7-T7M                                                      | Cable Kit for InterlockT7-T7M           | 1SDA062127R1  | 6,850    |
|                                                             | Cable Kit for InterlockT7-T7M with E1-6 | 1SDA064568R1  | 7,460    |
|                                                             | Plate for Interlock T7-T7M Fixed        | 1SDA062129R1  | 27,280   |
|                                                             | Plate for Interlock T7-T7M withdrawble  | 1SDA062131R1  | 29,190   |

Note: It is Necessary to order 2 plates and one kit of cables



# Tmax accessories



| Accessories for electronic trip units |                                                      |               |              |
|---------------------------------------|------------------------------------------------------|---------------|--------------|
| Frame                                 | Description                                          | Ordering code | L.P. (₹)     |
| XT2 - XT4                             | EKIP LED METER x LSI-LSIG-M/LRIU XT2-XT4             | 1SDA068660R1  | 10,410       |
|                                       | EKIP DISPLAY x LSI-LSIG-M/LRIU XT2-XT4               | 1SDA068659R1  | 12,260       |
|                                       | EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 F/P               | 1SDA068661R1  | 18,390       |
|                                       | EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 W                 | 1SDA068662R1  |              |
|                                       | KIT x CONNECTION Vaux 24Vdc XT2-XT4 F/P              | 1SDA066980R1  | 3,780        |
|                                       | KIT x CONNECTION Vaux 24Vdc XT2-XT4 W                | 1SDA066981R1  | 4,280        |
|                                       | EKIP multimeter display on front of the switch board | 1SDA074192R1  | Upon request |
| T4-T5-T6-T7-XT2-XT4/E1-E6             | HMI030 interface on the front of switchgear          | 1SDA063143R1  | 33,660       |

Note:- F/P: Fixed/Plug-in ; W: Withdrawable



| Test and configuration unit |                        |               |          |
|-----------------------------|------------------------|---------------|----------|
| Frame                       | Description            | Ordering code | L.P. (₹) |
| XT2 - XT4                   | Ekip TT Trip test unit | 1SDA066988R1  | 6,120    |



| Bracket for fixing onto DIN rail |                                       |               |          |
|----------------------------------|---------------------------------------|---------------|----------|
| Frame                            | Description                           | Ordering code | L.P. (₹) |
| XT1                              | KIT DIN50022 XT1 3p PLATE DIN         | 1SDA066652R1  | 1,530    |
|                                  | KIT DIN50022 XT1 4p PLATE DIN         | 1SDA066419R1  | 1,630    |
|                                  | KIT DIN50022 XT1+RC Sel 200 PLATE DIN | 1SDA067134R1  | 1,790    |
|                                  | KIT DIN50022 XT1+RC PLATE DIN         | 1SDA067135R1  | 1,950    |
| XT3                              | KIT DIN50022 XT3 3p PLATE DIN         | 1SDA066420R1  |          |
|                                  | KIT DIN50022 XT3 4p PLATE DIN         | 1SDA066421R1  |          |
|                                  | KIT DIN50022 XT3+RC PLATE DIN         | 1SDA067139R1  | 2,150    |
| XT2                              | KIT DIN50022 XT2-XT4 PLATE DIN        | 1SDA066653R1  | 1,530    |



| IP54 Protection for transmitted rotary handle |                                                   |               |          |
|-----------------------------------------------|---------------------------------------------------|---------------|----------|
| Frame                                         | Description                                       | Ordering code | L.P. (₹) |
| XT1....XT4                                    | IP54 Protection for transmitted rotary handle-RHE | 1SDA066587R1  | 2,350    |



# Tmax conversion kit



## Plug-in and drawout conversion

| Frame | Pole                  | Type         | Description            | Ordering code | L.P. (₹) |
|-------|-----------------------|--------------|------------------------|---------------|----------|
| XT1   | 3P                    | Plugin kit   | KIT P MP XT1 3p        | 1SDA066276R1  | 4,150    |
|       |                       |              | XT1 P FP 3p EF         | 1SDA068183R1  | 7,710    |
|       |                       |              |                        |               |          |
| XT2   |                       |              | KIT P MP XT2 3p        | 1SDA066278R1  | 4,630    |
|       |                       |              | XT2 P FP 3p EF         | 1SDA068187R1  | 8,430    |
| XT3   |                       |              | KIT P MP XT3 3p        | 1SDA066280R1  | 5,780    |
|       |                       |              | XT3 P FP 3p EF         | 1SDA068192R1  | 8,680    |
| XT4   |                       |              | KIT P MP XT4 3p        | 1SDA066282R1  | 6,700    |
|       |                       |              | XT4 P FP 3p EF         | 1SDA068196R1  | 9,300    |
| T5    |                       |              | KIT MP T5 400 P 3p     | 1SDA054843R1  | 8,500    |
|       |                       |              | T5 400 P FP 3p EF      | 1SDA054749R1  | 15,500   |
|       |                       |              |                        |               |          |
|       | KIT MP T5 630 P 3p    | 1SDA054847R1 | 9,800                  |               |          |
|       | T5 630 P FP 3p EF     | 1SDA054762R1 | 17,500                 |               |          |
| XT2   | Drawout kit           |              | KIT W MP XT2 3p        | 1SDA066284R1  | 7,710    |
|       |                       |              | XT2 W FP 3p EF         | 1SDA068200R1  | 17,350   |
|       |                       |              |                        |               |          |
| XT4   |                       |              | KIT W MP XT4 3p        | 1SDA066286R1  | 8,800    |
|       |                       |              | XT4 W FP 3p EF         | 1SDA068204R1  | 18,220   |
| T5    |                       |              | KIT MP T5 400 W 3p     | 1SDA054845R1  | 13,100   |
|       |                       |              | T5 400 W FP 3p EF      | 1SDA054755R1  | 27,500   |
|       |                       |              |                        |               |          |
|       |                       |              | KIT MP T5 630 W 3p     | 1SDA054849R1  | 16,900   |
|       |                       |              | T5 630 W FP 3p EF      | 1SDA054768R1  | 28,500   |
| T6    |                       |              | KIT MP T6 630/800 W 3p | 1SDA060390R1  | 19,270   |
|       |                       |              | T6 W FP 3p EF          | 1SDA060384R1  | 40,700   |
| T7    |                       |              |                        |               |          |
|       | KIT MP T7-T7M-X1 W 3p | 1SDA062162R1 | 31,410                 |               |          |
|       | T7-X1 W FP 3p EF-EF   | 1SDA062045R1 | 66,210                 |               |          |

Note:  
The plug-in version must be composed as follows:  
1) Fixed circuit-breaker  
2) Conversion kit from fixed into moving part of plug-in  
3) Fixed part of plug-in  
4) For T5 630 -circuit-breaker and switch-disconnector in Plug-in and withdrawable version In max = 570 A

Note:  
The withdrawable version must be composed as follows:  
1) Fixed circuit-breaker  
2) Conversion kit from fixed into moving part of withdrawable  
3) Fixed part of withdrawable  
4) Front for lever operating mechanism or rotary handle or motor operator  
5) Sliding contacts blocks if the circuit-breaker is automatic or fitted with electrical accessories (only for T7)  
6) For T5 630 -circuit-breaker and switch-disconnector in Plug-in and withdrawable version In max = 570 A

# Tmax conversion kit



## Plug-in and drawout conversion

| Frame | Pole                | Type                   | Description        | Ordering code | L.P. (₹) |
|-------|---------------------|------------------------|--------------------|---------------|----------|
| XT1   | 4P                  | Plug-in kit            | KIT P MP XT1 4p    | 1SDA066277R1  | 5,500    |
|       |                     |                        | XT1 P FP 4p EF     | 1SDA068185R1  | 10,500   |
|       |                     |                        |                    |               |          |
| XT2   |                     |                        | KIT P MP XT2 4p    | 1SDA066279R1  | 6,030    |
|       |                     |                        | XT2 P FP 4p EF     | 1SDA068190R1  | 11,500   |
| XT3   |                     |                        | KIT P MP XT3 4p    | 1SDA066281R1  | 6800     |
|       |                     |                        | XT3 P FP 4p EF     | 1SDA068194R1  | 12,,100  |
|       |                     |                        |                    |               |          |
| XT4   |                     |                        | KIT P MP XT4 4p    | 1SDA066283R1  | 8,870    |
|       |                     |                        | XT4 P FP 4p EF     | 1SDA068198R1  | 12,500   |
| T5    |                     |                        | KIT MP T5 400 P 4p | 1SDA054844R1  | 11,500   |
|       |                     |                        | T5 400 P FP 4p EF  | 1SDA054752R1  | 18,500   |
|       |                     |                        |                    |               |          |
|       |                     |                        | KIT MP T5 630 P 4p | 1SDA054848R1  | 13,500   |
|       | T5 630 P FP 4p EF   | 1SDA054765R1           | 21,500             |               |          |
| XT2   | Drawout kit         | KIT W MP XT2 4p        | 1SDA066285R1       | 10,500        |          |
|       |                     | XT2 W FP 4p EF         | 1SDA068202R1       | 23,050        |          |
|       |                     |                        |                    |               |          |
| XT4   |                     | KIT W MP XT4 4p        | 1SDA066287R1       | 11,500        |          |
|       |                     | XT4 W FP 4p EF         | 1SDA068206R1       | 24,370        |          |
| T5    |                     | KIT MP T5 400 W 4p     | 1SDA054846R1       | 18,500        |          |
|       |                     | T5 400 W FP 4p EF      | 1SDA054758R1       | 34,500        |          |
|       |                     |                        |                    |               |          |
|       |                     | KIT MP T5 630 W 4p     | 1SDA054850R1       | 20,500        |          |
|       |                     | T5 630 W FP 4p EF      | 1SDA054771R1       | 42,500        |          |
| T6    |                     | KIT MP T6 630/800 W 4p | 1SDA060391R1       | 23,620        |          |
|       |                     | T6 W FP 4p EF          | 1SDA060387R1       | 52,730        |          |
|       |                     |                        |                    |               |          |
| T7    |                     | KIT MP T7-T7M-X1 W 4p  | 1SDA062163R1       | 36,570        |          |
|       | T7-X1 W FP 4p EF-EF | 1SDA062049R1           | 88,540             |               |          |

## Accessories:

| Frame / Type             | Description                                             | Ordering code  | L.P. (₹) |
|--------------------------|---------------------------------------------------------|----------------|----------|
| Connector                | Socket-plug panel connector with 3PINS (XT1...XT4)      | 1SDA066409R1   | 1,270    |
|                          | Socket-plug panel connector with 6PINS (XT1...XT4)      | 1SDA066410R1   | 2,520    |
|                          | Socket-plug panel connector with 9PINS (XT1...XT4)      | 1SDA066411R1   | 3,830    |
|                          | Socket-plug panel connector with 15PINS (XT1...XT4)     | 1SDA066412R1   | 6,330    |
|                          | Socket-plug connector of moving part 12PINS (XT2...XT4) | 1SDA066413R1   | 6,840    |
|                          | Socket-plug connector of fixed part 12PINS (XT2...XT4)  | 1SDA066414R1   |          |
|                          | Connector 4th pole SOR-PS-SOR (XT2...XT4)               | 1SDA066415R1   | 1,260    |
|                          | Connector 4th pole UVR (XT2...XT4)                      | 1SDA066418R1   | 1,150    |
|                          | ADP 5pin SOR-C /UVR-C T4-T5-T6 P/W                      | 1SDA055173R1   | 2,180    |
|                          | ADP 6pin AUX -C T4-T5-T6 P/W                            | 1SDA054922R1 ■ | 1,880    |
|                          | ADP 10pin MOE AUE -C T4-T5-T6 P/W                       | 1SDA054924R1   | 2,400    |
|                          | ADP 12pin AUX -C T4-T5-T6 P/W                           | 1SDA054923R1   | 3,080    |
| MOT T7M                  | LEFT SLIDING CONTAC.MP C.BR.T7-T7M-X1                   | 1SDA062164R1   | 5,100    |
|                          | LEFT SLIDING CONTAC.FP C.BR.T7M-X1                      | 1SDA062167R1   | 7,540    |
| SOR/SCR/UVR/AUX - T7-T7M | RIGHT SLIDING CONTAC.MP C.BR.T7-T7M-X1                  | 1SDA062166R1   | 5,100    |
|                          | RIGHT SLIDING CONTAC.FP C.BR.T7M-X1                     | 1SDA062169R1   | 7,540    |
| Central Block for T7-T7M | Central block - MP T7 - T7M                             | 1SDA062165R1   | 5,100    |
|                          | Central block - FP T7 - T7M                             | 1SDA062168R1   | 7,540    |

■ Stock items

# Tmax PV: Photovoltaic range moulded case switch disconnecter



- Tmax PV is the latest T Generation product up to 1600 A/1100 V DC/1500V DC.
- IEC 60947-3 certification
  - 6 different sizes: from the compact T1 (which can be mounted on DIN rail) to high-performance
  - T7, available in the two versions, with lever operating mechanism and motor operator
  - Rated insulation voltage up to 1150 V DC/1500V DC
  - Advantages like
    - excellent performance-dimensions
    - vast and complete range of accessories for all requirements
    - Complete remote control with MOE options

| Rated current In (A) | Rated voltage | Description                    | Version / Poles | Ordering code | L.P. (₹)     |
|----------------------|---------------|--------------------------------|-----------------|---------------|--------------|
| 160                  | 1100 V DC     | T1D/PV 160 4p F FC Cu 1100V DC | Fixed / 4p      | 1SDA069816R1  | Upon request |
| 200                  |               | T3D/PV 200 4p F FC Cu 1100V DC | Fixed / 4p      | 1SDA069822R1  |              |
| 250                  |               | T4D/PV 250 4p F F 1100V DC     | Fixed / 4p      | 1SDA069823R1  |              |
| 500                  |               | T5D /PV 500 4p F F 1100V DC    | Fixed / 4p      | 1SDA069824R1  |              |
| 800                  |               | T6D/PV 800 4p F F 1100V DC     | Fixed / 4p      | 1SDA069825R1  |              |
| 1250                 |               | T7D/PV 1250 4p F F 1100V DC    | Fixed / 4p      | 1SDA069826R1  |              |
| 1250M                |               | T7D/PV 1250 4p F F M 1100V DC  | Fixed / 4p      | 1SDA069827R1  |              |
| 1600                 |               | T7D/PV 1600 4p F F 1100V DC    | Fixed / 4p      | 1SDA069828R1  |              |
| 1600M                |               | T7D/PV 1600 4p F F M 1100V DC  | Fixed / 4p      | 1SDA069829R1  |              |

| Rated current In (A) | Rated voltage | Description                      | Version / Poles | Ordering code | L.P. (₹)     |
|----------------------|---------------|----------------------------------|-----------------|---------------|--------------|
| 250                  | 1500V DC      | T4D/PV-E 250 4p F F 1500V DC     | Fixed / 4p      | 1SDA073559R1  | Upon request |
| 500                  |               | T5D/PV-E 500 4p F F 1500V DC     | Fixed / 4p      | 1SDA076898R1  |              |
| 1250                 |               | T7D/PV-E 1250 4p F F M 1500V DC  | Fixed / 4p      | 1SDA073560R1  |              |
| 1600                 |               | T7D/PV-E 1600 4p F F M 1500V DC  | Fixed / 4p      | 1SDA073561R1  |              |
| 250                  |               | KIT 2JUMPER U 2+2PS T4D/PV 250   | Kit jumpers     | 1SDA070454R1  | Upon request |
| 500                  |               | KIT 2JUMPER U 2+2PS T5D/PV-E 500 | Kit jumpers     | 1SDA076899R1  |              |
| 1250                 |               | KIT JUMPER U 2+2PS T7D/PV 1250   | Kit jumpers     | 1SDA070429R1  |              |
| 1600                 |               | KIT JUMPER U 2+2PS T7D/PV 1600   | Kit jumpers     | 1SDA070431R1  |              |

\*For information contact our nearest sales office

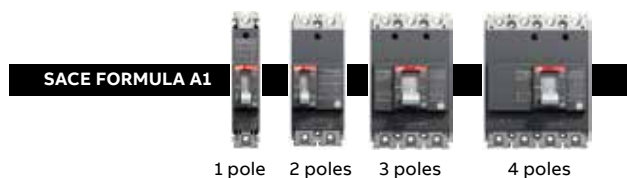
\*Jumper kit is compulsory to order with 1500V DC version

# FORMULA moulded case circuit breaker

## New low voltage moulded case circuit breakers up to 630A

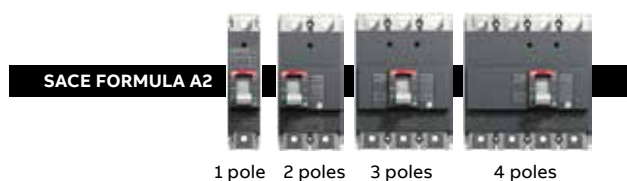
### General characteristics

- Conforms to IEC 60947-2
- Fixed thermal magnetic release throughout the range
- Compact dimensions
- Common range of accessories
- Available in 1P, 2P, 3P & 4 pole versions
- Line-load reversibility
- Suitable for DC application till 250Vdc
- Operation voltage till 550VAC, insulation voltage of 690VAC and impulse voltage of 6KV



### FORMULA A1

- Rated current,  $I_n$  15...125A
- 1, 2, 3, 4 pole versions
- $I_{cu}$  = 10, 18, 25, 36KA



### FORMULA A2

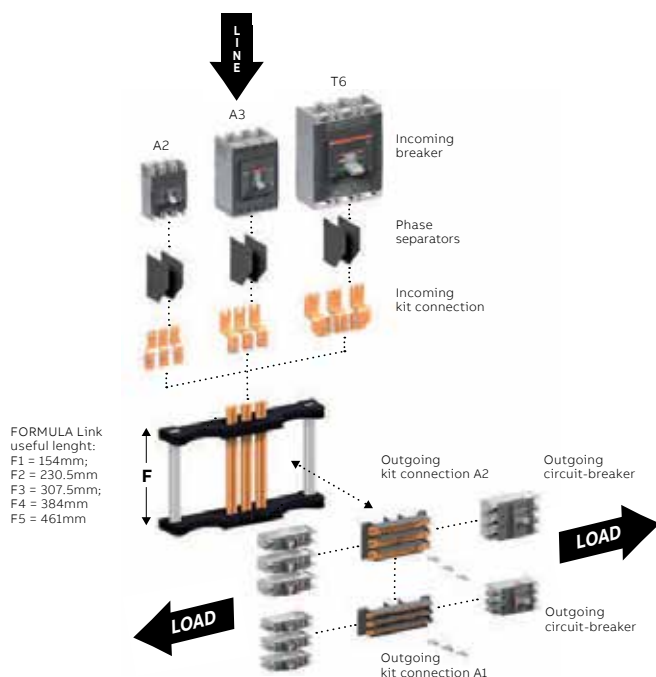
- Rated current,  $I_n$  125...250A
- 1, 2, 3, 4 pole versions
- $I_{cu}$  = 18, 25, 36KA



### FORMULA A3

- Rated current,  $I_n$  320...630A
- 3, 4 pole versions
- $I_{cu}$  = 36, 50KA

## FORMULA link system





# FORMULA moulded case circuit breaker

- FORMULA link in accordance with IEC 60439 Standard
- FORMULA link is a component of a power distribution system which divides the main power supply over different users
- The FORMULA link is characterised on the supply side by a main circuit-breaker which protects the whole distribution system, and on the load side by smaller sized circuit-breakers, dedicated to the individual users
- FORMULA link assembly for total discrimination between upstream and downstream devices

## FORMULA link - Electrical characteristics

| FORMULA link frame                      | [A]  | 250   | 400   | 630/800 |
|-----------------------------------------|------|-------|-------|---------|
| Incoming breaker                        |      | A2    | A3    | T6      |
| Outgoing breaker                        |      | A1    | A1-A2 | A1-A2   |
| Rated operational voltage 50/60 Hz      | [V]  | 550AC | 550AC | 550AC   |
| Rated insulation voltage                | [V]  | 690AC | 690AC | 690AC   |
| Rated short time withstand current (1s) | [KA] | 30    | 40    | 40      |



## Fixed thermal and fixed magnetic MCCB

| A1 125<br>TMF |       | A1A 125<br>Icu = 10KA |          | A 1B 125<br>Icu = 18KA |          | A 1C 125<br>Icu = 25KA |          | A 1N 125<br>Icu = 36KA |          |
|---------------|-------|-----------------------|----------|------------------------|----------|------------------------|----------|------------------------|----------|
| In(A)         | Poles | Ordering code         | L.P. (₹) | Ordering code          | L.P. (₹) | Ordering code          | L.P. (₹) | Ordering code          | L.P. (₹) |
| 25            |       | 1SDA066512R1 ■        |          | 1SDA066699R1           |          | 1SDA066711R1           |          | 1SDA066723R1           |          |
| 32            |       | 1SDA068757R1 ■        |          | 1SDA068758R1 ■         |          | 1SDA068759R1 ■         |          | 1SDA068760R1           |          |
| 40            |       | 1SDA066514R1 ■        |          | 1SDA066701R1           |          | 1SDA066713R1           |          | 1SDA066725R1           |          |
| 50            |       | 1SDA066515R1 ■        | 2,770    | 1SDA066702R1           | 3,720    | 1SDA066714R1           | 4,510    | 1SDA066726R1           | 5,320    |
| 63            |       | 1SDA068768R1 ■        |          | 1SDA068769R1 ■         |          | 1SDA068770R1 ■         |          | 1SDA068771R1 ■         |          |
| 80            |       | 1SDA066518R1 ■        |          | 1SDA066705R1           |          | 1SDA066717R1 ■         |          | 1SDA066729R1           |          |
| 100           |       | 1SDA066520R1 ■        |          | 1SDA066707R1 ■         |          | 1SDA066719R1 ■         |          | 1SDA066731R1 ■         |          |
| 125           |       | 1SDA066521R1 ■        | 3,270    | 1SDA066708R1 ■         | 4,290    | 1SDA066720R1 ■         | 4,800    | 1SDA066732R1 ■         | 5,590    |
| 25            |       | 1SDA066526R1          |          | 1SDA066735R1           |          | 1SDA066747R1           |          | 1SDA066759R1           |          |
| 32            |       | 1SDA068761R1 ■        |          | 1SDA068762R1           |          | 1SDA068763R1 ■         |          | 1SDA068764R1           |          |
| 40            |       | 1SDA066528R1          |          | 1SDA066737R1           |          | 1SDA066749R1           |          | 1SDA066761R1           |          |
| 50            |       | 1SDA066529R1          | 3,720    | 1SDA066738R1           | 4,730    | 1SDA066750R1           | 5,810    | 1SDA066762R1           | 6,760    |
| 63            |       | 1SDA068772R1 ■        |          | 1SDA068773R1 ■         |          | 1SDA068774R1 ■         |          | 1SDA068775R1 ■         |          |
| 80            |       | 1SDA066532R1          |          | 1SDA066741R1           |          | 1SDA066753R1           |          | 1SDA066765R1           |          |
| 100           |       | 1SDA066534R1 ■        |          | 1SDA066743R1 ■         |          | 1SDA066755R1 ■         |          | 1SDA066767R1 ■         |          |
| 125           |       | 1SDA066535R1 ■        | 3,990    | 1SDA066744R1 ■         | 5,010    | 1SDA066756R1 ■         | 6,100    | 1SDA066768R1 ■         | 7,260    |

# FORMULA moulded case circuit breaker

| A2 250 |       | A2B 250        |          | A2C 250        |          | A2N 250        |          |
|--------|-------|----------------|----------|----------------|----------|----------------|----------|
| TMF    |       | Icu = 18KA     |          | Icu = 25KA     |          | Icu = 36KA     |          |
| In(A)  | Poles | Ordering code  | L.P. (₹) | Ordering code  | L.P. (₹) | Ordering code  | L.P. (₹) |
| 160    | 3     | 1SDA066549R1 ■ | 7,500    | 1SDA066776R1 ■ | 8,000    | 1SDA066782R1 ■ | 8,500    |
| 200    |       | 1SDA066551R1 ■ | 8,780    | 1SDA066778R1 ■ | 9,440    | 1SDA066784R1 ■ | 10,750   |
| 250    |       | 1SDA066553R1 ■ | 9,440    | 1SDA066780R1 ■ | 10,100   | 1SDA066786R1 ■ | 12,070   |
| 160    | 4     | 1SDA066555R1 ■ | 9,750    | 1SDA066788R1 ■ | 10,400   | 1SDA066794R1 ■ | 11,050   |
| 200    |       | 1SDA066557R1 ■ | 11,180   | 1SDA066790R1 ■ | 12,070   | 1SDA066796R1 ■ | 13,870   |
| 250    |       | 1SDA066559R1 ■ | 12,200   | 1SDA066792R1 ■ | 13,870   | 1SDA066798R1 ■ | 15,320   |

| A3 400 |       | A3N 400       |          | A3S 400       |          |
|--------|-------|---------------|----------|---------------|----------|
| TMF    |       | Icu = 36KA    |          | Icu = 50KA    |          |
| In(A)  | Poles | Ordering code | L.P. (₹) | Ordering code | L.P. (₹) |
| 320    | 3     | 1SDA066560R1  | 26,120   | 1SDA066562R1  | 28,450   |
| 400    |       | 1SDA066561R1  |          | 1SDA066563R1  |          |
| 320    | 4     | 1SDA066568R1  | 33,820   | 1SDA066570R1  | 37,000   |
| 400    |       | 1SDA066569R1  |          | 1SDA066571R1  |          |

| A3 630 |       | A3N 630       |          | A3S 630       |          |
|--------|-------|---------------|----------|---------------|----------|
| TMF    |       | Icu = 36KA    |          | Icu = 50KA    |          |
| In(A)  | Poles | Ordering code | L.P. (₹) | Ordering code | L.P. (₹) |
| 500    | 3     | 1SDA066564R1  | 28,450   | 1SDA066565R1  | 30,770   |
| 630    |       | 1SDA066566R1  | 33,820   | 1SDA066567R1  | 37,750   |
| 500    | 4     | 1SDA066572R1  | 36,580   | 1SDA066573R1  | 39,180   |
| 630    |       | 1SDA066574R1  | 43,110   | 1SDA066575R1  | 49,340   |

## Accessories

| Terminals                           |       |                |                      | Terminals                           |       |                |                      |
|-------------------------------------|-------|----------------|----------------------|-------------------------------------|-------|----------------|----------------------|
| Front extended spread terminal - ES | Poles | Ordering code  | L.P. (₹)<br>6 pieces | Front extended spread terminal - ES | Poles | Ordering code  | L.P. (₹)<br>8 pieces |
| A1                                  | 3P    | 1SDA082242R1 ■ | 470                  | A1                                  | 4     | 1SDA082243R1 ■ | 640                  |
| A2                                  |       | 1SDA082247R1 ■ | 1,170                | A2                                  |       | 1SDA082248R1 ■ | 1,320                |

|                                              | Description                                  | A1-A2          |          |
|----------------------------------------------|----------------------------------------------|----------------|----------|
|                                              |                                              | Ordering code  | L.P. (₹) |
| Rotary handle                                | RHD - Operating mechanism direct handle      | 1SDA066154R1 ■ | 1,260    |
|                                              | RHE - Operating mechanism transmitted handle | 1SDA066158R1 ■ | 1,650    |
| Shunt opening release – SOR-C Cabled version | SOR-C 220...240 VAC - 220...250 VDC          | 1SDA066137R1   | 2,040    |
|                                              | SOR-C 380...440 VAC                          | 1SDA066138R1   | 1,890    |
| Auxiliary contacts – AUX-C Cabled version    | AUX-C 1Q + 1SY 250 VAC/DC                    | 1SDA066149R1 ■ | 1,710    |
| Undervoltage release – UVR-C Cabled version  | UVR-C 220...240 VAC - 220...250 VDC          | 1SDA066146R1   | 3,900    |
|                                              | UVR-C 380...440 VAC                          | 1SDA066147R1   |          |

# Switches

ABB has a wide portfolio of low voltage switches. They are suitable for diverse applications, in motor control centers, in switch boards and as main switches in various equipments and machines. From single to 8 poles and combination switches for change-over, automatic transfer, bypass, reversing etc.

## Switch disconnectors 16 – 4000 A

The switch disconnector is largely used as the main switch in low voltage switchgears for distribution of power, starting and stopping motors and isolating loads during maintenance.

The range from 16 to 125 Amps are either base plate or door mounted by snap-on or screw fitting front operated 3, 4, 6 and 8-pole are available as standard.

From 160 to 4000 Amps the switch disconnectors, also called load break switches, are designed as pole modules and they are available as 1, 2, 3 and 4-pole versions, front or side operated.

## Switch disconnectors OTDC and OTDCP 10 – 1600 A

The OTDC range of switch-disconnectors is specially designed for DC applications. Thanks to a compact design, efficiency and reliability, OTDC switches bring photovoltaic installations to the next level.

## Switch disconnector fuses 16 – 1250A

The switch disconnector fuse is used as the main switch in low voltage switchgears in industry for distributing power and protecting motors, cables and other devices against short circuits and over loads.

The switch disconnector fuses are available for all types of fuse links, DIN, BS, NFC, UL, CSA.

The range includes single pole to four pole versions, front-or side-operated. The pole module design enables location of the operating mechanism in any position together with the direction of the terminals giving flexibility to installation in different types of cubicle designs.

## Change-over and transfer switches 16 – 3200 A

ABB's change-over and transfer switches are designed to transfer loads from one power source to another in a wide variety of applications.

The range includes switches from 16 to 3200 Amperes, which can be operated manually, remotely by using a motor or automatically.

ABB's change-over and transfer switches are tested according to IEC 60947-6-1 and IEC 60947-3 standards. The switches have ratings in AC31 and AC33 utilization categories, up to 415 V. In motorized switches, the motor operators have a wide voltage operation range.

## Enclosed switches 16 – 1600 A

The ABB enclosed switches are suitable for power distribution in factories and buildings, as local motor isolators and as main switches. Each incoming supply shall be provided with a hand operated main switch-disconnector according to the Machine Directive EN 60204 and isolate reliably the electrical equipment from the supply. ABB enclosed switches are designed and tested to meet these requirements and complies with IEC 60 947-3.

The enclosed switches are easy to install and safe to use in industrial, public and residential environments. The indication of the handle is always reliable and lockable in the OFF-position with a standard padlock. ABB's long experience in switch disconnects guarantees a long and safe use

## Cam switches 10 – 315 A

ABB's new OC, OM, ON and OL rotary cam switches offer a complete range of cam switches for control, instrumentation and motor starting applications, maximizing the benefits and optimizing your use of assets. The standard cam switches provide you with a variety of functionalities for the most common mounting types and applications with minimum footprint area.





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## Optimized two-poles 1500V DC switch disconnectors

Small sized and with increased  
efficiency and performance

A fully optimized range of two-pole DC switch-disconnectors for 1500V utility-scale photovoltaic power plants covering 315-800A current range. The new design offers both a size reduction and an increase in efficiency and performances, helping manufacturers to adapt quickly to the industry's rapid adoption of 1500V DC solutions. A switch range that allows manufacturers and utilities to improve their systems efficiency, lowering power losses and reducing the size of combiner boxes, enclosures and inverters. <https://go.abb/otdc>



# DC switch disconnectors for PV application



## OTDC 10...32A

- Modular design
- Simple and fast installation
- DIN rail or screw mounted
- Tunnel terminals for easy termination
- Shortcircuit bars are pre-installed as standard
- Maximum energy efficiency
- Available in plastic enclosure

New



## OTDC 100A....1600A

- ABB offers a compact DC switch range for single and multi circuit disconnecting
- Carefully designed arc plates and dual magnetic breaking, breaking power is optimized across the entire current range.
- As a result of symmetric pole design, the connections are independent of polarity. The user can make the connections in both ways.
- OTDC is the only DC switch in the market that has visible contacts.
- The mechanism can be located between the poles or on the side of the switch.
- Special four pole versions can be made for double circuit applications.
- The operation of the switch is not vulnerable to voltage peaks and it is independent of the user (quick make quick brake).
- The switches are available in direct mounting handle version as well as external door mounted handle version.
- The power losses are very low, results in high efficiency.

New



| Rated current In (A) | Rated voltage | Description   | Ordering code     | L.P. (₹)     |
|----------------------|---------------|---------------|-------------------|--------------|
| 10                   | 1000 V DC     | OTDC16F2      | 1SCA121454R1001   | Upon Request |
| 16                   |               | OTDC16F3      | 1SCA121457R1001   |              |
| 25                   |               | OTDC25F3      | 1SCA121458R1001 ■ |              |
| 32                   |               | OTDC32F3      | 1SCA121459R1001 ■ |              |
| 100                  |               | OTDC100E11K   | 1SCA127730R1001   |              |
| 160                  |               | OTDC160E11K   | 1SCA127736R1001   |              |
| 200                  |               | OTDC200E11K-I | 1SCA145988R1001 ■ |              |
| 250                  |               | OTDC250E11K-I | 1SCA145994R1001 ■ |              |
| 315                  |               | OTDC315F11K   | 1SCA158258R1001   |              |
| 400                  |               | OTDC400F11K   | 1SCA158266R1001   |              |
| 500                  |               | OTDC500F11K   | 1SCA158274R1001   |              |
| 630                  |               | OTDC630F22K   | 1SCA137209R1001   |              |
| 800                  |               | OTDC800EPP22K | 1SCA137212R1001   |              |
| 1000                 |               | OTDC1000E22K  | 1SCA143710R1001   |              |
| 1250                 |               | OTDC1250E22K  | 1SCA143716R1001   |              |
| 1600                 |               | OTDC1600E22K  | 1SCA143719R1001   |              |
| 315                  | 1500 V DC     | OTDC315FV11K  | 1SCA158260R1001   | Upon Request |
| 400                  |               | OTDC400FV11K  | 1SCA158268R1001   |              |
| 500                  |               | OTDC500FV11K  | 1SCA158276R1001   |              |

Note: The above are direct mounted handle version, we also offer door mounted handle as suffix P version of same ratings.

Life Cycle Management (LCM) Status of OTDC switch-disconnector range OTDC315E... OTDC800E\_ and OTDC250US\_... OTDC600US\_ and related accessories will change from Active to Classic on January 1st, 2019 and will be available till stock last, On January 1st 2020 the LCM status will change from Classic to Obsolete

■ Stock items \*For information contact our nearest sales office



# ONE20

## Enclosed switches for residential and commercial installations



### ONE20

Switches can be used as main switches or for local isolation in various applications, such as HVAC, residential water pumps and heat pumps or commercial lighting.

### High quality

ABB is synonym of quality: each ONE20 switch is tested and approved at the factory. The enclosures are made of durable materials with high UV resistance, which makes it suitable for indoor or outdoor use.

### Reduced installation time

Compression glands are included in the delivery. They can be easily installed on the threaded knock-out cable entry.

### Simple and modern design

The enclosure is compact and has the same size for 2, 3 and 4 pole types. ONE20 is available in three colors.

### Maximized safety

The handle can be padlocked in the OFF position with up to three padlocks and in ON position with one padlock.

### Features

- Available in 2-, 3- and 4- pole versions
- Thermal current (Ith) 20A
- Color options: light grey, dark grey, red-yellow
- Weather proof enclosure due to high IP class (IP67) and
- UV resistant material

### Enclosed switches ONE20

| Poles | Description | Ordering code   | L.P. (₹) |
|-------|-------------|-----------------|----------|
| 2     | ONE20M2W    | 1SCA138456R1001 | 990      |
| 3     | ONE20M3W    | 1SCA138457R1001 | 1,480    |
| 4     | ONE20M4W    | 1SCA138459R1001 | 1,740    |
| 2     | ONE20M2G    | 1SCA135532R1001 | 1,000    |
| 3     | ONE20M3G    | 1SCA135535R1001 | 1,480    |
| 4     | ONE20M4G    | 1SCA135538R1001 | 1,740    |
| 2     | ONE20M2Y    | 1SCA135533R1001 | 1,000    |
| 3     | ONE20M3Y    | 1SCA135536R1001 | 1,480    |
| 4     | ONE20M4Y    | 1SCA135540R1001 | 1,740    |



# Fusegear

### Easyline - XLP

Fuse Switch Disconnecter 1, 2, 3 & 4P for both AC and DC application 160...630A

All units are applicable for AC Voltage, and the 1-pole and 2-pole range are also rated for DC voltage. In addition to be used as single apparatus, the 3-pole range from size 00 to size 3 (160A - 630A) are also designed to be used in distribution systems by use of a busbar adapter for easy installation. The Busbar adapters are available for 40mm, and 60mm distance in-between centre of the phases for each busbar



### Features

- All the XLP cable terminals can be delivered with integrated bolts for cable lugs or with integrated bridge clamps (BC) for easy direct cable connection
- Typetested according to EN60947-3
- Easy to recycle/EN14001 standards
- Quick-make operation device
- Integrated IP20 cable termination
- IP30 degree of protection from the front
- Replacement compatible to similar types in the market
- Voltage measuring from the front
- V-0 plastic materials

### Advantages

- Easy to install
- Easy to operate
- Sturdy design
- High personal safety
- Wide range of cable terminals and snap-on accessories
- Compact, add-on Electronic Fuse Monitoring (EFM)
- Busbar adapters

### Applications

- UPS: Uninterruptible Power Supply, used for the power supply for computer/servers, storage devices, communication network systems, industry control systems, etc.
- Telecom power supplies
- General protection in smaller distribution panels using 1-pole or 2-pole configurations AC or DC

systems. The whole EasyLine range got a sturdy, uniform design that is operator friendly and safe with IP 30 from front in closed position and IP 20 in open position. EasyLine Fuse Switch Disconnecters are developed and type tested according to IEC60947-3 and based on a long history, going back to 1958 when we successfully introduced the manually dependent operated LHB.



### Fusegear - Fuse switch disconnecter

| Description | Ordering code   | L.P. (₹) |
|-------------|-----------------|----------|
| XLP000-6CC  | 1SEP201428R0001 | 3,710    |
| XLP00-6BC   | 1SEP101890R0002 | 4,770    |
| XLP1-6BC    | 1SEP101891R0002 | 12,190   |
| XLP2-6BC    | 1SEP101892R0002 | 19,080   |
| XLP3-6BC    | 1SEP101975R0002 | 31,270   |



# Fusegear

## InLine II - ZLBM/ZHBM

Designed for the future

ABB is proud to introduce the latest technology of Fuse Switch Disconnectors to ensure the best stability and highest safety in the power distribution network.

The new generation InLine II also offers the highest level of personal safety during operation and service.



### Features

- Available as 160A, 250A, 400A, 630A, 800 and 1250A types in combination with NH/DIN HRC Fuse Links acc. to EN/IEC 60269
- Type tested in accordance to EN/IEC 60947-3
- 1 - pole and 3 - pole variants
- For vertical and horizontal installations
- Designed for 185mm busbar distance
- IP30 degree of protection from the front
  - Padlocking in open and closed position at the 3 - pole version
  - Padlocking in closed position at the 1 - pole version
- Park position with possible padlocking at the 1 - pole type
- Sealing solutions
- Wide range of accessories and cable terminal connections
- Compatible dimensions to equivalent products in the market

### Advantages

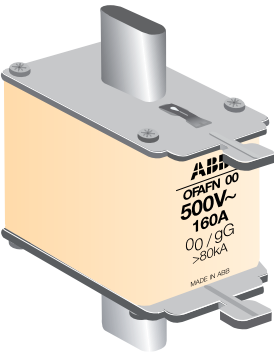
- High level of personal safety by:
  - Safe and reliable operation ON/OFF
  - Safe and simple replacement of the NH fuse links

- Universal terminal bolts offering standing bolt or fixed nut for high flexibility of cable connections
- Variants with integrated V-clamps
- Available in two alternative depths (ZLBM/ZHBM), L-version (ZLBM) will save space in Cable Distribution Cabinets by offering reduced depth
- Easy installation of current transformers in the H-version (ZHBM)
- Variants with non corrosive steel materials (stainless steel)
- Designed for intelligent communication to support a high level of stability in the power distribution network

### Applications

- Cable distribution cabinets (CDC)
- Low voltage distribution in compact secondary substations (CSS)
- Distribution boards for industry, housing and office buildings
- Installations

# OFAF HRC fuse links and base, DIN-type



## DIN -type fuse links, gG, 500 V, 80 kA

The ordering code includes one fuse link, the delivery batch is according to the column.

| Fuse size | Rated current In (A) | Description  | Delivery batch [pcs] | Ordering code     | L.P. (₹)     |
|-----------|----------------------|--------------|----------------------|-------------------|--------------|
| 000       | 2                    | OFAFN000GG2  | 6                    | 1SCA107747R1001 ■ | 210          |
|           | 6                    | OFAFN000GG6  | 6                    | 1SCA107748R1001 ■ |              |
|           | 10                   | OFAFN000GG10 | 6                    | 1SCA107749R1001 ■ |              |
|           | 16                   | OFAFN000GG16 | 6                    | 1SCA107750R1001 ■ |              |
|           | 20                   | OFAFN000GG20 | 6                    | 1SCA107751R1001 ■ |              |
|           | 25                   | OFAFN000GG25 | 6                    | 1SCA107751R1002 ■ |              |
|           | 32                   | OFAFN000GG32 | 6                    | 1SCA107752R1001 ■ |              |
| 00        | 63                   | OFAFN000GG63 | 6                    | 1SCA107753R1001 ■ | 490          |
|           | 6                    | OFAFN00GG6   | 6                    | 1SCA107754R1001   |              |
|           | 10                   | OFAFN00GG10  | 6                    | 1SCA107755R1001   |              |
|           | 16                   | OFAFN00GG16  | 6                    | 1SCA107756R1001   |              |
|           | 20                   | OFAFN00GG20  | 6                    | 1SCA107757R1001   |              |
|           | 25                   | OFAFN00GG25  | 6                    | 1SCA107758R1001   |              |
|           | 32                   | OFAFN00GG32  | 6                    | 1SCA107759R1001 ■ |              |
|           | 50                   | OFAFN00GG50  | 6                    | 1SCA107760R1001 ■ |              |
|           | 63                   | OFAFN00GG63  | 6                    | 1SCA107761R1001 ■ |              |
|           | 80                   | OFAFN00GG80  | 6                    | 1SCA107762R1001 ■ |              |
|           | 100                  | OFAFN00GG100 | 6                    | 1SCA107763R1001 ■ |              |
| 0         | 125                  | OFAFN00GG125 | 6                    | 1SCA107764R1001 ■ | 950          |
|           | 160                  | OFAFN00GG160 | 6                    | 1SCA107765R1001 ■ |              |
|           | 160                  | OFAF0H160    | 3                    | 1SCA022627R3170   |              |
| 1         | 200                  | OFAF0H200    | 3                    | 1SCA022629R5140 ■ | 710          |
|           | 32                   | OFAFN1GG32   | 6                    | 1SCA107766R1001   |              |
|           | 50                   | OFAFN1GG50   | 6                    | 1SCA107767R1001   |              |
|           | 63                   | OFAFN1GG63   | 6                    | 1SCA107768R1001   |              |
|           | 80                   | OFAFN1GG80   | 6                    | 1SCA107769R1001   |              |
|           | 100                  | OFAFN1GG100  | 6                    | 1SCA107770R1001   |              |
|           | 125                  | OFAFN1GG125  | 6                    | 1SCA107771R1001   |              |
|           | 160                  | OFAFN1GG160  | 6                    | 1SCA107772R1001 ■ |              |
|           | 200                  | OFAFN1GG200  | 3                    | 1SCA107773R1001 ■ |              |
| 2         | 250                  | OFAFN1GG250  | 3                    | 1SCA107774R1001 ■ | 1,050        |
|           | 100                  | OFAFN2GG100  | 3                    | 1SCA107775R1001   |              |
|           | 125                  | OFAFN2GG125  | 3                    | 1SCA107776R1001   |              |
|           | 250                  | OFAFN2GG250  | 3                    | 1SCA107778R1001   |              |
|           | 315                  | OFAFN2GG315  | 3                    | 1SCA107779R1001 ■ |              |
| 3         | 400                  | OFAFN2GG400  | 3                    | 1SCA107780R1001 ■ | 1,620        |
|           | 315                  | OFAFN3GG315  | 3                    | 1SCA107781R1001   |              |
|           | 500                  | OFAFN3GG500  | 3                    | 1SCA107783R1001 ■ |              |
|           | 630                  | OFAFN3GG630  | 3                    | 1SCA107784R1001 ■ |              |
|           | 800                  | OFAFN3GG800  | 3                    | 1SCA107785R1001 ■ |              |
| 4         | 1250                 | OFAF4H1250   | 1                    | 1SCA022627R7830   | Upon request |
| 4a        | 1250                 | OFAF4AH1250  | 1                    | 1SCA022637R4360   |              |



| Fuse size | Rated current In (A) | Description          | Ordering code     | L.P. (₹) |
|-----------|----------------------|----------------------|-------------------|----------|
| 00        | 160                  | Fuse Base - Din type | 1SCA833001R2001 ■ | 400      |
| 1         | 250                  |                      | 1SCA833001R2002 ■ | 810      |
| 2         | 400                  |                      | 1SCA833001R2003 ■ | 1,380    |
| 3         | 630                  |                      | 1SCA833001R2004 ■ | 1,840    |

■ Stock items

# OFF HRC fuse links and base, BS-type

## BS -type fuse links, gG, 415 V, 80 kA

The type code includes one fuse link, but the delivery batch is according to the column.



| Fuse size                    | Rated current<br>In [A] | Description | Delivery batch<br>[pcs] | Ordering code     | L.P. (₹) |
|------------------------------|-------------------------|-------------|-------------------------|-------------------|----------|
| Offset blade tag fuse link   |                         |             |                         |                   |          |
| F1                           | 2                       | OFFNF1GG2   | 10                      | 1SCA107786R1001 ■ | 70       |
|                              | 4                       | OFFNF1GG4   | 10                      | 1SCA107787R1001 ■ |          |
|                              | 6                       | OFFNF1GG6   | 10                      | 1SCA107788R1001 ■ |          |
|                              | 10                      | OFFNF1GG10  | 10                      | 1SCA107789R1001 ■ |          |
|                              | 16                      | OFFNF1GG16  | 10                      | 1SCA107790R1001 ■ |          |
|                              | 20                      | OFFNF1GG20  | 10                      | 1SCA107791R1001 ■ | 80       |
|                              | 25                      | OFFNF1GG25  | 10                      | 1SCA107792R1001 ■ |          |
|                              | 32                      | OFFNF1GG32  | 10                      | 1SCA107793R1001 ■ |          |
| Offset bolted tag fuse link  |                         |             |                         |                   |          |
| A2                           | 6                       | OFFNA2GG6   | 10                      | 1SCA107795R1001   | 100      |
|                              | 10                      | OFFNA2GG10  | 10                      | 1SCA107796R1001   |          |
|                              | 16                      | OFFNA2GG16  | 10                      | 1SCA107798R1001   |          |
|                              | 20                      | OFFNA2GG20  | 10                      | 1SCA107827R1001   |          |
|                              | 25                      | OFFNA2GG25  | 10                      | 1SCA107800R1001   |          |
|                              | 32                      | OFFNA2GG32  | 10                      | 1SCA107801R1001 ■ |          |
| A3                           | 40                      | OFFNA3GG40  | 10                      | 1SCA107803R1001 ■ | 130      |
|                              | 50                      | OFFNA3GG50  | 10                      | 1SCA107804R1001   |          |
|                              | 63                      | OFFNA3GG63  | 10                      | 1SCA107805R1001 ■ |          |
| A4                           | 50                      | OFFNA4GG50  | 10                      | 1SCA107806R1001   | 270      |
|                              | 63                      | OFFNA4GG63  | 10                      | 1SCA107807R1001   |          |
|                              | 80                      | OFFNA4GG80  | 10                      | 1SCA107808R1001   |          |
|                              | 100                     | OFFNA4GG100 | 10                      | 1SCA107809R1001 ■ |          |
|                              | 125                     | OFFNA4GG125 | 10                      | 1SCA107810R1001 ■ |          |
| Central bolted tag fuse link |                         |             |                         |                   |          |
| B1                           | 50                      | OFFNB1GG50  | 10                      | 1SCA107811R1001   | 320      |
|                              | 63                      | OFFNB1GG63  | 10                      | 1SCA107812R1001   |          |
|                              | 80                      | OFFNB1GG80  | 10                      | 1SCA107813R1001   |          |
|                              | 100                     | OFFNB1GG100 | 10                      | 1SCA107814R1001   |          |
| B2                           | 125                     | OFFNB2GG125 | 10                      | 1SCA107816R1001   | 480      |
|                              | 160                     | OFFNB2GG160 | 5                       | 1SCA107817R1001 ■ |          |
|                              | 200                     | OFFNB2GG200 | 5                       | 1SCA107818R1001 ■ |          |
| B3                           | 250                     | OFFNB3GG250 | 1                       | 1SCA107819R1001 ■ | 690      |
|                              | 315                     | OFFNB3GG315 | 1                       | 1SCA107820R1001   | 740      |
| B4                           | 400                     | OFFNB4GG400 | 1                       | 1SCA107822R1001   | 1,210    |
| C1                           | 400                     | OFFNC1GG400 | 1                       | 1SCA107823R1001   | 1,840    |
| C2                           | 500                     | OFFNC2GG500 | 1                       | 1SCA107824R1001   | 2,080    |
| C2                           | 630                     | OFFNC2GG630 | 1                       | 1SCA107825R1001   | 2,080    |
| C3                           | 800                     | OFFNC3GG800 | 1                       | 1SCA107826R1001   | 2,630    |



| Fuse size | Rated current<br>In [A] | Description  | Delivery batch<br>[pcs] | Ordering code     | L.P. (₹) |
|-----------|-------------------------|--------------|-------------------------|-------------------|----------|
| F1        | 20                      | Control Fuse | 100                     | 1SYN833001R2005 ■ | 140      |
|           | 32                      | Base         | 100                     | 1SYN833001R2009 ■ | 170      |

■ Stock items



# OESA/OS switch disconnector fuse, DIN-type

## DIN type

32 - 800A SDF supplied with shaft and handle, Mechanism at the end of the switch fuse



Notes:  
4<sup>th</sup> pole of all SFU's are 100% rated and are in the switched neutral (SN) version.

- Contact our nearest sales office
- For mechanism inbetween poles configuration
  - For motorized switch disconnector fuse requirement
  - For 4th pole with fuse protection
  - For Switch disconnector fuse with direct mounting handle

| Rated current In [A] | Poles                   | Recommend Fuse size | Description   | Ordering code     | L.P. (₹)     |
|----------------------|-------------------------|---------------------|---------------|-------------------|--------------|
| 32                   | 2                       | 000/ 00             | OESA0032D2    | 1SCA022108R4330   | 2,080        |
| 63                   |                         |                     | OESA0063D2    | 1SCA022080R5470   | 2,590        |
| 100                  |                         |                     | OESA00100D2   | 1SCA022080R5210   | 5,000        |
| 125                  |                         | 00                  | OESA125D2     | 1SYN833039R2012   | 6,680        |
| 160                  |                         |                     | OESA00160D2   | 1SCA022108R4500   | 7,140        |
| 200                  |                         |                     | OS200D02P     | 1SCA022759R9220   | 9,200        |
| 250                  |                         | 0-1                 | OS250D02P     | 1SCA022760R0170   | 11,450       |
| 315                  |                         | 0-2                 | OS315D02P     | 1SYN833040R2012   | 15,210       |
| 400                  |                         |                     | OS400D02P     | 1SCA022811R2740   | 17,090       |
| 630                  |                         |                     | OS630D02P     | 1SCA107745R1001   | 29,090       |
| 800                  |                         | 3                   | OS800D02P     | 1SCA022837R2650   | 33,020       |
| 1250                 |                         | 4                   | OS1250D02P    | 1SCA114051R1001   | Upon request |
| 32                   | 3                       | 000/ 00             | OESA00-32     | 1SCA022058R7710 ■ | 2,280        |
| 63                   |                         |                     | OESA 00-63    | 1SCA022057R6850 ■ | 3,130        |
| 100                  |                         |                     | OESA00100     | 1SCA022025R7830 ■ | 6,020        |
| 125                  |                         | 00                  | OESA 00125    | OESA00125 ■       | 8,070        |
| 160                  |                         |                     | OESA00-160    | 1SCA022077R8130 ■ | 8,640        |
| 200                  |                         |                     | OS200D03P     | 1SYN022709R9500 ■ | 11,130       |
| 250                  |                         | 0-1                 | OS250D03P     | 1SYN022719R0090   | 13,850       |
| 315                  |                         | 0-2                 | OS315D03P     | 1SYN953046P3001 ■ | 18,390       |
| 400                  |                         |                     | OS400D03P     | 1SYN022719R0250 ■ | 20,670       |
| 630                  |                         |                     | OS630D03P     | 1SYN022825R2830 ■ | 35,180       |
| 800                  |                         | 3                   | OS800D03P     | 1SYN022825R4880 ■ | 37,450       |
| 1250                 |                         | 4                   | OS1250D03P    | 1SCA105475R1001   | Upon request |
| 32                   | TPN                     | 000/ 00             | OESA0032N ■   | OESA0032N         | 2,400        |
| 63                   |                         |                     | OESA0063N ■   | OESA0063N         | 3,240        |
| 100                  |                         |                     | OESA00100N ■  | OESA00100N        | 6,360        |
| 125                  |                         | 00                  | OESA00125N ■  | OESA00125N        | 8,520        |
| 160                  |                         |                     | OESA00160N ■  | OESA00160N        | 9,540        |
| 200                  |                         |                     | OS200D03N3P   | 1SYN022749R8710 ■ | 12,040       |
| 250                  |                         | 0-1                 | OS250D03N3P   | 1SYN022749R9430 ■ | 14,540       |
| 315                  |                         | 0-2                 | OS315D03N3P   | 1SYN953047P3001 ■ | 19,520       |
| 400                  |                         |                     | OS400D03N3P   | 1SYN022753R9320 ■ | 21,560       |
| 630                  |                         |                     | OS630D03N3P   | 1SYN100858R1001 ■ | 35,740       |
| 800                  |                         | 3                   | OS800D03N3P   | 1SYN100859R1001 ■ | 38,580       |
| 1250                 |                         | 4                   | OS1250D03N3P  | 1SCA107932R1001   | Upon request |
| 32                   | 4<br>(Switched Neutral) | 000/ 00             | OESA 00-32A4  | 1SCA022067R7610   | 2,620        |
| 63                   |                         |                     | OESA 00-63A4  | 1SCA022057R7740 ■ | 3,410        |
| 100                  |                         |                     | OESA00100A4   | 1SCA022043R6760   | 6,600        |
| 125                  |                         | 00                  | OESA00125A4   | OESA00125A4       | 9,080        |
| 160                  |                         |                     | OESA 00-160A4 | 1SCA022080R7840   | 10,210       |
| 200                  |                         |                     | OS200D04N2P   | 1SYN022709R9680   | 13,170       |
| 250                  |                         | 0-1                 | OS250D04N2P   | 1SYN022719R2380   | 15,440       |
| 315                  |                         | 0-2                 | OS315D04N2P   | 1SYN953048P3001 ■ | 22,130       |
| 400                  |                         |                     | OS400D04N2P   | 1SYN022719R2460 ■ | 23,830       |
| 630                  |                         |                     | OS630D04N2P   | 1SYN022825R4290 ■ | 38,140       |
| 800                  |                         | 3                   | OS800D04N2P   | 1SYN022825R5180 ■ | 43,300       |
| 1250                 |                         | 4                   | OS1250D04N2P  | 1SCA105248R1001   | Upon request |

■ Stock items

# OESA/OS switch disconnecter fuse, BS-type

## BS

32 - 800A SDF supplied with shaft and handle

### Mechanism at the end of the switch fuse



Note:  
4<sup>th</sup> pole of all SFU's are 100% rated and are in the switched neutral (SN) version.

- Contact our nearest sales office
- For 1250A switch disconnecter fuse requirement
  - For mechanism in between poles configuration
  - For motorized switch disconnecter fuse requirement
  - For 4th pole with fuse protection

| Rated current In [A] | Poles                   | Recommend Fuse size | Description  | Ordering code     | L.P. (₹)     |
|----------------------|-------------------------|---------------------|--------------|-------------------|--------------|
| 32                   | 2                       | A2                  | OESA32G2     | 1SCA022108R6110   | 1,840        |
| 63                   |                         | A3                  | OESA63G2     | 1SCA022108R6380   | 2,510        |
| 100                  |                         | A4                  | OESA100G2    | 1SCA022087R7970   | 4,890        |
| 125                  |                         |                     | OESA125G2    | 1SYN833038R2012   | 6,200        |
| 160                  |                         | B2                  | OESA160B2    | 1SCA022082R6550   | 6,770        |
| 200                  |                         | B1-B2               | OS200B02P    | 1SCA022769R7820   | 8,170        |
| 250                  |                         | B1-B3               | OS250B02P    | 1SCA022769R9440   | 10,420       |
| 315                  |                         | B1-B4               | OS315B02P    | 1SCA022817R3450   | 15,120       |
| 400                  |                         |                     | OS400B02P    | 1SCA022813R7220   | 15,390       |
| 630                  |                         | C1-C2               | OS630B02P    | 1SCA113529R1001   | 26,740       |
| 800                  |                         | C1-C3               | OS800B02P    | 1SCA022837R6480   | 31,920       |
| 1250                 |                         | D1                  | OS1250B02P   | 1SCA114070R1001   | Upon request |
| 32                   | 3                       | A2                  | OESA32G1     | 1SCA022057R1540   | 2,220        |
| 63                   |                         | A3                  | OESA63G1     | 1SCA022057R0310 ■ | 3,020        |
| 100                  |                         | A4                  | OESA100G1    | 1SCA022042R0920 ■ | 5,920        |
| 125                  |                         |                     | OESA125G1    | OESA125G1         | 7,500        |
| 160                  |                         | B2                  | OESA160B3    | 1SCA022076R9570   | 8,170        |
| 200                  |                         | B1-B2               | OS200B03P    | 1SYN022709R9330   | 9,880        |
| 250                  |                         | B1-B3               | OS250B03P    | 1SYN022750R6660   | 12,610       |
| 315                  |                         | B1-B4               | OS315B03P    | 1SYN022719R0680   | 18,280       |
| 400                  |                         |                     | OS400B03P    | 1SYN022719R0840   | 18,620       |
| 630                  |                         | C1-C2               | OS630B03P    | 1SYN022825R5850   | 32,350       |
| 800                  |                         | C1-C3               | OS800B03P    | 1SYN022825R7550   | 38,580       |
| 1250                 |                         | D1                  | OS1250B03P   | 1SCA105250R1001   | Upon request |
| 32                   | TPN                     | A2                  | OESA32G1N ■  | OESA32G1N ‡       | 2,340        |
| 63                   |                         | A3                  | OESA63G1N ■  | OESA63G1N ‡       | 3,130        |
| 100                  |                         | A4                  | OESA100G1N ■ | OESA100G1N ‡      | 6,250        |
| 125                  |                         |                     | OESA125G1N ■ | OESA125G1N ‡      | 7,720        |
| 160                  |                         | B2                  | OESA160B3N ■ | OESA160B3N        | 8,420        |
| 200                  |                         | B1-B2               | OS200B03N3P  | YN022750R0620 ‡   | 10,570       |
| 250                  |                         | B1-B3               | OS250B03N3P  | 1SYN022750R8010 ‡ | 13,630       |
| 315                  |                         | B1-B4               | OS315B03N3P  | 1SYN022753R8940   | 18,730       |
| 400                  |                         |                     | OS400B03N3P  | 1SYN022753R9160   | 19,650       |
| 630                  |                         | C1-C2               | OS630B03N3P  | 1SYN100860R1001   | 32,910       |
| 800                  |                         | C1-C3               | OS800B03N3P  | 1SYN100861R1001   | 36,870       |
| 1250                 |                         | D1                  | OS1250B03N3P | 1SCA107936R1001   | Upon request |
| 32                   | 4<br>(Switched Neutral) | A2                  | OESA32G4     | 1SCA022059R9040   | 2,680        |
| 63                   |                         | A3                  | OESA63G4     | 1SCA022057R1110   | 3,410        |
| 100                  |                         | A4                  | OESA100G4    | 1SCA022043R7570   | 7,380        |
| 125                  |                         |                     | OESA125G4 ■  | OESA125G4         | 9,080        |
| 160                  |                         | B2                  | OESA160B4    | 1SCA022080R3690   | 10,210       |
| 200                  |                         | B1-B2               | OS200B04N2P  | 1SYN022709R9410   | 13,280       |
| 250                  |                         | B1-B3               | OS250B04N2P  | 1SYN022750R7800   | 15,670       |
| 315                  |                         | B1-B4               | OS315B04N2P  | 1SYN022719R2710   | 22,470       |
| 400                  |                         |                     | OS400B04N2P  | 1SYN022719R2890   | 22,700       |
| 630                  |                         | C1-C2               | OS630B04N2P  | 1SYN022825R6230   | 39,150       |
| 800                  |                         | C1-C3               | OS800B04N2P  | 1SYN022825R8010   | 44,830       |
| 1250                 |                         | D1                  | OS1250B04N2P | 1SCA105469R1001   | Upon request |

■ Stock items

# Accessories for OESA/OS switch disconnecter fuse, 32..800 A



## Phase barriers

| Frame       | Pole | Height (mm) | Description | Ordering code  | L.P. (₹) |
|-------------|------|-------------|-------------|----------------|----------|
| OS200...400 | 3    | 100         | PB100 low   | 1SDA054970R1 ■ | 910      |
|             | 4    | 100         | PB100 low   | 1SDA054971R1 ■ | 1,330    |



## Auxiliary contacts

| Frame                                         | Contact function | Description | Ordering Code     | L.P. (₹) |
|-----------------------------------------------|------------------|-------------|-------------------|----------|
| OESA 32...160                                 | 1NO+1NC          | OESAZX 15   | OESAZX 15         | 510      |
|                                               | 2NO+2NC          | OESAZX 16   | OESAZX 16         | 980      |
| OS200...800                                   | 1NO              | OA1G10      | 1SCA022353R4970   | 530      |
|                                               | 1NC              | OA3G01      | 1SCA022456R7410   | 590      |
| Screw mounting to the left side of the switch |                  | OEA28       | 1SCA022714R8810 ■ | 700      |

Note: OEA 28 has to be order along with 200 & 250A TPN switch only



## Fuse monitor

| Frame       | Rated voltage [Vac] | Description | Ordering code   | L.P. (₹) |
|-------------|---------------------|-------------|-----------------|----------|
| OS200...800 | 100...260           | OFS260      | 1SCA022716R0180 | 7,260    |
|             | 380...690           | OFS690      | 1SCA022715R9920 | 7,440    |



## Wrapped neutral link

| Frame         | Description | Ordering code   | L.P. (₹) |
|---------------|-------------|-----------------|----------|
| OESA32...63   | OESAZX87    | OESAZX 87       | 460      |
| OESA100       | OESAZX 86/1 | OESAZX 86/1     | 820      |
| OESA125...160 | OESAZX86    | OESAZX 86       | 900      |
| OS200...250   | OXN250      | 1SCA022752R9950 | 4,130    |
| OS315...400   | OXN400      | 1SCA022770R3060 | 10,810   |
| OS630...800   | OXN800S     | 1SCA022831R4880 | 12,390   |

## Handle adaptor

|                 |          |                 |       |
|-----------------|----------|-----------------|-------|
| OHB145...OHB175 | OHBZX200 | 1SCA125960R1001 | 1,310 |
|-----------------|----------|-----------------|-------|

## Handles

| Frame         | Description | Ordering code     | L.P. (₹) |
|---------------|-------------|-------------------|----------|
| OESA32...63   | YASDB51     | YASDB 51          | 750      |
| OESA100...160 | YASDB10     | YASDB 10          | 1,130    |
| OS200...250   | OHB80J6     | 1SCA022381R0240 ■ | 1,550    |
| OS315...400   | OHB145J12   | 1SCA022381R2110   | 1,900    |
| OS630...800   | OHB175J12   | 1SCA022381R2450   | 2,250    |



## Shaft

| Frame           | Description | Ordering code   | L.P. (₹) |
|-----------------|-------------|-----------------|----------|
| OESA/OS32...250 | OXP6X210    | 1SCA022295R6080 | 390      |
| OS315...400     | OXP12X250   | 1SCA022325R6980 | 780      |
| OS630...800     | OXP12X280   | 1SCA022137R5140 | 1,010    |



## Fuse covers for OESA switch disconnecter fuse

| Frame     | Type | Description | Ordering code   | L.P. (₹) |
|-----------|------|-------------|-----------------|----------|
| 32...63   | DIN  | Fuse cover  | 1SYN833035R2012 | 70       |
| 32...63   | BS   |             | 1SYN833036R2012 | 70       |
| 100...160 | DIN  |             | 1SYN833037R2012 | 80       |

Note: Ordering code mentioned above for fuse cover is per piece



# OT switch disconnectors



## Front operated switch-disconnectors with direct knob type handle

| Rated current In [A] | Pole | Description | Ordering code     | L.P.(₹) |
|----------------------|------|-------------|-------------------|---------|
| 16                   | 3    | OT16F3      | 1SCA104811R1001   | 1,120   |
| 25                   |      | OT25F3      | 1SCA104857R1001 ■ | 1,170   |
| 40                   |      | OT40F3      | 1SCA104902R1001   | 1,330   |
| 63                   |      | OT63F3      | 1SCA105332R1001   | 1,430   |
| 80                   |      | OT80F3      | 1SCA105798R1001   | 2,860   |
| 100                  |      | OT100F3     | 1SCA105004R1001   | 3,930   |
| 125                  |      | OT125F3     | 1SCA105033R1001   | 4,020   |

## Accessories for OT 16..125 F

### Selector handles for base and DIN-rail mounted switches

For shaft diameter 6 mm, door drilling 22.5 mm. Indication I-O and ON-OFF

### IP65 handles, NEMA 1, 3R, 12

Padlockable with max. 3 padlocks with bail diameter 5...8 mm, defeatable door interlock in ON-position, door interlocking in OFF-position when padlocked

| Frame                  | Description | Ordering code   | L.P. (₹) |
|------------------------|-------------|-----------------|----------|
| OT16...125F- Black     | OHBS2AJ     | 1SCA105213R1001 | 590      |
| OT16...125F-Red-yellow | OHYS2AJ     | 1SCA105296R1001 | 710      |

## Shafts

Suitable for all the switches in this section, OT16...125F

| Frame       | Description | Ordering code     | L.P. (₹) |
|-------------|-------------|-------------------|----------|
| OT16...125F | OX56X130    | 1SCA101655R1001 ■ | 400      |

## Door mounted switch-disconnectors with snap on and screw type mounting Handle for screw and snap on mouting to be ordered seperately



| Rated current In [A] | Pole | Description | Ordering code     | L.P. (₹) |
|----------------------|------|-------------|-------------------|----------|
| 16                   | 3    | OT16FT3     | 1SCA104838R1001 ■ | 1,230    |
| 25                   |      | OT25FT3     | 1SCA104884R1001   | 1,530    |
| 40                   |      | OT40FT3     | 1SCA104940R1001 ■ | 1,840    |
| 63                   |      | OT63FT3     | 1SCA105382R1001   | 2,550    |
| 80                   |      | OT80FT3     | 1SCA105431R1001   | 3,140    |
| 100                  |      | OT100FT3    | 1SCA105023R1001   | 5,240    |
| 125                  |      | OT125FT3    | 1SCA105060R1001   | 6,690    |

## Accessories for OT 16..125 FT

### Selector handles for door mounted switches

Indication I-O and ON-OFF. No separate shaft needed

### Screw mounting, hole distance 36 mm

Padlockable with max. 3 padlocks, IP65, hole distance 36/48 mm, NEMA 1, 3R, 12

| Frame                    | Description | Ordering code   | L.P. (₹) |
|--------------------------|-------------|-----------------|----------|
| OT16...125FT- Black      | OHBS2RJ     | 1SCA105232R1001 | 690      |
| OT16...125FT- Red Yellow | OHYS2RJ     | 1SCA105323R1001 | 710      |

Note:  
For any different arrangement kindly contact our nearest sales office.

■ Stock items





# OT switch disconnectors

## Front operated switch-disconnectors

OT 16A-3150A switch disconnector supplied with extended shaft and IP 65 pistol type handle



- Contact our nearest sales office
- For Door mounted switch disconnector
  - For different configuration of Shaft and Handle(selector type)
  - For 6 & 8pole switch disconnector requirement
  - 1 pole switch disconnector also availale on request



- Note:
- Contact our nearest sales office
- For requirement of Motorized isolators
  - For mechanism in between poles configuration
  - For switch disconnector with direct mounted handle
  - For Side operated switches

■ Stock items

| Rated current In [A] | Poles | Description | Ordering code     | L.P. (₹) |
|----------------------|-------|-------------|-------------------|----------|
| 160                  | 2     | OT160EV02P  | 1SCA120508R1001   | 6,130    |
| 200                  |       | OT200E02P   | 1SCA022751R1400   | 6,510    |
| 250                  |       | OT250E02P   | 1SCA022735R2500   | 8,030    |
| 315                  |       | OT315E02P   | 1SCA022866R5590   | 9,240    |
| 400                  |       | OT400E02P   | 1SCA022741R7210   | 12,450   |
| 630                  |       | OT630E02P   | 1SCA022866R5670   | 15,610   |
| 800                  |       | OT800E02P   | 1SCA022835R4830   | 19,280   |
| 1000                 |       | OT1000E02P  | 1SCA105795R1001   | 40,130   |
| 1250                 |       | OT1250E02P  | 1SCA106136R1001   | 48,160   |
| 1600                 |       | OT1600E02P  | 1SCA106142R1001   | 64,200   |
| 2000                 |       | OT2000E02P  | 1SCA120025R1001   | 80,250   |
| 2500                 | 3     | OT2500E02P  | 1SCA113956R1001   | 1,00,320 |
| 3200                 |       | OT3200E02P  | 1SCA128581R1001   | 1,44,460 |
| 4000                 |       | OT4000E02P  | 1SCA128595R1001   | 1,68,540 |
| 16                   |       | OT16F3      | 1SYN104811R1001 ■ | 2,190    |
| 25                   |       | OT25F3      | 1SYN104857R1001 ■ | 2,220    |
| 40                   |       | OT40F3      | 1SYN104902R1001 ■ | 2,300    |
| 63                   |       | OT63F3      | 1SYN105332R1001 ■ | 2,330    |
| 80                   |       | OT80F3      | 1SYN105798R1001 ■ | 3,750    |
| 100                  |       | OT100F3     | 1SYN105004R1001 ■ | 5,000    |
| 125                  |       | OT125F3     | 1SYN105033R1001 ■ | 5,090    |
| 160                  |       | OT160G03P   | 1SCA135139R1001   | 6,470    |
| 16                   | 4     | OT16F4N2    | 1SYN104829R1001   | 2,370    |
| 25                   |       | OT25F4N2    | 1SYN104886R1001   | 2,460    |
| 40                   |       | OT40F4N2    | 1SYN104932R1001 ■ | 2,510    |
| 63                   |       | OT63F4N2    | 1SYN105365R1001   | 2,870    |
| 80                   |       | OT80F4N2    | 1SYN105413R1001 ■ | 4,920    |
| 100                  |       | OT100F4N2   | 1SYN105018R1001 ■ | 5,190    |
| 125                  |       | OT125F4N2   | 1SYN105051R1001 ■ | 5,360    |
| 160                  |       | OT160G04P   | 1SCA135140R1001   | 8,870    |
| 160                  | 3     | OT160EV03P  | 1SCA120514R1001 ■ | 6,790    |
| 200                  |       | OT200E03P   | 1SCA022712R0800 ■ | 7,590    |
| 250                  |       | OT250E03P   | 1SCA022710R0100 ■ | 9,360    |
| 315                  |       | OT315E03P   | 1SCA022718R8510 ■ | 10,260   |
| 400                  |       | OT400E03P   | 1SCA022718R8780 ■ | 13,830   |
| 630                  |       | OT630E03P   | 1SCA022718R8940 ■ | 17,140   |
| 800                  |       | OT800E03P   | 1SCA022718R9410 ■ | 21,410   |
| 1000                 |       | OT1000E03P  | 1SCA022860R5930 ■ | 41,910   |
| 1250                 |       | OT1250E03P  | 1SCA022860R6230 ■ | 53,510   |
| 1600                 |       | OT1600E03P  | 1SCA022860R6580 ■ | 71,340   |
| 2000                 |       | OT2000E03P  | 1SCA108036R1001   | 87,400   |
| 2500                 | 4     | OT2500E03P  | 1SCA104972R1001 ■ | 1,11,460 |
| 3200                 |       | OT3200E03P  | 1SCA128481R1001   | 1,60,510 |
| 4000                 |       | OT4000E03P  | 1SCA12484R1001    | 1,87,250 |
| 160                  |       | OT160EV04P  | 1SCA120521R1001 ■ | 9,360    |
| 200                  |       | OT200E04P   | 1SCA022713R4930 ■ | 9,560    |
| 250                  |       | OT250E04P   | 1SCA022710R0520 ■ | 10,700   |
| 315                  |       | OT315E04P   | 1SCA022719R1730 ■ | 11,600   |
| 400                  |       | OT400E04P   | 1SCA022719R1810 ■ | 14,900   |
| 630                  |       | OT630E04P   | 1SCA022719R2030 ■ | 20,350   |
| 800                  |       | OT800E04P   | 1SCA022719R2110 ■ | 24,520   |
| 1000                 |       | OT1000E04P  | 1SCA022860R6150   | 55,280   |
| 1250                 | 4     | OT1250E04P  | 1SCA022860R6310   | 69,550   |
| 1600                 |       | OT1600E04P  | 1SCA022860R6740   | 89,170   |
| 2000                 |       | OT2000E04P  | 1SCA108038R1001   | 1,05,230 |
| 2500                 |       | OT2500E04P  | 1SCA105140R1001   | 1,29,310 |
| 3200                 |       | OT3200E04P  | 1SCA128482R1001   | 1,73,890 |
| 4000                 |       | OT4000E04P  | 1SCA124856R1001   | 1,96,180 |



# Accessories for OT switch disconnectors



## Handles

| Frame         | Description | Ordering code     | L.P. (₹) |
|---------------|-------------|-------------------|----------|
| OT16...125    | OHB45J6     | 1SCA022380R8770 ■ | 910      |
| OT160...250   | OHB65J6     | 1SCA022380R9660 ■ | 1,230    |
| OT315...400   | OHB95J12    | 1SCA022381R0830   | 1,420    |
| OT630...800   | OHB125J12   | 1SCA022381R1560 ■ | 1,530    |
| OT1000...4000 | OHB274J12   | 1SCA115920R1001 ■ | 4,360    |



## Shaft

| Frame         | Description | Ordering code     | L.P. (₹) |
|---------------|-------------|-------------------|----------|
| OT16...125    | EXP6X170    | 1SCA108224R1001 ■ | 330      |
| OT160...250   | EXP6X210    | 1SCA022295R6080   | 390      |
| OT315...800   | EXP12X185   | 1SCA022325R6710   | 620      |
| OT1000...4000 | EXP12X280   | 1SCA022137R5140   | 1,010    |



## Auxiliary contact

| Frame          | Contact function | Description | Ordering code     | L.P. (₹) |
|----------------|------------------|-------------|-------------------|----------|
| OT16...4000    | 1NO              | OA1G10      | 1SCA022353R4970 ■ | 530      |
| OT16...125     | 1NC              | OA1G01      | 1SCA022353R4890 ■ | 530      |
| OT160EV...4000 | 1NC              | OA3G01      | 1SCA022456R7410 ■ | 590      |



## Phase barrier

| Frame         | Poles | Description | Ordering code   | L.P. (₹) |
|---------------|-------|-------------|-----------------|----------|
| OT160...OT800 | 3     | PB100 low   | 1SDA054970R1    | 910      |
| OT160...OT800 | 4     | PB100 low   | 1SDA054971R1    | 1,330    |
| OT1000...2500 | 3 & 4 | OTB1600/6   | 1SCA100768R1001 | 3,930    |
| OT3200...4000 | 3 & 4 | OTB4000/6   | 1SCA129040R1001 | 3,980    |



## Mechanical interlock mechanism

(Prevents one switch from closing to ON-position, if the other is not in OFF-position)

| Frame        | Shaft distance [mm] | Description | Ordering code   | L.P. (₹) |
|--------------|---------------------|-------------|-----------------|----------|
| OT16...125   | 100                 | OTZW24      | 1SCA022639R5610 | 1,990    |
| OT160...250  | 190                 | OTZW10      | 1SCA022431R5280 | 2,420    |
| OT315...400  | 250                 | OETLZW14    | 1SCA022077R3410 | 6,150    |
| OT315...800  | 300                 | OETLZW3     | 1SCA022049R0380 | 6,420    |
| OT315...4000 | 500                 | OETLZW15    | 1SCA022081R9340 | 7,140    |



## Terminal shrouds snap-on mounting, transparent

For 3-pole switches

| Frame          | Description | Ordering code     | L.P. (₹) |
|----------------|-------------|-------------------|----------|
| OT 16...40F3   | OTS40T3     | 1SCA105317R1001   | 340      |
| OT63...80F3    | OTS63T3     | 1SCA022353R6750 ■ | 250      |
| OT 100...125F3 | OTS125T3    | 1SCA022379R968    | 510      |

Note:  
for requirement of terminal shrouds for higher current rating contact our nearest sales office

# OT manual changeover switches

## Manual changeover switches, I-O-II -operation

Supplied with extended shaft and IP 65 pistol type handle



| Rated current In [A]                                                     | Poles | Description | Ordering code     | L.P. (₹) |
|--------------------------------------------------------------------------|-------|-------------|-------------------|----------|
| 16                                                                       | 3     | OT16F3C     | 1SYN104816R1001 ■ | 3,400    |
| 25                                                                       |       | OT25F3C     | 1SYN104863R1001 ■ | 4,290    |
| 40                                                                       |       | OT40F3C     | 1SYN104913R1001 ■ | 4,650    |
| 63                                                                       |       | OT63F3C     | 1SYN105338R1001 ■ | 6,070    |
| 80                                                                       |       | OT80F3C     | 1SYN105402R1001   | 6,680    |
| 100                                                                      |       | OT100F3C    | 1SYN105008R1001 ■ | 8,930    |
| 125                                                                      |       | OT125F3C    | 1SYN105037R1001 ■ | 9,360    |
| 16                                                                       | 4     | OT16F4C     | 1SYN104831R1001   | 4,290    |
| 25                                                                       |       | OT25F4C     | 1SYN104877R1001   | 4,460    |
| 40                                                                       |       | OT40F4C     | 1SYN104934R1001 ■ | 4,920    |
| 63                                                                       |       | OT63F4C     | 1SYN105369R1001 ■ | 6,870    |
| 80                                                                       |       | OT80F4C     | 1SYN105418R1001 ■ | 7,220    |
| 100                                                                      |       | OT100F4C    | 1SYN105019R1001   | 10,630   |
| 125                                                                      |       | OT125F4C    | 1SYN105054R1001 ■ | 10,880   |
| Supplied with bridging bars, extended shaft and IP 65 pistol type handle |       |             |                   |          |
| 160                                                                      | 3     | OT160E03CP  | 1SYN022772R6510 ■ | 12,930   |
| 200                                                                      |       | OT200E03CP  | 1SYN022771R7520 ■ | 13,370   |
| 250                                                                      |       | OT250E03CP  | 1SYN022771R3450 ■ | 16,070   |
| 315                                                                      |       | OT315E03CP  | 1SYN022772R6780 ■ | 19,610   |
| 400                                                                      |       | OT400E03CP  | 1SYN022771R8500 ■ | 23,180   |
| 630                                                                      |       | OT630E03CP  | 1SYN022785R6050 ■ | 34,780   |
| 800                                                                      |       | OT800E03CP  | 1SYN022785R6300   | 44,580   |
| 1000                                                                     |       | OT1000E03CP | 1SYN022872R1680 ■ | 1,20,380 |
| 1250                                                                     |       | OT1250E03CP | 1SYN022872R0790   | 1,33,750 |
| 1600                                                                     |       | OT1600E03CP | 1SYN022872R1840   | 1,64,960 |
| 2000                                                                     | 4     | OT2000E03CP | 1SYN103908R1001   | 2,49,680 |
| 2500                                                                     |       | OT2500E03CP | 1SYN105615R1001   | 2,71,970 |
| 3200                                                                     |       | OT3200E03CP | 1SYN129156R1001   | 3,92,340 |
| 160                                                                      |       | OT160E04CP  | 1SYN022775R9440 ■ | 15,160   |
| 200                                                                      |       | OT200E04CP  | 1SYN022771R7280 ■ | 15,610   |
| 250                                                                      |       | OT250E04CP  | 1SYN022775R4640 ■ | 17,390   |
| 315                                                                      |       | OT315E04CP  | 1SYN022775R7150 ■ | 21,230   |
| 400                                                                      |       | OT400E04CP  | 1SYN022771R8680 ■ | 24,970   |
| 630                                                                      |       | OT630E04CP  | 1SYN022785R6130 ■ | 42,810   |
| 800                                                                      |       | OT800E04CP  | 1SYN022785R6210 ■ | 51,720   |
| 1000                                                                     | 4     | OT1000E04CP | 1SYN022872R1500   | 1,38,210 |
| 1250                                                                     |       | OT1250E04CP | 1SYN022872R1250   | 1,44,460 |
| 1600                                                                     |       | OT1600E04CP | 1SYN022872R2310   | 1,78,340 |
| 2000                                                                     |       | OT2000E04CP | 1SYN103912R1001   | 3,21,000 |
| 2500                                                                     |       | OT2500E04CP | 1SYN103906R1001   | 3,56,680 |
| 3200                                                                     |       | OT3200E04CP | 1SYN129158R1001   | 4,68,140 |

Note: Contact our nearest sales office  
1. For 6 pole change over  
2. For manual/motorized bypass switch  
3. For manual closed transition  
4. For wide phase manual change over

■ Stock items



# OT motorized changeover switches

Changeover switches, motor operation, I-O-II -operation  
Supplied with bridging bars and handle



| Rated current In [A] | Poles | Description     | Ordering code     | L.P.(₹)  |
|----------------------|-------|-----------------|-------------------|----------|
| 40                   | 3     | OTM40F3CMA230V  | 1SYN120096R1001   | 27,940   |
| 63                   |       | OTM63F3CMA230V  | 1SYN120095R1001   | 29,540   |
| 80                   |       | OTM80F3CMA230V  | 1SYN120093R1001   | 32,220   |
| 100                  |       | OTM100F3CMA230V | 1SYN120071R1001   | 33,830   |
| 125                  |       | OTM125F3CMA230V | 1SYN120070R1001   | 34,910   |
| 160                  |       | OTM160E3CM230C  | 1SYN022845R8610   | 43,220   |
| 200                  |       | OTM200E3CM230C  | 1SYN022845R8960   | 43,790   |
| 250                  |       | OTM250E3CM230C  | 1SYN022845R9260   | 54,020   |
| 315                  |       | OTM315E3CM230C  | 1SYN022847R1210   | 54,590   |
| 400                  |       | OTM400E3CM230C  | 1SYN022847R1630   | 65,690   |
| 630                  |       | OTM630E3CM230C  | 1SYN103567R1001   | 73,920   |
| 800                  |       | OTM800E3CM230C  | 1SYN103570R1001   | 1,09,880 |
| 1000                 |       | OTM1000E3CM230C | 1SYN112677R1001   | 1,63,770 |
| 1250                 |       | OTM1250E3CM230C | 1SYN112676R1001   | 1,79,700 |
| 1600                 |       | OTM1600E3CM230C | 1SYN112678R1001   | 2,16,090 |
| 2000                 | 4     | OTM2000E3CM230C | 1SYN112709R1001   | 3,64,220 |
| 2500                 |       | OTM2500E3CM230C | 1SYN112710R1001   | 4,00,050 |
| 40                   |       | OTM40F4CMA230V  | 1SYN120102R1001   | 30,080   |
| 63                   |       | OTM63F4CMA230V  | 1SYN120101R1001 ■ | 31,690   |
| 80                   |       | OTM80F4CMA230V  | 1SYN120100R1001   | 33,300   |
| 100                  |       | OTM100F4CMA230V | 1SYN120098R1001 ■ | 34,380   |
| 125                  |       | OTM125F4CMA230V | 1SYN120097R1001 ■ | 36,530   |
| 160                  |       | OTM160E4CM230C  | 1SYN022848R1510 ■ | 44,370   |
| 200                  |       | OTM200E4CM230C  | 1SYN022846R1590 ■ | 44,590   |
| 250                  |       | OTM250E4CM230C  | 1SYN022846R1910 ■ | 54,590   |
| 315                  |       | OTM315E4CM230C  | 1SYN022847R2870 ■ | 55,730   |
| 400                  |       | OTM400E4CM230C  | 1SYN022847R3250 ■ | 69,950   |
| 630                  |       | OTM630E4CM230C  | 1SYN022873R1990 ■ | 75,620   |
| 800                  |       | OTM800E4CM230C  | 1SYN022872R8340 ■ | 1,13,720 |
| 1000                 |       | OTM1000E4CM230C | 1SYN112703R1001   | 1,64,910 |
| 1250                 |       | OTM1250E4CM230C | 1SYN112702R1001   | 1,80,840 |
| 1600                 |       | OTM1600E4CM230C | 1SYN112704R1001   | 2,21,770 |
| 2000                 |       | OTM2000E4CM230C | 1SYN112712R1001   | 3,94,060 |
| 2500                 |       | OTM2500E4CM230C | 1SYN112713R1001   | 4,29,890 |

Note:  
Motor voltage Ue 110-240 V AC/DC (OTM40...125A)  
Motor voltage Ue 220-240 V AC (OTM160...2500A)  
OMD control units can be purchased separately for their motorized changeover switches in order to build an ATS by themselves.  
Contact nearest sales office for making selection

- Contact our nearest sales office
- For motor voltage Ue 110...125 V AC/DC (160A-2500A)
  - For motor voltage Ue = 48V DC (160A-2500A)

■ Stock items

Compact ATS

NEW

Automatic transfer switches, I - O - II operation  
Supplied with bridging bars and direct mounted handle

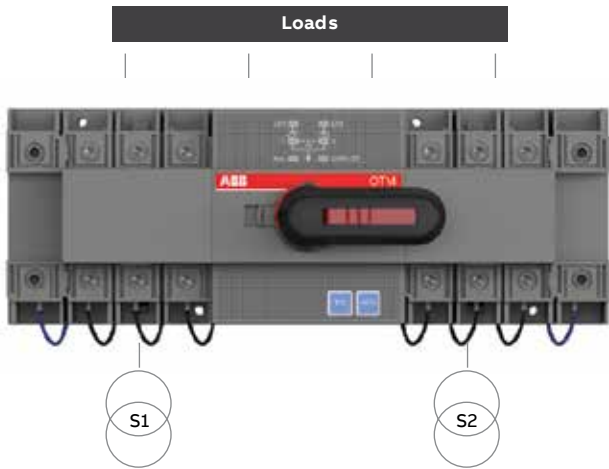


| Rated current In [A] | Pole | Description      | Ordering code   | L.P.(₹) |
|----------------------|------|------------------|-----------------|---------|
| 63                   | 3    | OTM63F3C20D400C  | 1SYN151423R1001 | 40,040  |
| 63                   |      | OTM63F3C21D400C  | 1SYN151424R1001 | 57,860  |
| 125                  |      | OTM125F3C20D400C | 1SYN151419R1001 | 44,890  |
| 125                  |      | OTM125F3C21D400C | 1SYN151420R1001 | 65,420  |

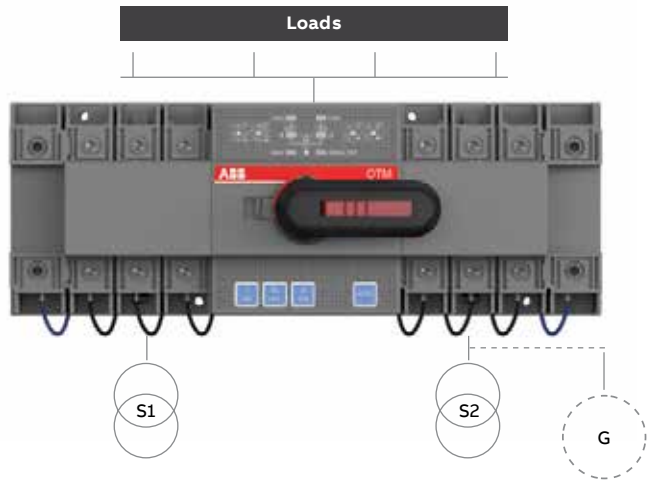


| Rated current In [A] | Pole | Description       | Ordering code   | L.P.(₹) |
|----------------------|------|-------------------|-----------------|---------|
| 40                   | 4    | OTM40F4C20D400C   | 1SYN151252R1001 | 39,820  |
| 40                   |      | OTM40F4C21D400C   | 1SYN151253R1001 | 60,490  |
| 40                   |      | OTM40F4CB21D400C  | 1SYN150580R1001 | 60,490  |
| 63                   |      | OTM63F4C20D400C   | 1SYN151254R1001 | 41,910  |
| 63                   |      | OTM63F4C21D400C   | 1SYN151255R1001 | 63,320  |
| 63                   |      | OTM63F4CB21D400C  | 1SYN150586R1001 | 63,320  |
| 125                  |      | OTM125F4C20D400C  | 1SYN151250R1001 | 49,380  |
| 125                  |      | OTM125F4C21D400C  | 1SYN151251R1001 | 71,530  |
| 125                  |      | OTM125F4CB21D230C | 1SYN150574R1001 | 71,530  |
|                      |      |                   |                 |         |

Note:  
● For 2 pole requirement contact nearest sales office



- OTM\_C20D:
- For Network/Network application
  - Fixed version with pre-defined delay times and voltage thresholds



- OTM\_C21D
- For Network/Network and Network/Genset applications
  - Adjustable version with configurable transfer and back-switching delays  
Adjustable over and under-voltage thresholds

# The world's first true ATS is here

Introducing TruONE.

A critical breakthrough for critical power



## WHAT MAKES TRUONE® UNIQUE

- Overlapping neutral\*
- One unit, One wire – just like an ATS should be
- Below 50 ms in-phase transfer
- Readily available emergency manual operation
- IEC/UL1008 approved
- Performance tested beyond standard requirements
- Variants with and without stable OFF-position
- ABB Ability™: EDCS for cloud-based services
- Ekip Com modules for uniform platform
- Configuration via Ekip Connect 3
- Predictive maintenance
- Modular structure to simplify service

\*in UL version only



# OT automatic transfer switches



## Automatic transfer switches, I - O - II operation

Supplied with bridging bars and handle

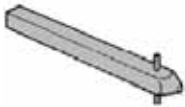
| Automatic operation, equipped with OMD300 controller unit with integrated dual power supply |       |                  |                   |          |
|---------------------------------------------------------------------------------------------|-------|------------------|-------------------|----------|
| Rated current In [A]                                                                        | Poles | Description      | Ordering code     | L.P.(₹)  |
| 160                                                                                         | 4     | OTM160E4C3D230C  | 1SYN106305R1001 ■ | 99,350   |
| 200                                                                                         |       | OTM200E4C3D230C  | 1SYN106309R1001   | 1,02,690 |
| 250                                                                                         |       | OTM250E4C3D230C  | 1SYN106313R1001   | 1,06,040 |
| 315                                                                                         |       | OTM315E4C3D230C  | 1SYN106317R1001   | 1,11,070 |
| 400                                                                                         |       | OTM400E4C3D230C  | 1SYN106318R1001 ■ | 1,17,200 |
| 630                                                                                         |       | OTM630E4C3D230C  | 1SYN108726R1001   | 1,56,270 |
| 800                                                                                         |       | OTM800E4C3D230C  | 1SYN108728R1001   | 2,06,500 |
| 1000                                                                                        |       | OTM1000E4C3D230C | 1SYN112852R1001   | 2,23,250 |
| 1250                                                                                        |       | OTM1250E4C3D230C | 1SYN112851R1001   | 2,56,730 |
| 1600                                                                                        |       | OTM1600E4C3D230C | 1SYN112848R1001   | 3,34,860 |

| Automatic operation, equipped with OMD800 controller unit with display |   |                  |                 |          |
|------------------------------------------------------------------------|---|------------------|-----------------|----------|
| 160                                                                    | 4 | OTM160E4C8D230C  | 1SYN101020R1001 | 1,33,940 |
| 200                                                                    |   | OTM200E4C8D230C  | 1SYN101021R1001 | 1,39,530 |
| 250                                                                    |   | OTM250E4C8D230C  | 1SYN101022R1001 | 1,45,110 |
| 315                                                                    |   | OTM315E4C8D230C  | 1SYN101063R1001 | 1,50,690 |
| 400                                                                    |   | OTM400E4C8D230C  | 1SYN101064R1001 | 1,67,430 |
| 630                                                                    |   | OTM630E4C8D230C  | 1SYN108453R1001 | 1,84,190 |
| 800                                                                    |   | OTM800E4C8D230C  | 1SYN108455R1001 | 2,23,250 |
| 1000                                                                   |   | OTM1000E4C8D230C | 1SYN112861R1001 | 2,84,630 |
| 1250                                                                   |   | OTM1250E4C8D230C | 1SYN112864R1001 | 3,12,540 |
| 1600                                                                   |   | OTM1600E4C8D230C | 1SYN112867R1001 | 3,90,670 |

- Note:
- Motor voltage Ue 220-240 V AC
  - For 3 pole requirement contact the nearest sales office
  - For OMD800, consider accessory ODPS for dual power supply



# Accessories for changeovers (manual, motorized, ATS)



## Shaft

| Frame          | Description | Ordering code    | L.P. (₹) |
|----------------|-------------|------------------|----------|
| OT16...125F_C  | EXP6X170    | 1SCA108224R1001  | 330      |
| OT160...250_C  | EXP6x161    | 1SCA022067R176 ■ | 330      |
| OT315...400_C  | EXP12x166   | 1SCA022325R671   | 520      |
| OT630...3200_C | EXP12x185   | 1SCA022325R710 ■ | 620      |



## Handle

| Frame           | Description    | Ordering code     | L.P. (₹) |
|-----------------|----------------|-------------------|----------|
| OT16...125F_C   | OHB45J6E311    | 1SCA022817R2130 ■ | 2,120    |
| OT160...250_C   | OHB65J6E011    | 1SCA022383R2480 ■ | 2,350    |
| OT315...400_C   | OHB95J12E011   | 1SCA022621R0760 ■ | 2,680    |
| OT630...800_C   | OHB125J12E011  | 1SCA022589R3340 ■ | 2,970    |
| OT1000...3200_C | OHB200J12PE011 | 1SCA022873R4230   | 6,500    |



## Auxiliary contacts

| Frame                         | Contact functions | Installation side | Description | Ordering code    | L.P. (₹) |
|-------------------------------|-------------------|-------------------|-------------|------------------|----------|
| OT16...125F_C<br>OTM40...125  | 1NO               | Right             | OA1G10      | 1SCA022353R497   | 530      |
|                               | 1NC               | Right             | OA8G01      | 1SCA022744R224 ■ | 950      |
|                               | 1NO               | Left              | OA7G10      | 1SCA022673R114 ■ | 840      |
|                               | 1NC               | Left              | OA1G01      | 1SCA022353R489   | 530      |
| OT160...3200<br>OTM160...2500 | 1NO               | Right             | OA1G10      | 1SCA022353R4970  | 530      |
|                               | 1NC               | Right             | OA3G01      | 1SCA022456R7410  | 590      |



## Phase barriers

3-pole change-overs need 8 barriers and 4-pole change-overs need 12 barriers for full protection.

| Frame                    | Poles | Description | Ordering code | L.P. (₹) |
|--------------------------|-------|-------------|---------------|----------|
| OT160...800 OTM160...800 | 3     | PB100 low   | 1SDA054970R1  | 910      |
|                          | 4     | PB100 low   | 1SDA054971R1  | 1,330    |



## Basic ATS controller for motorised change over

| Frame      | Description | Ordering code     | L.P. (₹) |
|------------|-------------|-------------------|----------|
| 40...2500A | ODPS230     | 1SCA122946R1001 ■ | 12,270   |

Note: Contact our nearest sales office for more information

# Enclosed switches

**Wide range of enclosed heavy duty switches**  
**From 16 to 1600 Amperes, 690 V**



Enclosed switches are designed and used as main switches for applications, which need to be isolated from the network. The range includes front operated and side operated switch disconnectors, switch fuses and changeover switches enclosed in plastic, steel sheet or stainless steel sheet and aluminium enclosures. They are rated for utilization categories including disconnecting as well as making and breaking the load. In addition the switch fuses equipped with fuse links protects the application and the cables from overload currents and short circuits.

## **Plastic enclosures**

The plastic enclosures are most suitable for locations with high chemical and moisture requirements. In addition, they are light and easy to install and handle.

## **Steel sheet enclosures**

The steel sheet enclosures are hot dip galvanized and the surface is polyester powder painted. The enclosures are durable and robust for various environments.

## **Stainless steel sheet enclosures**

The stainless steel sheet enclosures are made of AISI 304 stainless steel. They are used particularly in the food and beverage industry and in locations where high hygiene

is required. The smooth surface does not require any painting and is easy to clean.

## **Aluminum alloy enclosures**

Aluminum enclosures have very good impact strength and protection against UV light. They are suitable both for indoor and outdoor use in medium to heavy-duty applications.

## **Safety for personnel – reliable position indication**

- Padlocking in the OFF-position with one, three or six (with the shackle L6) padlocks against unintentional start-up The handle cannot be padlocked in the OFF-position if one of the contacts is not in the OFF position
- The cover cannot be removed if the handle is padlocked
- Door interlock in the ON-position
- Arc proof, short circuit durability function: Expander washers in aluminium enclosures with  $I_e > 160\text{ A}$  and door locking release in large metal sheet enclosures type MSC
- Door interlock defeatable with rectangular and pistol type handles

# Kabeldon low voltage switchgear system

Kabeldon low voltage distribution system by ABB is used to build modern systems for various applications,

from substations and cable distribution cabinets to distribution boards in industry.



Features of the Kabeldon IP-system are its simplicity and reliability. These are the most important factors when you want to achieve low operating costs and high delivery reliability in a distribution system.

- Busbars of continuously-extruded aluminium sections, insulated with a layer of polyamid.
- The busbar has a touch-proof contact slot. This ensures safety regardless of where on the busbar the switching device will be placed.
- Blade fuses in all of the fuse-switch disconnectors.
- The switching devices can be arranged in any order, regardless of rated current.
- All parts, busbars and devices, fulfil IP2X protection in accordance with IEC 60529\*).
- Switching devices 100-1600 A.

- It is easy to add new switching devices to existing distribution boards.
- Switching devices are mounted on and connected to the busbar system in the same operation.
- Switching devices can be connected when the system is live.
- Always voltage-free ("dead") when changing fuses.
- Busbars are available with rated currents from 400 to 1600 A.
- Switching devices, connectors and busbars combine to form a modular system. Each module is 12.5 mm. The modular system makes planning easier.
- The compact design of the switching devices makes them suitable for use in many different types of distribution boards.
- All switching devices have a utilisation category so that they can be used in cable distribution cabinets, substations and other distribution boards.

Note : For more details contact the nearest sales office.

# ABB's comprehensive range of LV control products

The range of ABB control products ranks amongst the most extensive on the market with a full range of innovative solutions for Control & Protection, Motor Starting, Intelligent motor management, measurement and monitoring and safety applications.

The business unit is comprised of 3 main product families:

- Control & Protection
- Electronic Relays
- Safety products

## Our products

Our products are already among the most extensive in the market and we are constantly adding new products in order to meet ever changing customer needs. Quality and reliability are built into every device to ensure total performance satisfaction, even in the most demanding applications.

We offer a very modern and competitive range of contactors, starters, manual motor starters, a wide range of electronic relays and overload relays, together with an extended of pilot devices.

## Our offering

- Contactors
- Manual motor starters
- Thermal overload relays
- Electronic overload relays
- Intelligent motor management systems
  - Universal motor controllers
  - Communication fieldbus plugs
- Electronic products and relays
  - Timers
  - Measuring and monitoring relays
  - Power supplies
  - Interface relays & optocouplers
- Jokab safety systems
- Pilot devices
- Arc guard systems



# Auxiliary contactors



## Standard control contactors

| No: of contacts | Contact configuration |    | Type code reference | Ordering code     | L.P.(₹) | Type code reference | Ordering code     | L.P.(₹) |
|-----------------|-----------------------|----|---------------------|-------------------|---------|---------------------|-------------------|---------|
|                 | NO                    | NC |                     |                   |         |                     |                   |         |
| 4               | 2                     | 2  | N22E **             | 1SBH141001R□□22 ■ | 1,220   | NL22E **            | 1SBH143001R□□22 ■ | 1,860   |
| 4               | 3                     | 1  | N31E **             | 1SBH141001R□□31 ■ |         | NL31E **            | 1SBH143001R□□31 ■ |         |
| 4               | 4                     | 0  | N40E **             | 1SBH141001R□□40 ■ |         | NL40E **            | 1SBH143001R□□40 ■ |         |

Refer coil voltage & codes mentioned below.

| No: of contacts | Contact configuration |    | Type code reference | Ordering code     | L.P.(₹) |
|-----------------|-----------------------|----|---------------------|-------------------|---------|
|                 | NO                    | NC |                     |                   |         |
| 4               | 2                     | 2  | NX22E               | 1SBH901074R□□22 ■ | 990     |
| 4               | 3                     | 1  | NX31E               | 1SBH901074R□□31 ■ |         |
| 4               | 4                     | 0  | NX40E               | 1SBH901074R□□40 ■ |         |

Refer coil voltage & codes mentioned below.

| No: of contacts | Contact configuration |    | Type code reference | Ordering code     | L.P.(₹) | Type code reference | Ordering code   | L.P.(₹) |
|-----------------|-----------------------|----|---------------------|-------------------|---------|---------------------|-----------------|---------|
|                 | NO                    | NC |                     |                   |         |                     |                 |         |
| 4               | 2                     | 2  | NF22E **            | 1SBH137001R□□22 ■ | 2,160   | NFZ22E **           | 1SBH136001R□□22 | 2,690   |
| 4               | 3                     | 1  | NF31E **            | 1SBH137001R□□31 ■ |         | NFZ31E **           | 1SBH136001R□□31 |         |
| 4               | 4                     | 0  | NF40E **            | 1SBH137001R□□40 ■ |         | NFZ40E **           | 1SBH136001R□□40 |         |

Refer coil voltage & codes mentioned below.

#Allows direct control by PLC output ≥ 24 V DC 500 mA

## Coil voltages and codes

### N & NX range (AC operated)

| Voltage     | Voltage     | Code  |
|-------------|-------------|-------|
| □□ V - 50Hz | □□ V - 60Hz | □□    |
| 24          | 24          | 8 1 ■ |
| 110         | 110 ... 120 | 8 4 ■ |
| 220 ... 230 | 230 ... 240 | 8 0 ■ |
| 400 ... 415 | 415 ... 440 | 8 6 ■ |

### NF range (AC/DC operated)

| Voltage    | Voltage   | Code  |
|------------|-----------|-------|
| V 50/60 Hz | V DC      | □□    |
| 24...60    | 20...60   | 1 1 ■ |
| 48...130   | 48...130  | 1 2 ■ |
| 100...250  | 100...250 | 1 3 ■ |
| 250...500  | 250...500 | 1 4 ■ |

### NL (DC operated)

| Voltage V DC | Code □□ |
|--------------|---------|
| 24           | 8 1 ■   |
| 48           | 8 3 ■   |
| 110          | 8 6 ■   |
| 240          | 8 9 ■   |

### NFZ range (AC/DC operated)

| Voltage    | Voltage   | Code |
|------------|-----------|------|
| V 50/60 Hz | V DC      | □□   |
| -          | 12...20   | 2 0  |
| 24...60    | 20...60   | 2 1  |
| 48...130   | 48...130  | 2 2  |
| 100...250  | 100...250 | 2 3  |

■ Stock items

# 3 pole contactors: AX09...AX370 : AC operated



AX09



AX95



AX185



AX370

## AX Contactor

AX contactors are mainly used for controlling 3-phase motors and power circuits up to 690 V AC. These contactors are of the block type design with:

- 3 main poles and built-in auxiliary contact
- Control circuit: AC operated
- Add-on auxiliary contact blocks for front or side mounting and a wide range of accessories

## Contactors: 3-pole – AC operated

| AC1 duty<br>Amps | AC3 rating at 415V |      | Auxiliary contacts |     | Type code   | Ordering code     | L.P.(₹) |
|------------------|--------------------|------|--------------------|-----|-------------|-------------------|---------|
|                  | Amps               | kW   |                    |     |             |                   |         |
| 22               | 9                  | 4    | 1NO                | -   | AX09-30-10  | 1SBL901074R□□10 ■ | 910     |
| 22               | 9                  | 4    | -                  | 1NC | AX09-30-01  | 1SBL901074R□□01 ■ | 910     |
| 25               | 12                 | 5.5  | 1NO                | -   | AX12-30-10  | 1SBL911074R□□10 ■ | 1,020   |
| 25               | 12                 | 5.5  | -                  | 1NC | AX12-30-01  | 1SBL911074R□□01 ■ | 1,020   |
| 27               | 18                 | 9    | 1NO                | -   | AX18-30-10  | 1SBL921074R□□10 ■ | 1,110   |
| 27               | 18                 | 9    | -                  | 1NC | AX18-30-01  | 1SBL921074R□□01 ■ | 1,110   |
| 32               | 25                 | 11   | 1NO                | -   | AX25-30-10  | 1SBL931074R□□10 ■ | 1,590   |
| 32               | 25                 | 11   | -                  | 1NC | AX25-30-01  | 1SBL931074R□□01 ■ | 1,590   |
| 55               | 32                 | 15   | 1NO                | -   | AX32-30-10  | 1SBL281074R□□10 ■ | 3,290   |
| 55               | 32                 | 15   | -                  | 1NC | AX32-30-01  | 1SBL281074R□□01 ■ | 3,290   |
| 60               | 40                 | 18.5 | 1NO                | -   | AX40-30-10  | 1SBL321074R□□10 ■ | 5,120   |
| 60               | 40                 | 18.5 | -                  | 1NC | AX40-30-01  | 1SBL321074R□□01 ■ | 5,120   |
| 100              | 50                 | 25   | 1NO                | 1NC | AX50-30-11  | 1SBL351074R□□11 ■ | 6,430   |
| 115              | 65                 | 30   | 1NO                | 1NC | AX65-30-11  | 1SBL371074R□□11 ■ | 8,690   |
| 125              | 80                 | 37   | 1NO                | 1NC | AX80-30-11  | 1SBL411074R□□11 ■ | 10,730  |
| 145              | 96                 | 45   | 1NO                | 1NC | AX95-30-11  | 1SFL431074R□□11 ■ | 12,440  |
| 160              | 115                | 55   | 1NO                | 1NC | AX115-30-11 | 1SFL981074R□□11 ■ | 15,440  |
| 190              | 150                | 75   | 1NO                | 1NC | AX150-30-11 | 1SFL991074R□□11 ■ | 20,660  |
| 250              | 185                | 90   | 1NO                | 1NC | AX185-30-11 | 1SFL491074R□□11 ■ | 24,240  |
| 275              | 205                | 110  | 1NO                | 1NC | AX205-30-11 | 1SFL501074R□□11 ■ | 29,170  |
| 400              | 265                | 132  | 1NO                | 1NC | AX260-30-11 | 1SFL547074R□□11 ■ | 35,080  |
| 500              | 305                | 160  | 1NO                | 1NC | AX300-30-11 | 1SFL587074R□□11 ■ | 42,250  |
| 600              | 370                | 200  | 1NO                | 1NC | AX370-30-11 | 1SFL607074R□□11 ■ | 52,230  |

Note: Complete the contactor code by replacing □□ with desired coil voltages as per above table.

## Coil voltages and codes AX range

| Voltage     | Voltage     | Code  |
|-------------|-------------|-------|
| □□ V - 50Hz | □□ V - 60Hz | □□    |
| 24          | 24          | 8 1 ■ |
| 110         | 110         | 8 4 ■ |
| 220 ... 230 | 220 ... 230 | 8 0 ■ |
| 400 ... 415 | 400 ... 415 | 8 6 ■ |

■ Stock items



# 3 pole contactors: AC operated



## Contactors: 3-pole – AC operated

| AC1duty<br>Amps | AC3 rating at 415V |      |      | Auxiliary contacts |     | Type code      | Ordering code     | L.P.(₹)      |
|-----------------|--------------------|------|------|--------------------|-----|----------------|-------------------|--------------|
|                 | Amps               | hP   | kW   |                    |     |                |                   |              |
| 25              | 9                  | 5.5  | 4    | 1NO                | -   | A09-30-10 **   | 1SBL141001R□□10 ■ | 1,060        |
| 25              | 9                  | 5.5  | 4    | -                  | 1NC | A09-30-01 **   | 1SBL141001R□□01 ■ | 1,060        |
| 27              | 12                 | 7.5  | 5.5  | 1NO                | -   | A12-30-10 **   | 1SBL161001R□□10 ■ | 1,200        |
| 27              | 12                 | 7.5  | 5.5  | -                  | 1NC | A12-30-01 **   | 1SBL161001R□□01 ■ | 1,200        |
| 30              | 17                 | 12.5 | 7.5  | 1NO                | -   | A16-30-10 **   | 1SBL181001R□□10 ■ | 1,380        |
| 30              | 17                 | 12.5 | 7.5  | -                  | 1NC | A16-30-01 **   | 1SBL181001R□□01 ■ | 1,380        |
| 45              | 26                 | 15   | 11   | 1NO                | -   | A26-30-10 **   | 1SBL241001R□□10 ■ | 1,970        |
| 45              | 26                 | 15   | 11   | -                  | 1NC | A26-30-01 **   | 1SBL241001R□□01 ■ | 1,970        |
| 55              | 32                 | 20   | 15   | 1NO                | -   | A30-30-10 **   | 1SBL281001R□□10 ■ | 3,790        |
| 55              | 32                 | 20   | 15   | -                  | 1NC | A30-30-01 **   | 1SBL281001R□□01 ■ | 3,790        |
| 60              | 37                 | 30   | 18.5 | 1NO                | -   | A40-30-10 **   | 1SBL321001R□□10 ■ | 6,070        |
| 60              | 37                 | 30   | 18.5 | -                  | 1NC | A40-30-01 **   | 1SBL321001R□□01 ■ | 6,070        |
| 100             | 50                 | 40   | 25   | -                  | -   | A50-30-00 **   | 1SBL351001R□□00 ■ | 6,870        |
| 115             | 65                 | 50   | 37   | -                  | -   | A63-30-00 **   | 1SBL371001R□□00 ■ | 9,660        |
| 125             | 75                 | 60   | 40   | -                  | -   | A75-30-00 **   | 1SBL411001R□□00 ■ | 12,130       |
| 145             | 96                 | 70   | 55   | 1NO                | 1NC | A95-30-11**    | 1SFL431001R□□11 ■ | 15,400       |
| 160             | 110                | 75   | 59   | 1NO                | 1NC | A110-30-11**   | 1SFL451001R□□11 ■ | 18,720       |
| 250             | 145                | 100  | 75   | 1NO                | 1NC | A145-30-11**   | 1SFL471001R□□11 ■ | 24,780       |
| 275             | 185                | 115  | 90   | 1NO                | 1NC | A185-30-11**   | 1SFL491001R□□11 ■ | 30,620       |
| 350             | 205                | 150  | 110  | 1NO                | 1NC | AF205-30-11**  | 1SFL527002R□□11 ■ | 35,330       |
| 400             | 265                | 175  | 140  | 1NO                | 1NC | AF265-30-11**  | 1SFL547002R□□11 ■ | 40,220       |
| 500             | 305                | 215  | 160  | 1NO                | 1NC | AF305-30-11**  | 1SFL587002R□□11 ■ | 46,660       |
| 600             | 370                | 270  | 200  | 1NO                | 1NC | AF370-30-11**  | 1SFL607002R□□11 ■ | 59,470       |
| 600             | 400                | 300  | 220  | 1NO                | 1NC | AF400-30-11**  | 1SFL577001R□□11 ■ | 63,260       |
| 700             | 460                | 340  | 250  | 1NO                | 1NC | AF460-30-11**  | 1SFL597001R□□11 ■ | 79,350       |
| 800             | 580                | 470  | 355  | 1NO                | 1NC | AF580-30-11**  | 1SFL617001R□□11 ■ | 1,13,910     |
| 1050            | 750                | 570  | 425  | 1NO                | 1NC | AF750-30-11**  | 1SFL637001R□□11 ■ | 1,73,660     |
| 1260            | -                  | -    | -    | 1NO                | 1NC | AF1250-30-11** | 1SFL647001R□□11   | Upon request |
| 1350            | 860                | -    | 500  | 1NO                | 1NC | AF1350-30-11** | 1SFL657001R□□11   |              |
| 1650            | 1050               | -    | 600  | 1NO                | 1NC | AF1650-30-11** | 1SFL677001R□□11   |              |
| 2050            | -                  | -    | -    | 1NO                | 1NC | AF2050-30-11** | 1SFL707001R□□11   |              |
| 2650            | -                  | -    | -    | 1NO                | 1NC | AF2650-30-11** | 1SFL667001R□□11   |              |
| 2850            | -                  | -    | -    | 1NO                | 1NC | AF2850-30-11** | 1SFL687001R□□11   |              |

Complete the contactor type code by replacing \*\* with desired coil voltage, AF contactors have advanced electronic coil interface with wideband AC/DC coil

### Coil voltages and codes: A09 ... A185 range

| Voltage     | Voltage     | Code |
|-------------|-------------|------|
| V - 50Hz    | V - 60Hz    | □□   |
| 24          | 24          | 8 1■ |
| 110         | 110 ... 120 | 8 4■ |
| 220 ... 230 | 230 ... 240 | 8 0■ |
| 400 ... 415 | 415 ... 440 | 8 6■ |

### New AF205...AF370 range (AC/DC operated)

| Voltage    | Voltage   | Code |
|------------|-----------|------|
| V 50/60 Hz | V DC      | □□   |
| 24...60    | 20...60   | 1 1  |
| 48...130   | 48...130  | 1 2  |
| 100...250  | 100...250 | 1 3  |
| 250...500  | 250...500 | 1 4  |

### AF400...AF1250 range (AC/DC operated)

| Voltage    | Voltage   | Code |
|------------|-----------|------|
| V 50/60 Hz | V DC      | □□   |
| -          | 24...60   | 6 8  |
| 48...130   | 48...130  | 6 9  |
| 100...250  | 100...250 | 7 0  |
| 250...500  | 250...500 | 7 1  |

### AF1350...AF2850 range (AC/DC operated)

| Voltage    | Voltage   | Code |
|------------|-----------|------|
| V 50/60 Hz | DC        | □□   |
| 100...250  | 100...250 | 7 0  |

Note: For non-standard coil voltage, other than this contact us for price.



# 4 pole contactors: AC operated



Contactors: 4-pole (AC operated)

| Rating at 415V<br>AC1 Amps | Main contact<br>arrangement |     | Auxiliary contacts |     | Type code reference | Ordering code     | L.P.(₹)  |
|----------------------------|-----------------------------|-----|--------------------|-----|---------------------|-------------------|----------|
| 25                         | 4NO                         | -   | -                  | -   | A09-40-00 **        | 1SBL141201R□□00 ■ | 1,410    |
| 25                         | 2NO                         | 2NC | -                  | -   | A09-22-00 **        | 1SBL141501R□□00 ■ | 1,660    |
| 30                         | 4NO                         | -   | -                  | -   | A16-40-00 **        | 1SBL181201R□□00 ■ | 1,480    |
| 30                         | 2NO                         | 2NC | -                  | -   | A16-22-00 **        | 1SBL181501R□□00 ■ | 1,750    |
| 45                         | 4NO                         | -   | -                  | -   | A26-40-00 **        | 1SBL241201R□□00 ■ | 2,660    |
| 45                         | 2NO                         | 2NC | -                  | -   | A26-22-00 **        | 1SBL241501R□□00 ■ | 3,330    |
| 70                         | 4NO                         | -   | -                  | -   | A45-40-00**         | 1SBL331201R□□00 ■ | 6,990    |
| 70                         | 2NO                         | 2NC | -                  | -   | A45-22-00**         | 1SBL331501R□□00   | 9,990    |
| 100                        | 4NO                         | -   | -                  | -   | A50-40-00**         | 1SBL351201R□□00 ■ | 9,990    |
| 125                        | 4NO                         | -   | -                  | -   | A75-40-00**         | 1SBL351201R□□00 ■ | 13,290   |
| 125                        | 2NO                         | 2NC | -                  | -   | A75-22-00**         | 1SBL411501R□□00   | 15,230   |
| 160                        | 4NO                         | -   | -                  | -   | AF116-40-00         | 1SFL427102R□□00   | 22,000   |
| 200                        | 4NO                         | -   | -                  | -   | AF140-40-00         | 1SFL447102R□□00   | 26,820   |
| 275                        | 4NO                         | -   | -                  | -   | AF190-40-00         | 1SFL487102R□□00 ■ | 39,660   |
| 350                        | 4NO                         | -   | -                  | -   | AF205-40-00         | 1SFL527102R□□00 ■ | 47,290   |
| 400                        | 4NO                         | -   | -                  | -   | AF265-40-00         | 1SFL547102R□□00 ■ | 56,190   |
| 500                        | 4NO                         | -   | -                  | -   | AF305-40-00         | 1SFL587102R□□00 ■ | 69,200   |
| 525                        | 4NO                         | -   | -                  | -   | AF370-40-00         | 1SFL607102R□□00 ■ | 77,210   |
| 800                        | 4NO                         | -   | 1NO                | 1NC | EK550-40-11 **      | SK827041 - □□ ■   | 1,23,310 |
| 1000                       | 4NO                         | -   | 1NO                | 1NC | EK1000-40-11 **     | SK827044 - □□     | 1,71,570 |

Complete the contactor type code by replacing \*\* with desired coil voltage

### Coil voltages and codes:

#### A09 ... A 75 range

| Voltage     | Voltage     | Code |
|-------------|-------------|------|
| V - 50Hz    | V - 60Hz    | □□   |
| 24          | 24          | 8 1  |
| 110         | 110 ... 120 | 8 4  |
| 220 ... 230 | 230 ... 240 | 8 0  |
| 400 ... 415 | 415 ... 440 | 8 6  |

Note: For non-standard coil voltage, other than this contact us for price.

### Coil voltages and codes: EK550 ... EK1000

| Voltage     | Voltage  | Code  |
|-------------|----------|-------|
| □□V - 50Hz  | □□□ 60Hz | □□    |
| -           | 110      | A E   |
| 110         | 120      | A F   |
| 220 ... 230 | *        | A L ■ |
| 230 ... 240 | -        | A M   |
| 400 ... 415 | -        | A R   |

### Coil voltages and codes:

#### New AF116 - AF370 (AC/DC operated)

| Voltage    | Voltage   | Code |
|------------|-----------|------|
| V 50/60 Hz | V DC      | □□   |
| 24...60    | 20...60   | 1 1  |
| 48...130   | 48...130  | 1 2  |
| 100...250  | 100...250 | 1 3  |
| 250...500  | 250...500 | 1 4  |

■ Stock items

# 3 pole contactors AL and TAL range: DC operated



## AL contactors

| AC 1 duty<br>Amps | AC3 rating at 415V |     |      | Auxiliary contacts |     | Type code<br>reference | Ordering code     | L.P.(₹) |
|-------------------|--------------------|-----|------|--------------------|-----|------------------------|-------------------|---------|
|                   | Amps               | hP  | kW   |                    |     |                        |                   |         |
| 25                | 9                  | 5   | 4    | 1NO                | -   | AL9-30-10              | 1SBL143001R□□10 ■ | 1,800   |
| 25                | 9                  | 5   | 4    | -                  | 1NC | AL9-30-01              | 1SBL143001R□□01 ■ | 1,800   |
| 27                | 12                 | 7.5 | 5.5  | 1NO                | -   | AL12-30-10             | 1SBL163001R□□10   | 1,960   |
| 27                | 12                 | 7.5 | 5.5  | -                  | 1NC | AL12-30-01             | 1SBL163001R□□01   | 1,960   |
| 30                | 17                 | 10  | 7.5  | 1NO                | -   | AL16-30-10             | 1SBL183001R□□10 ■ | 2,480   |
| 30                | 17                 | 10  | 7.5  | -                  | 1NC | AL16-30-01             | 1SBL183001R□□01   | 2,480   |
| 45                | 26                 | 20  | 11   | 1NO                | -   | AL26-30-10             | 1SBL243001R□□10 ■ | 3,230   |
| 45                | 26                 | 20  | 11   | -                  | 1NC | AL26-30-01             | 1SBL243001R□□01   | 3,230   |
| 55                | 32                 | 25  | 15   | 1NO                | -   | AL30-30-10             | 1SBL283001R□□10   | 6,710   |
| 55                | 32                 | 25  | 15   | -                  | 1NC | AL30-30-01             | 1SBL283001R□□01   | 6,710   |
| 60                | 37                 | 30  | 18.5 | 1NO                | -   | AL40-30-10             | 1SBL323001R□□10   | 8,120   |
| 60                | 37                 | 30  | 18.5 | -                  | 1NC | AL40-30-01             | 1SBL323001R□□01   | 8,120   |



## TAL contactors

| AC 1 duty<br>Amps | AC3 rating at 415V |     |      | Auxiliary contacts |     | Type code<br>reference | Ordering code     | L.P.(₹) |
|-------------------|--------------------|-----|------|--------------------|-----|------------------------|-------------------|---------|
|                   | Amps               | hP  | kW   |                    |     |                        |                   |         |
| 25                | 9                  | 5   | 4    | 1NO                | -   | TAL9-30-10             | 1SBL143061R□□10 ■ | 2,120   |
| 25                | 9                  | 5   | 4    | -                  | 1NC | TAL9-30-01             | 1SBL163061R□□10 ■ | 2,120   |
| 27                | 12                 | 7.5 | 5.5  | 1NO                | -   | TAL12-30-10            | 1SBL163061R□□10   | 2,600   |
| 27                | 12                 | 7.5 | 5.5  | -                  | 1NC | TAL12-30-01            | 1SBL163061R□□01   | 2,600   |
| 30                | 17                 | 10  | 7.5  | 1NO                | -   | TAL16-30-10            | 1SBL183061R□□10 ■ | 2,780   |
| 30                | 17                 | 10  | 7.5  | -                  | 1NC | TAL16-30-01            | 1SBL183061R□□01 ■ | 2,780   |
| 45                | 26                 | 20  | 11   | 1NO                | -   | TAL26-30-10            | 1SBL243061R□□10 ■ | 3,800   |
| 45                | 26                 | 20  | 11   | -                  | 1NC | TAL26-30-01            | 1SBL243061R□□01   | 3,800   |
| 55                | 32                 | 25  | 15   | 1NO                | -   | TAL30-30-10            | 1SBL283061R□□10   | 7,480   |
| 55                | 32                 | 25  | 15   | -                  | 1NC | TAL30-30-01            | 1SBL283061R□□01   | 7,480   |
| 60                | 37                 | 30  | 18.5 | 1NO                | -   | TAL40-30-10            | 1SBL323061R□□10 ■ | 8,350   |
| 60                | 37                 | 30  | 18.5 | -                  | 1NC | TAL40-30-01            | 1SBL323061R□□01   | 8,350   |

## Coil voltages and codes: AL

| Voltage  | Code  |
|----------|-------|
| □□□ V DC | □□    |
| 24       | 8 1   |
| 110      | 8 6 ■ |
| 240      | 8 9   |

Other voltages: contact nearest ABB sales office.

## Coil voltages and codes: TAL

| Voltage   | Code  |
|-----------|-------|
| □□□ V DC  | □□    |
| 25...45   | 5 2   |
| 77...143  | 6 2 ■ |
| 90...150  | 6 6   |
| 152...264 | 6 8   |

# Contactors for special application - capacitors switching



## Contactors for capacitor switching: 3 pole – AC operated:

| kVAR Rating at 415V                           | Auxiliary contacts | Type code reference | Ordering code     | L.P.(₹) |
|-----------------------------------------------|--------------------|---------------------|-------------------|---------|
| Type UA...RA with in-built damping resistors: |                    |                     |                   |         |
| 12.5                                          | 1NO                | UA16-30-10RA **     | 1SBL181024R□□10 ■ | 2,640   |
| 22                                            | 1NO                | UA26-30-10RA **     | 1SBL241024R□□10 ■ | 4,410   |
| 30                                            | 1NO                | UA30-30-10RA**      | 1SBL281024R□□10 ■ | 5,050   |
| 40                                            | --                 | UA50-30-00RA        | 1SBL281024R□□10 ■ | 13,950  |
| 50                                            | --                 | UA63-30-00RA**      | 1SBL371024R□□00 ■ | 15,020  |
| 60                                            | --                 | UA75-30-00RA**      | 1SBL411024R□□00 ■ | 16,420  |
| 70                                            | --                 | UA95-30-00RA**      | 1SFL431024R□□00 ■ | 19,090  |
| 80                                            | --                 | UA110-30-00RA**     | 1SFL451024R□□00 ■ | 21,760  |

Type UA...RA with in-built damping resistors  
Complete the contactor type code by replacing \*\* with desired coil voltage.

## Peak current $\hat{I} \leq 100$ times the rms current

| kVAR rating at 415V | Max peak current $\hat{I}$ | Auxiliary contacts fitted |    | Type        | Ordering code     | L.P.(₹) |
|---------------------|----------------------------|---------------------------|----|-------------|-------------------|---------|
| kvar                | kA                         | NO                        | NC |             |                   |         |
| 12.5                | 1.8                        | 1                         | 0  | UA16-30-10  | 1SBL181022R□□10 ■ | 2,120   |
| 20                  | 3                          | 1                         | 0  | UA26-30-10  | 1SBL241022R□□10 ■ | 2,640   |
| 27.5                | 33.5                       | 1                         | 0  | UA30-30-10  | 1SBL281022R□□10 ■ | 4,520   |
| 33                  | 5                          | 0                         | 0  | UA50-30-00  | 1SBL351022R□□00 ■ | 10,200  |
| 45                  | 6.5                        | 0                         | 0  | UA63-30-00  | 1SBL371022R□□00 ■ | 10,730  |
| 50                  | 7.5                        | 0                         | 0  | UA75-30-00  | 1SBL411022R□□00 ■ | 12,770  |
| 65                  | 9.3                        | 1                         | 1  | UA95-30-11  | 1SFL431022R□□11 ■ | 16,080  |
| 75                  | 10.5                       | 1                         | 1  | UA110-30-11 | 1SFL451022R□□11   | 20,120  |

## Single step - Peak current $\hat{I} \leq 30$ times the RMS current

| kVAR Rating at 415V | Type code     | Ordering code     | L.P.(₹)  |
|---------------------|---------------|-------------------|----------|
| 60                  | A95-30-11**   | 1SFL431001R□□11 ■ | 15,400   |
| 70                  | A110-30-11**  | 1SFL451001R□□11 ■ | 18,720   |
| 90                  | A145-30-11**  | 1SFL471001R□□11 ■ | 24,780   |
| 110                 | A185-30-11**  | 1SFL491001R□□11   | 30,620   |
| 130                 | AF205-30-11** | 1SFL527002R□□11 ■ | 35,330   |
| 145                 | AF265-30-11** | 1SFL547002R□□11 ■ | 40,220   |
| 165                 | AF305-30-11** | 1SFL587002R□□11 ■ | 46,660   |
| 200                 | AF370-30-11** | 1SFL607002R□□11   | 59,470   |
| 210                 | AF400-30-11** | 1SFL577001R□□11 ■ | 63,260   |
| 240                 | AF460-30-11** | 1SFL597001R□□11   | 79,350   |
| 285                 | AF580-30-11** | 1SFL617001R□□11 ■ | 1,13,910 |
| 400                 | AF750-30-11** | 1SFL637001R□□11 ■ | 1,73,660 |

## Coil voltages and codes UA...RA & UA

| Voltage     | Voltage     | Code  |
|-------------|-------------|-------|
| V - 50Hz    | V - 60Hz    | □□    |
| 24          | 24          | 8 1 ■ |
| 110         | 110 ... 120 | 8 4 ■ |
| 220 ... 230 | 230 ... 240 | 8 0 ■ |
| 400 ... 415 | 415 ... 440 | 8 6 ■ |

Note: Refer page no 74 for selection of AF contactor coil voltage

■ Stock items

# Contactors for DC circuit switching: AC/DC operated

| Coil | Current ratings at 440V DC |      |      | Type code reference | Ordering code   | L.P.(₹)      |
|------|----------------------------|------|------|---------------------|-----------------|--------------|
|      | DC-1                       | DC-3 | DC-5 |                     |                 |              |
| AC   | 100A                       | 85A  | 50A  | GA75-10-11 **       | 1SBL411025R□□11 | Upon request |
| DC   | 100A                       | 85A  | 50A  | GAE75-10-11 **      | 1SBL419025R□□11 |              |

Complete the contactor type code by replacing \*\* with desired coil voltage

| Coil  | Current ratings at 1000V DC |  | Type code reference | Ordering code   | L.P.(₹)      |
|-------|-----------------------------|--|---------------------|-----------------|--------------|
|       | DC-1 L/R 1 ms               |  |                     |                 |              |
| AC/DC | 275A                        |  | GAF185-10-11        | 1SFL497025R□□11 | Upon request |
|       | 450A                        |  | GAF300-10-11        | 1SFL557025R□□11 |              |
|       | 700A                        |  | GAF460-10-11        | 1SFL597025R□□11 |              |
|       | 1050A                       |  | GAF750-10-11        | 1SFL637025R□□11 |              |
|       | 1250A                       |  | GAF1250-10-11       | 1SFL647025R□□11 |              |
|       | 1650A                       |  | GAF1650-10-11       | 1SFL677025R□□11 |              |
|       | 2050A                       |  | GAF2050-10-11       | 1SFL707025R□□11 |              |

For DC3, DC5 ratings refer technical catalog

### Coil voltages and codes:

#### GA 75

| Voltage                                                                                   | Voltage                                                                                    | Code |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------|
|  V - 50Hz |  V - 60Hz | □□   |
| 24                                                                                        | 24                                                                                         | 8 1  |
| 110                                                                                       | 110 ... 120                                                                                | 8 4  |
| 220 ... 230                                                                               | 230 ... 240                                                                                | 8 0  |
| 400 ... 415                                                                               | 415 ... 440                                                                                | 8 6  |

### Coil voltages and codes:

#### GAE 75

| Voltage                                                                                  | Code |
|------------------------------------------------------------------------------------------|------|
|  V d.c. | □□   |
| 12                                                                                       | 8 0  |
| 24                                                                                       | 8 2  |
| 42                                                                                       | 8 1  |
| 110                                                                                      | 8 6  |
| 240                                                                                      | 8 9  |

### Coil voltages and codes: GAF range (AC/DC operated)

| Voltage                                                                                        | Voltage                                                                                  | Code |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------|
|  V 50/60 Hz |  V DC | □□   |
| -                                                                                              | 24...60                                                                                  | 6 8  |
| 48...130                                                                                       | 48...130                                                                                 | 6 9  |
| 100...250                                                                                      | 100...250                                                                                | 7 0  |
| 250...500                                                                                      | 250...500                                                                                | 7 1  |

## Accessories for contactors



### Auxiliary contact block

| Description                             | Mounting on contactors                                    | Contact configuration |     | Type code reference | Ordering code     | L.P.(₹) |
|-----------------------------------------|-----------------------------------------------------------|-----------------------|-----|---------------------|-------------------|---------|
|                                         |                                                           | NO                    | NC  |                     |                   |         |
| Front mounted single pole add-on blocks | A9....A110<br>AL9...AL40,<br>TAL9...TAL40<br>N,NL &UA     | 1NO                   | -   | CA5-10              | 1SBN010010R1010 ■ | 190     |
|                                         |                                                           | -                     | 1NC | CA5-01              | 1SBN010010R1001 ■ | 190     |
|                                         |                                                           | 4NO                   | -   | CA 5-40 E           | 1SBN010040R1040   | 870     |
|                                         |                                                           | 3NO                   | 1NC | CA 5-31 E           | 1SBN010040R1031   |         |
|                                         |                                                           | 2NO                   | 2NC | CA 5-22 E           | 1SBN010040R1022 ■ |         |
|                                         |                                                           |                       | 4NC | CA 5-04 E           | 1SBN010040R1004   |         |
| Side mounted 2 pole add-on blocks       | A9....A75, AL9...AL40,<br>TAL9...TAL40, N, NL & UA 16..75 | 1NO                   | 1NC | CAL5-11             | 1SBN010020R1011 ■ | 640     |
|                                         | A95...A185, UA95...UA110,<br>AF400...AF2050               | 1NO                   | 1NC | CAL18-11            | 1SFN010720R1011 ■ | 710     |
|                                         | A145...A185      AF400...AF2050                           | 1NO                   | 1NC | CAL18-11B           | 1SFN010720R3311 ■ |         |
|                                         |                                                           | 1NO                   | 1NC | CAL19-11            | 1SFN010820R1011 ■ |         |
|                                         | AF205...AF370                                             | 1NO                   | 1NC | CAL 19-11B          | 1SFN010820R3311   |         |

### Auxiliary contact blocks for EK range of contactors:

| Description                                        | Mounting on contactors | Contact configuration |     | Type code reference | Ordering code | L.P.(₹) |
|----------------------------------------------------|------------------------|-----------------------|-----|---------------------|---------------|---------|
|                                                    |                        | NO                    | NC  |                     |               |         |
| Side mounting<br>Two pole auxiliary contact blocks | EK110 . . . EK1000     | 1NO                   | 1NC | CAL16-11A           | SK829002-A ■  | 720     |
|                                                    |                        | 1NO                   | 1NC | CAL16-11B           | SK829002-B ■  |         |
|                                                    |                        | 1NO                   | 1NC | CAL16-11C           | SK829002-C    |         |
|                                                    |                        | 1NO                   | 1NC | CAL16-11D           | SK829002-D    |         |

\* Refer technical catalogue for proper selection.

■ Stock items

# Accessories for contactors



## Auxiliary contact block

| Description                             | Mounting on contactors  | Contact configuration |     | Type code reference | Ordering code     | L.P.(₹) |
|-----------------------------------------|-------------------------|-----------------------|-----|---------------------|-------------------|---------|
|                                         |                         | NO                    | NC  |                     |                   |         |
| Front mounted single pole add-on blocks | AX09...AX150, NX 4-pole | 1NO                   | -   | CA5X-10             | 1SBN019010R1010 ■ | 180     |
|                                         |                         | -                     | 1NC | CA5X-01             | 1SBN019010R1001 ■ | 180     |
| Front mounted Four pole add-on blocks   | AX09...AX150, NX 4-pole | 2NO                   | 2NC | CA5X-22E            | 1SBN019040R1022 ■ | 650     |
|                                         |                         | 3NO                   | 1NC | CA5X-31E            | 1SBN019040R1031   |         |
|                                         |                         | 4NO                   | -   | CA5X-40E            | 1SBN019040R1040   |         |
|                                         |                         | -                     | 4NC | CA5X-04E            | 1SBN019040R1004   |         |
| Side mounted 2 pole add-on blocks       | AX09...AX80, NX 4-pole  | 1NO                   | 1NC | CAL5X-11            | 1SBN019020R1011 ■ | 590     |
|                                         | AX95...AX205            | 1NO                   | 1NC | CAL18X-11           | 1SFN019820R1011 ■ | 600     |
|                                         |                         | 1NO                   | 1NC | CAL18X-11B          | 1SFN019820R3311 ■ | 600     |
|                                         | AX260...AX370           | 1NO                   | 1NC | CAL19-11            | 1SFN010820R1011   | 710     |
|                                         |                         | 1NO                   | 1NC | CAL19-11B           | 1SFN010820R3311   | 710     |



## Surge suppressors

| For contactor types                                    | Voltage range    | Type code reference | Ordering code     | L.P.(₹) |
|--------------------------------------------------------|------------------|---------------------|-------------------|---------|
| AL9...AL40, TAL9...TAL40 NL                            | 12...32 DC       | RT5/32              | 1SBN050020R1000 ■ | 750     |
|                                                        | 25...65 DC       | RT5/65              | 1SBN050020R1001   |         |
|                                                        | 50...90 DC       | RT5/90              | 1SBN050020R1002   |         |
|                                                        | 77...150 DC      | RT5/150             | 1SBN050020R1003 ■ |         |
|                                                        | 150...264 DC     | RT5/264             | 1SBN050020R1004   |         |
| A9...A110, AL9...AL40, TAL9...TAL40, N/NL AX09...AX150 | 24...50V AC/DC   | RV5/50              | 1SBN050010R1000   | 750     |
|                                                        | 50...133V AC/DC  | RV5/133             | 1SBN050010R1001   |         |
|                                                        | 110...250V AC/DC | RV5/250             | 1SBN050010R1002   |         |
|                                                        | 250...440V AC/DC | RV5/440             | 1SBN050010R1003   |         |
| A9...A40, N AX09...AX40                                | 24...50V AC      | RC5-1/50            | 1SBN050100R1000   | 750     |
|                                                        | 50...133V AC     | RC5-1/133           | 1SBN050100R1001   |         |
|                                                        | 110...250V AC    | RC5-1/250           | 1SBN050100R1002 ■ |         |
|                                                        | 250...440V AC    | RC5-1/440           | 1SBN050100R1003 ■ |         |
| A45...A110 AX50...AX150                                | 24...50V AC      | RC5-2/50            | 1SBN050200R1000   | 780     |
|                                                        | 50...133V AC     | RC5-2/133           | 1SBN050200R1001   |         |
|                                                        | 110...250V AC    | RC5-2/250           | 1SBN050200R1002 ■ | 1,060   |
|                                                        | 250...440V AC    | RC5-2/440           | 1SBN050200R1003 ■ |         |
| A145...A185, AX185...AX205                             | 250...440        | RC5-3/440           | 1SFN050300R1003 ■ | 2,150   |
| EK550.....EK1000                                       | 48...110V/AC     | RC-EH 800/110       | SK829007-C        | 3,180   |
|                                                        | 220...600V/AC    | RC-EH 800/600       | SK829007-D        |         |

■ Stock items



# Accessories for contactors



VM5-1



VM300

## Mechanical interlocks

| For contactor types                 | Description                                                    | Type code reference | Ordering code     | L.P.(₹) |
|-------------------------------------|----------------------------------------------------------------|---------------------|-------------------|---------|
| A9...A40, AL9...AL40<br>AX09...AX40 | Horizontal Mechanical Interlock                                | VM5-1               | 1SBN030100R1000 ■ | 500     |
| A9...A40, AL9...AL40<br>AX09...AX40 | Horizontal Mechanical & Electrical Interlock with 2NC contacts | VE5-1               | 1SBN030110R1000 ■ | 740     |
| A30...A110<br>AX50...AX115          | Horizontal Mechanical & Electrical Interlock with 2NC contacts | VE5-2               | 1SBN030210R1000 ■ | 1,490   |
| A95...A185,<br>AX185...AX205        | Horizontal with 2NC contacts                                   | VM300H              | 1SFN034700R1000   | 3,120   |
| EK110...EK150                       | Horizontal Mechanical Interlock                                | VH145               | SK829071-A        | 4,140   |
| EK175...EK210                       | Horizontal Mechanical Interlock                                | VH300               | SK829071-B        | 4,820   |
| AF116...AF146 and<br>AF190. AF205   | Horizontal Mechanical Interlock                                | VM140/190           | 1SFN034403R1000 ■ | 3,120   |
| AF190, AF205 and<br>AF265 ... AF370 | Horizontal Mechanical Interlock                                | VM205/265           | 1SFN035203R1000 ■ | 3,120   |
| AF116...AF370<br>AX260...AX370      | Horizontal Mechanical Interlock                                | VM19                | 1SFN030300R1000   | 3,220   |

Note: Refer technical catalogue for proper selection.

## Mechanical latching units description

For converting standard contactors into latched contactors. The WB75-A block contains a mechanical latching device with electromagnetic impulse unlatching (AC or DC) or manual unlatching.

## Ordering details

| For contactors | Rated control circuit voltage<br>Uc |           | Type   | Ordering code   | L.P.(₹) |
|----------------|-------------------------------------|-----------|--------|-----------------|---------|
|                | V 50 Hz or DC                       | V 60 Hz   |        |                 |         |
| N, NL, A9-A75  | 24                                  | 24...28   | WB75-A | FPTN372726R1001 | 5,690   |
|                | 220...230                           | 220...255 | WB75-A | FPTN372726R1006 | 5,690   |

| For contactors    | Time delay range<br>selected by switch | Delay type | Auxiliary contacts | Type     | Ordering code   | L.P.(₹) |
|-------------------|----------------------------------------|------------|--------------------|----------|-----------------|---------|
| Electronic timers |                                        |            |                    |          |                 |         |
| A9...A75          | 0.1...1 s                              | ON-delay   | 1                  | TEF5 ON  | 1SBN020312R1000 | 5,870   |
|                   | 1...10 s                               | OFF-delay  | 1                  | TEF5 OFF | 1SBN020314R1000 | 5,580   |
|                   | 10...100 s                             |            |                    |          |                 |         |



■ Stock items

# Contactors: Wide band AC/DC operated

## NF/AF contactors

### Wide band AC/DC operated - with screw terminals

#### Description

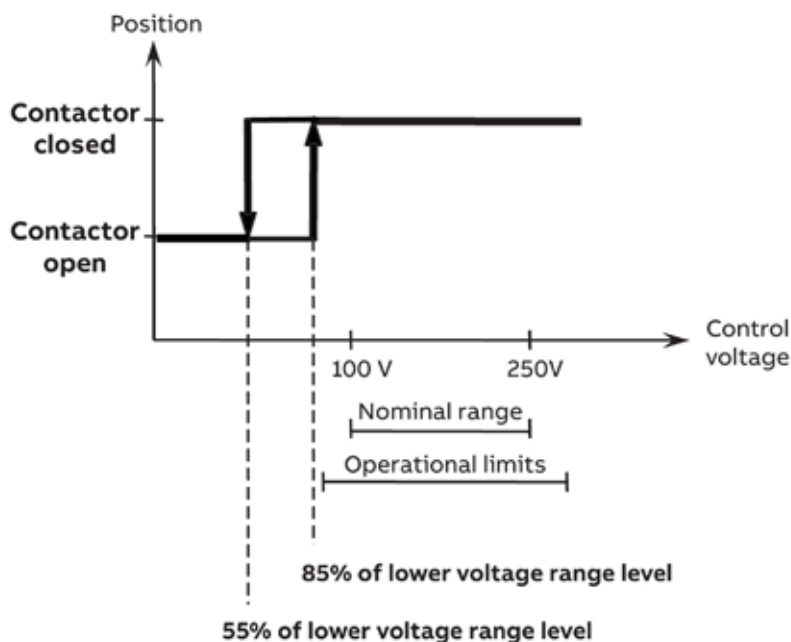
- NF/AF contactor include an electronic coil interface accepting a wide control voltage  $U_c$  min. ...  $U_c$  max. only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC
- NF/AF contactor can manage large control voltage variations. One coil (e.g. 100...250 V 50/60 Hz - DC) can be used for different control voltages used worldwide without any coil change.
- NF...Z/AF...Z contactor equipped with a Z coil type allow direct control by 24 V DC 500 mA PLC-output and obtain a reduced holding coil consumption.
- NF/AF contactor have built-in surge protection and do not require additional surge suppressors.

**Control contactors : Wide band AC/DC operated with low power consumption & in built surge suppressor for ordering code refer page no. 71**



#### Innovative solution from ABB

- Electronically controlled coil
- Distinct drop out- and pick up value
- 20ms sags and dip immunity
- Fulfills SEMI - F47- 0200 surge suppressors.
- Specification for processing equipment regarding voltage drop immunity.





# 3 pole contactors AF range: Wide band AC/DC operated



- AF contactors are built in with:
- Universal coil operable on wide band AC / DC voltages
  - Surge suppressors
  - Low power consumption coil

| AC1duty<br>Amps | AC3 rating at 415V |      |      | Auxiliary contacts |     | Type code      | Ordering code     | L.P.(₹)      |
|-----------------|--------------------|------|------|--------------------|-----|----------------|-------------------|--------------|
|                 | Amps               | hP   | kW   |                    |     |                |                   |              |
| 25              | 9                  | 5.5  | 4    | 1NO                | -   | AF09-30-10-□□  | 1SBL137001R□□10 ■ | 2,070        |
|                 |                    |      |      | -                  | 1NC | AF09-30-01-□□  | 1SBL137001R□□01 ■ | 2,070        |
| 28              | 12                 | 7.5  | 5.5  | 1NO                | -   | AF12-30-10-□□  | 1SBL157001R□□10 ■ | 2,220        |
|                 |                    |      |      | -                  | 1NC | AF12-30-01-□□  | 1SBL157001R□□01   | 2,220        |
| 30              | 18                 | 12.5 | 7.5  | 1NO                | -   | AF16-30-10-□□  | 1SBL177001R□□10 ■ | 2,790        |
|                 |                    |      |      | -                  | 1NC | AF16-30-01-□□  | 1SBL177001R□□01 ■ | 2,790        |
| 45              | 26                 | 15   | 11   | -                  | -   | AF26-30-00-□□  | 1SBL237001R□□00 ■ | 3,590        |
| 50              | 32                 | 20   | 18   | -                  | -   | AF30-30-00-□□  | 1SBL277001R□□00 ■ | 7,550        |
| 50              | 38                 | 25   | 18.5 | -                  | -   | AF38-30-00-□□  | 1SBL297001R□□00 ■ | 8,840        |
| 70              | 40                 | 30   | 18.5 | -                  | -   | AF40-30-00-□□  | 1SBL347001R□□00 ■ | 9,760        |
| 100             | 53                 | 40   | 22   | -                  | -   | AF52-30-00-□□  | 1SBL367001R□□00 ■ | 11,920       |
| 105             | 65                 | 50   | 30   | -                  | -   | AF65-30-00-□□  | 1SBL387001R□□00 ■ | 13,950       |
| 125             | 80                 | 60   | 37   | -                  | -   | AF80-30-00-□□  | 1SBL397001R□□00 ■ | 16,950       |
| 130             | 96                 | 70   | 45   | -                  | -   | AF96-30-00-□□  | 1SBL407001R□□00 ■ | 20,370       |
| 160             | 116                | 75   | 55   | 1NO                | 1NC | AF116-30-11-□□ | 1SFL427001R□□11 ■ | 21,780       |
| 200             | 140                | 100  | 75   | 1NO                | 1NC | AF140-30-11-□□ | 1SFL447001R□□11 ■ | 27,620       |
| 225             | 146                | 100  | 75   | 1NO                | 1NC | AF146-30-11-□□ | 1SFL467001R□□11 ■ | 28,960       |
| 275             | 490                | 120  | 90   | 1NO                | 1NC | AF190-30-11-□□ | 1SFL487002R□□11 ■ | 34,300       |
| 350             | 205                | 150  | 110  | 1NO                | 1NC | AF205-30-11-□□ | 1SFL527002R□□11 ■ | 35,330       |
| 400             | 265                | 175  | 140  | 1NO                | 1NC | AF265-30-11-□□ | 1SFL547002R□□11 ■ | 40,220       |
| 500             | 305                | 215  | 160  | 1NO                | 1NC | AF305-30-11-□□ | 1SFL587002R□□11   | 46,660       |
| 600             | 370                | 270  | 200  | 1NO                | 1NC | AF370-30-11-□□ | 1SFL607002R□□11   | 59,470       |
| 600             | 400                | 300  | 220  | 1NO                | 1NC | AF400-30-11**  | 1SFL577001R□□11   | 63,260       |
| 700             | 460                | 340  | 250  | 1NO                | 1NC | AF460-30-11**  | 1SFL597001R□□11   | 79,350       |
| 800             | 580                | 470  | 355  | 1NO                | 1NC | AF580-30-11**  | 1SFL617001R□□11 ■ | 1,13,910     |
| 1050            | 750                | 570  | 425  | 1NO                | 1NC | AF750-30-11**  | 1SFL637001R□□11 ■ | 1,73,660     |
| 1260            | -                  | -    | -    | 1NO                | 1NC | AF1250-30-11** | 1SFL647001R□□11   | Upon request |
| 1350            | 860                | -    | 500  | 1NO                | 1NC | AF1350-30-11** | 1SFL657001R□□11   |              |
| 1650            | 1050               | -    | 600  | 1NO                | 1NC | AF1650-30-11** | 1SFL677001R□□11   |              |
| 2050            | -                  | -    | -    | 1NO                | 1NC | AF2050-30-11** | 1SFL707001R□□11   |              |
| 2650            | -                  | -    | -    | 1NO                | 1NC | AF2650-30-11** | 1SFL667001R□□11   |              |
| 2850            | -                  | -    | -    | 1NO                | 1NC | AF2850-30-11** | 1SFL687001R□□11   |              |

Complete the contactor type code by replacing \*\* with desired coil voltage, AF contactors have advanced electronic coil interface with wideband AC/DC coil

## Coil voltages and codes: New AF09...AF370 range (AC/DC operated)

| Voltage    | Voltage   | Code  |
|------------|-----------|-------|
| V 50/60 Hz | V DC      | □□    |
| 24...60    | 20...60   | 1 1 ■ |
| 48...130   | 48...130  | 1 2 ■ |
| 100...250  | 100...250 | 1 3 ■ |
| 250...500  | 250...500 | 1 4 ■ |

Note: For non-standard coil voltage, other than this contact us for price.

## AF400...AF1250 range (AC/DC operated)

| Voltage    | Voltage   | Code  |
|------------|-----------|-------|
| V 50/60 Hz | V DC      | □□    |
| -          | 24...60   | 6 8   |
| 48...130   | 48...130  | 6 9   |
| 100...250  | 100...250 | 7 0 ■ |
| 250...500  | 250...500 | 7 1 ■ |

## AF1350...AF2850 range (AC/DC operated)

| Voltage    | Voltage   | Code |
|------------|-----------|------|
| V 50/60 Hz | DC        | □□   |
| 100...250  | 100...250 | 7 0  |

■ Stock items

# 4 pole contactors: Wide band AC/DC operated

## New AF Contactors: 4 pole – AC / DC Operated

| Rating at 415V AC1 Amps | Main contact arrangement |     | Auxiliary contacts |   | Type code reference | Ordering code     | L.P.(₹) |
|-------------------------|--------------------------|-----|--------------------|---|---------------------|-------------------|---------|
| 25                      | 4NO                      | -   | -                  | - | AF09-40-00-□□       | 1SBL137201R□□00 ■ | 2,480   |
|                         | 2NO                      | 2NC | -                  | - | AF09-22-00-□□       | 1SBL137501R□□00   | 3,120   |
| 30                      | 4NO                      | -   | -                  | - | AF16-40-00-□□       | 1SBL177201R□□00   | 2,900   |
|                         | 2NO                      | 2NC | -                  | - | AF16-22-00-□□       | 1SBL177501R□□00 ■ | 3,820   |
| 45                      | 4NO                      | -   | -                  | - | AF26-40-00-□□       | 1SBL237201R□□00   | 4,730   |
|                         | 2NO                      | 2NC | -                  | - | AF26-22-00-□□       | 1SBL237501R□□00   | 5,840   |
| 55                      | 4NO                      | -   | -                  | - | AF38-40-00-□□       | 1SBL297201R□□00 ■ | 9,500   |
|                         | 2NO                      | 2NC | -                  | - | AF38-22-00-□□       | 1SBL297501R□□00   | 11,770  |
| 70                      | 4NO                      | -   | -                  | - | AF40-40-00-□□       | 1SBL347201R□□00   | 15,340  |
|                         | 2NO                      | 2NC | -                  | - | AF40-22-00-□□       | 1SBL347501R□□00   | 16,960  |
| 100                     | 4NO                      | -   | -                  | - | AF52-40-00-□□       | 1SBL367201R□□00 ■ | 15,770  |
| 125                     | 4NO                      | -   | -                  | - | AF80-40-00-□□       | 1SBL397201R□□00   | 19,180  |
|                         | 2NO                      | 2NC | -                  | - | AF80-22-00-□□       | 1SBL397501R□□00   | 21,500  |
| 160                     | 4NO                      | -   | -                  | - | AF116-40-00-□□      | 1SFL427102R□□00 ■ | 22,000  |
| 200                     | 4NO                      | -   | -                  | - | AF140-40-00-□□      | 1SFL447102R□□00 ■ | 26,820  |
| 275                     | 4NO                      | -   | -                  | - | AF190-40-00-□□      | 1SFL487102R□□00 ■ | 39,660  |
| 350                     | 4NO                      | -   | -                  | - | AF205-40-00-□□      | 1SFL527102R□□00 ■ | 47,290  |
| 400                     | 4NO                      | -   | -                  | - | AF265-40-00-□□      | 1SFL547102R□□00 ■ | 56,190  |
| 500                     | 4NO                      | -   | -                  | - | AF305-40-00-□□      | 1SFL587102R□□00 ■ | 69,200  |
| 525                     | 4NO                      | -   | -                  | - | AF370-40-00-□□      | 1SFL607102R□□00 ■ | 77,210  |

## Coil voltages and codes: New AF range (AC/DC operated)

| Voltage V 50/60 Hz | Voltage V DC | Code □□ |
|--------------------|--------------|---------|
| 24...60            | 20...60      | 1 1 ■   |
| 48...130           | 48...130     | 1 2 ■   |
| 100...250          | 100...250    | 1 3 ■   |
| 250...500          | 250...500    | 1 4 ■   |

# Accessories for AF contactors

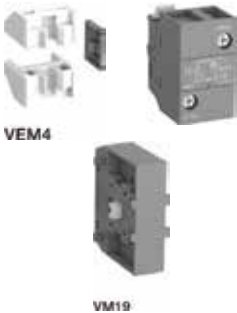


| Auxiliary contact block            |                        |                       |     |                     |                   |         |
|------------------------------------|------------------------|-----------------------|-----|---------------------|-------------------|---------|
| Description                        | Mounting on contactors | Contact configuration |     | Type code reference | Ordering code     | L.P.(₹) |
|                                    |                        | NO                    | NC  |                     |                   |         |
| Front mounted 1 pole add-on blocks | AF09....AF96 / NF      | 1NO                   | -   | CA4-10              | 1SBN010110R1010 ■ | 220     |
|                                    |                        | -                     | 1NC | CA4-01              | 1SBN010110R1001 ■ | 220     |
| Front mounted 4 pole add-on blocks | AF09....AF80 / NF      | 4NO                   | -   | CA4-40E             | 1SBN010140R1040 ■ | 940     |
|                                    |                        | 3NO                   | 1NC | CA4-31E             | 1SBN010140R1031   | 940     |
|                                    |                        | 2NO                   | 2NC | CA4-22E             | 1SBN010140R1022 ■ | 940     |
|                                    |                        | -                     | 4NC | CA4-04E             | 1SBN010140R1004   | 940     |
| Side mounted 2 pole add-on blocks  | AF09....AF96 / NF      | 1NO                   | 1NC | CAL4-11             | 1SBN010120R1011 ■ | 610     |
|                                    | AF96...AF370           | 1NO                   | 1NC | CAL19-11            | 1SFN010820R1011 ■ | 710     |
|                                    |                        | 1NO                   | 1NC | CAL19-11B           | 1SFN010820R3311 ■ | 710     |

\* Refer technical catalogue for proper selection.

■ Stock items

# Accessories for AF contactors



## Mechanical interlocks

| Description                                  | For contactor types              | Type Code reference | Ordering code     | L.P.(₹) |
|----------------------------------------------|----------------------------------|---------------------|-------------------|---------|
| Horizontal Mechanical Interlock              | AF09...AF38                      | VM 4                | 1SBN030105T1000   | 600     |
| Horizontal Mechanical & Electrical Interlock | AF09...AF38                      | VEM 4               | 1SBN030111R1000   | 1,060   |
| Horizontal Mechanical Interlock              | AF40...AF96                      | VM96-4              | 1SBN033405T1000   | 2,150   |
| Horizontal Mechanical Interlock              | AF116...AF146 and AF190. AF205   | VM140/190           | 1SFN034403R1000   | 3,120   |
| Horizontal Mechanical Interlock              | AF190, AF205 and AF265 ... AF370 | VM205/265           | 1SFN034403R1000   | 3,120   |
| Horizontal Mechanical Interlock              | AF116...AF370                    | VM19                | 1SFN030300R1000 ■ | 3,220   |

Note: Refer technical catalogue for proper selection.

## Ordering Details

| For contactors                | Rated control circuit voltage Uc | Type      | Ordering code   | L.P.(₹) |
|-------------------------------|----------------------------------|-----------|-----------------|---------|
| NF(Z),AF(Z)09....38,AF40...65 | 24V DC                           | WA4-10    | 1SBN040100R1010 | 2,330   |
| NF(Z),AF(Z)09....38,AF40...65 | 24-60V50/60HZ-DC                 | WA4-11    | 1SBN040100R1011 | 2,330   |
| NF(Z),AF(Z)09....38,AF40...65 | 48-130V50/60HZ-DC                | WA4-12    | 1SBN040100R1012 | 2,330   |
| NF(Z),AF(Z)09....38,AF40...65 | 100-250V50/60HZ-DC               | WA4-13    | 1SBN040100R1013 | 2,330   |
| NF(Z),AF(Z)09....38,AF40...65 | 250-500V50/60HZ-DC               | WA4-14    | 1SBN040100R1014 | 2,330   |
| AF80....96                    | 24-60V50/60HZ-DC                 | WA4-96-11 | 1SBN040200R1011 | 2,330   |
| AF80....96                    | 48-130V50/60HZ-DC                | WA4-96-12 | 1SBN040200R1012 | 2,330   |
| AF80....96                    | 100-250V50/60HZ-DC               | WA4-96-13 | 1SBN040200R1013 | 2,330   |
| AF80....96                    | 250-500V50/60HZ-DC               | WA4-96-14 | 1SBN040200R1014 | 2,330   |

## Electronic timers

| For contactor types | Time delay range selected by switch | Delay type | Auxiliary contacts | Type     | Ordering code   | L.P.(₹) |
|---------------------|-------------------------------------|------------|--------------------|----------|-----------------|---------|
| AF09 ... AF96       | 0.1...1 s                           | ON-delay   | 1NO + 1NC          | TEF4-ON  | 1SBN020112R1000 | 5,870   |
|                     | 1...10 s                            | OFF-delay  | 1NO + 1NC          | TEF4-OFF | 1SBN020114R1000 | 5,580   |
|                     | 10...100 s                          |            |                    |          |                 |         |

Note: Rated control circuit voltage Uc 24...240 V 50/60 Hz or DC.

## Connecting links with manual motor starters

| For contactor types | Used with                                        | Type    | Ordering code     | L.P.(₹) |
|---------------------|--------------------------------------------------|---------|-------------------|---------|
| AF09 ... AF16       | MS116-0.16 ... MS116-25, MS132-0.16 ... MS132-25 | BEA16-4 | 1SBN081306T1000   | 400     |
| AF26 ... AF30       | MS116-0.16 ... MS116-16, MS132-0.16 ... MS132-10 | BEA26-4 | 1SBN082306T1000   | 470     |
|                     | MS116-20 ... MS116-32, MS132-12 ... MS132-32     | BEA38-4 | 1SBN082306T2000 ■ | 500     |

## Connection sets for reversing contactors

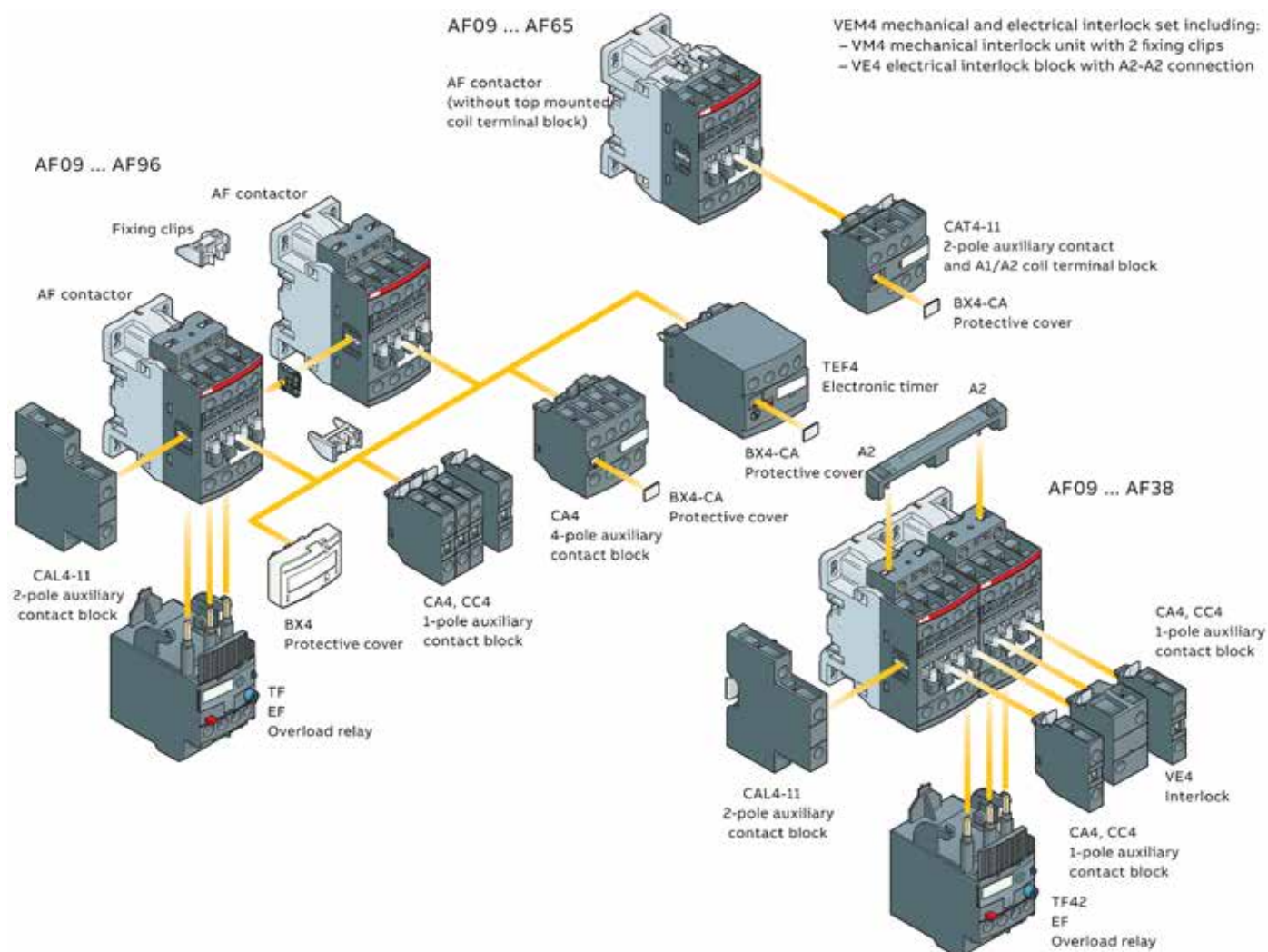
| For contactor types | Type    | Ordering code   | L.P.(₹) |
|---------------------|---------|-----------------|---------|
| AF09 ... AF16       | BER16-4 | 1SBN081311R1000 | 1,030   |
| AF26 ... AF30       | BER38-4 | 1SBN082311R1000 | 1,390   |
| AF40 ... AF65       | BER65-4 | 1SBN083411R1000 | 1,660   |
| AF80 ... AF96       | BER96-4 | 1SBN083911R1000 | 2,900   |

## Connection sets for star-delta starting

| For contactor types | Type    | Ordering code   | L.P.(₹) |
|---------------------|---------|-----------------|---------|
| AF09 ... AF16       | BEY16-4 | 1SBN081313R2000 | 1,390   |
| AF26 ... AF30       | BEY38-4 | 1SBN082713R2000 | 2,150   |
| AF40 ... AF65       | BEY65-4 | 1SBN083413R2000 | 2,760   |
| AF80 ... AF96       | BEY96-4 | 1SBN083913R2000 | 3,540   |

■ Stock items

# Accessories for AF contactors



## AF the premium range



### The AF contactor is compact

The AF contactor is compact in size and has had its width reduced by up to 30% thanks to an 80% reduction of the coil's energy consumption.

### The AF contactor is flexible

AF09...AF370 is perfect for motor starting applications and for solutions where space is limited. Interlocked reversing pairs require no spacing between contactors can fit more functional units into cabinets or other small enclosures.





# Powerful light switching made easy **NEW**

## ESB and EN installation contactors

ABB's hum-free installation contactor designs offer a wide range of ratings from 16 A to 100 A. With an innovative AC/DC coil design that eliminates hum, a broad selection of common accessories as well as manual and automatic versions, ESB..N contactors cover all your needs in both domestic and residential applications. Find out more at [abb.com/lowvoltage](http://abb.com/lowvoltage)



# ESB and EN Installation contactors **NEW**



Hum-free operation



Tool-free to save time



More choice,  
less inventory



Comprehensive solution



Optimum interface



Easy to install



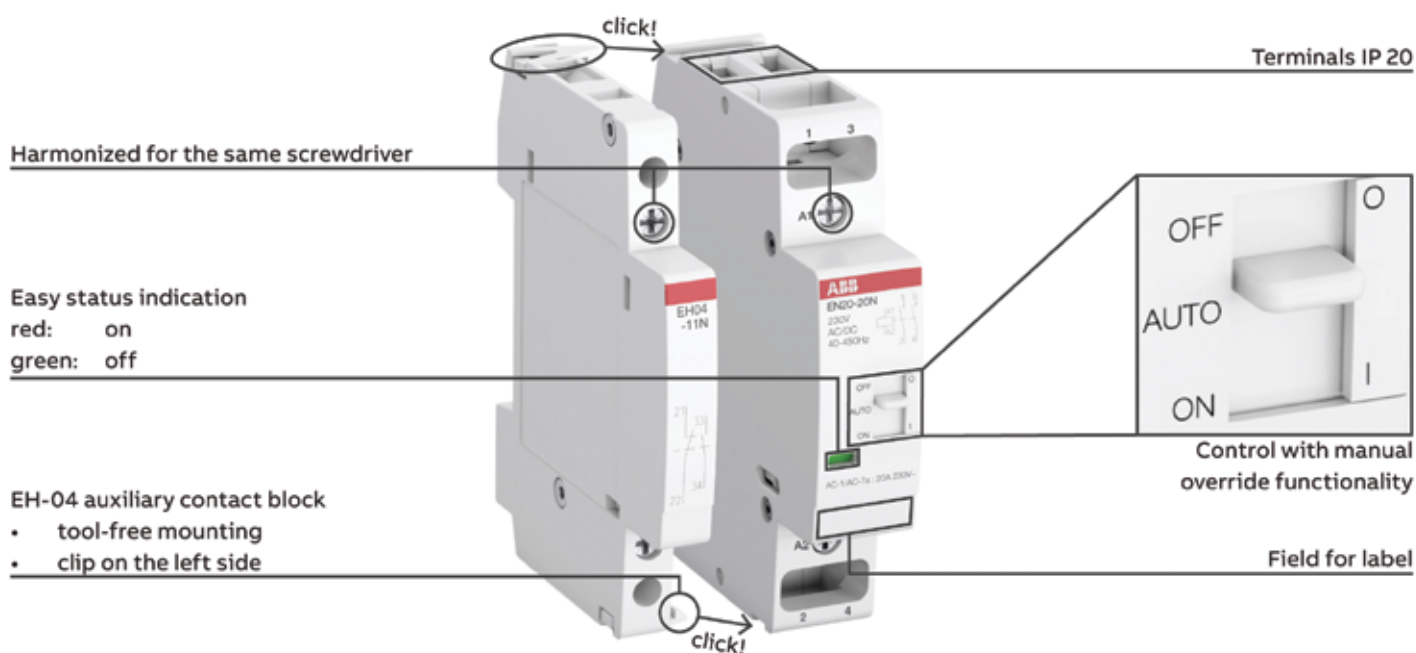
Group mounting  
saves space



Global  
availability



Easy identification



# ESB and EN Installation contactors

NEW

ABB's installation contactor range comes with a host of features to make installation and maintenance easier. A mechanical indicator shows the status in green or red color to make system diagnostics quicker. Some speciality types also feature a manual override functionality with a toggle switch providing independent control. Accessories such as auxiliaries, space holders, as well as safety covers can be mounted tool-free onto the contactor.

| Main contacts                                                                    | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup> VAC / DC | Type         | Ordering code   | L.P.(₹)      |
|----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------|--------------|-----------------|--------------|
|  | 1                                   | 24                                                    | ESB16-20N-01 | 1SBE111111R0120 | Upon request |
|                                                                                  | 1                                   | 230                                                   | ESB16-20N-06 | 1SBE111111R0620 |              |
|  | 1                                   | 24                                                    | ESB16-02N-01 | 1SBE111111R0102 |              |
|                                                                                  | 1                                   | 230                                                   | ESB16-02N-06 | 1SBE111111R0602 |              |
|  | 1                                   | 24                                                    | ESB16-11N-01 | 1SBE111111R0111 |              |
|                                                                                  | 1                                   | 230                                                   | ESB16-11N-06 | 1SBE111111R0611 |              |

| Main contacts                                                                     | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup> VAC / DC | Type         | Ordering code   | L.P.(₹)      |
|-----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------|--------------|-----------------|--------------|
|  | 1                                   | 24                                                    | ESB20-20N-01 | 1SBE121111R0120 | Upon request |
|                                                                                   | 1                                   | 230                                                   | ESB20-20N-06 | 1SBE121111R0620 |              |
|  | 1                                   | 24                                                    | ESB20-02N-01 | 1SBE121111R0102 |              |
|                                                                                   | 1                                   | 230                                                   | ESB20-02N-06 | 1SBE121111R0602 |              |
|  | 1                                   | 24                                                    | ESB20-11N-01 | 1SBE121111R0111 |              |
|                                                                                   | 1                                   | 230                                                   | ESB20-11N-06 | 1SBE121111R0611 |              |

| Main contacts                                                                      | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup> V AC / DC | Type         | Ordering code   | L.P.(₹)      |
|------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------|--------------|-----------------|--------------|
|   | 2                                   | 24                                                     | ESB25-40N-01 | 1SAE231111R0140 | Upon request |
|                                                                                    |                                     | 230 ... 240                                            | ESB25-40N-06 | 1SAE231111R0640 |              |
|  | 2                                   | 24                                                     | ESB25-04N-01 | 1SAE231111R0104 |              |
|                                                                                    |                                     | 230 ... 240                                            | ESB25-04N-06 | 1SAE231111R0604 |              |
|  | 2                                   | 24                                                     | ESB25-22N-01 | 1SAE231111R0122 |              |
|                                                                                    |                                     | 230 ... 240                                            | ESB25-22N-06 | 1SAE231111R0622 |              |
|  | 2                                   | 24                                                     | ESB25-31N-01 | 1SAE231111R0131 |              |
|                                                                                    |                                     | 230 ... 240                                            | ESB25-31N-06 | 1SAE231111R0631 |              |
|  | 2                                   | 24                                                     | ESB25-13N-01 | 1SAE231111R0113 |              |
|                                                                                    |                                     | 230 ... 240                                            | ESB25-13N-06 | 1SAE231111R0613 |              |

| Main contacts                                                                       | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup> V AC / DC | Type         | Ordering code   | L.P.(₹)      |
|-------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------|--------------|-----------------|--------------|
|   | 3                                   | 24                                                     | ESB40-40N-01 | 1SAE341111R0140 | Upon request |
|                                                                                     |                                     | 230                                                    | ESB40-40N-06 | 1SAE341111R0640 |              |
|  | 3                                   | 24                                                     | ESB40-22N-01 | 1SAE341111R0122 |              |
|                                                                                     |                                     | 230                                                    | ESB40-22N-06 | 1SAE341111R0622 |              |
|  | 3                                   | 24                                                     | ESB40-31N-01 | 1SAE341111R0131 |              |
|                                                                                     |                                     | 230                                                    | ESB40-31N-06 | 1SAE341111R0631 |              |
|  | 3                                   | 24                                                     | ESB40-30N-01 | 1SAE341111R0130 |              |
|                                                                                     |                                     | 230                                                    | ESB40-30N-06 | 1SAE341111R0630 |              |
|  | 3                                   | 24                                                     | ESB40-20N-01 | 1SAE341111R0120 |              |
|                                                                                     |                                     | 230                                                    | ESB40-20N-06 | 1SAE341111R0620 |              |

| Main contacts                                                                      | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup> V AC / DC | Type         | Ordering code   | L.P.(₹)      |
|------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------|--------------|-----------------|--------------|
|  | 3                                   | 24                                                     | ESB63-40N-01 | 1SAE351111R0140 | Upon request |
|                                                                                    |                                     | 230                                                    | ESB63-40N-06 | 1SAE351111R0640 |              |
|  | 3                                   | 230                                                    | ESB63-31N-06 | 1SAE351111R0631 |              |
|                                                                                    |                                     | 230                                                    | ESB63-30N-06 | 1SAE351111R0630 |              |
|  | 3                                   | 24                                                     | ESB63-20N-01 | 1SAE351111R0120 |              |
|                                                                                    |                                     | 230                                                    | ESB63-20N-06 | 1SAE351111R0620 |              |
|  | 3                                   | 230                                                    | ESB63-11N-06 | 1SAE351111R0611 |              |

| Main contacts                                                                       | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup> V AC / DC | Type          | Ordering code   | L.P.(₹)      |
|-------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------|---------------|-----------------|--------------|
|  | 6                                   | 24                                                     | ESB100-40N-01 | 1SAE661111R0140 | Upon request |
|                                                                                     |                                     | 230                                                    | ESB100-40N-06 | 1SAE661111R0640 |              |
|  | 3                                   | 24                                                     | ESB100-20N-01 | 1SAE361111R0120 |              |
|                                                                                     |                                     | 230                                                    | ESB100-20N-06 | 1SAE361111R0620 |              |



ESB and EN Installation contactors

NEW

| Main contacts                                                                    | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup><br>V AC / DC | Type        | Ordering code   | L.P.(₹)      |
|----------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------|-------------|-----------------|--------------|
|  | 1                                   | 24                                                        | EN20-20N-01 | 1SBE122111R0120 | Upon request |
|                                                                                  |                                     | 230                                                       | EN20-20N-06 | 1SBE122111R0620 |              |

| Main contacts                                                                     | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup><br>V AC / DC | Type          | Ordering code   | L.P.(₹)      |
|-----------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------|---------------|-----------------|--------------|
|  | 2                                   | 24                                                        | EN25- 40N- 01 | 1SAE232111R0140 |              |
|                                                                                   |                                     | 230 ... 240                                               | EN25-40N-06   | 1SAE232111R0640 |              |
|  | 2                                   | 24                                                        | EN25-31N-01   | 1SAE232111R0131 | Upon request |
|                                                                                   |                                     | 230 ... 240                                               | EN25-31N-06   | 1SAE232111R0631 |              |
|  | 2                                   | 24                                                        | EN25-30N-06   | 1SAE232111R0630 |              |
|                                                                                   |                                     | 230 ... 240                                               | EN20-20N-06   | 1SBE122111R0620 |              |

| Main contacts                                                                      | Width in number of modular spacings | Rated control circuit voltage <sup>(1)</sup><br>V AC / DC | Type        | Ordering code   | L.P.(₹)      |
|------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------|-------------|-----------------|--------------|
|   | 3                                   | 24                                                        | EN40-40N-01 | 1SAE342111R0140 |              |
|                                                                                    |                                     | 230                                                       | EN40-40N-06 | 1SAE342111R0640 |              |
|  | 3                                   | 24                                                        | EN40-31N-01 | 1SAE342111R0131 | Upon request |
|                                                                                    |                                     | 230                                                       | EN40-31N-06 | 1SAE342111R0631 |              |
|  | 3                                   | 230                                                       | EN40-30N-06 | 1SAE342111R0630 |              |
|  | 3                                   | 230                                                       | EN40-20N-06 | 1SAE342111R0620 |              |

| Auxiliary contact blocks                                                           |                                                                                        |          |                 |              |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------|-----------------|--------------|
| Auxiliary contacts                                                                 | Suitable for                                                                           | Type     | Ordering code   | L.P.(₹)      |
| Single packaging                                                                   |                                                                                        |          |                 |              |
|  | ESB16..N, ESB20..N, ESB25..N, ESB40..N, ESB63..N, ESB100..N, EN20..N, EN25..N, EN40..N | EH04-11N | 1SAE901901R1011 | Upon request |
|                                                                                    |                                                                                        | EH04-20N | 1SAE901901R1020 |              |

Distant piece

| Suitable for                                                        | Type        | Ordering code   | L.P.(₹) |
|---------------------------------------------------------------------|-------------|-----------------|---------|
| Single packaging                                                    |             |                 |         |
| ESB25..N, ESB40..N, ESB63..N, EN25..N, EN40..N, ESB100..N, EN100..N | ESB-DIS (1) | GHE3201902R0001 |         |

# Mini contactors



## Mini contactors with screw connection: 3 pole - AC operated

| AC1 duty |    | AC3 rating at 415V |     | Auxiliary contacts |     | Type code reference | Ordering code     | L.P.(₹) |
|----------|----|--------------------|-----|--------------------|-----|---------------------|-------------------|---------|
| Amps     |    | Amps               | hP  | kW                 |     |                     |                   |         |
| 16A      | 9  | 5.5                | 4   | 1NO                | -   | B06-30-10 **        | GJL1211001R□10□ ■ | 1,070   |
| 16A      | 9  | 5.5                | 4   | -                  | 1NC | B06-30-01 **        | GJL1211001R□01□ ■ |         |
| 20A      | 12 | 7.5                | 5.5 | 1NO                | -   | B07-30-10 **        | GJL1311001R□10□ ■ | 1,160   |
| 20A      | 12 | 7.5                | 5.5 | -                  | 1NC | B07-30-01 **        | GJL1311001R□01□ ■ |         |

Complete the contactor type code by replacing \*\* with desired coil voltage

## 3 pole - DC operated

| Type code reference |                   | Ordering code |  | L.P.(₹) |
|---------------------|-------------------|---------------|--|---------|
|                     |                   |               |  |         |
| BC6-30-10 **        | GJL1213001R□10□ ■ |               |  | 1,490   |
| BC6-30-01 **        | GJL1213001R□01□ ■ |               |  |         |
| BC7-30-10 **        | GJL1313001R□10□ ■ |               |  | 1,610   |
| BC7-30-01 **        | GJL1313001R□01□ ■ |               |  |         |

## Mini reversing contactors with screw connection:

### 3 pole - AC operated

| AC1 duty |    | AC3 rating at 415V |     | Auxiliary contacts |     | Type code reference | Ordering code    | L.P.(₹) |
|----------|----|--------------------|-----|--------------------|-----|---------------------|------------------|---------|
| Amps     |    | Amps               | hP  | kW                 |     |                     |                  |         |
| 16A      | 9  | 5.5                | 4   | 1NO                | -   | VB06-30-10 **       | GJL1211901R□10 □ | 3,100   |
| 16A      | 9  | 5.5                | 4   | -                  | 1NC | VB06-30-01 **       | GJL1211901R□01 □ | 3,100   |
| 20A      | 12 | 7.5                | 5.5 | 1NO                | -   | VB07-30-10 **       | GJL1311901R□10 □ | 3,270   |
| 20A      | 12 | 7.5                | 5.5 | -                  | 1NC | VB07-30-01 **       | GJL1311901R□01 □ | 3,270   |

Complete the contactor type code by replacing \*\* with desired coil voltage

### 3 pole - DC operated

| Type code reference |                   | Ordering code |  | L.P.(₹) |
|---------------------|-------------------|---------------|--|---------|
|                     |                   |               |  |         |
| VBC6-30-10 **       | GJL1213901R□10□   |               |  | 3,300   |
| VBC6-30-01 **       | GJL1213901R□01□ ■ |               |  | 3,300   |
| VBC7-30-10 **       | GJL1313901R□10□   |               |  | 3,540   |
| VBC7-30-01 **       | GJL1313901R□01□   |               |  | 3,540   |

Mini contactors are also available in 4 pole (4NO / 2NO + 2NC)

## Mini auxiliary contactor 4 pole with screw connection

| Control circuit | Contact configuration |     | Type code reference | Ordering code     | L.P.(₹) |
|-----------------|-----------------------|-----|---------------------|-------------------|---------|
|                 | NO                    | NC  |                     |                   |         |
| AC              | 2NO                   | 2NC | K6-22Z**            | GJH1211001R□22□   | 1,190   |
|                 | 3NO                   | 1NC | K6-31Z **           | GJH1211001R□31□ ■ |         |
|                 | 4NO                   | -   | K6-40E **           | GJH1211001R□40□   |         |
| DC              | 2NO                   | 2NC | KC6-22Z**           | GJH1213001R□22□ ■ | 1,530   |
|                 | 3NO                   | 1NC | KC6-31Z **          | GJH1213001R□31□   |         |
|                 | 4NO                   | -   | KC6-40E **          | GJH1213001R□40□   |         |

Complete the contactor type code by replacing \*\* with desired coil voltage

## Coil voltage for mini contactors

| AC          |           | DC          |           |
|-------------|-----------|-------------|-----------|
| 50-60Hz     | Code      | DC V        | Code      |
| 24          | 0 ... 1 ■ | 24          | 0 ... 1 ■ |
| 48          | 0 ... 3   | 110 ... 125 | 0 ... 4 ■ |
| 110 ... 127 | 8 ... 4 ■ | 220 ... 240 | 0 ... 5   |
| 220 ... 240 | 8 ... 0 ■ |             |           |
| 380 ... 415 | 8 ... 5   |             |           |

## Auxiliary contact blocks for mini contactors

### Ordering details

| For contactor types                                  | Auxiliary contacts | Type     | Ordering code   | L.P.(₹) |
|------------------------------------------------------|--------------------|----------|-----------------|---------|
| Front mounted instantaneous auxiliary contact blocks |                    |          |                 |         |
| B6-, B7-30-10, BC6-, BC7-30-10                       | 1NO + 1NC          | CAF6-11M | GJL1201330R0003 | 640     |
| VB6, VB7, VBC6, VBC7, VB6A, VB7A                     | 2NO                | CAF6-20M | GJL1201330R0007 |         |
| VBC6A, VBC7A                                         | 2NC                | CAF6-02M | GJL1201330R0011 |         |
| Side mounted instantaneous auxiliary contact block   |                    |          |                 |         |
| B6-, B7-30-10, BC6-, BC7-30-10                       | 1NO + 1NC          | CA6-11M  | GJL1201317R0003 | 640     |

■ Stock items

# Spares for contactors

## Spare coils for A range

| For contactor types       | Type code reference | Ordering code   | L.P.(₹) |
|---------------------------|---------------------|-----------------|---------|
| N, A9.....A16, UA16..RA   | ZA16 **             | 1SBN151410R□□06 | 770     |
| A26..A40;UA26..UA30 RA    | ZA40 **             | 1SBN152410R□□06 | 950     |
| A45..A75;UA50..UA75 RA    | ZA75 **             | 1SBN153510R□□06 | 2,980   |
| A95..A110; UA95..UA110 RA | ZA110 **            | 1SFN154310R□□06 | 3,910   |
| A145...A185               | ZA185 **            | 1SFN154710R□□06 | 6,380   |
| A210...A300               | ZA300 **            | 1SFN155110R□□06 | 7,070   |

## Spare coils for AF range

| For contactor types | Type code reference | Ordering code   | L.P.(₹) |
|---------------------|---------------------|-----------------|---------|
| AF45...AF75         | ZAF75               | 1SBN153570R□□06 | 8,150   |
| AF95...AF110        | ZAF110              | 1SFN153370R□□06 | 10,940  |
| AF145...AF185       | ZAF185              | 1SFN154770R□□06 | 12,800  |
| AF210,AF260 &AF300  | ZAF300              | 1SFN155170R□□06 | 23,280  |
| AF400...AF460       | ZAF460**            | 1SFN155770R□□06 | 27,350  |
| AF580...AF750**     | ZAF750**            | 1SFN156170R□□06 | 35,490  |

## Coil voltages & codes

| N range, A09.....A300, UA....RA, AX09...AX205 |                 |      | AF45...AF300       |               |      | AF400...AF750      |               |      |
|-----------------------------------------------|-----------------|------|--------------------|---------------|------|--------------------|---------------|------|
| Voltage V-50 Hz                               | Voltage V-60 Hz | Code | Voltage V-50/60 Hz | Voltage V..dc | Code | Voltage V-50/60 Hz | Voltage V..dc | Code |
| 24                                            | 24              | 81   |                    | 20....60      | 72*  |                    | 24....60      | 68   |
| 110                                           | 110....120      | 84   | 48....130          | 48....130     | 69   | 48....130          | 48....130     | 69   |
| 220....230                                    | 230....240      | 80   | 100....250         | 100....250    | 70   | 100....250         | 100....250    | 70   |
| 400....415                                    | 415....440      | 86   |                    |               |      | 250....500         | 250....500    | 71   |

\* For contactor AF95...AF300

## Spare contact sets for 3 pole

| Description                                                                                                            | For contactor types | Type code reference | Ordering code     | L.P.(₹) |
|------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|-------------------|---------|
| Contact set for 3 -pole contactors consisting of 6 fixed contacts, 3 moving contacts, springs and the required screws. | A/AF/AE/TAE50       | ZL 50               | 1SBN163503R1000 ■ | 4,110   |
|                                                                                                                        | A/AF/AE/TAE63       | ZL 63               | 1SBN163703R1000 ■ | 5,960   |
|                                                                                                                        | A/AF/AE/TAE75       | ZL 75               | 1SBN164103R1000 ■ | 7,480   |
|                                                                                                                        | A/AF/AE/TAE95       | ZL 95               | 1SFN164303R1000 ■ | 9,840   |
|                                                                                                                        | A/AF/AE/TAE110      | ZL 110              | 1SFN164503R1000 ■ | 10,780  |
|                                                                                                                        | A/AF145             | ZL 145              | 1SFN164703R1000 ■ | 13,660  |
|                                                                                                                        | A/AF185             | ZL 185              | 1SFN164903R1000 ■ | 17,160  |
|                                                                                                                        | A/AF210             | ZL 210              | 1SFN165103R1000 ■ | 22,100  |
|                                                                                                                        | A/AF260             | ZL 260              | 1SFN165303R1000 ■ | 26,760  |
|                                                                                                                        | A/AF300             | ZL 300              | 1SFN165503R1000 ■ | 32,000  |
|                                                                                                                        | AF400               | ZL 400              | 1SFN165703R1000 ■ | 36,050  |
|                                                                                                                        | AF460               | ZL 460              | 1SFN165903R1000 ■ | 44,470  |
|                                                                                                                        | AF 580              | ZL 580              | 1SFN166103R1000 ■ | 74,840  |
|                                                                                                                        | AF 750              | ZL 750              | 1SFN166303R1000 ■ | 93,960  |
|                                                                                                                        | UA 50               | ZLU 50              | 1SBN163502R1000   | 4,730   |
|                                                                                                                        | UA 63               | ZLU 63              | 1SBN163702R1000   | 6,590   |
|                                                                                                                        | UA 75               | ZLU 75              | 1SBN164102R1000   | 8,270   |

## Spare contact sets for 3 pole for AX

| For contactor types | Type code reference | Ordering code   | L.P.(₹) |
|---------------------|---------------------|-----------------|---------|
| AX50                | ZLX50               | 1SBN163506R1000 | 3,800   |
| AX65                | ZLX65               | 1SBN163706R1000 | 5,050   |
| AX80                | ZLX80               | 1SBN164106R1000 | 6,570   |
| AX95                | ZLX95               | 1SFN164306R1000 | 7,660   |
| AX115               | ZLX115              | 1SFN169806R1000 | 9,330   |
| AX150               | ZLX150              | 1SFN169906R1000 | 12,360  |
| AX185               | ZLX185              | 1SFN164906R1000 | 14,550  |
| AX205               | ZLX205              | 1SFN165006R1000 | 17,700  |

## Spare coils for AX range

| For contactor types | Type code reference | Ordering code   | L.P.(₹) |
|---------------------|---------------------|-----------------|---------|
| AX25                | ZAX25               | 1SBN158910R□□36 | 710     |
| AX40                | ZAX40               | 1SBN152810R□□36 | 930     |
| AX80                | ZAX80               | 1SBN153510R□□36 | 2,920   |
| AX150               | ZAX150              | 1SFN159910R□□36 | 4,430   |
| AX205               | ZAX205              | 1SFN155010R□□36 | 6,280   |

Complete the contactor type code by replacing□□ with desired coil voltage from above mentioned table

# DOL and star delta starters



Direct on line starter:

| Rating at 415V 50Hz |      | Back - up Fuse rating (A) | Type code reference | Ordering code     | L.P.(₹) |
|---------------------|------|---------------------------|---------------------|-------------------|---------|
| HP                  | kW   |                           |                     |                   |         |
| 0.25                | 0.18 | 4A                        | MA-0.25 **          | 1SYN140318R□□25   | 3,310   |
| 0.50                | 0.37 | 4A                        | MA-0.50 **          | 1SYN140318R□□05   | 3,310   |
| 0.75                | 0.52 | 6A                        | MA-0.75 **          | 1SYN140318R□□75   | 3,310   |
| 1.00                | 0.75 | 6A                        | MA-1.00 **          | 1SYN140318R□□10 ■ | 3,310   |
| 1.50                | 1.10 | 10A                       | MA-1.50 **          | 1SYN140318R□□15   | 3,310   |
| 2.00                | 1.50 | 10A                       | MA-2.00 **          | 1SYN140318R□□20 ■ | 3,310   |
| 3.00                | 2.20 | 16A                       | MA-3.00 **          | 1SYN140318R□□30 ■ | 3,310   |
| 5.00                | 3.70 | 25A                       | MA-5.00 **          | 1SYN140318R□□50 ■ | 3,310   |
| 7.50                | 5.50 | 32A                       | MA-7.50 **          | 1SYN16018R□□75 ■  | 3,310   |
| 10.00               | 7.50 | 32A                       | MA-10.00 **         | 1SYN180318R□□10 ■ | 3,580   |



Fully automatic Star Delta starter:

| Rating at 415V 50Hz |          | Type code reference | Ordering code     | L.P.(₹) |
|---------------------|----------|---------------------|-------------------|---------|
| HP                  | kW       |                     |                   |         |
| 12.5                | 12.5/9.3 | SDA-12.5 **         | 1SYN184322R□□00 ■ | 12,340  |
| 15                  | 15/11    | SDA-15 **           | 1SYN242322R□□00 ■ | 13,410  |
| 20                  | 20/15    | SDA- 20 **          | 1SYN244322R□□00 ■ | 15,560  |
| 25                  | 25/18.5  | SDA-25 **           | 1SYN246322R□□00   | 16,200  |
| 30                  | 30/22    | SDA-30 **           | 1SYN282322R□□00   | 19,580  |
| 35                  | 35/26    | SDA-35 **           | 1SYN284322R□□00   | 21,720  |
| 40                  | 40/30    | SDA-40 **           | 1SYN322322R□□00   | 26,360  |
| 50                  | 50/37    | SDA-50 **           | 1SYN352342R□□00   | 31,640  |
| 60                  | 60/45    | SDA-60 **           | 1SYN372342R□□00   | 40,700  |
| 75                  | 75/55    | SDA-75 **           | 1SYN412342R□□00   | 47,720  |

Complete the starter type code by replacing the \*\* with the desired coil voltage.

| Voltage            | Code  |
|--------------------|-------|
| □□□                | □□    |
| 220 ... 230 V coil | 3 8   |
| 400 ... 415 V coil | 8 6 ■ |

DOL Starter with IP65 enclosure



4KE 7.5KW 415V, IP65 compact plastic enclosure with double insulation



| Description                       | Ordering code | L.P.(₹) |
|-----------------------------------|---------------|---------|
| DRAS09-29P 4.0 kW 415V, 415V coil | 1SBK104035R   | 5,790   |
| DRAS12-29P 5.5 kW 415V, 415V coil | 1SBK114035R   | 6,220   |
| DRAS16-29P 7.5 kW 415V, 415V coil | 1SBK124035R   | 8,360   |

Note: T16 OLR to be ordered separately. Plz refer page no. 96 for reference.

■ Stock items

# Manual motor starter

With thermal and electromagnetic protection



**MS116 Manual motor starters with short circuit, overload and phase loss protection**

| Rated power<br>415V KW | Ie current<br>setting<br>range Amp | S/C Icu<br>breaking<br>capacity kA | Type       | Ordering code     | L.P.(₹) |
|------------------------|------------------------------------|------------------------------------|------------|-------------------|---------|
| 0.03                   | 0.10 ... 0.16                      | 50                                 | MS116-0.16 | 1SAM250000R1001 ■ | 2,980   |
| 0.06                   | 0.16 ... 0.25                      | 50                                 | MS116-0.25 | 1SAM250000R1002 ■ | 2,980   |
| 0.09                   | 0.25 ... 0.40                      | 50                                 | MS116-0.4  | 1SAM250000R1003 ■ | 2,980   |
| 0.12                   | 0.40 ... 0.63                      | 50                                 | MS116-0.63 | 1SAM250000R1004 ■ | 3,390   |
| 0.25                   | 0.63 ... 1.00                      | 50                                 | MS116-1.0  | 1SAM250000R1005 ■ | 3,390   |
| 0.55                   | 1.00 ... 1.60                      | 50                                 | MS116-1.6  | 1SAM250000R1006 ■ | 3,400   |
| 0.75                   | 1.60 ... 2.50                      | 50                                 | MS116-2.5  | 1SAM250000R1007 ■ | 3,400   |
| 1.5                    | 2.50 ... 4.00                      | 50                                 | MS116-4.0  | 1SAM250000R1008 ■ | 3,460   |
| 2.2                    | 4.00 ... 6.30                      | 50                                 | MS116-6.3  | 1SAM250000R1009 ■ | 3,460   |
| 4.0                    | 6.30 ... 10.0                      | 50                                 | MS116-10   | 1SAM250000R1010 ■ | 3,560   |
| 5.5                    | 8.00 ... 12.0                      | 25                                 | MS116-12   | 1SAM250000R1012 ■ | 4,050   |
| 7.5                    | 10.0 ... 16.0                      | 16                                 | MS116-16   | 1SAM250000R1011 ■ | 4,490   |
| 9.0                    | 16.0 ... 20.0                      | 15                                 | MS116-20   | 1SAM250000R1013 ■ | 4,880   |
| 12.5                   | 20.0 ... 25.0                      | 15                                 | MS116-25   | 1SAM250000R1014 ■ | 5,030   |
| 15.5                   | 25.0 ... 32.0                      | 10                                 | MS116-32   | 1SAM250000R1015 ■ | 8,770   |



**MS132 Manual motor starters with short circuit, overload and phase loss protection**

|      |               |     |            |                   |        |
|------|---------------|-----|------------|-------------------|--------|
| 0.03 | 0.10 ... 0.16 | 100 | MS132-0.16 | 1SAM350000R1001   | 3,810  |
| 0.06 | 0.16 ... 0.25 | 100 | MS132-0.25 | 1SAM350000R1002 ■ | 3,810  |
| 0.09 | 0.25 ... 0.40 | 100 | MS132-0.4  | 1SAM350000R1003 ■ | 3,810  |
| 0.12 | 0.40 ... 0.63 | 100 | MS132-0.63 | 1SAM350000R1004 ■ | 4,130  |
| 0.25 | 0.63 ... 1.00 | 100 | MS132-1.0  | 1SAM350000R1005 ■ | 4,170  |
| 0.55 | 1.00 ... 1.60 | 100 | MS132-1.6  | 1SAM350000R1006 ■ | 4,360  |
| 0.75 | 1.60 ... 2.50 | 100 | MS132-2.5  | 1SAM350000R1007 ■ | 4,360  |
| 1.5  | 2.50 ... 4.00 | 100 | MS132-4.0  | 1SAM350000R1008 ■ | 4,380  |
| 2.2  | 4.00 ... 6.30 | 100 | MS132-6.3  | 1SAM350000R1009 ■ | 4,430  |
| 4.0  | 6.30 ... 10.0 | 100 | MS132-10   | 1SAM350000R1010 ■ | 4,750  |
| 5.5  | 8.00 ... 12.0 | 100 | MS132-12   | 1SAM350000R1012 ■ | 5,220  |
| 7.5  | 10.0 ... 16.0 | 100 | MS132-16   | 1SAM350000R1011 ■ | 5,780  |
| 9.0  | 16.0 ... 20.0 | 100 | MS132-20   | 1SAM350000R1013 ■ | 6,210  |
| 12.5 | 20.0 ... 25.0 | 50  | MS132-25   | 1SAM350000R1014 ■ | 6,330  |
| 15.5 | 25.0 ... 32.0 | 50  | MS132-32   | 1SAM350000R1015 ■ | 10,080 |

■ Stock items

# Manual motor starter

With thermal and electromagnetic protection



## MS165 manual motor starters with short circuit, overload and phase loss protection

| Ie current setting range Amp | S/C Icu breaking capacity kA | Type     | Ordering code     | L.P.(₹) |
|------------------------------|------------------------------|----------|-------------------|---------|
| 10 ... 16                    | 100                          | MS165-16 | 1SAM451000R1011   | 10,810  |
| 14 ... 20                    | 100                          | MS165-20 | 1SAM451000R1012   | 11,310  |
| 18 ... 25                    | 100                          | MS165-25 | 1SAM451000R1013   | 11,590  |
| 23 ... 32                    | 100                          | MS165-32 | 1SAM451000R1014 ■ | 12,420  |
| 30 ... 42                    | 50                           | MS165-42 | 1SAM451000R1015 ■ | 12,420  |
| 40 ... 54                    | 50                           | MS165-54 | 1SAM451000R1016 ■ | 15,090  |
| 52 ... 65                    | 50                           | MS165-65 | 1SAM451000R1017 ■ | 16,070  |



## Manual motor starters with short Circuit, overload and phase loss protection

| Rated power 415V KW                                                                       | Ie current setting range Amp | S/C Icu breaking capacity kA | Type      | Ordering code   | L.P.(₹)      |
|-------------------------------------------------------------------------------------------|------------------------------|------------------------------|-----------|-----------------|--------------|
| <b>MS495 Manual motor starters with short circuit, overload and phase loss protection</b> |                              |                              |           |                 |              |
| 37                                                                                        | 57.0 ... 75.0                | 50                           | MS495-75  | 1SAM550000R1008 | Upon request |
| 45                                                                                        | 70.0 ... 90.0                | 50                           | MS495-90  | 1SAM550000R1009 |              |
| 55                                                                                        | 80.0 ... 100.0               | 50                           | MS495-100 | 1SAM550000R1010 |              |
| 37                                                                                        | 57.0 ... 75.0                | 100                          | MS497-75  | 1SAM580000R1008 | Upon request |
| 45                                                                                        | 70.0 ... 90.0                | 100                          | MS497-90  | 1SAM580000R1009 |              |
| 55                                                                                        | 80.0 ... 100.                | 100                          | MS497-100 | 1SAM580000R1010 |              |

## MO132 Manual motor starters with short circuit protection only



|      |      |     |            |                   |       |
|------|------|-----|------------|-------------------|-------|
| 0.03 | 0.16 | 100 | MO132-0.16 | 1SAM360000R1001   | 3,700 |
| 0.06 | 0.25 | 100 | MO132-0.25 | 1SAM360000R1002   | 3,700 |
| 0.09 | 0.40 | 100 | MO132-0.4  | 1SAM360000R1003   | 3,700 |
| 0.12 | 0.63 | 100 | MO132-0.63 | 1SAM360000R1004   | 3,950 |
| 0.25 | 1.0  | 100 | MO132-1.0  | 1SAM360000R1005 ■ | 4,000 |
| 0.55 | 1.6  | 100 | MO132-1.6  | 1SAM360000R1006 ■ | 4,000 |
| 0.75 | 2.5  | 100 | MO132-2.5  | 1SAM360000R1007 ■ | 4,000 |
| 1.5  | 4.0  | 100 | MO132-4.0  | 1SAM360000R1008 ■ | 4,050 |
| 2.2  | 6.3  | 100 | MO132-6.3  | 1SAM360000R1009 ■ | 4,050 |
| 4.0  | 10   | 100 | MO132-10   | 1SAM360000R1010 ■ | 4,200 |
| 5.5  | 12   | 100 | MO132-12   | 1SAM360000R1012 ■ | 4,200 |
| 7.5  | 16   | 100 | MO132-16   | 1SAM360000R1011 ■ | 4,200 |
| 9.0  | 20   | 100 | MO132-20   | 1SAM360000R1013 ■ | 4,590 |
| 12.5 | 25   | 50  | MO132-25   | 1SAM360000R1014 ■ | 4,750 |
| 15.5 | 32   | 50  | MO132-32   | 1SAM360000R1015 ■ | 9,790 |

■ Stock items



# Manual motor starter

## MO132, MO165, MO495 and MO497 Manual motor starters

### MO165 manual motor starters with short circuit protection only

| Rated operational current Amp | S/C Icu breaking capacity kA | Type     | Ordering code     | L.P.(₹) |
|-------------------------------|------------------------------|----------|-------------------|---------|
| 16                            | 100                          | MO165-16 | 1SAM461000R1011   | 10,400  |
| 20                            | 100                          | MO165-20 | 1SAM461000R1012   | 10,920  |
| 32                            | 100                          | MO165-32 | 1SAM461000R1014 ■ | 11,140  |
| 42                            | 50                           | MO165-42 | 1SAM461000R1015   | 11,480  |
| 54                            | 50                           | MO165-54 | 1SAM461000R1016 ■ | 12,660  |
| 65                            | 50                           | MO165-65 | 1SAM461000R1017   | 13,150  |

### Description

#### Manual motor starters with short Circuit protection only

| Rated power<br>415V<br>KW                                      | Ie current<br>setting<br>range<br>Amp | S/C Icu<br>breaking<br>capacity<br>kA | Type      | Ordering code   | L.P.(₹)         |
|----------------------------------------------------------------|---------------------------------------|---------------------------------------|-----------|-----------------|-----------------|
| MO495 Manual motor starters with short circuit protection only |                                       |                                       |           |                 |                 |
| 37                                                             | 75                                    | 50                                    | MO495-75  | 1SAM560000R1008 | Upon<br>request |
| 45                                                             | 90                                    | 50                                    | MO495-90  | 1SAM560000R1009 |                 |
| 55                                                             | 100                                   | 50                                    | MO495-100 | 1SAM560000R1010 |                 |
| MO497 Manual motor starters with short circuit protection only |                                       |                                       |           |                 |                 |
| 37                                                             | 75                                    | 100                                   | MO497-75  | 1SAM590000R1008 | Upon<br>request |
| 45                                                             | 90                                    | 100                                   | MO497-90  | 1SAM590000R1009 |                 |
| 55                                                             | 100                                   | 100                                   | MO497-100 | 1SAM590000R1010 |                 |



## MS132-T circuit breakers for transformer protection

### Description

MS132-T Circuit breakers for transformer protection are electro-mechanical protection devices specially designed to protect control transformers on the primary side. The short-circuit current setting is fixed to 20 times the operating current to handle the high inrush current generated by transformers.

| Ie current setting range Amp | S/C Icu breaking capacity kA | Type        | Ordering code     | L.P.(₹) |
|------------------------------|------------------------------|-------------|-------------------|---------|
| 0.10 ... 0.16                | 100                          | MS132-0.16T | 1SAM340000R1001   | 4,300   |
| 0.16 ... 0.25                | 100                          | MS132-0.25T | 1SAM340000R1002   | 4,300   |
| 0.25 ... 0.40                | 100                          | MS132-0.4T  | 1SAM340000R1003   | 4,300   |
| 0.40 ... 0.63                | 100                          | MS132-0.63T | 1SAM340000R1004   | 4,670   |
| 0.63 ... 1.00                | 100                          | MS132-1.0T  | 1SAM340000R1005   | 4,710   |
| 1.00 ... 1.60                | 100                          | MS132-1.6T  | 1SAM340000R1006   | 4,930   |
| 1.60 ... 2.50                | 100                          | MS132-2.5T  | 1SAM340000R1007   | 4,930   |
| 2.50 ... 4.00                | 100                          | MS132-4.0T  | 1SAM340000R1008 ■ | 4,950   |
| 4.00 ... 6.30                | 100                          | MS132-6.3T  | 1SAM340000R1009 ■ | 5,020   |
| 6.30 ... 10.0                | 100                          | MS132-10T   | 1SAM340000R1010 ■ | 5,370   |
| 8.00 ... 12.0                | 100                          | MS132-12T   | 1SAM340000R1012   | 5,920   |
| 10.0 ... 16.0                | 100                          | MS132-16T   | 1SAM340000R1011 ■ | 5,920   |
| 16.0 ... 20.0                | 100                          | MS132-20T   | 1SAM340000R1013   | 7,150   |
| 20.0 ... 25.0                | 50                           | MS132-25T   | 1SAM340000R1014   | 7,180   |



# Manual motor starter

MS116, MS132, MO132, MS165, MO165, MS4xx, MO4xx

## General accessories

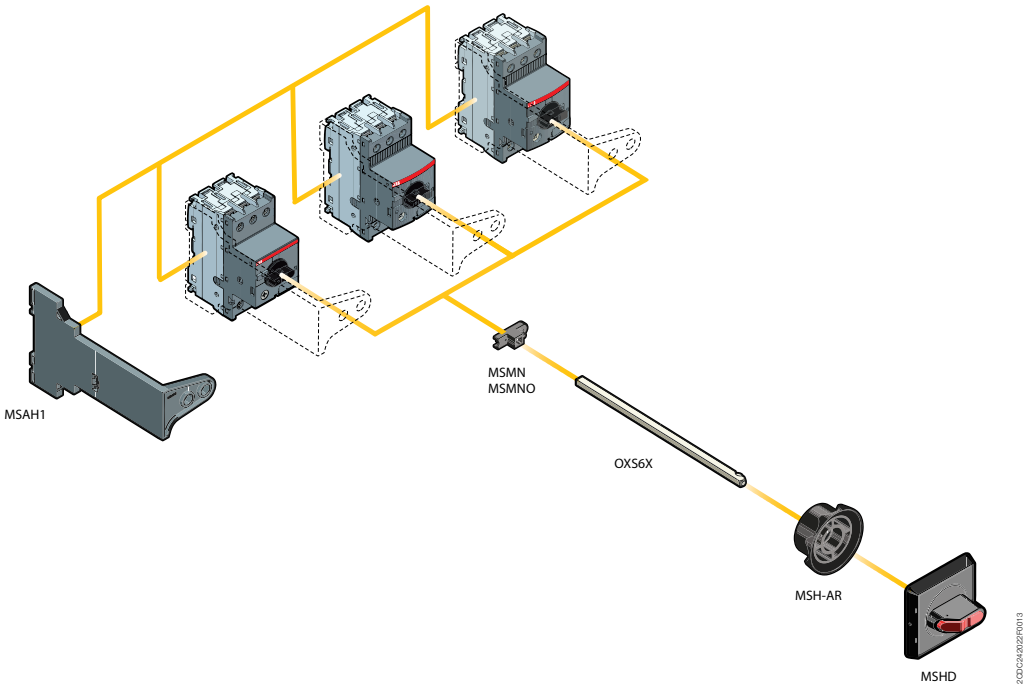
### Description

With this solution of door coupling rotary mechanism it is possible to operate a Manual Motor Starter in the back of a switch cabinet from outside. The door coupling mechanism prevents opening of the door of a switch cabinet with the Manual Motor Starter in ON position. The complete mechanism includes handle, shaft, driver, shaft alignment ring and shaft supporter. All accessories fit for 6 mm shafts with a maximum length of 180 mm. The degree of protection for handles MSHD is IP64.

### Ordering details

| Frame                                                        | Description                                                           | Type                  | Ordering code     | L.P.(₹) |
|--------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------|-------------------|---------|
| MS116<br>MS132<br>MO132<br>MS165<br>MO165<br>MS4xx,<br>MO4xx | SHAFT - Shaft diameter 6 mm. Shaft extension for door coupling driver | OX56X130              | 1SCA101655R1001   | 420     |
|                                                              | MSHD - Handle                                                         | MSHD-LB <sup>1</sup>  | 1SAM201920R1001 ■ | 1,200   |
|                                                              |                                                                       | MSHD-LY <sup>2</sup>  | 1SAM201920R1002   | 1,200   |
|                                                              |                                                                       | MSHD-LTB <sup>3</sup> | 1SAM201920R1011 ■ | 1,200   |
|                                                              |                                                                       | MSHD-LTY <sup>3</sup> | 1SAM201920R1012   | 1,200   |
|                                                              | MSMN- Driver                                                          | MSMN <sup>4</sup>     | 1SAM101923R0002 ■ | 180     |
|                                                              |                                                                       | MSMNO <sup>5</sup>    | 1SAM101923R0012 ■ | 180     |
|                                                              | MSH-AR Shaft alignment ring                                           | MSH-AR                | 1SAM201920R1000 ■ | 200     |
| MS116, MS132                                                 | MSAH1-Shaft supporter                                                 | MSAH1                 | 1SAM201909R1021 ■ | 790     |

- 1) Black in colour
- 2) Yellow in colour
- 3) Indication I-O and ON-OFF+Trip indication
- 4) Positioning of ON indication dependent from mounting orientation of the MMS
- 5) Positioning of ON indication independent from mounting orientation of the MMS



# Manual motor starter

## Accessories for MS116, MS132, MO132, MS132-T, MS165, MO165



AA1-24

| Suitable for                                            | Shunt trip    |         |                   |         | Undervoltage release |         |                 |         |
|---------------------------------------------------------|---------------|---------|-------------------|---------|----------------------|---------|-----------------|---------|
|                                                         | Rated voltage | Type    | Ordering code     | L.P.(₹) | Rated voltage        | Type    | Ordering code   | L.P.(₹) |
| MS116,<br>MS132,<br>MO132,<br>MS132-T<br>MS165<br>MO165 | 20 ... 24     | AA1-24  | 1SAM201910R1001   | 3,070   | 24                   | UA1-24  | 1SAM201904R1001 | 2,510   |
|                                                         | 110           | AA1-110 | 1SAM201910R1002 ■ | 3,070   | 110                  | UA1-110 | 1SAM201904R1004 | 2,510   |
|                                                         | 200-240       | AA1-230 | 1SAM201910R1003 ■ | 3,070   | 230                  | UA1-230 | 1SAM201904R1005 | 2,510   |
|                                                         | 350-415       | AA1-400 | 1SAM201910R1004   | 3,070   | 415                  | UA1-415 | 1SAM201904R1007 | 2,510   |



HKF1-11

| Suitable for                                            | Auxiliary contacts – mountable on the front |         |                   |         | Auxiliary contacts – mountable on the right |                   |         |
|---------------------------------------------------------|---------------------------------------------|---------|-------------------|---------|---------------------------------------------|-------------------|---------|
|                                                         | Aux contacts                                | Type    | Ordering code     | L.P.(₹) | Type                                        | Ordering code     | L.P.(₹) |
| MS116,<br>MS132,<br>MO132,<br>MS132-T<br>MS165<br>MO165 | 1NO+1NC                                     | HKF1-11 | 1SAM201901R1001 ■ | 640     | HK1-11                                      | 1SAM201902R1001 ■ | 850     |
|                                                         | 2 NO                                        | HKF1-20 | 1SAM201901R1002 ■ | 640     | HK1-20                                      | 1SAM201902R1002 ■ | 850     |
|                                                         | 2NC                                         | -       | -                 | -       | HK1-02                                      | 1SAM201902R1003 ■ | 850     |
|                                                         | 1NO                                         | HKF1-10 | 1SAM201901R1003 ■ | 390     |                                             |                   |         |
|                                                         | 1NC                                         | HKF1-01 | 1SAM201901R1004 ■ | 390     |                                             |                   |         |



SK1-11

| Suitable for                         | Aux contacts | Type     | Ordering code     | L.P.(₹) |
|--------------------------------------|--------------|----------|-------------------|---------|
| MS116,<br>MS132,<br>MO132,<br>MS 165 | 1NO+1NC      | SK1-11** | 1SAM201903R1001 ■ | 1,120   |
|                                      | 2 NO         | SK1-20** | 1SAM201903R1002 ■ | 1,120   |
| MO 165<br>MS132-T                    | 2 NC         | SK1-02** | 1SAM201903R1003   | 1,120   |
| MS132                                | 1NO+1NC      | CK1-11#  | 1SAM301901R1001 ■ | 1,570   |
| MS132-T                              | 2 NO         | CK1-20#  | 1SAM301901R1002 ■ | 1,570   |
| MS165                                | 2 NC         | CK1-02#  | 1SAM301901R1003   | 1,570   |

\*\*for tripped alarm, max 2 piece  
#for short-circuit alarm, max. 2 pieces



CK1-11



# Manual motor starter

## Accessories for MS4xx



HK4-11

| Auxiliary contacts – mountable on the front |              |        |                   |         |
|---------------------------------------------|--------------|--------|-------------------|---------|
| Suitable for                                | Aux contacts | Type   | Ordering code     | L.P.(₹) |
| MS49x, MO49x                                | 1NO+1NC      | HK4-11 | 1SAM401901R1001 ■ | 970     |

| Auxiliary contacts – mountable on the right |         |                   |         |
|---------------------------------------------|---------|-------------------|---------|
| Rated voltage                               | Type    | Ordering code     | L.P.(₹) |
| 1NO+1NC                                     | HKS4-11 | 1SAM401902R1001 ■ | 970     |
| 2 NO                                        | HKS4-20 | 1SAM401902R1002 ■ | 970     |
| 2 NC                                        | HKS4-02 | 1SAM401902R1003   | 970     |



SK4-11

| Signaling contacts – mountable on the right* |              |        |                   |         |
|----------------------------------------------|--------------|--------|-------------------|---------|
| Suitable for                                 | Aux contacts | Type   | Ordering code     | L.P.(₹) |
| MS49x, MO49x                                 | 1NO+1NC      | SK4-11 | 1SAM401904R1001 ■ | 1,760   |

\*for tripped alarm, max 2 piece



AA4-24

| Suitable for | Shunt trip units – mountable on the right |         |                 |         | Undervoltage release mountable on the right |         |                 |         |
|--------------|-------------------------------------------|---------|-----------------|---------|---------------------------------------------|---------|-----------------|---------|
|              | Rated voltage                             | Type    | Ordering code   | L.P.(₹) | Rated voltage                               | Type    | Ordering code   | L.P.(₹) |
| MS49x, MO49x | 20 ... 24                                 | AA4-24  | 1SAM401907R1001 | 3,080   | 24                                          | UA4-24  | 1SAM401905R1004 | 3,410   |
|              | 110                                       | AA4-110 | 1SAM401907R1002 | 3,410   | 110                                         | UA4-110 | 1SAM401905R1001 | 3,410   |
|              | 200-240                                   | AA4-230 | 1SAM401907R1003 | 3,410   | 230                                         | UA4-230 | 1SAM401905R1002 | 3,410   |
|              | 350-415                                   | AA4-400 | 1SAM401907R1004 | 3,410   | 415                                         | UA4-415 | 1SAM401905R1002 | 3,410   |

■ Stock items

# Thermal overload relays



## TA25, TA42 and TA75 relays

| Relay range in Amps                                                            | Direct mounting on contactors                        | Type code reference | Ordering code     | L.P.(₹) |
|--------------------------------------------------------------------------------|------------------------------------------------------|---------------------|-------------------|---------|
| 0.1 ... 0.16                                                                   | A9...A40<br>AX9...AX40<br>AL9...AL40<br>TAL9...TAL40 | TA25DU 0.16M        | 1SAZ211201R2005 ■ | 1,420   |
| 0.16 ... 0.25                                                                  |                                                      | TA25DU 0.25M        | 1SAZ211201R2009 ■ | 1,420   |
| 0.25 ... 0.4                                                                   |                                                      | TA25DU 0.4M         | 1SAZ211201R2013 ■ | 1,420   |
| 0.4 ... 0.63                                                                   |                                                      | TA25DU 0.63M        | 1SAZ211201R2017 ■ | 1,420   |
| 0.63 ... 1.0                                                                   |                                                      | TA25DU 1.0M         | 1SAZ211201R2021 ■ | 1,420   |
| 1.0 ... 1.4                                                                    |                                                      | TA25DU 1.4M         | 1SAZ211201R2023 ■ | 1,420   |
| 1.3 ... 1.8                                                                    |                                                      | TA25DU 1.8M         | 1SAZ211201R2025 ■ | 1,420   |
| 1.7 ... 2.4                                                                    |                                                      | TA25DU 2.4M         | 1SAZ211201R2028 ■ | 1,420   |
| 2.2 ... 3.1                                                                    |                                                      | TA25DU 3.1M         | 1SAZ211201R2031 ■ | 1,420   |
| 2.8 ... 4.0                                                                    |                                                      | TA25DU 4.0M         | 1SAZ211201R2033 ■ | 1,420   |
| 3.5 ... 5.0                                                                    |                                                      | TA25DU 5.0M         | 1SAZ211201R2035 ■ | 1,420   |
| 4.5 ... 6.5                                                                    |                                                      | TA25DU 6.5M         | 1SAZ211201R2038 ■ | 1,420   |
| 6.0 ... 8.5                                                                    |                                                      | TA25DU 8.5M         | 1SAZ211201R2040 ■ | 1,420   |
| 7.5 ... 11.0                                                                   |                                                      | TA25DU 11M          | 1SAZ211201R2043 ■ | 1,420   |
| 10.0 ... 14.0                                                                  |                                                      | TA25DU 14M          | 1SAZ211201R2045 ■ | 1,420   |
| 13.0 ... 19.0                                                                  |                                                      | TA25DU 19M          | 1SAZ211201R2047 ■ | 1,760   |
| 18.0 ... 25.0                                                                  |                                                      | TA25DU 25M          | 1SAZ211201R2051 ■ | 1,760   |
| 24.0 ... 32.0                                                                  |                                                      | TA25DU 32M          | 1SAZ211201R2053 ■ | 2,460   |
| TA42DU                                                                         |                                                      |                     |                   |         |
| 18.0 ... 25.0                                                                  | A30,A40,                                             | TA42DU 25           | 1SAZ311201R2001 ■ | 2,920   |
| 22.0 ... 32.0                                                                  | AX32...AX40                                          | TA42DU 32           | 1SAZ311201R2002 ■ | 3,180   |
| 29.0 ... 42.0                                                                  | AL30,AL40,<br>TAL30,TAL 40                           | TA42DU 42           | 1SAZ311201R2003 ■ | 3,220   |
| TA75DU                                                                         |                                                      |                     |                   |         |
| 22 ... 32                                                                      | A50...A75<br>AX50...AX80                             | TA75DU 32           | 1SAZ321201R2002 ■ | 3,680   |
| 29 ... 42                                                                      |                                                      | TA75DU 42           | 1SAZ321201R2003 ■ | 4,320   |
| 36 ... 52                                                                      |                                                      | TA75DU 52           | 1SAZ321201R2004 ■ | 4,320   |
| 45 ... 63                                                                      |                                                      | TA75DU 63           | 1SAZ321201R2005 ■ | 4,320   |
| 60 ... 80                                                                      |                                                      | TA75DU 80           | 1SAZ321201R2006 ■ | 4,630   |
| TA80DU                                                                         |                                                      |                     |                   |         |
| 36 ... 52                                                                      | A95...A110,<br>AX95...AX150                          | TA80DU-52           | 1SAZ331201R1004 ■ | 4,940   |
| 45 ... 63                                                                      |                                                      | TA80DU-63           | 1SAZ331201R1005 ■ | 4,940   |
| 60 ... 80                                                                      |                                                      | TA80DU-80           | 1SAZ331201R1006 ■ | 5,300   |
| TA25/TA42/TA75/TA80/TA110/TA200 are direct operated relays with trip class 10A |                                                      |                     |                   |         |
| TA110DU                                                                        |                                                      |                     |                   |         |
| 66 ... 90                                                                      | A95...A110,                                          | TA110DU-90          | 1SAZ411201R1001 ■ | 8,690   |
| 80 ... 110                                                                     | AX95...AX150                                         | TA110DU-110         | 1SAZ411201R1002 ■ | 9,500   |
| TA200DU                                                                        |                                                      |                     |                   |         |
| 66 ... 90                                                                      | A145...A185<br>AX185...AX205<br>AF190, AF205         | TA200DU-90          | 1SAZ421201R1001 ■ | 10,000  |
| 80 ... 110                                                                     |                                                      | TA200DU-110         | 1SAZ421201R1002 ■ | 10,820  |
| 100 ... 135                                                                    |                                                      | TA200DU-135         | 1SAZ421201R1003 ■ | 11,550  |
| 110 ... 150                                                                    |                                                      | TA200DU-150         | 1SAZ421201R1004 ■ | 12,580  |
| 130 ... 175                                                                    |                                                      | TA200DU-175         | 1SAZ421201R1005 ■ | 13,090  |
| 150 ... 200                                                                    |                                                      | TA200DU-200         | 1SAZ421201R1006 ■ | 13,680  |
| Accessories                                                                    |                                                      |                     |                   |         |
| Independent Mounting Kit                                                       | TA25DU0.16..25A                                      | DB25/25             | 1SAZ201108R0001 ■ | 360     |
|                                                                                | TA25DU32                                             | DB25/32             | 1SAZ201108R0002   | 750     |
|                                                                                | TA42DU,TA75DU, TA80DU                                | DB80                | 1SAZ301110R0001 ■ | 3,290   |
|                                                                                | TA110DU, TA200DU                                     | DB200               | 1SAZ401110R0001 ■ | 3,400   |

■ Stock items

# Thermal overload relays



TF42

## T16 Relays

| Relay range in Amps | Direct mounting on contactors                                          | Type code reference | Ordering code     | L.P.(₹)      |
|---------------------|------------------------------------------------------------------------|---------------------|-------------------|--------------|
| 0.10 ... 0.13       | B6/BC6<br>B7/BC7<br>VB6/VBC6<br>VB7/VBC7<br>AS/ASL<br>DOL starter IP65 | T16-0.13            | 1SAZ711201R1005   | Upon request |
| 0.13 ... 0.17       |                                                                        | T16-0.17            | 1SAZ711201R1008   |              |
| 0.17 ... 0.23       |                                                                        | T16-0.23            | 1SAZ711201R1009   |              |
| 0.23 ... 0.31       |                                                                        | T16-0.31            | 1SAZ711201R1013   |              |
| 0.31 ... 0.41       |                                                                        | T16-0.41            | 1SAZ711201R1014   |              |
| 0.41 ... 0.55       |                                                                        | T16-0.55            | 1SAZ711201R1017   |              |
| 0.55 ... 0.74       |                                                                        | T16-0.74            | 1SAZ711201R1021   |              |
| 0.74 ... 1.00       |                                                                        | T16-1.0             | 1SAZ711201R1023   |              |
| 1.00 ... 1.30       |                                                                        | T16-1.3             | 1SAZ711201R1025   |              |
| 1.30 ... 1.70       |                                                                        | T16-1.7             | 1SAZ711201R1028   |              |
| 1.70 ... 2.30       |                                                                        | T16-2.3             | 1SAZ711201R1031   |              |
| 2.30 ... 3.10       |                                                                        | T16-3.1             | 1SAZ711201R1033   |              |
| 3.10 ... 4.20       |                                                                        | T16-4.2             | 1SAZ711201R1035   |              |
| 4.20 ... 5.70       |                                                                        | T16-5.7             | 1SAZ711201R1038 ■ |              |
| 5.70 ... 7.60       |                                                                        | T16-7.6             | 1SAZ711201R1040   |              |
| 7.60 ... 10.0       |                                                                        | T16-10              | 1SAZ711201R1043   |              |
| 10.0 ... 13.0       |                                                                        | T16-13              | 1SAZ711201R1045   |              |
| 13.0 ... 16.0       |                                                                        | T16-16              | 1SAZ711201R1047   |              |

## TF42 Relays

| Relay range in Amps | Direct mounting on contactors | Type code reference | Ordering code     | L.P.(₹)      |
|---------------------|-------------------------------|---------------------|-------------------|--------------|
| 0.10 ... 0.13       | AF09...AF38                   | TF42-0.13           | 1SAZ721201R1005   | Upon request |
| 0.13 ... 0.17       |                               | TF42-0.17           | 1SAZ721201R1008   |              |
| 0.17 ... 0.23       |                               | TF42-0.23           | 1SAZ721201R1009   |              |
| 0.23 ... 0.31       |                               | TF42-0.31           | 1SAZ721201R1013   |              |
| 0.31 ... 0.41       |                               | TF42-0.41           | 1SAZ721201R1014   |              |
| 0.41 ... 0.55       |                               | TF42-0.55           | 1SAZ721201R1017   |              |
| 0.55 ... 0.74       |                               | TF42-0.74           | 1SAZ721201R1021   |              |
| 0.74 ... 1.00       |                               | TF42-1.0            | 1SAZ721201R1023   |              |
| 1.00 ... 1.30       |                               | TF42-1.3            | 1SAZ721201R1025   |              |
| 1.30 ... 1.70       |                               | TF42-1.7            | 1SAZ721201R1028 ■ |              |
| 1.70 ... 2.30       |                               | TF42-2.3            | 1SAZ721201R1031 ■ |              |
| 2.30 ... 3.10       |                               | TF42-3.1            | 1SAZ721201R1033 ■ |              |
| 3.10 ... 4.20       |                               | TF42-4.2            | 1SAZ721201R1035 ■ |              |
| 4.20 ... 5.70       |                               | TF42-5.7            | 1SAZ721201R1038 ■ |              |
| 5.70 ... 7.60       |                               | TF42-7.6            | 1SAZ721201R1040 ■ |              |
| 7.60 ... 10.0       |                               | TF42-10             | 1SAZ721201R1043   |              |
| 10.0 ... 13.0       |                               | TF42-13             | 1SAZ721201R1045 ■ |              |
| 13.0 ... 16.0       |                               | TF42-16             | 1SAZ721201R1047 ■ |              |
| 16.0 ... 20.0       |                               | TF42-20             | 1SAZ721201R1049   |              |
| 20.0 ... 24.0       |                               | TF42-24             | 1SAZ721201R1051   |              |
| 24.0 ... 29.0       |                               | TF42-29             | 1SAZ721201R1052   |              |
| 29.0 ... 35.0       |                               | TF42-35             | 1SAZ721201R1053   |              |
| 35.0 ... 38.0/40.0  |                               | TF42-38             | 1SAZ721201R1055   |              |

■ Stock items

# Thermal overload relays



TF42

## TF65/TF96/TF140 Relay

| Relay range in Amps | Direct mounting on contactors | Type code reference | Ordering code   | L.P.(₹)      |
|---------------------|-------------------------------|---------------------|-----------------|--------------|
| 22.0...28.0         | AF40, AF52, AF65              | TF65-28             | 1SAZ811201R1001 | Upon request |
| 25.0...33.0         |                               | TF65-33             | 1SAZ811201R1002 |              |
| 30.0...40.0         |                               | TF65-40             | 1SAZ811201R1003 |              |
| 36.0...47.0         |                               | TF65-47             | 1SAZ811201R1004 |              |
| 44.0...53.0         |                               | TF65-53             | 1SAZ811201R1005 |              |
| 50.0...60.0         |                               | TF65-60             | 1SAZ811201R1006 |              |
| 57.0...67.0         |                               | TF65-67             | 1SAZ811201R1007 |              |
| 40.0...51.0         | AF80, AF96                    | TF96-51             | 1SAZ911201R1001 |              |
| 48.0...60.0         |                               | TF96-60             | 1SAZ911201R1002 |              |
| 57.0...68.0         |                               | TF96-68             | 1SAZ911201R1003 |              |
| 65.0...78.0         |                               | TF96-78             | 1SAZ911201R1004 |              |
| 75.0...87.0         |                               | TF96-87             | 1SAZ911201R1005 |              |
| 84.0...96.0         | AF116, AF140                  | TF96-96             | 1SAZ911201R1006 |              |
| 66...90             |                               | TF140DU-90          | 1SAZ431201R1001 |              |
| 80...110            |                               | TF140DU-110         | 1SAZ431201R1002 |              |
| 100...135           |                               | TF140DU-135         | 1SAZ431201R1003 |              |
| 110...142           |                               | TF140DU-142         | 1SAZ431201R1004 |              |

For AF190 and AF205 use TA200DU OLR

| Description                    | Type  | Ordering code     | L.P.(₹)      |
|--------------------------------|-------|-------------------|--------------|
| Separate mounting kit          | DB16E | 1SAX101110R0001 ■ | Upon request |
| Separate mounting kit          | DB42  | 1SAZ701902R0001 ■ |              |
| Separate mounting kit for TF65 | DB65  | 1SAZ801901R1001   |              |
| Separate mounting kit for TF96 | DB96  | 1SAZ901901R1001   |              |

## Electronic overload relays and suitable contactors

|                        |                            |               |                  |            |                     |                     |               |                      |
|------------------------|----------------------------|---------------|------------------|------------|---------------------|---------------------|---------------|----------------------|
| Suitable for Contactor | A9 ... A16<br>TAL9...TAL16 | A26 ... A40   | A50 ... A75      | A95, A110  | AF190, AF205        |                     |               |                      |
|                        | AL9 ... AL16               | AL30 ... AL40 |                  |            |                     |                     |               |                      |
| EOLR                   | E16DU                      | E45DU         | E80DU            | E140DU     | EF205               |                     |               |                      |
| Suitable for Contactor | AF400,                     | AF580,        | AF1350,          |            | B6/BC6              |                     |               |                      |
|                        | AF460                      | AF750         | AF1650           |            | B7/BC7              |                     |               |                      |
| EOLR                   | EF460                      | EF750         | E1250DU          |            | E16DU, T16          |                     |               |                      |
| Suitable for Contactor | AF09 ... AF16              | AF26, AF38    | AF40, AF52, AF65 | AF80, AF96 | AF116, AF140, AF146 | AF265, AF305, AF370 | AF400, AF460, | AF580, AF750, AF1250 |
|                        | EF19                       | EF45          | EF65             | EF96       | EF146               | EF370               | EF460         | EF750                |

■ Stock items



# Electronic overload relays class 10, 20, 30



## Electronic overload relays

### Trip class 10, 20, 30 selectable

| Setting range | Trip class                          | Type                 | Ordering code     | L.P.(₹)      |
|---------------|-------------------------------------|----------------------|-------------------|--------------|
| 0.1... 0.32A  | Selecatable<br><br>10E, 20E and 30E | E16DU 0.32           | 1SAX111001R1101   | 7,600        |
| 0.3 ... 1.0A  |                                     | E16DU 1.0            | 1SAX111001R1102   | 7,600        |
| 0.8 ... 2.7A  |                                     | E16DU 2.7            | 1SAX111001R1103 ■ | 7,600        |
| 1.9 ... 6.3A  |                                     | E16DU 6.3            | 1SAX111001R1104 ■ | 8,400        |
| 5.7... 18.9A  |                                     | E16DU 18.9           | 1SAX111001R1105 ■ | 8,400        |
| 9 ... 30A     |                                     | E45DU 30             | 1SAX211001R1101 ■ | 10,810       |
| 15 ... 45A    |                                     | E45DU 45             | 1SAX211001R1102 ■ | 11,770       |
| 27 ... 80A    |                                     | E80DU 80             | 1SAX311001R1101 ■ | 15,460       |
| 50 ... 140A   |                                     | E140DU 140           | 1SAX321001R1101 ■ | 18,620       |
| 63 ... 210A   |                                     | EF205-210            | 1SAX531001R1101   | 26,110       |
| 115 ... 380A  |                                     | EF370-380            | 1SAX611001R1101   | 28,780       |
| 150 ... 500A  |                                     | EF460                | 1SAX721001R1101 ■ | 29,000       |
| 250 ... 800A  |                                     | EF750                | 1SAX821001R1101   | Upon request |
| 375 ... 1250A |                                     | E1250DU 375 - 1250 A | 1SFA739001R1000   | Upon request |
| 0.10...0.32A  | Selecatable<br><br>10E, 20E and 30E | EF19-0.32            | 1SAX121001R1101   | Upon request |
| 0.30...1.00A  |                                     | EF19-1.0             | 1SAX121001R1102   |              |
| 0.80...2.70A  |                                     | EF19-2.7             | 1SAX121001R1103 ■ |              |
| 1.90...6.30A  |                                     | EF19-6.3             | 1SAX121001R1104 ■ |              |
| 5.70...18.9A  |                                     | EF19-18.9            | 1SAX121001R1105 ■ |              |
| 9.00...30.0A  |                                     | EF45-30              | 1SAX221001R1101 ■ |              |
| 15.0...45.0A  |                                     | EF45-45              | 1SAX221001R1102 ■ |              |
| 25...70A      |                                     | EF65-70              | 1SAX331001R1101 ■ |              |
| 36...100A     |                                     | EF96-100             | 1SAX341001R1101 ■ |              |
| 54...150A     |                                     | EF146-150            | 1SAX351001R1101 ■ |              |
| 63 ... 210A   |                                     | EF205-210            | 1SAX531001R1101 ■ |              |
| 115 ... 380A  |                                     | EF370-380            | 1SAX611001R1101 ■ |              |
| 150 ... 500A  |                                     | EF460                | 1SAX721001R1101   |              |
| 250 ... 800A  |                                     | EF750                | 1SAX821001R1101   |              |

## Accessories

| Description                  | Type   | Ordering code     | L.P.(₹) |
|------------------------------|--------|-------------------|---------|
| Separate mounting kit        | DB16E  |                   | 2,360   |
| Separate mounting kit - EF19 | DB19EF | 1SAX101910R1001 ■ | 2,390   |
| Separate mounting kit - EF45 | DB45EF | 1SAX201910R0001 ■ | 3,820   |
| Separate mounting kit        | DB45E  | 1SAX201110R1001   | 3,820   |
| Separate mounting kit        | DB80E  | 1SAX301110R1001 ■ | 4,770   |
| Separate mounting kit        | DB140E | 1SAX301110R1002   | 6,890   |

For suitable contactors refer page no. 97

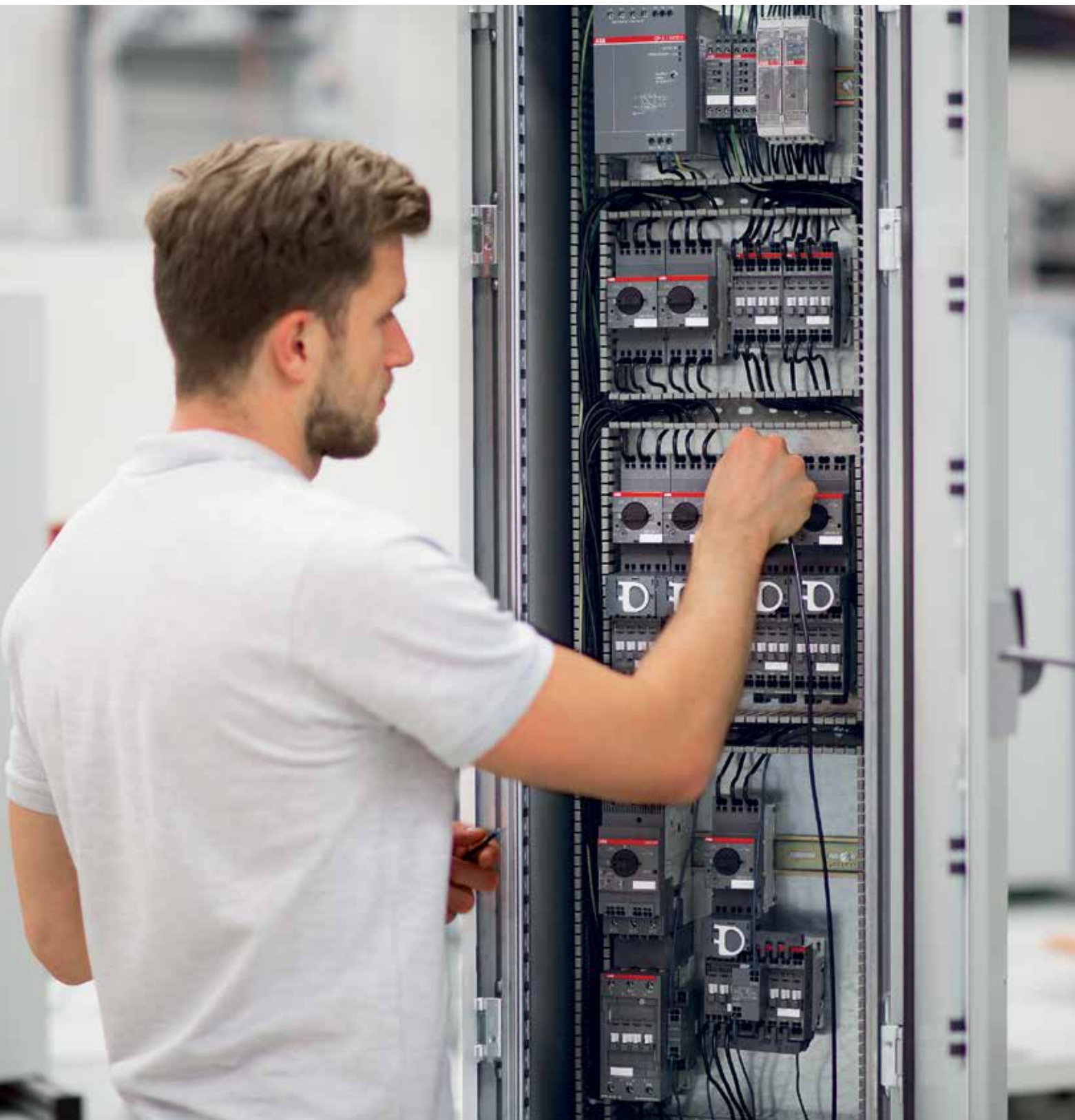
■ Stock items

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**Just push it** **NEW**

## Push-in Spring motor starting solution

- Faster than ever installation
- Easier than ever wiring
- Reliable as ever connections



# Push-in Spring motor starting solution **NEW**

## Complete range, complete efficiency

With the new Push-in Spring motor starting solution, one push is all you need for extremely fast wiring. No tool is required, so you can save up to 50% wiring time with Push-in Spring compared to conventional spring solutions. And the connections are just as reliable. So for speed, ease and reliability, just push it.



### 2-in-1

Benefit from both Push-in mode and Spring mode and use ferruled cables or cables without ferrules in the same terminal.



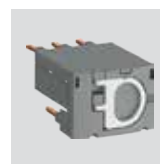
### Just one tool for everything

You only need a 3 mm screwdriver in Spring mode as well as for de-wiring the complete solution.



### Compatible with screw range

Mount accessories for control circuits on the screw range up to 30 kW AC-3 400 V on manual motor starters and up to 45 kW AC-3 400 V, 130 A AC-1 on contactors.



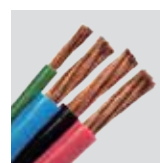
### Tool-less connecting links

100% tool-less mounting and dismounting connecting links.



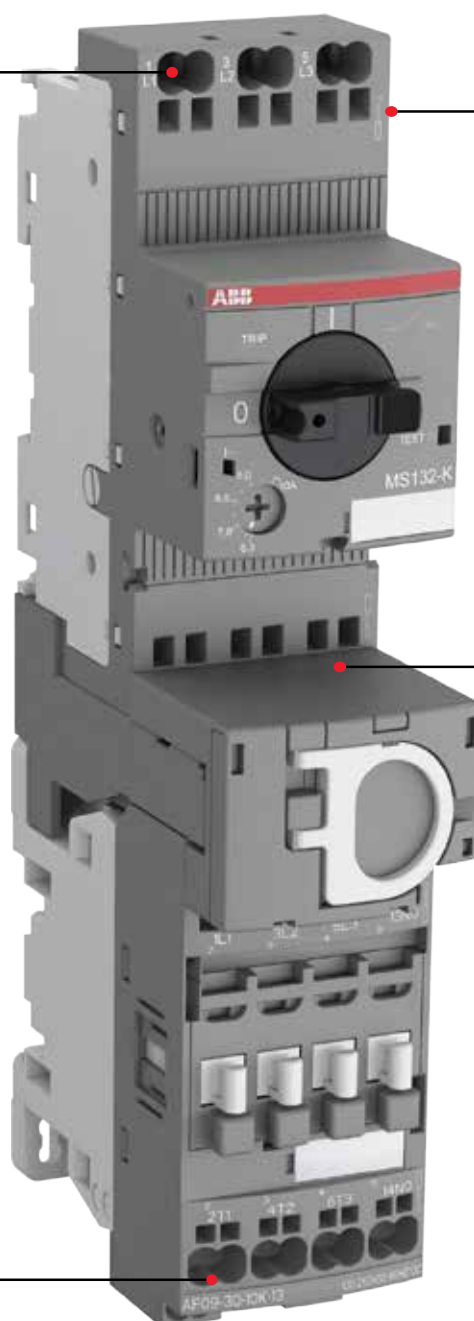
### Robust by design

Contact robustness by design, independent from operator.



### Higher connecting capacity

The solution ranges up to 18.5 kW 400 V AC-3 and 50 A AC-1 (25 hp 480 V and 45 A 600 V general use).



Note: Contact our nearest sales office for more information

# AFS contactors with front-mounted auxiliary contact blocks **NEW**

Dedicated for safety applications

ABB's complete range of safety components make protection systems easier to build. Designed for machine safety applications, AFS contactors come with fixed front auxiliary

contact blocks, making them ideal for monitoring and controlling circuits. Mechanically linked and mirror contacts help make your system safer.



Safety and protection

### Safety in all things

ABB's AFS contactors can be easily integrated in machine manufacturer's systems complying with main safety standards EN ISO 13849 and EN 62061 guaranteeing the safe use of your machinery and equipment. The AFS contactor range is an integral part of ABB's comprehensive range of safety products.



Continuous operation

### Secure uptime

The AFS contactor secures system uptime. It allows direct control by relay outputs of safety PLCs and safety relays to ensure the safety performance customers require. A low energy auxiliary contact guarantees system status feedback.



Speed up your projects

### Simplify design

Perfect design makes integration easier. ABB's distinctive yellow auxiliary contact block makes identifying the right product quicker. By reducing the contactor coil's power consumption, panels can also be made smaller and transformers more compact. In addition, all the safety data for the contactors are readily available using safety design tools.

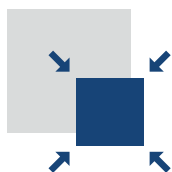
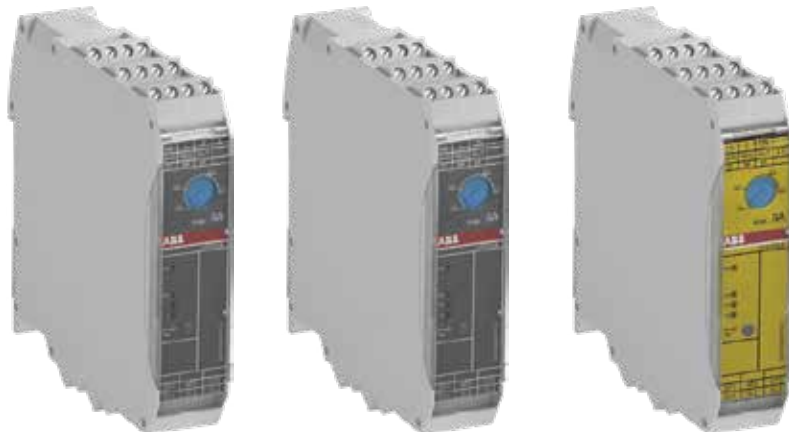
Note: Contact our nearest sales office for more information

## Electronic compact starters: HF range **NEW**

A compact solution with great functionality

ABB's electronic compact starter, up to 3 kW / 400 V, is a 22.5 mm wide product. Even though its compact, it has, direct-on-line, reversed starting, motor overload protection,

and emergency stop all included. It is well suited for paper machines, conveyors or machine tools.



Space saving

### Up to 90% less space required

Decrease your cabinet size.

ABB's electronic compact starter is 22.5 mm wide while still containing motor starting functionalities and embedding motor protection and safety.



Safety and protection

### Integrated safety function

Protect your personnel with emergency stop version complying with SIL3, PL e safety standards. Extend equipment life time and decrease maintenance cost as our starters service life is 10 times higher than electromechanical solutions.



Easy to install

### Up to 75% reduced time in wiring

Wiring time upon installation is reduced to a minimum as motor protection, reversing function and emergency stop are already part of the product. Only one component to install reduces the risk of wiring errors.

Note: Contact our nearest sales office for more information



# Pilot devices

## Pilot Devices Offering

ABB Pilot Devices offers both modular and compact range of pushbuttons. Both feature the same front-of-panel design and appear consistent when combined.

**Modular range**, features a wide range of operators that can be combined with high flexibility. The unique snap-on design promotes simple and fast assembly.

**Compact range** features an all-in-one construction and rugged design for added simplicity and ease of installation.

## Technical data compact range

| Standard and approvals |                                                                                                                                                                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC / EN 60947-1       | Low-voltage switchgear and controlgear - Part 1: General rules                                                                                                         |
| IEC / EN 60947-5-1     | Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices                          |
| IEC / EN 60947-5-5     | Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function |
| IEC / EN 60073         | Basic and safety principles for man-machine                                                                                                                            |
| IEC / EN 60529         | Degrees of protection provided by enclosures (IP Code)                                                                                                                 |
| EN 50013               | Low-voltage switchgear and controlgear for industrial use - Terminal marking and distinctive number for particular control switches                                    |
| DIN 40050-9            | Road vehicles; degrees of protection (IP-code); protection against foreign objects; water and contact; electrical equipment                                            |
| UL 508                 | Industrial control equipment                                                                                                                                           |
| CSA C22.2 No 14        | Industrial control equipment                                                                                                                                           |

## Environmental data

### Degrees of protection

| Pilot device:   | IEC/EN DIN           | UL/CSA                    |
|-----------------|----------------------|---------------------------|
| Pushbutton      | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Selector switch | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Pilot light     | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Emergency stops | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Terminals       | IP20                 |                           |

## Temperature

|                                      |               |
|--------------------------------------|---------------|
| Ambient temperature during operation | -25 to +70 °C |
| Storage temperature                  | -40 to +85 °C |

## Technical data

### Cable connections

| Operator                                        | Cable terminal                                                                                                                       |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Pushbutton<br>Selector switch<br>Emergency stop | Plus-minus Pozidriv No. 2<br>Connectable area:<br>min. 1 x 0.5 mm <sup>2</sup> /1 x AWG22<br>max. 2 x 1.5 mm <sup>2</sup> /2 x AWG14 |

### Tightening torque

|                                |                              |
|--------------------------------|------------------------------|
| Operators, M22                 | Min. 2 Nm / Max. 2.3 Nm      |
| Pushbutton and selector switch | Cable terminals M3, 0.8 Nm   |
| Pilot light                    | Cable terminals M3.5, 0.9 Nm |
| Emergency stop                 | Cable terminals M3, 0.8 Nm   |



Modular range

## Electrical data

### Electrical ratings

#### Contacts

#### Ratings as per IEC 60947-5-1

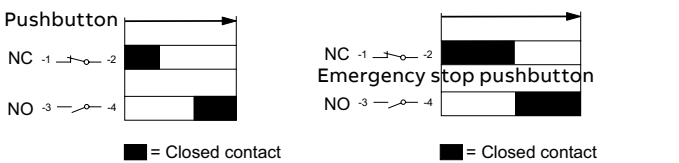
|                                                                          |           |       |
|--------------------------------------------------------------------------|-----------|-------|
| Rated insulation voltage, U <sub>i</sub>                                 | 300 V     |       |
| Rated thermal current, I <sub>th</sub>                                   | 5 A       |       |
| Rated operational current, I <sub>e</sub><br>utilisation category AC-15  | at: 240 V | 1 A   |
| Rated operational current, I <sub>e</sub><br>utilization category DC-13, | at: 24 V  | 0.3 A |
|                                                                          | at: 125 V | 0.2 A |

#### Ratings as per UL, CSA, NEMA

|                           | C300 AC                                                       | R300 DC          |
|---------------------------|---------------------------------------------------------------|------------------|
| Rated insulation voltage  | 250 V                                                         | 250 V            |
| Rated thermal current     | 2.5 A                                                         | 1 A              |
| Rated operational current | at: 120 V 1.5 A<br>at: 125 V 0.75 A<br>at: 240 V<br>at: 250 V | 0.22 A<br>0.11 A |

## Short circuit protection

|                         |        |
|-------------------------|--------|
| Max. fuse at 1 kA       | gG 10A |
| Make-and-break contacts |        |



## LEDs (for both compact and modular)

Service life for LED's means number of service hours until the brightness has been reduced down 50 %. Service life 50 000 h

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| White LEDs            | x=0.31 Y=3.2 means the position of color in the ICI Chromaticity Diagram |
| Over voltage on LEDs  | 10 % overvoltage is acceptable without affecting the service life        |
| Voltage peaks on LEDs | Voltage peaks up to 1000 V Current peaks up to 500 mA during a few msec  |
| Gloaming light        | All integrated LEDs have a function built in to cut leakage currents     |

## Mechanical data

### Mechanical life

|                                |                    |
|--------------------------------|--------------------|
| Pushbuttons, selector switches | 500 000 operations |
| Emergency stop pushbutton      | 50 000 operations  |

# Pilot devices

## Compact range

**Order example:**  
 Ex 1: Type CP1-10 ■-10, to order color red replace ■ with R: CP1-10 R-10  
 Ex 2: Ordering code 1SFA619100R101 □ To order color red replace □ with 1: 1SFA619100R1011 ■

| Color codes     |       |         |          |        |         |         |        |
|-----------------|-------|---------|----------|--------|---------|---------|--------|
|                 | Red ● | Green ● | Yellow ● | Blue ● | White ○ | Black ● | Grey ● |
| Type ■          | R     | G       | Y        | L      | W       | B       | U      |
| Ordering code □ | 1     | 2       | 3        | 4      | 5       | 6       | 7      |



| Non-illuminated flush pushbutton |             |           |                  |         |
|----------------------------------|-------------|-----------|------------------|---------|
|                                  | Type        | Pack size | Ordering code    | L.P.(₹) |
| <b>Momentary</b>                 |             |           |                  |         |
| 1 NO                             | CP1-10 □-10 | 1 X 10    | 1SFA619100R101 □ | 90      |
| 2 NO                             | CP1-10 □-20 | 1 X 10    | 1SFA619100R102 □ | 135     |
| 1 NC                             | CP1-10 □-01 | 1 X 10    | 1SFA619100R104 □ | 90      |
| 2 NC                             | CP1-10 □-02 | 1 X 10    | 1SFA619100R105 □ | 135     |
| 1 NO+1 NC                        | CP1-10 □-11 | 1 X 10    | 1SFA619100R107 □ | 135     |
| <b>Maintained</b>                |             |           |                  |         |
| 1 NO                             | CP2-10 □-10 | 1 X 10    | 1SFA619101R101 □ | 125     |
| 2 NO                             | CP2-10 □-20 | 1 X 10    | 1SFA619101R102 □ | 175     |
| 1 NC                             | CP2-10 □-01 | 1 X 10    | 1SFA619101R104 □ | 125     |
| 2 NC                             | CP2-10 □-02 | 1 X 10    | 1SFA619101R105 □ | 175     |
| 1 NO+1 NC                        | CP2-10 □-11 | 1 X 10    | 1SFA619101R107 □ | 175     |



| Non-illuminated extended pushbutton |             |           |                  |         |
|-------------------------------------|-------------|-----------|------------------|---------|
|                                     | Type        | Pack size | Ordering code    | L.P.(₹) |
| <b>Momentary</b>                    |             |           |                  |         |
| 1 NO                                | CP3-10 ■-10 | 1 X 10    | 1SFA619102R101 □ | 125     |
| 2 NO                                | CP3-10 ■-20 | 1 X 10    | 1SFA619102R102 □ | 165     |
| 1 NC                                | CP3-10 ■-01 | 1 X 10    | 1SFA619102R104 □ | 125     |
| 2 NC                                | CP3-10 ■-02 | 1 X 10    | 1SFA619102R105 □ | 165     |
| 1 NO+1 NC                           | CP3-10 ■-11 | 1 X 10    | 1SFA619102R107 □ | 165     |
| <b>Maintained</b>                   |             |           |                  |         |
| 1 NO                                | CP4-10 ■-10 | 1 X 10    | 1SFA619103R101 □ | 135     |
| 2 NO                                | CP4-10 ■-20 | 1 X 10    | 1SFA619103R102 □ | 165     |
| 1 NC                                | CP4-10 ■-01 | 1 X 10    | 1SFA619103R104 □ | 135     |
| 2 NC                                | CP4-10 ■-02 | 1 X 10    | 1SFA619103R105 □ | 165     |
| 1 NO+1 NC                           | CP4-10 ■-11 | 1 X 10    | 1SFA619103R107 □ | 165     |



# Pilot devices

## Compact range



Pilot Light with intergrated LED, with leakage current protection



Pilot Light with intergrated LED, with leakage current protection



Pilot Light with intergrated LED, with leakage current protection

| Color codes     |       |         |          |        |         |         |
|-----------------|-------|---------|----------|--------|---------|---------|
|                 | Red ● | Green ● | Yellow ● | Blue ● | White ○ | Amber ● |
| Type ■          | R     | G       | Y        | L      | W       | A       |
| Ordering code □ | 1     | 2       | 3        | 4      | 5       | 9       |

| Pilot light with integrated LED |           |                   |         |
|---------------------------------|-----------|-------------------|---------|
| Type                            | Pack size | Ordering code     | L.P.(₹) |
| 24 V, AC/DC                     |           |                   |         |
| CL-502R                         | 1 X 10    | 1SFA619402R5021 ■ | 145     |
| CL-502G                         | 1 X 10    | 1SFA619402R5022 ■ | 145     |
| CL-502Y                         | 1 X 10    | 1SFA619402R5023 ■ | 145     |
| CL-502L                         | 1 X 10    | 1SFA619402R5024 ■ | 280     |
| CL-502W                         | 1 X 10    | 1SFA619402R5025 ■ | 145     |
| CL-502A                         | 1 X 10    | 1SFA619402R5029 ■ | 145     |
| 110-130 V, AC                   |           |                   |         |
| CL-513R                         | 1 X 10    | 1SFA619402R5131 ■ | 145     |
| CL-513G                         | 1 X 10    | 1SFA619402R5132 ■ | 145     |
| CL-513Y                         | 1 X 10    | 1SFA619402R5133 ■ | 145     |
| CL-513L                         | 1 X 10    | 1SFA619402R5134 ■ | 280     |
| CL-513W                         | 1 X 10    | 1SFA619402R5135 ■ | 145     |
| CL-513A                         | 1 X 10    | 1SFA619402R5139 ■ | 145     |
| 110-130 V, DC                   |           |                   |         |
| CL-515R                         | 1 X 10    | 1SFA619402R5151 ■ | 145     |
| CL-515G                         | 1 X 10    | 1SFA619402R5152 ■ | 145     |
| CL-515Y                         | 1 X 10    | 1SFA619402R5153 ■ | 145     |
| CL-515L                         | 1 X 10    | 1SFA619402R5154 ■ | 280     |
| CL-515W                         | 1 X 10    | 1SFA619402R5155 ■ | 145     |
| CL-515A                         | 1 X 10    | 1SFA619402R5159 ■ | 145     |
| 220 V, DC                       |           |                   |         |
| CL-520R                         | 1 X 10    | 1SFA619402R5201 ■ | 145     |
| CL-520G                         | 1 X 10    | 1SFA619402R5202 ■ | 145     |
| CL-520Y                         | 1 X 10    | 1SFA619402R5203 ■ | 145     |
| CL-520L                         | 1 X 10    | 1SFA619402R5204 ■ | 280     |
| CL-520W                         | 1 X 10    | 1SFA619402R5205 ■ | 145     |
| CL-520A                         | 1 X 10    | 1SFA619402R5209 ■ | 145     |
| 230 V, AC                       |           |                   |         |
| CL-523R                         | 1 X 10    | 1SFA619402R5231 ■ | 145     |
| CL-523G                         | 1 X 10    | 1SFA619402R5232 ■ | 145     |
| CL-523Y                         | 1 X 10    | 1SFA619402R5233 ■ | 145     |
| CL-523L                         | 1 X 10    | 1SFA619402R5234 ■ | 280     |
| CL-523W                         | 1 X 10    | 1SFA619402R5235 ■ | 145     |
| CL-523A                         | 1 X 10    | 1SFA619402R5239 ■ | 145     |

Note:

48 V AC/DC, 60 V AC/DC, 380 V AC and 415 V AC Pilot devices are available with ABB range of Pilot lamps L.P.(₹)s will be available upon request

# Pilot devices

## Compact range



Non-illuminated black selector switch with plastic bezel

| Selector switch                                                                                                        |              |           |                 |         |
|------------------------------------------------------------------------------------------------------------------------|--------------|-----------|-----------------|---------|
|                                                                                                                        | Type         | Pack size | Ordering code   | L.P.(₹) |
| <b>Maintained / Two-positions</b>     |              |           |                 |         |
| 1 NO                                                                                                                   | C2SS1-10B-10 | 1 X 10    | 1SFA619200R1016 | 245     |
| 2 NO                                                                                                                   | C2SS1-10B-20 | 1 X 10    | 1SFA619200R1026 | 270     |
| 1 NC                                                                                                                   | C2SS1-10B-01 | 1 X 10    | 1SFA619200R1046 | 245     |
| 2 NC                                                                                                                   | C2SS1-10B-02 | 1 X 10    | 1SFA619200R1056 | 270     |
| 1 NO+1 NC                                                                                                              | C2SS1-10B-11 | 1 X 10    | 1SFA619200R1076 | 270     |
| <b>Maintained / Two-positions</b>     |              |           |                 |         |
| 1 NO                                                                                                                   | C2SS2-10B-10 | 1 X 10    | 1SFA619201R1016 | 245     |
| 2 NO                                                                                                                   | C2SS2-10B-20 | 1 X 10    | 1SFA619201R1026 | 270     |
| 1 NC                                                                                                                   | C2SS2-10B-01 | 1 X 10    | 1SFA619201R1046 | 245     |
| 2 NC                                                                                                                   | C2SS2-10B-02 | 1 X 10    | 1SFA619201R1056 | 270     |
| 1 NO+1 NC                                                                                                              | C2SS2-10B-11 | 1 X 10    | 1SFA619201R1076 | 270     |
| <b>Momentary / Two-positions</b>      |              |           |                 |         |
| 1 NO                                                                                                                   | C2SS3-10B-10 | 1 X 10    | 1SFA619202R1016 | 235     |
| 2 NO                                                                                                                   | C2SS3-10B-20 | 1 X 10    | 1SFA619202R1026 | 270     |
| 1 NC                                                                                                                   | C2SS3-10B-01 | 1 X 10    | 1SFA619202R1046 | 235     |
| 2 NC                                                                                                                   | C2SS3-10B-02 | 1 X 10    | 1SFA619202R1056 | 270     |
| 1 NO+1 NC                                                                                                              | C2SS3-10B-11 | 1 X 10    | 1SFA619202R1076 | 270     |
| <b>Maintained / Three-positions</b>   |              |           |                 |         |
| 2 NO                                                                                                                   | C3SS1-10B-20 | 1 X 10    | 1SFA619210R1026 | 270     |
| 2 NC                                                                                                                   | C3SS1-10B-02 | 1 X 10    | 1SFA619210R1056 | 270     |
| 1 NO+1 NC                                                                                                              | C3SS1-10B-11 | 1 X 10    | 1SFA619210R1076 | 270     |
| <b>Momentary / Three-positions</b>    |              |           |                 |         |
| 2 NO                                                                                                                   | C3SS2-10B-20 | 1 X 10    | 1SFA619211R1026 | 270     |
| 2 NC                                                                                                                   | C3SS2-10B-02 | 1 X 10    | 1SFA619211R1056 | 270     |
| 1 NO+1 NC                                                                                                              | C3SS2-10B-11 | 1 X 10    | 1SFA619211R1076 | 270     |
| <b>Momentary / Three-positions</b>  |              |           |                 |         |
| 2 NO                                                                                                                   | C3SS3-10B-20 | 1 X 10    | 1SFA619212R1026 | 270     |
| 2 NC                                                                                                                   | C3SS3-10B-02 | 1 X 10    | 1SFA619212R1056 | 270     |
| 1 NO+1 NC                                                                                                              | C3SS3-10B-11 |           | 1SFA619212R1076 | 270     |

# Pilot devices

## Compact range



Non-illuminated emergency stop pushbutton, 30 mm



Non-illuminated emergency stop pushbutton, 40 mm



Non-illuminated machine stop pushbutton, pull release, 30 mm



Non-illuminated machine stop pushbutton, push release, 30 mm

| Emergency stop pushbutton |                                     |              |           |                   |         |
|---------------------------|-------------------------------------|--------------|-----------|-------------------|---------|
| Description               | Type                                |              | Pack size | Ordering code     | L.P.(₹) |
| ●                         | Twist release                       |              |           |                   |         |
| 1 NC                      | Ø 30 mm                             | CE3T-10R-01  | 1         | 1SFA619500R1041 ■ | 175     |
| 2 NC                      | Ø 30 mm                             | CE3T-10R-02  | 1         | 1SFA619500R1051   | 235     |
| 1NO+1NC                   | Ø 30 mm                             | CE3T-10R-11  | 1         | 1SFA619500R1071   | 235     |
|                           | Pull release                        |              |           |                   |         |
| 2 NC                      | Ø 30 mm                             | CE3P-10R-02  | 1         | 1SFA619501R1051   | 235     |
| 1NO+1NC                   | Ø 30 mm                             | CE3P-10R-11  | 1         | 1SFA619501R1071   | 235     |
|                           | Key release: Ronis 455, key code 71 |              |           |                   |         |
| 2 NC                      | Ø 30 mm                             | CE3K1-10R-02 | 1         | 1SFA619502R1051   | 680     |
| 1NO+1NC                   | Ø 30 mm                             | CE3K1-10R-11 | 1         | 1SFA619502R1071   | 680     |
|                           | Twist release                       |              |           |                   |         |
| 1 NC                      | Ø 40 mm                             | CE4T-10R-01  | 1         | 1SFA619550R1041 ■ | 185     |
| 2 NC                      | Ø 40 mm                             | CE4T-10R-02  | 1         | 1SFA619550R1051 ■ | 235     |
| 1NO+1NC                   | Ø 40 mm                             | CE4T-10R-11  | 1         | 1SFA619550R1071 ■ | 235     |
|                           | Pull release                        |              |           |                   |         |
| 2 NC                      | Ø 40 mm                             | CE4P-10R-02  | 1         | 1SFA619551R1051 ■ | 235     |
| 1NO+1NC                   | Ø 40 mm                             | CE4P-10R-11  | 1         | 1SFA619551R1071   | 235     |
|                           | Key release: Ronis 455, key code 71 |              |           |                   |         |
| 2 NC                      | Ø 40 mm                             | CE4K1-10R-02 | 1         | 1SFA619552R1051   | 740     |
| 1NO+1NC                   | Ø 40 mm                             | CE4K1-10R-11 | 1         | 1SFA619552R1071   | 740     |

| Machine stop |                                     |              |           |                 |         |
|--------------|-------------------------------------|--------------|-----------|-----------------|---------|
| Description  | Type                                |              | Pack size | Ordering code   | L.P.(₹) |
| ●            | Twist release                       |              |           |                 |         |
| 1NO+1NC      | Ø 30 mm                             | CE3T-10B-11  | 1         | 1SFA619500R1076 | 235     |
|              | Pull release                        |              |           |                 |         |
| 1NO+1NC      | Ø 30 mm                             | CE3P-10B-11  | 1         | 1SFA619501R1076 | 235     |
|              | Key release: Ronis 455, Key code 71 |              |           |                 |         |
| 1NO+1NC      | Ø 30 mm                             | CE3K1-10B-11 | 1         | 1SFA619502R1076 | 680     |
|              | Twist release                       |              |           |                 |         |
| 1NO+1NC      | Ø 40 mm                             | CE4T-10B-11  | 1         | 1SFA619550R1076 | 235     |
|              | Pull release                        |              |           |                 |         |
| 1NO+1NC      | Ø 40 mm                             | CE4P-10B-11  | 1         | 1SFA619551R1076 | 235     |
|              | Key release: Ronis 455, Key code 71 |              |           |                 |         |
| 1NO+1NC      | Ø 40 mm                             | CE4K1-10B-11 | 1         | 1SFA619552R1076 | 740     |

■ Stock items

# Pilot devices

## Compact range



| Buzzer                      |              |                  |          |           |                 |         |
|-----------------------------|--------------|------------------|----------|-----------|-----------------|---------|
| Description                 | Sound output | Rated current mA | Type     | Pack size | Ordering code   | L.P.(₹) |
| Rated voltage 24 V, AC/DC   |              |                  |          |           |                 |         |
| ● Black                     | Continuous   | 40               | CB1-620B | 1         | 1SFA619600R6206 | 1,125   |
| ● Black                     | Pulsation    | 48               | CB1-630B | 1         | 1SFA619600R6306 | 1,125   |
| Rated voltage 230 V, AC     |              |                  |          |           |                 |         |
| ● Black                     | Continuous   | 40               | CB1-623B | 1         | 1SFA619600R6236 | 1,125   |
| ● Black                     | Pulsation    | 40               | CB1-633B | 1         | 1SFA619600R6336 | 1,125   |
| Rated voltage 110-130 V, DC |              |                  |          |           |                 |         |
| ● Black                     | Continuous   | 15               | CB1-622B | 1         | 1SFA619600R6226 | 1,125   |
| ● Black                     | Pulsation    | 15               | CB1-632B | 1         | 1SFA619600R6326 | 1,125   |
| Rated voltage 110-130 V, AC |              |                  |          |           |                 |         |
| ● Black                     | Continuous   | 40               | CB1-621B | 1         | 1SFA619600R6216 | 1,125   |
| ● Black                     | Pulsation    | 45               | CB1-631B | 1         | 1SFA619600R6316 | 1,125   |



| Assembled compact emergency stop enclosures                                                                                                                                                        |            |           |                 |         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|-----------------|---------|
| Description                                                                                                                                                                                        | Type       | Pack size | Ordering code   | L.P.(₹) |
| 1-seat plastic enclosure (yellow)                                                                                                                                                                  |            |           |                 |         |
|   Twist release. Red button 2 NC | CEPY1-1001 | 1         | 1SFA619821R1001 | 1,345   |
|   Pull release. Red button 2 NC  | CEPY1-1002 | 1         | 1SFA619821R1002 | 1,345   |
| Emergency stop enclosure with shroud                                                                                                                                                               |            |           |                 |         |
|   Twist release. Red button 2 NC | CEPY1-2002 | 1         | 1SFA619821R2002 | 1,620   |
|   Pull release. Red button 2 NC  | CEPY1-2001 | 1         | 1SFA619821R2001 | 1,620   |



| Assembled compact machine stop enclosures                           |           |           |                 |         |  |
|---------------------------------------------------------------------|-----------|-----------|-----------------|---------|--|
| Description                                                         | Type      | Pack Size | Ordering code   | L.P.(₹) |  |
| 1-seat plastic enclosure with black mushroom pushbutton (dark grey) |           |           |                 |         |  |
| ■ □ Twist release. Black button 1 NO + 1 NC                         | CEP1-1001 | 1         | 1SFA619811R1001 | 1,345   |  |
| ■ □ Pull release. Black button 1 NO + 1 NC                          | CEP1-1002 | 1         | 1SFA619811R1002 | 1,345   |  |
| Machine stop enclosure with shroud                                  |           |           |                 |         |  |
| ■ □ Twist release. Black button 1 NO + 1 NC                         | CEP1-2001 | 1         | 1SFA619811R2001 | 1,620   |  |
| ■ □ Pull release. Black button 1 NO + 1 NC                          | CEP1-2002 | 1         | 1SFA619811R2002 | 1,620   |  |

# Pilot devices

## Technical data modular range

| Standard and approvals |                                                                                                                                                                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC / EN 60947-1       | Low-voltage switchgear and controlgear - Part 1: General rules                                                                                                         |
| IEC / EN 60947-5-1     | Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices                          |
| IEC / EN 60947-5-5     | Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function |
| IEC / EN 60073         | Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators                                     |
| IEC / EN 60529         | Degrees of protection provided by enclosures (IP Code)                                                                                                                 |
| EN 50013               | Low-voltage switchgear and controlgear for industrial use - Termnal marking and distinctive number for particular control switches                                     |
| UL 508                 | Industrial control equipment                                                                                                                                           |
| CSA C22.2 No 14        | Industrial control equipment                                                                                                                                           |

| Environmental data                  |                |                             |
|-------------------------------------|----------------|-----------------------------|
| Degrees of protection               |                |                             |
| Operators                           | IEC/EN         | UL/CSA                      |
| Pushbutton                          | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Double pushbutton                   | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Mushroom                            | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Emergency stop                      | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Selector switch                     | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Key operated selector switch        | IP 66          | Type 1, 3R, 4, 4X, 12       |
| Toggle switch                       | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Extreme duty pushbutton             | -              | Type 1, 3R, 4, 4X           |
| Reset button                        | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Joystick                            | IP 66, 67, 69K | Type 1, 4X (indoor), 12, 13 |
| Pilot lights                        | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Buzzer                              | IP 65          | Type 4X                     |
| Potentiometer                       | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Contact block and transformer block | IP 20          | -                           |
| Plastic enclosures                  | IP 66          | Type 1, 3R, 4, 4X, 12, 13   |
| Metallic enclosures                 | IP 66, 67, 69K | -                           |

| Temperature                          |               |
|--------------------------------------|---------------|
| Ambient temperature during operation | -25 to +70 °C |
| Storage temperature                  | -40 to +85 °C |

| Technical data                                 |                                                       |
|------------------------------------------------|-------------------------------------------------------|
| Terminals                                      |                                                       |
| Plus-minus Pozidriv No.2 screw with DIN-washer |                                                       |
| Connectable area                               | min. 1 x 0.5 mm2 AWG 20<br>max. 2 x 2.5 mm2/2 x AWG14 |

| Tightening torque                       |                         |
|-----------------------------------------|-------------------------|
| Operators, M22                          | Min. 2 Nm / Max. 2.3 Nm |
| Cable terminals                         | 0.9 Nm                  |
| Recommended maximum number of blocks: 6 |                         |

| Electrical data                                                                                                                                                                                       |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Standards contact blocks                                                                                                                                                                              |                       |
| Mechanical endurance                                                                                                                                                                                  | 10 million operations |
| Self cleaning contacts of silver, NC contact with positive opening. At voltages and currents below 24 V and 5.6 mA we recommended our micro switch blocks or as an alternative, gold plated contacts. |                       |

| Ratings as per IEC 60947-5-1                             |                                                                  |
|----------------------------------------------------------|------------------------------------------------------------------|
| Rated insulation voltage, Ui                             | 690 V                                                            |
| Rated thermal current, Ith                               | 10 A                                                             |
| Rated operational curent, Ie utilisation category AC 15, | at: 120 V 8 A<br>at: 230 V 6 A<br>at: 400 V 4 A<br>at: 690 V 2 A |
| Rated operational curent, Ie utilisation category DC 13, | at: 24 V 5 A<br>at:125 V 1.1 A<br>at: 250 V 0.55 A               |

| Ratings as per UL, CSA, NEMA | A600 AC                                                              | Q600 DC                                                                      |
|------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------|
| Rated insulation voltage     | 600 V                                                                | 600 V                                                                        |
| Rated thermal current        | 10 A                                                                 | 2.5 A                                                                        |
| Rated operational current    | at: 120 V 6 A<br>at: 240 V 3 A<br>at: 480 V 1.5 A<br>at: 600 V 1.2 A | at: 125 V 0.55 A<br>at: 250 V 0.27 A<br>at: 480 V 0.10 A<br>at: 600 V 0.10 A |

|                                                                          |               |       |
|--------------------------------------------------------------------------|---------------|-------|
| Contact resistance                                                       | < 25 mΩ       |       |
| Compulsory functiontest                                                  | at: 5V, 16 mA |       |
| Micro switch block / ratings as per IEC 60947-5-1                        |               |       |
| Rated insulation voltage, U <sub>i</sub>                                 |               | 125 V |
| Rated thermal current, I <sub>th</sub>                                   |               | 3 A   |
| Rated operational current, I <sub>e</sub><br>utilisation category AC 14, | at: 125 V     | 0.5 A |
| Rated operational current, I <sub>e</sub><br>utilization category DC 13, | at: 24 V      | 0.3 A |
| Rated operational current, I <sub>e</sub><br>utilization category DC 12, | at: 24 V      | 0.1 A |
| Minimum switching capacity                                               | 3 V DC        | 1 mA  |

| Ratings as per UL 508 |          |       |
|-----------------------|----------|-------|
|                       | 125 V AC | 3 A   |
|                       | 60 V DC  | 0.2 A |
|                       | 48 V DC  | 0.1 A |

| Short circuit protection                    |        |
|---------------------------------------------|--------|
| Max. fuse at 1 kA                           | gG 16A |
| Note: LEDs see technical data compact range |        |

| Mechanical data                                                                     |                      |
|-------------------------------------------------------------------------------------|----------------------|
| Mechanical life                                                                     |                      |
| Pushbuttons, momentary mushroom                                                     | 2 million operations |
| Selector switches. Present standard (no operation of center contact)                | 500 000 operations   |
| With operation of center contact                                                    | 250 000 operations   |
|                                                                                     | 150 000 operations   |
| Maintained mushroom, pushbutton, key operated selector switch and double pushbutton | 500 000 operations   |
| Emergency stop                                                                      | 100 000 operations   |
| Toggle switch                                                                       | 1 million operations |

# Pilot devices

## Modular range

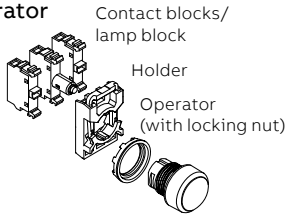


### Modular product features

- Widest range of integrated LEDs on the market
- Parts of Range IP 66, 67, 69K
- All range & UL Type 1, 3R, 4, 4X, 12, 13
- Snap-on feature reduces installation time
- Quick release contact holder
- Several bezel colors
- Unique low energy solutions, including wiping action

### How to order standard operators:

- Non-illuminated operator
  - + holder
  - + contact block(s)
- Illuminated operator
  - + holder
  - + contact block(s)
  - + lamp block



\*Only for illuminated operator

### How to order Bezel:

| Bezel options | Type    | Ordering code     |
|---------------|---------|-------------------|
| Black plastic | MPX-10X | 1SFA611 10X R1XXX |

### Color codes

|                 | Red ● | Green ● | Yellow ● | Blue ● | White ○ | Black ● | Grey ● |
|-----------------|-------|---------|----------|--------|---------|---------|--------|
| Type ■          | R     | G       | Y        | L      | W       | B       | U      |
| Ordering code □ | 1     | 2       | 3        | 4      | 5       | 6       | 7      |

### Ordering example:

Ex 1: Type MP1-10 ■, to order color red replace ■ with R: MP1-10R

Ex 2: Ordering code 1SFA611100R1001 n, to order color red replace □ with 1: 1SFA619100R1001

### Operator : Flush button Non-illuminated push button

|            | Type     | Pack size | Ordering code    | L.P.(₹) |
|------------|----------|-----------|------------------|---------|
| Momentary  | MP1-10 ■ | 1 X 10    | 1SFA611100R100 □ | 45      |
| Maintained | MP2-10 ■ | 1 X 10    | 1SFA611101R100 □ | 70      |

### Operator : Extended button Non-illuminated push button

|            |          |        |                  |    |
|------------|----------|--------|------------------|----|
| Momentary  | MP3-10 ■ | 1 X 10 | 1SFA611102R100 □ | 70 |
| Maintained | MP4-10 ■ | 1 X 10 | 1SFA611103R100 □ | 70 |

### Color codes

|                 | Red ● | Green ● | Yellow ● | Blue ● | White ○ | Black ● | Grey ● | Amber ● |
|-----------------|-------|---------|----------|--------|---------|---------|--------|---------|
| Type ■          | R     | G       | Y        | L      | W       | B       | U      | AN      |
| Ordering code □ | 1     | 2       | 3        | 4      | 5       | 6       | 7      | 9       |

|                                                        | Type     | Pack size | Ordering code    | L.P.(₹) |
|--------------------------------------------------------|----------|-----------|------------------|---------|
| <b>Operator : Flush button illuminated push button</b> |          |           |                  |         |
| Momentary                                              | MP1-11■  | 1 X 10    | 1SFA611100R110 □ | 65      |
|                                                        | MP1-11AN | 1 X 10    | 1SIN611100R1109  | 60      |
| Maintained                                             | MP2-11■  | 1 X 10    | 1SFA611101R110 □ | 85      |
|                                                        | MP2-11AN | 1 X 10    | 1SIN611101R1109  | 85      |

### Operator : Extended button illuminated push button

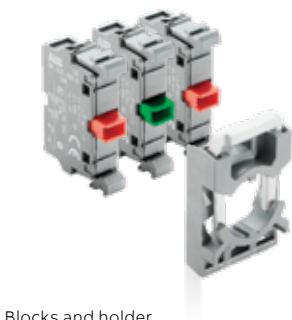
|            |          |        |                  |    |
|------------|----------|--------|------------------|----|
| Momentary  | MP3-11■  | 1 X 10 | 1SFA611102R110 □ | 85 |
|            | MP3-11AN | 1 X 10 | 1SIN611102R1109  | 85 |
| Maintained | MP4-11■  | 1 X 10 | 1SFA611103R110 □ | 85 |
|            | MP4-11AN | 1 X 10 | 1SIN611103R1109  | 85 |

Note:

1. Integrated LED block to be considered from MLBL range of suitable voltage from page no. 109

### Separate holder

|                                      |         |        |                   |    |
|--------------------------------------|---------|--------|-------------------|----|
| Holders for three blocks             | MCBH-00 | 1 X 10 | 1SFA611605R1100   | 15 |
| Contact blocks only (without holder) |         |        |                   |    |
| 1 NO                                 | MCB-10  | 1 X 10 | 1SFA611610R1001 ■ | 55 |
| 1 NC                                 | MCB-01  | 1 X 10 | 1SFA611610R1010 ■ | 55 |



Blocks and holder

■ Stock items

# Pilot devices

## Modular range



LED lamp block with built in leakage curragge protection

| Operator : Pilot lights         |           |           |                   |         |
|---------------------------------|-----------|-----------|-------------------|---------|
|                                 | Type      | Pack size | Ordering code     | L.P.(₹) |
| ● Red                           | ML1-100R  | 1 X 10    | 1SFA611400R1001 ■ | 50      |
| ● Green                         | ML1-100G  | 1 X 10    | 1SFA611400R1002 ■ | 50      |
| ● Yellow                        | ML1-100Y  | 1 X 10    | 1SFA611400R1003 ■ | 50      |
| ● Blue                          | ML1-100L  | 1 X 10    | 1SFA611400R1004   | 50      |
| ○ White                         | ML1-100W  | 1 X 10    | 1SFA611400R1005   | 50      |
| ● Amber                         | ML1-100AN | 1 X 10    | 1SIN611400R1009   | 50      |
| Separate holder                 |           |           |                   |         |
|                                 | Type      | Pack size | Ordering code     | L.P.(₹) |
| Holders for three blocks        | MCBH-00   | 1 X 10    | 1SFA611605R1100 ■ | 15      |
| Lamp blocks with integrated LED |           |           |                   |         |
| Rated voltage 24 V, AC/DC       |           |           |                   |         |
|                                 | Type      | Pack size | Ordering code     | L.P.(₹) |
| ● Red                           | MLBL-01R  | 1 X 10    | 1SFA611621R1011 ■ | 125     |
| ● Green                         | MLBL-01G  | 1 X 10    | 1SFA611621R1012 ■ | 125     |
| ● Yellow                        | MLBL-01YN | 1 X 10    | 1SIN611621R1013   | 125     |
| ● Blue                          | MLBL-01L  | 1 X 10    | 1SFA611621R1014 ■ | 280     |
| ○ White                         | MLBL-01W  | 1 X 10    | 1SFA611621R1015 ■ | 125     |
| ● Amber                         | MLBL-01A  | 1 X 10    | 1SFA611621R1016   | 125     |
| Rated voltage 110-130 V, AC     |           |           |                   |         |
|                                 | Type      | Pack size | Ordering code     | L.P.(₹) |
| ● Red                           | MLBL-04R  | 1 X 10    | 1SFA611621R1041   | 125     |
| ● Green                         | MLBL-04G  | 1 X 10    | 1SFA611621R1042   | 125     |
| ● Yellow                        | MLBL-04YN | 1 X 10    | 1SIN611621R1043   | 125     |
| ● Blue                          | MLBL-04L  | 1 X 10    | 1SFA611621R1044   | 280     |
| ○ White                         | MLBL-04W  | 1 X 10    | 1SFA611621R1045   | 125     |
| ● Amber                         | MLBL-04A  | 1 X 10    | 1SFA611621R1046   | 125     |
| Rated voltage 110-130 V, DC     |           |           |                   |         |
|                                 | Type      | Pack size | Ordering code     | L.P.(₹) |
| ● Red                           | MLBL-05R  | 1 X 10    | 1SFA611621R1051   | 125     |
| ● Green                         | MLBL-05G  | 1 X 10    | 1SFA611621R1052   | 125     |
| ● Yellow                        | MLBL-05YN | 1 X 10    | 1SIN611621R1053   | 125     |
| ● Blue                          | MLBL-05L  | 1 X 10    | 1SFA611621R1054   | 280     |
| ○ White                         | MLBL-05W  | 1 X 10    | 1SFA611621R1055   | 125     |
| ● Amber                         | MLBL-05A  | 1 X 10    | 1SFA611621R1056   | 125     |
| Rated voltage 220 V, DC         |           |           |                   |         |
|                                 | Type      | Pack size | Ordering code     | L.P.(₹) |
| ● Red                           | MLBL-06R  | 1 X 10    | 1SFA611621R1061   | 125     |
| ● Green                         | MLBL-06G  | 1 X 10    | 1SFA611621R1062   | 125     |
| ● Yellow                        | MLBL-06YN | 1 X 10    | 1SIN611621R1063   | 125     |
| ● Blue                          | MLBL-06L  | 1 X 10    | 1SFA611621R1064   | 280     |
| ○ White                         | MLBL-06W  | 1 X 10    | 1SFA611621R1065   | 125     |
| ● Amber                         | MLBL-06A  | 1 X 10    | 1SFA611621R1066   | 125     |
| Rated voltage 230 V, AC         |           |           |                   |         |
|                                 | Type      | Pack size | Ordering code     | L.P.(₹) |
| ● Red                           | MLBL-07R  | 1 X 10    | 1SFA611621R1071   | 125     |
| ● Green                         | MLBL-07G  | 1 X 10    | 1SFA611621R1072 ■ | 125     |
| ● Yellow                        | MLBL-07YN | 1 X 10    | 1SIN611621R1073   | 125     |
| ● Blue                          | MLBL-07L  | 1 X 10    | 1SFA611621R1074 ■ | 280     |
| ○ White                         | MLBL-07W  | 1 X 10    | 1SFA611621R1075   | 125     |
| ● Amber                         | MLBL-07A  | 1 X 10    | 1SFA611621R1076   | 125     |

Note: 48 V AC/DC, 60 V AC/DC, 380 V AC and 415 V AC L.P.(₹)S will be available upon request

■ Stock items



# Pilot devices

## Modular range



| Operator : Emergency stop pushbutton |                           |           |                   |         |
|--------------------------------------|---------------------------|-----------|-------------------|---------|
|                                      | Type                      | Pack size | Ordering code     | L.P.(₹) |
| ●                                    | Ø 30 mm / Non-illuminated |           |                   |         |
| Twist release                        | MPET3-10R                 | 1         | 1SFA611520R1001   | 350     |
| Pull release                         | MPEP3-10R                 | 1         | 1SFA611521R1001   | 350     |
| Key release code 71/Ronis 455        | MPEK3-11R                 | 1         | 1SFA611522R1101   | 730     |
| Key release code 72/ Ronis 421       | MPEK3-12R                 | 1         | 1SFA611522R1201   | 730     |
| Key release code 73/ Ronis 3433-E    | MPEK3-13R                 | 1         | 1SFA611522R1301   | 730     |
|                                      | Ø 40 mm / Non-illuminated |           |                   |         |
| Twist release                        | MPET4-10R                 | 1         | 1SFA611523R1001   | 305     |
| Pull release                         | MPEP4-10R                 | 1         | 1SFA611524R1001   | 350     |
| Key release code 71/Ronis 455        | MPEK4-11R                 | 1         | 1SFA611525R1101   | 690     |
| Key release code 72/ Ronis 421       | MPEK4-12R                 | 1         | 1SFA611525R1201   | 690     |
| Key release code 73/ Ronis 3433-E    | MPEK4-13R                 | 1         | 1SFA611525R1301   | 690     |
|                                      | Ø 60 mm /Non-illuminated  |           |                   |         |
| Twist release                        | MPMT4-10R                 | 1         | 1SFA611513R1001   | 585     |
| Pull release                         | MPMP4-10R                 | 1         | 1SFA611514R1001   | 485     |
|                                      | Ø 40 mm / Illuminated     |           |                   |         |
| Twist release                        | MPMT3-11R                 | 1         | 1SFA611510R1101 ■ | 560     |
| Pull release                         | MPMP3-11R                 | 1         | 1SFA611511R1101   | 450     |
|                                      | Ø 60 mm / Illuminated     |           |                   |         |
| Twist release                        | MPMT4-11R                 | 1         | 1SFA611513R1101   | 765     |
| Pull release                         | MPMP4-11R                 |           | 1SFA611514R1101   | 615     |

Refer holder and contact block configuration for standard operator from page no. 108

| Operator : Machine stop pushbutton |           |           |                 |         |
|------------------------------------|-----------|-----------|-----------------|---------|
|                                    | Type      | Pack size | Ordering code   | L.P.(₹) |
| ●                                  | Ø 30 mm   |           |                 |         |
| Twist release                      | MPET3-10B | 1         | 1SFA611520R1006 | 350     |
| Pull release                       | MPEP3-10B | 1         | 1SFA611521R1006 | 350     |
| Key release                        | MPEK3-10B | 1         | 1SFA611522R1106 | 730     |
|                                    | Ø 40 mm   |           |                 |         |
| Twist release                      | MPET4-10B | 1         | 1SFA611523R1006 | 350     |
| Pull release                       | MPEP4-10B | 1         | 1SFA611524R1006 | 350     |
| Key release                        | MPEK4-10B | 1         | 1SFA611525R1061 | 730     |

Refer holder and contact block configuration for standard operator from page no. 108

| Operator : Double pushbutton |                                                         |           |                 |         |
|------------------------------|---------------------------------------------------------|-----------|-----------------|---------|
|                              | Type                                                    | Pack size | Ordering code   | L.P.(₹) |
| ● Upper<br>● Lower           | Extended lower button / Non-illuminated                 |           |                 |         |
| I / O                        | MPD13-11B                                               | 1         | 1SFA611142R1106 | 350     |
| START / STOP                 | MPD15-11B                                               | 1         | 1SFA611144R1106 | 350     |
| ● Upper<br>● Lower           | Extended lower button / Illuminated                     |           |                 |         |
| I / O                        | MPD13-11C                                               | 1         | 1SFA611142R1108 | 520     |
| START / STOP                 | MPD15-11C                                               | 1         | 1SFA611144R1108 | 520     |
| ● Upper<br>● Lower           | ○ Upper Extended lower button / ● Lower Non-illuminated |           |                 |         |
| I / O                        | MPD17-11B                                               | 1         | 1SFA611146R1106 | 350     |

Refer holder and contact block configuration for standard operator

Pilot devices

Modular range



Operator: non-illuminated black two-position selector switch

| Type                                                | Pack size |  | Ordering code   | L.P.(₹) |
|-----------------------------------------------------|-----------|--|-----------------|---------|
| Maintained / Short handle                           |           |  |                 |         |
| M2SS1-10B                                           | 1         |  | 1SFA611200R1006 | 235     |
| Maintained / Short handle                           |           |  |                 |         |
| M2SS2-10B                                           | 1         |  | 1SFA611201R1006 | 235     |
| Momentary / Short handle, spring return from C to B |           |  |                 |         |
| M2SS3-10B                                           | 1         |  | 1SFA611202R1006 | 245     |
| Maintained / Long handle                            |           |  |                 |         |
| M2SS4-10B                                           | 1         |  | 1SFA611203R1006 | 720     |
| Maintained / Long handle                            |           |  |                 |         |
| M2SS5-10B                                           | 1         |  | 1SFA611204R1006 | 720     |
| Momentary / Long handle, spring return from C to B  |           |  |                 |         |
| M2SS6-10B                                           | 1         |  | 1SFA611205R1006 | 740     |

Refer holder and contact block configuration for standard operator

Operator: non-illuminated black three-position selector switch

| Type                                                           | Pack size |  | Ordering code   | L.P.(₹) |
|----------------------------------------------------------------|-----------|--|-----------------|---------|
| Maintained / Short handle                                      |           |  |                 |         |
| M3SS1-10B                                                      | 1         |  | 1SFA611210R1006 | 235     |
| Momentary / Short handle, spring return from A to B and C to B |           |  |                 |         |
| M3SS2-10B                                                      | 1         |  | 1SFA611211R1006 | 245     |
| Momentary / Short handle, spring return from C to B            |           |  |                 |         |
| M3SS3-10B                                                      | 1         |  | 1SFA611212R1006 | 245     |
| Momentary / Short handle, spring return from A to B            |           |  |                 |         |
| M2SS7-10B                                                      | 1         |  | 1SFA611216R1006 | 245     |
| Maintained / Long handle                                       |           |  |                 |         |
| M3SS4-10B                                                      | 1         |  | 1SFA611213R1006 | 720     |
| Momentary / Long handle, spring return from A to B and C to B  |           |  |                 |         |
| M3SS5-10B                                                      | 1         |  | 1SFA611214R1006 | 740     |
| Momentary / Long handle, spring return from C to B             |           |  |                 |         |
| M3SS6-10B                                                      | 1         |  | 1SFA611215R1006 | 935     |
| Momentary / Long handle, spring return from A to B             |           |  |                 |         |
| M2SS8-10B                                                      | 1         |  | 1SFA611217R1006 | 670     |

Refer holder and contact block configuration for standard operator

Operator: non-illuminated black three-position selector switch with operation of center position

| Type         | Pack size |  | Ordering code   | L.P.(₹) |
|--------------|-----------|--|-----------------|---------|
| Short handle |           |  |                 |         |
| M3SSC1-10B   | 1         |  | 1SFA611250R1006 | 260     |
| M3SSC2-10B   | 1         |  | 1SFA611251R1006 | 260     |
| M3SSC3-10B   | 1         |  | 1SFA611252R1006 | 260     |
| M3SSC7-10B   | 1         |  | 1SFA611256R1006 | 260     |
| Long handle  |           |  |                 |         |
| M3SSC4-10B   | 1         |  | 1SFA611253R1006 | 765     |
| M3SSC5-10B   | 1         |  | 1SFA611254R1006 | 765     |
| M3SSC6-10B   | 1         |  | 1SFA611255R1006 | 765     |
| M3SSC8-10B   | 1         |  | 1SFA611258R1006 | 765     |

Refer holder and contact block configuration for standard operator

Pilot devices

Modular range



| Operator : Key operated selector switch |                                                                                                  |  |           |                 |         |
|-----------------------------------------|--------------------------------------------------------------------------------------------------|--|-----------|-----------------|---------|
|                                         | Type                                                                                             |  | Pack size | Ordering code   | L.P.(₹) |
| ●                                       | Maintained / Two positions (The key can be removed in both position)                             |  |           |                 |         |
| 71/Ronis 455                            | M2SSK1-101                                                                                       |  | 1         | 1SFA611280R1001 | 560     |
| 72/Ronis 421                            | M2SSK1-102                                                                                       |  | 1         | 1SFA611280R1002 | 560     |
| 73/Ronis 3433-E                         | M2SSK1-103                                                                                       |  | 1         | 1SFA611280R1003 | 560     |
| Random selection*)                      | M2SSK1-104                                                                                       |  | 1         | 1SFA611280R1004 | 560     |
|                                         | Maintained / Two positions (The key can be removed in position B only)                           |  |           |                 |         |
| 71/Ronis 455                            | M2SSK2-101                                                                                       |  | 1         | 1SFA611281R1001 | 560     |
| 72/Ronis 421                            | M2SSK2-102                                                                                       |  | 1         | 1SFA611281R1002 | 560     |
| 73/Ronis 3433-E                         | M2SSK2-103                                                                                       |  | 1         | 1SFA611281R1003 | 560     |
| Random selection*)                      | M2SSK2-104                                                                                       |  | 1         | 1SFA611281R1004 | 560     |
|                                         | Momentary / Two positions, spring return from C to B (The key can be removed in position B only) |  |           |                 |         |
| 71/Ronis 455                            | M2SSK3-101                                                                                       |  | 1         | 1SFA611282R1001 | 615     |
| 72/Ronis 421                            | M2SSK3-102                                                                                       |  | 1         | 1SFA611282R1002 | 615     |
| 73/Ronis 3433-E                         | M2SSK3-103                                                                                       |  | 1         | 1SFA611282R1003 | 615     |
| Random selection*)                      | M2SSK3-104                                                                                       |  | 1         | 1SFA611282R1004 | 615     |

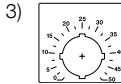
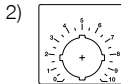
Refer holder and contact block configuration for standard operator

| Operator : Key operated selector switch |                                                                                                    |  |           |                 |         |
|-----------------------------------------|----------------------------------------------------------------------------------------------------|--|-----------|-----------------|---------|
|                                         | Type                                                                                               |  | Pack size | Ordering code   | L.P.(₹) |
| ●                                       | Maintained / Three positions (The key can be removed in both position)                             |  |           |                 |         |
| 71/Ronis 455                            | M3SSK1-101                                                                                         |  | 1         | 1SFA611283R1001 | 560     |
| 72/Ronis 421                            | M3SSK1-102                                                                                         |  | 1         | 1SFA611283R1002 | 560     |
| 73/Ronis 3433-E                         | M3SSK1-103                                                                                         |  | 1         | 1SFA611283R1003 | 560     |
| Random selection*)                      | M3SSK1-104                                                                                         |  | 1         | 1SFA611280R1004 | 560     |
|                                         | Maintained / Three positions (The key can be removed in position B only)                           |  |           |                 |         |
| 71/Ronis 455                            | M3SSK2-101                                                                                         |  | 1         | 1SFA611284R1001 | 560     |
| 72/Ronis 421                            | M3SSK2-102                                                                                         |  | 1         | 1SFA611284R1002 | 560     |
| 73/Ronis 3433-E                         | M3SSK2-103                                                                                         |  | 1         | 1SFA611284R1003 | 560     |
| Random selection*)                      | M3SSK2-104                                                                                         |  | 1         | 1SFA611284R1004 | 560     |
|                                         | Momentary / Three positions, spring return from C to B (The key can be removed in position B only) |  |           |                 |         |
| 71/Ronis 455                            | M3SSK3-101                                                                                         |  | 1         | 1SFA611285R1001 | 615     |
| 72/Ronis 421                            | M3SSK3-102                                                                                         |  | 1         | 1SFA611285R1002 | 615     |
| 73/Ronis 3433-E                         | M3SSK3-103                                                                                         |  | 1         | 1SFA611285R1003 | 615     |
| Random selection*)                      | M3SSK3-104                                                                                         |  | 1         | 1SFA611285R1004 | 615     |

Refer holder and contact block configuration for standard operator

| Potentiometer |                       |  |           |                 |         |
|---------------|-----------------------|--|-----------|-----------------|---------|
|               | Type                  |  | Pack size | Ordering code   | L.P.(₹) |
| ●             | with resistor 5 kohm  |  |           |                 |         |
| Black plastic | MT-105B               |  | 1         | 1SFA611410R1056 | 3,210   |
| ●             | with resistor 10 kohm |  |           |                 |         |
| Black plastic | MT-110B               |  | 1         | 1SFA611410R1106 | 3,210   |
| ●             | with resistor 50 kohm |  |           |                 |         |
| Black plastic | MT-150B               |  | 1         | 1SFA611410R1506 | 3,370   |

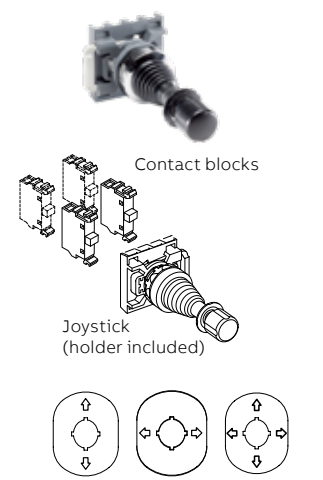
| Toggle switch* |                              |  |           |                 |         |
|----------------|------------------------------|--|-----------|-----------------|---------|
|                | Type                         |  | Pack size | Ordering code   | L.P.(₹) |
| ●              | Maintained / Two-positions   |  |           |                 |         |
| Black plastic  | MTS1-10B                     |  | 1         | 1SFA611300R1006 | 540     |
| ●              | Momentary / Three-positions  |  |           |                 |         |
| Black plastic  | MTS2-10B                     |  | 1         | 1SFA611301R1006 | 700     |
| ●              | Maintained / Three-positions |  |           |                 |         |
| Black plastic  | MTS3-10B                     |  | 1         | 1SFA611302R1006 | 540     |



# Pilot devices

## Modular range

• Joystick (holder included)  
+ contact blocks



| Joystick                          |           |           |                 |         |
|-----------------------------------|-----------|-----------|-----------------|---------|
| ●                                 | Type      | Pack size | Ordering code   | L.P.(₹) |
| Maintained                        |           |           |                 |         |
| 2 - position                      | MJS1-60B  | 1         | 1SFA611701R6006 | 3,075   |
| 4 - position                      | MJS5-60B  | 1         | 1SFA611705R6006 | 3,380   |
| Spring return                     |           |           |                 |         |
| 2 - position                      | MJS2-60B  | 1         | 1SFA611702R6006 | 3,075   |
| 4 - position                      | MJS6-60B  | 1         | 1SFA611706R6006 | 3,380   |
| Maintained / Latching function    |           |           |                 |         |
| 2 - position                      | MJS7-60B  | 1         | 1SFA611707R6006 | 3,380   |
| 4 - position                      | MJS11-60B | 1         | 1SFA611711R6006 | 3,910   |
| Spring return / Latching function |           |           |                 |         |
| 2 - position                      | MJS8-60B  | 1         | 1SFA611708R6006 | 3,380   |
| 4 - position                      | MJS12-60B | 1         | 1SFA611712R6006 | 3,910   |

| Legend plates for joystick |          |   |                 |     |
|----------------------------|----------|---|-----------------|-----|
| 2 - position               | MA6-1240 | 1 | 1SFA611930R1240 | 260 |
| 2 - position               | MA6-1241 | 1 | 1SFA611930R1241 | 260 |
| 4 - position               | MA6-1242 | 1 | 1SFA611930R1242 | 260 |

Refer holder and contact block configuration for standard operator

| Micro switch blocks |         |           |                 |         |
|---------------------|---------|-----------|-----------------|---------|
| Description         | Type    | Pack size | Ordering code   | L.P.(₹) |
| 1 NO                | MCBL-10 | 1         | 1SFA611612R1010 | 450     |
| 1 NC                | MCBL-01 | 1         | 1SFA611612R1001 | 450     |

| Extreme duty pushbutton |                           |           |                  |         |
|-------------------------|---------------------------|-----------|------------------|---------|
|                         | Type                      | Pack size | Ordering code    | L.P.(₹) |
| ● ● ●                   | For Ø 30 mm mounting hole |           |                  |         |
|                         | KP6-40 ■                  | 1         | 1SFA616105R400 □ | 1,305   |

Refer contact block configuration for standard operator

| Reset pushbutton |                            |           |                  |         |
|------------------|----------------------------|-----------|------------------|---------|
|                  | Type                       | Pack size | Ordering code    | L.P.(₹) |
| ● ○              | With shaft                 |           |                  |         |
| No text          | KPR3-100 ■                 | 1         | 1SFA616162R100 □ | 405     |
| ● ○              | Without shaft              |           |                  |         |
| No text          | KPR1-100 ■                 | 1         | 1SFA616160R100 □ | 305     |
| ● ○              | Accessories: Shaft (black) |           |                  |         |
| No text          | KA1-8046                   | 1         | 1SFA616920R8046  | 125     |

| Accessories                          |          |           |                 |         |
|--------------------------------------|----------|-----------|-----------------|---------|
|                                      | Type     | Pack size | Ordering code   | L.P.(₹) |
| Mounting tool                        | MA1-8015 | 1         | 1SFA611920R8015 | 280     |
| Membrane of silicone flush button    | KA1-8052 | 1         | 1SFA611920R8052 | 175     |
| Membrane of silicone extended button | KA1-8002 | 1         | 1SFA611920R8002 | 330     |
| Locking nut                          | MA1-8019 | 1         | 1SFA611920R8019 | 215     |

\*Spacer is needed when legendplates are not used in plastic enclosures

# Pilot devices

## Enclosures



Empty enclosures



Shroud



DIN-rail adaptor

| Empty plastic enclosures for modular and compact range |          |           |                 |         |
|--------------------------------------------------------|----------|-----------|-----------------|---------|
| Description                                            | Type     | Pack size | Ordering code   | L.P.(₹) |
| ■ □ 1-seat                                             | MEPY1-0  | 1         | 1SFA611821R1000 | 1,600   |
| ■ □ 1-seat                                             | MEP1-0   | 1         | 1SFA611811R1000 | 1,570   |
| ■ □ 2-seat                                             | MEP2-0   | 1         | 1SFA611812R1000 | 1,450   |
| ■ □ 3-seat                                             | MEP3-0   | 1         | 1SFA611813R1000 | 2,055   |
| ■ □ 4-seat                                             | MEP4-0   | 1         | 1SFA611814R1000 | 2,790   |
| ■ □ 6-seat                                             | MEP6-0   | 1         | 1SFA611816R1000 | 4,250   |
| Shroud for modular range push button operator          |          |           |                 |         |
| ■ Yellow                                               | MA1-8053 | 1         | 1SFA611920R8053 | 450     |
| ■ Grey                                                 | MA1-8128 | 1         | 1SFA611920R8128 | 1,355   |
| Empty enclosures for compact range                     |          |           |                 |         |
| ■ □ Yellow/Light grey                                  | CEPY1-0  | 1         | 1SFA619821R1000 | 1,365   |
| ■ □ Dark grey/Light grey                               | CEP1-0   | 1         | 1SFA619811R1000 | 1,115   |
| Shroud for compact range push buttons                  |          |           |                 |         |
| ■ Yellow                                               | CA1-8053 | 1         | 1SFA619920R8053 | 280     |
| ■ Grey                                                 | CA1-8054 | 1         | 1SFA619920R8054 | 280     |
| DIN-rail adaptor                                       |          |           |                 |         |
| DIN-rail adaptor                                       | MA1-8131 | 1         | 1SFA611920R8131 | 755     |

## Signal towers and signal beacons\*



\* Price on request

# Signal tower and beacons



KL70-401B

1SFC151507F0001



KL70-401Y

SFC151508F0001



KA4-102...

SFC151509F0001

| Description                     |     |       |        |      |       |
|---------------------------------|-----|-------|--------|------|-------|
| Colors                          | Red | Green | Yellow | Blue | Clear |
| Replace ■ in type with          | R   | G     | Y      | B    | C     |
| Replace □ in Ordering code with | 1   | 2     | 3      | 4    | 8     |

| Description                                                        | Type       | Ordering code    | L.P.(₹)      |
|--------------------------------------------------------------------|------------|------------------|--------------|
| Light element                                                      |            |                  |              |
| Available in red, green, yellow, blue and clear                    |            |                  |              |
| Permanent light, 12-240 V AC/DC For bulb BA 15d. Bulb not included | KL70-401 ■ | 1SFA616070R401 □ | Upon request |
| Blinking light, 24 V AC/DC with integrated LED                     | KL70-306 ■ | 1SFA616070R306 □ |              |
| Flashing light, 24 V AC/DC with integrated xenon tube              | KL70-203 ■ | 1SFA616070R203 □ |              |
| Blinking light, 115 V AC with integrated LED                       | KL70-342 ■ | 1SFA616070R342 □ |              |
| Flashing light, 115 V AC with integrated xenon tube                | KL70-113 ■ | 1SFA616070R113 □ |              |
| Blinking light, 230 V AC with integrated LED                       | KL70-352 ■ | 1SFA616070R352 □ |              |
| Flashing light, 230 V AC with integrated xenon tube                | KL70-123 ■ | 1SFA616070R123 □ |              |
| LED permanent light, 24 V AC/DC with integrated LED                | KL70-305 ■ | 1SFA616070R305 □ |              |
| LED rotating light, 24 V AC/DC with integrated LED                 | KL70-307 ■ | 1SFA616070R307 □ |              |

|                                                                   |          |                 |              |
|-------------------------------------------------------------------|----------|-----------------|--------------|
| Bulbs: Bulb Ba 15d, 42mm, max 7 W for permanent or blinking light |          |                 | Upon request |
| 24 V, 5 W, AC/DC                                                  | KA4-1021 | 1SFA616923R1028 |              |
| 115 V, 5 W, AC/DC                                                 | KA4-1118 | 1SFA616923R1118 |              |
| 230 V, 5 W, AC/DC                                                 | KA4-1148 | 1SFA616923R1148 |              |

|                                                 |           |                  |              |
|-------------------------------------------------|-----------|------------------|--------------|
| LED bulbs Ba 15d, 40mA                          |           |                  |              |
| Available in red, green, yellow, blue and white |           |                  |              |
| 24 V AC/DC                                      | KA4-102 ■ | 1SFA616924R102 □ | Upon request |

|                                                                                 |           |                 |              |
|---------------------------------------------------------------------------------|-----------|-----------------|--------------|
| Audible modules buzzer element. 85 dB, continuous or pulsating tone, adjustable |           |                 |              |
| 24 V AC/DC                                                                      | KB70-3001 | 1SFA616071R3001 | Upon request |
| 115 V AC                                                                        | KB70-3101 | 1SFA616071R3101 |              |
| 115 V AC                                                                        | KB70-1201 | 1SFA616071R1201 |              |



# Signal towers



KT70-10...

1SFC151510F0001



KA70-1001

1SFC151511F0001



KA70-1034

1SFC151512F0001

| Description                                                                    | Type      | Ordering code   | LP           |
|--------------------------------------------------------------------------------|-----------|-----------------|--------------|
| <b>Siren element</b>                                                           |           |                 |              |
| Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 115 V AC   | KS70-1104 | 1SFA616073R1104 | Upon request |
| Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 230 V AC   | KS70-1204 | 1SFA616073R1204 |              |
| Multi function, 7 diff. Tones adjustable, volume adjustable, 100 dB, 24 V DC   | KS70-2004 | 1SFA616073R2004 |              |
| Multi function, 8 diff. Tones adjustable, volume adjustable 100 dB, 24 V AC/DC | KS70-3004 | 1SFA616073R3004 |              |
| Continuous tone alternating 108 dB, 24 V DC                                    | KS70-2002 | 1SFA616073R2002 |              |

|                                    |           |                 |              |
|------------------------------------|-----------|-----------------|--------------|
| <b>Terminal elements</b>           |           |                 |              |
| For tube mounting, including cap   | KT70-1001 | 1SFA616075R1001 | Upon request |
| For bracket or base, including cap | KT70-1002 | 1SFA616075R1002 |              |

|                      |           |                 |              |
|----------------------|-----------|-----------------|--------------|
| <b>Special parts</b> |           |                 |              |
| <b>Contact box</b>   |           |                 |              |
| Cable exit at side   | KA70-1001 | 1SFA616077R1001 | Upon request |
| Magnetic base        | KA70-1002 | 1SFA616077R1002 |              |

|                       |           |                 |              |
|-----------------------|-----------|-----------------|--------------|
| <b>Base with tube</b> |           |                 |              |
| D=25 mm L=110 mm      | KA70-1011 | 1SFA616077R1011 | Upon request |

|                      |           |                 |              |
|----------------------|-----------|-----------------|--------------|
| <b>Base for tube</b> |           |                 |              |
| D=25 mm, plastic     | KA70-1012 | 1SFA616077R1012 | Upon request |
| D=25 mm, metal       | KA70-1013 | 1SFA616077R1013 |              |

|                                |           |                 |              |
|--------------------------------|-----------|-----------------|--------------|
| <b>Tube, anodized aluminum</b> |           |                 |              |
| D=25 mm L=250 mm               | KA70-1021 | 1SFA616077R1021 | Upon request |
| D=25 mm L=400 mm               | KA70-1022 | 1SFA616077R1022 |              |
| D=25 mm L=800 mm               | KA70-1023 | 1SFA616077R1023 |              |

|                      |           |                 |              |
|----------------------|-----------|-----------------|--------------|
| <b>Bracket</b>       |           |                 |              |
| 1-sided mounting     | KA70-1031 | 1SFA616077R1031 | Upon request |
| 2-sided mounting     | KA70-1032 | 1SFA616077R1032 |              |
| For tube mounting    | KA70-1033 | 1SFA616077R1033 |              |
| For surface mounting | KA70-1034 | 1SFA616077R1034 |              |



# Signal beacons



KSB-401G

SFC151513F0001



KASB-100

SFC151514F0001

| Description                                                              |       |           |                  |        |              |
|--------------------------------------------------------------------------|-------|-----------|------------------|--------|--------------|
| Colors                                                                   | ● Red | ● Green   | ● Yellow         | ● Blue | ○ Clear      |
| Replace ■ in type with                                                   | R     | G         | Y                | B      | C            |
| Replace □ in Ordering code with                                          | 1     | 2         | 3                | 4      | 8            |
| Light element: Available in red, green, yellow, blue and clear           |       |           |                  |        |              |
| Permanent light, 12-240 V AC/DC.<br>For Bulb BA 15dBulb not included     |       | KSB-401 ■ | 1SFA616080R401 □ |        | Upon request |
| Flashing light, 24 V DC.<br>With integrated xenon tube                   |       | KSB-203 ■ | 1SFA616080R203 □ |        |              |
| Flashing light, 115 V AC.<br>With integrated xenon tube                  |       | KSB-113 ■ | 1SFA616080R113 □ |        |              |
| Flashing light, 230 V AC.<br>With integrated xenon tube                  |       | KSB-123 ■ | 1SFA616080R123 □ |        |              |
| Light element LED: Available in red, green and yellow                    |       |           |                  |        |              |
| LED permanent light, 24 V AC/DC.<br>With integrated LED                  |       | KSB-305 ■ | 1SFA616080R305 □ |        | Upon request |
| LED blinking light, 24 V AC/DC.<br>With integrated LED                   |       | KSB-306 ■ | 1SFA616080R306 □ |        |              |
| LED rotation light, 24 V AC/DC.<br>With integrated LED                   |       | KSB-307 ■ | 1SFA616080R307 □ |        |              |
| Special parts                                                            |       |           |                  |        |              |
| Anti-twist device                                                        |       | KASB-100  | 1SFA616087R1000  |        | Upon request |
| Bulbs for signal beacons max 10 W. For permanent light Bulb Ba 15d, 52mm |       |           |                  |        |              |
| 12 V, 7 W, AC/DC                                                         |       | KA3-1018  | 1SFA616922R1018  |        | Upon request |
| 24 V, 7 W, AC/DC                                                         |       | KA3-1028  | 1SFA616922R1028  |        |              |
| 115 V, 7 W, AC/DC                                                        |       | KA3-1118  | 1SFA616922R1118  |        |              |
| 220-260 V, 7-10 W, AC/DC                                                 |       | KA3-1148  | 1SFA616922R1118  |        |              |

# Electronic products and relays

## The product range



### Time relays, CT range

Three ranges of electronic timers provide timing functions for all applications: the CT-D range with a width of just 17.5 mm; the CT-E range, the ideal solution for serial applications; and the CT-S range that has two different types of connection terminals and is ideally suited for universal use. The CT range has a wide variety of timing functions (from ON or OFF delay to star-delta changeover). The time relays are available with output relays, solid-state outputs and precise direct time adjustment.

### Measuring and monitoring relays, CM range

State-of-the-art monitors for single and three-phase systems. Monitoring of: voltage, current, frequency, power factor (motor load), thermistors, temperature, liquid level, insulation resistance, and grid feeding. ABB has one of the world's widest product ranges of measuring and monitoring relays. The CM range is a key product line of the EPR range.

### Power supplies, CP range

Modern power supply units are a vital component in most areas of energy management and automation technology. As your global partner in this area, ABB pays close attention to corresponding requirements. Innovation is the key to the substantial enlargement of our power supply product range. ABB offers four different product lines for single and three-phase supplies, output voltages 5/12/24, and 48 VDC in plastic and metal enclosure, as well as various accessories.

### Interface relays and optocouplers, CR range and R600

Interface relays and optocouplers are widely used in various industrial applications. As an interface, they link the controller, e.g. PLC (programmable logic controller), PC or field bus systems to the sensor/actuator level. Here, they have various functions: switching AC or DC loads with different resistive, inductive and capacitive parts, switching voltages from a few mV up to 250 V, switching currents from a few mA up to 16 A, amplification of weak control signals, electrical isolation of control and load circuits, and signal multiplying.

### Logic relays, CL range

CL range logic relays are suitable for small and medium-sized control tasks and can substitute logic wiring quickly and easily. Three different ranges are available: stand alone, expandable and the display systems.

# Electronic products and relays

## Electronic timer



**ON-delay timers**  
**CT-ERE : 1 c/o contact, 2 LEDs**

| Type   | Rated control supply voltage | Time range | Ordering code     | L.P.(₹) |
|--------|------------------------------|------------|-------------------|---------|
| CT-ERE | 24 V AC / DC, 220-240 V AC   | 0.1-10 s   | 1SVR550107R1100   | 1,580   |
|        |                              | 0.3-30 s   | 1SVR550107R4100 ■ |         |
|        |                              | 3-300 s    | 1SVR550107R2100 ■ |         |
|        |                              | 0.3-30 min | 1SVR550107R5100 ■ |         |
|        | 110-130 V AC                 | 0.1-10 s   | 1SVR550100R1100   |         |
|        |                              | 0.3-30 s   | 1SVR550100R4100 ■ |         |
|        |                              | 3-300 s    | 1SVR550100R2100   |         |
|        |                              | 0.3-30 min | 1SVR550100R5100   |         |

**OFF-delay timers**  
**CT-AHE : 1 c/o contact, 2 LEDs**

| Type   | Rated control supply voltage | Time range | Ordering code     | L.P.(₹) |
|--------|------------------------------|------------|-------------------|---------|
| CT-AHE | 24 V AC/DC                   | 0.1-10 s   | 1SVR550118R1100   | 1,640   |
|        |                              | 0.3-30 s   | 1SVR550118R4100   |         |
|        |                              | 3-300 s    | 1SVR550118R2100   |         |
|        | 110-130 V AC                 | 0.1-10 s   | 1SVR550110R1100   |         |
|        |                              | 0.3-30 s   | 1SVR550110R4100 ■ |         |
|        |                              | 3-300 s    | 1SVR550110R2100   |         |
|        | 220-240 V AC                 | 0.1-10 s   | 1SVR550111R1100   |         |
|        |                              | 0.3-30 s   | 1SVR550111R4100 ■ |         |
|        |                              | 3-300 s    | 1SVR550111R2100 ■ |         |

**CT-ARE : without auxiliary voltage, 1 c/o contact, 1 LED**

| Type   | Rated control supply voltage | Time range | Ordering code     | L.P.(₹) |
|--------|------------------------------|------------|-------------------|---------|
| CT-ARE | "24 V AC/DC, 220-240 V AC"   | 0.1-10 s   | 1SVR550127R1100   | 2,260   |
|        |                              | 0.3-30 s   | 1SVR550127R4100 ■ |         |
|        | 110-130 V AC                 | 0.1-10 s   | 1SVR550120R1100   |         |
|        |                              | 0.3-30 s   | 1SVR550120R4100 ■ |         |

**Multifunction timer**  
**CT-MFE : 6 functions, 8 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs**

| Type   | Rated control supply voltage | Time range     | Ordering code     | L.P.(₹) |
|--------|------------------------------|----------------|-------------------|---------|
| CT-MFE | 24-240 V AC/DC               | 0.05 s - 100 h | 1SVR550029R8100 ■ | 2,970   |

**Star Delta timers**  
**CT-YDE : ON-delayed, OFF-delayed without auxiliary voltage, 1 c/o contact, 2 LEDs**

| Type   | Rated control supply voltage | Time range | Ordering code     | L.P.(₹) |
|--------|------------------------------|------------|-------------------|---------|
| CT-YDE | 24 V AC/DC, 220 - 240V AC    | 0.1-10 s   | 1SVR550207R1100   | 2,790   |
|        |                              | 0.3-30 s   | 1SVR550207R4100 ■ |         |
|        |                              | 3-300 s    | 1SVR550207R2100 ■ |         |
|        | 110-130V AC                  | 0.1-10 s   | 1SVR550200R1100   |         |
|        |                              | 0.3-30 s   | 1SVR550200R4100   |         |
|        |                              | 3-300 s    | 1SVR550200R2100   |         |

■ Stock items

# Electronic products and relays

## Electronic timer



**CT-SDE: ON-delayed with fixed transition time, 1 n/c contact, 1 n/o contact, internally wired, 2 LEDs**

| Type    | Rated control supply voltage | Time range | Ordering code     | L.P.(₹) |
|---------|------------------------------|------------|-------------------|---------|
| CT- SDE | 24 V AC/DC, 220 -240V AC     | 0.3-30 s   | 1SVR550217R4100 ■ | 1,820   |
|         | 110-130V AC                  |            | 1SVR550210R4100   |         |
|         | 380-415V AC                  |            | 1SVR550212R4100 ■ |         |

**CT-VWE: Impulse-ON, 1 c/o contact**

| Type   | Rated control supply voltage | Time range | Ordering code   | L.P.(₹) |
|--------|------------------------------|------------|-----------------|---------|
| CT-VWE | 24 V AC/DC, 220-240 V AC     | 0.1-10 s   | 1SVR550137R1100 | 3,390   |
|        |                              | 0.3-30 s   | 1SVR550137R4100 |         |
|        |                              | 3-300 s    | 1SVR550137R2100 |         |
|        | 110-130 V AC                 | 0.1-10 s   | 1SVR550130R1100 |         |
|        |                              | 0.3-30 s   | 1SVR550130R4100 |         |
|        |                              | 3-300 s    | 1SVR550130R2100 |         |

**CT-AWE: Impulse-OFF, 1 c/o contact**

| Type             | Rated control supply voltage | Time range | Ordering code   | L.P.(₹) |
|------------------|------------------------------|------------|-----------------|---------|
| CT-AWE w/o Aux.  | 24 V AC/DC                   | 0.05-1 s   | 1SVR550158R3100 | 4,420   |
|                  | 110-130 V AC                 |            | 1SVR550150R3100 |         |
|                  | 220-240 V AC                 |            | 1SVR550151R3100 |         |
| CT-AWE with Aux. | 24 V AC/DC                   | 0.1-10 s   | 1SVR550148R1100 |         |
|                  |                              | 0.3-30 s   | 1SVR550148R4100 |         |
|                  |                              | 3-300 s    | 1SVR550148R2100 |         |
|                  | 110-130 V AC                 | 0.1-10 s   | 1SVR550140R1100 |         |
|                  |                              | 0.3-30 s   | 1SVR550140R4100 |         |
|                  |                              | 3-300 s    | 1SVR550140R2100 |         |
|                  | 220-240 V AC                 | 0.1-10 s   | 1SVR550141R1100 |         |
|                  |                              | 0.3-30 s   | 1SVR550141R4100 |         |
|                  |                              | 3-300 s    | 1SVR550141R2100 |         |

**CT-EBE: Flasher starting with OFF, 1 c/o contact**

| Type   | Rated control supply voltage | Time range | Ordering code   | L.P.(₹) |
|--------|------------------------------|------------|-----------------|---------|
| CT-EBE | 24 V AC/DC, 220-240 V AC     | 0.1-10 s   | 1SVR550167R1100 | 3,390   |
|        | 110-130 V AC                 |            | 1SVR550160R1100 | 1,360   |

**CT-MFS.21: ON-delay (accumulative), OFF-delay without aux., Symmetrical ON-delay and OFF-delay and Impulse-ON, ON/OFF function, pulse former, star-delta changeover with impluse, Flasher starting with OFF, Flasher starting with ON, impluse -OFF, 2 c/o**

| Type       | Rated control supply voltage | Time range         | Ordering code   | L.P.(₹) |
|------------|------------------------------|--------------------|-----------------|---------|
| CT-MFS.21S | 24-240 V AC/DC               | 10 (0.05 s- 300 h) | 1SVR730010R0200 | 4,730   |

**CT-ERS.22: ON-delay (accumulative), 2 c/o**

| Type       | Rated control supply voltage | Time range         | Ordering code   | L.P.(₹) |
|------------|------------------------------|--------------------|-----------------|---------|
| CT-ERS.22S | 24-48 V DC, 24-240 V AC      | 10 (0.05 s- 300 h) | 1SVR730100R3300 | 3,180   |



■ Stock items

# Electronic products and relays

## Measuring and monitoring relays



### Single and three phase monitoring relays for phase failure detection

| Type                       | Rated control supply voltage = measuring voltage | Ordering code   | L.P.(₹) |
|----------------------------|--------------------------------------------------|-----------------|---------|
| With neutral monitoring    |                                                  |                 |         |
| CM-PBE                     | 3x380-440 V AC, 220-240 V AC                     | 1SVR550881R9400 | 4,820   |
| Without neutral monitoring |                                                  |                 |         |
| CM-PBE                     | 3x380-440 V AC                                   | 1SVR550882R9500 | 4,820   |

### Single and three phase monitoring relays for over / undervoltage and phase failure detection

| Type                       | Rated control supply voltage = measuring voltage | Ordering code     | L.P.(₹) |
|----------------------------|--------------------------------------------------|-------------------|---------|
| With neutral monitoring    |                                                  |                   |         |
| CM-PVE                     | 3x320-460 V AC, 185-265 V AC                     | 1SVR550870R9400 ■ | 4,820   |
| Without neutral monitoring |                                                  |                   |         |
| CM-PVE                     | 3x320-460 V AC                                   | 1SVR550871R9500   | 4,820   |

### Three phase monitoring relays for phase sequence monitoring and phase failure detection

| Type     | Rated control supply voltage = measuring voltage | Ordering code   | L.P.(₹) |
|----------|--------------------------------------------------|-----------------|---------|
| CM-PFS.S | 3x200-500 V AC                                   | 1SVR730824R9300 | 2,200   |

### Three phase monitoring relays for over and undervoltage with adjustable threshold values

| Type       | Rated control supply voltage = measuring voltage | Ordering code   | L.P.(₹) |
|------------|--------------------------------------------------|-----------------|---------|
| CM-PVS.31P | 3x160-300 V AC                                   | 1SVR740794R1300 | 16,270  |
| CM-PVS.31S |                                                  | 1SVR730794R1300 | 13,420  |
| CM-PVS.41P | 3x300-500 V AC                                   | 1SVR740794R3300 | 14,480  |
| CM-PVS.41S |                                                  | 1SVR730794R3300 | 14,480  |



### Three phase monitoring relays for phase unbalance

| Type       | Rated control supply voltage = measuring voltage | Ordering code   | L.P.(₹) |
|------------|--------------------------------------------------|-----------------|---------|
| CM-PAS.31P | 3x160-300 V AC                                   | 1SVR740774R1300 | 15,470  |
| CM-PAS.31S |                                                  | 1SVR730774R1300 | 13,420  |
| CM-PAS.41P | 3x300-500 V AC                                   | 1SVR740774R3300 | 15,470  |
| CM-PAS.41S |                                                  | 1SVR730774R3300 | 13,420  |

### Multifunctional three phase monitoring relays (phase failure detection, phase sequence monitoring, overvoltage, undervoltage, phase unbalance)

| Type                                   | Rated control supply voltage = measuring voltage | Ordering code     | L.P.(₹) |
|----------------------------------------|--------------------------------------------------|-------------------|---------|
| With interrupted neutral monitoring    |                                                  |                   |         |
| CM-MPS.11P                             | 3x90-170 V AC                                    | 1SVR740885R1300   | 16,100  |
| CM-MPS.11S                             |                                                  | 1SVR730885R1300   | 15,020  |
| CM-MPS.21P                             | 3x180-280 V AC                                   | 1SVR740885R3300   | 15,560  |
| CM-MPS.21S                             |                                                  | 1SVR730885R3300   | 14,770  |
| Without interrupted neutral monitoring |                                                  |                   |         |
| CM-MPS.41S                             | 3x300-500 V AC                                   | 1SVR730884R3300 ■ | 6,160   |

■ Stock items

# Electronic products and relays

## Measuring and monitoring relays

### Three phase monitoring relays



**Multifunctional three phase monitoring relays, automatic phase sequence correction and separate monitoring of over and undervoltage (window monitoring) configurable**

| Type                                   | Rated control<br>supply voltage =<br>measuring voltage | Ordering code   | L.P.(₹) |
|----------------------------------------|--------------------------------------------------------|-----------------|---------|
| With interrupted neutral monitoring    |                                                        |                 |         |
| CM-MPS.23P                             | 3x180-280 V AC                                         | 1SVR740885R4300 | 20,480  |
| CM-MPS.23S                             |                                                        | 1SVR730885R4300 | 18,030  |
| Without interrupted neutral monitoring |                                                        |                 |         |
| CM-MPS.43P                             | 3x300-500 V AC                                         | 1SVR740884R4300 | 19,750  |
| CM-MPS.43S                             |                                                        | 1SVR730884R4300 | 16,360  |

**Multifunctional three phase monitoring relays, automatic phase sequence correction and separate monitoring of over and undervoltage (window monitoring) configurable**

| Type       | Rated control supply voltage = measuring voltage | Ordering code     | L.P.(₹) |
|------------|--------------------------------------------------|-------------------|---------|
| CM-MPN.52P | 3x350-580 V AC                                   | 1SVR760487R8300   | 22,480  |
| CM-MPN.52S |                                                  | 1SVR750487R8300   | 19,100  |
| CM-MPN.62P | 3x450-720 V AC                                   | 1SVR760488R8300   | 22,480  |
| CM-MPN.62S |                                                  | 1SVR750488R8300   | 19,750  |
| CM-MPN.72P | 3x530-820 V AC                                   | 1SVR760489R8300   | 22,490  |
| CM-MPN.72S |                                                  | 1SVR750489R8300 ■ | 19,750  |

### Insulation monitors for unearthed supply systems



| Type          | Nominal voltage<br>Un of the distribution<br>system to be monitored | Rated control<br>supply voltage | Ordering code     | L.P.(₹) |
|---------------|---------------------------------------------------------------------|---------------------------------|-------------------|---------|
| CM-IWS.1P     | 0-250 V AC / 0-300 V DC                                             | 24-240 V AC/DC                  | 1SVR740660R0100   | 25,770  |
| CM-IWS.1S     |                                                                     |                                 | 1SVR730660R0100 ■ | 25,770  |
| CM-IWS.2P     | 0-400 V AC                                                          | 24-240 V AC/DC                  | 1SVR740670R0200   | 22,840  |
| CM-IWS.2S     |                                                                     |                                 | 1SVR730670R0200 ■ | 20,390  |
| CM-IWN.1P     | 0-400 V AC / 0-600 V DC                                             | 24-240 V AC/DC                  | 1SVR760660R0200   | 64,870  |
| CM-IWN.1S     |                                                                     |                                 | 1SVR750660R0200   | 47,220  |
| Coupling unit |                                                                     |                                 |                   |         |
| CM-IVN.S      | Passive device, no control<br>supply voltage needed                 | 0-690 V AC /<br>0-1000 V DC     | 1SVR750669R9400 ■ | 24,690  |
| CM-IVN.P      |                                                                     |                                 | 1SVR760669R9400   | 30,060  |

### Thermistor motor protection relays



| Type       | Rated control supply voltage | Ordering code     | L.P.(₹) |
|------------|------------------------------|-------------------|---------|
| CM-MSE     | 24 V AC                      | 1SVR550805R9300   | 5,370   |
|            | 110-130 V AC                 | 1SVR550800R9300 ■ | 4,080   |
|            | 220-240 V AC                 | 1SVR550801R9300 ■ | 5,370   |
| CM-MSS.12S | 24 V AC/DC                   | 1SVR730700R0100   | 6,830   |
| CM-MSS.12P | 24 V AC/DC                   | 1SVR740700R0100   | 7,200   |
| CM-MSS.13S | 110-130 V AC/220-240 V AC    | 1SVR730700R2100   | 6,430   |
| CM-MSS.13P | 110-130 V AC/220-240 V AC    | 1SVR740700R2100   | 7,200   |
| CM-MSS.22S | 24 V AC/DC                   | 1SVR730700R0200   | 6,870   |
| CM-MSS.22P | 24 V AC/DC                   | 1SVR740700R0200   | 7,900   |
| CM-MSS.23S | 110-130 V AC/220-240 V AC    | 1SVR730700R2200   | 6,870   |
| CM-MSS.23P | 110-130 V AC/220-240 V AC    | 1SVR740700R2200   | 7,900   |

■ Stock items



# Electronic products and relays

## Pluggable interface relays



CR-M

### Ordering details - CR-M range without LED

| Version  | Outputs      | Type       | Ordering code     | L.P.(₹) |
|----------|--------------|------------|-------------------|---------|
| 12 V DC  | 2 c/o (SPDT) | CR-M012DC2 | 1SVR405611R4000   | 590     |
| 24 V DC  |              | CR-M024DC2 | 1SVR405611R1000 ■ | 590     |
| 48 V DC  |              | CR-M048DC2 | 1SVR405611R6000   | 590     |
| 60 V DC  |              | CR-M060DC2 | 1SVR405611R4200   | 590     |
| 110 V DC |              | CR-M110DC2 | 1SVR405611R8000 ■ | 650     |
| 125 V DC |              | CR-M125DC2 | 1SVR405611R8200   | 650     |
| 220 V DC |              | CR-M220DC2 | 1SVR405611R9000   | 650     |
| 24 V AC  |              | CR-M024AC2 | 1SVR405611R0000   | 610     |
| 48 V AC  | 4 c/o (SPDT) | CR-M048AC2 | 1SVR405611R5000   | 610     |
| 110 V AC |              | CR-M110AC2 | 1SVR405611R7000   | 610     |
| 120 V AC |              | CR-M120AC2 | 1SVR405611R2000   | 610     |
| 230 V AC |              | CR-M230AC2 | 1SVR405611R3000 ■ | 680     |
| 12 V DC  |              | CR-M012DC4 | 1SVR405613R4000   | 600     |
| 24 V DC  |              | CR-M024DC4 | 1SVR405613R1000 ■ | 600     |
| 48 V DC  |              | CR-M048DC4 | 1SVR405613R6000   | 610     |
| 60 V DC  |              | CR-M060DC4 | 1SVR405613R4200   | 610     |
| 110 V DC |              | CR-M110DC4 | 1SVR405613R8000 ■ | 690     |
| 125 V DC |              | CR-M125DC4 | 1SVR405613R8200 ■ | 690     |
| 220 V DC |              | CR-M220DC4 | 1SVR405613R9000 ■ | 720     |
| 24 V AC  |              | CR-M024AC4 | 1SVR405613R0000   | 690     |
| 48 V AC  |              | CR-M048AC4 | 1SVR405613R5000   | 640     |
| 110 V AC |              | CR-M110AC4 | 1SVR405613R7000 ■ | 690     |
| 120 V AC |              | CR-M120AC4 | 1SVR405613R2000   | 690     |
| 230 V AC |              | CR-M230AC4 | 1SVR405613R3000 ■ | 720     |



CR-M

### Ordering details - CR-M range with LED

| Version  | Outputs      | Type        | Ordering code     | L.P.(₹) |
|----------|--------------|-------------|-------------------|---------|
| 12 V DC  | 2 c/o (SPDT) | CR-M012DC2L | 1SVR405611R4100   | 600     |
| 24 V DC  |              | CR-M024DC2L | 1SVR405611R1100 ■ | 600     |
| 48 V DC  |              | CR-M048DC2L | 1SVR405611R6100   | 610     |
| 60 V DC  |              | CR-M060DC2L | 1SVR405611R4300   | 610     |
| 110 V DC |              | CR-M110DC2L | 1SVR405611R8100   | 690     |
| 125 V DC |              | CR-M125DC2L | 1SVR405611R8300   | 690     |
| 220 V DC |              | CR-M220DC2L | 1SVR405611R9100   | 720     |
| 24 V AC  |              | CR-M024AC2L | 1SVR405611R0100   | 690     |
| 48 V AC  | 4 c/o (SPDT) | CR-M048AC2L | 1SVR405611R5100   | 640     |
| 110 V AC |              | CR-M110AC2L | 1SVR405611R7100   | 690     |
| 120 V AC |              | CR-M120AC2L | 1SVR405611R2100   | 690     |
| 230 V AC |              | CR-M230AC2L | 1SVR405611R3100   | 720     |
| 12 V DC  |              | CR-M012DC4L | 1SVR405613R4100   | 730     |
| 24 V DC  |              | CR-M024DC4L | 1SVR405613R1100 ■ | 730     |
| 48 V DC  |              | CR-M048DC4L | 1SVR405613R6100   | 730     |
| 60 V DC  |              | CR-M060DC4L | 1SVR405613R4300   | 640     |
| 110 V DC |              | CR-M110DC4L | 1SVR405613R8100 ■ | 810     |
| 125 V DC |              | CR-M125DC4L | 1SVR405613R8300   | 810     |
| 220 V DC |              | CR-M220DC4L | 1SVR405613R9100 ■ | 850     |
| 24 V AC  |              | CR-M024AC4L | 1SVR405613R0100   | 810     |
| 48 V AC  |              | CR-M048AC4L | 1SVR405613R5100   | 810     |
| 110 V AC |              | CR-M110AC4L | 1SVR405613R7100   | 810     |
| 120 V AC |              | CR-M120AC4L | 1SVR405613R2100   | 740     |
| 230 V AC |              | CR-M230AC4L | 1SVR405613R3100 ■ | 850     |



CR-M4SS

### Ordering details - CR-M range accessories

| Version                     | Type    | Ordering code     | L.P.(₹) |
|-----------------------------|---------|-------------------|---------|
| Standard socket for 2 c/o   | CR-M2SS | 1SVR405651R1000 ■ | 370     |
| Standard socket for 2/4 c/o | CR-M4SS | 1SVR405651R3000 ■ | 400     |
| Plastic holder              | CR-MH   | 1SVR405659R1000 ■ | 50      |
| Metal holder                | CR-MH1  | 1SVR405659R1100 ■ | 40      |

■ Stock items





# Electronic products and relays

## Pluggable interface relays



CR-MX with  
Base and  
Holder

Ordering details - CR-M range with LED

| Version  | Outputs                  | Type         | Ordering code     | L.P.(₹) | MOQ |
|----------|--------------------------|--------------|-------------------|---------|-----|
| 12 V DC  | 2 c/o (SPDT), 250 V, 7 A | CR-MX012DC2L | 1SVR405631R4100   | 250     | 250 |
| 24 V DC  |                          | CR-MX024DC2L | 1SVR405631R1100 ■ | 270     | 250 |
| 48 V DC  |                          | CR-MX048DC2L | 1SVR405631R6100   | 290     | 250 |
| 110 V DC |                          | CR-MX110DC2L | 1SVR405631R8100 ■ | 270     | 250 |
| 24 V AC  |                          | CR-MX024AC2L | 1SVR405631R0100 ■ | 250     | 250 |
| 110 V AC | 4 c/o (SPDT), 250 V, 5 A | CR-MX110AC2L | 1SVR405631R7100   | 250     | 250 |
| 230 V AC |                          | CR-MX230AC2L | 1SVR405631R3100 ■ | 290     | 250 |
| 12 V DC  |                          | CR-MX012DC4L | 1SVR405633R4100   | 290     | 250 |
| 24 V DC  |                          | CR-MX024DC4L | 1SVR405633R1100 ■ | 310     | 250 |
| 48 V DC  |                          | CR-MX048DC4L | 1SVR405633R6100   | 320     | 250 |
| 110 V DC |                          | CR-MX110DC4L | 1SVR405633R8100 ■ | 320     | 250 |
| 24 V AC  |                          | CR-MX024AC4L | 1SVR405633R0100 ■ | 320     | 250 |
| 110 V AC |                          | CR-MX110AC4L | 1SVR405633R7100 ■ | 330     | 250 |
| 230 V AC |                          | CR-MX230AC4L | 1SVR405633R3100 ■ | 330     | 250 |

Accessories\* - CR-MX range

| Version                               | Type     | Ordering code     | L.P.(₹) | MOQ |
|---------------------------------------|----------|-------------------|---------|-----|
| For 2 c/o (SPDT) contacts, black      | CR-M2SFB | 1SVR405651R1400 ■ | 130     | 250 |
| For 2 or 4 c/o (SPDT) contacts, black | CR-M4SFB | 1SVR405651R3400 ■ | 170     | 250 |
| Metal holder                          | CR-MH1   | 1SVR405659R1100 ■ | 40      | 250 |

■ Stock items

# Electronic products and relays

## Power supplies

### Overview

Modern power supply units are vital components in most areas of energy management and automation technology. ABB as your global partner in these areas pays the utmost attention to the resulting requirements. Innovation is the key to a substantial enlargement of our power supply product program:

### CP-D

The CP-D range of power supply units in MDRC design (modular DIN rail components) fits into all domestic installation and distribution panels.

### CP-E

The CP-E range offers enhanced functionality while the number of different types has been considerably reduced. Now all power supply units can be operated at an ambient temperature of up to +70 °C.

### CP-T

The CP-T range of three-phase power supply units is ABB's youngest member of the power supply family.

### CP-C.1

The CP-C.1 power supplies are ABB's high-performance and most advanced range. With excellent efficiency, high reliability and innovative functionality it is prepared for the most demanding industrial applications. These power supplies have up to 50 % integrated power reserve and operate at an efficiency of up to 94%. They are equipped with overheat protection and active power factor correction. Combined with a broad AC and DC input range and extensive worldwide approvals the CP-C.1 power supplies are the preferred choice for professional DC applications.



### CP-E range

| Rated I/P voltage          | Rated O/P Voltage/Current | Type         | Ordering code     | L.P.(₹) |
|----------------------------|---------------------------|--------------|-------------------|---------|
| 100-240 V AC               | 5 V DC / 3 A              | CP-E 5/3.0   | 1SVR427033R3000   | 4,510   |
| 100-240 V AC               | 12 V DC / 2.5 A           | CP-E 12/2.5  | 1SVR427032R1000 ■ | 4,670   |
| 115 / 230 V AC auto select | 12 V DC / 10 A            | CP-E 12/10.0 | 1SVR427035R1000 ■ | 8,590   |
| 100-240 V AC               | 24 V DC / 0.75 A          | CP-E 24/0.75 | 1SVR427030R0000   | 3,430   |
| 100-240 V AC               | 24 V DC / 1.25 A          | CP-E 24/1.25 | 1SVR427031R0000 ■ | 3,750   |
| 100-240 V AC               | 24 V DC / 2.5 A           | CP-E 24/2.5  | 1SVR427032R0000 ■ | 3,870   |
| 115 / 230 V AC auto select | 24 V DC / 5 A             | CP-E 24/5.0  | 1SVR427034R0000 ■ | 6,960   |
| 115 / 230 V AC auto select | 24 V DC / 10 A            | CP-E 24/10.0 | 1SVR427035R0000 ■ | 10,190  |
| 115 / 230 V AC             | 24 V DC / 20 A            | CP-E 24/20.0 | 1SVR427036R0000 ■ | 18,240  |
| 100-240 V AC               | 48 V DC / 0.625 A         | CP-E 48/0.62 | 1SVR427030R2000   | 4,820   |
| 100-240 V AC               | 48 V DC / 1.25 A          | CP-E 48/1.25 | 1SVR427031R2000   | 6,140   |
| 115 / 230 V AC auto select | 48 V DC / 5 A             | CP-E 48/5.0  | 1SVR427034R2000   | 12,430  |
| 115 / 230 V AC             | 48 V DC / 10 A            | CP-E 48/10.0 | 1SVR427035R2000 ■ | 17,710  |

Note: Refer technical data sheet for DC voltage input range

### CP-C.1

| Input voltage range       | Rated output Voltage/Current | Type           | Ordering code   | L.P.(₹)w     |
|---------------------------|------------------------------|----------------|-----------------|--------------|
| 100-240 V AC, 90-300 V DC | 24 V DC / 5 A                | CP-C.1 24/5.0  | 1SVR360563R1001 | Upon request |
| 100-240 V AC, 90-300 V DC | 24 V DC / 10 A               | CP-C.1 24/10.0 | 1SVR360663R1001 |              |
| 100-240 V AC, 90-300 V DC | 24 V DC / 20 A               | CP-C.1 24/20.0 | 1SVR360763R1001 |              |

### CP-T range

| Rated I/P voltage          | Rated O/P Voltage/Current | Type         | Ordering code   | L.P.(₹)w |
|----------------------------|---------------------------|--------------|-----------------|----------|
| 340-575 V AC/ 480-820 V DC | 24 V DC / 5 A             | CP-T 24/5.0  | 1SVR427054R0000 | 12,400   |
| 340-575 V AC/ 480-820 V DC | 24 V DC / 10 A            | CP-T 24/10.0 | 1SVR427055R0000 | 15,790   |
| 340-575 V AC/ 480-820 V DC | 24 V DC / 20 A            | CP-T 24/20.0 | 1SVR427056R0000 | 19,590   |
| 340-575 V AC/ 480-820 V DC | 24 V DC / 40 A            | CP-T 24/40.0 | 1SVR427057R0000 | 28,980   |
| 340-575 V AC/ 480-820 V DC | 48 V DC / 5 A             | CP-T 48/5.0  | 1SVR427054R2000 | 17,170   |
| 340-575 V AC/ 480-820 V DC | 48 V DC / 10 A            | CP-T 48/10.0 | 1SVR427055R2000 | 23,460   |
| 340-575 V AC/ 480-820 V DC | 48 V DC / 20 A            | CP-T 48/20.0 | 1SVR427056R2000 | 34,340   |

■ Stock items

# Intelligent motor management system - UMC100.3

## Ordering details - Universal Motor Controller UMC100.3



UMC100.3 DC



UMC100.3 UC

### Description

Intelligent motor management system for single and three-phase motors with  $I_e = 0.24 - 63$  A in one single device. Compact housing with integrated current transformer for cable cross section up to  $25 \text{ mm}^2$  (max.  $\varnothing$  with Insulation 11 mm). Higher currents with additional external current transformer. Thermal overload protection according to EN/IEC 60947-4-1, selectable trip classes 5E, 10E, 20E, 30E, 40E. Some functions require an additional expansion module.

- **Motor protection functions:**  
Over-/underload, over-/undercurrent, over-/undervoltage, rotor blocking, phase failure/imbalance/sequence Earth fault detection integrated or with external sensor CEM11  
Hot motor protection with thermistor or temperature measurement
- **Motor control functions:**  
Easily configurable motor control functions: direct, reverse, star-delta starter, pole-changing, overload relay, actuator mode, softstarter mode. Additionally free programmable application specific logic with function blocks
- **Service and diagnostic data:**  
Operating hours, number of motor starts and overload trips, energy, standstill and operation hours supervision, motor status, faults and warnings, fault history (16 events)  
Motor current, phase voltages, thermal load, power factor (cos), active power, apparent power, energy, total harmonic distortion (THD).
- **Integrated I/Os:**  
6 digital inputs, 1 PTC input, 4 digital outputs. Maximum number of I/Os with expansion modules:  
14 digital inputs, 1 PTC input, 9 digital outputs, 6 analogue inputs, 1 analogue output
- **Communication interfaces for fieldbuses and ethernet networks, Interface for operator panel UMC100-PAN, bus interface for connection of expansion modules**
- **Versions for supply voltage 24 V DC and 110 – 240 V AC/DC and with ATEX approval**

### Ordering details

| Designation                      | Supply voltage  | Type           | Ordering code   | L.P.(₹)      |
|----------------------------------|-----------------|----------------|-----------------|--------------|
| Universal Motor Controller       | 24 V DC         | UMC100.3 DC    | 1SAJ530000R0100 | Upon request |
| Universal Motor Controller       | 110-240 V AC/DC | UMC100.3 UC    | 1SAJ530000R1100 |              |
| Universal Motor Controller, ATEX | 24 V DC         | UMC100.3 DC EX | 1SAJ530000R0200 |              |
| Universal Motor Controller, ATEX | 110-240 V AC/DC | UMC100.3 UC EX | 1SAJ530000R1200 |              |

### Operating panel UMC100-PAN

Operator panel for Universal Motor Controller UMC100. Backlit graphical and multilingual fulltext display, LEDs for status. Assembly directly on UMC100 or on the control cabinet door via extension cable and door mounting set.

### Functions:

- **Monitoring:** Shows motor status and diagnostics
- **Operate:** Start, stop, fault reset
- **Parametrize:** Setting and changing of motor and fieldbus parameters (password protection possible)
- **Copy settings**
- **USB port for up/download of parameters and logic**

Supports 8 languages: English, French, German, Italian, Spanish, Polish, Portuguese, Russian  
Replaces all former UMC100 operator panels



UMC100-PAN

### Ordering details

| Designation                             | Type           | Ordering code   | L.P.(₹)      |
|-----------------------------------------|----------------|-----------------|--------------|
| Operating panel                         | UMC100-PAN     | 1SAJ590000R0103 | Upon request |
| 0.7 m ext. cable with door mounting set | UMCPAN-CAB.070 | 1SAJ510003R0002 |              |
| 1.5 m ext. cable with door mounting set | UMCPAN-CAB.150 | 1SAJ510004R0002 |              |
| 3 m ext. cable with door mounting set   | UMCPAN-CAB.300 | 1SAJ510002R0002 |              |

# Intelligent motor management system - UMC100.3

## Ordering details - Expansion modules



Description

Up to 4 expansion-modules can be connected to one UMC100.3

- 1 digital expansion module DX111 or DX122
- 1 voltage expansion module VI150 or VI155
- 2 analog/temperature expansion modules AI111 possible)

Supply voltage is 24 V DC; the 110-240 V AC/DC version of the UMC100.3 provides the 24 V DC supply for expansion modules



DX111

I/O-expansion module with 8 digital inputs 24 V DC, 4 relay outputs, 1 analog output 0/4-20 mA or 0...10 V

DX122

I/O-expansion module with 8 digital inputs 110 / 230 V AC, 4 relay outputs, 1 analog output 0/4-0 mA or 0-10 V



VI15x

Voltage modules for the determination of phase voltages, power factor (cos φ), apparent power, energy, total harmonic distortion (THD).  
For use in grounded networks (VI150) or in all networks (VI155), 150-690 V AC

AI111

Analog / temperature expansion module, 3 inputs PT100, PT1000, KTY83, KTY84, NTC, 0-10 V, 0/4-20 mA  
1 or 2 modules AI111 can be connected to an UMC100.3.



| Ordering details                                      |               |                 |              |
|-------------------------------------------------------|---------------|-----------------|--------------|
| Designation                                           | Type          | Ordering code   | L.P.(₹)      |
| I/O module for UMC100, 24 V DC digital input          | DX111         | 1SAJ611000R0101 | Upon request |
| I/O module for UMC100, 110 – 230 V AC digital input   | DX122         | 1SAJ622000R0101 |              |
| 3 phase voltage module for grounded networks          | VI150         | 1SAJ650000R0100 |              |
| 3 phase voltage module for all networks               | VI155         | 1SAJ655000R0100 |              |
| Analog/temperature module 3 analogue inputs           | AI111         | 1SAJ613000R0101 |              |
| Connection cable UMC100 - I/O module, length 0.30 m   | UMCIO-CAB.030 | 1SAJ691000R0001 |              |
| Connection cable IO-module - IO-module, length 0,30 m | IOIO-CAB.030  | 1SAJ692000R0001 |              |
| Terminal set for UMC100.3 DC (spare parts)            | UMCTB         | 1SAJ929160R0001 |              |
| Terminal set for UMC100.3 UC (spare parts)            | UMCTB         | 1SAJ929160R0002 |              |

# Other offerings



## Arc Guard System TVOC-2

Most short circuit faults in LV and MV switchgears are accompanied by an electric arc. An arc fault always leads to considerable damage to equipment and personnel unless it is distinguished very fast. The fault should be disconnected as fast as possible and in less than 0.1 s to avoid serious damages and give involved person a fair chance to survive the accident without severe damages. This is a demand found in the electrical safety rules in all CE countries, ref. IEC364-4-42.

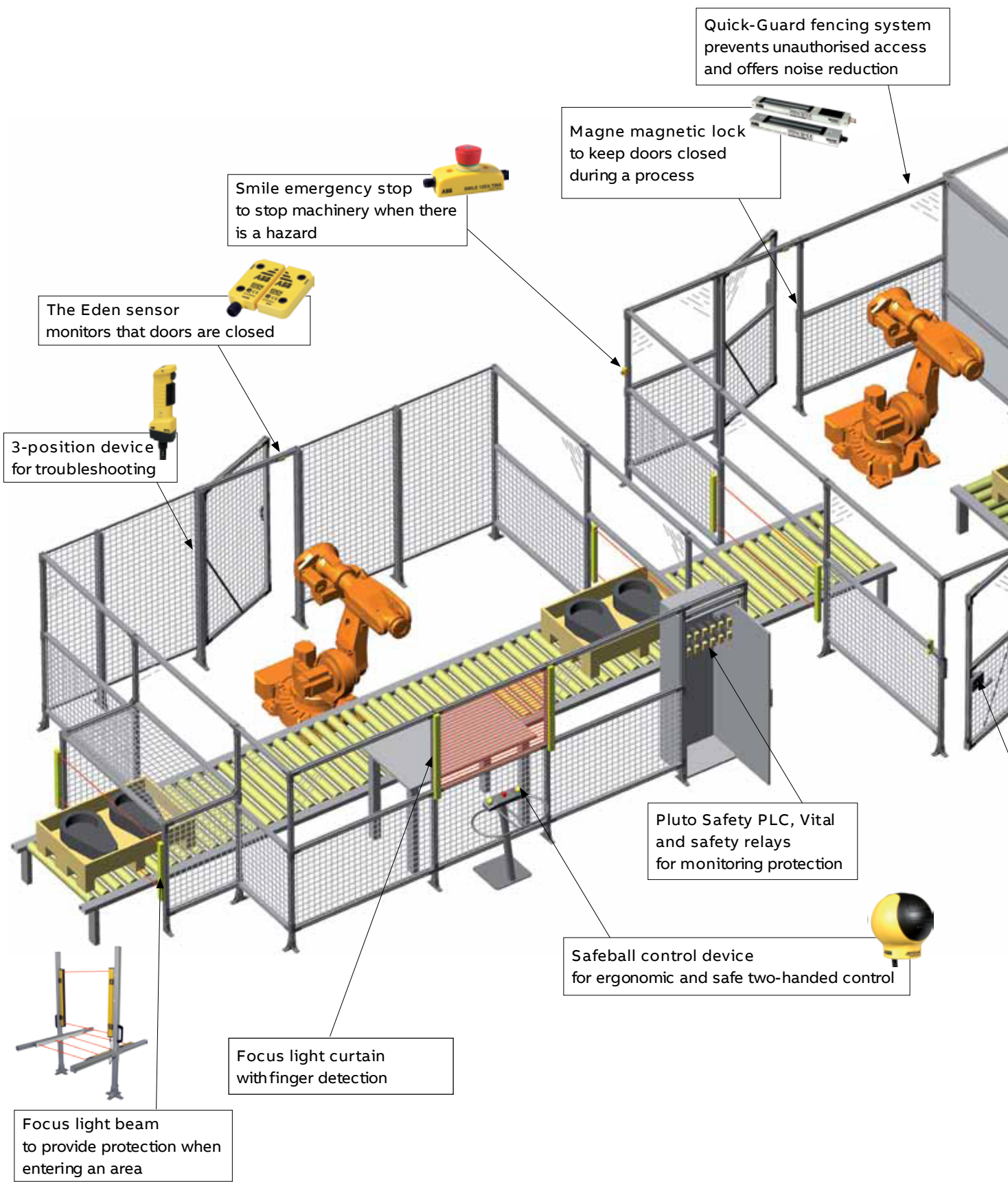
The Arc Guard System TVOC-2 is an aid to quickly detect an arc fault and trip the incoming circuit-breaker. The main advantage with the Arc Guard System is that it can trip instantaneously, i.e. override other tripping functions.

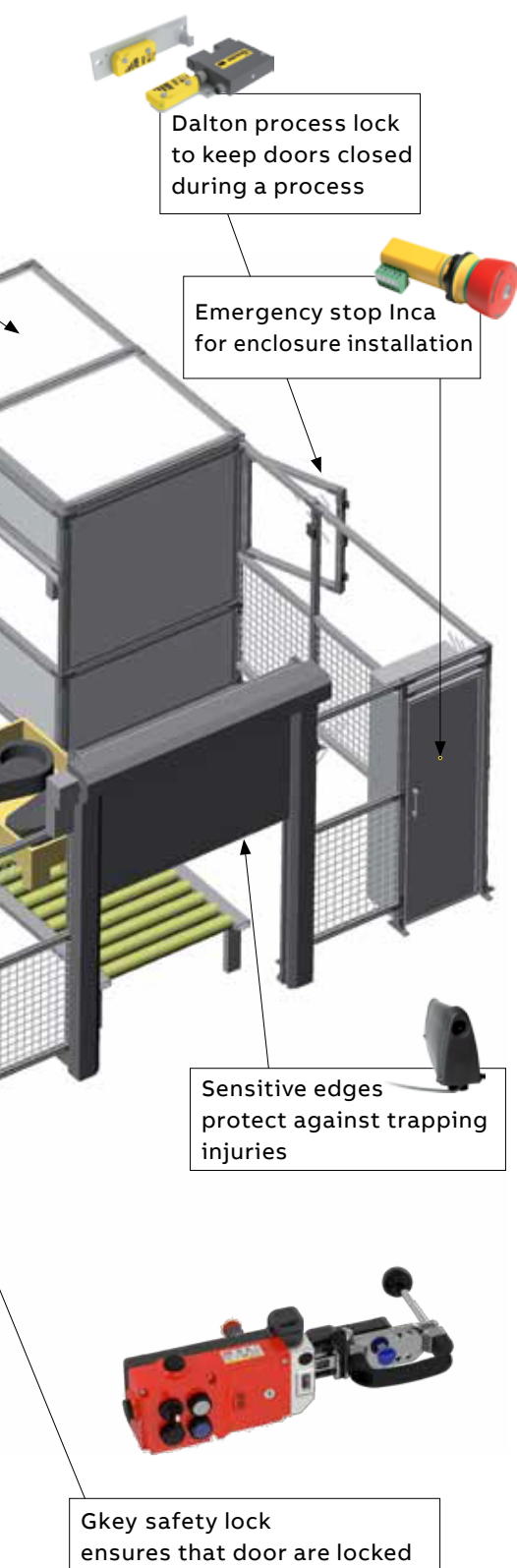
| Ordering details                                                       |                              |              |                 |              |
|------------------------------------------------------------------------|------------------------------|--------------|-----------------|--------------|
| Description                                                            | Rated supply voltage         | Type         | Ordering code   | LP.(₹)       |
| Arc Monitor including one HMI and door mounting accessories            | 24...48V DC                  | TVOC-2-48    | 1SFA664001R1002 | Upon request |
|                                                                        | 100...240V AC/ 100...250V DC | TVOC-2-240   | 1SFA664001R1001 |              |
| Arc Monitor including one COM Module and door mounting accessories     | 24...48V DC                  | TVOC-2-48-C  | 1SFA664001R1004 |              |
|                                                                        | 100...240V AC/ 100...250V DC | TVOC-2-240-C | 1SFA664001R1003 |              |
|                                                                        |                              |              |                 |              |
| Accessories                                                            |                              |              |                 |              |
| Extension-10 optical inputs                                            |                              | TVOC-2-E1    | 1SFA664002R1001 | Upon request |
| Extension-10 optical inputs for cable TVOC-2-DP60 only                 |                              | TVOC-2-E3    | 1SFA664002R3001 |              |
| HMI (Human machine interface)                                          |                              | TVOC-2-H1    | 1SFA664002R1005 |              |
| COM Module-with communication interface (Modbus RTU) and door mounting |                              | TVOC-2-COM   | 1SFA664002R4001 |              |
|                                                                        |                              |              |                 |              |
| Detector                                                               |                              |              |                 |              |
| Cable length                                                           | 1 m                          | TVOC-2-DP1   | 1SFA664003R1010 | Upon Request |
| Cable length                                                           | 2 m                          | TVOC-2-DP2   | 1SFA664003R1020 |              |
| Cable length                                                           | 4 m                          | TVOC-2-DP4   | 1SFA664003R1040 |              |
| Cable length                                                           | 6 m                          | TVOC-2-DP6   | 1SFA664003R1060 |              |
| Cable length                                                           | 8 m                          | TVOC-2-DP8   | 1SFA664003R1080 |              |
| Cable length                                                           | 10 m                         | TVOC-2-DP10  | 1SFA664003R1100 |              |
| Cable length                                                           | 15 m                         | TVOC-2-DP15  | 1SFA664003R1150 |              |
| Cable length                                                           | 20 m                         | TVOC-2-DP20  | 1SFA664003R1200 |              |
| Cable length                                                           | 25 m                         | TVOC-2-DP25  | 1SFA664003R1250 |              |
| Cable length                                                           | 30 m                         | TVOC-2-DP30  | 1SFA664003R1300 |              |
| Cable length (1)                                                       | 60 m                         | TVOC-2-DP60  | 1SFA664003R3600 |              |



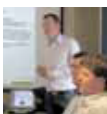
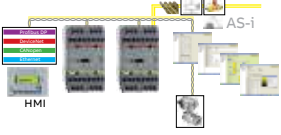
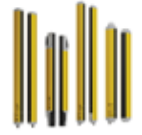
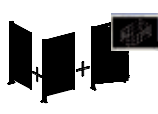
# Production-friendly safety systems

from ABB Jokab Safety





## Product groups

|                                                                                     |                                                                                                                                                                         |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Training &amp; Advice</b><br>Practical application of standards and regulations, along with CE-labelling.                                                            |
|    | <b>Pluto Safety PLC</b><br>A unique All-Master safety PLC for dynamic and static safety circuits.                                                                       |
|    | <b>Pluto AS-i</b><br>Programmable safety system AS-i where all units are connected to the same bus cable and the function of the unit is determined in the PLC program. |
|    | <b>Vital safety controller</b><br>Dynamic safety circuit for multiple protection according to the highest safety category                                               |
|   | <b>Tina adapter units</b><br>Transformation of static signals to dynamic safety signals, etc.                                                                           |
|  | <b>Safety relays</b><br>The market's most flexible safety relays for different protection purposes and categories.                                                      |
|  | <b>Light curtain/light beam/scanner</b><br>Complete range of light beams, light curtains and scanners.                                                                  |
|  | <b>Sensors/switches/locks</b><br>Dynamic non-contact sensors, safety switches, magnetic switches and locks.                                                             |
|  | <b>Control devices</b><br>Ergonomic three-position control units, two-hand control units and foot pedals.                                                               |
|  | <b>Emergency stop devices</b><br>Emergency stop devices for dynamic and static safety circuits.                                                                         |
|  | <b>Contact strips/Bumpers/Safety mats</b><br>Sensitive edges, bumpers and safety mats.                                                                                  |
|  | <b>Fencing systems/SafeCAD/Roller doors</b><br>A stable and flexible fencing system that is easy to install.                                                            |





## Sentry safety relays

| Description                                                                                                                                   | Type          | Ordering code   | L.P.(₹)      |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|--------------|
| 24VDC , Safety/Expansion Relay,3 NO + 1 NC - No Time Delay                                                                                    | SENTRY BSR10  | 2TLA010040R0000 | Upon request |
| 24VDC,Safety/Expansion Relay,4 NO - No Time Delay                                                                                             | SENTRY BSR11  | 2TLA010040R0200 |              |
| 24VDC,Safety/Expansion Relay,4 NO + 1 NC - No Time Delay                                                                                      | SENTRY BSR23  | 2TLA010041R0600 |              |
| 24VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay                                                                             | SENTRY SSR10  | 2TLA010050R0000 |              |
| 85-265VAC/120-275VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay                                                              | SENTRY SSR10M | 2TLA010050R0100 |              |
| 24VDC,Safety Relay with Relay outputs3 NO + 1 NC - No Time Delay                                                                              | SENTRY SSR20  | 2TLA010051R0000 |              |
| 85-265VAC/120-275VDC,Safety Relay with Relay outputs,3 NO + 1 NC - No Time Delay                                                              | SENTRY SSR20M | 2TLA010051R0100 |              |
| 24VDC,Safety Relay with Relay outputs,2 NO + 2 NO (delayed) - OFF-Delay - 0.5 second.                                                         | SENTRY SSR32  | 2TLA010052R0400 |              |
| 24VDC,Safety Relay with Relay outputs,2 NO + 2 NO (delayed) - OFF-Delay - 1.5 seconds.                                                        | SENTRY SSR42  | 2TLA010053R0400 |              |
| 24VDC,safety relay/safety timer with delayable relay outputs,3 NO + 1 NC - Multifunction - 0 ... 999 seconds.                                 | SENTRY TSR10  | 2TLA010060R0000 |              |
| 24VDC,safety expansion timer with delayed relay outputs,3 NO + 1 NC - OFF-Delay - 0.5 and 1.5 seconds.                                        | SENTRY TSR20  | 2TLA010061R0000 |              |
| 85-265VAC/120-275VDC,3 NO + 1 NC - OFF-Delay - 0.5 and 1.5 seconds                                                                            | SENTRY TSR20M | 2TLA010061R0100 |              |
| 24VDC,universal safety relay/safety timer with delayable relay outputs,3 NO + 1 NC - Multifunction - 0 ... 999 seconds.                       | SENTRY USR10  | 2TLA010070R0000 |              |
| 24VDC,universal safety relay/safety timer with relay outputs, 2 NO + 2 delayable NO,2 NO + 2 NO (delayed) - Multifunction - 0 ... 999 seconds | SENTRY USR22  | 2TLA010070R0400 |              |
| Terminal block for Sentry safety relays. One piece,Contact block                                                                              | SENTRY S30A   | 2TLA010099R0000 |              |
| Coding kit for terminal blocks for Sentry safety relays.Should be enough for one Sentry relay,Coding kit                                      | SENTRY S30B   | 2TLA010099R0100 |              |



## Safety controller

| Description                                                                        | Type    | Ordering code   | L.P.(₹)      |
|------------------------------------------------------------------------------------|---------|-----------------|--------------|
| Safety module with one single channel input for dynamic sensors. Relay outputs 2NO | Vital 1 | 2TLA020052R1000 | Upon request |



## Programmable safety controller

| Description                                                                    | Type             | Ordering code   | L.P.(₹)      |
|--------------------------------------------------------------------------------|------------------|-----------------|--------------|
| Pluto AS-i v2 Safety-PLC AS-i bus,Programmable                                 | Pluto Safety PLC | 2TLA020070R1100 | Upon request |
| Pluto B42 AS-i, Safety-PLC AS-i bus, 42                                        | Pluto Safety PLC | 2TLA020070R1400 |              |
| Pluto B46 v2 Safety-PLC 24+16+4+2                                              | Pluto Safety PLC | 2TLA020070R1700 |              |
| Pluto S46 v2 Safety PLC 24+16+4+2 No BUS                                       | Pluto Safety PLC | 2TLA020070R1800 |              |
| Pluto A20 v2, Safety-PLC                                                       | Pluto Safety PLC | 2TLA020070R4500 |              |
| Pluto B20 v2, Safety-PLC                                                       | Pluto Safety PLC | 2TLA020070R4600 |              |
| Pluto S20 v2, Safety-PLC                                                       | Pluto Safety PLC | 2TLA020070R4700 |              |
| Pluto B22 Safety-PLC                                                           | Pluto Safety PLC | 2TLA020070R4800 |              |
| Pluto D20 Safety-PLC                                                           | Pluto Safety PLC | 2TLA020070R6400 |              |
| Pluto D20 Safety PLC, Harsh environment                                        | Pluto Safety PLC | 2TLA020070R6401 |              |
| Pluto D45 Safety-PLC                                                           | Pluto Safety PLC | 2TLA020070R6600 |              |
| Pluto D45 Safety PLC, Harsh environment                                        | Pluto Safety PLC | 2TLA020070R6601 |              |
| Pluto O2 Safety PLC output module with Pluto safety bus. Safety output module. | Pluto Safety PLC | 2TLA020070R8500 |              |



# ABB jokab safety



## Gateway for communication

| Description                                                                                                                | Type     | Ordering code   | L.P.(₹)      |
|----------------------------------------------------------------------------------------------------------------------------|----------|-----------------|--------------|
| Gateway for 2-way communication between the Pluto bus and Profibus                                                         | GATE-P2  | 2TLA020071R8000 | Upon request |
| Gateway for 2-way communication between the Pluto bus and CANopen.                                                         | GATE-C2  | 2TLA020071R8100 |              |
| Gateway for 2-way communication between the Pluto bus and Devicenet                                                        | GATE-D2  | 2TLA020071R8200 |              |
| Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocols: Profinet, Ethernet I/P, Modbus TCP | GATE-E2  | 2TLA020071R8300 |              |
| Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol EtherNet I/P.                        | GATE-EIP | 2TLA020071R9000 |              |
| Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol EtherCAT.                            | GATE-EC  | 2TLA020071R9100 |              |
| Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol SERCOS III.                          | GATE-S3  | 2TLA020071R9200 |              |
| Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol PROFINET.                            | GATE-PN  | 2TLA020071R9300 |              |
| Gateway for 2-way communication between the Pluto bus and Ethernet. Ethernet protocol Modbus TCP.                          | GATE-MT  | 2TLA020071R9400 |              |



## Safe input slave for AS-i bus

| Description                                                                                                                                                                                | Type     | Ordering code   | L.P.(₹)      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|--------------|
| Safe input slave for AS-i bus for DYNlink devices + 1 non-safe output. Ex. of devices: Eden DYN. Up to three devices in series                                                             | URAX-A1  | 2TLA020072R0000 | Upon request |
| Safe input slave for AS-i bus for DYNlink devices + 1 non-safe output + input for local reset. Ex. of devices: Eden DYN. Up to 3 devices in series.                                        | URAX-A1R | 2TLA020072R0100 |              |
| Safe input slave for AS-i bus for DYNlink devices+ 3 non-safe outputs + input for local reset. Ex. of devices: Magne, Knox and Dalton. Up to 10 devices in series. Black AS-i cable needed | URAX-B1R | 2TLA020072R0200 |              |
| Safe input slave for AS-i bus for safety devices with two potential free contacts, NO+NO or NO+NC, like emergency stop buttons and safety switches. Ex. of devices: Smile and Mkey.        | URAX-C1  | 2TLA020072R0300 |              |
| Safe input slave for AS-i bus for safety devices with two potential free contacts (NO+NO or NO+NC) + input for local reset. Ex. of devices: emergency stop buttons and safety switches.    | URAX-C1R | 2TLA020072R0400 |              |
| Safe input slave for AS-i bus for devices with OSSD outputs + 3 non-safe outputs + input for local reset. Ex. of devices: Orion light guards. Black AS-i cable needed.'                    | URAX-D1R | 2TLA020072R0500 |              |
| Safe input slave for AS-i bus for two-hand control devices according to EN 574 type IIIC.                                                                                                  | URAX-E1  | 2TLA020072R0600 |              |



## Safety and process locks

| Description                                                                | Type | Ordering code   | L.P.(₹)      |
|----------------------------------------------------------------------------|------|-----------------|--------------|
| GKey4 RU Safety lock, 4 positions, die-cast, escape release, manual unlock |      | 2TLA050304R0002 | Upon request |
| FHS GKey4 Front handle, sliding incl. mounting plate for GKey4             |      | 2TLA050310R0032 |              |
| RHS GKey Mkey Rear handle, sliding                                         |      | 2TLA050040R0510 |              |
| SCS GKey Mkey Spring loaded catch                                          |      | 2TLA050040R0511 |              |



Orion1 Base

## Safety light curtains/Grids

| Description                                                                                                       | Type              | Ordering code   | L.P.(₹)      |
|-------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------|
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=150mm, Range=0.2-6m, Type 4  | Orion1-4-14-015-B | 2TLA022300R0000 | Upon request |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=300mm, Range=0.2-6m, Type 4. | Orion1-4-14-030-B | 2TLA022300R0100 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=450mm, Range=0.2-6m, Type 4. | Orion1-4-14-045-B | 2TLA022300R0200 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=600mm, Range=0.2-6m, Type 4. | Orion1-4-14-060-B | 2TLA022300R0300 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=750mm, Range=0.2-6m, Type 4. | Orion1-4-14-075-B | 2TLA022300R0400 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=900mm, Range=0.2-6m, Type 4. | Orion1-4-14-090-B | 2TLA022300R0500 |              |



Orion1  
Extended

| Description                                                                                                            | Type              | Ordering code   | L.P.(₹)      |
|------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------|
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1050mm, Range=0.2-6m, Type 4.     | Orion1-4-14-105-B | 2TLA022300R0600 | Upon request |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1200mm, Range=0.2-6m, Type 4.     | Orion1-4-14-120-B | 2TLA022300R0700 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1350mm, Range=0.2-6m, Type 4.     | Orion1-4-14-135-B | 2TLA022300R0800 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1500mm, Range=0.2-6m, Type 4.     | Orion1-4-14-150-B | 2TLA022300R0900 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1650mm, Range=0.2-6m, Type 4.     | Orion1-4-14-165-B | 2TLA022300R1000 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1800mm, Range=0.2-6m, Type 4.     | Orion1-4-14-180-B | 2TLA022300R1100 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=300mm, Range=0.2-7m, Type 4.  | Orion1-4-14-030-E | 2TLA022301R0100 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=450mm, Range=0.2-7m, Type 4.  | Orion1-4-14-045-E | 2TLA022301R0200 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=600mm, Range=0.2-7m, Type 4.  | Orion1-4-14-060-E | 2TLA022301R0300 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=750mm, Range=0.2-7m, Type 4.  | Orion1-4-14-075-E | 2TLA022301R0400 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=900mm, Range=0.2-7m, Type 4.  | Orion1-4-14-090-E | 2TLA022301R0500 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1050mm, Range=0.2-7m, Type 4. | Orion1-4-14-105-E | 2TLA022301R0600 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1200mm, Range=0.2-7m, Type 4. | Orion1-4-14-120-E | 2TLA022301R0700 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1350mm, Range=0.2-7m, Type 4. | Orion1-4-14-135-E | 2TLA022301R0800 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1500mm, Range=0.2-7m, Type 4. | Orion1-4-14-150-E | 2TLA022301R0900 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1650mm, Range=0.2-7m, Type 4. | Orion1-4-14-165-E | 2TLA022301R1000 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=14mm, Protected height=1800mm, Range=0.2-7m, Type 4. | Orion1-4-14-180-E | 2TLA022301R1100 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=150mm, Range=0.2-19m, Type 4.     | Orion1-4-30-015-B | 2TLA022302R0000 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=300mm, Range=0.2-19m, Type 4.     | Orion1-4-30-030-B | 2TLA022302R0100 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=450mm, Range=0.2-19m, Type 4.     | Orion1-4-30-045-B | 2TLA022302R0200 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=600mm, Range=0.2-19m, Type 4.     | Orion1-4-30-060-B | 2TLA022302R0300 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=750mm, Range=0.2-19m, Type 4.     | Orion1-4-30-075-B | 2TLA022302R0400 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=900mm, Range=0.2-19m, Type 4.     | Orion1-4-30-090-B | 2TLA022302R0500 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1050mm, Range=0.2-19m, Type 4.    | Orion1-4-30-105-B | 2TLA022302R0600 |              |



| Description                                                                                                             | Type              | Ordering code   | L.P.(₹)      |
|-------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------|
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1200mm, Range=0.2-19m, Type 4.     | Orion1-4-30-120-B | 2TLA022302R0700 | Upon request |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1350mm, Range=0.2-19m, Type 4.     | Orion1-4-30-135-B | 2TLA022302R0800 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1500mm, Range=0.2-19m, Type 4.     | Orion1-4-30-150-B | 2TLA022302R0900 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1650mm, Range=0.2-19m, Type 4.     | Orion1-4-30-165-B | 2TLA022302R1000 |              |
| Orion1 Base Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1800mm, Range=0.2-19m, Type 4.     | Orion1-4-30-180-B | 2TLA022302R1100 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=300mm, Range=0.2-20m, Type 4.  | Orion1-4-30-030-E | 2TLA022303R0100 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=450mm, Range=0.2-20m, Type 4.  | Orion1-4-30-045-E | 2TLA022303R0200 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=600mm, Range=0.2-20m, Type 4.  | Orion1-4-30-060-E | 2TLA022303R0300 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=750mm, Range=0.2-20m, Type 4.  | Orion1-4-30-075-E | 2TLA022303R0400 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=900mm, Range=0.2-20m, Type 4.  | Orion1-4-30-090-E | 2TLA022303R0500 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1050mm, Range=0.2-20m, Type 4. | Orion1-4-30-105-E | 2TLA022303R0600 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1200mm, Range=0.2-20m, Type 4. | Orion1-4-30-120-E | 2TLA022303R0700 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1350mm, Range=0.2-20m, Type 4. | Orion1-4-30-135-E | 2TLA022303R0800 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1500mm, Range=0.2-20m, Type 4. | Orion1-4-30-150-E | 2TLA022303R0900 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1650mm, Range=0.2-20m, Type 4. | Orion1-4-30-165-E | 2TLA022303R1000 |              |
| Orion1 Extended Light Curtain, Transmitter + Receiver, Resolution=30mm, Protected height=1800mm, Range=0.2-20m, Type 4. | Orion1-4-30-180-E | 2TLA022303R1100 |              |
| Orion2 Base Light Grids, Transmitter + Receiver, 2 beams, Protected height=500mm, Range=0.5-50m, Type 4.                | Orion2-4-K2-050-B | 2TLA022304R0000 |              |
| Orion2 Base Light Grids, Transmitter + Receiver, 2 beams, Protected height=800mm, Range=0.5-50m, Type 4.                | Orion2-4-K2-080-B | 2TLA022304R0100 |              |
| Orion2 Base Light Grids, Transmitter + Receiver, 2 beams, Protected height=900mm, Range=0.5-50m, Type 4.                | Orion2-4-K2-090-B | 2TLA022304R0200 |              |
| Orion2 Base Light Grids, Transmitter + Receiver, 4 beams, Protected height=1200mm, Range=0.5-50m, Type 4.               | Orion2-4-K4-120-B | 2TLA022304R0300 |              |
| Orion2 Extended Light Grids, Transmitter + Receiver, 2 beams, Protected height=500mm, Range=0.5-50m, Type 4.            | Orion2-4-K2-050-E | 2TLA022305R0000 |              |
| Orion2 Extended Light Grids, Transmitter + Receiver, 2 beams, Protected height=800mm, Range=0.5-50m, Type 4.            | Orion2-4-K2-080-E | 2TLA022305R0100 |              |
| Orion2 Extended Light Grids, Transmitter + Receiver, 2 beams, Protected height=900mm, Range=0.5-50m, Type 4.            | Orion2-4-K2-090-E | 2TLA022305R0200 |              |
| Orion2 Extended Light Grids, Transmitter + Receiver, 2 beams, Protected height=1200mm, Range=0.5-50m, Type 4.           | Orion2-4-K2-120-E | 2TLA022305R0300 |              |

# ABB jokab safety



Orion3 Base  
and Orion3  
extended

| Description                                                                                       | Type                | Ordering code   | L.P.(₹)      |
|---------------------------------------------------------------------------------------------------|---------------------|-----------------|--------------|
| Orion3 Base Light Grids, Active unit, 2 beams, Protected height=500mm, Range=0.5-8m, Type 4.      | Orion3-4-K1C-050-B  | 2TLA022306R0000 | Upon request |
| Orion3 Base Light Grids, Active unit, 3 beams, Protected height=800mm, Range=0.5-8m, Type 4.      | Orion3-4-K2C-080-B  | 2TLA022306R0100 |              |
| Orion3 Base Light Grids, Active unit, 3 beams, Protected height=800mm, Range=0.5-8m, Type 4.      | Orion3-4-K2C-090-B  | 2TLA022306R0200 |              |
| Orion3 Base Light Grids, Active unit, 3 beams, Protected height=800mm, Range=0.5-8m, Type 4.      | Orion3-4-K2C-1200-B | 2TLA022306R0300 |              |
| Orion3 Light Grids, Passive unit, 2 beams, Protected height=500mm.                                | Orion3-4-M1C-050    | 2TLA022306R1000 |              |
| Orion3 Light Grids, Passive unit, 2 beams, Protected height=800mm.                                | Orion3-4-M1C-080    | 2TLA022306R1100 |              |
| Orion3 Light Grids, Passive unit, 2 beams, Protected height=900mm.                                | Orion3-4-M1C-090    | 2TLA022306R1300 |              |
| Orion3 Light Grids, Passive unit, 2 beams, Protected height=1200mm.                               | Orion3-4-M1C-120    | 2TLA022306R1400 |              |
| Orion3 Extended Light Grids, Active unit, 2 beams, Protected height=500mm, Range=0.5-8m, Type 4.  | Orion3-4-K1C-050-E  | 2TLA022307R0000 |              |
| Orion3 Extended Light Grids, Active unit, 2 beams, Protected height=800mm, Range=0.5-8m, Type 4.  | Orion3-4-K1C-080-E  | 2TLA022307R0100 |              |
| Orion3 Extended Light Grids, Active unit, 2 beams, Protected height=900mm, Range=0.5-8m, Type 4.  | Orion3-4-K1C-090-E  | 2TLA022307R0200 |              |
| Orion3 Extended Light Grids, Active unit, 2 beams, Protected height=1200mm, Range=0.5-8m, Type 4. | Orion3-4-K1C-120-E  | 2TLA022307R0300 |              |

## Safeball one/two hands operates



| Description                                                                                       | Type      | Ordering code   | L.P.(₹)      |
|---------------------------------------------------------------------------------------------------|-----------|-----------------|--------------|
| JSTD1-A Safeballs each have 1NO & 1NC independent switches, maximum load of 30VDC - 2A resistive. | JSTD1-A   | 2TLA020007R3000 | Upon request |
| JSTD1-B Safeballs each have 1NO & 1NC independent switches, maximum load of 30VDC - 2A resistive. | JSTD1-B   | 2TLA020007R3100 |              |
| JSTD1-C Safeballs each have 1NO & 1NC independent switches, maximum load of 30VDC - 2A resistive. | JSTD1-C   | 2TLA020007R3200 |              |
| JSTD1-E Safeballs each have 2NO independent switches, maximum load of 30VDC - 2A resistive.       | JSTD1-E   | 2TLA020007R3400 |              |
| JSTD25F Twohand station, 5-pole M12 Male                                                          | JSTD25F   | 2TLA020007R6000 |              |
| JSTD25H Twohand station, 8-pole M12 Male                                                          | JSTD25H   | 2TLA020007R6300 |              |
| JSTD25P-1 Twohand station                                                                         | JSTD25P-1 | 2TLA020007R6500 |              |





## Three positional safety device

| Description                                                                                                                                                               | Type         | Ordering code   | L.P.(₹)      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|--------------|
| Three-position device. Top part with no LED, no extra buttons. Bottom part with cable gland.                                                                              | JSHD4-1-AA   | 2TLA019995R0000 | Upon request |
| Three-position device. Top part with no LED, no extra buttons. Bottom part with M12-5 connector.                                                                          | JSHD4-1-AC   | 2TLA019995R0100 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with Cannon connector.                                                                | JSHD4-2-AB   | 2TLA019995R0200 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with Cannon connector and anti-tamper PCB.                                            | JSHD4-2-AB-A | 2TLA019995R0300 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with M12-8 connector.                                                                 | JSHD4-2-AD   | 2TLA019995R0400 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with M12-8 connector and anti-tamper PCB.                                             | JSHD4-2-AD-A | 2TLA019995R0500 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with M12-5 connector and 2 AS-i nodes (for front and top button).                     | JSHD4-2-AF   | 2TLA019995R0600 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with M12-5 connector and 2 AS-i nodes (for front and top button) and anti-tamper PCB. | JSHD4-2-AF-A | 2TLA019995R0700 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with cable gland and PCB with 10 screw connections.                                   | JSHD4-2-AH   | 2TLA019995R0800 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with cable gland and PCB with 10 screw connections and anti-tamper PCB.               | JSHD4-2-AH-A | 2TLA019995R0900 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with cable gland and PCB with 16 screw connections.                                   | JSHD4-2-AJ   | 2TLA019995R1000 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with cable gland and PCB with 16 screw connections and anti-tamper PCB.               | JSHD4-2-AJ-A | 2TLA019995R1100 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with Cannon connector.                                                                        | JSHD4-3-AB   | 2TLA019995R1200 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with Cannon connector and anti-tamper PCB.                                                    | JSHD4-3-AB-A | 2TLA019995R1300 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with M12-8 connector.                                                                         | JSHD4-3-AD   | 2TLA019995R1400 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with M12-8 connector and anti-tamper PCB.                                                     | JSHD4-3-AD-A | 2TLA019995R1500 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with M12-8 connector and emergency stop.                                                      | JSHD4-3-AE   | 2TLA019995R1600 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with M12-5 connector and 2 AS-i nodes (for front and top button).                             | JSHD4-3-AF   | 2TLA019995R1700 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with M12-5 connector and 2 AS-i nodes (for front and top button) and anti-tamper PCB          | JSHD4-3-AF-A | 2TLA019995R1800 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with M12-5 connector and 1 AS-i node (without front and top button                            | JSHD4-3-AG   | 2TLA019995R1900 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with cable gland and PCB with 10 screw connections.                                           | JSHD4-3-AH   | 2TLA019995R2000 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with cable gland and PCB with 10 screw connections.                                           | JSHD4-3-AH-A | 2TLA019995R2100 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with cable gland and PCB with 16 screw connections.                                           | JSHD4-3-AJ   | 2TLA019995R2200 |              |



# ABB jokab safety

| Description                                                                                                                                                                                 | Type         | Ordering code   | L.P.(₹)      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|--------------|
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with cable gland and PCB with 16 screw connections and anti-tamper PCB.                                         | JSHD4-3-AJ-A | 2TLA019995R2300 | Upon request |
| Three-position device. Top part with LEDs and front button. Bottom part with Cannon connector.                                                                                              | JSHD4-4-AB   | 2TLA019995R2400 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with Cannon connector and anti-tamper PCB.                                                                          | JSHD4-4-AB-A | 2TLA019995R2500 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with M12-8 connector.                                                                                               | JSHD4-4-AD   | 2TLA019995R2600 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with M12-8 connector and anti-tamper PCB.                                                                           | JSHD4-4-AD-A | 2TLA019995R2700 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with M12-5 connector and 2 AS-i nodes (for front and top button).                                                   | JSHD4-4-AF   | 2TLA019995R2800 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with M12-5 connector and 2 AS-i nodes (for front and top button) and anti-tamper PCB.                               | JSHD4-4-AF-A | 2TLA019995R2900 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with cable gland and PCB with 10 screw connection.                                                                  | JSHD4-4-AH   | 2TLA019995R3000 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with cable gland and PCB with 10 screw connection and anti-tamper PCB.                                              | JSHD4-4-AH-A | 2TLA019995R3100 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with cable gland and PCB with 16 screw connections.                                                                 | JSHD4-4-AJ   | 2TLA019995R3200 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with cable gland and PCB with 16 screw connections and anti-tamper PCB.                                             | JSHD4-4-AJ-A | 2TLA019995R3300 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with Cannon connector.                                                                                                | JSHD4-5-AB   | 2TLA019995R3400 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with Cannon connector and anti-tamper PCB.                                                                            | JSHD4-5-AB-A | 2TLA019995R3500 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with M12-8 connector.                                                                                                 | JSHD4-5-AD   | 2TLA019995R3600 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with M12-8 connector and anti-tamper PCB.                                                                             | JSHD4-5-AD-A | 2TLA019995R3700 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with M12-5 connector and 2 AS-i nodes (for front and top button).                                                     | JSHD4-5-AF   | 2TLA019995R3800 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with M12-5 connector and 2 AS-i nodes (for front and top button) and anti-tamper PCB.                                 | JSHD4-5-AF-A | 2TLA019995R3900 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with cable gland and PCB with 10 screw connection.                                                                    | JSHD4-5-AH   | 2TLA019995R4000 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with cable gland and PCB with 10 screw connection and anti-tamper PCB.                                                | JSHD4-5-AH-A | 2TLA019995R4100 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with cable gland and PCB with 16 screw connections.                                                                   | JSHD4-5-AJ   | 2TLA019995R4200 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with cable gland and PCB with 16 screw connections and anti-tamper PCB.                                               | JSHD4-5-AJ-A | 2TLA019995R4300 |              |
| Three-position device. Top part with no LED, no extra buttons. Bottom part with cable gland and holder for Eva safety sensor.                                                               | JSHD4-1-AL   | 2TLA019995R4700 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with Cannon connector. Mainly for replacement of older non modular JSHD4 enabling device (Jokab brand). | JSHD4-2-AK   | 2TLA019995R4800 |              |
| Three-position device. Top part with LEDs, front button and top button. Bottom part with cable gland and holder for Eva safety sensor.                                                      | JSHD4-2-AL   | 2TLA019995R4900 |              |

| Description                                                                                                                                                                         | Type         | Ordering code   | L.P.(₹)      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|--------------|
| Three-position device. Top part with LEDs, front button and top button. Bottom part with cable gland, anti-tamper PCB and holder for Eva safety sensor.                             | JSHD4-2-AL-A | 2TLA019995R5000 | Upon request |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with Cannon connector. Mainly for replacement of older non modular JSHD4 enabling device (Jokab brand). | JSHD4-3-AK   | 2TLA019995R5100 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with cable gland and holder for Eva safety sensor.                                                      | JSHD4-3-AL   | 2TLA019995R5200 |              |
| Three-position device. Top part with LEDs and no extra buttons. Bottom part with cable gland, anti-tamper PCB and holder for Eva safety sensor.                                     | JSHD4-3-AL-A | 2TLA019995R5300 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with Cannon connector.                                                                                      | JSHD4-4-AK   | 2TLA019995R5400 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with cable gland and holder for Eva safety sensor.                                                          | JSHD4-4-AL   | 2TLA019995R5500 |              |
| Three-position device. Top part with LEDs and front button. Bottom part with cable gland, anti-tamper PCB and holder for Eva safety sensor.                                         | JSHD4-4-AL-A | 2TLA019995R5600 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with Cannon connector.                                                                                        | JSHD4-5-AK   | 2TLA019995R5700 |              |
| Three-position device. Top part with LEDs and top button. Bottom part with cable gland and holder for Eva safety sensor.                                                            | JSHD4-5-AL   | 2TLA019995R5800 |              |

## Emergency Stop Sign

| Description                                                                | Type              | Ordering code   | L.P.(₹)      |
|----------------------------------------------------------------------------|-------------------|-----------------|--------------|
| Elevated yellow surround for panel mounted emergency stop button.          | Surround for Inca | 2TLA030054R0400 | Upon request |
| Yellow surround for panel mounted emergency stop button, for 22.5 mm hole. | E-Sign 22.5       | 2TLA030054R0900 |              |
| Yellow surround for panel mounted emergency stop button, for 32.5 mm hole. | E-Sign 32.5       | 2TLA030054R1000 |              |

## Emergency Stop Button

| Description                                                                                                                                                                                                                                                  | Type               | Ordering code   | L.P.(₹)      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|--------------|
| Emergency stop button for panel mounting, 22.5 mm holes, Tina adaptation to DYNlink and StatusBus functionality, Indication LED in button, detachable terminal blocks.                                                                                       | Inca 1 EC Tina     | 2TLA030054R1400 | Upon request |
| Push button box according to Smile design with 4 buttons. The box is adapted for AS-i system. The buttons have programable status LED in button. Connection via a M12 5-pin male connector.                                                                  | Smile 41 WWWWN Asi | 2TLA030056R0000 |              |
| Push button box according to Smile design with 4 buttons, one of which is an emergency stop. The box is adapted for AS-i system. The buttons have programable status LED in button. Connection via a M12 5-pin male connector.                               | Smile 41 EWWWA Asi | 2TLA030056R0100 |              |
| Push button box according to Smile design with 4 buttons, one of which is an emergency stop and another a safe key switch. The box is adapted for AS-i system. The buttons have programable status LED in button. Connection via a M12 5-pin male connector. | Smile 41 EKWWA Asi | 2TLA030056R0200 |              |
| Push button box according to Smile design with 4 buttons. The box is adapted for connection to Pluto IQ using lightbutton function. Connection via a M12 8-pin male connector.                                                                               | Smile 41 WWWWP     | 2TLA030057R0000 |              |
| Push button box according to Smile design with 4 buttons, one of which is an emergency stop. The box is adapted for connection to Pluto IQ using lightbutton function. Connection via a M12 8-pin male connector.                                            | Smile 41 EWWWP     | 2TLA030057R0100 |              |

# ABB jokab safety



## Emergency stop grab wire safety switch

| Description                                                                                                                                                                                     | Type                                  | Ordering code   | L.P.(₹)      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------|--------------|
| Emergency stop grab wire safety switch, 2NC + 2NO, Up to 50m length, die cast housing, Conduit entry 3xM20                                                                                      | LineStrong1                           | 2TLA050200R0030 | Upon request |
| Emergency stop grab wire safety switch, 2NC + 2NO, Up to 100m length, stainless steel 316 body, LED status indication, Conduit entry 3xM20                                                      | LineStrong2Z                          | 2TLA050202R0322 |              |
| Emergency stop grab wire safety switch, 2NC + 2NO, Up to 80m length, yellow die cast housing, LED status indication, Conduit entry 3xM20                                                        | LineStrong2                           | 2TLA050202R0332 |              |
| Emergency stop grab wire safety switch for explosion proof environment, 2NC, Up to 100m length, stainless steel 316 body, pre-wired with 3m cable.                                              | LineStrong2ZX                         | 2TLA050202R7125 |              |
| Emergency stop grab wire safety switch, 4NC + 4NO, Entries from both sides of the grab wire switch, Up to 250m length, Stainless steel 316 housing, LED status indication, Conduit entry 3xM20. | LineStrong3DZ                         | 2TLA050204R0322 |              |
| Emergency stop grab wire safety switch, 4NC + 4NO, Entries from both sides of the grab wire switch, Up to 250m length, yellow die cast housing, LED status indication, Conduit entry 3xM20      | LineStrong3D                          | 2TLA050204R0332 |              |
| Emergency stop, 2NC/2NO, stainless steel 316 body, Conduit entry 3xM20                                                                                                                          | EstrongZ E-Stop 2NC/2NO, M20, SS      | 2TLA050220R0020 |              |
| EstrongZX E-Stop 2NC, 3m, SS, Explosion proof                                                                                                                                                   | EstrongZ, EX                          | 2TLA050220R0025 |              |
| Emergency stop, 2NC/2NO, stainless steel 316 body, LED status indication, Conduit entry 3xM20                                                                                                   | EstrongZ E-Stop 2NC/2NO, M20, SS, LED | 2TLA050220R0222 |              |



## Safety bumper

| Description                                                                                                                       | Type              | Ordering code   | L.P.(₹)      |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------|
| Applies to all bumpers, independent on legth. Special shape can be orderd on request. NOTE: Maximum legth of a bumper is 3000 mm. | ASB CM Base price | 2TLA076200R0000 | Upon request |
| Width 53 mm, Height 100 mm, Black/Yellow, meter                                                                                   | ASB 53/100 B/Y    | 2TLA076200R0500 |              |
| Width 200 mm, Height 400 mm, Black/Yellow, meter                                                                                  | ASB 200/400 B/Y   | 2TLA076200R0800 |              |



## Safety mats

| Description                                                                                                                                                                            | Type               | Ordering code   | L.P.(₹)      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|--------------|
| Safety mat Custom made Special                                                                                                                                                         | Safety mat CM Spec | 2TLA076300R0000 | Upon request |
| Applies for custom safety mats ASK-1U4 model, except for special surface (See 2TLA076300R0000) Special shape can be orderd on request. NOTE: Maximum safeguarded area is 2350x1350 mm. | ASK-1U4.4-NP CM BA | 2TLA076301R0000 |              |
| Applies for custom made safety mats ASK-1T4 model. Special shape can be orderd on request. NOTE: Maximum safeguarded area is 2350x1350 mm.                                             | ASK-1T4.4-NP CM BA | 2TLA076301R0200 |              |
| Safety mat ASK-1U4.4-NP, No ramp edge trim, safeguarded area is 1000 x 750 mm, incl. 5 + 5 m cables.                                                                                   | ASK-1U4.4-NP 1x.75 | 2TLA076310R0500 |              |
| Safety mat ASK-1T4.4-NP, cast-in ramp edge trim, safeguarded area is 1000 x 1500 mm, incl. 5 + 5 m cables.                                                                             | ASK-1T4.4-NP 1x1.5 | 2TLA076310R1200 |              |

## Safety contact edges

| Description                                                                                                     | Type              | Ordering code   | L.P.(₹)      |
|-----------------------------------------------------------------------------------------------------------------|-------------------|-----------------|--------------|
| Aluminum profile for safety edge GE and GP for T-base. Width 25 mm, height 14 mm.                               | AL 25-14          | 2TLA076002R0200 | Upon request |
| It's necessary to add these cables to the desired length. For GP safety edges.                                  | Cable LIYY 2x0.34 | 2TLA076002R1800 |              |
| GE series safety edge. EPDM part in meters, 25 mm width, 25 mm height, with T-base.                             | GE 25-25 EPDM     | 2TLA076005R0200 |              |
| GE series safety edge. EPDM part in meters, 25 mm width, 45 mm height, with T-base.                             | GE 25-45 EPDM     | 2TLA076005R0400 |              |
| GE series safety edge. KS 6 is an end connection for GE safety edges wider than 25 mm. Cable length 0.5 meters. | GE KS6 0.5M       | 2TLA076005R4000 |              |

## Spot sensors

| Description                                                                     | Type    | Ordering code   | L.P.(₹)      |
|---------------------------------------------------------------------------------|---------|-----------------|--------------|
| Safety light beam for up to 10 m distance. M18 steel casing with M12 connector. | Spot 10 | 2TLA020009R0600 | Upon request |

## Spot sensors

| Description                                                                                                                                                                           | Type                             | Ordering code   | L.P.(₹)      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------|--------------|
| Eva actuator for use with Adam sensors in the Eden sensor system, IP67, yellow, 4pcs of DA2 spacer rings are included.                                                                | Eva Actuator                     | 2TLA020046R0000 | Upon request |
| Eva actuator with general code for use with Adam DYN/OSSD sensors in the Eden sensor system, IP69K, yellow, 4pcs of DA 2B spacer rings are included.                                  | Eva General code                 | 2TLA020046R0800 |              |
| Eva actuator with unique code for use with Adam DYN/OSSD sensors in the Eden sensor system, IP69K, yellow, 4pcs of DA 2B spacer rings are included.                                   | Eva Unique code                  | 2TLA020046R0900 |              |
| Eva actuator for use with Adam sensors, encapsulated in polyurethane for harsh environments, IP69K, yellow.                                                                           | Eva E                            | 2TLA020046R0600 |              |
| Eva actuator for use with Adam sensors, encapsulated in polyurethane for harsh environments, IP69K, grey.                                                                             | Eva E Grey                       | 2TLA020046R0700 |              |
| Eva actuator for use with Adam AS-i sensors in the Eden sensor system, IP69K, yellow, 4pcs of DA2 spacer rings are included.                                                          | Eva AS-i                         | 2TLA020051R8000 |              |
| Adam safety sensor unit with a fixed M12 male connector, IP67, yellow, 4pcs of DA1 protection plate and 4pcs of DA2 spacer rings are included.                                        | Adam M12                         | 2TLA020051R0000 |              |
| Adam safety sensor unit with a fixed M12 male connector, IP67, grey, 4pcs of DA1 protection plate and 4pcs of DA2 spacer rings are included.                                          | Adam M12, Grey                   | 2TLA020051R0100 |              |
| Adam safety sensor unit, encapsulated in polyurethane for harsh environments with 1m of cable (5 x 0.34 mm2 + screen) and M12, IP69K.                                                 | Adam E 1M                        | 2TLA020051R0900 |              |
| Adam safety sensor unit, encapsulated in polyurethane for harsh environments with 10m of cable (5 x 0.34 mm2 + screen) and M12, IP69K, yellow.                                        | Adam E 10m cable with M12        | 2TLA020051R0600 |              |
| Adam safety sensor unit with OSSD signals and information output. M12-5 male connector, IP69K, yellow. 4pcs of DA 1B distance plates and 4pcs of DA 2B distance rings are included.   | Adam OSSD-Info M12-5             | 2TLA020051R5400 |              |
| Adam safety sensor unit with OSSD signals and reset with indication. M12-5 male connector, IP69K, yellow. 4pcs of DA 1B distance plates and 4pcs of DA 2B distance rings are included | Adam OSSD-Reset M12-5            | 2TLA020051R5600 |              |
| Adam safety sensor unit with OSSD signals and information output. M12-8 male connector, IP69K, yellow. 4pcs of DA 1B distance plates and 4pcs of DA 2B distance rings are included.   | Adam OSSD-Info M12-8 connector   | 2TLA020051R5700 |              |
| Adam safety sensor unit, encapsulated in polyurethane for harsh environments with 0.5m of cable (5 x 0.34 mm2 + screen) and M12, IP69K, grey.                                         | Adam E 0,5m cable with M12, Grey | 2TLA020051R4000 |              |
| Adam safety sensor unit, encapsulated in polyurethane for harsh environments with 10m of cable (5 x 0.34 mm2 + screen) and M12, IP69K, grey.                                          | Adam E 10m cable with M12, Grey  | 2TLA020051R4100 |              |
| Adam safety sensor unit with AS-i node. M12-4 male connector, IP69K, yellow. 4pcs of DA 1 distance plates and 4pcs of DA 2B distance rings are included.                              | Adam AS-i M12-4 connector        | 2TLA020051R6000 |              |

# ABB jokab safety

## Interlock switches



| Description                                                                                                                                            | Type        | Ordering code   | L.P.(₹)      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|--------------|
| Safety interlock switch, 2NC+1NO, plastic body and head, 3xM20 conduit entries, 12N holding force. Delivered with standard key.                        | MKey5       | 2TLA050003R0100 | Upon request |
| Safety interlock switch, plastic body and head, 3xM20 conduit entries, 40N holding force. Delivered with standard key.                                 | MKey5+      | 2TLA050003R0101 |              |
| Safety interlock switch, plastic body and stainless steel head, 3xM20 conduits entries, 12N holding force. Delivered with standard key.                | MKey5 SSH   | 2TLA050003R0110 |              |
| Safety interlock switch, plastic body and stainless steel head, 3xM20 conduits entries, 40N holding force. Delivered with standard key.                | MKey5+ SSH  | 2TLA050003R0111 |              |
| Safety Interlock Switch, 2NC/NO, Full stainless steel, 3xM20 Conduits entries, 12N Holding force, Standard Key.                                        | MKey5Z      | 2TLA050003R0120 |              |
| Safety interlock switch, rugged polyester housing and stainless steel head, 1xM20 Conduit entry, +24 VDC power to unlock. Delivered with standard key. | MKey9 24VDC | 2TLA050007R0112 |              |
| Flexible key for MKey safety switches. Stainless steel 316 key, die cast metal housing.                                                                | MKey Key 5  | 2TLA050040R0203 |              |



## Fencing system – Quick-Guard

| Description                                                                                                                                      | Type       | Ordering code   | L.P.(₹)      |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|--------------|
| Aluminum post 44x44, 1000 mm with end cap.                                                                                                       | JSMA44-L   | 2TLA040001R0000 | Upon request |
| Aluminum post 44x44, 1300 mm with 3pcs feet brackets and end cap.                                                                                | JSMA44-L   | 2TLA040001R1000 |              |
| Aluminum post 44x44, 1100 mm with 3pcs feet brackets and end cap.                                                                                | JSMA44A-L  | 2TLA040001R1100 |              |
| Aluminum post 44x44, 1300+1000 mm with 3pcs feet brackets and end cap. 2pcs JSM66 is included with screws.                                       | JSMA44-L   | 2TLA040001R1200 |              |
| Aluminum post 44x44, 1100+2x500 mm with 3pcs feet brackets, 2pcs T-brackets and end cap.                                                         | JSMA44A-LM | 2TLA040001R1300 |              |
| Bracket for JSM9 or JSM63. Includes screws for profile.                                                                                          | JSM60-L    | 2TLA040003R0000 |              |
| Wall bracket for JSHD4 enabling device.                                                                                                          | JSM 55     | 2TLA040005R0500 |              |
| Floor bracket in Aluminium. Dimension 40x70x100 mm, pre-assembled. Not recommended for fences with height over 2500 mm                           | JSM 39-K   | 2TLA040030R1400 |              |
| Infill securing strip in black ABS plastic. L=842 mm for 5 mm panels.                                                                            | JSM PL1A   | 2TLA040038R0100 |              |
| JSM D2 Handle with screws                                                                                                                        | JSM D2     | 2TLA040033R0100 |              |
| Door closer incl. mounting components, for conventional door/hatch.                                                                              | JSM D3     | 2TLA040033R0200 |              |
| Suspension wheel for sliding-/folding door. Suitable in JSM A3130B and JSM A56.                                                                  | JSM D5     | 2TLA040033R0400 |              |
| Guide sliding element in Polyamide                                                                                                               | JSM D8     | 2TLA040033R0700 |              |
| Support wheel with lock/brake, including angled bracket. Wheel diameter 75 mm, height 97 mm. Maximal load 60 kg                                  | JSM D9-K   | 2TLA040033R1100 |              |
| Hinge C/C 47 mm in Zinc-plated steel, pre-assembled. Used as angled bracket in Quick-Guard S                                                     | JSM 35-K   | 2TLA040033R1400 |              |
| Hinge C/C 62 mm in Zinc-plated steel, pre-assembled. Used for conventional doors/hatches. Not as angled bracket because its gap can exceed 20 mm | JSM D1A    | 2TLA040033R1500 |              |
| Spring-loaded pullock for above the door. Brackets are in Zinc-plated steel, Rod are in Stainless steel. Total height 1130 mm                    | JSM D10A   | 2TLA040033R2100 |              |
| Fitting for Adam & Eva (Eden) for conventional- and folding door/hatch. Need two pieces for a complete Eden.                                     | JSM D4H    | 2TLA040033R3600 |              |
| Door stop, with vibration damper in Zinc-plated steel, for sliding door, horizontal profile.                                                     | JSM D13B   | 2TLA040033R2700 |              |
| Cable tie holder including screw and nut, nylon black.                                                                                           | JSM X1     | 2TLA040033R4300 |              |
| Door closer incl. mounting components, for slidingdoors.                                                                                         | JSM D19    | 2TLA042020R5600 |              |
| 45 deg angle mounting bracket in steel for mounting profiles together, pre-assembled.                                                            | JSM 40     | 2TLA042021R5600 |              |
| Cross bar for door 20 x 5 L=400 mm. Natural anodized Aluminium. Suitable small doors/hatches                                                     | JSM D14A   | 2TLA042021R7300 |              |
| JSM AS3 Aluminum profile for 50mm sound-absorbing panel, meter                                                                                   | JSM AS3    | 2TLA042021R8000 |              |
| Mounting profile for 50mm sound-absorbing panels. Natural anodized Aluminium, length 6000 mm                                                     | JSM AS3    | 2TLA042021R8100 |              |





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# The System pro M compact® – DIN rail products

## System Pro M

System Pro M is a modular system developed by ABB which, is capable of meeting the requirements of the most modern and up-to-date installations for low voltage applications.

### MCBs

Miniature circuit-breakers.

### RCDs

- Residual current circuit-breakers (RCCBs);
- RCD-blocks;
- Residual current circuit-breakers with overcurrent protection (RCBOs);
- Residual current relays (modular and front panel) with external toroid.

### Auxiliary elements

A whole range of accessories and auxiliary elements.

### SPDs

Surge protective devices.

### Protection devices

In addition to MCBs and RCDs, ABB supplies other modular devices for protection such as fuse holders, fuses, switch disconnectors, insulation monitoring devices etc.

## Command devices

This category includes devices that are operated manually to command the electric system: contactors, latching relays, switch-isolators, switches, pushbuttons etc. Typically they are installed to control lights from several points of the same circuit or to pilot user devices with a high number of operations.

## Load management devices

Overload relays, load management switches, anti black-out lamps, time switches and the other modular devices in this category react automatically to variations of parameters and other events in the system to allow for plant optimisation.

## Measurement devices

The range of devices in this category is very wide, including a great number of auxiliary components and accessories that make installation in switchboards and consumer units practical and economic.

## Other devices

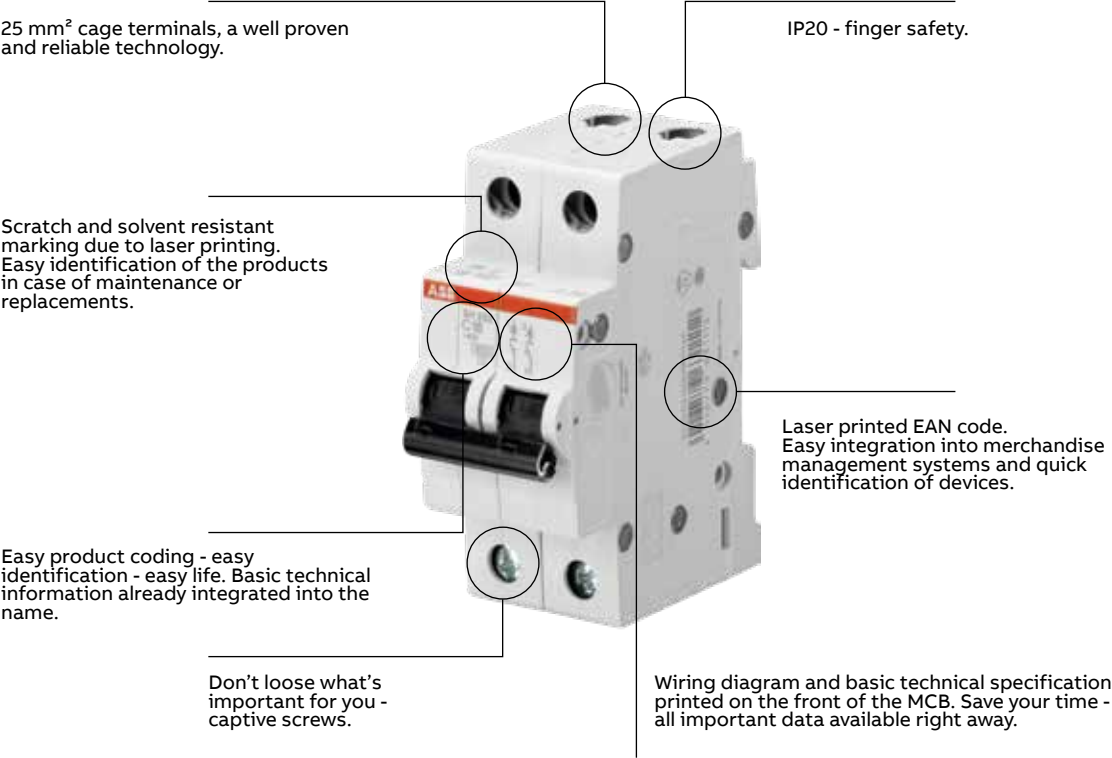
The System pro M compact® range also includes bells, transformers, modular sockets etc.





# Miniature Circuit Breaker (MCB)

## SH200M series



### Technical Features

| Electrical Data                      | SH200 M                                                                                      |
|--------------------------------------|----------------------------------------------------------------------------------------------|
| Standards                            | IS/IEC 60898-1                                                                               |
| Poles                                | 1P, 2P, 3P, 4P, 1P +N, 3P +N                                                                 |
| Tripping Characteristics             | B, C, D                                                                                      |
| Rated Current                        | 0.5A - 63 A (0.5 A - 40 A in D chr.)                                                         |
| Rated Voltage                        | 1P : 230/400/415 V AC<br>1P + N : 230 V AC<br>2...4P : 400/415 V AC<br>3P + N : 400/415 V AC |
| Insulation Voltage                   | 250 V AC (Phase to Ground)<br>440 V AC (Phase to Phase)                                      |
| Max Operating Voltage                | 1P: 253 V AC<br>2...4P : 440 V AC                                                            |
| Min Operating Voltage                | 12 V AC                                                                                      |
| Rated Frequency                      | 50/60 Hz                                                                                     |
| Rated Short Circuit Capacity         | 10kA                                                                                         |
| Energy Limiting Class                | 3                                                                                            |
| Over Voltage Category (B,C upto 40A) | III                                                                                          |
| Pollution Degree                     | 2                                                                                            |
| Rated Impulse withstand Voltage      | 4kV (Test Voltage 6.2kV at Sea Level,<br>5kV at 2,000 m)                                     |
| Dielectric Test Voltage              | 2kV (50/60 Hz, 1 min)                                                                        |
| Accessories mountable                | No                                                                                           |



# SH200M - MCBs, C characteristics - 10 kA



SH201M-C

## Single pole

| Description  | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|--------------|--------------------|----------------|-------------------|-----------|
| SH201M-C 0.5 | 0.5                | 12             | 1SYS271011R0984   | 350       |
| SH201M-C 1   | 1                  | 12             | 1SYS271011R0014   |           |
| SH201M-C 1.6 | 1.6                | 12             | 1SYS271011R0974   |           |
| SH201M-C 2   | 2                  | 12             | 1SYS271011R0024   |           |
| SH201M-C 3   | 3                  | 12             | 1SYS271011R0034   |           |
| SH201M-C 4   | 4                  | 12             | 1SYS271011R0044   |           |
| SH201M-C 6   | 6                  | 12             | 1SYS271011R0064 ■ | 238       |
| SH201M-C 10  | 10                 | 12             | 1SYS271011R0104 ■ |           |
| SH201M-C 16  | 16                 | 12             | 1SYS271011R0164 ■ |           |
| SH201M-C 20  | 20                 | 12             | 1SYS271011R0204 ■ |           |
| SH201M-C 25  | 25                 | 12             | 1SYS271011R0254 ■ |           |
| SH201M-C 32  | 32                 | 12             | 1SYS271011R0324 ■ |           |
| SH201M-C 40  | 40                 | 12             | 1SYS271011R0404 ■ | 485       |
| SH201M-C 50  | 50                 | 12             | 1SYS271011R0504 ■ |           |
| SH201M-C 63  | 63                 | 12             | 1SYS271011R0634 ■ |           |



SH201M-C NA

## Single Pole & neutral

| Description     | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|-----------------|--------------------|----------------|-------------------|-----------|
| SH201M-C 0.5 NA | 0.5                | 6              | 1SYS271113R0984   | 1,000     |
| SH201M-C 1 NA   | 1                  | 6              | 1SYS271113R0014   |           |
| SH201M-C 1.6 NA | 1.6                | 6              | 1SYS271113R0974   |           |
| SH201M-C 2 NA   | 2                  | 6              | 1SYS271113R0024   |           |
| SH201M-C 3 NA   | 3                  | 6              | 1SYS271113R0034   |           |
| SH201M-C 4 NA   | 4                  | 6              | 1SYS271113R0044   |           |
| SH201M-C 6 NA   | 6                  | 6              | 1SYS271113R0064 ■ | 690       |
| SH201M-C 10 NA  | 10                 | 6              | 1SYS271113R0104 ■ |           |
| SH201M-C 16 NA  | 16                 | 6              | 1SYS271113R0164 ■ |           |
| SH201M-C 20 NA  | 20                 | 6              | 1SYS271113R0204 ■ |           |
| SH201M-C 25 NA  | 25                 | 6              | 1SYS271113R0254 ■ |           |
| SH201M-C 32 NA  | 32                 | 6              | 1SYS271113R0324 ■ |           |
| SH201M-C 40 NA  | 40                 | 6              | 1SYS271113R0404 ■ | 1,120     |
| SH201M-C 50 NA  | 50                 | 6              | 1SYS271113R0504 ■ |           |
| SH201M-C 63 NA  | 63                 | 6              | 1SYS271113R0634 ■ |           |



SH202M-C

## Double pole

| Description  | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|--------------|--------------------|----------------|-------------------|-----------|
| SH202M-C 0.5 | 0.5                | 6              | 1SYS272011R0984   | 930       |
| SH202M-C 1   | 1                  | 6              | 1SYS272011R0014   |           |
| SH202M-C 1.6 | 1.6                | 6              | 1SYS272011R0974   |           |
| SH202M-C 2   | 2                  | 6              | 1SYS272011R0024   |           |
| SH202M-C 3   | 3                  | 6              | 1SYS272011R0034   |           |
| SH202M-C 4   | 4                  | 6              | 1SYS272011R0044   |           |
| SH202M-C 6   | 6                  | 6              | 1SYS272011R0064 ■ | 650       |
| SH202M-C 10  | 10                 | 6              | 1SYS272011R0104 ■ |           |
| SH202M-C 16  | 16                 | 6              | 1SYS272011R0164 ■ |           |
| SH202M-C 20  | 20                 | 6              | 1SYS272011R0204 ■ |           |
| SH202M-C 25  | 25                 | 6              | 1SYS272011R0254 ■ |           |
| SH202M-C 32  | 32                 | 6              | 1SYS272011R0324 ■ |           |
| SH202M-C 40  | 40                 | 6              | 1SYS272011R0404 ■ | 1,090     |
| SH202M-C 50  | 50                 | 6              | 1SYS272011R0504 ■ |           |
| SH202M-C 63  | 63                 | 6              | 1SYS272011R0634 ■ |           |

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

■ Stock items



# SH200M - MCBs, C characteristics - 10 kA



SH203M-C

### Triple pole

| Description  | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|--------------|--------------------|----------------|-------------------|-----------|
| SH203M-C 0.5 | 0.5                | 4              | 1SYS273011R0984   | 1,380     |
| SH203M-C 1   | 1                  | 4              | 1SYS273011R0014   |           |
| SH203M-C 1.6 | 1.6                | 4              | 1SYS273011R0974   |           |
| SH203M-C 2   | 2                  | 4              | 1SYS273011R0024   |           |
| SH203M-C 3   | 3                  | 4              | 1SYS273011R0034   |           |
| SH203M-C 4   | 4                  | 4              | 1SYS273011R0044   | 1,020     |
| SH203M-C 6   | 6                  | 4              | 1SYS273011R0064 ■ |           |
| SH203M-C 10  | 10                 | 4              | 1SYS273011R0104 ■ |           |
| SH203M-C 16  | 16                 | 4              | 1SYS273011R0164 ■ |           |
| SH203M-C 20  | 20                 | 4              | 1SYS273011R0204 ■ |           |
| SH203M-C 25  | 25                 | 4              | 1SYS273011R0254 ■ | 1,650     |
| SH203M-C 32  | 32                 | 4              | 1SYS273011R0324 ■ |           |
| SH203M-C 40  | 40                 | 4              | 1SYS273011R0404 ■ |           |
| SH203M-C 50  | 50                 | 4              | 1SYS273011R0504 ■ |           |
| SH203M-C 63  | 63                 | 4              | 1SYS273011R0634 ■ |           |



SH203M-C NA

### Triple pole & neutral

| Description     | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|-----------------|--------------------|----------------|-------------------|-----------|
| SH203M-C 0.5 NA | 0.5                | 3              | 1SYS273113R0984   | 2,040     |
| SH203M-C 1 NA   | 1                  | 3              | 1SYS273113R0014   |           |
| SH203M-C 1.6 NA | 1.6                | 3              | 1SYS273113R0974   |           |
| SH203M-C 2 NA   | 2                  | 3              | 1SYS273113R0024   |           |
| SH203M-C 3 NA   | 3                  | 3              | 1SYS273113R0034   |           |
| SH203M-C 4 NA   | 4                  | 3              | 1SYS273113R0044   | 1,400     |
| SH203M-C 6 NA   | 6                  | 3              | 1SYS273113R0064 ■ |           |
| SH203M-C 10 NA  | 10                 | 3              | 1SYS273113R0104 ■ |           |
| SH203M-C 16 NA  | 16                 | 3              | 1SYS273113R0164 ■ |           |
| SH203M-C 20 NA  | 20                 | 3              | 1SYS273113R0204 ■ |           |
| SH203M-C 25 NA  | 25                 | 3              | 1SYS273113R0254 ■ | 2,080     |
| SH203M-C 32 NA  | 32                 | 3              | 1SYS273113R0324 ■ |           |
| SH203M-C 40 NA  | 40                 | 3              | 1SYS273113R0404 ■ |           |
| SH203M-C 50 NA  | 50                 | 3              | 1SYS273113R0504 ■ |           |
| SH203M-C 63 NA  | 63                 | 3              | 1SYS273113R0634 ■ |           |



SH204M-C

### Four pole

| Description  | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|--------------|--------------------|----------------|-------------------|-----------|
| SH204M-C 0.5 | 0.5                | 3              | 1SYS274011R0984   | 1,930     |
| SH204M-C 1   | 1                  | 3              | 1SYS274011R0014   |           |
| SH204M-C 1.6 | 1.6                | 3              | 1SYS274011R0974   |           |
| SH204M-C 2   | 2                  | 3              | 1SYS274011R0024   |           |
| SH204M-C 3   | 3                  | 3              | 1SYS274011R0034   |           |
| SH204M-C 4   | 4                  | 3              | 1SYS274011R0044   | 1,400     |
| SH204M-C 6   | 6                  | 3              | 1SYS274011R0064 ■ |           |
| SH204M-C 10  | 10                 | 3              | 1SYS274011R0104 ■ |           |
| SH204M-C 16  | 16                 | 3              | 1SYS274011R0164 ■ |           |
| SH204M-C 20  | 20                 | 3              | 1SYS274011R0204 ■ |           |
| SH204M-C 25  | 25                 | 3              | 1SYS274011R0254 ■ | 1,980     |
| SH204M-C 32  | 32                 | 3              | 1SYS274011R0324 ■ |           |
| SH204M-C 40  | 40                 | 3              | 1SYS274011R0404 ■ |           |
| SH204M-C 50  | 50                 | 3              | 1SYS274011R0504 ■ |           |
| SH204M-C 63  | 63                 | 3              | 1SYS274011R0634 ■ |           |

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

■ Stock items



# SH200M - MCBs, D characteristics - 10 kA



SH201M-D

### Single pole

| Description  | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|--------------|--------------------|----------------|-----------------|-----------|
| SH201M-D 0.5 | 0.5                | 12             | 1SYS271011R0981 | 400       |
| SH201M-D 1   | 1                  | 12             | 1SYS271011R0011 |           |
| SH201M-D 1.6 | 1.6                | 12             | 1SYS271011R0971 |           |
| SH201M-D 2   | 2                  | 12             | 1SYS271011R0021 |           |
| SH201M-D 3   | 3                  | 12             | 1SYS271011R0031 |           |
| SH201M-D 4   | 4                  | 12             | 1SYS271011R0041 |           |
| SH201M-D 6   | 6                  | 12             | 1SYS271011R0061 | 290       |
| SH201M-D 10  | 10                 | 12             | 1SYS271011R0101 |           |
| SH201M-D 16  | 16                 | 12             | 1SYS271011R0161 |           |
| SH201M-D 20  | 20                 | 12             | 1SYS271011R0201 |           |
| SH201M-D 25  | 25                 | 12             | 1SYS271011R0251 |           |
| SH201M-D 32  | 32                 | 12             | 1SYS271011R0321 |           |
| SH201M-D 40  | 40                 | 12             | 1SYS271011R0401 | 540       |



SH202M-D

### Double pole

| Description  | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|--------------|--------------------|----------------|-----------------|-----------|
| SH202M-D 0.5 | 0.5                | 6              | 1SYS272011R0981 | 1,100     |
| SH202M-D 1   | 1                  | 6              | 1SYS272011R0011 |           |
| SH202M-D 1.6 | 1.6                | 6              | 1SYS272011R0971 |           |
| SH202M-D 2   | 2                  | 6              | 1SYS272011R0021 |           |
| SH202M-D 3   | 3                  | 6              | 1SYS272011R0031 |           |
| SH202M-D 4   | 4                  | 6              | 1SYS272011R0041 |           |
| SH202M-D 6   | 6                  | 6              | 1SYS272011R0061 | 780       |
| SH202M-D 10  | 10                 | 6              | 1SYS272011R0101 |           |
| SH202M-D 16  | 16                 | 6              | 1SYS272011R0161 |           |
| SH202M-D 20  | 20                 | 6              | 1SYS272011R0201 |           |
| SH202M-D 25  | 25                 | 6              | 1SYS272011R0251 |           |
| SH202M-D 32  | 32                 | 6              | 1SYS272011R0321 |           |
| SH202M-D 40  | 40                 | 6              | 1SYS272011R0401 | 1,290     |

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

# SH200M - MCBs, D characteristics - 10 kA



SH203M-D

## Triple pole

| Description  | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|--------------|--------------------|----------------|-----------------|-----------|
| SH203M-D 0.5 | 0.5                | 4              | 1SYS273011R0981 | 1,640     |
| SH203M-D 1   | 1                  | 4              | 1SYS273011R0011 |           |
| SH203M-D 1.6 | 1.6                | 4              | 1SYS273011R0971 |           |
| SH203M-D 2   | 2                  | 4              | 1SYS273011R0021 |           |
| SH203M-D 3   | 3                  | 4              | 1SYS273011R0031 |           |
| SH203M-D 4   | 4                  | 4              | 1SYS273011R0041 |           |
| SH203M-D 6   | 6                  | 4              | 1SYS273011R0061 | 1,240     |
| SH203M-D 10  | 10                 | 4              | 1SYS273011R0101 |           |
| SH203M-D 16  | 16                 | 4              | 1SYS273011R0161 |           |
| SH203M-D 20  | 20                 | 4              | 1SYS273011R0201 |           |
| SH203M-D 25  | 25                 | 4              | 1SYS273011R0251 |           |
| SH203M-D 32  | 32                 | 4              | 1SYS273011R0321 |           |
| SH203M-D 40  | 40                 | 4              | 1SYS273011R0401 | 1,950     |



SH204M-D

## Four pole

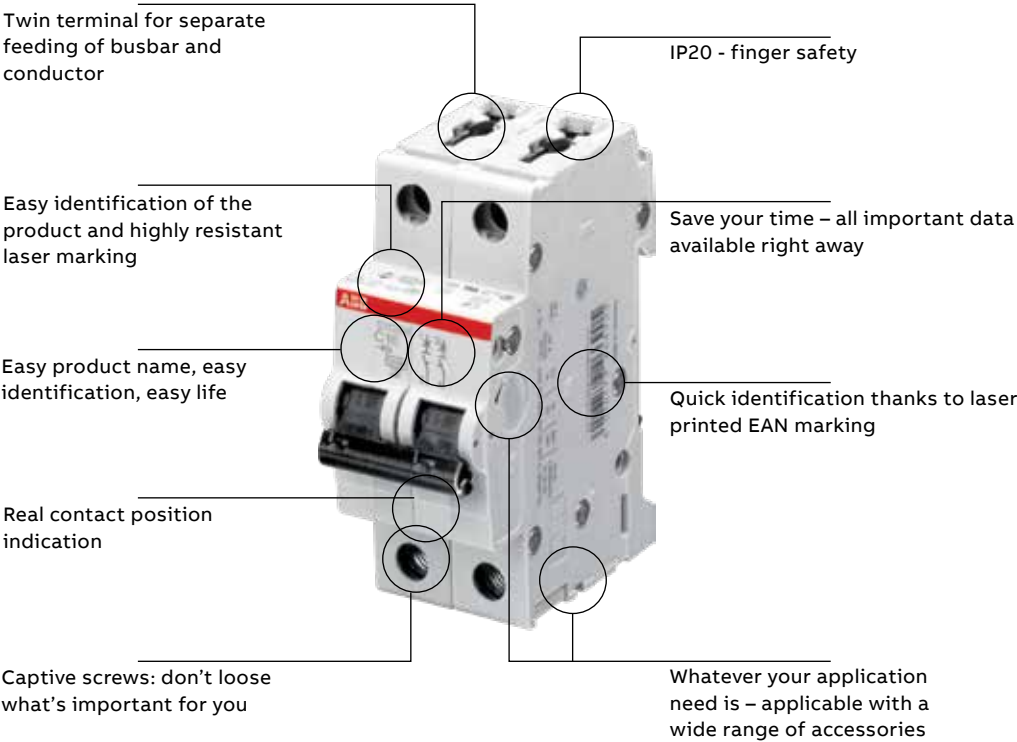
| Description  | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|--------------|--------------------|----------------|-----------------|-----------|
| SH204M-D 0.5 | 0.5                | 3              | 1SYS274011R0981 | 2,150     |
| SH204M-D 1   | 1                  | 3              | 1SYS274011R0011 |           |
| SH204M-D 1.6 | 1.6                | 3              | 1SYS274011R0971 |           |
| SH204M-D 2   | 2                  | 3              | 1SYS274011R0021 |           |
| SH204M-D 3   | 3                  | 3              | 1SYS274011R0031 |           |
| SH204M-D 4   | 4                  | 3              | 1SYS274011R0041 |           |
| SH204M-D 6   | 6                  | 3              | 1SYS274011R0061 | 1,710     |
| SH204M-D 10  | 10                 | 3              | 1SYS274011R0101 |           |
| SH204M-D 16  | 16                 | 3              | 1SYS274011R0161 |           |
| SH204M-D 20  | 20                 | 3              | 1SYS274011R0201 |           |
| SH204M-D 25  | 25                 | 3              | 1SYS274011R0251 |           |
| SH204M-D 32  | 32                 | 3              | 1SYS274011R0321 |           |
| SH204M-D 40  | 40                 | 3              | 1SYS274011R0401 | 2,260     |

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.



# Miniature circuit breaker (MCB)

## S200M series



### Technical Features

| Electrical data                           | S200 M                                                          |               |
|-------------------------------------------|-----------------------------------------------------------------|---------------|
| Standards                                 | IEC 60947-2, IS/IEC-60898-1                                     |               |
| Poles                                     | 1P, 2P, 3P, 4P, 1P +N, 3P +N                                    |               |
| Tripping characteristics                  | B, C, D                                                         |               |
| Rated current                             | 0.5A - 63 A                                                     |               |
| Rated voltage                             | 1P : 230 / 400 V AC                                             | 1P : 60 V DC  |
|                                           | 1P + N : 230 V AC                                               | 2P : 120 V DC |
|                                           | 2...4P : 400 V AC                                               |               |
|                                           | 3P + N : 400 V AC                                               |               |
|                                           |                                                                 |               |
| Insulation voltage                        | 250 V AC (Phase to ground)                                      |               |
|                                           | 500 V AC (Phase to phase)                                       |               |
| Max operating voltage                     | 1P: 253 V AC<br>2...4P : 440 V AC                               |               |
| Min operating voltage                     | 12 V AC                                                         |               |
| Rated frequency                           | 50/60 Hz                                                        |               |
| Rated short circuit capacity              | 10kA                                                            |               |
| Energy limiting class (B, C upto 40 A)    | 3                                                               |               |
| Over voltage category                     | III                                                             |               |
| Pollution degree                          | 2                                                               |               |
| Rated impulse withstand voltage           | 4kV (Test Voltage 6.2kV at Sea Level,<br>5kV at 2,000 m)        |               |
| Dielectric test voltage                   | 2kV (50/60 Hz, 1 min)                                           |               |
| Accessories mountable                     | Yes                                                             |               |
| Cross-section of conductor (top / bottom) | 35 mm²                                                          |               |
| Terminal                                  | Fail safe bi-directional cylinder - lift terminal               |               |
| Contact position indication               | Marking on toggle (1 ON / 0 OFF), Real CPI (red ON / green OFF) |               |
| Real contact position indication          | Red ON / green OFF                                              |               |





# S200M - MCBs, C characteristics - 10 kA



S201M-C

### Single pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|-------------|--------------------|----------------|-------------------|-----------|
| S201M-C 0.5 | 0.5                | 12             | 2CDS271001R0984   | 465       |
| S201M-C 1   | 1                  | 12             | 2CDS271001R0014   |           |
| S201M-C 1.6 | 1.6                | 12             | 2CDS271001R0974   |           |
| S201M-C 2   | 2                  | 12             | 2CDS271001R0024   |           |
| S201M-C 3   | 3                  | 12             | 2CDS271001R0034   |           |
| S201M-C 4   | 4                  | 12             | 2CDS271001R0044   |           |
| S201M-C 6   | 6                  | 12             | 2CDS271001R0064 ■ | 285       |
| S201M-C 10  | 10                 | 12             | 2CDS271001R0104 ■ |           |
| S201M-C 16  | 16                 | 12             | 2CDS271001R0164 ■ |           |
| S201M-C 20  | 20                 | 12             | 2CDS271001R0204 ■ |           |
| S201M-C 25  | 25                 | 12             | 2CDS271001R0254 ■ |           |
| S201M-C 32  | 32                 | 12             | 2CDS271001R0324 ■ |           |
| S201M-C 40  | 40                 | 12             | 2CDS271001R0404   | 580       |
| S201M-C 50  | 50                 | 12             | 2CDS271001R0504   |           |
| S201M-C 63  | 63                 | 12             | 2CDS271001R0634 ■ |           |



S201M-C NA

### Single pole & neutral

| Description    | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|----------------|--------------------|----------------|-----------------|-----------|
| S201M-C 0.5 NA | 0.5                | 6              | 2CDS271103R0984 | 1,195     |
| S201M-C 1 NA   | 1                  | 6              | 2CDS271103R0014 |           |
| S201M-C 1.6 NA | 1.6                | 6              | 2CDS271103R0974 |           |
| S201M-C 2 NA   | 2                  | 6              | 2CDS271103R0024 |           |
| S201M-C 3 NA   | 3                  | 6              | 2CDS271103R0034 |           |
| S201M-C 4 NA   | 4                  | 6              | 2CDS271103R0044 |           |
| S201M-C 6 NA   | 6                  | 6              | 2CDS271103R0064 | 865       |
| S201M-C 10 NA  | 10                 | 6              | 2CDS271103R0104 |           |
| S201M-C 16 NA  | 16                 | 6              | 2CDS271103R0164 |           |
| S201M-C 20 NA  | 20                 | 6              | 2CDS271103R0204 |           |
| S201M-C 25 NA  | 25                 | 6              | 2CDS271103R0254 |           |
| S201M-C 32 NA  | 32                 | 6              | 2CDS271103R0324 |           |
| S201M-C 40 NA  | 40                 | 6              | 2CDS271103R0404 | 1,465     |
| S201M-C 50 NA  | 50                 | 6              | 2CDS271103R0504 |           |
| S201M-C 63 NA  | 63                 | 6              | 2CDS271103R0634 |           |



S202M-C

### Double pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|-------------|--------------------|----------------|-------------------|-----------|
| S202M-C 0.5 | 0.5                | 6              | 2CDS272001R0984   | 1,200     |
| S202M-C 1   | 1                  | 6              | 2CDS272001R0014   |           |
| S202M-C 1.6 | 1.6                | 6              | 2CDS272001R0974   |           |
| S202M-C 2   | 2                  | 6              | 2CDS272001R0024   |           |
| S202M-C 3   | 3                  | 6              | 2CDS272001R0034   |           |
| S202M-C 4   | 4                  | 6              | 2CDS272001R0044   |           |
| S202M-C 6   | 6                  | 6              | 2CDS272001R0064 ■ | 880       |
| S202M-C 10  | 10                 | 6              | 2CDS272001R0104 ■ |           |
| S202M-C 16  | 16                 | 6              | 2CDS272001R0164 ■ |           |
| S202M-C 20  | 20                 | 6              | 2CDS272001R0204 ■ |           |
| S202M-C 25  | 25                 | 6              | 2CDS272001R0254 ■ |           |
| S202M-C 32  | 32                 | 6              | 2CDS272001R0324 ■ |           |
| S202M-C 40  | 40                 | 6              | 2CDS272001R0404 ■ | 1,365     |
| S202M-C 50  | 50                 | 6              | 2CDS272001R0504   |           |
| S202M-C 63  | 63                 | 6              | 2CDS272001R0634   |           |

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

■ Stock items

# S200M - MCBs, C characteristics - 10 kA



S203M-C

## Triple pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|-------------|--------------------|----------------|-------------------|-----------|
| S203M-C 0.5 | 0.5                | 4              | 2CDS273001R0984   | 1,825     |
| S203M-C 1   | 1                  | 4              | 2CDS273001R0014   |           |
| S203M-C 1.6 | 1.6                | 4              | 2CDS273001R0974   |           |
| S203M-C 2   | 2                  | 4              | 2CDS273001R0024   |           |
| S203M-C 3   | 3                  | 4              | 2CDS273001R0034   |           |
| S203M-C 4   | 4                  | 4              | 2CDS273001R0044   |           |
| S203M-C 6   | 6                  | 4              | 2CDS273001R0064 ■ | 1,365     |
| S203M-C 10  | 10                 | 4              | 2CDS273001R0104 ■ |           |
| S203M-C 16  | 16                 | 4              | 2CDS273001R0164 ■ |           |
| S203M-C 20  | 20                 | 4              | 2CDS273001R0204 ■ |           |
| S203M-C 25  | 25                 | 4              | 2CDS273001R0254 ■ |           |
| S203M-C 32  | 32                 | 4              | 2CDS273001R0324 ■ |           |
| S203M-C 40  | 40                 | 4              | 2CDS273001R0404 ■ | 2,090     |
| S203M-C 50  | 50                 | 4              | 2CDS273001R0504   |           |
| S203M-C 63  | 63                 | 4              | 2CDS273001R0634 ■ |           |



S203M-C NA

## Triple pole & neutral

| Description    | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|----------------|--------------------|----------------|-------------------|-----------|
| S203M-C 0.5 NA | 0.5                | 3              | 2CDS273103R0984   | 2,430     |
| S203M-C 1 NA   | 1                  | 3              | 2CDS273103R0014   |           |
| S203M-C 1.6 NA | 1.6                | 3              | 2CDS273103R0974   |           |
| S203M-C 2 NA   | 2                  | 3              | 2CDS273103R0024   |           |
| S203M-C 3 NA   | 3                  | 3              | 2CDS273103R0034   |           |
| S203M-C 4 NA   | 4                  | 3              | 2CDS273103R0044   |           |
| S203M-C 6 NA   | 6                  | 3              | 2CDS273103R0064   | 1,765     |
| S203M-C 10 NA  | 10                 | 3              | 2CDS273103R0104   |           |
| S203M-C 16 NA  | 16                 | 3              | 2CDS273103R0164   |           |
| S203M-C 20 NA  | 20                 | 3              | 2CDS273103R0204 ■ |           |
| S203M-C 25 NA  | 25                 | 3              | 2CDS273103R0254 ■ |           |
| S203M-C 32 NA  | 32                 | 3              | 2CDS273103R0324 ■ |           |
| S203M-C 40 NA  | 40                 | 3              | 2CDS273103R0404 ■ | 2,670     |
| S203M-C 50 NA  | 50                 | 3              | 2CDS273103R0504 ■ |           |
| S203M-C 63 NA  | 63                 | 3              | 2CDS273103R0634 ■ |           |



S204M-C

## Four pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|-------------|--------------------|----------------|-------------------|-----------|
| S204M-C 0.5 | 0.5                | 3              | 2CDS274001R0984   | 2,325     |
| S204M-C 1   | 1                  | 3              | 2CDS274001R0014   |           |
| S204M-C 1.6 | 1.6                | 3              | 2CDS274001R0974   |           |
| S204M-C 2   | 2                  | 3              | 2CDS274001R0024   |           |
| S204M-C 3   | 3                  | 3              | 2CDS274001R0034   |           |
| S204M-C 4   | 4                  | 3              | 2CDS274001R0044   |           |
| S204M-C 6   | 6                  | 3              | 2CDS274001R0064 ■ | 1,755     |
| S204M-C 10  | 10                 | 3              | 2CDS274001R0104 ■ |           |
| S204M-C 16  | 16                 | 3              | 2CDS274001R0164 ■ |           |
| S204M-C 20  | 20                 | 3              | 2CDS274001R0204 ■ |           |
| S204M-C 25  | 25                 | 3              | 2CDS274001R0254 ■ |           |
| S204M-C 32  | 32                 | 3              | 2CDS274001R0324 ■ |           |
| S204M-C 40  | 40                 | 3              | 2CDS274001R0404 ■ | 2,635     |
| S204M-C 50  | 50                 | 3              | 2CDS274001R0504   |           |
| S204M-C 63  | 63                 | 3              | 2CDS274001R0634 ■ |           |

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

■ Stock items

# S200M - MCBs, D characteristics - 10 kA



S201M-D

## Single pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|-------------|--------------------|----------------|-----------------|-----------|
| S201M-D 0.5 | 0.5                | 12             | 2CDS271001R0981 | 470       |
| S201M-D 1   | 1                  | 12             | 2CDS271001R0011 |           |
| S201M-D 1.6 | 1.6                | 12             | 2CDS271001R0971 |           |
| S201M-D 2   | 2                  | 12             | 2CDS271001R0021 |           |
| S201M-D 3   | 3                  | 12             | 2CDS271001R0031 |           |
| S201M-D 4   | 4                  | 12             | 2CDS271001R0041 |           |
| S201M-D 6   | 6                  | 12             | 2CDS271001R0061 | 395       |
| S201M-D 10  | 10                 | 12             | 2CDS271001R0101 |           |
| S201M-D 16  | 16                 | 12             | 2CDS271001R0161 |           |
| S201M-D 20  | 20                 | 12             | 2CDS271001R0201 |           |
| S201M-D 25  | 25                 | 12             | 2CDS271001R0251 |           |
| S201M-D 32  | 32                 | 12             | 2CDS271001R0321 |           |
| S201M-D 40  | 40                 | 12             | 2CDS271001R0401 | 740       |
| S201M-D 50  | 50                 | 12             | 2CDS271001R0501 |           |
| S201M-D 63  | 63                 | 12             | 2CDS271001R0631 |           |



S202M-D

## Double pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|-------------|--------------------|----------------|-----------------|-----------|
| S202M-D 0.5 | 0.5                | 6              | 2CDS272001R0981 | 1,395     |
| S202M-D 1   | 1                  | 6              | 2CDS272001R0011 |           |
| S202M-D 1.6 | 1.6                | 6              | 2CDS272001R0971 |           |
| S202M-D 2   | 2                  | 6              | 2CDS272001R0021 |           |
| S202M-D 3   | 3                  | 6              | 2CDS272001R0031 |           |
| S202M-D 4   | 4                  | 6              | 2CDS272001R0041 |           |
| S202M-D 6   | 6                  | 6              | 2CDS272001R0061 | 915       |
| S202M-D 10  | 10                 | 6              | 2CDS272001R0101 |           |
| S202M-D 16  | 16                 | 6              | 2CDS272001R0161 |           |
| S202M-D 20  | 20                 | 6              | 2CDS272001R0201 |           |
| S202M-D 25  | 25                 | 6              | 2CDS272001R0251 |           |
| S202M-D 32  | 32                 | 6              | 2CDS272001R0321 |           |
| S202M-D 40  | 40                 | 6              | 2CDS272001R0401 | 1,585     |
| S202M-D 50  | 50                 | 6              | 2CDS272001R0501 |           |
| S202M-D 63  | 63                 | 6              | 2CDS272001R0631 |           |

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.



# S200M - MCBs, D characteristics - 10 kA



S203M-D

## Triple pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|-------------|--------------------|----------------|-----------------|-----------|
| S203M-D 0.5 | 0.5                | 4              | 2CDS273001R0981 | 1,980     |
| S203M-D 1   | 1                  | 4              | 2CDS273001R0011 |           |
| S203M-D 1.6 | 1.6                | 4              | 2CDS273001R0971 |           |
| S203M-D 2   | 2                  | 4              | 2CDS273001R0021 |           |
| S203M-D 3   | 3                  | 4              | 2CDS273001R0031 |           |
| S203M-D 4   | 4                  | 4              | 2CDS273001R0041 |           |
| S203M-D 6   | 6                  | 4              | 2CDS273001R0061 | 1,610     |
| S203M-D 10  | 10                 | 4              | 2CDS273001R0101 |           |
| S203M-D 16  | 16                 | 4              | 2CDS273001R0161 |           |
| S203M-D 20  | 20                 | 4              | 2CDS273001R0201 |           |
| S203M-D 25  | 25                 | 4              | 2CDS273001R0251 |           |
| S203M-D 32  | 32                 | 4              | 2CDS273001R0321 |           |
| S203M-D 40  | 40                 | 4              | 2CDS273001R0401 | 2,395     |
| S203M-D 50  | 50                 | 4              | 2CDS273001R0501 |           |
| S203M-D 63  | 63                 | 4              | 2CDS273001R0631 |           |



S204M-D

## Four pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code   | M.R.P.(₹) |
|-------------|--------------------|----------------|-----------------|-----------|
| S204M-D 0.5 | 0.5                | 3              | 2CDS274001R0981 | 2,660     |
| S204M-D 1   | 1                  | 3              | 2CDS274001R0011 |           |
| S204M-D 1.6 | 1.6                | 3              | 2CDS274001R0971 |           |
| S204M-D 2   | 2                  | 3              | 2CDS274001R0021 |           |
| S204M-D 3   | 3                  | 3              | 2CDS274001R0031 |           |
| S204M-D 4   | 4                  | 3              | 2CDS274001R0041 |           |
| S204M-D 6   | 6                  | 3              | 2CDS274001R0061 | 2,015     |
| S204M-D 10  | 10                 | 3              | 2CDS274001R0101 |           |
| S204M-D 16  | 16                 | 3              | 2CDS274001R0161 |           |
| S204M-D 20  | 20                 | 3              | 2CDS274001R0201 |           |
| S204M-D 25  | 25                 | 3              | 2CDS274001R0251 |           |
| S204M-D 32  | 32                 | 3              | 2CDS274001R0321 |           |
| S204M-D 40  | 40                 | 3              | 2CDS274001R0401 | 3,000     |
| S204M-D 50  | 50                 | 3              | 2CDS274001R0501 |           |
| S204M-D 63  | 63                 | 3              | 2CDS274001R0631 |           |

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

# Miniature circuit-breaker (MCB)

## S200M DC - MCB for DC applications



S200 M DC MCB in System pro M compact range impresses with its performance range, approvals and high inbuilt short circuit breaking capacity in DC applications. S200 M DC MCBs

can be used in 1-pole version at 220V DC and in 2-pole version up to 440V DC. During the installation process it is necessary to take into account, the polarity marked on the device.

### Technical features

| Electrical data                                     | S200 M DC                                                       |              |
|-----------------------------------------------------|-----------------------------------------------------------------|--------------|
| Standards                                           | IEC / EN 60947-2                                                |              |
| Poles                                               | 1P, 2P                                                          |              |
| Tripping characteristics curve                      | C                                                               |              |
| Rated current                                       | 1.6A - 63 A                                                     |              |
| Rated voltage                                       | 1P : 220 V DC                                                   | 2P : 440V DC |
| Maximum power frequency recovery vVoltage, Umax     | 1P : 250V DC                                                    | 2P : 500V DC |
| Min. operating voltage                              | 12 V DC                                                         |              |
| Rated ultimate short-circuit breaking capacity, Icu | 10kA                                                            |              |
| Rated service short-circuit breaking capacity, Ics  | 10kA                                                            |              |
| Cross-section of conductor (top / bottom)           | 35 mm2                                                          |              |
| Terminal                                            | Fail safe bi-directional cylinder - lift terminal               |              |
| Contact position indication                         | Marking on toggle (1 ON / 0 OFF), Real CPI (red ON / green OFF) |              |
| Real contact position indication                    | Red ON / green OFF                                              |              |
| Accessories mountable                               | Yes (All System ProM Compact accessories)                       |              |
| Housing                                             | Insulation group I, RAL 7035                                    |              |
| Toggle                                              | Insulation group II, black, sealable                            |              |
| Ambient temperature                                 | -25..... +55°C                                                  |              |
| Storage temperature                                 | -40..... +70°C                                                  |              |
| Torque                                              | 2.8 Nm                                                          |              |
| Screwdriver                                         | No. 2 Pozidrive                                                 |              |
| Mounting                                            | On DIN rail 35 mm acc. to EN 60715 by fast clip                 |              |
| Mounting position                                   | any                                                             |              |
| Mounting dimensions acc. To DIN 43880               | 1                                                               |              |
| Pole dimensions ( H X D X W )                       | 85 X 69 X 17.5                                                  |              |
| Pole weight                                         | approx. 125g                                                    |              |



# S200M - DC , C characteristics - 10 kA



S201M-C DC

## Single pole

| Description  | Current rating (A) | Pack Unit (Pc) | Ordering code   | L.P.(₹) |
|--------------|--------------------|----------------|-----------------|---------|
| S201M-C1,6DC | 1.6                | 12             | 2CDS271064R0974 | 755     |
| S201M-C2DC   | 2                  | 12             | 2CDS271064R0024 |         |
| S201M-C3DC   | 3                  | 12             | 2CDS271064R0034 |         |
| S201M-C4DC   | 4                  | 12             | 2CDS271064R0044 |         |
| S201M-C6DC   | 6                  | 12             | 2CDS271064R0064 |         |
| S201M-C10DC  | 10                 | 12             | 2CDS271064R0104 | 620     |
| S201M-C16DC  | 16                 | 12             | 2CDS271064R0164 |         |
| S201M-C20DC  | 20                 | 12             | 2CDS271064R0204 |         |
| S201M-C25DC  | 25                 | 12             | 2CDS271064R0254 |         |
| S201M-C32DC  | 32                 | 12             | 2CDS271064R0324 |         |
| S201M-C40DC  | 40                 | 12             | 2CDS271064R0404 | 790     |
| S201M-C50DC  | 50                 | 12             | 2CDS271064R0504 |         |
| S201M-C63DC  | 63                 | 12             | 2CDS271064R0634 |         |



S202M-C DC

## Double Pole

| Description  | Current rating (A) | Pack Unit (Pc) | Ordering code   | L.P.(₹) |
|--------------|--------------------|----------------|-----------------|---------|
| S202M-C1,6DC | 1.6                | 6              | 2CDS272064R0974 | 1,600   |
| S202M-C2DC   | 2                  | 6              | 2CDS272064R0024 |         |
| S202M-C3DC   | 3                  | 6              | 2CDS272064R0034 |         |
| S202M-C4DC   | 4                  | 6              | 2CDS272064R0044 |         |
| S202M-C6DC   | 6                  | 6              | 2CDS272064R0064 | 1,290   |
| S202M-C10DC  | 10                 | 6              | 2CDS272064R0104 |         |
| S202M-C16DC  | 16                 | 6              | 2CDS272064R0164 |         |
| S202M-C20DC  | 20                 | 6              | 2CDS272064R0204 |         |
| S202M-C25DC  | 25                 | 6              | 2CDS272064R0254 |         |
| S202M-C32DC  | 32                 | 6              | 2CDS272064R0324 | 1,745   |
| S202M-C40DC  | 40                 | 6              | 2CDS272064R0404 |         |
| S202M-C50DC  | 50                 | 6              | 2CDS272064R0504 |         |
| S202M-C63DC  | 63                 | 6              | 2CDS272064R0634 |         |

Note: Standard packing quantity for MCBs: SP - 12 Nos, DP - 6 Nos



# Miniature Circuit Breaker (MCB)

S200 series - 80, 100A



S201C

**Features**

- Breaking capacity - 6kA
- Tripping characteristics - C curve
- Suitable for -25..... +55 °C ambient temperatures
- Standards : Conforms to IEC60898, IEC60947-2

| Description                      | Current rating (A) | Pack unit (Pc) | Ordering code   | L.P.(₹) |
|----------------------------------|--------------------|----------------|-----------------|---------|
| <b>Single pole</b>               |                    |                |                 |         |
| S201-C80                         | 80                 | 1              | 2CDS251001R0804 | 2,295   |
| S201-C100                        | 100                | 1              | 2CDS251001R0824 | 2,685   |
| <b>Single pole &amp; neutral</b> |                    |                |                 |         |
| S201-C80NA                       | 80                 | 1              | 2CDS251103R0804 | 4,800   |
| S201-C100NA                      | 100                | 1              | 2CDS251103R0824 | 5,730   |
| <b>Double pole</b>               |                    |                |                 |         |
| S202-C80                         | 80                 | 1              | 2CDS252001R0804 | 4,500   |
| S202-C100                        | 100                | 1              | 2CDS252001R0824 | 5,200   |
| <b>Triple pole</b>               |                    |                |                 |         |
| S203-C80                         | 80                 | 1              | 2CDS253001R0804 | 6,550   |
| S203-C100                        | 100                | 1              | 2CDS253001R0824 | 7,925   |
| <b>Triple pole &amp; neutral</b> |                    |                |                 |         |
| S203-C80NA                       | 80                 | 1              | 2CDS253103R0804 | 9,850   |
| S203-C100NA                      | 100                | 1              | 2CDS253103R0824 | 11,740  |
| <b>Four pole</b>                 |                    |                |                 |         |
| S204-C80                         | 80                 | 1              | 2CDS254001R0804 | 9,200   |
| S204-C100                        | 100                | 1              | 2CDS254001R0824 | 9,950   |



# High performance MCB

## S800 series 80 to 125A



S202M-C DC

### Features

- Complies to standards IEC 60947-2 & EN 60898-1
- Compact size: One size up to 125A
- Compact performance:  
Selective and back-up characteristics
- Does not let go: The interchangeable terminal adapter.  
Cage terminals or ring lugs
- On the safe side: Operating status display.
- Simple and flexible: Accessories fitted by the customer
- Identical accessories for a broad range of applications

### The S800 range

- S800S (50kA) upto 125A
- S800N (36kA) upto 125A
- S800C (25kA) upto 125A
- S800B (16kA) upto 125A
- S800PV-SP (upto 1500V DC & upto 125A)
- S800PV-M-H (upto 1500V DC & upto 125A)

### S800B - 'C' Curve 16 kA as per IEC 60947-2

#### Single pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code   | L.P.(₹) |
|-------------|--------------------|----------------|-----------------|---------|
| S801B-C32   | 32                 | 1              | 2CCS811001R0324 | 2,285   |
| S801B-C40   | 40                 | 1              | 2CCS811001R0404 | 2,285   |
| S801B-C50   | 50                 | 1              | 2CCS811001R0504 | 2,400   |
| S801B-C63   | 63                 | 1              | 2CCS811001R0634 | 2,400   |
| S801B-C80   | 80                 | 1              | 2CCS811001R0804 | 2,800   |
| S801B-C100  | 100                | 1              | 2CCS811001R0824 | 2,950   |
| S801B-C125  | 125                | 1              | 2CCS811001R0844 | 3,100   |

#### Double pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code   | L.P.(₹) |
|-------------|--------------------|----------------|-----------------|---------|
| S802B-C32   | 32                 | 1              | 2CCS812001R0324 | 4,800   |
| S802B-C40   | 40                 | 1              | 2CCS812001R0404 | 4,800   |
| S802B-C50   | 50                 | 1              | 2CCS812001R0504 | 5,040   |
| S802B-C63   | 63                 | 1              | 2CCS812001R0634 | 5,040   |
| S802B-C80   | 80                 | 1              | 2CCS812001R0804 | 5,800   |
| S802B-C100  | 100                | 1              | 2CCS812001R0824 | 6,200   |
| S802B-C125  | 125                | 1              | 2CCS812001R0844 | 6,500   |

#### Triple pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code   | L.P.(₹) |
|-------------|--------------------|----------------|-----------------|---------|
| S803B-C32   | 32                 | 1              | 2CCS813001R0324 | 7,300   |
| S803B-C40   | 40                 | 1              | 2CCS813001R0404 | 7,300   |
| S803B-C50   | 50                 | 1              | 2CCS813001R0504 | 7,680   |
| S803B-C63   | 63                 | 1              | 2CCS813001R0634 | 7,680   |
| S803B-C80   | 80                 | 1              | 2CCS813001R0804 | 8,960   |
| S803B-C100  | 100                | 1              | 2CCS813001R0824 | 9,440   |
| S803B-C125  | 125                | 1              | 2CCS813001R0844 | 9,920   |

#### Four pole

| Description | Current rating (A) | Pack unit (Pc) | Ordering code   | L.P.(₹) |
|-------------|--------------------|----------------|-----------------|---------|
| S804B-C32   | 32                 | 1              | 2CCS814001R0324 | 9,820   |
| S804B-C40   | 40                 | 1              | 2CCS814001R0404 | 9,820   |
| S804B-C50   | 50                 | 1              | 2CCS814001R0504 | 10,320  |
| S804B-C63   | 63                 | 1              | 2CCS814001R0634 | 10,320  |
| S804B-C80   | 80                 | 1              | 2CCS814001R0804 | 12,040  |
| S804B-C100  | 100                | 1              | 2CCS814001R0824 | 12,680  |
| S804B-C125  | 125                | 1              | 2CCS814001R0844 | 13,330  |

# Isolators

### SHD series

Isolator for panel installation onto DIN rail acc. to DIN EN 60715  
Mounting depth : 70 mm  
Mounting width : per pole = 17.5 mm = 1 module  
Colour : grey, RAL 7035  
Colour of switch lever : red RAL 3000®  
Captive screws with recessed/slotted head, Pozidrive size 2  
Compatibility for Locking device (unauthorized ON/OFF)



SHD201

| Description        | Current rating (A) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|--------------------|--------------------|----------------|-------------------|-----------|
| <b>Double pole</b> |                    |                |                   |           |
| SHD202/25          | 25                 | 6              | 1SYD272111R0025 ■ | 490       |
| SHD202/40          | 40                 | 6              | 1SYD272111R0040 ■ | 525       |
| SHD202/63          | 63                 | 6              | 1SYD272111R0063 ■ | 695       |
| <b>Triple pole</b> |                    |                |                   |           |
| SHD203/25          | 25                 | 4              | 1SYD273111R0025 ■ | 825       |
| SHD203/40          | 40                 | 4              | 1SYD273111R0040 ■ | 900       |
| SHD203/63          | 63                 | 4              | 1SYD273111R0063 ■ | 1,050     |
| <b>Four pole</b>   |                    |                |                   |           |
| SHD204/25          | 25                 | 3              | 1SYD274111R0025 ■ | 920       |
| SHD204/40          | 40                 | 3              | 1SYD274111R0040 ■ | 1,115     |
| SHD204/63          | 63                 | 3              | 1SYD274111R0063 ■ | 1,235     |

Note: Standard packing quantity for SHD Isolators: SP - 12 Nos, DP - 6 Nos, TP - 4 Nos, FP - 3 Nos.



E201

| Description        | Current rating (A) | Pack unit (Pc) | Ordering code   | L.P.(₹) |
|--------------------|--------------------|----------------|-----------------|---------|
| <b>Double pole</b> |                    |                |                 |         |
| E202/80r           | 80                 | 1              | 2CDE282001R0080 | 900     |
| E202/100r          | 100                | 1              | 2CDE282001R0100 | 1,415   |
| E202/125r          | 125                | 1              | 2CDE282001R0125 | 1,460   |
| <b>Triple pole</b> |                    |                |                 |         |
| E203/80r           | 80                 | 1              | 2CDE283001R0080 | 1,510   |
| E203/100r          | 100                | 1              | 2CDE283001R0100 | 1,650   |
| E203/125r          | 125                | 1              | 2CDE283001R0125 | 1,850   |
| <b>Four pole</b>   |                    |                |                 |         |
| E204/80r           | 80                 | 1              | 2CDE284001R0080 | 1,700   |
| E204/100r          | 100                | 1              | 2CDE284001R0100 | 1,800   |
| E204/125r          | 125                | 1              | 2CDE284001R0125 | 2,010   |



E213

### Change over switch

| Description                                              | Ordering code   | LP (₹) |
|----------------------------------------------------------|-----------------|--------|
| E213-16-002, double pole change over switch, 16 A (I-II) | 2CCA703045R0001 | 2,050  |
| E213-25-002, double pole change over switch, 25 A (I-II) | 2CCA703046R0001 | 2,550  |
| E214-16-202, group switch, 16 A (I-0-II)                 | 2CCA703030R0001 | 2,315  |
| E214-25-202, group switch, 25 A (I-0-II)                 | 2CCA703031R0001 | 2,585  |

■ Stock items

# Residual current circuit breaker (RCCB)

## FH200 Series

Test pushbutton to verify the correct functioning of the device.

Information on the device is laser printed to make it clearly visible and long lasting.



Bi-directional cylindrical terminal ensures higher safety of connecting operations, making them easier.

Laser-marked order code on the front to make easier future orders.

|                                                   |                                                                                    |
|---------------------------------------------------|------------------------------------------------------------------------------------|
| Technical data                                    | FH200                                                                              |
| Standards                                         | IEC/EN 61008; IS 12640-1: 2008                                                     |
| Type (wave form of the earth leakage sensed)      | AC                                                                                 |
| Poles                                             | 2P, 4P                                                                             |
| Rated current I <sub>n</sub>                      | 25, 40, 63 A                                                                       |
| Rated sensitivity I <sub>Δn</sub>                 | 30, 100, 300 mA                                                                    |
| Rated voltage U <sub>e</sub>                      | 230/400 - 240/415 V                                                                |
| Insulation voltage U <sub>i</sub>                 | 500 V                                                                              |
| Max. operating voltage of circuit test            | 254 V                                                                              |
| Min. operating voltage of circuit test            | 110 V                                                                              |
| Rated frequency                                   | 50..60 Hz                                                                          |
| Dielectric test voltage at ind. freq. for 1 min.  | 2.5 kV                                                                             |
| Mechanical features                               |                                                                                    |
| Toggle                                            | BLACK sealable in ON-OFF position                                                  |
| Contact position indicator (CPI)                  | not available                                                                      |
| Ambient temperature (with daily average ≤ +35 °C) | -5..... +40°C                                                                      |
| Storage temperature                               | -40..... +70°C                                                                     |
| Installation                                      |                                                                                    |
| Terminal type                                     | Failsafe bi-directional cylinder-lift terminal at top and bottom (shock protected) |
| Terminal size top/bottom for cable                | 25/25 mm²                                                                          |
| Terminal size top/bottom for busbar               | 10/10 mm²                                                                          |
| Tightening torque                                 | 2.8 N*m                                                                            |
| Connection                                        | from top and bottom                                                                |
| Accessories mountability                          | No                                                                                 |

# Residual current circuit breaker (RCCB) 1SYF202006R1400

## FH200 series



FH202 AC

Two pole

| Product description | Current rating (A) | Residual rated current (mA) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|---------------------|--------------------|-----------------------------|----------------|-------------------|-----------|
| FH202 AC-25/0.03    | 25                 | 30                          | 1              | 1SYF202006R1250 ■ | 2,440     |
| FH202 AC-25/0.1     | 25                 | 100                         | 1              | 1SYF202006R2250 ■ | 2,585     |
| FH202 AC-25/0.3     | 25                 | 300                         | 1              | 1SYF202006R3250   | 2,605     |
| FH202 AC-40/0.03    | 40                 | 30                          | 1              | 1SYF202006R1400 ■ | 2,695     |
| FH202 AC-40/0.1     | 40                 | 100                         | 1              | 1SYF202006R2400 ■ | 2,815     |
| FH202 AC-40/0.3     | 40                 | 300                         | 1              | 1SYF202006R3400   | 2,825     |
| FH202 AC-63/0.03    | 63                 | 30                          | 1              | 1SYF202006R1630 ■ | 3,200     |
| FH202 AC-63/0.1     | 63                 | 100                         | 1              | 1SYF202006R2630 ■ | 3,465     |
| FH202 AC-63/0.3     | 63                 | 300                         | 1              | 1SYF202006R3630   | 3,520     |



FH204 AC

Four pole

| Product description | Current rating (A) | Residual rated current (mA) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|---------------------|--------------------|-----------------------------|----------------|-------------------|-----------|
| FH204 AC-25/0.03    | 25                 | 30                          | 1              | 1SYF204006R1250   | 3,195     |
| FH204 AC-25/0.1     | 25                 | 100                         | 1              | 1SYF204006R2250   | 3,325     |
| FH204 AC-25/0.3     | 25                 | 300                         | 1              | 1SYF204006R3250   | 3,350     |
| FH204 AC-40/0.03    | 40                 | 30                          | 1              | 1SYF204006R1400 ■ | 3,275     |
| FH204 AC-40/0.1     | 40                 | 100                         | 1              | 1SYF204006R2400 ■ | 3,375     |
| FH204 AC-40/0.3     | 40                 | 300                         | 1              | 1SYF204006R3400 ■ | 3,470     |
| FH204 AC-63/0.03    | 63                 | 30                          | 1              | 1SYF204006R1630   | 3,630     |
| FH204 AC-63/0.1     | 63                 | 100                         | 1              | 1SYF204006R2630 ■ | 3,805     |
| FH204 AC-63/0.3     | 63                 | 300                         | 1              | 1SYF204006R3630 ■ | 3,925     |

■ Stock items

# Residual current circuit breaker (RCCB)

## F200 series

Test pushbutton to verify the correct functioning of the device.

Bi-directional cylindrical terminal ensures higher safety of connecting operations, making them easier.

Contact position indicator (CPI): to always know the status of the contacts (red: closed contacts; green: open contacts) independently on the toggle position

Information on the device is laser printed to make it clearly visible and long lasting.

Laser-marked order code on the front to make easier future orders.

| Technical data                                    | F200                                                                               |
|---------------------------------------------------|------------------------------------------------------------------------------------|
| Standards                                         | IEC/EN 61008; IS 12640-1: 2008                                                     |
| Type (wave form of the earth leakage sensed)      | AC                                                                                 |
| Poles                                             | 2P, 4P                                                                             |
| Rated current I <sub>n</sub>                      | 25, 40, 63, 80, 100 &125 A                                                         |
| Rated sensitivity I <sub>Δn</sub>                 | 30, 100, 300 mA                                                                    |
| Rated voltage U <sub>e</sub>                      | 230/400 - 240/415 V                                                                |
| Insulation voltage U <sub>i</sub>                 | 500 V                                                                              |
| Max. operating voltage of circuit test            | 254 V                                                                              |
| Min. operating voltage of circuit test            | 110 V                                                                              |
| Rated frequency                                   | 50..60 Hz                                                                          |
| Dielectric test voltage at ind. freq. for 1 min.  | 2.5 kV                                                                             |
| Mechanical features                               |                                                                                    |
| Toggle                                            | BLUE sealable in ON-OFF position                                                   |
| Contact position indicator (CPI)                  | yes                                                                                |
| Ambient temperature (with daily average ≤ +35 °C) | -25..+55 °C                                                                        |
| Storage temperature                               | -40...+70 °C                                                                       |
| Installation                                      |                                                                                    |
| Terminal type                                     | Failsafe bi-directional cylinder-lift terminal at top and bottom (shock protected) |
| Terminal size top/bottom for cable                | 25/25 mm²                                                                          |
| Terminal size top/bottom for busbar               | 10/10 mm²                                                                          |
| Tightening torque                                 | 2.8 N*m                                                                            |
| Connection                                        | from top and bottom                                                                |
| Accessories mountability                          | Yes                                                                                |



# Residual current circuit breaker (RCCB)

## F200 series



F202 AC

### Two pole

| Product Description | Current rating (A) | Residual rated current (mA) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|---------------------|--------------------|-----------------------------|----------------|-------------------|-----------|
| F202 AC-25/0,03     | 25                 | 30                          | 1              | 1SYF202005R1250 ■ | 2,775     |
| F202 AC-25/0,1      | 25                 | 100                         | 1              | 1SYF202005R2250 ■ | 2,860     |
| F202 AC-25/0,3      | 25                 | 300                         | 1              | 1SYF202005R3250   | 3,045     |
| F202 AC-40/0,03     | 40                 | 30                          | 1              | 1SYF202005R1400 ■ | 3,005     |
| F202 AC-40/0,1      | 40                 | 100                         | 1              | 1SYF202005R2400 ■ | 3,460     |
| F202 AC-40/0,3      | 40                 | 300                         | 1              | 1SYF202005R3400   | 3,480     |
| F202 AC-63/0,03     | 63                 | 30                          | 1              | 1SYF202005R1630 ■ | 3,500     |
| F202 AC-63/0,1      | 63                 | 100                         | 1              | 1SYF202005R2630 ■ | 3,745     |
| F202 AC-63/0,3      | 63                 | 300                         | 1              | 1SYF202005R3630   | 3,990     |
| F202 AC-80/0,03     | 80                 | 30                          | 1              | 2CSF202005R1800   | 8,985     |
| F202 AC-80/0,1      | 80                 | 100                         | 1              | 2CSF202005R2800   | 8,910     |
| F202 AC-80/0,3      | 80                 | 300                         | 1              | 2CSF202005R3800   | 8,910     |
| F202 AC-100/0,03    | 100                | 30                          | 1              | 2CSF202005R1900   | 8,045     |
| F202 AC-100/0,1     | 100                | 100                         | 1              | 2CSF202005R2900   | 8,420     |
| F202 AC-100/0,3     | 100                | 300                         | 1              | 2CSF202005R3900   | 9,125     |



F204 AC

### Four pole

| Product Description | Current rating (A) | Residual rated current (mA) | Pack unit (Pc) | Ordering code     | M.R.P.(₹) |
|---------------------|--------------------|-----------------------------|----------------|-------------------|-----------|
| F204 AC-25/0,03     | 25                 | 30                          | 1              | 1SYF204005R1250   | 3,980     |
| F204 AC-25/0,1      | 25                 | 100                         | 1              | 1SYF204005R2250   | 4,060     |
| F204 AC-25/0,3      | 25                 | 300                         | 1              | 1SYF204005R3250   | 4,285     |
| F204 AC-40/0,03     | 40                 | 30                          | 1              | 1SYF204005R1400 ■ | 3,770     |
| F204 AC-40/0,1      | 40                 | 100                         | 1              | 1SYF204005R2400 ■ | 3,915     |
| F204 AC-40/0,3      | 40                 | 300                         | 1              | 1SYF204005R3400 ■ | 4,245     |
| F204 AC-63/0,03     | 63                 | 30                          | 1              | 1SYF204005R1630   | 4,370     |
| F204 AC-63/0,1      | 63                 | 100                         | 1              | 1SYF204005R2630 ■ | 4,575     |
| F204 AC-63/0,3      | 63                 | 300                         | 1              | 1SYF204005R3630 ■ | 4,710     |
| F204 AC-80/0,03     | 80                 | 30                          | 1              | 2CSF204005R1800   | 9,525     |
| F204 AC-80/0,1      | 80                 | 100                         | 1              | 2CSF204005R2800   | 9,955     |
| F204 AC-80/0,3      | 80                 | 300                         | 1              | 2CSF204005R3800   | 10,055    |
| F204 AC-100/0,03    | 100                | 30                          | 1              | 2CSF204005R1900   | 9,685     |
| F204 AC-100/0,1     | 100                | 100                         | 1              | 2CSF204005R2900   | 10,770    |
| F204 AC-100/0,3     | 100                | 300                         | 1              | 2CSF204005R3900   | 10,505    |
| F204 AC-125/0,03    | 125                | 30                          | 1              | 2CSF204001R1950   | 13,740    |
| F204 AC-125/0,1     | 125                | 100                         | 1              | 2CSF204001R2950   | 16,180    |
| F204 AC-125/0,3     | 125                | 300                         | 1              | 2CSF204001R3950   | 35,000    |

■ Stock items



# Residual current circuit breaker with overcurrent protection

## RCBO - DS200M series



DS201M 1P+N

**Features**

- Complies to standard to IEC/EN 61009
- DS201 available in 4.5kA,6kA & 10kA breaking capacity
- Available in AC, A and APR types to meet all protection needs
- B and C characteristics with rated current up to 40 A available on all the versions
- Contact position indicator (CPI) to indicate the exact information of the circuit-breaker status
- Equipped with an RFID tag according to standard ISO/IEC FCD 15693-3 to authenticate the product
- Bi-directional cylinder-lift terminals for easier parallel feed
- Flag indicators - Differential trip indicator - blue
- Contact position indicator - green / red

**RCBO 10kA AC Type - DS200M**

| Description       | Current rating (A) | Residual rated current (mA) | Pack unit (Pc) | Ordering code     | LP (₹) |
|-------------------|--------------------|-----------------------------|----------------|-------------------|--------|
| DS201 M C6 AC30   | 6                  | 30                          | 1              | 2CSR275040R1064   | 3,300  |
| DS201 M C6 AC100  | 6                  | 100                         | 1              | 2CSR275040R2064   | 3,430  |
| DS201 M C6 AC300  | 6                  | 300                         | 1              | 2CSR275040R3064   | 3,610  |
| DS201 M C10 AC30  | 10                 | 30                          | 1              | 2CSR275040R1104   | 3,250  |
| DS201 M C10 AC100 | 10                 | 100                         | 1              | 2CSR275040R2104   | 3,380  |
| DS201 M C10 AC300 | 10                 | 300                         | 1              | 2CSR275040R3104   | 3,560  |
| DS201 M C16 AC30  | 16                 | 30                          | 1              | 2CSR275040R1164   | 3,195  |
| DS201 M C16 AC100 | 16                 | 100                         | 1              | 2CSR275040R2164   | 3,330  |
| DS201 M C16 AC300 | 16                 | 300                         | 1              | 2CSR275040R3164   | 3,510  |
| DS201 M C20 AC30  | 20                 | 30                          | 1              | 2CSR275040R1204   | 3,195  |
| DS201 M C20 AC100 | 20                 | 100                         | 1              | 2CSR275040R2204   | 3,330  |
| DS201 M C20 AC300 | 20                 | 300                         | 1              | 2CSR275040R3204   | 3,510  |
| DS201 M C25 AC30  | 25                 | 30                          | 1              | 2CSR275040R1254 ■ | 3,195  |
| DS201 M C25 AC100 | 25                 | 100                         | 1              | 2CSR275040R2254 ■ | 3,330  |
| DS201 M C25 AC300 | 25                 | 300                         | 1              | 2CSR275040R3254   | 3,510  |
| DS201 M C32 AC30  | 32                 | 30                          | 1              | 2CSR275040R1324   | 3,470  |
| DS201 M C32 AC100 | 32                 | 100                         | 1              | 2CSR275040R2324   | 3,565  |
| DS201 M C32 AC300 | 32                 | 300                         | 1              | 2CSR275040R3324   | 3,685  |
| DS201 M C40 AC30  | 40                 | 30                          | 1              | 2CSR275040R1404 ■ | 4,010  |
| DS201 M C40 AC100 | 40                 | 100                         | 1              | 2CSR275040R2404 ■ | 4,120  |
| DS201 M C40 AC300 | 40                 | 300                         | 1              | 2CSR275040R3404   | 4,230  |

■ Stock items



# Residual current circuit breaker with overcurrent protection blocks

## RCD blocks - DDA200 series



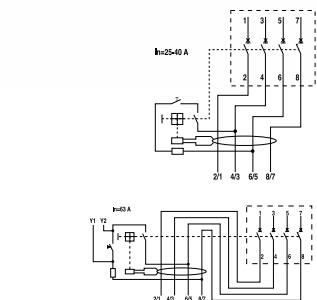
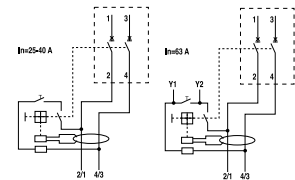
### DDA - 200 AC type

Function: RCD-block for assembly on site with MCBs S 200M series. Protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct (with  $I_{\Delta n}=30$  mA) contacts.

Standard: IEC/EN 61009 Ann. G



DDA202 AC



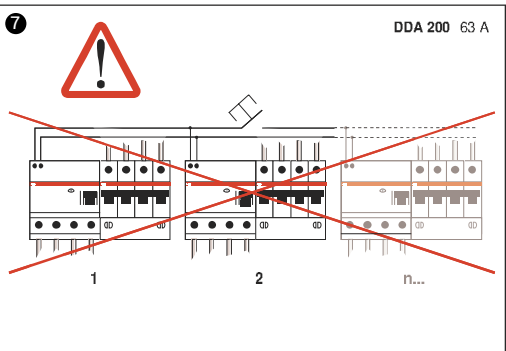
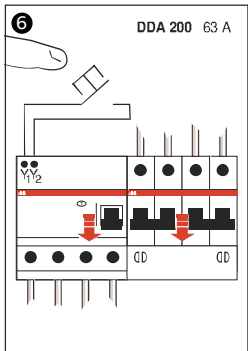
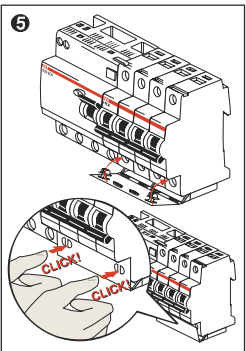
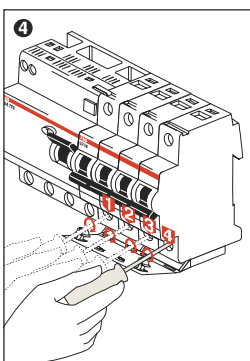
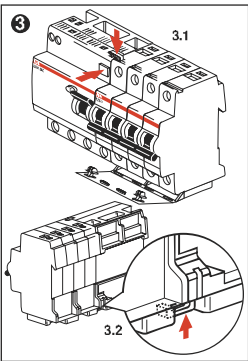
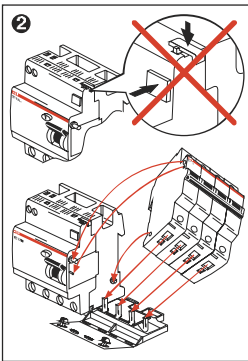
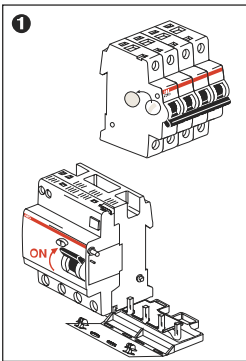
### DDA 200 AC

#### Two pole

| Description       | Current rating (A) | Residual rated current (mA) | Pack unit (Pc) | Ordering code     | LP (₹) |
|-------------------|--------------------|-----------------------------|----------------|-------------------|--------|
| DDA202 AC-63/0.03 | 63                 | 30                          | 1              | 2CSB202001R1630 ■ | 2,985  |
| DDA202 AC-63/0.1  | 63                 | 100                         | 1              | 2CSB202001R2630 ■ | 3,635  |
| DDA202 AC-63/0.3  | 63                 | 300                         | 1              | 2CSB202001R3630   | 3,650  |

#### Four pole

| Description       | Current rating (A) | Residual rated current (mA) | Pack unit (Pc) | Ordering code     | LP (₹) |
|-------------------|--------------------|-----------------------------|----------------|-------------------|--------|
| DDA204 AC-25/0.03 | 25                 | 30                          | 1              | 2CSB204001R1250   | 2,800  |
| DDA204 AC-40/0.03 | 40                 | 30                          | 1              | 2CSB204001R1400 ■ | 2,905  |
| DDA204 AC-63/0.03 | 63                 | 30                          | 1              | 2CSB204001R1630 ■ | 3,075  |
| DDA204 AC-25/0.1  | 25                 | 100                         | 1              | 2CSB204001R2250   | 3,115  |
| DDA204 AC-40/0.1  | 40                 | 100                         | 1              | 2CSB204001R2400 ■ | 3,310  |
| DDA204 AC-63/0.1  | 63                 | 100                         | 1              | 2CSB204001R2630 ■ | 3,960  |
| DDA204 AC-25/0.3  | 25                 | 300                         | 1              | 2CSB204001R3250   | 3,195  |
| DDA204 AC-40/0.3  | 40                 | 300                         | 1              | 2CSB204001R3400 ■ | 3,435  |
| DDA204 AC-63/0.3  | 63                 | 300                         | 1              | 2CSB204001R3630 ■ | 3,815  |



■ Stock items

# Solution for unwanted tripping - AP-R type (high immunity)

## RCCB / RCBO

The ABB range of AP-R anti-disturbance residual current circuit-breakers and blocks was designed to overcome the problem of unwanted tripping due to overvoltages of atmospheric or operation origin.

The electronic circuit in these devices can distinguish between temporary leakage caused by disturbances on the mains and permanent leakage due to actual faults, only breaking the circuit in the latter case.

AP-R residual current circuit-breakers and blocks have a slight delay into the tripping time, but this does not compromise the safety limits set by the Standards in force (release time at  $2 I_{\Delta n}=150$  ms).

Compared with standard type breakers, AP-R residual current breakers are therefore characterised, for any given sensibility, by:

- Higher residual trip current
- Tripping time delay
- Better resistance to overvoltages, harmonics and impulse disturbances.

Guaranteeing conventional residual current protection, their installation in the electrical circuit therefore allows any unwanted tripping to be avoided in domestic and industrial systems in which service continuity is essential.

This delay makes the AP-R residual current devices especially suited for installations involving motor starters/variable speed drives, fluorescent lamps or IT/electronic equipment.

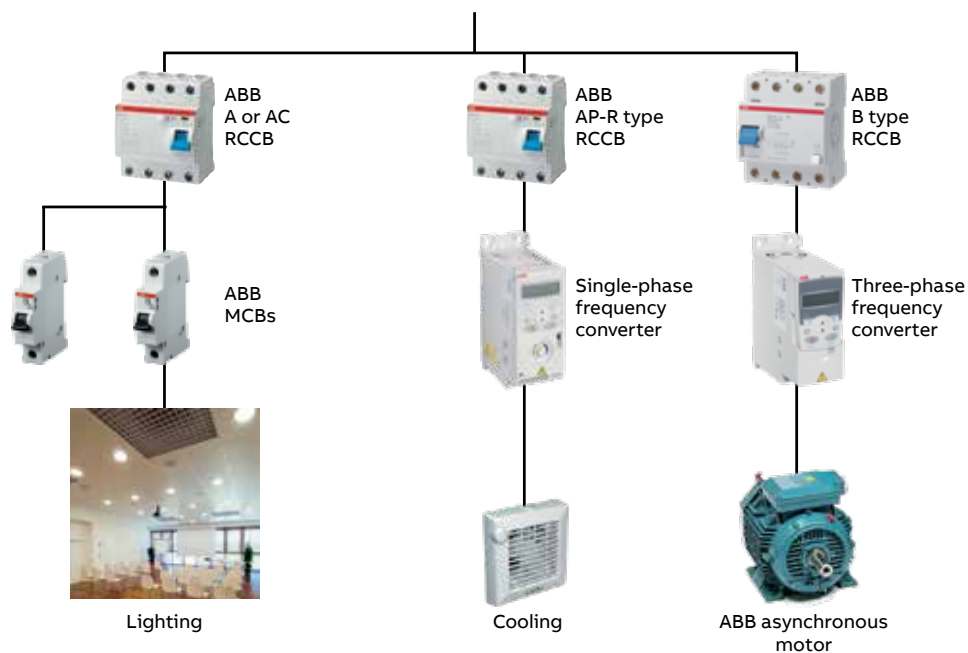
The use of multiple electronic reactors for the supply of fluorescent lamps instead generates permanent leakage currents and inrush currents that can cause nuisance tripping of a standard residual current circuit breaker.

IT system loads and other electronic equipment (e.g. dimmers, computers, inverters) with capacitive input filters connected between the phases and ground can also generate permanent earth leakage currents whose sum may provoke the nuisance tripping of a standard residual current circuit breaker. For these situations, the AP-R breakers allow a greater number of devices to be connected to the installation.

Frequency converters include a rectifier section and an inverter section.

In case of fault within a single-phase frequency converter AP-R type RCDs provide complete protection, because an earth fault occurring downstream the inverter, produces an earth fault current with multi-frequency shape with high amount of harmonics.

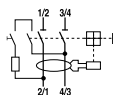
While, in case of fault within a three-phase frequency converter, B type RCDs ensure complete protection because in case of insulation fault between the rectifier and the inverter or downstream the inverter we can have a smooth DC earth fault current.



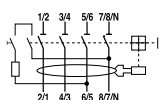
# RCCB - F200 series: AP-R (high immunity)



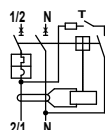
F202A



F204A



DS201M APR-1P+N



Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing the best compromise between safety and continuity in the service, thanks to the resistance to unwanted trippings; protection against indirect contacts and additional protection against direct ( $I_{\Delta n}=30$  mA) contacts.

Application: residential, commercial, industrial. Standard: IEC/EN 61008

Surge current resistance (wave 8/20)=3000 A Marking: according to EN 61008

## RCCB - F200 series

| Description         | Current rating (A) | Residual rated current (mA) | Packing | Ordering code   | LP (₹) |
|---------------------|--------------------|-----------------------------|---------|-----------------|--------|
| <b>Two pole</b>     |                    |                             |         |                 |        |
| F202 A-25/0.03 AP-R | 25                 | 30                          | 1       | 2CSF202401R1250 | 5,590  |
| F202 A-40/0.03 AP-R | 40                 | 30                          | 1       | 2CSF202401R1400 | 5,885  |
| F202 A-63/0.03 AP-R | 63                 | 30                          | 1       | 2CSF202401R1630 | 7,105  |

## Four pole

|                     |    |    |   |                 |       |
|---------------------|----|----|---|-----------------|-------|
| F204 A-25/0.03 AP-R | 25 | 30 | 1 | 2CSF204401R1250 | 6,870 |
| F204 A-40/0.03 AP-R | 40 | 30 | 1 | 2CSF204401R1400 | 7,065 |
| F204 A-63/0.03 AP-R | 63 | 30 | 1 | 2CSF204401R1630 | 8,020 |

## RCBO - DS200 series APR type (high immunity)

Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing an optimal compromise between safety and continuity of service, thanks to the resistance to unwanted tripping; protection against indirect contact and additional protection against direct ( $I_{\Delta n}=30$  mA) contact; protection and isolation of resistive and inductive loads.

Application: residential, commercial, industrial. Standard: IEC/EN 61009

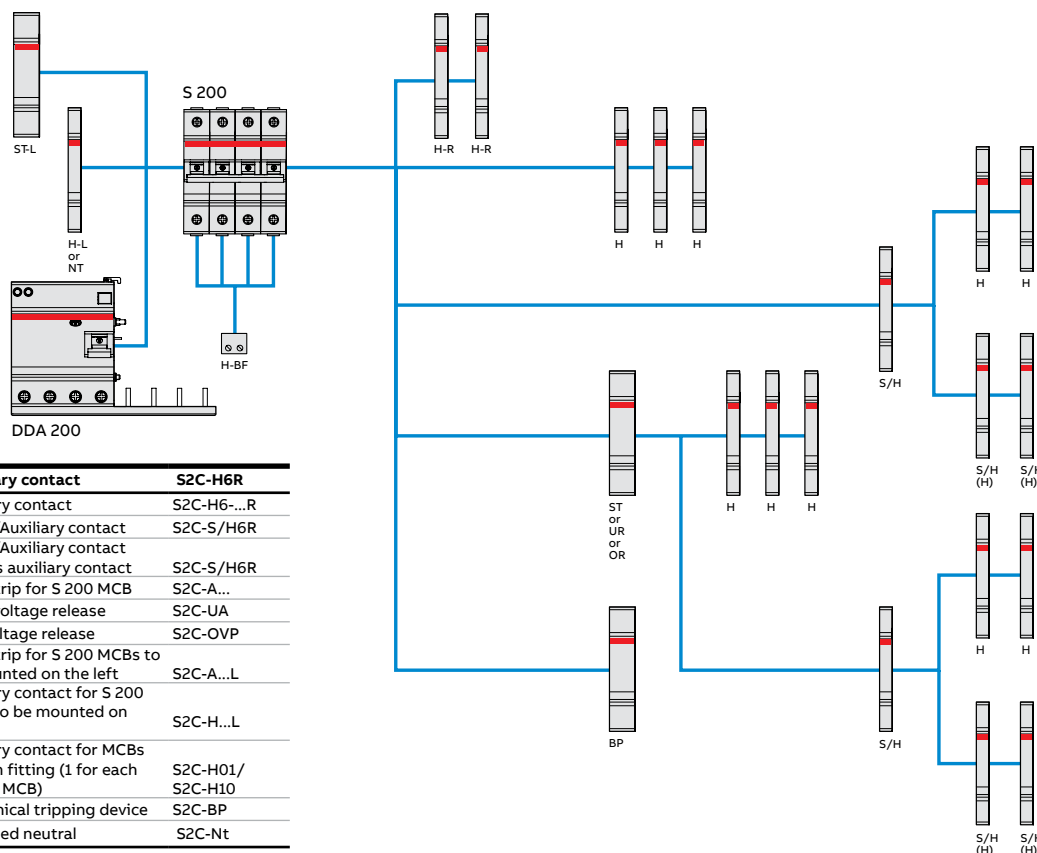
$I_{cn}=10$  kA

## RCBO - DS200 series APR type

| Description        | Current rating (A) | Residual rated current (mA) | Packing | Ordering code   | M.R.P. (₹) |
|--------------------|--------------------|-----------------------------|---------|-----------------|------------|
| DS201 M C6 APR30   | 6                  | 30                          | 1       | 2CSR275440R1064 | 5,935      |
| DS201 M C10 APR30  | 10                 | 30                          | 1       | 2CSR275440R1104 |            |
| DS201 M C16 APR30  | 16                 | 30                          | 1       | 2CSR275440R1164 |            |
| DS201 M C20 APR30  | 20                 | 30                          | 1       | 2CSR275440R1204 |            |
| DS201 M C25 APR30  | 25                 | 30                          | 1       | 2CSR275440R1254 |            |
| DS201 M C32 APR30  | 32                 | 30                          | 1       | 2CSR275440R1324 | 6,135      |
| DS201 M C40 APR30  | 40                 | 30                          | 1       | 2CSR275440R1404 | 6,165      |
| DS201 M C6 APR100  | 6                  | 100                         | 1       | 2CSR275440R2064 | 6,955      |
| DS201 M C10 APR100 | 10                 | 100                         | 1       | 2CSR275440R2104 |            |
| DS201 M C16 APR100 | 16                 | 100                         | 1       | 2CSR275440R2164 |            |
| DS201 M C20 APR100 | 20                 | 100                         | 1       | 2CSR275440R2204 |            |
| DS201 M C25 APR100 | 25                 | 100                         | 1       | 2CSR275440R2254 |            |
| DS201 M C32 APR100 | 32                 | 100                         | 1       | 2CSR275440R2324 | 7,085      |
| DS201 M C40 APR100 | 40                 | 100                         | 1       | 2CSR275440R2404 | 7,215      |
| DS201 M C6 APR300  | 6                  | 300                         | 1       | 2CSR275440R3064 | 7,345      |
| DS201 M C10 APR300 | 10                 | 300                         | 1       | 2CSR275440R3104 |            |
| DS201 M C16 APR300 | 16                 | 300                         | 1       | 2CSR275440R3164 |            |
| DS201 M C20 APR300 | 20                 | 300                         | 1       | 2CSR275440R3204 |            |
| DS201 M C25 APR300 | 25                 | 300                         | 1       | 2CSR275440R3254 |            |
| DS201 M C32 APR300 | 32                 | 300                         | 1       | 2CSR275440R3324 | 8,290      |
| DS201 M C40 APR300 | 40                 | 300                         | 1       | 2CSR275440R3404 |            |

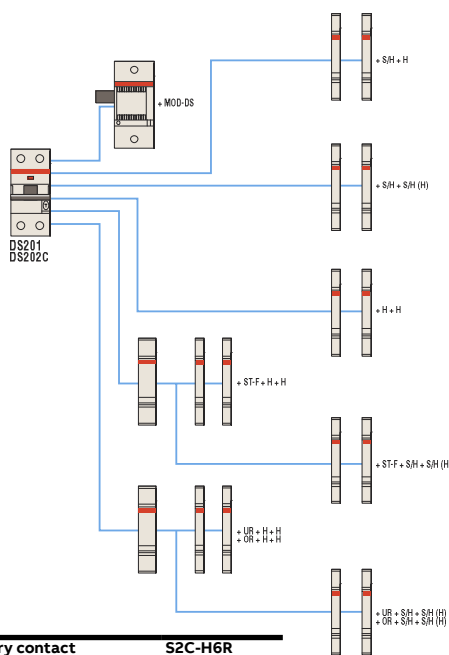
## Auxiliary elements and accessories for MCBs S200, RCDs F200 and DS200 series

### Combination of auxiliary elements with S200, DDA200 + S200 or DS200



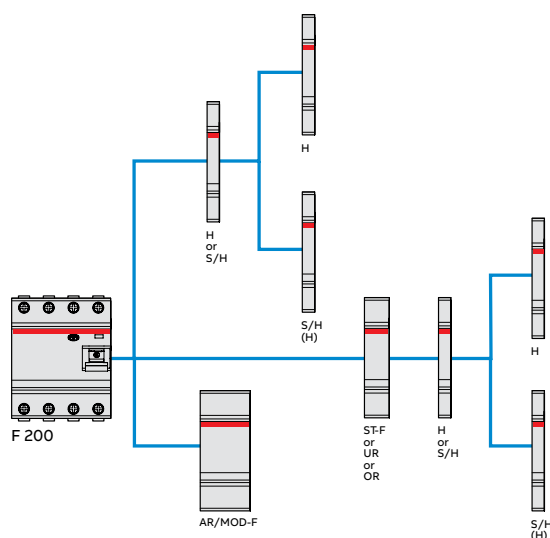
| H       | Auxiliary contact                                                  | S2C-H6R             |
|---------|--------------------------------------------------------------------|---------------------|
| H-R     | Auxiliary contact                                                  | S2C-H6...R          |
| S/H     | Signal/Auxiliary contact                                           | S2C-S/H6R           |
| S/H (H) | Signal/Auxiliary contact used as auxiliary contact                 | S2C-S/H6R           |
| ST      | Shunt trip for S 200 MCB                                           | S2C-A...            |
| UR      | Undervoltage release                                               | S2C-UA              |
| OR      | Overvoltage release                                                | S2C-OVP             |
| ST-L    | Shunt trip for S 200 MCBs to be mounted on the left                | S2C-A...L           |
|         | Auxiliary contact for S 200 MCBs to be mounted on the left         | S2C-H...L           |
| H-L     | Auxiliary contact for MCBs bottom fitting (1 for each pole of MCB) | S2C-H01/<br>S2C-H10 |
| H-BF    | Mechanical tripping device                                         | S2C-BP              |
| BP      | Switched neutral                                                   | S2C-Nt              |

### Combination of auxiliary elements with DS201, DS202C



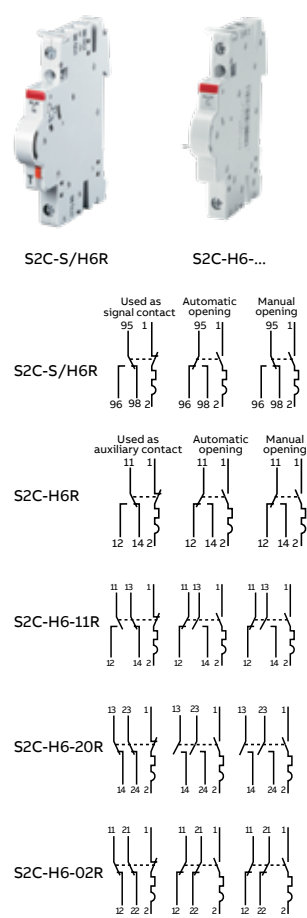
| H       | Auxiliary contact                                  | S2C-H6R   |
|---------|----------------------------------------------------|-----------|
| S/H     | Signal/Auxiliary contact                           | S2C-S/H6R |
| S/H (H) | Signal/Auxiliary contact used as auxiliary contact | S2C-S/H6R |
| ST-F    | Shunt trip for F 200 RCCB                          | F2C-A     |
| UR      | Undervoltage release                               | S2C-UA    |
| OR      | Overvoltage release                                | S2C-OVP   |
| MOD-DS  | Motor operating device                             | DS2C-CM   |

### Combination of auxiliary elements with F200



|                |                                                       |                |
|----------------|-------------------------------------------------------|----------------|
| <b>H</b>       | <b>Auxiliary contact</b>                              | <b>S2C-H6R</b> |
| <b>S/H</b>     | Signal/Auxiliary contact                              | S2C-S/H6R      |
| <b>S/H (H)</b> | Signal/Auxiliary contact<br>used as auxiliary contact | S2C-S/H6R      |
| <b>UR</b>      | Undervoltage release                                  | S2C-UA         |
| <b>OR</b>      | Overvoltage release                                   | S2C-OVP        |
| <b>AR</b>      | Auto reclosing unit                                   | F2C-ARI        |
| <b>MOD-F</b>   | Motor operating device                                | F2C-CM         |
| <b>ST-F</b>    | Shunt trip for F 200 RCCB                             | F2C-A          |

# Selection tables



## Signal/auxiliary contacts

Function S2C-S/H6R: choice through a selector between indication of the position of the device's contacts and signalling of the fault (overcurrent/short-circuit for MCBs and RCBOs; earth fault for RCCBs and RCBOs). Suitable for MCBs S 200 series, RCCBs F 200 series, RCBOs DS201, DS202C, DS 200 series.

Function S2C-H6R: indication of the position of the device's contacts. Suitable for MCBs S200 series. To be mounted on the left side of the MCBs, thanks to the special pin. They are not suitable to be mounted together with RCD-block DDA200.

Function S2C-H6-xxR: indication of the position of the MCB contact. Mounted on the right side. They are not suitable to be mounted together with other right side mounted auxiliary contacts.

| Description                                         | Order details | Packing | Ordering code     | LP (₹) |
|-----------------------------------------------------|---------------|---------|-------------------|--------|
| Auxiliary Contact, 1CO (Right side)                 | S2C-H6R       | 1       | 2CDS200912R0001   | 750    |
| Auxiliary Contact, 1NO / 1NC (Right side)           | S2C-H6-11R    | 1       | 2CDS200946R0001 ■ | 760    |
| Auxiliary Contact, 2NO (Right side)                 | S2C-H6-20R    | 1       | 2CDS200946R0002 ■ | 770    |
| Auxiliary Contact, 2NC (Right side)                 | S2C-H6-02R    | 1       | 2CDS200946R0003 ■ | 770    |
| Signal contact / Auxiliary switch, 1CO (Right side) | S2C-S/H6R     | 1       | 2CDS200922R0001 ■ | 1,340  |

## Auxiliary contacts mounting on the left side

| Description                              | Order details | Packing | Ordering code     | LP (₹) |
|------------------------------------------|---------------|---------|-------------------|--------|
| Auxiliary Contact, 1NO / 1NC (Left side) | S2C-H11L      | 1       | 2CDS200936R0001 ■ | 870    |
| Auxiliary Contact, 2NO (Left side)       | S2C-H20L      | 1       | 2CDS200936R0002 ■ | 850    |
| Auxiliary Contact, 2NC (Left side)       | S2C-H02L      | 1       | 2CDS200936R0003 ■ | 850    |

## Bottom-fitting auxiliary contacts for S200, S200M, S200P, S200S

| Description                     | Order details | Packing | Ordering code   | LP (₹) |
|---------------------------------|---------------|---------|-----------------|--------|
| Bottom fitting Aux contact, 1NC | S2C-H01       | 1       | 2CDS200970R0001 | 1,185  |
| Bottom fitting Aux contact, 1NO | S2C-H10       | 1       | 2CDS200970R0002 | 1,185  |

## Shunt trips

Function: remote opening of the device when a voltage is applied. Suitable for MCBs S200 series and RCBOs DS200 series.

| Description                             | Order details | Packing | Ordering code     | LP (₹) |
|-----------------------------------------|---------------|---------|-------------------|--------|
| Shunt Trip, 12...60V AC/DC              | S2C-A1        | 1       | 2CDS200909R0001 ■ | 3,355  |
| Shunt Trip, 110...415V AC, 110...250 DC | S2C-A2        | 1       | 2CDS200909R0002 ■ | 3,355  |

Function: remote opening of the device when a voltage is applied. Suitable for RCCBs F200 series and RCBOs DS201 and DS202C.

It can be used with MCBs SN201 series by means of SN201-IH interface module.

| Description                              | Order details | Packing | Ordering code     | LP (₹) |
|------------------------------------------|---------------|---------|-------------------|--------|
| Shunt Trip, 12...60V AC/DC               | F2C-A1        | 1       | 2CSS200933R0011   | 4,085  |
| Shunt Trip, 110...415V AC/ 110...250V DC | F2C-A2        | 1       | 2CSS200933R0012 ■ | 4,085  |

# Auxiliary elements for MCBs S200, RCDs F200 and DS200

## Selection tables



S2C-UA

### Undervoltage releases

Function: protection of the load in the event of a voltage drop (between 70% and 35% of its rated value); positive safety (device's tripping when the voltage is disconnected) emergency stop by means of a button. Suitable for MCBs S200 series, RCCBs F200 series and RCBOs DS201, DS202C, DS200 series It can be used with MCBs SN201 series by means of SN201-IH interface module.

| Description                   | Order details | Packing | Ordering code     | LP (₹) |
|-------------------------------|---------------|---------|-------------------|--------|
| Undervoltage Release, 12V DC  | S2C-UA 12 DC  | 1       | 2CSS200911R0001   | 4,305  |
| Undervoltage Release, 24V AC  | S2C-UA 24 AC  | 1       | 2CSS200911R0002   |        |
| Undervoltage Release, 24V DC  | S2C-UA 24 DC  | 1       | 2CSS200911R0007   |        |
| Undervoltage Release, 48V AC  | S2C-UA 48 AC  | 1       | 2CSS200911R0003   |        |
| Undervoltage Release, 48V DC  | S2C-UA 48 DC  | 1       | 2CSS200911R0008   |        |
| Undervoltage Release, 110V AC | S2C-UA 110 AC | 1       | 2CSS200911R0004   |        |
| Undervoltage Release, 110V DC | S2C-UA 110 DC | 1       | 2CSS200911R0009   |        |
| Undervoltage Release, 230V AC | S2C-UA 230 AC | 1       | 2CSS200911R0005 ■ |        |
| Undervoltage Release, 230V DC | S2C-UA 230 DC | 1       | 2CSS200911R0010   |        |
| Undervoltage Release, 400V AC | S2C-UA 400 AC | 1       | 2CSS200911R0006 ■ |        |
|                               |               |         |                   |        |



S2C-OVP

### Overvoltage releases

Function: monitoring voltage between the neutral and phase; when an overvoltage reaches the threshold value, the OVP device causes the tripping of the associated MCB or RCCB. Suitable for MCBs of the S200 series up to 63 A, and RCCBs of the F200 series up to 100 A and RCBOs DS201 and DS202C series.

| Description                                    | Order details | Packing | Ordering code   | LP (₹) |
|------------------------------------------------|---------------|---------|-----------------|--------|
| Over Voltage Release (Max tripping : 275 V AC) | S2C-OVP1      | 1       | 2CSS200910R0005 | 5,130  |
| Over Voltage Release (Max tripping : 290 V AC) | S2C-OVP2      | 1       | 2CSS200993R0005 |        |



S2C-NT

### Hand operated neutral

The hand operated neutral has to be mounted to the left side of the MCB and be snapped on the DIN rail. It is used for measuring duties where the neutral conductor must be in the open position. Due to the special design of the handle - when switching ON the MCB – the neutral will make before the MCB is closed. The S2C - Nt is not to switch with a tool (screw driver).

| Description                        | Order details | Packing | Ordering code   | LP (₹) |
|------------------------------------|---------------|---------|-----------------|--------|
| Hand operated neutral (Right side) | S2C-NT        | 1       | 2CDS200918R0001 | 770    |

# Auxiliary elements for MCBs S800 series



S800-AUX

### Auxiliary contact

| Description       | Order details | Packing | Ordering code   | LP (₹) |
|-------------------|---------------|---------|-----------------|--------|
| Auxiliary contact | S800-AUX      | 1       | 2CCS800900R0011 | 2,625  |



S800-AUX/ALT

### Combined auxiliary and signal contact

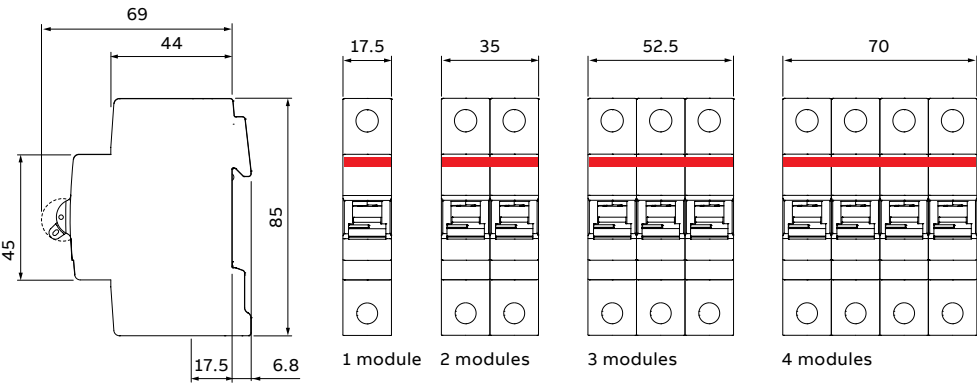
| Description              | Order details | Packing | Ordering Code   | L.P.(₹) |
|--------------------------|---------------|---------|-----------------|---------|
| Auxiliary/signal contact | S800-AUX/ALT  | 1       | 2CCS800900R0021 | 3,135   |

■ Stock items

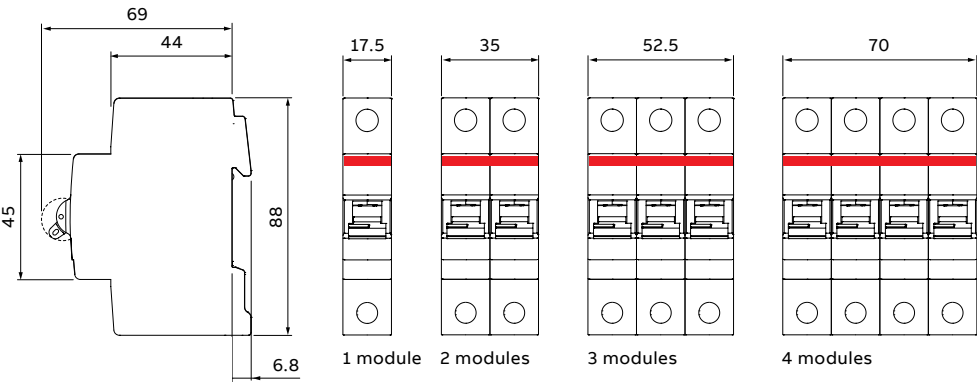


# Overall dimensions

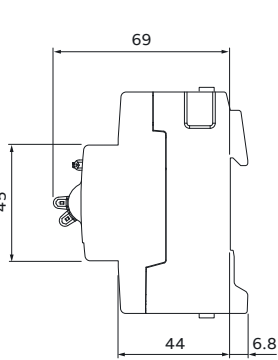
## MCB - (SH200) and Isolator (SHD)



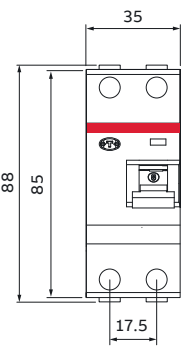
## MCB - (S200)



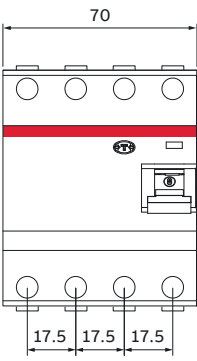
## RCCB - (F200)



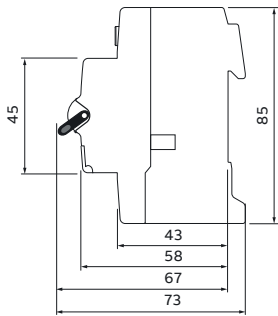
### Two pole



### Four pole



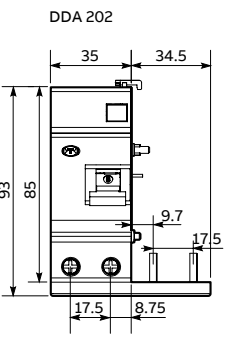
## RCBO (DS200)



## DDA 200

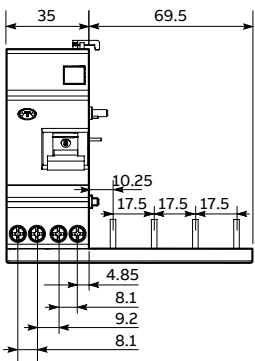
### Two pole

In=25-63 A



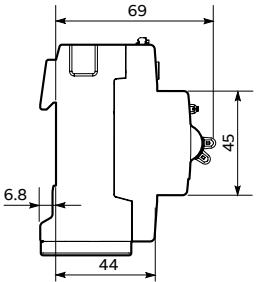
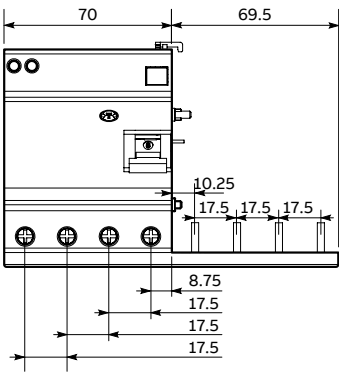
### Four pole

In=25-40 A



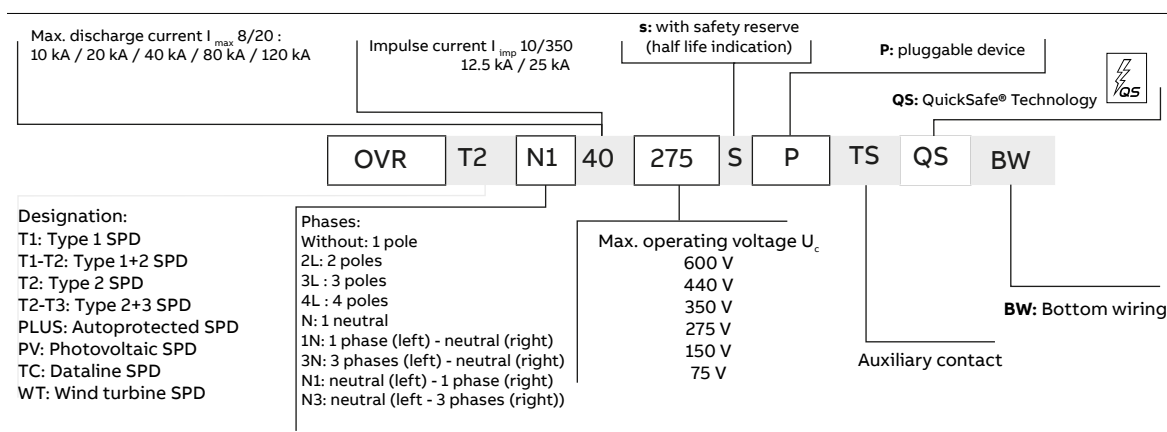
### Four pole

In=63 A





# Surge protection devices - The new OVR QuickSafe®



## Type 1 - Spark gap type

Type 1 SPDs can be installed at the entrance in the main switch board for protection of electrical installation and equipments against direct lightning surges.

### Three pole + Neutral



OVR Type 1

| Description              | Max. continuous operating voltage $U_c$ (V) | "I imp in kA (10/350us wave)" | "I max in kA (8/20us wave)" | Pole | No of modules | Ordering code   | L.P.(₹) |
|--------------------------|---------------------------------------------|-------------------------------|-----------------------------|------|---------------|-----------------|---------|
| OVR T1 3N 25 255-7 (TT)  | 255                                         | 25                            | -                           | 3+1  | 4             | 2CTB815101R8800 | 31,090  |
| OVR T1 3N 25 255 (TT)    | 255                                         | 25                            | -                           | 3+1  | 4             | 2CTB815101R1600 | 62,151  |
| OVR T1 3N 25 255 TS (TT) | 255                                         | 25                            | -                           | 3+1  | 5             | 2CTB815101R0700 | 62,525  |

## Type 1+2 - Metal Oxide Varistor

Type 1+2 surge protective devices are designed to discharge high current surges without any destruction of the installation. These surge protective devices are characterized by their capacity to withstand impulse current with 10/350  $\mu$ s wave form which simulate natural lightning current.

### Three pole + Neutral



OVR Type 1

| Description                    | Max. continuous operating voltage $U_c$ (V) | "I imp in kA (10/350us wave)" | "I max in kA (8/20us wave)" | Pole | No of modules | Ordering code   | L.P.(₹) |
|--------------------------------|---------------------------------------------|-------------------------------|-----------------------------|------|---------------|-----------------|---------|
| OVR T1-T2 3N 12.5-275s P QS    | 275                                         | 12.5                          | 80                          | 3+1  | 4             | 2CTB815710R1900 | 20,055  |
| OVR T1-T2 3N 12.5-275s P TS QS | 275                                         | 12.5                          | 80                          | 3+1  | 4             | 2CTB815710R0700 | 23,065  |
| OVR T1-T2 3N 12.5-440s P QS    | 440                                         | 12.5                          | 80                          | 3+1  | 4             | 2CTB815710R4800 | 24,065  |
| OVR T1-T2 3N 12.5-440s P TS QS | 440                                         | 12.5                          | 80                          | 3+1  | 4             | 2CTB815710R3600 | 27,675  |

## Type 2 - Metal oxide varistor

Type 2 SPDs can be installed at the sub-distribution switch board for protection of electrical installation and equipments against indirect lightning and switching surges.

### Single pole



OVR Type 2

| Description            | Max. continuous operating voltage $U_c$ (V) | I max in kA (8/20us wave) | No of Modules | Ordering code   | L.P.(₹) |
|------------------------|---------------------------------------------|---------------------------|---------------|-----------------|---------|
| OVR T2 40-275 P QS     | 275                                         | 40                        | 1             | 2CTB803871R2300 | 3,400   |
| OVR T2 40-275s P QS    | 275                                         | 40                        | 1             | 2CTB815704R1200 | 5,020   |
| OVR T2 40-275 P TS QS  | 275                                         | 40                        | 1             | 2CTB803871R1700 | 4,325   |
| OVR T2 40-440 P QS     | 440                                         | 40                        | 1             | 2CTB803871R1200 | 3,465   |
| OVR T2 40-440s P QS    | 440                                         | 40                        | 1             | 2CTB815704R4100 | 4,770   |
| OVR T2 80-275s P QS    | 275                                         | 80                        | 1             | 2CTB815708R1200 | 5,190   |
| OVR T2 80-275s P TS QS | 275                                         | 80                        | 1             | 2CTB815708R0000 | 6,395   |
| OVR T2 80-440s P QS    | 440                                         | 80                        | 1             | 2CTB815708R4100 | 4,695   |
| OVR T2 80-440s P TS QS | 440                                         | 80                        | 1             | 2CTB815708R2900 | 5,890   |

# Surge protection devices (OVR)



OVR Type 2

## Single pole + neutral

| Description               | Max. continuous operating voltage U <sub>c</sub> (V) | I max in kA (8/20us wave) | No of Modules | Ordering code   | L.P.(₹) |
|---------------------------|------------------------------------------------------|---------------------------|---------------|-----------------|---------|
| OVR T2 1N 40-275 P QS     | 275                                                  | 40                        | 2             | 2CTB803972R1100 | 7,230   |
| OVR T2 1N 40-275s P QS    | 275                                                  | 40                        | 2             | 2CTB815704R1400 | 9,110   |
| OVR T2 1N 40-275 P TS QS  | 275                                                  | 40                        | 2             | 2CTB803972R0500 | 8,205   |
| OVR T2 1N 40-275s P TS QS | 275                                                  | 40                        | 2             | 2CTB815704R0200 | 9,970   |
| OVR T2 1N 40-350 P QS     | 350                                                  | 40                        | 2             | 2CTB803982R1100 | 7,810   |
| OVR T2 1N 40-350 P TS QS  | 350                                                  | 40                        | 2             | 2CTB803982R0500 | 8,860   |
| OVR T2 1N 80-275s P QS    | 275                                                  | 80                        | 2             | 2CTB815708R1400 | 9,595   |
| OVR T2 1N 80-275s P TS QS | 275                                                  | 80                        | 2             | 2CTB815708R0200 | 10,590  |



OVR Type 2

## Three pole + Neutral

| Description               | Max. continuous operating voltage U <sub>c</sub> (V) | I max in kA (8/20us wave) | No of modules | Ordering code   | LP (₹) |
|---------------------------|------------------------------------------------------|---------------------------|---------------|-----------------|--------|
| OVR T2 3N 40-275 P QS     | 275                                                  | 40                        | 4             | 2CTB803973R1100 | 12,350 |
| OVR T2 3N 40-275s P QS    | 275                                                  | 40                        | 4             | 2CTB815704R2000 | 17,600 |
| OVR T2 3N 40-275 P TS QS  | 275                                                  | 40                        | 4             | 2CTB803973R0500 | 15,725 |
| OVR T2 3N 40-275s P TS QS | 275                                                  | 40                        | 4             | 2CTB815704R0800 | 20,630 |
| OVR T2 3N 40-350 P QS     | 350                                                  | 40                        | 4             | 2CTB803983R1100 | 13,340 |
| OVR T2 3N 40-350 P TS QS  | 350                                                  | 40                        | 4             | 2CTB803983R0500 | 20,025 |
| OVR T2 3N 40-440 P QS     | 440                                                  | 40                        | 4             | 2CTB803973R1400 | 12,720 |
| OVR T2 3N 40-440 P TS QS  | 440                                                  | 40                        | 4             | 2CTB803973R1500 | 15,920 |
| OVR T2 3N 40-440s P TS QS | 440                                                  | 40                        | 4             | 2CTB815704R3700 | 37,135 |
| OVR T2 3N 80-275s P QS    | 275                                                  | 80                        | 4             | 2CTB815708R2000 | 18,400 |
| OVR T2 3N 80-275s P TS QS | 275                                                  | 80                        | 4             | 2CTB815708R0800 | 21,920 |
| OVR T2 3N 80-440s P QS    | 440                                                  | 80                        | 4             | 2CTB815708R4900 | 16,060 |
| OVR T2 3N 80-440s P TS QS | 440                                                  | 80                        | 4             | 2CTB815708R3700 | 19,380 |



OVR PV

## Surge arrester for photovoltaic applications

| Description               | Max. continuous operating voltage U <sub>c</sub> (V) | I max in kA (8/20us wave) | No. of modules | Ordering code   | LP (₹) |
|---------------------------|------------------------------------------------------|---------------------------|----------------|-----------------|--------|
| OVR PV T2 40-1000 P QS    | 1100                                                 | 40                        | 3              | 2CTB804153R2400 | 4,525  |
| OVR PV T2 40-1000 P TS QS | 1100                                                 | 40                        | 3              | 2CTB804153R2500 | 5,720  |



OVR SL

## Surge arrester for data line protection (Pluggable)

| Description | Max. continuous operating voltage U <sub>c</sub> (V) | I max in kA (8/20us wave) | Width | Ordering code   | LP (₹) |
|-------------|------------------------------------------------------|---------------------------|-------|-----------------|--------|
| OVR SL06    | 7.79 V                                               | 10 kA                     | 7mm   | 7TCA085400R0360 | 9,025  |
| OVR SL15    | 16.7 V                                               | 10 kA                     | 7mm   | 7TCA085400R0361 | 7,565  |
| OVR SL30    | 36.7 V                                               | 10 kA                     | 7mm   | 7TCA085400R0363 | 7,935  |
| OVR SL50    | 56.7 V                                               | 10 kA                     | 7mm   | 7TCA085400R0364 | 7,765  |
| OVR SLTN    | 296 V                                                | 10 kA                     | 7mm   | 7TCA085400R0323 | 6,135  |

## D Line. Simply precise

An ideal range for automating the functions of the installation

Sealable glass and keypad lock to prevent tampering by unauthorised personnel

Inputs for the connection of remote controls (i.e. switches and buttons) and for DCF77 or GPS receiver connection

Clear display of each contact status

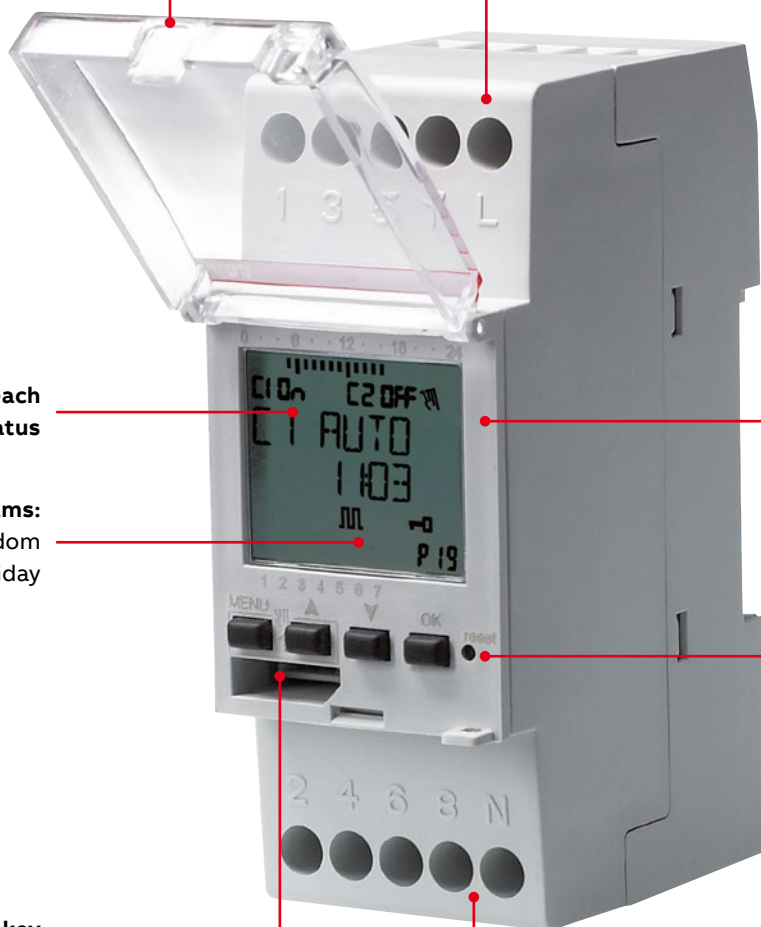
High contrast LCD monitor for excellent visibility in all conditions due to timed back-lighting

Wide range of programs: standard, cyclic, random and holiday

Permanent or temporary manual deviation, directly activated with a single touch

Programming key slot to run, copy or save programs

Terminals for wires up to 6 mm<sup>2</sup>.



## D Line. Simply precise

An ideal range for automating the functions of the installation



D Line

### D Line weekly digital time switches

The unique design, with white backlit LCD display, and extreme ease of use with two lines of text menu and only four buttons, make D Line ideal to automate the installation functions. Thanks to the innovative management of time vacation, the D Line digital time switches allow the exclusion of the normal weekly program in one or more periods of several years or between two different years.

| Description                                       | Ordering code   | LP (₹) |
|---------------------------------------------------|-----------------|--------|
| D Line weekly digital time switches-D1, 1 channel | 2CSM258763R0621 | 8,145  |
| D Line weekly digital time switches-D2, 2 channel | 2CSM256313R0621 | 12,725 |



T Line

### T Line modular twilight switches

These twilight switches allow to switch ON and switch OFF lighting devices according to a scheduled level of the ambient light. They are used in combination with an external sensor to detect if the ambient light is higher or lower than the set level. A switching delay prevents them from operating unnecessarily when the light intensity suddenly changes (e.g. lightning, moving vehicles, etc.).

| Description                                                                                                           | Ordering code   | LP (₹) |
|-----------------------------------------------------------------------------------------------------------------------|-----------------|--------|
| T Line modular twilight switches 1 channel is preset with a 10 LUX T1                                                 | 2CSM295563R1341 | 7,260  |
| "T Line modular twilight switches adjusted for 4 different scale values (2:40, 20:200, 200:2000, 2000:15000) T1 PLUS" | 2CSM295793R1341 | 7,760  |
| T1 POLE twilight switches, installation on the pole/wall, T1 POLE                                                     | 2CSM295753R1341 | 6,760  |
| Accessories for T Line modular twilight switches External sensor LS-D                                                 | 2CSM295723R1341 | 2,455  |



TWA

### TWA twilight astronomical switches

The twilight astronomical switches TWA-1 and TWA-2, respectively, in 1 and 2 channels, automatically control lighting circuits depending on the time of sunrise and sunset, greatly increasing energy efficiency.

The programming is in fact based on a mathematical algorithm able to calculate the time of the rising and setting of the sun in a certain location for each day of the year. Once powered the device, simply insert date, time, geographical coordinates and time zone so that it is ready to work.

| Description                                     | Ordering code   | LP (₹) |
|-------------------------------------------------|-----------------|--------|
| TWA twilight astronomical switches 1NO/NC TWA-1 | 2CSM204365R1341 | 17,645 |
| TWA twilight astronomical switches 2NO/NC TWA-2 | 2CSM204375R1341 | 22,025 |



AT2e-R

### AT and ATe electro-mechanical time switches

They control circuit opening and closing according to the scheduled program. Both available on daily and weekly versions and equipped with a 16 A contact, they can be set on the scheduled program or on the permanent ON function (ON-OFF only for two modules versions).

| Description                                                                                                     | Ordering code   | LP (₹) |
|-----------------------------------------------------------------------------------------------------------------|-----------------|--------|
| AT2e-R Daily electro-mechanical time switch, with running reserve, 2 modules, 15 minutes minimum switching time | 2CSM204235R0601 | 3,570  |



E200

### Control and automation components

| Description                                                                                                                                                                                                                                                                                           | Ordering code   | LP (₹) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------|
| E 232-230 staircase lighting time-delay switches, Staircase lighting time-delay switches are usually operated by pushbuttons, often fitted with a glow lamp. Switches are designed for a glow lamp current of up to 150 mA and thus perfectly suitable for installations in multi-storey buildings.   | 2CDE110000R0501 | 5,050  |
| The E 232-230 staircase lighting time-delay switch includes an electro-mechanical timer with a synchronous motor drive to ensure high operational safety in whatever mounting position. The time range is adjustable in increments of 15 seconds from 1 to seven minutes. Resettable after 30 seconds | 2CDE110003R0511 | 6,555  |

## SMISLINE TP plug-in system

Changes are never been easier

SMISLINE TP ensures that load-free devices and components can be snapped on and off under voltage without the need for additional personal protective equipment to guard against electrical hazards.



It opens up to a completely new prospects for you when it comes to installation, operation and flexibility.

The world's first pluggable socket system.



# SMISLINE TP plug-in system

## Changes have never been easier

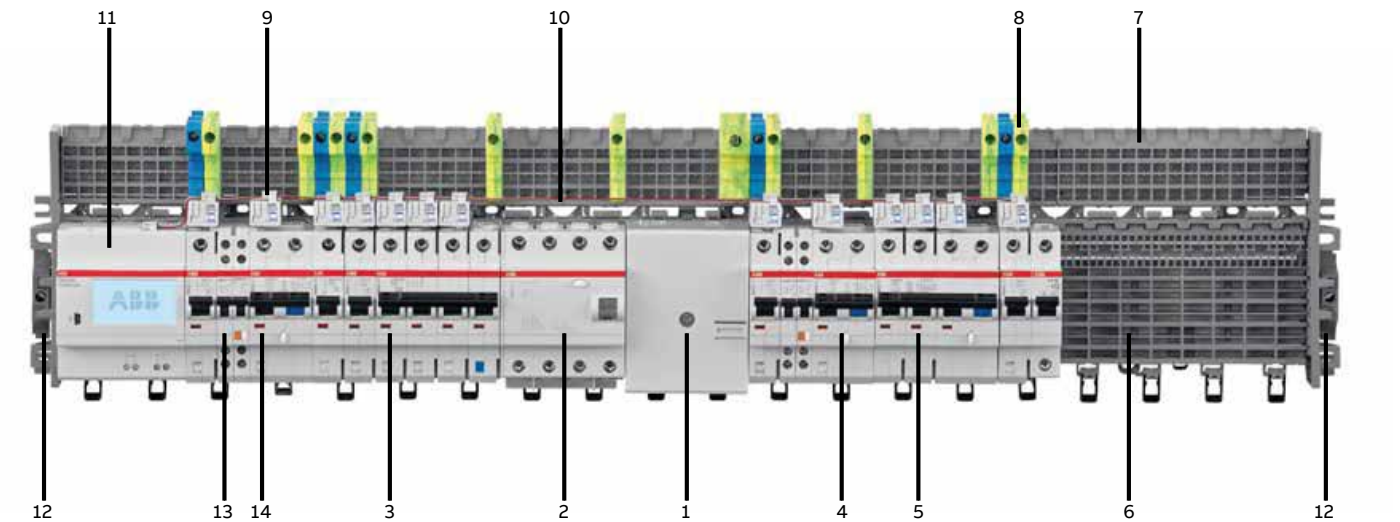


**Even safer: protection against electrical hazards**  
We have upgraded our unique SMISLINE socket system even further through the addition of a pioneering innovation. With the new SMISLINE TP system, components can now be plugged in or unplugged load-free without any risk from electrical current running through the body.

The SMISLINE TP pluggable socket system is completely fingersafe (IP2XB) – when devices are plugged in and unplugged, the system is always touch-proof. This means that SMISLINE TP prevents any danger to personnel from switching arcs or accidental arcing.

**Even more flexible: make additions and changes during on-going operation**  
Pluggable devices can be added and changed quickly, safely and simply during on-going operation. And this can be done without any need for personal protective equipment.

This means that you benefit from more flexibility, savings on installation and maintenance – and improved safety. SMISLINE TP provides greater availability and operating safety than conventional systems.



- |   |                                  |    |                                       |    |                   |
|---|----------------------------------|----|---------------------------------------|----|-------------------|
| 1 | Supply terminal                  | 6  | Socket IP20                           | 11 | Control unit CMS  |
| 2 | Surge arrester OVR404            | 7  | Additional socket IP20                | 12 | Socket end piece  |
| 3 | Miniature circuit breaker S403NP | 8  | Terminals                             | 13 | Auxillary contact |
| 4 | RCBO FS401                       | 9  | Sensor for current measurement system | 14 | Signal contact    |
| 5 | RCBO FS403                       | 10 | Cabel Bus system CMS                  |    |                   |

# ELR, Earth leakage relay - (Front panel mountable)



Front panel residual current relays are electronic devices used in combination with an external toroidal transformer. They are according to the protection standard IEC/EN 60947-2 Annex-M. The sensitivity can be set from 0.03 A to 30 A, while the tripping time from 0 to 5 seconds. Residual current relays are available in versions 48x48 mm, 72x72 mm, and 96x96 mm.

The Fail Safe function is available for versions ELR48P, ELR72P and ELR96P: the contacts switch when there is no auxiliary power.

The ELR96PF version is equipped with Fail Safe function, fault memory LED, and a frequency filter, that ensure continuity of service in the presence of harmonics.

ELR96PD has (in addition to these functions) a digital display for an instantaneous view of the residual current  $I\Delta n$ .

| Description | Operating voltage            | Pack | Ordering code   | L.P.(₹)      |
|-------------|------------------------------|------|-----------------|--------------|
| ELR48P      | 110 V a.c./d.c. - 230 V a.c. | 1    | 2CSG252211R1202 | Upon request |
| ELR48V24P   | 24-48 V a.c./d.c.            | 1    | 2CSG452211R1202 |              |
| ELR72       | 110 V a.c./d.c. - 230 V a.c. | 1    | 2CSG252120R1202 |              |
| ELR72V24    | 24-48 V a.c./d.c.            | 1    | 2CSG452120R1202 |              |
| ELR72P      | 110-230-400 V a.c.           | 1    | 2CSG152424R1202 |              |
| ELR72V24P   | 24-48 V a.c./d.c.            | 1    | 2CSG452424R1202 |              |
| ELR96       | 110-230-400 V a.c.           | 1    | 2CSG152130R1202 |              |
| ELR96V24    | 24-48 V a.c./d.c.            | 1    | 2CSG452130R1202 |              |
| ELR96P      | 110-230-400 V a.c.           | 1    | 2CSG152434R1202 |              |
| ELR96V24P   | 24-48 V a.c./d.c.            | 1    | 2CSG452434R1202 |              |
| ELR96PF     | 110-230-400 V a.c.           | 1    | 2CSG152435R1202 |              |
| ELR96PD     | 110-230-400 V a.c.           | 1    | 2CSG152436R1202 |              |

## RD3, residual current relays - (DIN rail mountable)

The RD3 family of electronic residual current relays provides residual current protection and monitoring functions according to IEC/EN 60947-2:2006 annex M and can be used in conjunction with all S 200 automatic devices and Tmax range moulded case devices up to T5, for industrial installations.

The RD3 residual current relays can provide status indications through two output contacts.

| Description | Operating voltage | Pack | Ordering code   | LP (₹)       |
|-------------|-------------------|------|-----------------|--------------|
| RD3-48      | 12-48 a.c./d.c.   | 1    | 2CSJ201001R0001 | Upon request |
| RD3         | 230-400 a.c.      | 1    | 2CSJ201001R0002 |              |
| RD3M-48     | 12-48 a.c./d.c.   | 1    | 2CSJ202001R0001 |              |
| RD3M        | 230-400 a.c.      | 1    | 2CSJ202001R0002 |              |
| RD3P-48     | 12-48 a.c./d.c.   | 1    | 2CSJ203001R0001 |              |
| RD3P        | 230-400 a.c.      | 1    | 2CSJ203001R0002 |              |

## Toroidal transformers

| Description | Toroid useful diameter (mm) | Min. measureable current (mA) | Max. rated current <sup>1</sup> (A) | Max. capacity <sup>2</sup> (A) | Pack | Ordering code   | L.P.(₹)      |
|-------------|-----------------------------|-------------------------------|-------------------------------------|--------------------------------|------|-----------------|--------------|
| TRM         | 29 (modular version)        | 30                            | 65                                  | 160                            | 1    | 2CSM029000R1211 | Upon request |
| TR1         | 35                          | 30                            | 75                                  | 250                            | 1    | 2CSG035100R1211 |              |
| TR2         | 60                          | 30                            | 85                                  | 400                            | 1    | 2CSG060100R1211 |              |
| TR3         | 80                          | 100                           | 160                                 | 800                            | 1    | 2CSG080100R1211 |              |
| TR4         | 110                         | 100                           | 250                                 | 1,250                          | 1    | 2CSG110100R1211 |              |
| TR4/A       | 110 (openable version)      | 300                           | 250                                 | 1,250                          | 1    | 2CSG110200R1211 |              |
| TR160       | 160                         | 300                           | 400                                 | 2,000                          | 1    | 2CSG160100R1211 |              |
| TR160A      | 160 (openable version)      | 500                           | 400                                 | 2,000                          | 1    | 2CSG160200R1211 |              |
| TR5         | 210                         | 300                           | 630                                 | 3,200                          | 1    | 2CSG210100R1211 |              |
| TR5/A       | 210 (openable version)      | 500                           | 630                                 | 3,200                          | 1    | 2CSG210200R1211 |              |

<sup>1</sup> Shows toroidal transformers selection for use with ELR according to IEC/EN 60947-2 Annex M in combination with MCBs S200 range and MCCBs Tmax range upto T5

<sup>2</sup> Shows the technical features of the toroidal transformers



# Measurement devices – DMTME multimeters



## DMTME multimeters

The instruments DMTME are digital multimeters that allow the measurement, in TRMS mode, of the principal electrical parameters in three-phase and single-phase 230/400 Vac networks, including the max/min/average detection of the main electrical parameters and the active and reactive energy count. The multiple measured variables are displayed locally on four red 7-segment LED displays providing easy readability and simultaneous display of the measures of the electrical parameters of the phases individually and of the whole network.

The instruments DMTME combine, in a single instrument, the functions of multiple devices: voltmeter, ammeter, power factor meter, wattmeter, varmeter, frequency meter, active and reactive energy meters; it allows remarkable financial savings, thanks to the reduction of space taken up in the panel and also of time required for cabling, along with the advantage of providing clear readings on a single device.

The DMTME-I-485, DMTME-I-485-96 and DMTME-I-485-72 models are additionally equipped with two digital relays, fully programmable as either pulse outputs for remote metering of energy consumption, or as alarm outputs. The output relay can be set as NO or NC. There is also an RS485 port for communicating the measured parameters and alarms over a Modbus network; used in addition to a converter of the CUS series, it allows direct connection to a central PC for remote supervision and control of the electrical network.

All versions come complete with Mini CD containing the instruction manual, technical documentation, Modbus communication protocol and the DMTME-SW tool, intended to be a first-hand PC-based application for the remote visualization of the measures.

## DMTME modular multimeters

TRMS measure of VL-L, VL-N, A, W, Var, VA, kWh, kVar, PF in 230/400 V a.c. lines.

Indirect connection through CT .../5 A. Auxiliary supply at 110 V a.c. and 230 V a.c.

| Product description | RS485 | Program. | Pack | Ordering code   | L.P.(₹)      |
|---------------------|-------|----------|------|-----------------|--------------|
| DMTME               | -     | -        | 1    | 2CSM170040R1021 | Upon request |
| DMTME-I-485         | ✓     | 2        | 1    | 2CSM180050R1021 |              |

## DMTME-96 panel multimeters

Auxiliary supply 230 V a.c. and 110 V a.c.

| Product description | RS485 | Program | Dimension | Pack | Ordering code   | L.P.(₹)      |
|---------------------|-------|---------|-----------|------|-----------------|--------------|
| DMTME-96            | -     | -       | 96x96     | 1    | 2CSG133030R4022 | Upon request |
| DMTME-I-485-96      | ✓     | 2       | 96x96     | 1    | 2CSG163030R4022 |              |

## DMTME-72 panel multimeters

Auxiliary supply 230 V a.c. and 400 V a.c.

| Product description | RS485 | Program | Dimension | Pack | Ordering code   | L.P.(₹)      |
|---------------------|-------|---------|-----------|------|-----------------|--------------|
| DMTME-72            | -     | -       | 72x72     | 1    | 2CSG132030R4022 | Upon request |
| DMTME-I-485-72      | ✓     | 2       | 96x96     | 1    | 2CSG162030R4022 |              |

# M2M - network analyser

## The measure of efficiency

The new M2M network analyser has advanced analysis functions which allow effective measurement of the main single-phase or three-phase electrical parameters: voltage, current, frequency, power factor, active and reactive power, active and reactive energy.

Fitted to low- and medium-voltage electrical panels, the new analyser allows the measurement and analysis in real time of electrical parameters, also verifying the quality of the energy thanks to THD measurement.

M2M also keeps the system's consumption under control, giving figures in CO2 kg and Euros to ensure more efficient and rational use of energy. Bidirectional metering of energy and power on the 4 quadrants allows both production and consumption of energy to be monitored with a single device. Aside from optimising the use of loads, real time measurement contributes to containing both environmental and budgetary impact.

All information gathered by the analyser can be transmitted quickly to remote locations through specific communication interfaces – RS485, RJ45 or RS232, with the support of numerous protocols including Modbus RTU, Modbus TCP/IP and Profibus DP.

Interaction with the control and supervision systems is possible via different inputs and outputs, all programmable.

### Features

- The importance of control  
Measurement and advanced analysis of electrical parameters
- The value of flexibility  
Versatility in its different applications and completeness of functions
- The advantages of communication  
Intuitive analyser with multiple integrated functions, which communicates also via digital and analogue I/O
- Easy to install
- Ease of use



## M2M - Network analyser

### The measure of efficiency

| Type         | Description                                                                                           | Protocol      | Serial port | Ordering code   | LP (₹)       |
|--------------|-------------------------------------------------------------------------------------------------------|---------------|-------------|-----------------|--------------|
| M2M          | 2 digital outputs programmable as threshold alarms or pulses                                          | -             | -           | 2CSG299883R4052 | Upon request |
| M2M MODBUS   | 2 digital outputs programmable as threshold alarms or pulses                                          | Modbus RTU    | RS485       | 2CSG299893R4052 |              |
| M2M ETHERNET | 2 digital outputs programmable as threshold alarms or pulses                                          | Modbus TCP/IP | RJ45        | 2CSG299903R4052 |              |
| M2M PROFIBUS | 2 digital outputs programmable as threshold alarms or pulses                                          | Profibus      | RS232       | 2CSG299913R4052 |              |
| M2M ALARM    | 2 digital outputs programmable as threshold alarms or pulses, 2 programmable relay outputs            | Modbus RTU    | RS485       | 2CSG299923R4052 |              |
| M2M I/O      | 2 digital outputs programmable as threshold alarms or pulses, 3 digital inputs and 2 analogue outputs | Modbus RTU    | RS485       | 2CSG299933R4052 |              |



## A point of reference. For simplicity and effectiveness NEW

A complete series, versatile and easy to install

Efficiency, safety, integration: the new System pro E comfort MISTRAL65 series rests on the strengths which have consolidated ABB's image over the years for its expertise and reliability in the area of products for protection, control, monitoring, measurement, safety and energy efficiency. These innovative IP65 rated consumer units complete

ABB's wide product range for the industrial sector. The result of constant research and constant attention paid to technological development, the System pro E comfort c consumer units are designed to satisfy all requirements electrical installers might have.



Enclosed Switches ONE20

| Description                       | No. modules | No. of rows | Dimensions WxHxD | Order code | L P (₹) |
|-----------------------------------|-------------|-------------|------------------|------------|---------|
| Mistral65 transparent door 4M     | 4           | 1           | 52x202x117       | 1SL1200A00 | 1,967   |
| Mistral65 transparent door 8M     | 8           | 1           | 232x250x154      | 1SL1201A00 | 3,180   |
| Mistral65 transparent door 12M    | 12          | 1           | 320x250x155      | 1SL1202A00 | 4,226   |
| Mistral65 transparent door 18M    | 18          | 1           | 430x250x155      | 1SL1203A00 | 5,357   |
| Mistral65 transparent door 24M    | 24          | 2           | 320x435x155      | 1SL1204A00 | 6,567   |
| Mistral65 transparent door 36M 2F | 36          | 2           | 430x435x155      | 1SL1205A00 | 10,454  |
| Mistral65 transparent door 36M 3F | 36          | 3           | 320x600x155      | 1SL1206A00 | 10,454  |
| Mistral65 transparent door 54M    | 54          | 3           | 430x600x155      | 1SL1208A00 | 16,738  |

# Distribution boards

## Elegance series

Elegance series (E-series) distribution boards are available in texture grey (color code - RAL7035)

### Construction

Blending aesthetics, functionality and safety, the E-series of ABB distribution boards are manufactured with high precision, and high quality CRCA steel sheets. These distribution boards undergo a seven-tank phosphating process to ensure anti-rust conditioning, superior finish and lasting strength. Premier quality powder coating is applied using the latest techniques

### Colour

ABB's E-series of distribution boards is available in texture grey (RAL 7035)

### Installation

The E-series of ABB distribution boards are universal mounting type, hence can be flush or wall mounted. These distribution boards are provided with top and bottom removable gland plates with adequate no of knock outs, which enable easy installation and connection of conduits of sizes up to 32 mm dia knock out.

### Protection

E-series distribution boards offer three types of protection- IP43 & IP54 degree with a metal door and IP30 degree without a door. The highest degree of attention has been paid to the safety aspect of the distribution boards, considering that they are installed in close proximity to people. An intermediate plate ensures total safety, as no live parts are exposed when the door is opened.



# Distribution boards

## Elegance series

### SPN DB -E-SHC

Horizontal single phase consumer unit with provision for incoming 2 pole (MCB / Isolator / RCD) and single phase outgoing. Suitable for surface and flush mounting.

#### IP 30



| Product description | No. of ways | No of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|---------------|-------------------|------------|
| E-SHC WD 4          | 4 way       | 4+2           | NSYN8690SPNWD04 ■ | 1,115      |
| E-SHC WD 6          | 6 way       | 6+2           | NSYN8690SPNWD06   | 1,200      |
| E-SHC WD 8          | 8 way       | 8+2           | NSYN8690SPNWD08 ■ | 1,360      |
| E-SHC WD 10         | 10 way      | 10+2          | NSYN8690SPNWD10   | 1,510      |
| E-SHC WD 12         | 12 way      | 12+2          | NSYN8690SPNWD12 ■ | 1,735      |
| E-SHC WD 14         | 14 way      | 14+2          | NSYN8690SPNWD14   | 1,770      |
| E-SHC WD 16         | 16 way      | 16+2          | NSYN8690SPNWD16 ■ | 2,240      |
| E-SHC WD 20         | 20 way      | 20+2          | NSYN8690SPNWD20   | 2,520      |

#### IP 43 with metal door



| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| E-SHC M 4           | 4 way       | 4+2            | NSYN8690SPNOM04 ■ | 1,680      |
| E-SHC M 6           | 6 way       | 6+2            | NSYN8690SPNOM06   | 1,855      |
| E-SHC M 8           | 8 way       | 8+2            | NSYN8690SPNOM08 ■ | 2,060      |
| E-SHC M 10          | 10 way      | 10+2           | NSYN8690SPNOM10   | 2,220      |
| E-SHC M 12          | 12 way      | 12+2           | NSYN8690SPNOM12 ■ | 2,450      |
| E-SHC M 14          | 14 way      | 14+2           | NSYN8690SPNOM14   | 2,530      |
| E-SHC M 16          | 16 way      | 16+2           | NSYN8690SPNOM16 ■ | 3,095      |
| E-SHC M 20          | 20 way      | 20+2           | NSYN8690SPNOM20   | 3,455      |

#### IP 43 Metal door with acrylic



| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SHC P 4           | 4 way       | 4+2            | NSYN8690SPN0P04 | 1,710      |
| E-SHC P 6           | 6 way       | 6+2            | NSYN8690SPN0P06 | 2,095      |
| E-SHC P 8           | 8 way       | 8+2            | NSYN8690SPN0P08 | 2,125      |
| E-SHC P 10          | 10 way      | 10+2           | NSYN8690SPN0P10 | 2,635      |
| E-SHC P 12          | 12 way      | 12+2           | NSYN8690SPN0P12 | 2,660      |
| E-SHC P 14          | 14 way      | 14+2           | NSYN8690SPN0P14 | 2,925      |
| E-SHC P 16          | 16 way      | 16+2           | NSYN8690SPN0P16 | 3,435      |
| E-SHC P 20          | 20 way      | 20+2           | NSYN8690SPN0P20 | 4,380      |

#### IP 54

| Product Description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SHC M WP 4        | 4 way       | 4+2            | NSYN8690SPNWP04 | 4,735      |
| E-SHC M WP 6        | 6 way       | 6+2            | NSYN8690SPNWP06 | 5,135      |
| E-SHC M WP 8        | 8 way       | 8+2            | NSYN8690SPNWP08 | 5,600      |
| E-SHC M WP 10       | 10 way      | 10+2           | NSYN8690SPNWP10 | 5,900      |
| E-SHC M WP 12       | 12 way      | 12+2           | NSYN8690SPNWP12 | 6,445      |
| E-SHC M WP 14       | 14 way      | 14+2           | NSYN8690SPNWP14 | 6,565      |
| E-SHC M WP 16       | 16 way      | 16+2           | NSYN8690SPNWP16 | 7,140      |
| E-SHC M WP 20       | 20 way      | 20+2           | NSYN8690SPNWP20 | 7,640      |

■ Stock items



# Distribution boards

## Elegance series

### TPN DB - E-SHDB

Horizontal three phase distribution board provision for incomer 8 pole (MCB / Isolator / RCD) and single phase outgoings suitable for both surface & flush mounting.

#### IP 30

| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| E-SHDB WD 4         | 4 way       | 8+12           | NSYN8690TPNWD04 ■ | 2,655      |
| E-SHDB WD 6         | 6 way       | 8+18           | NSYN8690TPNWD06   | 3,275      |
| E-SHDB WD 8         | 8 way       | 8+24           | NSYN8690TPNWD08 ■ | 3,855      |
| E-SHDB WD 12        | 12 way      | 8+36           | NSYN8690TPNWD12 ■ | 5,655      |
| E-SHDB WD 16        | 16 way      | 8+48           | NSYN8690TPNWD16   | 6,970      |

#### IP 43 with metal door

| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| E-SHDB M 4          | 4 way       | 8+12           | NSYN8690TPN0M04 ■ | 3,800      |
| E-SHDB M 6          | 6 way       | 8+18           | NSYN8690TPN0M06   | 4,325      |
| E-SHDB M 8          | 8 way       | 8+24           | NSYN8690TPN0M08 ■ | 5,185      |
| E-SHDB M 12         | 12 way      | 8+36           | NSYN8690TPN0M12 ■ | 7,340      |
| E-SHDB M 16         | 16 way      | 8+48           | NSYN8690TPN0M16   | 8,970      |

#### IP 43 with metal door with acrylic

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SHDB P 4          | 4 way       | 8+12           | NSYN8690TPN0P04 | 4,185      |
| E-SHDB P 6          | 6 way       | 8+18           | NSYN8690TPN0P06 | 5,170      |
| E-SHDB P 8          | 8 way       | 8+24           | NSYN8690TPN0P08 | 6,140      |
| E-SHDB P 12         | 12 way      | 8+36           | NSYN8690TPN0P12 | 9,415      |
| E-SHDB P 16         | 16 way      | 8+48           | NSYN8690TPN0P16 | 11,300     |

#### IP 54

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SHDB M WP 4       | 4 way       | 8+12           | NSYN8690TPNWP04 | 10,415     |
| E-SHDB M WP 6       | 6 way       | 8+18           | NSYN8690TPNWP06 | 12,535     |
| E-SHDB M WP 8       | 8 way       | 8+24           | NSYN8690TPNWP08 | 13,705     |
| E-SHDB M WP 12      | 12 way      | 8+36           | NSYN8690TPNWP12 | 19,315     |
| E-SHDB M WP 16      | 16 way      | 8+48           | NSYN8690TPNWP16 | 23,185     |



■ Stock items

# Distribution boards

## Elegance series



### Per Phase Isolation DB -E-SHPPI

Horizontal per-phase Isolation distribution board with provision for 8 pole (MCB / Isolator / RCD) as incomer and single phase as outgoings with separate neutral and earth bars for per phase isolation.

#### IP 43 with metal door

| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| E-SHPPI M 6         | 6 way       | 8+18           | NSYN8690PPIOM06 ■ | 6,590      |
| E-SHPPI M 8         | 8 way       | 8+24           | NSYN8690PPIOM08 ■ | 7,830      |
| E-SHPPI M 12        | 12 way      | 8+36           | NSYN8690PPIOM12 ■ | 10,605     |
| E-SHPPI M 16        | 16 way      | 8+48           | NSYN8690PPIOM16 ■ | 12,540     |



### Per Phase Isolation DB -E-SVDB

Tier type per-phase isolation distribution board with provision for 8 pole (MCB / Isolator / RCD) incomer and provision for 2 pole (MCB / Isolator / RCD) as sub-incomers with single phase outgoings with separate neutral and earth bars for per phase Isolation.

#### IP 43 with metal door

| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| E-SVDB M 6          | 6 way       | 8+6+18         | NSYN8690SVDOM06 ■ | 7,305      |
| E-SVDB M 8          | 8 way       | 8+6+24         | NSYN8690SVDOM08 ■ | 9,310      |
| E-SVDB M 12         | 12 way      | 8+6+36         | NSYN8690SVDOM12 ■ | 10,895     |

# Distribution boards

## Elegance series

### Vertical DB 8P I/C & SP/TP O/G -E-SVTDB

Vertical three phase distribution board with provision for 8 pole (MCB / Isolator / RCD) incoming with three phase and single phase (TP/SP) outgoing, complete with insulated busbar arrangement.

#### IP 30

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SVTDB WD 4        | 4 way       | 8+12           | NSYN8690VTPWD04 | 7,480      |
| E-SVTDB WD 6        | 6 way       | 8+18           | NSYN8690VTPWD06 | 8,350      |
| E-SVTDB WD 8        | 8 way       | 8+24           | NSYN8690VTPWD08 | 9,220      |
| E-SVTDB WD 12       | 12 way      | 8+36           | NSYN8690VTPWD12 | 13,185     |

#### IP 43 with metal door

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SVTDB M 4         | 4 way       | 8+12           | NSYN8690VTPOM04 | 8,705      |
| E-SVTDB M 6         | 6 way       | 8+18           | NSYN8690VTPOM06 | 9,860      |
| E-SVTDB M 8         | 8 way       | 8+24           | NSYN8690VTPOM08 | 10,925     |
| E-SVTDB M 12        | 12 way      | 8+36           | NSYN8690VTPOM12 | 13,780     |

#### IP 54

| Product description | No. of Ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SVTDB M WP 4      | 4 way       | 8+12           | NSYN8690VTPWP04 | 16,705     |
| E-SVTDB M WP 6      | 6 way       | 8+18           | NSYN8690VTPWP06 | 18,400     |
| E-SVTDB M WP 8      | 8 way       | 8+24           | NSYN8690VTPWP08 | 20,095     |
| E-SVTDB M WP 12     | 12 way      | 8+36           | NSYN8690VTPWP12 | 26,775     |

### Vertical DB 160 A MCCB I/C & SP/TP MCB O/G - E - SVTDB-XT1

Vertical three phase distribution board with provision for 4 pole MCCB (Tmax - XT1) upto 160A as incoomer with three phase and single.

#### IP 30

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SVTDB WD 4XT1     | 4 way       | Tmax XT1+12    | NSYN8690VWXT104 | 8,390      |
| E-SVTDB WD 6XT1     | 6 way       | Tmax XT1+18    | NSYN8690VWXT106 | 9,770      |
| E-SVTDB WD 8XT1     | 8 way       | Tmax XT1+24    | NSYN8690VWXT108 | 10,620     |
| E-SVTDB WD 12XT1    | 12 way      | Tmax XT1+36    | NSYN8690VWXT112 | 15,020     |

#### IP 43 with metal door

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SVTDB M 4XT1      | 4 way       | Tmax XT1+12    | NSYN8690VMXT104 | 9,700      |
| E-SVTDB M 6XT1      | 6 way       | Tmax XT1+18    | NSYN8690VMXT106 | 11,475     |
| E-SVTDB M 8XT1      | 8 way       | Tmax XT1+24    | NSYN8690VMXT108 | 12,825     |
| E-SVTDB M 12XT1     | 12 way      | Tmax XT1+36    | NSYN8690VMXT112 | 17,060     |

#### IP 54

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-SVTDB M WP 4XT1   | 4 way       | Tmax XT1+12    | NSYN8690VPXT104 | 19,225     |
| E-SVTDB M WP 6XT1   | 6 way       | Tmax XT1+18    | NSYN8690VPXT106 | 21,165     |
| E-SVTDB M WP 8XT1   | 8 way       | Tmax XT1+24    | NSYN8690VPXT108 | 23,110     |
| E-SVTDB M WP 12XT1  | 12 way      | Tmax XT1+36    | NSYN8690VPXT112 | 31,035     |

■ Stock items

# Distribution boards

## Elegance series

### Vertical DB 250 A MCCB I/C & SP/TP MCB O/G - E - SVTDB-XT3

Vertical three phase distribution board with provision for 4 pole MCCB (Tmax - XT3) upto 250A as incomer with three phase and single phase (TP/SP) outgoings, complete with insulated busbar arrangement.

#### IP 30

| Product description | No. of ways | No. of modules   | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|------------------|-----------------|------------|
| E-SVTDB WD 4XT3     | 4 way       | 250A Tmax XT3+12 | NSYN8690VWXT304 | 15,510     |
| E-SVTDB WD 6XT3     | 6 way       | 250A Tmax XT3+18 | NSYN8690VWXT306 | 17,025     |
| E-SVTDB WD 8XT3     | 8 way       | 250A Tmax XT3+24 | NSYN8690VWXT308 | 17,255     |
| E-SVTDB WD 12XT3    | 12 way      | 250A Tmax XT3+36 | NSYN8690VWXT312 | 19,065     |

#### IP 43 with metal door

| Product description | No. of ways | No. of modules   | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|------------------|-----------------|------------|
| E-SVTDB M 4XT3      | 4 way       | 250A Tmax XT3+12 | NSYN8690VMXT304 | 18,645     |
| E-SVTDB M 6XT3      | 6 way       | 250A Tmax XT3+18 | NSYN8690VMXT306 | 20,075     |
| E-SVTDB M 8XT3      | 8 way       | 250A Tmax XT3+24 | NSYN8690VMXT308 | 21,185     |
| E-SVTDB M 12XT3     | 12 way      | 250A Tmax XT3+36 | NSYN8690VMXT312 | 22,430     |

#### IP 54

| Product description | No. of ways | No. of modules   | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|------------------|-----------------|------------|
| E-SVTDB M WP 4XT3   | 4 way       | 250A TMAX XT3+12 | NSYN8690VPXT304 | 27,370     |
| E-SVTDB M WP 6XT3   | 6 way       | 250A TMAX XT3+18 | NSYN8690VPXT306 | 29,135     |
| E-SVTDB M WP 8XT3   | 8 way       | 250A TMAX XT3+24 | NSYN8690VPXT308 | 30,905     |
| E-SVTDB M WP 12XT3  | 12 way      | 250A TMAX XT3+36 | NSYN8690VPXT312 | 36,900     |

### 8 Segment DB - E-S8SEG -MCB I/C

Eight segment distribution board with phase segregation and separation between incoming and outgoing with provision for 8P (MCB / Isolator / RCD) + 4P(ACCL provision ) as incomer with single phase outgoings with complete wire sets.

#### IP 43 with metal door

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| E-S8SEG M 4         | 4 way       | 8+12+12        | NSYN8690S7S0M04 | 8,365      |
| E-S8SEG M 6         | 6 way       | 8+12+18        | NSYN8690S7S0M06 | 9,430      |
| E-S8SEG M 8         | 8 way       | 8+12+24        | NSYN8690S7S0M08 | 10,525     |
| E-S8SEG M 12        | 12 way      | 8+12+36        | NSYN8690S7S0M12 | 13,435     |

### 7 SEGMENT DB - E-S7SEG XT1 160A -MCCB I/C

Seven segment Distribution Board with phase segregation and separation between incoming and outgoing with provision for 4P MCCB up to 160A incomer and 4P as sub-incomers (MCB / Isolator / RCD) with single phase outgoings with complete wire sets & bus bars.

#### IP 43 with metal door

| Product description | No. of ways | No. of modules      | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|---------------------|-----------------|------------|
| E-S7SEG M 4 XT1     | 6 way       | T-max XT1 160+12+12 | NSYN86908ST1M04 | 11,983     |
| E-S7SEG M 6 XT1     | 8 way       | T-max XT1 160+12+18 | NSYN86908ST1M06 | 13,723     |
| E-S7SEG M 8 XT1     | 12 way      | T-max XT1 160+12+24 | NSYN86908ST1M08 | 15,689     |
| E-S7SEG M 12 XT1    | 16 way      | T-max XT1 160+12+36 | NSYN86908ST1M12 | 18,055     |



# Distribution boards

## Elegance series

### Phase Selector DB -E- SPVS

Phase selector DBs-SPVS with inbuilt 3 nos. piano switches and 3 nos. phase selector switch of 63A.



#### IP 43 with metal door

| Product description | No. of ways | No. of modules | Ordering code    | M.R.P. (₹) |
|---------------------|-------------|----------------|------------------|------------|
| E-SPVS M 4(63A)     | 4 way       | 8+12           | NSYN8690SPV4M63  | 11,735     |
| E-SPVS M 6(63A)     | 6 way       | 8+18           | NSYN8690SPV6M63  | 13,180     |
| E-SPVS M 8(63A)     | 8 way       | 8+24           | NSYN8690SPV8M63  | 14,195     |
| E-SPVS M 12(63A)    | 12 way      | 8+36           | NSYN8690SPV12M63 | 14,315     |
| E-SPVS M 4(40A)     | 4 way       | 8+12           | NSYN8690SPV4M40  | 11,985     |
| E-SPVS M 6(40A)     | 6 way       | 8+18           | NSYN8690SPV6M40  | 10,700     |
| E-SPVS M 8(40A)     | 8 way       | 8+24           | NSYN8690SPV8M40  | 11,680     |
| E-SPVS M 12(40A)    | 12 way      | 8+36           | NSYN8690SPV12M40 | 13,085     |

### Flexy tier DB - E-SVFL

Total flexibility as per site needs - configuration as per your choice of incomer & outgoings. Supply bus bars needs to be selected.



#### IP 43 with metal door

| Product description | No. of ways    | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|----------------|----------------|-----------------|------------|
| E-SVFL M 132        | 2 row of 13mod | 26             | NSYN8690SVFM213 | 4,185      |
| E-SVFL M 133        | 3 row of 13mod | 39             | NSYN8690SVFM313 | 4,920      |
| E-SVFL M 134        | 4 row of 13mod | 52             | NSYN8690SVFM413 | 5,600      |
| E-SVFL M 142        | 2 row of 14mod | 28             | NSYN8690SVFM214 | 5,685      |
| E-SVFL M 143        | 3 row of 14mod | 42             | NSYN8690SVFM314 | 6,360      |
| E-SVFL M 144        | 4 row of 14mod | 56             | NSYN8690SVFM414 | 6,930      |

#### IP 43 metal door with acrylic

| Product description | No. of ways    | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|----------------|----------------|-----------------|------------|
| E-SVFL P 132        | 2 row of 13mod | 26             | NSYN8690SVFP213 | 4,255      |
| E-SVFL P 133        | 3 row of 13mod | 39             | NSYN8690SVFP313 | 5,010      |
| E-SVFL P 134        | 4 row of 13mod | 52             | NSYN8690SVFP413 | 5,645      |
| E-SVFL P 142        | 2 row of 14mod | 28             | NSYN8690SVFP214 | 6,410      |
| E-SVFL P 143        | 3 row of 14mod | 42             | NSYN8690SVFP314 | 7,125      |
| E-SVFL P 144        | 4 row of 14mod | 56             | NSYN8690SVFP414 | 7,500      |



# Distribution boards

## Elegance series

### Plug & Socket DB - E-SGK

Plug socket boards for single phase and three phase applications up to 63A (supplied completely with plug and socket).

| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| E-SGK 10 SP         | 10A SP      | 1              | NSYN8690SGKSP10 ■ | 1,325      |
| E-SGK 20 SP         | 20A SP      | 1              | NSYN8690SGKSP20 ■ | 1,520      |
| E-SGK 20 TP         | 20A TP      | 3              | NSYN8690SGKTP20 ■ | 2,860      |
| E-SGK 30 TP         | 30A TP      | 3              | NSYN8690SGKTP30 ■ | 3,255      |
| E-SGK 20 DPR        | 20A DP RCBO | 4              | NSYN8690SGKDP20 ■ | 1,505      |
| E-SGK 25 FPR        | 25A FP RCBO | 6              | NSYN8690SGKFP25 ■ | 2,625      |
| E-SGK 60 FP         | 60A FP      | 4              | NSYN8690SGKFP60 ■ | 12,245     |

### Enclosure-E-SEN

Metal enclosures, universal mounting suitable for SP, DP, FP, 6 pole & 8 pole arrangement.

| Product description | No. of ways  | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|--------------|----------------|-------------------|------------|
| E-SEN 1P            | 1P Enclosure | 1              | NSYN8690SENSPP1 ■ | 380        |
| E-SEN 2P            | 2P Enclosure | 2              | NSYN8690SENSPP2 ■ | 590        |
| E-SEN 4P            | 4P Enclosure | 4              | NSYN8690SENSPP4 ■ | 595        |
| E-SEN 6P            | 6P Enclosure | 6              | NSYN8690SENSPP6 ■ | 815        |
| E-SEN 8P            | 8P Enclosure | 8              | NSYN8690SENSPP8 ■ | 970        |

### Busbar SP I/C & SP O/G

| Product description     | No. of ways | No of modules | Ordering code   | M.R.P. (₹) |
|-------------------------|-------------|---------------|-----------------|------------|
| 13Mod Insulated Busbars | 13          | 13            | NSYN8690BUSSP13 | 335        |
| 14Mod Insulated Busbars | 14          | 14            | NSYN8690BUSSP14 | 395        |

### Blanking plate

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| Blank PL            |             | 1              | NSYN8690BLPLP00 | 15         |



# Distribution boards

## Elegance series

Cable end box

| Product description       | No. of ways                     | Ordering code     | M.R.P. (₹) |
|---------------------------|---------------------------------|-------------------|------------|
| <b>SPN IP30 SHC</b>       |                                 |                   |            |
| E-SHC WD 4/CEB            | For 4 way SPN IP30 DB           | NSYN8690SPNMCE4   | 490        |
| E-SHC WD 6/CEB            | For 6 way SPN IP30 DB           | NSYN8690SPNMCE6   | 520        |
| E-SHC WD 8/CEB            | For 8 way SPN IP30 DB           | NSYN8690SPNMCE8   | 575        |
| E-SHC WD 10/CEB           | For 10 way SPN IP30 DB          | NSYN8690SPNMCE10  | 600        |
| E-SHC WD 12/CEB           | For 12 way SPN IP30 DB          | NSYN8690SPNMCE12  | 700        |
| E-SHC WD 14/CEB           | For 14 way SPN IP30 DB          | NSYN8690SPNMCE14  | 710        |
| E-SHC WD 16/CEB           | For 16 way SPN IP30 DB          | NSYN8690SPNMCE16  | 800        |
| E-SHC WD 20/CEB           | For 20 way SPN IP30 DB          | NSYN8690SPNMCE20  | 890        |
| <b>SPN IP43 SHC</b>       |                                 |                   |            |
| E-SHC M 4/CEB             | For 4 way SPN IP43 DB           | NSYN8690SPNWCE4   | 490        |
| E-SHC M 6/CEB             | For 6 way SPN IP43 DB           | NSYN8690SPNWCE6   | 520        |
| E-SHC M 8/CEB             | For 8 way SPN IP43 DB           | NSYN8690SPNWCE8   | 575        |
| E-SHC M 10/CEB            | For 10 way SPN IP43 DB          | NSYN8690SPNWCE10  | 600        |
| E-SHC M 12/CEB            | For 12 way SPN IP43 DB          | NSYN8690SPNWCE12  | 700        |
| E-SHC M 14/CEB            | For 14 way SPN IP43 DB          | NSYN8690SPNWCE14  | 710        |
| E-SHC M 16/CEB            | For 16 way SPN IP43 DB          | NSYN8690SPNWCE16  | 800        |
| E-SHC M 20/CEB            | For 20 way SPN IP43 DB          | NSYN8690SPNWCE20  | 890        |
| <b>TPN IP30 SHDB</b>      |                                 |                   |            |
| E-SHDB WD 4/CEB           | For 4 way TPN IP30 DB           | NSYN8690TPNWCE4   | 770        |
| E-SHDB WD 6/CEB           | For 6 way TPN IP30 DB           | NSYN8690TPNWCE6   | 800        |
| E-SHDB WD 8/CEB           | For 8 way TPN IP30 DB           | NSYN8690TPNWCE8   | 985        |
| E-SHDB WD 12/CEB          | For 12 way TPN IP30 DB          | NSYN8690TPNWCE12  | 1,475      |
| E-SHDB WD 16/CEB          | For 16 way TPN IP30 DB          | NSYN8690TPNWCE16  | 1,920      |
| <b>TPN IP43 SHDB</b>      |                                 |                   |            |
| E-SHDB M 4/CEB            | For 4 way TPN IP43 DB           | NSYN8690TPNMCE4   | 890        |
| E-SHDB M 6/CEB            | For 6 way TPN IP43 DB           | NSYN8690TPNMCE6   | 940        |
| E-SHDB M 8/CEB            | For 8 way TPN IP43 DB           | NSYN8690TPNMCE8   | 1,175      |
| E-SHDB M 12/CEB           | For 12 way TPN IP43 DB          | NSYN8690TPNMCE12  | 1,475      |
| E-SHDB M 16/CEB           | For 16 way TPN IP43 DB          | NSYN8690TPNMCE16  | 1,955      |
| <b>TPN IP43 SHPPI</b>     |                                 |                   |            |
| E-SHPPI M 6/CEB           | For 6way PPI IP43 DB            | NSYN8690PPIMCE6   | 1,025      |
| E-SHPPI M 8/CEB           | For 8way PPI IP43 DB            | NSYN8690PPIMCE8   | 1,415      |
| E-SHPPI M 12/CEB          | For 12way PPI IP43 DB           | NSYN8690PPIMCE12  | 2,030      |
| E-SHPPI M 16/CEB          | For 16way PPI IP43 DB           | NSYN8690PPIMCE16  | 2,200      |
| <b>TPN IP43 SVDB</b>      |                                 |                   |            |
| E-SVDB M 6/CEB            | For 6way SVDB IP43 DB           | NSYN8690SVDMCE6   | 935        |
| E-SVDB M 8/CEB            | For 8way SVDB IP43 DB           | NSYN8690SVDMCE8   | 1,110      |
| E-SVDB M 12/CEB           | For 12way SVDB IP43 DB          | NSYN8690SVDMCE12  | 1,280      |
| <b>Flexy DB IP43</b>      |                                 |                   |            |
| E-SVFL 13M/CEB            | For all SVFL 13Mod DBs          | NSYN8690SVFCE13   | 1,165      |
| E-SVFL 14M/CEB            | For all SVFL 14Mod DBs          | NSYN8690SVFCE14   | 1,415      |
| <b>VTPN IP30 SVTDB</b>    |                                 |                   |            |
| E-SVTDB WD /CEB           | For all SVTDBs(IP30DBs)         | NSYN8690VTPWCE1   | 1,905      |
| <b>VTPN IP43 SVTDB</b>    |                                 |                   |            |
| E-SVTDB M/CEB             | For all SVTDBs(IP43DBs)         | NSYN8690VTPMCE1   | 2,150      |
| <b>VTPN IP30 XT1 160A</b> |                                 |                   |            |
| E-SVTDB WD XT1/CEB        | For all SVTDB XT1(IP30 DBs)     | NSYN8690VTPWCEXT1 | 2,675      |
| <b>VTPN IP43 XT1 160A</b> |                                 |                   |            |
| E-SVTDB M XT1/CEB         | For all SVTDB XT1 DBs(IP43DBs)  | NSYN8690VTPMCEXT1 | 2,790      |
| <b>VTPN IP30 XT3 250A</b> |                                 |                   |            |
| E-SVTDB WD XT3/CEB        | For all SVTDB XT3 DBs(IP30 DBs) | NSYN8690VTPWCEXT3 | 3,070      |
| <b>VTPN IP43 XT3 250A</b> |                                 |                   |            |
| E-SVTDB M XT3/CEB         | For all SVTDB XT3 DBs(IP43DBs)  | NSYN8690VTPMCEXT3 | 3,300      |





# Distribution boards

## Classic series



### SPN DB - SHC

#### IP 30



| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| SHC WD 4            | 4 way       | 4+2            | 1SYN869006R0001 ■ | 1,015      |
| SHC WD 6            | 6 way       | 6+2            | 1SYN869007R0001   | 1,045      |
| SHC WD 8            | 8 way       | 8+2            | 1SYN869008R0001 ■ | 1,200      |
| SHC WD 10           | 10 way      | 10+2           | 1SYN869006R0010   | 1,305      |
| SHC WD 12           | 12 way      | 12+2           | 1SYN869009R0001 ■ | 1,555      |
| SHC WD 14           | 14 way      | 14+2           | 1SYN869010R0001   | 1,590      |
| SHC WD 16           | 16 way      | 16+2           | 1SYN869006R0016 ■ | 1,970      |
| SHC WD 20           | 20 way      | 20+2           | 1SYN869006R0020   | 2,240      |

#### IP 43 with metal door



| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| SHC M 4             | 4 way       | 4+2            | 1SYN869001R0001 ■ | 1,360      |
| SHC M 6             | 6 way       | 6+2            | 1SYN869002R0001 ■ | 1,500      |
| SHC M 8             | 8 way       | 8+2            | 1SYN869003R0001   | 1,770      |
| SHC M 10            | 10 way      | 10+2           | 1SYN869004R0101   | 1,800      |
| SHC M 12            | 12 way      | 12+2           | 1SYN869004R0001 ■ | 2,030      |
| SHC M 14            | 14 way      | 14+2           | 1SYN869005R0001   | 2,125      |
| SHC M 16            | 16 way      | 16+2           | 1SYN869001R0016   | 2,690      |
| SHC M 20            | 20 way      | 20+2           | 1SYN869001R0020   | 3,055      |

Classic series distribution boards are available in ivory color (color code - RAL9010)

■ Stock items

# Distribution boards

## Classic series

SPN DB - SHC

IP 43 metal door with acrylic

| Product description | No.of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|------------|----------------|-----------------|------------|
| SHC P 4             | 4 way      | 4+2            | 1SYN869011R0041 | 1,385      |
| SHC P 6             | 6 way      | 6+2            | 1SYN869011R0042 | 1,730      |
| SHC P 8             | 8 way      | 8+2            | 1SYN869013R0001 | 1,900      |
| SHC P 10            | 10 way     | 10+2           | 1SYN869013R0002 | 1,930      |
| SHC P 12            | 12 way     | 12+2           | 1SYN869015R0012 | 2,180      |
| SHC P 14            | 14 way     | 14+2           | 1SYN869015R0001 | 2,595      |
| SHC P 16            | 16 way     | 16+2           | 1SYN869011R0161 | 3,070      |
| SHC P 20            | 20 way     | 20+2           | 1SYN869011R0201 | 3,490      |

IP 54

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SHC M WP 4          | 4 way       | 4+2            | 1SYN869002R0004 | 4,130      |
| SHC M WP 6          | 6 way       | 6+2            | 1SYN869004R0020 | 4,455      |
| SHC M WP 8          | 8 way       | 8+2            | 1SYN869002R0008 | 5,470      |
| SHC M WP 10         | 10 way      | 10+2           | 1SYN869004R0021 | 6,020      |
| SHC M WP 12         | 12 way      | 12+2           | 1SYN869002R0012 | 5,625      |
| SHC M WP 14         | 14 way      | 14+2           | 1SYN869004R0022 | 5,695      |
| SHC M WP 16         | 16 way      | 16+2           | 1SYN869004R0023 | 6,955      |
| SHC M WP 20         | 20 way      | 20+2           | 1SYN869002R0013 | 6,670      |

TPN DB - SHDB

IP 30

| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| SHDB WD 4           | 4 way       | 8+12           | 1SYN869020R0001 ■ | 2,310      |
| SHDB WD 6           | 6 way       | 8+18           | 1SYN869021R0001   | 3,020      |
| SHDB WD 8           | 8 way       | 8+24           | 1SYN869022R0001 ■ | 3,590      |
| SHDB WD 12          | 12 way      | 8+36           | 1SYN869023R0001 ■ | 5,530      |
| SHDB WD 16          | 16 way      | 8+48           | 1SYN869004R0024   | 6,270      |

IP 43 with metal door

| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| SHDB M 4            | 4 way       | 8+12           | 1SYN869016R0001 ■ | 3,140      |
| SHDB M 6            | 6 way       | 8+18           | 1SYN869017R0001   | 3,625      |
| SHDB M 8            | 8 way       | 8+24           | 1SYN869018R0001 ■ | 4,455      |
| SHDB M 12           | 12 way      | 8+36           | 1SYN869019R0001 ■ | 6,710      |
| SHDB M 16           | 16 way      | 8+48           | 1SYN869004R0025   | 8,510      |

IP 43 metal door with acrylic

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SHDB P 4            | 4 way       | 8+12           | 1SYN869024R0001 | 3,670      |
| SHDB P 6            | 6 way       | 8+18           | 1SYN869025R0001 | 4,790      |
| SHDB P 8            | 8 way       | 8+24           | 1SYN869026R0001 | 5,435      |
| SHDB P 12           | 12 way      | 8+36           | 1SYN869027R0006 | 7,580      |
| SHDB P 16           | 16 way      | 8+48           | 1SYN869004R0026 | 10,070     |

IP 54

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SHDB M WP 4         | 4 way       | 8+12           | 1SYN869001R0004 | 9,115      |
| SHDB M WP 6         | 6 way       | 8+18           | 1SYN869001R0006 | 10,970     |
| SHDB M WP 8         | 8 way       | 8+24           | 1SYN869001R0008 | 12,010     |
| SHDB M WP 12        | 12 way      | 8+36           | 1SYN869004R0027 | 17,025     |
| SHDB M WP 16        | 16 way      | 8+48           | 1SYN869004R0028 | 20,325     |



■ Stock items

# Distribution boards

## Classic series



### PER PHASE ISOLATION DB - SHPPI

#### IP 43 WITH METAL DOOR

| Product description | No. of ways | No. of modules | Ordering code    | M.R.P. (₹) |
|---------------------|-------------|----------------|------------------|------------|
| SHPPI M 6           | 6 way       | 8+18           | 1SYN8690100R0061 | 5,810      |
| SHPPI M 8           | 8 way       | 8+24           | 1SYN8690100R0081 | 6,615      |
| SHPPI M 12          | 12 way      | 8+36           | 1SYN8690100R0121 | 9,280      |
| SHPPI M 16          | 16 way      | 8+48           | 1SYN8690100R0161 | 10,820     |

### PER PHASE ISOLATION DB -SVDB

#### IP 43 WITH METAL DOOR

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SVDB M 6            | 6 way       | 8+6+18         | 1SYN869028R0001 | 6,700      |
| SVDB M 8            | 8 way       | 8+6+24         | 1SYN869029R0001 | 8,195      |
| SVDB M 12           | 12 way      | 8+6+36         | 1SYN869030R0001 | 9,465      |

### VERTICAL DB 8P I/C &SP/TP O/G -SVTDB

#### IP 30

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SVTDB WD 4          | 4 way       | 8+12           | 1SYN869035R0001 | 7,095      |
| SVTDB WD 6          | 6 way       | 8+18           | 1SYN869036R0001 | 7,065      |
| SVTDB WD 8          | 8 way       | 8+24           | 1SYN869037R0001 | 8,245      |
| SVTDB WD 12         | 12 way      | 8+36           | 1SYN869038R0001 | 11,905     |

#### IP 43 WITH METAL DOOR

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SVTDB M 4           | 4 way       | 8+12           | 1SYN869031R0001 | 7,835      |
| SVTDB M 6           | 6 way       | 8+18           | 1SYN869032R0001 | 9,220      |
| SVTDB M 8           | 8 way       | 8+24           | 1SYN869033R0001 | 10,100     |
| SVTDB M 12          | 12 way      | 8+36           | 1SYN869034R0001 | 12,625     |

#### IP 54

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SVTDB M WP 4        | 4 way       | 8+12           | 1SYN869004R0041 | 14,810     |
| SVTDB M WP 6        | 6 way       | 8+18           | 1SYN869004R0015 | 17,075     |
| SVTDB M WP 8        | 8 way       | 8+24           | 1SYN869004R0043 | 17,820     |
| SVTDB M WP 12       | 12 way      | 8+36           | 1SYN869004R0044 | 23,740     |



# Distribution boards

## Classic series



### Vertical DB 160 A MCCB I/C & SP/TP MCB O/G - E - SVTDB-XT1

#### IP30

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SVTDB WD 4XT1       | 4 way       | Tmax XT1+12    | 1SYN8690VWXT104 | 7,495      |
| SVTDB WD 6XT1       | 6 way       | Tmax XT1+18    | 1SYN8690VWXT106 | 8,395      |
| SVTDB WD 8XT1       | 8 way       | Tmax XT1+24    | 1SYN8690VWXT108 | 8,840      |
| SVTDB WD 12XT1      | 12 way      | Tmax XT1+36    | 1SYN8690VWXT112 | 13,620     |

#### IP43 WITH METAL DOOR

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SVTDB M 4XT1        | 4 way       | Tmax XT1+12    | 1SYN8690VMXT104 | 8,690      |
| SVTDB M 6XT1        | 6 way       | Tmax XT1+18    | 1SYN8690VMXT106 | 10,320     |
| SVTDB M 8XT1        | 8 way       | Tmax XT1+24    | 1SYN8690VMXT108 | 10,850     |
| SVTDB M 12XT1       | 12 way      | Tmax XT1+36    | 1SYN8690VMXT112 | 14,970     |

#### IP54

| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SVTDB M WP4XT1      | 4 way       | Tmax XT1+12    | 1SYN8690VPXT104 | 16,880     |
| SVTDB M WP6XT1      | 6 way       | Tmax XT1+18    | 1SYN8690VPXT106 | 19,235     |
| SVTDB M WP8XT1      | 8 way       | Tmax XT1+24    | 1SYN8690VPXT108 | 22,650     |
| SVTDB M WP12XT1     | 12 way      | Tmax XT1+36    | 1SYN8690VPXT112 | 28,130     |



### VERTICAL DB 250A MCCB I/C & SP/TP MCB O/G -SVTDB XT3

#### IP 30

| Product description | No. of ways | No. of modules   | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|------------------|-----------------|------------|
| SVTDB WD 4XT3       | 4 way       | 250A Tmax XT3+12 | 1SYN8690VWXT304 | 13,665     |
| SVTDB WD 6XT3       | 6 way       | 250A Tmax XT3+18 | 1SYN8690VWXT306 | 15,000     |
| SVTDB WD 8XT3       | 8 way       | 250A Tmax XT3+24 | 1SYN8690VWXT308 | 15,205     |
| SVTDB WD 12XT3      | 12 way      | 250A Tmax XT3+36 | 1SYN8690VWXT312 | 16,795     |

#### IP 43 WITH METAL DOOR

| Product description | No. of ways | No. of modules   | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|------------------|-----------------|------------|
| SVTDB M 4XT3        | 4 way       | 250A Tmax XT3+12 | 1SYN8690VMXT304 | 17,655     |
| SVTDB M 6XT3        | 6 way       | 250A Tmax XT3+18 | 1SYN8690VMXT306 | 19,410     |
| SVTDB M 8XT3        | 8 way       | 250A Tmax XT3+24 | 1SYN8690VMXT308 | 20,630     |
| SVTDB M 12XT3       | 12 way      | 250A Tmax XT3+36 | 1SYN8690VMXT312 | 21,035     |

#### IP 54

| Product description | No. of ways | No of modules    | Ordering code   | M.R.P.(₹) |
|---------------------|-------------|------------------|-----------------|-----------|
| SVTDB M WP 4XT3     | 4 way       | 250A Tmax XT3+12 | 1SYN8690VPXT304 | 23,370    |
| SVTDB M WP 6XT3     | 6 way       | 250A Tmax XT3+18 | 1SYN8690VPXT306 | 25,700    |
| SVTDB M WP 8XT3     | 8 way       | 250A Tmax XT3+24 | 1SYN8690VPXT308 | 26,885    |
| SVTDB M WP 12XT3    | 12 way      | 250A Tmax XT3+36 | 1SYN8690VPXT312 | 30,905    |

# Distribution boards

## Classic series

### 7 SEGMENT DB - S7SEG

#### IP43 WITH METAL DOOR



| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| S7SEG M 4           | 4 way       | 8+12+12        | 1SYN869058R0001 | 7,790      |
| S7SEG M 6           | 6 way       | 8+12+18        | 1SYN869059R0001 | 8,755      |
| S7SEG M 8           | 8 way       | 8+12+24        | 1SYN869060R0001 | 9,430      |
| S7SEG M 12          | 12 way      | 8+12+36        | 1SYN869061R0001 | 12,080     |

### 7 SEGMENT DB MCCB I/C DB - S7SEG XT1 160A

#### IP43 WITH METAL DOOR



| Product description | No. of ways | No. of modules      | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|---------------------|-----------------|------------|
| S7SEG M 4 XT1       | 4 way       | T-max XT1 160+12+12 | 1SYN869057XT104 | 10,840     |
| S7SEG M 6 XT1       | 6 way       | T-max XT1 160+12+18 | 1SYN869057XT106 | 12,410     |
| S7SEG M 8 XT1       | 8 way       | T-max XT1 160+12+24 | 1SYN869057XT108 | 14,190     |
| S7SEG M 12 XT1      | 12 way      | T-max XT1 160+12+36 | 1SYN869057XT112 | 16,400     |

### PHASE SELECTOR DB - SPVS

#### IP43 WITH METAL DOOR



| Product description | No. of ways | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|-------------|----------------|-----------------|------------|
| SPVS M 4(63A)       | 4 way       | 8+12           | 1SYN869100R0001 | 11,910     |
| SPVS M 6(63A)       | 6 way       | 8+18           | 1SYN869100R0002 | 12,070     |
| SPVS M 8(63A)       | 8 way       | 8+24           | 1SYN869100R0003 | 12,855     |
| SPVS M 12(63A)      | 12 way      | 8+36           | 1SYN869100R0004 | 13,925     |
| SPVS M 4(40A)       | 4 way       | 8+12           | 1SYN869100SP004 | 10,690     |
| SPVS M 6(40A)       | 6 way       | 8+18           | 1SYN869100SP002 | 11,020     |
| SPVS M 8(40A)       | 8 way       | 8+24           | 1SYN869100SP003 | 11,240     |
| SPVS M 12(40A)      | 12 way      | 8+36           | 1SYN869100SP012 | 11,975     |

### FLEXY TIER DB - SVFL

#### IP43 WITH METAL DOOR

| Product description | No. of ways    | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|----------------|----------------|-----------------|------------|
| SVFL M 132          | 2 row of 13mod | 26             | 1SYN869004R0051 | 3,810      |
| SVFL M 133          | 3 row of 13mod | 39             | 1SYN869103R0001 | 4,640      |
| SVFL M 134          | 4 row of 13mod | 52             | 1SYN869103R0002 | 5,000      |
| SVFL M 142          | 2 row of 14mod | 28             | 1SYN869004R0052 | 4,810      |
| SVFL M 143          | 3 row of 14mod | 42             | 1SYN869004R0053 | 5,900      |
| SVFL M 144          | 4 row of 14mod | 56             | 1SYN869103R0012 | 6,100      |

#### IP43 METAL DOOR WITH ACRYLIC

| Product description | No. of ways    | No. of modules | Ordering code   | M.R.P. (₹) |
|---------------------|----------------|----------------|-----------------|------------|
| SVFL P 132          | 2 row of 13mod | 26             | 1SYN869004R0054 | 3,855      |
| SVFL P 133          | 3 row of 13mod | 39             | 1SYN869105R0001 | 4,540      |
| SVFL P 134          | 4 row of 13mod | 52             | 1SYN869105R0002 | 5,120      |
| SVFL P 142          | 2 row of 14mod | 28             | 1SYN869004R0055 | 5,810      |
| SVFL P 143          | 3 row of 14mod | 42             | 1SYN869004R0056 | 6,455      |
| SVFL P 144          | 4 row of 14mod | 56             | 1SYN869004R0057 | 6,795      |

# Distribution boards

## Classic series



### Plug & Socket DB - SGK

| Product description | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|-------------|----------------|-------------------|------------|
| SGK 10 SP           | 10A SP      | 1              | 1SYN869048R0001 ■ | 1,275      |
| SGK 20 SP           | 20A SP      | 1              | 1SYN869043R0001 ■ | 1,275      |
| SGK 20 TP           | 20A TP      | 3              | 1SYN869049R0001 ■ | 2,635      |
| SGK 30 TP           | 30A TP      | 3              | 1SYN869044R0001 ■ | 3,080      |
| SGK 20 DPR          | 20A DP RCBO | 4              | 1SYN869051R0001 ■ | 1,465      |
| SGK 25 FPR          | 25A FP RCBO | 6              | 1SYN869052R0001 ■ | 2,440      |
| SGK 60 FP           | 60A FP      | 4              | 1SYN869053R0001 ■ | 11,715     |

### Plug and sockets in metal enclosure with MCB / RCB provision

| Terminals / Pole | Current rating (A) | Protection | Type        | Order code      | LP (₹) |
|------------------|--------------------|------------|-------------|-----------------|--------|
| 3 (2P+E)         | 16                 | IP30       | 216RAU6SPNE | 1SYN880110R0001 | 2,052  |
|                  | 32                 |            | 232RAU6SPNE | 1SYN880113R0001 | 2,237  |
|                  | 63                 |            | 263RAU6SPNE | 1SYN880116R0001 | 8,584  |
| 4 (3P+E)         | 16                 |            | 316RAU6TPE  | 1SYN880111R0001 | 2,544  |
|                  | 32                 |            | 332RAU6TPE  | 1SYN880114R0001 | 3,166  |
|                  | 63                 |            | 363RAU6TPE  | 1SYN880117R0001 | 9,053  |
| 5 (4P+E)         | 16                 |            | 416RAU6TPNE | 1SYN880112R0001 | 2,289  |
|                  | 32                 |            | 432RAU6TPNE | 1SYN880115R0001 | 2,467  |
|                  | 63                 |            | 463RAU6TPNE | 1SYN880118R0001 | 9,416  |



### 3P+N+E

| Product description | No. of ways  | No. of modules | Ordering code     | M.R.P. (₹) |
|---------------------|--------------|----------------|-------------------|------------|
| SEN 1P              | 1P Enclosure | 1              | 1SYN869054R0001 ■ | 350        |
| SEN 2P              | 2P Enclosure | 2              | 1SYN869055R0001 ■ | 515        |
| SEN 4P              | 4P Enclosure | 4              | 1SYN869056R0001 ■ | 520        |
| SEN 6P              | 6P Enclosure | 6              | 1SYN869057R0001 ■ | 730        |
| SEN 8P              | 8P Enclosure | 8              | 1SYN869004R0029 ■ | 840        |

### BUSBAR SP I/C & SP O/G, BLANKING PLATE

| Product description        | No. of ways | No. of modules | Ordering code     | M.R.P. (₹) |
|----------------------------|-------------|----------------|-------------------|------------|
| 13 Module Pin type Busbars | 13          | 13             | 1SYN360025P0001   | 320        |
| 14 Module Pin type Busbars | 14          | 14             | 1SYN869103R0013   | 510        |
| Blank PL                   |             | 1              | 1SYN869004R0059 ■ | 15         |

# Distribution boards

## Classic series

### Cable end box

| Product description       | No. of ways                         | Ordering code   | M.R.P. (₹) |
|---------------------------|-------------------------------------|-----------------|------------|
| <b>SPN IP30 SHC</b>       |                                     |                 |            |
| SHC WD 4/CEB              | For 4 way SPN IP30 DB               | 1SYN869004R0064 | 400        |
| SHC WD 6/CEB              | For 6 way SPN IP30 DB               | 1SYN869004R0065 | 440        |
| SHC WD 8/CEB              | For 8 way SPN IP30 DB               | 1SYN869004R0066 | 465        |
| SHC WD 10/CEB             | For 10 way SPN IP30 DB              | 1SYN869004R0067 | 515        |
| SHC WD 12/CEB             | For 12 way SPN IP30 DB              | 1SYN869004R0068 | 565        |
| SHC WD 14/CEB             | For 14 way SPN IP30 DB              | 1SYN869004RCE71 | 630        |
| SHC WD 16/CEB             | For 16 way SPN IP30 DB              | 1SYN869004R0070 | 720        |
| SHC WD 20/CEB             | For 20 way SPN IP30 DB              | 1SYN869004R0071 | 800        |
| <b>SPN IP43 SHC</b>       |                                     |                 |            |
| SHC M 4/CEB               | For 4 way SPN IP 43 DB              | 1SYN869103R0014 | 470        |
| SHC M 6/CEB               | For 6 way SPN IP43 DB               | 1SYN869103R0015 | 490        |
| SHC M 8/CEB               | For 8 way SPN IP43 DB               | 1SYN869004R0082 | 535        |
| SHC M 10/CEB              | For 10 way SPN IP43 DB              | 1SYN869004R0083 | 565        |
| SHC M 12/CEB              | For 12 way SPN IP43 DB              | 1SYN869004R0084 | 610        |
| SHC M 14/CEB              | For 14 way SPN IP43 DB              | 1SYN869004R0085 | 700        |
| SHC M 16/CEB              | For 16 way SPN IP43 DB              | 1SYN869004R0086 | 850        |
| SHC M 20/CEB              | For 20 way TPN IP43 DB              | 1SYN869004R0087 | 1,055      |
| <b>TPN IP30 SHDB</b>      |                                     |                 |            |
| SHDB WD 4/CEB             | For 4 way TPN IP30 DB               | 1SYN869004R0072 | 690        |
| SHDB WD 6/CEB             | For 6 way TPN IP30 DB               | 1SYN869004R0073 | 720        |
| SHDB WD 8/CEB             | For 8 way TPN IP30 DB               | 1SYN869004R0074 | 885        |
| SHDB WD 12/CEB            | For 12 way TPN IP30 DB              | 1SYN869004R0075 | 1,325      |
| SHDB WD 16/CEB            | For 16 way TPN IP30 DB              | 1SYN869004R0076 | 1,725      |
| <b>TPN IP43 SHDB</b>      |                                     |                 |            |
| SHDB M 4/CEB              | For 4 way TPN IP43 DB               | 1SYN869004R0088 | 795        |
| SHDB M 6/CEB              | For 6 way TPN IP43 DB               | 1SYN869004R0089 | 780        |
| SHDB M 8/CEB              | For 8 way TPN IP43 DB               | 1SYN869004R0090 | 945        |
| SHDB M 12/CEB             | For 12 way TPN IP43 DB              | 1SYN869004R0091 | 1,260      |
| SHDB M 16/CEB             | For 16 way TPN IP43 DB              | 1SYN869004R0092 | 1,660      |
| <b>TPN IP43 SHPPI</b>     |                                     |                 |            |
| SHPPI M 6/CEB             | For 6way PPI IP43 DB                | 1SYN869004R0093 | 920        |
| SHPPI M 8/CEB             | For 8way PPI IP43 DB                | 1SYN869004R0094 | 1,270      |
| SHPPI M 12/CEB            | For 12way PPI IP43 DB               | 1SYN869004R0095 | 1,820      |
| SHPPI M 16/CEB            | For 16way PPI IP43 DB               | 1SYN869004R0096 | 1,975      |
| <b>TPN IP43 SVDB</b>      |                                     |                 |            |
| SVDB M 6/CEB              | For 6way SVDB IP43 DB               | 1SYN869004R0097 | 985        |
| SVDB M 8/CEB              | For 8way SVDB IP43 DB               | 1SYN869004R0098 | 995        |
| SVDB M 12/CEB             | For 12way SVDB IP43 DB              | 1SYN869004R0099 | 1,150      |
| <b>Flexy DB IP43</b>      |                                     |                 |            |
| SVFL 13M/CEB              | For all SVFL 13Mod DBs              | 1SYN869004R0103 | 1,050      |
| SVFL 14M/CEB              | For all SVFL 14Mod DBs              | 1SYN869004R0104 | 1,275      |
| <b>VTPN IP30 SVTDB</b>    |                                     |                 |            |
| SVTDB WD /CEB             | For all SVTDBs(IP30DBs)             | 1SYN86900WD0104 | 1,710      |
| <b>VTPN IP43 SVTDB</b>    |                                     |                 |            |
| SVTDB M/CEB               | For all SVTDBs(IP43DBs)             | 1SYN869004R0100 | 1,950      |
| <b>VTPN IP30 XT1 160A</b> |                                     |                 |            |
| SVTDB WD XT1 160/CEB      | For all SVTDB XT1 160(IP30 DBs)     | 1SYN869004C0100 | 2,405      |
| <b>VTPN IP43 XT1 160A</b> |                                     |                 |            |
| SVTDB M XT1 160/CEB       | For all SVTDB XT1 160 DBs(IP43DBs)  | 1SYN869004C0101 | 2,380      |
| <b>VTPN IP30 XT3 250A</b> |                                     |                 |            |
| SVTDB WD T3 250/CEB       | For all SVTDB XT3 250 DBs(IP30 DBs) | 1SYN869004C0102 | 2,760      |
| <b>VTPN IP43 XT3 250A</b> |                                     |                 |            |
| SVTDB M XT3 250/CEB       | For all SVTDB XT3 250 DBs(IP43DBs)  | 1SYN869004C0103 | 2,900      |





# Distribution boards

## Gemini switchboard

ABB SACE's Gemini range is revolutionizing the market of low voltage electric insulating switchboards. The reason for this is that it is the first switchboard made in thermoplastic material, to which the co-injection molding technique gives the same mechanical characteristics as polyester. This means that it is extremely sturdy, with its rigid covering and expanded internal

core. Moreover, it contains no fiber glass, a material that with time rises to the surface, jeopardizing the functioning and safety of switchboards made in polyester with which it is usually mixed. Available in 6 different sizes with transparent or opaque door, the Gemini switchboards are suitable for installation in any application context.



|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Compliance with standard | IEC60670, EN 50298, 60439-1, 62208, 61439 – 1 & 2 |
| Rated service voltage    | 1000V AC                                          |
| Degree of protection     | IP 30 open door / IP66 closed door                |

\* Details available on request



# Wiring accessories

IVIE **NEW**

## Switch to the future

IVIE is the latest premium modular range of wiring accessories designed to address various functionalities. These include basic switching, controlling, comfort and energy saving.

The IVIE range innovatively matches your interiors and aesthetically brings out the best in your comfort zone. The enhanced design for reliable performance of this range is for the passionate, compassionate, intuitive and magnetic personality within each one of us.

The IVIE range, includes the tastefully selected color options, caters to the needs of various segments like residential, commercial and hospitality.

IVIE with its ability to integrate home automation solutions in your existing switch box, makes the range future proof.

IVIE truly makes you want to switch to the future.

## Sleek and convex design in different finishes

Thanks to the complete system, The Ivie series provides a comprehensive range of solutions for building concepts. The convex and sleek design not only provides quality and style to the overall building, but is easy to install.

—  
01



—  
02



—  
03



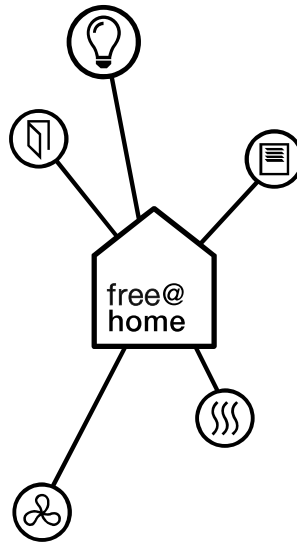
Different finishes and combinations:

- 01 Anthracite grey mechanisms in Silver plate
- 02 Silver mechanisms in Anthracite Grey plate
- 03 Anthracite grey mechanisms in White plate

## Flexibility in design which provides total control

The IVIE range is the first Indian range to incorporate wired and wireless home automation systems together. This range can be integrated with

ABB-free@home® home automation system, which is the most intelligent way of managing spaces with energy saving.



Great comfort, safety and energy efficiency for buildings

ABB-free@home® sensor for switching control, blind control, dimming and scene control.



# IVIE complete range

## IVIE mechanisms - White

|    | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Switch 6 A - 240 V ~</td></tr><tr><td>IIS10610 BL - 6A 1 way switch</td><td>1</td><td>20/400</td><td>1SYK100001A1001</td><td>172</td></tr><tr><td>IIS10620 BL - 6A 2 way switch</td><td>1</td><td>20/400</td><td>1SYK100001A1002</td><td>258</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Switch 6 A - 240 V ~  |  |  |  |  | IIS10610 BL - 6A 1 way switch          | 1 | 20/400 | 1SYK100001A1001 | 172          | IIS10620 BL - 6A 2 way switch                 | 1 | 20/400 | 1SYK100001A1002 | 258                                   |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------|--------------|--|--------------------------------|-------------------|------|---------------|-----------|-----------------------|--|--|--|--|----------------------------------------|---|--------|-----------------|--------------|-----------------------------------------------|---|--------|-----------------|---------------------------------------|--------------------------------------------------|---|-----------------|-----------------|-----|----------------------------|---|--------|-----------------|-----|----------------------------|---|--------|-----------------|-----|-------------------------------|---|--------|-----------------|-----|----------------------------------------------------------------------------|---|----|-----------------|--------------|----------------------------------------------------------------------------|---|----|-----------------|----------------------------------------------------------------|---|----|-----------------|
| Type reference and description                                                      | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pack   | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Switch 6 A - 240 V ~                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIS10610 BL - 6A 1 way switch                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20/400 | 1SYK100001A1001 | 172          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIS10620 BL - 6A 2 way switch                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20/400 | 1SYK100001A1002 | 258          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| 1SYK100001A1001                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
|    | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Switch 16 A - 240 V ~</td></tr><tr><td>IIS11610 BL - 16A 1 way switch</td><td>1</td><td>20/400</td><td>1SYK100001A1006</td><td>338</td></tr><tr><td>IIS1161L BL - 16A 1 way switch with indicator</td><td>1</td><td>20/400</td><td>1SYK100001A1007</td><td>406</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Switch 16 A - 240 V ~ |  |  |  |  | IIS11610 BL - 16A 1 way switch         | 1 | 20/400 | 1SYK100001A1006 | 338          | IIS1161L BL - 16A 1 way switch with indicator | 1 | 20/400 | 1SYK100001A1007 | 406                                   |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Type reference and description                                                      | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pack   | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Switch 16 A - 240 V ~                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIS11610 BL - 16A 1 way switch                                                      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20/400 | 1SYK100001A1006 | 338          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIS1161L BL - 16A 1 way switch with indicator                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20/400 | 1SYK100001A1007 | 406          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| 1SYK100001A1007                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
|    | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Switch 32 A - 240 V ~</td></tr><tr><td>IIS2321L BL - 32A, DP switch</td><td>2</td><td>10/200</td><td>1SYK100001A1008</td><td>1,120</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Switch 32 A - 240 V ~ |  |  |  |  | IIS2321L BL - 32A, DP switch           | 2 | 10/200 | 1SYK100001A1008 | 1,120        |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Type reference and description                                                      | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pack   | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Switch 32 A - 240 V ~                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIS2321L BL - 32A, DP switch                                                        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10/200 | 1SYK100001A1008 | 1,120        |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| 1SYK100001A1008                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
|   | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Bell Push</td></tr><tr><td>IIS106B0 BL - 6A Bell switch</td><td>1</td><td>20/400</td><td>1SYK100001A1003</td><td>284</td></tr><tr><td>IIS106BL BL - 6A Bell switch with indicator</td><td>1</td><td>20/400</td><td>1SYK100001A1004</td><td>370</td></tr><tr><td>IIS206BL BL - 6A Mega Bell switch with indicator</td><td>2</td><td>10/200</td><td>1SYK100001A1005</td><td>502</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Bell Push             |  |  |  |  | IIS106B0 BL - 6A Bell switch           | 1 | 20/400 | 1SYK100001A1003 | 284          | IIS106BL BL - 6A Bell switch with indicator   | 1 | 20/400 | 1SYK100001A1004 | 370                                   | IIS206BL BL - 6A Mega Bell switch with indicator | 2 | 10/200          | 1SYK100001A1005 | 502 |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Type reference and description                                                      | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pack   | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Bell Push                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIS106B0 BL - 6A Bell switch                                                        | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20/400 | 1SYK100001A1003 | 284          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIS106BL BL - 6A Bell switch with indicator                                         | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20/400 | 1SYK100001A1004 | 370          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIS206BL BL - 6A Mega Bell switch with indicator                                    | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10/200 | 1SYK100001A1005 | 502          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| 1SYK100001A1003    1SYK100001A1005                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
|  | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Sockets</td></tr><tr><td>IIK20506 BL 6A, 5 Pin socket</td><td>2</td><td>10/200</td><td>1SYK100001A1027</td><td>360</td></tr><tr><td>IIK20613 BL - 6/13A universal socket</td><td>2</td><td>10/200</td><td>1SYK100001A1022</td><td>440</td></tr><tr><td>IIK20616 BL - 6/16A socket</td><td>2</td><td>10/200</td><td>1SYK100001A1023</td><td>494</td></tr><tr><td>IIK20620 BL - 6/20A socket</td><td>2</td><td>10/200</td><td>1SYK100001A1024</td><td>560</td></tr><tr><td>IIK20625 BL - 6/25A socket</td><td>2</td><td>10/200</td><td>1SYK100001A1025</td><td>618</td></tr><tr><td>IIK10006 BL - 6A 2 pin socket</td><td>1</td><td>20/400</td><td>1SYK100001A1026</td><td>484</td></tr><tr><td>N2238 BL - Euro-American earthed socket outlet, 125/250V AC, 15/16A, 2 P+E</td><td>2</td><td>10</td><td>2CLA223800N1102</td><td rowspan="3">Upon request</td></tr><tr><td>N2135 BL - Euro-American unearthed socket outlet, 125/250V AC, 15/16A, 2 P</td><td>1</td><td>20</td><td>2CLA213500N1102</td></tr><tr><td>N2237 BL - British standard socket outlet, 250V AC, 13A, 2 P+E</td><td>2</td><td>10</td><td>2CLA223700N1102</td></tr></table> |        |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Sockets               |  |  |  |  | IIK20506 BL 6A, 5 Pin socket           | 2 | 10/200 | 1SYK100001A1027 | 360          | IIK20613 BL - 6/13A universal socket          | 2 | 10/200 | 1SYK100001A1022 | 440                                   | IIK20616 BL - 6/16A socket                       | 2 | 10/200          | 1SYK100001A1023 | 494 | IIK20620 BL - 6/20A socket | 2 | 10/200 | 1SYK100001A1024 | 560 | IIK20625 BL - 6/25A socket | 2 | 10/200 | 1SYK100001A1025 | 618 | IIK10006 BL - 6A 2 pin socket | 1 | 20/400 | 1SYK100001A1026 | 484 | N2238 BL - Euro-American earthed socket outlet, 125/250V AC, 15/16A, 2 P+E | 2 | 10 | 2CLA223800N1102 | Upon request | N2135 BL - Euro-American unearthed socket outlet, 125/250V AC, 15/16A, 2 P | 1 | 20 | 2CLA213500N1102 | N2237 BL - British standard socket outlet, 250V AC, 13A, 2 P+E | 2 | 10 | 2CLA223700N1102 |
| Type reference and description                                                      | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pack   | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Sockets                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIK20506 BL 6A, 5 Pin socket                                                        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10/200 | 1SYK100001A1027 | 360          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIK20613 BL - 6/13A universal socket                                                | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10/200 | 1SYK100001A1022 | 440          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIK20616 BL - 6/16A socket                                                          | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10/200 | 1SYK100001A1023 | 494          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIK20620 BL - 6/20A socket                                                          | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10/200 | 1SYK100001A1024 | 560          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIK20625 BL - 6/25A socket                                                          | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10/200 | 1SYK100001A1025 | 618          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIK10006 BL - 6A 2 pin socket                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20/400 | 1SYK100001A1026 | 484          |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| N2238 BL - Euro-American earthed socket outlet, 125/250V AC, 15/16A, 2 P+E          | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10     | 2CLA223800N1102 | Upon request |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| N2135 BL - Euro-American unearthed socket outlet, 125/250V AC, 15/16A, 2 P          | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20     | 2CLA213500N1102 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| N2237 BL - British standard socket outlet, 250V AC, 13A, 2 P+E                      | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10     | 2CLA223700N1102 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| 1SYK100001A1023                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
|  | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">USB chargers</td></tr><tr><td>N2185 BL - USB charger 0.75A, 100-240V</td><td>1</td><td>1</td><td>2CLA218500N1102</td><td rowspan="3">Upon request</td></tr><tr><td>N2185.2 BL - USB charger 2A, 100-230V</td><td>1</td><td>1</td><td>2CLA218520N1102</td></tr><tr><td>N2285 BL - USB charger 1.5A, 100-240V</td><td>2</td><td>1</td><td>2CLA228500N1102</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | USB chargers          |  |  |  |  | N2185 BL - USB charger 0.75A, 100-240V | 1 | 1      | 2CLA218500N1102 | Upon request | N2185.2 BL - USB charger 2A, 100-230V         | 1 | 1      | 2CLA218520N1102 | N2285 BL - USB charger 1.5A, 100-240V | 2                                                | 1 | 2CLA228500N1102 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Type reference and description                                                      | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pack   | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| USB chargers                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| N2185 BL - USB charger 0.75A, 100-240V                                              | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1      | 2CLA218500N1102 | Upon request |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| N2185.2 BL - USB charger 2A, 100-230V                                               | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1      | 2CLA218520N1102 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| N2285 BL - USB charger 1.5A, 100-240V                                               | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1      | 2CLA228500N1102 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| 2CLA218500N1102    2CLA228500N1102                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
|  | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Blank plates</td></tr><tr><td>IIM1BLNK BL - blank plate</td><td>1</td><td>20/400</td><td>1SYK100001A1041</td><td>56</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Blank plates          |  |  |  |  | IIM1BLNK BL - blank plate              | 1 | 20/400 | 1SYK100001A1041 | 56           |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Type reference and description                                                      | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Pack   | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| Blank plates                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| IIM1BLNK BL - blank plate                                                           | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20/400 | 1SYK100001A1041 | 56           |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |
| 1SYK100001A1041                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                        |   |        |                 |              |                                               |   |        |                 |                                       |                                                  |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                            |   |    |                 |              |                                                                            |   |    |                 |                                                                |   |    |                 |

# IVIE complete range

## IVIE mechanisms - White

|                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |                   |                 |               |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------|-----------------|---------------|--------------|
| 1SYK100001A1042                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |                   |                 |               |              |
| 1SYK100001A1045                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |                   |                 |               |              |
| 2CLA226020N1102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |                   |                 |               |              |
| 2CLA226030N1102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |                   |                 |               |              |
| 2CLA226080N1102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |                   |                 |               |              |
| 2CLA226090N1102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |                   |                 |               |              |
| 1SYK100001A1047                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |                   |                 |               |              |
| 1SYK100001A1049                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |                   |                 |               |              |
| 1SYK100001A1051                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| <b>Dimmer &amp; fan regulators</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |                   |                 |               |              |
| IIM2FR05 BL - step fan regulator 5 step                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2 | 5/100             | 1SYK100001A1042 | 1,100         |              |
| IIM1FR04 BL - step fan regulator 4 step                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1 | 10/200            | 1SYK100001A1043 | 960           |              |
| IIM2D400 BL - dimmer 400 watt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1 | 10/200            | 1SYK100001A1045 | 1,232         |              |
| N2260.2 BL - Universal rotatory/push dimmer, 230V • Rated voltage: 230 V AC • Max. power: incandescent: 500 Watt halogen lamp with electronic transformer: 500 VA • Halogen lamp with ferromagnetic transformer: 400 VA                                                                                                                                                                                                                                                                                             | 2 | 1                 | 2CLA226020N1102 |               |              |
| N2260.3 BL - LED rotatory/push dimmer, 230V • Rated voltage: 230 V AC • Nominal power: 250 W/VA Power (min./max load): LEDi: 2/100 W/VA (max. 10 lamps) • Dimmable energy saving lamps: 2/100 W/VA (max. 10 lamps) • LV LEDi with transformer (only type L or LC): 4/100 W/VA (max. 10 lamps) • Incandescent lamps: 10/250 W/VA • Halogen lamps: 10/250 W/VA • LV halogen with transformer (only type L or LC): 10/250 W/VA (max. 10 lamps) • 2 wire connection. Optional: auxiliary on/off with 2-way switch N2X02 | 2 | 1                 | 2CLA226030N1102 |               | Upon request |
| N2260.8 BL - LED rotatory/push dimmer • Rated voltage: 127 V AC, Frequency: 50/60 Hz (Nominal power: 140 W/VA) • Power (min./max load): LEDi: 2/55 W/VA (max. 10 lamps) • Dimmable energy saving lamps:2/55 W/VA (max. 10 lamps) • LV LEDi with transformer (only type L or LC): 4/55 W/VA (max. 10 lamps) • Incandescent lamps: 10/140 W/VA • Halogen lamps: 10/140 W/VA • LV halogen with transformer (only type L or LC): 10/140 W/VA (max. 10 lamps)                                                            | 2 | 1                 | 2CLA226080N1102 |               |              |
| N2260.9 BL - 1-10V rotary dimmer • Rated voltage: 127 - 230 V AC/50 - 60 Hz • Max. power: 230 Vac: 700 VA • 127 V AC: 350 VA • Max. 6 ballasts per device                                                                                                                                                                                                                                                                                                                                                           | 2 | 1                 | 2CLA226090N1102 |               |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| <b>Data &amp; voice</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |                   |                 |               |              |
| IIM1RJ11 BL - RJ11 Tel. jack 2 pin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1 | 20/400            | 1SYK100001A1047 | 246           |              |
| IIM1RJ45 BL - RJ45 Jack cat 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1 | 20/400            | 1SYK100001A1048 | 836           |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| <b>TV Socket</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |                   |                 |               |              |
| IIM1TVSK BL - TV co-axial socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1 | 20/400            | 1SYK100001A1049 | 250           |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| <b>Starters</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |                   |                 |               |              |
| IIM2ST20 BL - Single Phase Starter 20A                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2 | 5/100             | 1SYK100001A1051 | 792           |              |
| IIM2ST25 BL - Single Phase Starter 25A                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2 | 5/100             | 1SYK100001A1052 | 810           |              |

# IVIE complete range

## IVIE mechanisms - White



1SYK100001A1055



2CLA224450N1102 2CLA218050N1102  
2CLA218040N1102



2CLA221410N1102



1SYK100001A1059



2CLA215520N1102 2CLA215530N1102



2CLA215540N1102 2CLA215560N1102



2CLA224100N1102



1SYK100001A1054



2CLA211900N1102 2CLA221900N1102



1SYK100001A1053

| Type reference and description                     | Number of modules | Pack  | Ordering code   | M.R.P.(₹)    |
|----------------------------------------------------|-------------------|-------|-----------------|--------------|
| <b>DND &amp; MMR</b>                               |                   |       |                 |              |
| IIM1DNDS BL - DND and MMR set internal & external  | 2+3               | 5/100 | 1SYK100001A1055 | Upon request |
| N2244.5 BL - DND and MUR 2-gang interlocked switch | 2                 | 5     | 2CLA224450N1102 |              |
| N2180.5 BL - LED MUR signaling light               | 1                 | 5     | 2CLA218050N1102 |              |
| N2180.4 BL - LED DND signaling light               | 1                 | 5     | 2CLA218040N1102 |              |

| Type reference and description             | Number of modules | Pack | Ordering code   | M.R.P.(₹)    |
|--------------------------------------------|-------------------|------|-----------------|--------------|
| <b>Key card switches</b>                   |                   |      |                 |              |
| N2214.1 BL - Card switch 1-gang, 1-way, DP | 2                 | 1    | 2CLA221410N1102 | Upon request |

| Type reference and description | Number of modules | Pack  | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|-------|-----------------|-----------|
| <b>Down lighter</b>            |                   |       |                 |           |
| IIM3DOWN BL-down lighter       | 3                 | 5/100 | 1SYK100001A1059 | 720       |

| Type reference and description                  | Number of modules | Pack | Ordering code   | M.R.P.(₹)    |
|-------------------------------------------------|-------------------|------|-----------------|--------------|
| <b>Audio &amp; video connector</b>              |                   |      |                 |              |
| N2155.2 BL - 2x RCA connection unit             | 1                 | 1    | 2CLA215520N1102 | Upon request |
| N2155.3 BL - 3x RCA connection unit             | 1                 | 1    | 2CLA215530N1102 |              |
| N2155.4 BL - Mini-Jack connection unit          | 1                 | 1    | 2CLA215540N1102 |              |
| N2155.5 BL - VGA connection unit                | 1                 | 1    | 2CLA215550N1102 |              |
| N2155.6 BL - HDMI connection unit               | 1                 | 1    | 2CLA215560N1102 |              |
| N2155.7 BL - HDMI female-female connection unit | 1                 | 1    | 2CLA215570N1102 |              |
| N2155.8 BL - USB connection unit                | 1                 | 1    | 2CLA215580N1102 |              |
| N2155.9 BL - USB female-female connection unit  | 1                 | 1    | 2CLA215590N1102 |              |

| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Number of modules | Pack | Ordering code   | M.R.P.(₹)    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------|-----------------|--------------|
| <b>Motion sensor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |      |                 |              |
| N2241 BL - 110° motion sensor • Max. power:<br>Incandescent: 1,800W @230V AC/1,000W @127V AC<br>• Halogen with electronic or ferromagnetic transformer:<br>750VA @230V AC/400VA @127V AC - Fluorescent lamps<br>or motors: 400VA @230V AC/200VA @127V AC<br>• For automatic switching of devices dependent on<br>motion and brightness • With integrated selector switch<br>for automatic ON-OFF in the front side • Switch-off delay:<br>10 sec to 10 min or short-time pulse 1 sec adjustable<br>(from the front side) • Detection range: 5 m radius<br>• Adjustable light set point level for activation (from the<br>front side) • Detection angle: 110° Mounting height:<br>1, 2 m Auxiliary control with N2X04.X push-buttons | 2                 | 1    | 2CLA224100N1102 | Upon request |

| Type reference and description           | Number of modules | Pack  | Ordering code   | M.R.P.(₹)    |
|------------------------------------------|-------------------|-------|-----------------|--------------|
| <b>Buzzer &amp; door bell</b>            |                   |       |                 |              |
| IIM2BUZR BL - Buzzer                     | 2                 | 5/100 | 1SYK100001A1054 | 496          |
| N2119 BL - Buzzer                        | 1                 | 1     | 2CLA211900N1102 | Upon request |
| N2219 BL - Buzzer                        | 2                 | 1     | 2CLA221900N1102 |              |
| N2224 BL - Electronic door bell 230 V AC | 2                 | 1     | 2CLA222400N1102 |              |

| Type reference and description | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|--------|-----------------|-----------|
| <b>Indicator</b>               |                   |        |                 |           |
| IIM1INDI BL - Indicator        | 1                 | 20/400 | 1SYK100001A1053 | 380       |



# IVIE complete range

## IVIE mechanisms - White



| Type reference and description                                                                                                                                                                                                           | Number of modules | Pack | Ordering code   | M.R.P.(₹)    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------|-----------------|--------------|
| <b>Signaling light</b>                                                                                                                                                                                                                   |                   |      |                 |              |
| N2180 BL - L ED white signaling light, Lamp: white LED<br>Luminous flux: > 2 lumen at 1 meter, white diffuser                                                                                                                            | 1                 | 5    | 2CLA218000N1102 | Upon request |
| N2180 RJ - LED red signaling light, Lamp: white LED<br>Luminous flux: > 2 lumen at 1 meter, Red diffuser                                                                                                                                 | 1                 | 1    | 2CLA218000N1602 |              |
| N2180 VD - N2180 VD, Lamp: white LED<br>Luminous flux: > 2 lumen at 1 meter, Green diffuser                                                                                                                                              | 1                 | 1    | 2CLA218000N1802 |              |
| N2280 BL - LED signaling light, Lamp: white LED<br>Luminous flux: > 2 lumen at 1 meter, White diffuser                                                                                                                                   | 2                 | 1    | 2CLA228000N1102 |              |
| N2281 BL - Beacon LED light, Lamp: white LED<br>Luminous flux: > 2 lumen at 1 meter, white diffuser,<br>Autonomy: 3 hours (1 hour at maximum illumination 2 hours with lower illumination), Battery: Ni-MH (estimated lifetime: 4 years) | 2                 | 1    | 2CLA228100N1102 |              |

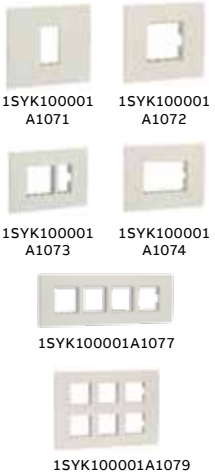


| Type reference and description                                                                                                                                                                                                                                                     | Number of modules | Pack | Ordering code   | M.R.P.(₹)    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------|-----------------|--------------|
| <b>Thermostat</b>                                                                                                                                                                                                                                                                  |                   |      |                 |              |
| 8140.5 - Digital room thermostat • Maximum load: 3A cos = 0,5 • Output relay operation modes: Hysteresis: 0.5° C • Pulse-width modulation: with a ±4°C difference with the set-point temperature • Variable from 100% to 0% modulation • To be installed with N2240.5 cover plates | 2                 | 1    | 2CLA814050A1002 | Upon request |
| N2240.5 BL - Cover plate for digital thermostat - 2M                                                                                                                                                                                                                               | 2                 | 1    | 2CLA224050N1102 |              |



| Type reference and description                            | Number of modules | Pack | Ordering code   | M.R.P.(₹)    |
|-----------------------------------------------------------|-------------------|------|-----------------|--------------|
| <b>Sound</b>                                              |                   |      |                 |              |
| 9368.1 - Multiroom sound module                           | 1                 | 1    | 2CLA936810A1001 | Upon request |
| 9368.2 - Remote control for multiroom sound module        | 2                 | 1    | 2CLA936820A1001 |              |
| N2268 BL - Cover plate for radio/remote control modules   | -                 | 1    | 2CLA226800N1102 |              |
| 9368- FM - Radio and alarm module                         | 2                 | 1    | 2CLA936800A1001 |              |
| N2268 BL - Cover plate for radio/remote control modules   | -                 | 1    | 2CLA226800N1102 |              |
| 9368.3 - Auxiliary module                                 | 2                 | 1    | 2CLA936830A1001 |              |
| N2268.3 BL - Cover plate for I/O + USB + Bluetooth module | -                 | 1    | 2CLA226830N1102 |              |
| N2257.1 BL - Speaker connection unit                      | 2                 | 1    | 2CLA225710N1102 |              |

\* More details will be provided upon request



| Type reference and description | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|--------|-----------------|-----------|
| <b>White plate with frame</b>  |                   |        |                 |           |
| IIP0133 BL - 1M plate          | 1                 | 15/360 | 15YK100001A1071 | 172       |
| IIP0233 BL - 2M plate          | 2                 | 15/360 | 15YK100001A1072 | 184       |
| IIPP343 BL - 3M plate power    | 3                 | 10/240 | 15YK100001A1073 | 197       |
| IIP0343 BL - 3M plate          | 3                 | 10/240 | 15YK100001A1074 | 202       |
| IIP0453 BL - 4M plate          | 4                 | 10/190 | 15YK100001A1075 | 260       |
| IIP0683 BL - 6M plate          | 6                 | 5/120  | 15YK100001A1076 | 378       |
| IIP0893 BL - 8M plate          | 8                 | 5/120  | 15YK100001A1077 | 410       |
| IIP0855 BL - 8M plate square   | 8                 | 5/95   | 15YK100001A1078 | 518       |
| IIP1286 BL - 12M plate         | 12                | 5/95   | 15YK100001A1079 | 620       |
| IIP1888 BL - 18M plate         | 18                | 5/40   | 15YK100001A1080 | 830       |



IVIE complete range

IVIE mechanisms - Anthracite Grey



| Type reference and description | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|--------|-----------------|-----------|
| Switch 6 A - 240 V ~           |                   |        |                 |           |
| IIS10610 AN - 6A 1 way switch  | 1                 | 20/400 | 15YK100001A1201 | 206       |
| IIS10620 AN - 6 A 2 way switch | 1                 | 20/400 | 15YK100001A1202 | 284       |

| Type reference and description           | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|------------------------------------------|-------------------|--------|-----------------|-----------|
| Switch 16 A - 240 V ~                    |                   |        |                 |           |
| IIS11610 AN - 16A 1 way switch           | 1                 | 20/400 | 15YK100001A1206 | 378       |
| IIS1161L AN - 16A 1 way switch with ind. | 1                 | 20/400 | 15YK100001A1207 | 470       |

| Type reference and description | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|--------|-----------------|-----------|
| Switch 32 A - 240 V ~          |                   |        |                 |           |
| IIS2321L AN - 32A, DP switch   | 2                 | 10/200 | 15YK100001A1208 | 1,292     |

| Type reference and description              | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|---------------------------------------------|-------------------|--------|-----------------|-----------|
| Bell Push - 240 V ~                         |                   |        |                 |           |
| IIS106B0 AN - 6A Bell Switch                | 1                 | 20/400 | 15YK100001A1203 | 330       |
| IIS106BL AN - 6A Bell Switch with ind.      | 1                 | 20/400 | 15YK100001A1204 | 418       |
| IIS206BL AN - 6A Mega Bell switch with ind. | 2                 | 10/200 | 15YK100001A1205 | 576       |

| Type reference and description                                                                       | Number of modules | Pack   | Ordering code   | MRP(₹)       |
|------------------------------------------------------------------------------------------------------|-------------------|--------|-----------------|--------------|
| Sockets - 240 V ~                                                                                    |                   |        |                 |              |
| IIK20506 AN 6A, 5 Pin socket                                                                         | 2                 | 10/200 | 15YK100001A1227 | 400          |
| IIK20613 AN - 6/13A universal socket                                                                 | 2                 | 10/200 | 15YK100001A1222 | 480          |
| IIK20616 AN - 6/16A socket                                                                           | 2                 | 10/200 | 15YK100001A1223 | 570          |
| IIK20620 AN - 6/20A socket                                                                           | 2                 | 10/200 | 15YK100001A1224 | 640          |
| IIK20625 AN - 6/25A socket                                                                           | 2                 | 10/200 | 15YK100001A1225 | 702          |
| IIK10006 AN - 6A 2 pin socket                                                                        | 1                 | 20/400 | 15YK100001A1226 | 558          |
| N2238 AN - Euro-American earthed socket outlet, Rated current: 15/16A, 2P+E/NEMA 5-15R               | 2                 | 10     | 2CLA223800N1802 | Upon request |
| N2135 AN - Euro-American unearthed socket outlet, Rated current: 15/16A, 2P (non-earthed)/NEMA 1-15R | 1                 | 20     | 2CLA213500N1802 |              |
| N2237 AN - British standard socket outlet, Rated current: 13A, 2P+E                                  | 2                 | 10     | 2CLA223700N1302 |              |

| Type reference and description           | Number of modules | Pack | Ordering code   | M.R.P.(₹)    |
|------------------------------------------|-------------------|------|-----------------|--------------|
| USB chargers                             |                   |      |                 |              |
| N2185 AN - USB charger 750mA, 1-gang     | 1                 | 1    | 2CLA218500N1802 | Upon request |
| N2185.2 AN - USB charger 2.000mA, 1-gang | 1                 | 1    | 2CLA218520N1802 |              |
| N2285 AN - USB charger 1.500mA, 2-gang   | 2                 | 1    | 2CLA228500N1802 |              |

| Type reference and description | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|--------|-----------------|-----------|
| Blank plates                   |                   |        |                 |           |
| IIM1BLNK AN - Blank plate      | 1                 | 20/400 | 15YK100001A1241 | 112       |

# IVIE complete range

## IVIE mechanisms - Anthracite Grey



1SYK100001A1242



2CLA226020N1802



2CLA226030N1802



2CLA226080N1802



2CLA226090N1802



1SYK100001A1247



1SYK100001A1249



1SYK100001A1257



1SYK100001A1255



| Type reference and description          | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|-----------------------------------------|-------------------|--------|-----------------|-----------|
| <b>Motion sensor</b>                    |                   |        |                 |           |
| IIM2FR05 AN - Step fan regulator 5 step | 2                 | 5/100  | 1SYK100001A1242 | 1,250     |
| IIM1FR04 AN - Step fan regulator 4 step | 1                 | 10/200 | 1SYK100001A1243 | 1,104     |
| IIM1D400 AN - Dimmer 400 Watt           | 1                 | 10/200 | 1SYK100001A1245 | 1,414     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |   |                 |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|-----------------|--------------|
| N2260.2 AN - Universal rotatory/push dimmer • Rated voltage: 230 V AC • Max. power: Incandescent: 500 W • Halogen lamp with electronic transformer: 500 VA • Halogen lamp with ferromagnetic transformer: 400 VA                                                                                                                                                                                                                                                                                                | 2 | 1 | 2CLA226020N1802 | Upon request |
| N2260.3 AN - LED rotatory/push dimmer • Rated voltage: 230 V AC • Nominal power: 250 W/VA • Power (min./max load): LEDi: 2/100 W/VA (max. 10 lamps). Dimmable energy saving lamps: 2/100 W/VA (max. 10 lamps) • LV LEDi with transformer (only type L or LC): 4/100 W/VA (max. 10 lamps) • Incandescent lamps: 10/250 W/VA • Halogen lamps: 10/250 W/VA • LV halogen with transformer (only type L or LC): 10/250 W/VA (max. 10 lamps) • 2 wire connection • Optional: auxiliary on/off with 2-way switch N2X02 | 2 | 1 | 2CLA226030N1802 |              |
| N2260.8 AN - LED rotatory/push dimmer • Rated voltage: 127 V AC • Frequency: 50/60 Hz (Nominal power: 140 W/ VA) • Power (min./max load): LEDi: 2/55 W/VA (max. 10 lamps) • Dimmable energy saving lamps: 2/55 W/VA (max. 10 lamps) • LV LEDi with transformer (only type L or LC): 4/55 W/VA (max. 10 lamps) • Incandescent lamps: 10/140 W/VA • Halogen lamps: 10/140 W/VA • LV halogen with transformer (only type L or LC): 10/140 W/VA (max. 10 lamps)                                                     | 2 | 1 | 2CLA226080N1802 |              |
| N2260.9 AN - 1-10V rotary dimmer • Rated voltage: 127 - 230 V AC / 50 - 60 Hz • Max. power: 230 V AC: 700 VA • 127 V AC: 350 VA • Max. 6 ballasts per device                                                                                                                                                                                                                                                                                                                                                    | 2 | 1 | 2CLA226090N1802 |              |

| Type reference and description     | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|------------------------------------|-------------------|--------|-----------------|-----------|
| <b>Data &amp; Voice</b>            |                   |        |                 |           |
| IIM1RJ11 AN - RJ11 Tel. jack 2 pin | 1                 | 20/400 | 1SYK100001A1247 | 284       |
| IIM1RJ45 AN - RJ45 Jack cat 6      | 1                 | 20/400 | 1SYK100001A1248 | 944       |

| Type reference and description   | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|----------------------------------|-------------------|--------|-----------------|-----------|
| <b>TV Socket</b>                 |                   |        |                 |           |
| IIM1TVSK AN - TV co-axial socket | 1                 | 20/400 | 1SYK100001A1249 | 296       |

| Type reference and description | Number of modules | Pack  | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|-------|-----------------|-----------|
| <b>Shaver Socket</b>           |                   |       |                 |           |
| IIM2SVSK AN - Shaver Socket    | 2                 | 5/100 | 1SYK100001A1257 | 1,710     |

| Type reference and description                     | Number of modules | Pack  | Ordering code   | M.R.P.(₹)    |
|----------------------------------------------------|-------------------|-------|-----------------|--------------|
| <b>DND &amp; MMR</b>                               |                   |       |                 |              |
| IIM1DND5 AN - DND and MMR set internal & external  | 2+3               | 5/100 | 1SYK100001A1255 | 2,050        |
| N2244.5 AN - DND and MUR 2-gang interlocked switch | 2                 | 1     | 2CLA224450N1802 | Upon request |
| N2180.4 AN - LED MUR signaling light               | 1                 | 1     | 2CLA218050N1802 |              |
| N2180.4 AN - LED DND signaling light               | 1                 | 1     | 2CLA218040N1802 |              |

| Type reference and description  | Number of modules | Pack | Ordering code   | M.R.P.(₹)    |
|---------------------------------|-------------------|------|-----------------|--------------|
| <b>Key Card Switches</b>        |                   |      |                 |              |
| - Card switch 1-gang, 1-way, DP | 2                 | 1    | 2CLA221410N1802 | Upon request |

IVIE complete range

IVIE mechanisms - Anthracite Grey



# IVIE complete range

## IVIE mechanisms - Anthracite Grey



| Type reference and description | Number of modules | Pack   | Ordering code   | M.R.P. (₹) |
|--------------------------------|-------------------|--------|-----------------|------------|
| Anthracite plate with frame    |                   |        |                 |            |
| IIP0133 AN - 1M plate          | 1                 | 15/360 | 1SYK100001A1271 | 410        |
| IIP0233 AN - 2M plate          | 2                 | 15/360 | 1SYK100001A1272 | 362        |
| IIPP343 AN - 3M plate power    | 3                 | 10/240 | 1SYK100001A1273 | 490        |
| IIP0343 AN - 3M plate          | 3                 | 10/240 | 1SYK100001A1274 | 508        |
| IIP0453 AN - 4M plate          | 4                 | 10/190 | 1SYK100001A1275 | 636        |
| IIP0683 AN - 6M plate          | 6                 | 5/120  | 1SYK100001A1276 | 918        |
| IIP0893 AN - 8M plate          | 8                 | 5/120  | 1SYK100001A1277 | 1,060      |
| IIP0855 AN - 8M plate square   | 8                 | 5/95   | 1SYK100001A1278 | 1,150      |
| IIP1286 AN - 12M plate         | 12                | 5/95   | 1SYK100001A1279 | 1,540      |
| IIP1888 AN - 18M plate         | 18                | 5/40   | 1SYK100001A1280 | 2,170      |

# IVIE complete range

## IVIE mechanisms - Silver

|                                                  | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Switch 6 A - 240 V ~</td></tr><tr><td>IIS10610 PL - 6A 1 way switch</td><td>1</td><td>20/400</td><td>1SYK100001A1101</td><td>206</td></tr><tr><td>IIS10620 PL - 6A 2 way switch</td><td>1</td><td>20/400</td><td>1SYK100001A1102</td><td>284</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Switch 6 A - 240 V ~  |  |  |  |  | IIS10610 PL - 6A 1 way switch        | 1 | 20/400 | 1SYK100001A1101 | 206          | IIS10620 PL - 6A 2 way switch            | 1 | 20/400 | 1SYK100001A1102 | 284                                    |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|--|--------------------------------|-------------------|------|---------------|-----------|-----------------------|--|--|--|--|--------------------------------------|---|--------|-----------------|--------------|------------------------------------------|---|--------|-----------------|----------------------------------------|--------------------------------------------|---|-----------------|-----------------|-----|----------------------------|---|--------|-----------------|-----|----------------------------|---|--------|-----------------|-----|-------------------------------|---|--------|-----------------|-----|---------------------------------------------------------------------------------------------------------------------|---|----|-----------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------|---|----|-----------------|---------------------------------------------------------------------|---|----|-----------------|
| Type reference and description                                                                                                    | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Switch 6 A - 240 V ~                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIS10610 PL - 6A 1 way switch                                                                                                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20/400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1101 | 206          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIS10620 PL - 6A 2 way switch                                                                                                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20/400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1102 | 284          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| SYK100001A1101                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
|                                                  | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Switch 16 A - 240 V ~</td></tr><tr><td>IIS11610 PL - 16A 1 way switch</td><td>1</td><td>20/400</td><td>1SYK100001A1106</td><td>378</td></tr><tr><td>IIS1161L PL - 16A 1 way switch with Ind.</td><td>1</td><td>20/400</td><td>1SYK100001A1107</td><td>470</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Switch 16 A - 240 V ~ |  |  |  |  | IIS11610 PL - 16A 1 way switch       | 1 | 20/400 | 1SYK100001A1106 | 378          | IIS1161L PL - 16A 1 way switch with Ind. | 1 | 20/400 | 1SYK100001A1107 | 470                                    |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Type reference and description                                                                                                    | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Switch 16 A - 240 V ~                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIS11610 PL - 16A 1 way switch                                                                                                    | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20/400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1106 | 378          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIS1161L PL - 16A 1 way switch with Ind.                                                                                          | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20/400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1107 | 470          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| 1SYK100001A1107                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
|                                                  | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Switch 32 A - 240 V ~</td></tr><tr><td>IIS2321L PL - 32A, DP switch</td><td>2</td><td>10/200</td><td>1SYK100001A1108</td><td>1292</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Switch 32 A - 240 V ~ |  |  |  |  | IIS2321L PL - 32A, DP switch         | 2 | 10/200 | 1SYK100001A1108 | 1292         |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Type reference and description                                                                                                    | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Switch 32 A - 240 V ~                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIS2321L PL - 32A, DP switch                                                                                                      | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10/200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1108 | 1292         |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| 1SYK100001A1108                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Bell Push - 240 V ~</td></tr><tr><td>IIS106B0 PL - 6A Bell Switch</td><td>1</td><td>20/400</td><td>1SYK100001A1103</td><td>330</td></tr><tr><td>IIS106BL PL - 6A Bell Switch with Ind.</td><td>1</td><td>20/400</td><td>1SYK100001A1104</td><td>418</td></tr><tr><td>IIS206BL PL - 6A Mega bell switch with Ind</td><td>2</td><td>10/200</td><td>1SYK100001A1105</td><td>578</td></tr></table> |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Bell Push - 240 V ~   |  |  |  |  | IIS106B0 PL - 6A Bell Switch         | 1 | 20/400 | 1SYK100001A1103 | 330          | IIS106BL PL - 6A Bell Switch with Ind.   | 1 | 20/400 | 1SYK100001A1104 | 418                                    | IIS206BL PL - 6A Mega bell switch with Ind | 2 | 10/200          | 1SYK100001A1105 | 578 |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Type reference and description                                                                                                    | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Bell Push - 240 V ~                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIS106B0 PL - 6A Bell Switch                                                                                                      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20/400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1103 | 330          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIS106BL PL - 6A Bell Switch with Ind.                                                                                            | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20/400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1104 | 418          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIS206BL PL - 6A Mega bell switch with Ind                                                                                        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10/200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1105 | 578          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| 1SYK100001 A1003                                                                                                                  | 1SYK100001 A1105                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
|                                                | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Sockets - 240 V ~</td></tr><tr><td>IIK20506 PL 6A, 5 Pin socket</td><td>2</td><td>10/200</td><td>1SYK100001A1127</td><td>400</td></tr><tr><td>IIK20613 PL - 6/13A universal socket</td><td>2</td><td>10/200</td><td>1SYK100001A1122</td><td>480</td></tr><tr><td>IIK20616 PL - 6/16A socket</td><td>2</td><td>10/200</td><td>1SYK100001A1123</td><td>570</td></tr><tr><td>IIK20620 PL - 6/20A socket</td><td>2</td><td>10/200</td><td>1SYK100001A1124</td><td>640</td></tr><tr><td>IIK20625 PL - 6/25A socket</td><td>2</td><td>10/200</td><td>1SYK100001A1125</td><td>702</td></tr><tr><td>IIK10006 PL - 6A 2 pin socket</td><td>1</td><td>20/400</td><td>1SYK100001A1126</td><td>558</td></tr><tr><td>N2238 PL - Euro-American earthed socket outlet, Rated voltage: 125/250 Vac, Rated current: 15/16A. 2P+E/ NEMA 5-15R</td><td>2</td><td>10</td><td>2CLA223800N1302</td><td rowspan="3">Upon request</td></tr><tr><td>N2135 PL - Euro-American unearthed socket outlet, Rated voltage: 125/250 V AC, Rated current: 15/16A. 2P (non-earthed)/NEMA 1-15R</td><td>1</td><td>20</td><td>2CLA213500N1302</td></tr><tr><td>N2237 PL - British standard socket outlet, Rated current: 13A, 2P+E</td><td>2</td><td>10</td><td>2CLA223700N1802</td></tr></table> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Sockets - 240 V ~     |  |  |  |  | IIK20506 PL 6A, 5 Pin socket         | 2 | 10/200 | 1SYK100001A1127 | 400          | IIK20613 PL - 6/13A universal socket     | 2 | 10/200 | 1SYK100001A1122 | 480                                    | IIK20616 PL - 6/16A socket                 | 2 | 10/200          | 1SYK100001A1123 | 570 | IIK20620 PL - 6/20A socket | 2 | 10/200 | 1SYK100001A1124 | 640 | IIK20625 PL - 6/25A socket | 2 | 10/200 | 1SYK100001A1125 | 702 | IIK10006 PL - 6A 2 pin socket | 1 | 20/400 | 1SYK100001A1126 | 558 | N2238 PL - Euro-American earthed socket outlet, Rated voltage: 125/250 Vac, Rated current: 15/16A. 2P+E/ NEMA 5-15R | 2 | 10 | 2CLA223800N1302 | Upon request | N2135 PL - Euro-American unearthed socket outlet, Rated voltage: 125/250 V AC, Rated current: 15/16A. 2P (non-earthed)/NEMA 1-15R | 1 | 20 | 2CLA213500N1302 | N2237 PL - British standard socket outlet, Rated current: 13A, 2P+E | 2 | 10 | 2CLA223700N1802 |
| Type reference and description                                                                                                    | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Sockets - 240 V ~                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIK20506 PL 6A, 5 Pin socket                                                                                                      | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10/200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1127 | 400          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIK20613 PL - 6/13A universal socket                                                                                              | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10/200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1122 | 480          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIK20616 PL - 6/16A socket                                                                                                        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10/200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1123 | 570          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIK20620 PL - 6/20A socket                                                                                                        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10/200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1124 | 640          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIK20625 PL - 6/25A socket                                                                                                        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10/200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1125 | 702          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIK10006 PL - 6A 2 pin socket                                                                                                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20/400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1126 | 558          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| N2238 PL - Euro-American earthed socket outlet, Rated voltage: 125/250 Vac, Rated current: 15/16A. 2P+E/ NEMA 5-15R               | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2CLA223800N1302 | Upon request |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| N2135 PL - Euro-American unearthed socket outlet, Rated voltage: 125/250 V AC, Rated current: 15/16A. 2P (non-earthed)/NEMA 1-15R | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2CLA213500N1302 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| N2237 PL - British standard socket outlet, Rated current: 13A, 2P+E                                                               | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2CLA223700N1802 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| 1SYK100001A1121                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
|                                                | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">USB Chargers</td></tr><tr><td>N2185 PL - USB charger 750mA, 1-gang</td><td>1</td><td>1</td><td>2CLA218500N1302</td><td rowspan="3">Upon request</td></tr><tr><td>N2185.2 PL - USB charger 2.000mA, 1-gang</td><td>1</td><td>1</td><td>2CLA218520N1302</td></tr><tr><td>N2285 PL - USB charger 1.500mA, 2-gang</td><td>2</td><td>1</td><td>2CLA228500N1302</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | USB Chargers          |  |  |  |  | N2185 PL - USB charger 750mA, 1-gang | 1 | 1      | 2CLA218500N1302 | Upon request | N2185.2 PL - USB charger 2.000mA, 1-gang | 1 | 1      | 2CLA218520N1302 | N2285 PL - USB charger 1.500mA, 2-gang | 2                                          | 1 | 2CLA228500N1302 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Type reference and description                                                                                                    | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| USB Chargers                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| N2185 PL - USB charger 750mA, 1-gang                                                                                              | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2CLA218500N1302 | Upon request |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| N2185.2 PL - USB charger 2.000mA, 1-gang                                                                                          | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2CLA218520N1302 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| N2285 PL - USB charger 1.500mA, 2-gang                                                                                            | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2CLA228500N1302 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| 1SYK100001 A1123                                                                                                                  | 1SYK100001 A1126                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <table><tr><th>Type reference and description</th><th>Number of modules</th><th>Pack</th><th>Ordering code</th><th>M.R.P.(₹)</th></tr><tr><td colspan="5">Blank Plates</td></tr><tr><td>IIM1BLNK PL - Blank Plate</td><td>1</td><td>20/400</td><td>1SYK100001A1141</td><td>112</td></tr></table>                                                                                                                                                                                                                                                         |                 |              |  | Type reference and description | Number of modules | Pack | Ordering code | M.R.P.(₹) | Blank Plates          |  |  |  |  | IIM1BLNK PL - Blank Plate            | 1 | 20/400 | 1SYK100001A1141 | 112          |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Type reference and description                                                                                                    | Number of modules                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Pack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ordering code   | M.R.P.(₹)    |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| Blank Plates                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| IIM1BLNK PL - Blank Plate                                                                                                         | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20/400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1SYK100001A1141 | 112          |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |
| 2CLA218500 N1302                                                                                                                  | 2CLA228500 N1302                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |              |  |                                |                   |      |               |           |                       |  |  |  |  |                                      |   |        |                 |              |                                          |   |        |                 |                                        |                                            |   |                 |                 |     |                            |   |        |                 |     |                            |   |        |                 |     |                               |   |        |                 |     |                                                                                                                     |   |    |                 |              |                                                                                                                                   |   |    |                 |                                                                     |   |    |                 |

# IVIE complete range

## IVIE mechanisms - Silver

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------|-----------------|---------------|--------------|
| 1SYK100001A1142                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |                   |                 |               |              |
| 2CLA226030N1302                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |                   |                 |               |              |
| 2CLA226030N1302                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |                   |                 |               |              |
| 2CLA226080N1302                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |                   |                 |               |              |
| 2CLA226090N1302                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                   |                 |               |              |
| 1SYK100001A1147                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                   |                 |               |              |
| 1SYK100001A1149                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |                   |                 |               |              |
| 1SYK100001A1157                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |                   |                 |               |              |
| 2CLA218040N1302                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |     | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| Dimmer & Fan Regulators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |                   |                 |               |              |
| IIM2FR05 PL - Step fan regulator 5 step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2   | 5/100             | 1SYK100001A1142 | 1,252         |              |
| IIM1FR04 PL - Step fan regulator 4 step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1   | 10/200            | 1SYK100001A1143 | 1,104         |              |
| IIM1D400 PL - Dimmer 400 Watt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1   | 10/200            | 1SYK100001A1145 | 1,414         |              |
| N2260.2 PL - Universal rotatory/push dimmer<br>• Rated voltage: 230 V AC • Max. power:<br>Incandescent: 500 W • Halogen lamp with<br>electronic transformer: 500 VA • Halogen lamp with<br>ferromagnetic transformer: 400 VA.                                                                                                                                                                                                                                                                                                                           | 2   | 1                 | 2CLA226020N1302 |               | Upon request |
| N2260.3 PL - LED rotatory/push dimmer 230 V AC<br>• Rated voltage: 230 V AC, Nominal power: 250 W/<br>VA • Power (min./max load): LEDi: 2/100 W/VA<br>(max. 10 lamps) • Dimmable energy saving lamps:<br>2/100 W/VA (max. 10 lamps) • LV LEDi with<br>transformer (only type L or LC): 4/100 W/VA (max.<br>10 lamps) • Incandescent lamps: 10/250 W/VA<br>• Halogen lamps: 10/250 W/VA • LV halogen with<br>transformer (only type L or LC): 10/250 W/VA (max.<br>10 lamps) • 2 wire connection • Optional: auxiliary<br>on/off with 2-way switch N2X02 | 2   | 1                 | 2CLA226030N1302 |               |              |
| N2260.8 PL - LED rotatory/push dimmer 127 V AC<br>• Rated voltage: 127 V AC, Frequency: 50/60 Hz<br>(Nominal power: 140 W/VA) • Power (min./max<br>load): LEDi: 2/55 W/VA (max. 10 lamps) • Dimmable<br>energy saving lamps: 2/55 W/VA (max. 10 lamps)<br>• LV LEDi with transformer (only type L or LC): 4/55<br>W/VA (max. 10 lamps) • Incandescent lamps:<br>10/140 W/VA • Halogen lamps: 10/140 W/VA<br>• LV halogen with transformer (only type L or LC):<br>10/140 W/VA (max. 10 lamps)                                                           | 2   | 1                 | 2CLA226080N1302 |               |              |
| N2260.9 PL - 1-10V rotary dimmer • Rated voltage:<br>127 - 230 V AC/50 - 60 Hz • Max. power: 230 Vac:<br>700 VA • 127 Vac: 350 VA • Max. 6 ballasts per<br>device                                                                                                                                                                                                                                                                                                                                                                                       | 2   | 1                 | 2CLA226090N1302 |               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |     | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| Data & Voice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     |                   |                 |               |              |
| IIM1RJ11 PL - RJ11 Tel. jack 2 pin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1   | 20/400            | 1SYK100001A1147 | 284           |              |
| IIM1RJ45 PL - RJ45 Jack cat 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1   | 20/400            | 1SYK100001A1148 | 946           |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |     | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| TV Socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |                   |                 |               |              |
| IIM1TVSK PL - TV co-axial socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1   | 20/400            | 1SYK100001A1149 | 296           |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |     | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| Shaver Socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |                   |                 |               |              |
| IIM2SVSK PL - Shaver Socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2   | 5/100             | 1SYK100001A1157 | 1,710         |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                   |                 |               |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |     | Number of modules | Pack            | Ordering code | M.R.P.(₹)    |
| DND & MMR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |                   |                 |               |              |
| IIM1DND5 PL - DND and MMR set internal & external                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2+3 | 5/100             | 1SYK100001A1155 | 2,050         |              |
| N2244.5 PL - DND and MUR 2-gang interlocked switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1   | 1                 | 2CLA224450N1302 |               | Upon request |
| N2180.4 PL - LED DND signaling light                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2   | 1                 | 2CLA218040N1302 |               |              |
| N2180.4 BL - LED MUR signaling light                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1   | 1                 | 2CLA218050N1102 |               |              |

# IVIE complete range

## IVIE mechanisms - Silver

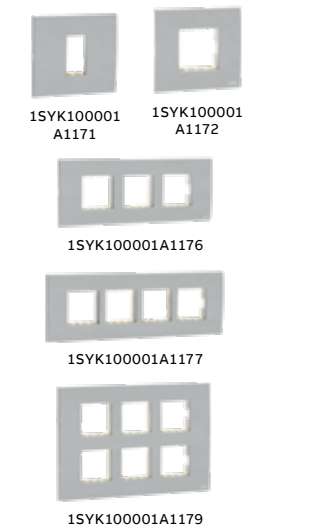


| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Number of modules | Pack   | Ordering code   | M.R.P.(₹)    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|-----------------|--------------|
| Key Card Switches                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |        |                 |              |
| N2214.1 PL - Card switch 1-gang, 1-way, DP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2                 | 1      | 2CLA221410N1302 | Upon request |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Number of modules | Pack   | Ordering code   | M.R.P.(₹)    |
| Down Lighter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |        |                 |              |
| IIM3DOWN PL - Down lighter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2                 | 5/100  | 1SYK100001A1159 | 1,074        |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Number of modules | Pack   | Ordering code   | M.R.P.(₹)    |
| Audio & Video Connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |        |                 |              |
| N2155.2 PL - 2x RCA connection unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1                 | 1      | 2CLA215520N1302 | Upon request |
| N2155.3 PL - 3x RCA connection unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1                 | 1      | 2CLA215530N1302 |              |
| N2155.4 PL - Mini-Jack connection unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1                 | 1      | 2CLA215540N1302 |              |
| N2155.5 PL - VGA connection unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1                 | 1      | 2CLA215550N1302 |              |
| N2155.6 PL - HDMI connection unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1                 | 1      | 2CLA215560N1302 |              |
| N2155.7 PL - HDMI female-female connection unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1                 | 1      | 2CLA215570N1302 |              |
| N2155.8 PL - USB connection unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1                 | 1      | 2CLA215580N1302 |              |
| N2155.9 PL - USB female-female connection unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1                 | 1      | 2CLA215590N1302 |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Number of modules | Pack   | Ordering code   | M.R.P.(₹)    |
| Motion Sensor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |        |                 |              |
| N2241 PL - 110° motion sensor Max. power: Incandescent: 1.800W @230V AC/1.000W @127V AC • Halogen with electronic o ferromagnetic transformer: 750VA @230V AC/400VA @127V AC - Fluorescent lamps or motors: 400VA @230V / 200VA @127Vac • For automatic switching of devices dependent on motion and brightness • With integrated selector switch for automatic ON-OFF in the front side, Switch-off delay: 10 sec to 10 min or short-time pulse 1 sec adjustable (from the front side) • Detection range: 5 m radius Adjustable light set point level for activation (from the front side) • Detection angle: 110° Mounting height: 1, 2 m Auxiliary control with N2X04.X push-buttons | 2                 | 1      | 2CLA224100N1302 | Upon request |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Number of modules | Pack   | Ordering code   | M.R.P.(₹)    |
| Buzzer & Door Bell                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |        |                 |              |
| IIM2BUZR PL - Buzzer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2                 | 5/100  | 1SYK100001A1154 | 726          |
| N2119 PL - Buzzer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1                 | 1      | 2CLA211900N1302 | Upon request |
| N2219 PL - Buzzer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2                 | 1      | 2CLA221900N1302 |              |
| N2224 PL - Electronic door bell 230 V AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2                 | 1      | 2CLA222400N1302 |              |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Number of modules | Pack   | Ordering code   | M.R.P.(₹)    |
| Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |        |                 |              |
| IIM1INDI PL - Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1                 | 20/400 | 1SYK100001A1153 | 426          |
| Type reference and description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Number of modules | Pack   | Ordering code   | M.R.P.(₹)    |
| Thermostat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |        |                 |              |
| N2240.5 PL - Cover plate for digital thermostat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2                 | 1      |                 | Upon request |

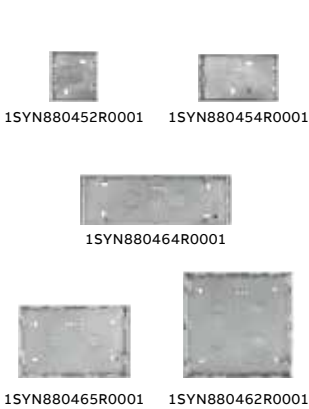


# IVIE complete range

## IVIE mechanisms - Silver



| Type reference and description     | Number of modules | Pack   | Ordering code   | M.R.P.(₹) |
|------------------------------------|-------------------|--------|-----------------|-----------|
| <b>Anthracite plate with frame</b> |                   |        |                 |           |
| IIP0133 PL - 1M plate              | 1                 | 15/360 | 1SYK100001A1171 | 410       |
| IIP0233 PL - 2M plate              | 2                 | 15/360 | 1SYK100001A1172 | 430       |
| IIPP343 PL - 3M plate power        | 3                 | 10/240 | 1SYK100001A1173 | 490       |
| IIP0343 PL - 3M plate              | 3                 | 10/240 | 1SYK100001A1174 | 508       |
| IIP0453 PL - 4M plate              | 4                 | 10/190 | 1SYK100001A1175 | 636       |
| IIP0683 PL - 6M plate              | 6                 | 5/120  | 1SYK100001A1176 | 918       |
| IIP0893 PL - 8M plate              | 8                 | 5/120  | 1SYK100001A1177 | 1,060     |
| IIP0855 PL - 8M plate square       | 8                 | 5/95   | 1SYK100001A1178 | 1,150     |
| IIP1286 PL - 12M plate             | 12                | 5/95   | 1SYK100001A1179 | 1,540     |
| IIP1888 PL - 18M plate             | 18                | 5/40   | 1SYK100001A1180 | 2,170     |



| Type reference and description | Number of modules | Pack | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|------|-----------------|-----------|
| <b>Metal flush boxes</b>       |                   |      |                 |           |
| <b>Flush boxes</b>             |                   |      |                 |           |
| Metal Box 1-2M - CMBZ3302      | 1/2               | 108  | 1SYN880452R0001 | 105       |
| Metal Box 3M - CMBZ4303        | 3                 | 82   | 1SYN880453R0001 | 115       |
| Metal Box 4-5M - CMBZ5305      | 4                 | 60   | 1SYN880454R0001 | 140       |
| Metal Box 6M - CMBZ8306        | 6                 | 40   | 1SYN880463R0001 | 245       |
| Metal Box 8M - CMBZ9308        | 8                 | 39   | 1SYN880464R0001 | 339       |
| Metal Box 8MV - CMBZ5508V      | 8                 | 26   | 1SYN880456R0001 | 316       |
| Metal Box 12M - CMBZ8612       | 12                | 16   | 1SYN880465R0001 | 363       |
| Metal Box 18M - CMBZ8824       | 18                | 10   | 1SYN880462R0001 | 566       |

# Wiring accessories

ABB Tvisha **NEW**

## Switch on simplicity

ABB Tvisha is a range of wiring accessories with simple flat surface design that creates a trend on the wall with its elegant Euro white finish. The range covers a large variety of functionalities that caters to most of the applications beyond the normal switching functions like USB chargers, HDMI ports, communication sockets, foot lamps and dimmers. ABB Tvisha is ideal for residential and commercial requirements.



- Plastic parts which holds current carrying parts are made of PA6 20% glass filled rating upto 16A
- All switches are marked with IS 3854:1997
- Terminals are designed in such a way that wire is tightened without damage
- Bi-metal silver contact tips for less spark and longer life
- 6A & 6/16A marked with IS 1293, up to 16A
- Non-flammable thermoplastic resin parts and a very high insulating resistance after humidity test



1SYK100001A1501 1SYK100001A1504



1SYK100001A1505 1SYK100001A1509



1SYK100001A1508 1SYK100001A1512



1SYK100001A1523



1SYK100001A1526 1SYK100001A1522

### Switches

| Item description                               | Module size | Pack unit (PC) | Ordering code   | M.R.P. (₹) per PC |
|------------------------------------------------|-------------|----------------|-----------------|-------------------|
| ITS10610 BL 6A 1 way switch                    | 1 M         | 20             | 1SYK100001A1501 | 110               |
| ITS1061L BL 6A 1 way switch with Ind.          | 1 M         | 20             | 1SYK100001A1502 | 155               |
| ITS10620 BL 6A 2 way switch                    | 1 M         | 20             | 1SYK100001A1503 | 145               |
| ITS106B0 BL 6A Bell switch                     | 1 M         | 20             | 1SYK100001A1504 | 150               |
| ITS106BL BL 6A Bell switch with Ind.           | 1 M         | 20             | 1SYK100001A1505 | 210               |
| ITS11610 BL 16A 1 way switch                   | 1 M         | 20             | 1SYK100001A1506 | 165               |
| ITS1161L BL 16A 1 way switch with Ind.         | 1 M         | 20             | 1SYK100001A1507 | 200               |
| ITS1201L BL 20A DP Switch 1 way with Ind.      | 1 M         | 20             | 1SYK100001A1508 | 450               |
| ITS206BL BL 6A Bell Mega switch with Ind.      | 2 M         | 10             | 1SYK100001A1509 | 270               |
| ITS2062L BL 6A 2 way Mega switch with Ind.     | 2 M         | 10             | 1SYK100001A1510 | 310               |
| ITS2162L BL 16A 2 way Mega switch with Ind.    | 2 M         | 10             | 1SYK100001A1511 | 325               |
| ITS2321L BL 32A 1 Way DP Mega switch with Ind. | 2 M         | 10             | 1SYK100001A1512 | 455               |

### Sockets

| Item description                   | Module size | Pack unit (PC) | Ordering code   | M.R.P. (₹) per PC |
|------------------------------------|-------------|----------------|-----------------|-------------------|
| ITK20006 BL 6A 2+3 Pin socket      | 2 M         | 10             | 1SYK100001A1521 | 150               |
| ITK20613 BL 6/13A Universal socket | 2 M         | 10             | 1SYK100001A1522 | 255               |
| ITK20616 BL 6/16A Socket           | 2 M         | 10             | 1SYK100001A1523 | 265               |
| ITK20620 BL 6/20A Socket           | 2 M         | 10             | 1SYK100001A1524 | 290               |
| ITK20625 BL 6/25A Socket           | 2 M         | 10             | 1SYK100001A1525 | 355               |
| ITK10006 BL 6A 2 Pin socket        | 1 M         | 20             | 1SYK100001A1526 | 245               |

# Price list

## Switches, sockets, plates and accessories

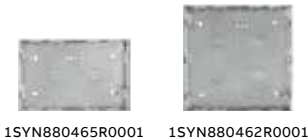
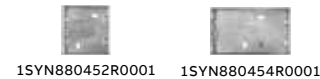


### Support accessories

| Item description                 | Module size | Pack unit (PC) | Ordering code   | M.R.P. (₹) per PC |
|----------------------------------|-------------|----------------|-----------------|-------------------|
| ITM1BLNK BL Blank plate          | 1 M         | 20             | 1SYK100001A1541 | 32                |
| ITM2FR05 BL Fan regulator 5 step | 2 M         | 5              | 1SYK100001A1542 | 590               |
| ITM1FR04 BL Fan regulator 4 step | 1 M         | 10             | 1SYK100001A1543 | 440               |
| ITM1RJ11 BL RJ 11TEL 2 Pin       | 1 M         | 20             | 1SYK100001A1544 | 135               |
| ITM1RJ45 BL RJ 45 Jack CAT 6     | 1 M         | 20             | 1SYK100001A1545 | 510               |
| ITM1TVSK BL TV socket            | 1 M         | 20             | 1SYK100001A1546 | 140               |
| ITM1FLEX BL Flex outlet          | 1 M         | 20             | 1SYK100001A1547 | 125               |
| ITM2LDFL BL LED foot lamp        | 1 M         | 10             | 1SYK100001A1550 | 438               |
| ITM1INDI BL Indicator            | 2 M         | 5              | 1SYK100001A1551 | 240               |
| ITM1USBC BL USB Charger 1A       | 1 M         | 5              | 1SYK100001A1552 | 920               |
| ITM2USBC BL USB charger 2A       | 2 M         | 10             | 1SYK100001A1553 | 1,750             |
| ITM1HDMI BL HDMI Port 2.0        | 1 M         | 20             | 1SYK100001A1554 | 1,250             |
| ITM1D400 BL Dimmer 400W          | 1 M         | 20             | 1SYK100001A1548 | 635               |
| ITM2D1000 BL Dimmer 1000W        | 1 M         | 20             | 1SYK100001A1549 | 800               |

### Plates

| Item description            | Module size | Pack unit (PC) | Ordering code   | M.R.P.(₹) per PC |
|-----------------------------|-------------|----------------|-----------------|------------------|
| ITP0133 BL 1 M Plate        | 1 M         | 15             | 1SYK100001A1571 | 92               |
| ITP0233 BL 2 M Plate        | 2 M         | 15             | 1SYK100001A1572 | 92               |
| ITPP343 BL 3 M Plate power  | 3 M         | 10             | 1SYK100001A1573 | 120              |
| ITP0453 BL 4 M Plate        | 4 M         | 10             | 1SYK100001A1574 | 130              |
| ITP0683 BL 6 M Plate        | 6 M         | 5              | 1SYK100001A1575 | 230              |
| ITP0893 BL 8 M Plate        | 8 M         | 5              | 1SYK100001A1576 | 235              |
| ITP0855 BL 8 M Plate square | 8 M         | 5              | 1SYK100001A1577 | 335              |
| ITP1286 BL 12 M Plate       | 12 M        | 5              | 1SYK100001A1578 | 395              |
| ITP1696 BL 16M Plate        | 16 M        | 5              | 1SYK100001A1579 | 450              |
| ITP1888 BL 18M Plate        | 18 M        | 5              | 1SYK100001A1580 | 505              |



### Metal flush boxes

| Type reference and description | Number of modules | Pack | Ordering code   | M.R.P.(₹) |
|--------------------------------|-------------------|------|-----------------|-----------|
| <b>Flush boxes</b>             |                   |      |                 |           |
| Metal Box 1-2M - CMBZ3302      | 1/2               | 108  | 1SYN880452R0001 | 105       |
| Metal Box 3M - CMBZ4303        | 3                 | 82   | 1SYN880453R0001 | 115       |
| Metal Box 4-5M - CMBZ5305      | 4                 | 60   | 1SYN880454R0001 | 140       |
| Metal Box 6M - CMBZ8306        | 6                 | 40   | 1SYN880463R0001 | 245       |
| Metal Box 8M - CMBZ9308        | 8                 | 39   | 1SYN880464R0001 | 339       |
| Metal Box 8MV - CMBZ5508V      | 8                 | 26   | 1SYN880456R0001 | 316       |
| Metal Box 12M - CMBZ8612       | 12                | 16   | 1SYN880465R0001 | 363       |
| Metal Box 16M - CMBZ9616       | 12                | 15   | 1SYN880466R0001 | 470       |
| Metal Box 18M - CMBZ8824       | 18                | 10   | 1SYN880462R0001 | 566       |

# Wiring accessories

## Cheiron

### Where all good things come together

The Cheiron series combines high quality thermoplastic resin with a unique design that adds quality and style to any building. Cheiron is now available in two different mounting plates to match the mood of any interior.



Contour



Oval

#### Switch modules

| Description                               | Module size | Qty/Pack | Ordering code     | M.R.P. (₹) per pc |
|-------------------------------------------|-------------|----------|-------------------|-------------------|
| 6A 1 way switch - CHSW0610                | 1M          | 20       | 1SYN880501R0001 ■ | 162               |
| 6A 2 way switch - CHSW0620                | 1M          | 20       | 1SYN880501R0002 ■ | 197               |
| 6A Bell push - CHSW06B0                   | 1M          | 20       | 1SYN880501R0003 ■ | 221               |
| 6A 1 way switch with LED - CHSW061L       | 1M          | 20       | 1SYN880501R0004 ■ | 212               |
| 6A Bell push with LED - CHSW06BL          | 1M          | 20       | 1SYN880501R0006 ■ | 281               |
| 16A 1 way switch - CHSW1610               | 1M          | 20       | 1SYN880501R0007 ■ | 245               |
| 16A 2 way switch - CHSW1620               | 1M          | 20       | 1SYN880501R0008 ■ | 283               |
| 16A 1 way switch with LED - CHSW161L      | 1M          | 20       | 1SYN880501R0009 ■ | 268               |
| 6A 1 way Mega switch with LED - CHSW061M  | 2M          | 10       | 1SYN880501R0011 ■ | 330               |
| 6A 2 way Mega switch with LED - CHSW062M  | 2M          | 10       | 1SYN880501R0012 ■ | 358               |
| 6A Mega Bell push with LED - CHSW06BM     | 2M          | 10       | 1SYN880501R0013 ■ | 364               |
| 16A 1 way Mega switch with LED - CHSW161M | 2M          | 10       | 1SYN880501R0014 ■ | 379               |
| 16A 2 way Mega switch with LED - CHSW162M | 2M          | 10       | 1SYN880501R0015 ■ | 366               |
| 32A 1 way DP switch with LED - CHSW321M   | 2M          | 10       | 1SYN880507R0001 ■ | 617               |
| 32A 2 way DP switch with LED - CHSW322M   | 2M          | 10       | 1SYN880507R0002 ■ | 569               |

#### Socket modules

| Description                          | Module size | Qty/Pack | Ordering code     | M.R.P. (₹) |
|--------------------------------------|-------------|----------|-------------------|------------|
| 6A, 2+3 pin socket + FLAT - CHSK0652 | 2M          | 15       | 1SYN880511R0001 ■ | 270        |
| 16A, 3 pin socket - CHSK1633         | 3M          | 10       | 1SYN880510R0003 ■ | 377        |
| 6/16A socket - CHSK1662              | 2M          | 15       | 1SYN880510R0002 ■ | 374        |
| 20A socket - CHSK2062                | 2M          | 15       | 1SYN880510R0004 ■ | 362        |
| 6/16A socket - CHSK1663              | 3M          | 10       | 1SYN880510R0001 ■ | 337        |
| 25A, 3 pin socket - CHSK2533         | 3m          | 10       | 1SYN880510R0005 ■ | 406        |
| 6A, 2 pin socket - CHSK0621          | 1m          | 20       | 1SYN880767R0001 ■ | 226        |
| 13A Universal socket - CHSK13U2      | 2M          | 15       | 1SYN880557R0001 ■ | 329        |

#### Support modules

| Description                     | Module size | Qty/Pack | Ordering code     | M.R.P. (₹) |
|---------------------------------|-------------|----------|-------------------|------------|
| Step fan regulator - CHSMSFR1   | 1M          | 20       | 1SYN880546R0001 ■ | 577        |
| Step fan regulator - CHSMSFR2   | 2M          | 10       | 1SYN880550R0001 ■ | 754        |
| Dimmer 100 W - CHSMD100         | 1M          | 20       | 1SYN880546R0002 ■ | 520        |
| Dimmer 400 W - CHSMD400         | 2M          | 10       | 1SYN880554R0001 ■ | 836        |
| Dimmer 650 W - CHSMD650         | 2M          | 10       | 1SYN880554R0002 ■ | 1,007      |
| Buzzer - CHSMBUZ1               | 1M          | 20       | 1SYN880546R0003 ■ | 358        |
| Buzzer - CHSMBUZ2               | 2M          | 10       | 1SYN880556R0001 ■ | 382        |
| Blank plate - CHSMBLNK          | 1M          | 40       | 1SYN880515R0001 ■ | 44         |
| TV co-axial socket - CHSMTVSK   | 1M          | 20       | 1SYN880530R0001 ■ | 175        |
| RJ11 Tel. jack 2 pin - CHSMRJ11 | 1M          | 20       | 1SYN880478R0001 ■ | 173        |
| RJ45 Jack cat 6 - CHSMRJ45      | 1M          | 20       | 1SYN880565R0001 ■ | 786        |
| Indicator - CHSMINDI            | 1M          | 20       | 1SYN880540R0001 ■ | 340        |

■ Stock items



# Wiring accessories

## Cheiron



Oval

### Mounting plates

| Oval                      | Qty/Pack | Ordering code     | M.R.P. (₹) |
|---------------------------|----------|-------------------|------------|
| 1M Plate - CHPL01P        | 20       | 1SYN880580R0002 ■ | 125        |
| 2M Plate - CHPL02P        | 20       | 1SYN880581R0002 ■ | 125        |
| 3M Plate - CHPL03P        | 20       | 1SYN880583R0002 ■ | 143        |
| 3M Power Plate - CHPL03SP | 20       | 1SYN880585R0002 ■ | 134        |
| 4M Plate - CHPL04P        | 10       | 1SYN880587R0002 ■ | 171        |
| 6M Plate - CHPL06P        | 10       | 1SYN880589R0002 ■ | 265        |
| 8M Plate - CHPL08P        | 10       | 1SYN880591R0002 ■ | 310        |
| 9M Plate - CHPL09P        | 10       | 1SYN880593R0001 ■ | 404        |
| 8MV Plate - CHPL08VP      | 5        | 1SYN880595R0002 ■ | 363        |
| 12M Plate - CHPL12P       | 5        | 1SYN880597R0002 ■ | 441        |
| 16M Plate - CHPL16P       | 5        | 1SYN880599R0002 ■ | 548        |
| 18M Plate - CHPL18P       | 5        | 1SYN880617R0001 ■ | 600        |



Contour

| Contour                  | Qty/Pack | Ordering code     | M.R.P. (₹) |
|--------------------------|----------|-------------------|------------|
| 1M Plate - CHPL01C       | 20       | 1SYN880580R0003 ■ | 138        |
| 2M Plate - CHPL02C       | 20       | 1SYN880581R0003 ■ | 145        |
| 3M Plate - CHPL03C       | 20       | 1SYN880583R0003 ■ | 161        |
| 3M Power Plate - HPL03SC | 20       | 1SYN880585R0003 ■ | 153        |
| 4M Plate - CHPL04C       | 10       | 1SYN880587R0003 ■ | 183        |
| 6M Plate - CHPL06C       | 10       | 1SYN880589R0003 ■ | 286        |
| 8M Plate - CHPL08C       | 10       | 1SYN880591R0003 ■ | 333        |
| 9M Plate - CHPL09C       | 10       | 1SYN880593R0003 ■ | 439        |
| 8MV Plate - CHPL08VC     | 5        | 1SYN880595R0003 ■ | 380        |
| 12M Plate - CHPL12C      | 5        | 1SYN880597R0003 ■ | 501        |
| 16M Plate - CHPL16C      | 5        | 1SYN880599R0003 ■ | 568        |
| 18M Plate - CHPL18C      | 5        | 1SYN880617R0003 ■ | 640        |

### Metal flush boxes

| Description                 | Qty/Pack | Ordering code     | M.R.P. (₹) |
|-----------------------------|----------|-------------------|------------|
| Metal Box 1-2M - CMBZ3302   | 108      | 1SYN880452R0001 ■ | 105        |
| Metal Box 3M - CMBZ4303     | 82       | 1SYN880453R0001 ■ | 115        |
| Metal Box 4-5M - CMBZ5305   | 60       | 1SYN880454R0001 ■ | 140        |
| Metal Box 6-8MH - CMBZ8308  | 40       | 1SYN880455R0001 ■ | 245        |
| Metal Box 9M - CMBZ9310     | 39       | 1SYN880457R0001 ■ | 339        |
| Metal Box 8MV - CMBZ5508V   | 26       | 1SYN880456R0001 ■ | 316        |
| Metal Box 12-16M - CMBZ8616 | 16       | 1SYN880458R0001 ■ | 363        |
| Metal Box 18M - CMBZ8824    | 10       | 1SYN880462R0001   | 566        |

■ Stock items

# Wiring accessories

## Snieo

### Classic ideas never go out of style

Snieo combines modern design with high-performance materials such as premium thermoplastic resin. Our switches are made of fire retardant substances with superior electrical properties. Chamfered edges prevent dust accumulation and well crafted sockets provide an enduring grip for a variety of plugs.



#### Switch modules

| Description                               | Module size | Qty/Pack | Ordering code     | M.R.P. (₹) |
|-------------------------------------------|-------------|----------|-------------------|------------|
| 6A 1 way switch - CPW10610                | 1           | 25       | 1SYN880676R0001 ■ | 100        |
| 6A 2 way switch - CPW10620                | 1           | 25       | 1SYN880677R0001 ■ | 132        |
| 6A Bell Push - CPW106B0                   | 1           | 25       | 1SYN880676R0002 ■ | 139        |
| 6A 1 way switch LED - CPW1061L            | 1           | 25       | 1SYN880676R0003 ■ | 139        |
| 6A Bell Push LED - CPW106BL               | 1           | 25       | 1SYN880676R0004 ■ | 198        |
| 16A 1 way switch - CPW11610               | 1           | 25       | 1SYN880676R0005 ■ | 146        |
| 16A 2 way switch - CPW11620               | 1           | 25       | 1SYN880677R0002 ■ | 204        |
| 16A 1 way switch with LED - CPW1161L      | 1           | 25       | 1SYN880676R0006 ■ | 186        |
| 20A DP Switch 1 way with LED - CPW1201L   | 1           | 20       | 1SYN880670R0001 ■ | 295        |
| 6A 1 way Mega switch with LED - CPW2061L  | 2           | 10       | 1SYN880652R0001 ■ | 235        |
| 6A 2 way Mega switch with LED - CPW2062L  | 2           | 10       | 1SYN880652R0002 ■ | 296        |
| 6A Mega Bell Push with LED - CPW206BL     | 2           | 10       | 1SYN880652R0003 ■ | 266        |
| 16A 1 way Mega switch with LED - CPW2161L | 2           | 10       | 1SYN880653R0001 ■ | 263        |
| 16A 2 way Mega switch with LED - CPW2162L | 2           | 10       | 1SYN880653R0002 ■ | 320        |
| 32A 1 way DP Switch with LED - CPW2321DPL | 2           | 10       | 1SYN880655R0001 ■ | 370        |

#### Socket modules

| Description                             | Module size | Qty/Pack | Ordering code     | M.R.P. (₹) |
|-----------------------------------------|-------------|----------|-------------------|------------|
| 6A 2+3 Pin Socket - 2 Module - CPWS2065 | 2           | 20       | 1SYN880690R0001 ■ | 157        |
| 6/16A Socket - 2 Module - CPWS2166      | 2           | 10       | 1SYN880393R0001 ■ | 219        |
| 20A Socket - CPWS2020                   | 2           | 10       | 1SYN880394R0001 ■ | 224        |
| 13A Intel Socket - 2 Module - CPWS213U  | 2           | 10       | 1SYN880381R0001 ■ | 230        |
| 6/16A Socket - CPWS3166                 | 3           | 5        | 1SYN880122R0001 ■ | 230        |
| 25A 3 Pin Socket - CPWS3253             | 3           | 10       | 1SYN880138R0002 ■ | 231        |
| 6A 2 Pin Socket - CPWS1062              | 1           | 20       | 1SYN880089R0001 ■ | 148        |

#### Support modules

| Description                         | Module size | Qty/Pack | Ordering code     | M.R.P. (₹) |
|-------------------------------------|-------------|----------|-------------------|------------|
| Fan Regulator - 1 Module - CPW1SFR4 | 1           | 20       | 1SYN880373R0001   | 340        |
| Fan Regulator - CPW2SFR5            | 2           | 10       | 1SYN880284R0001 ■ | 498        |
| Dimmer 100W - 1 Module - CPW1D0400  | 1           | 20       | 1SYN880373R0011 ■ | 413        |
| Dimmer 400W - CPW2D0400             | 2           | 10       | 1SYN880400R0001   | 618        |
| Dimmer 1000W - CPW1D1000            | 2           | 20       | 1SYN880500R0001   | 720        |
| Blank Plate - CPW1BLNK              | 1           | 80       | 1SYN880182R0001 ■ | 30         |
| TV Socket - CPW1TVSK                | 1           | 20       | 1SYN880175R0001 ■ | 108        |
| RJ 11TEL 2 Pin - CPW1RJ11           | 1           | 20       | 1SYN880192R0001 ■ | 102        |
| RJ 45 Jack CAT 6 - CPW1RJ45         | 1           | 20       | 1SYN880201R0001 ■ | 495        |
| Flex Outlet - CPW1FLEX              | 1           | 20       | 1SYN880165R0001   | 126        |
| Foot Lamp Grid - CPW4FLGD           | 4           | 10       | 1SYN880671R0001   | 232        |
| Buzzer - CPW2BZR                    | 2           | 10       | 1SYN880490R0001   | 234        |
| Indicator - CPW1IND                 | 1           | 20       | 1SYN880412R0004   | 220        |

■ Stock items

# Wiring accessories

## Snieo

### Hospitality products

| Description                                                                 | Ordering code   | M.R.P. (₹) |
|-----------------------------------------------------------------------------|-----------------|------------|
| Mechanical Keytag fitted with Lumina Plate & 20A DP Switch (3M) - CPW320MKT | 1SYN880669R0001 | 824        |
| DND/MMR Set - External - CPWDNDSET                                          | 1SYN880412R0005 | 708        |
| Switch Ste DND/MMR - Internal - CPW2SET                                     | 1SYN880414R0001 | 461        |
| Room Occupied - Internal - CPW1OQP                                          | 1SYN880412R0003 | 312        |
| USB Charger 1Module 1000mA - 1 CPW1USBC                                     | 1SYN880417R0001 | 860        |
| Charger 2Module 2000mA - 2 CPW2USBC                                         | 1SYN880418R0001 | 1,540      |

### Snieo mounting plates

| Description                 | Metal box size | Qty/Pack | Ordering code     | M.R.P. (₹) |
|-----------------------------|----------------|----------|-------------------|------------|
| 1 M Plate - SNWP3301        | 3"x3"          | 25       | 1SYN880421R0001 ■ | 75         |
| 2 M Plate - SNWP3302        | 3"x3"          | 25       | 1SYN880422R0001 ■ | 75         |
| 3 M Plate - SNWP4303        | 4"x3"          | 20       | 1SYN880423R0001 ■ | 97         |
| 3 M Power Plate - SNWP4303S | 4"x3"          | 20       | 1SYN880424R0001 ■ | 89         |
| 4 M Plate - SNWP5304        | 5"x3"          | 15       | 1SYN880425R0001 ■ | 110        |
| 5 M Plate - SNWP5305        | 5"x3"          | 15       | 1SYN880426R0001 ■ | 122        |
| 6 M Plate - SNWP8306        | 8"x3"          | 10       | 1SYN880427R0001 ■ | 155        |
| 8 M Plate - SNWP8308        | 8"x3"          | 10       | 1SYN880428R0001 ■ | 207        |
| 9 M Plate - SNWP9310        | 9"x3"          | 15       | 1SYN880429R0001 ■ | 230        |
| 8 M Plate Square - SNWP5508 | 5"x5"          | 6        | 1SYN880430R0001 ■ | 206        |
| 12 M Plate - SNWP8612       | 8"x6"          | 6        | 1SYN880431R0001 ■ | 262        |
| 16 M Plate - SNWP8616       | 8"x6"          | 6        | 1SYN880432R0001 ■ | 323        |

### Metal flush boxes

| Description                 | Metal box size | Qty/Pack | Ordering code     | M.R.P. (₹) |
|-----------------------------|----------------|----------|-------------------|------------|
| Metal Box 1-2M - CMBZ3302   | 3"x3"          | 108      | 1SYN880452R0001 ■ | 105        |
| Metal Box 3M - CMBZ4303     | 4"x3"          | 82       | 1SYN880453R0001 ■ | 115        |
| Metal Box 4-5M - CMBZ5305   | 5"x3"          | 60       | 1SYN880454R0001 ■ | 140        |
| Metal Box 6-8MH - CMBZ8308  | 8"x3"          | 40       | 1SYN880455R0001 ■ | 245        |
| Metal Box 9-10M - CMBZ9310  | 9"x3"          | 39       | 1SYN880457R0001 ■ | 339        |
| Metal Box 8MV - CMBZ5508V   | 5"x5"          | 26       | 1SYN880456R0001 ■ | 316        |
| Metal Box 12-16M - CMBZ8616 | 8"x6"          | 16       | 1SYN880458R0001 ■ | 363        |

### Surface box

| Description                | Module size | Qty/Pack | Ordering code   | M.R.P. (₹) |
|----------------------------|-------------|----------|-----------------|------------|
| Surface box 1-2M- SNBW3302 |             |          | 1SYN880351R0001 | 98         |
| Surface box 3M- SNBW4303   |             |          | 1SYN880352R0001 | 130        |
| Surface box 6-8M- SNBW8308 |             |          | 1SYN880354R0001 | 190        |

Snieo



■ Stock items



# Busch-Presence detectors

## Energy saving the easy way

Presence detectors automatically detect the presence of someone inside the room. Their precision is far superior to that of conventional movement detectors. Not only lighting systems but heating systems and air-conditioning systems can be controlled intelligently and efficiently with presence detectors. Empty rooms in which the lights are on and the air-conditioning runs at full power are now history. There is one presence detector for each need.



Office single



Office open plan /  
with or without windows



Gym  
Sport facilities



Toilets



6818 U-500

| Description                                                                                                                                                                                                                                                                                                                                                                                                                | Type        | Ordering code   | M.R.P. (₹) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|------------|
| <b>Busch-Watchdog Presence tech BasicLINE mini - 6 Metres</b><br>For switching lighting systems that depend on brightness and movement. Ceiling installation using integrated spring bracket. Switch-off delay: approx. 1 sec - 15 min or short-time pulse adjustable.                                                                                                                                                     | 6811 EB-500 | 2CKA006800A2517 | 4,422      |
| <b>Busch-Watchdog Presence tech BasicLINE - 8 Metres.</b><br>For switching lighting systems that depend on brightness and movement. For semiautomatic and fully automatic operation. Ceiling installation using integrated spring bracket. Switch-off delay: approx. 5 sec - 30 min or short-timepulse adjustable.                                                                                                         | 6814 U-500  | 2CKA006800A2518 | 3,834      |
| <b>Busch-Watchdog Presence tech BasicLINE Corridor - 24 Metres.</b><br>For switching lighting systems that depend on brightness and movement. Ceiling installation using included dust protection socket. Switch-off delay: approx. 10 sec - 30 min or short-time pulse adjustable. Remote control possible via IR service remote control 6843. Use outdoors possible due to combination with surfacemounted housing 6888. | 6818 U-500  | 2CKA006800A2519 | 8,848      |
| <b>Surface-mounting box -6818U</b><br>For Busch-Watchdog Presence tech BasicLINE Corridor 6818 U-500. For surface mounting and increase of the protection type. Protection class (Device): IP 54                                                                                                                                                                                                                           | 6888        | 2CKA006899A2305 | 1,530      |

# Busch-Presence detectors

Energy saving the easy way



6817/32-24-500

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Type           | Ordering code   | M.R.P. (₹) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|------------|
| <b>Presence Comp. e-contact - 8 Metres</b><br>Master presence detector with mixed light measurement. For switching lighting systems that depend on brightness and movement. Detection range (for installation height of 3 m): circular: Seated persons: up to Ø 6,5 m, walking persons: up to Ø 8 m. Ceiling installation using integrated spring bracket. Switch-off delay: approx. 1 min - 30 min or short-time pulse adjustable. Remote control possible via IR service remote control 6843. Suitable for false ceilings with a board thickness from 9 to 25 mm. | 6817/62-24-500 | 2CKA006800A2737 | 11,678     |
| <b>Presence Uni. e-contact - 12 Metres</b><br>Master presence detector with mixed light measurement. For switching lighting systems that depend on brightness and movement. Detection range (for installation height of 3 m): circular: Seated persons: up to Ø 10 m, walking persons: up to Ø 12 m. Ceiling installation using integrated spring bracket. Switch-off delay: approx. 1 min - 30 min or short-time pulse adjustable. Remote control possible via IR service remote control 6843. Suitable for false ceilings with a board thickness from 9 to 25 mm. | 6817/32-24-500 | 2CKA006800A2739 | 14,290     |
| <b>Presence Uni. Bluetooth e-contact - 12 Metres</b><br>Master presence detector with mixed light measurement. For switching lighting systems that depend on brightness and movement. Detection range (for installation height of 3 m): circular: Seated persons: up to Ø 10 m, walking persons: up to Ø 12 m. Ceiling installation using integrated spring bracket. Switch-off delay: approx. 1 min - 30 min or short-time pulse adjustable. With selectable dynamic switch-off delay. Suitable for false ceilings with a board thickness from 9 to 25 mm.         | 6817/33-24-500 | 2CKA006800A2743 | 15,804     |



6819/51-24-500

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Type           | Ordering code   | M.R.P. (₹) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|------------|
| <b>Presence Comp. rel - 8 Meters</b><br>Master presence detector with mixed light measurement. For switching lighting systems that depend on brightness and movement. With power relays for LED operation. Detection range (for installation height of 3 m): circular Seated persons: up to Ø 6.5 m, walking persons: up to Ø 8 m.                                                                                                                                                                                                                                                                                                 | 6819/60-24-500 | 2CKA006800A2733 | 11161      |
| <b>Presence Uni. Rel - 12 Meters</b><br>Master presence detector with mixed light measurement. For switching lighting systems that depend on brightness and movement. With power relays for LED operation. Detection range (for installation height of 3 m): circular Seated persons: up to Ø 10 m, walking persons: up to Ø 12 m.                                                                                                                                                                                                                                                                                                 | 6819/30-24-500 | 2CKA006800A2735 | 13610      |
| <b>Presence Uni. rel. Bluetooth - 12 Metres</b><br>Master presence detector with mixed light measurement. For switching lighting systems that depend on brightness and movement. With Bluetooth interface for parameterization and operation. Adjustment of all setting options via smartphone or tablet. Light control via smartphone or tablet app. With power relays for LED operation. Detection range (for installation height of 3 m): circular Seated persons: up to Ø 10 m, walking persons: up to Ø 12 m.                                                                                                                 | 6819/31-24-500 | 2CKA006800A2741 | 15071      |
| <b>Presence Corr. rel. Bluetooth - 20 Metres</b><br>Master presence detector with mixed light measurement. For switching lighting systems that depend on brightness and movement. With Bluetooth interface for parameterization and operation. Adjustment of all setting options via smartphone or tablet. Light control via smartphone or tablet app. With power relays for LED operation. Detection range (for installation height of 3 m): rectangular Walking persons: crosswise to the detector 30 m x 3 m, frontal 20 m x 3 m. Extension of the detection range by means of master/slave combination. Mounting height 27 mm. | 6819/51-24-500 | 2CKA006800A2745 | 19887      |
| <b>Presence Uni. DALI Bluetooth -12 Metres</b><br>Master presence detector with mixed light measurement. For regulating and switching of DALI operating devices that depend on brightness and movement. Suitable for up to 45 DALI operating devices. Detection range (for installation height of 3 m): circular Seated persons: up to Ø 10 m, walking persons: up to Ø 12 m.                                                                                                                                                                                                                                                      | 6819/35-24-500 | 2CKA006800A2747 | 19206      |

# Busch-Presence detectors

Energy saving the easy way



6819/50-24-500



6819/39-24-500



2069/21



2069/11-84

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Type           | Ordering code   | M.R.P. (₹) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|------------|
| <b>Presence Corr. DALI Bluetooth - 30 Metres</b><br>Master presence detector with mixed light measurement. For regulating and switching of DALI operating devices that depend on brightness and movement. . Detection range (for installation height of 3 m): rectangular Walking persons: crosswise to the detector 30 m x 3 m, frontal 20 m x 3 m.                                                                                                                                                                                 | 6819/55-24-500 | 2CKA006800A2749 | 25930      |
| <b>Presence Comp. Slave - 8 Metres</b><br>Slave presence detector for extension of the detection range of master presence detectors. Detection range (for installation height of 3 m): circular Seated persons: up to Ø 6.5 m, walking persons: up to Ø 8 m. Visible height 23 mm.                                                                                                                                                                                                                                                   | 6819/68-24-500 | 2CKA006800A2751 | 8927       |
| <b>Presence Uni. Slave - 8 Metres</b><br>Slave presence detector for extension of the detection range of master presence detectors. Detection range (for installation height of 3 m): circular Seated persons: up to Ø 10 m, walking persons: up to Ø 12 m. Visible height 23 mm.                                                                                                                                                                                                                                                    | 6819/38-24-500 | 2CKA006800A2753 | 10888      |
| <b>Presence Corr. Slave - 30 Metres</b><br>Slave presence detector for extension of the detection range of master presence detectors. Detection range (for installation height of 3 m): rectangular Walking persons: crosswise to the detector 24 m x 3 m, frontal/lengthways to the detector 14 m x 3 m.                                                                                                                                                                                                                            | 6819/58-24-500 | 2CKA006800A2755 | 14700      |
| <b>Presence Uni. DALI Slave - 12 Metres</b><br>DALI slave presence detector for extension of the detection range of DALI master presence detectors. For the supply of operating voltage via the DALI master. Power consumption on the DALI bus: max. 10 mA, corresponds to approx. 5 DALI operating devices. Detection range (for installation height of 3 m): circular Seated persons: up to Ø 10 m, walking persons: up to Ø 12 m. Visible height 23 mm.                                                                           | 6819/39-24-500 | 2CKA006800A2759 | 14156      |
| <b>Presence Corr. DALI Slave - 30 Metres</b><br>DALI slave presence detector for extension of the detection range of DALI master presence detectors. For the supply of operating voltage via the DALI master. Detection range (for installation height of 3 m): rectangular Walking persons: crosswise to the detector 24 m x 3 m, frontal/lengthways to the detector 14 m x 3 m. Mounting height 27 mm.                                                                                                                             | 6819/59-24-500 | 2CKA006800A2761 | 14700      |
| <b>Presence Corr. Rel - 30 Metres</b><br>Master presence detector with mixed light measurement. For switching lighting systems that depend on brightness and movement. With power relays for LED operation. Detection range (for installation height of 3 m): rectangular Walking persons: crosswise to the detector 24 m x 3 m, frontal/lengthways to the detector 14 m x 3 m. Switch-off delay: approx. 1 min. - 30 min. or short-time pulse adjustable.                                                                           | 6819/50-24-500 | 2CKA006800A2797 | 18375      |
| <b>IceLight set ceiling module, Busch-iceLight</b><br>Consisting of LED/FM insert, power module (neutral white) 2067/12 U. Consisting of ceiling module, one light direction 2068/21. For ambient lightning. Light outlet downward. Not dimmable. Light intensity can be switched between 100% and 25% using front service switch. Colour temperature: 4,000 K (neutral white) System power consumption: 5 W Rated voltage: 230 V~, + 10% / - 10% Current consumption of LED: 350 mA (secondary) Secondary: SELV                     | 2069/21        | 2CKA001510A0018 | 21840      |
| <b>IceLight Night light set, studio white, Busch-iceLight</b><br>Complete set consists flush-mounted LED insert Night light (cold white) 2067/14 U. Wall module with one lighting direction, design future® linear 2068/11-84. Cover frame design future® linear 1721-184K. With one lighting direction. Not dimmable. For low brightness (night light). Colour temperature 6,500 K (cold white) System power consumption: 0.15 W Rated voltage: 230 V~, + 10% / - 10% Current consumption of LED: 40 mA (secondary) Secondary: SELV | 2069/11-84     | 2CKA001510A0015 | 10395      |



# G Kit

## G Range door entry system

The ABB G Kit is the 4-wire system used in the villa segment, it is DIY design which is convenient for installation. Intercom is available between indoor stations. The system's maximum capacity is two outdoor stations and four indoor stations The user can monitor two entries by turns, which will help better understand the outside circumstance.



| Description                                                                                                                                                                | Type       | Ordering code   | M.R.P.<br>(₹) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|---------------|
| Kit includes 1 pc GF5S70-C color outdoor station+ 1 pc GF3110(7"TFT) acrylic color indoor station(grey color)+ 1 pc PS-4WD power supply(British standard plug/socket type) | GFS7V11-SD | 2TMA040140N0019 | 25,530        |



# Wiring accessories

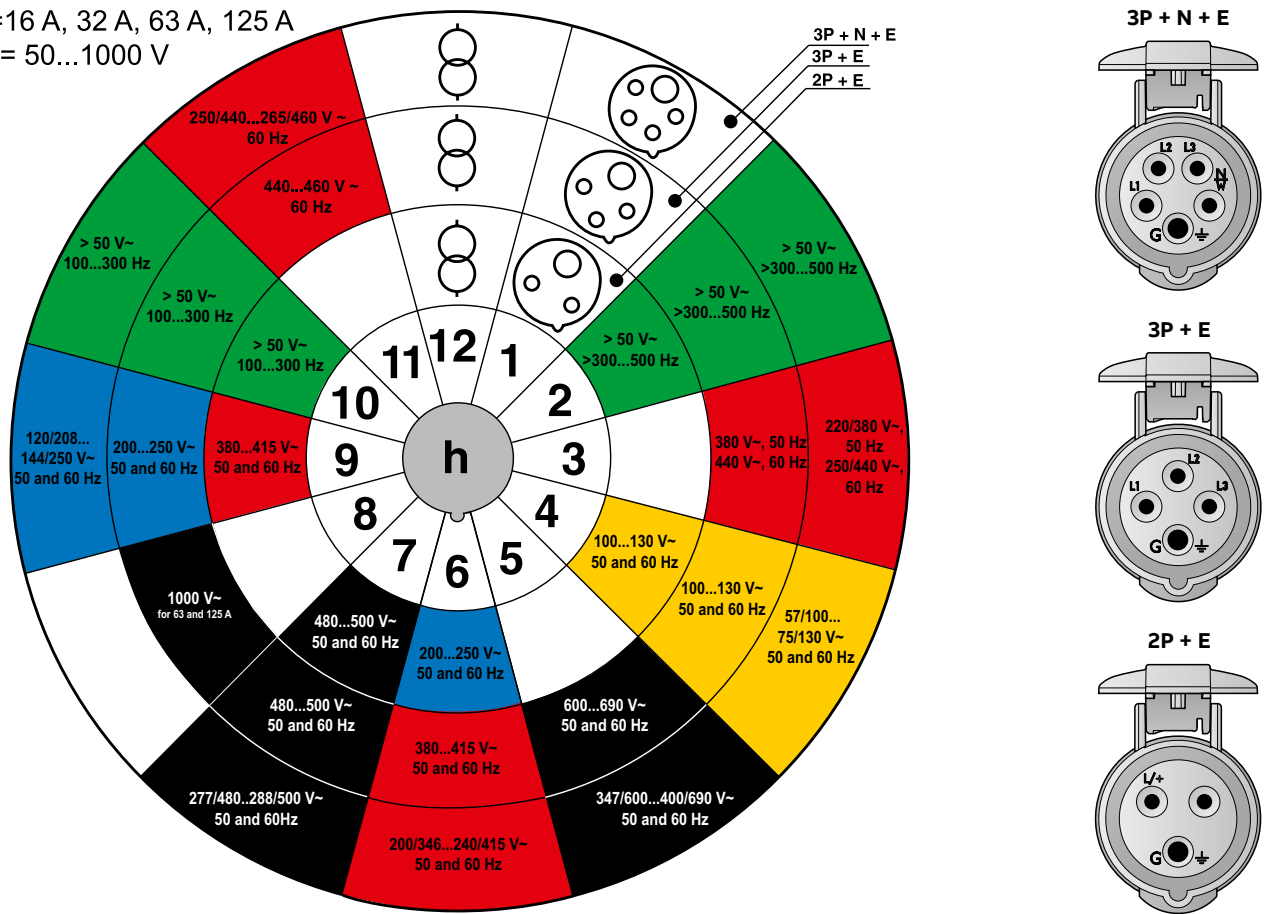
## Industrial plugs and sockets

### Reliable, durable and safe. Perfect for your application

These products are used for connection of equipment in all kind of applications where it needs to be possible to connect and disconnect. ABB industrial plugs and sockets are chosen when safety, reliability and durability is requested.

#### IEC 60309-2 "clock"

$I_e = 16\text{ A}, 32\text{ A}, 63\text{ A}, 125\text{ A}$   
 $U_e = 50\text{...}1000\text{ V}$



Standard voltages - Color codes according to IEC60309-1, -2

| Position of earthing sleeve according to IEC 60309-2 (clock) | 2P+E                                                          | 3P+E                                                             | 3P+N+E                                                                |
|--------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------|
| 1                                                            | <input type="checkbox"/> Optional voltage (not stated below)  | <input type="checkbox"/> Optional voltage (not stated below)     | <input type="checkbox"/> Optional voltage (not stated below)          |
| 2                                                            | <input checked="" type="checkbox"/> >300...500 V~ >50 Hz      | <input checked="" type="checkbox"/> >300...500 V~ >50 Hz         | <input checked="" type="checkbox"/> >300...500 V~ >50 Hz              |
| 3                                                            | <input type="checkbox"/> Not used                             | <input checked="" type="checkbox"/> 380 V~ 50 Hz, 440 V 60 Hz    | <input checked="" type="checkbox"/> 220/380 V~ 50 Hz, 250/440 V 60 Hz |
| 4                                                            | <input checked="" type="checkbox"/> 100...130 V~ 50 and 60 Hz | <input checked="" type="checkbox"/> 100...130 V~ 50 and 60 Hz    | <input checked="" type="checkbox"/> 57/100...75/130 V~ 50 and 60 Hz   |
| 5                                                            | <input type="checkbox"/> Not used                             | <input checked="" type="checkbox"/> 600...690 V~ 50 and 60 Hz    | <input checked="" type="checkbox"/> 347/600...400/690 V~ 50 and 60 Hz |
| 6                                                            | <input checked="" type="checkbox"/> 200...250 V~ 50 and 60 Hz | <input checked="" type="checkbox"/> 380...415 V~ 50 and 60 Hz    | <input checked="" type="checkbox"/> 200/346...240/415 V~ 50 and 60 Hz |
| 7                                                            | <input checked="" type="checkbox"/> 480...500 V~ 50 and 60 Hz | <input checked="" type="checkbox"/> 480...500 V~ 50 and 60 Hz    | <input checked="" type="checkbox"/> 277/480...288/500 V~ 50 and 60 Hz |
| 8                                                            | <input type="checkbox"/> Not used                             | <input checked="" type="checkbox"/> 1000 V~ (for 63 A and 125 A) | <input type="checkbox"/> Not used                                     |
| 9                                                            | <input checked="" type="checkbox"/> 380...415 V~ 50 and 60 Hz | <input checked="" type="checkbox"/> 200...250 V~ 50 and 60 Hz    | <input checked="" type="checkbox"/> 120/208...144/250 V~ 50 and 60 Hz |
| 10                                                           | <input checked="" type="checkbox"/> 100...300 V~ >50 Hz       | <input checked="" type="checkbox"/> 100...300 V~ >50 Hz          | <input checked="" type="checkbox"/> 100...300 V~ >50 Hz               |
| 11 Mainly for marine installations                           | <input type="checkbox"/> Not used                             | <input checked="" type="checkbox"/> 440...460 V~ 60 Hz           | <input checked="" type="checkbox"/> 250/440...265/460 V~ 60 Hz        |
| 12 Supply from isolating transformer                         | <input type="checkbox"/> Supply from isolating transformer    | <input type="checkbox"/> Supply from isolating transformer       | <input type="checkbox"/> Supply from isolating transformer            |



# Wiring accessories

## Industrial plugs and sockets

### Plugs

|                                                                                                     | Terminals / Pole | IP Protection | Color code | Voltage   | Current rating (A) | Type     | Order code      | LP (₹) |
|-----------------------------------------------------------------------------------------------------|------------------|---------------|------------|-----------|--------------------|----------|-----------------|--------|
| <br>IP44 (2P+E)    | 3 (2P+E)         | IP44          | Blue       | 200...250 | 16                 | 216-P6-I | 2CMA100202R1000 | 405    |
|                                                                                                     |                  |               | Blue       | 200...250 | 32                 | 232-P6-I | 2CMA100204R1000 | 580    |
|                                                                                                     |                  |               | Blue       | 200...250 | 63                 | 263P6    | 2CMA166742R1000 | 2,620  |
|                                                                                                     | 3 (2P+E)         | IP67          | Blue       | 200...250 | 16                 | 216P6W   | 2CMA166460R1000 | 1,390  |
|                                                                                                     |                  |               | Blue       | 200...250 | 32                 | 232P6W   | 2CMA166722R1000 | 1,720  |
|                                                                                                     |                  |               | Blue       | 200...250 | 63                 | 263P6W   | 2CMA166776R1000 | 3,970  |
|                                                                                                     |                  |               | Blue       | 200...250 | 125                | 2125P6W  | 2CMA166810R1000 | 10,810 |
| <br>IP44 (3P+E)    | 4 (3P+E)         | IP44          | Red        | 380...415 | 16                 | 316-P6   | 2CMA193506R1000 | 600    |
|                                                                                                     |                  |               | Red        | 380...415 | 32                 | 332-P6   | 2CMA193515R1000 | 740    |
|                                                                                                     |                  |               | Red        | 380...415 | 63                 | 363P6    | 2CMA166752R1000 | 2,930  |
|                                                                                                     | 4 (3P+E)         | IP67          | Red        | 380...415 | 16                 | 316P6W   | 2CMA166476R1000 | 1,500  |
|                                                                                                     |                  |               | Red        | 380...415 | 32                 | 332P6W   | 2CMA166738R1000 | 1,955  |
|                                                                                                     |                  |               | Red        | 380...415 | 63                 | 363P6W   | 2CMA166786R1000 | 4,200  |
|                                                                                                     |                  |               | Red        | 380...415 | 125                | 3125P6W  | 2CMA166816R1000 | 11,200 |
| <br>IP67 (3P+N+E) | 5 (3P+N+E)       | IP44          | Red        | 346...415 | 16                 | 416-P6-I | 2CMA100203R1000 | 630    |
|                                                                                                     |                  |               | Red        | 346...415 | 32                 | 432-P6-I | 2CMA100205R1000 | 760    |
|                                                                                                     |                  |               | Red        | 346...415 | 63                 | 463P6    | 2CMA166764R1000 | 3,150  |
|                                                                                                     | 5 (3P+N+E)       | IP67          | Red        | 346...415 | 16                 | 416P6W   | 2CMA166494R1000 | 1,455  |
|                                                                                                     |                  |               | Red        | 346...415 | 32                 | 432P6W   | 2CMA166524R1000 | 2,165  |
|                                                                                                     |                  |               | Red        | 346...415 | 63                 | 463P6W   | 2CMA166798R1000 | 4,250  |
|                                                                                                     |                  |               | Red        | 346...415 | 125                | 4125P6W  | 2CMA166828R1000 | 11,250 |

### Connectors

|                                                                                                      | Terminals / Pole | IP Protection | Color code | Voltage   | Current rating (A) | Type     | Order code      | LP (₹) |
|------------------------------------------------------------------------------------------------------|------------------|---------------|------------|-----------|--------------------|----------|-----------------|--------|
| <br>IP44 (2P+E)   | 3 (2P+E)         | IP44          | Blue       | 200...250 | 16                 | 216-C6-I | 2CMA100206R1000 | 670    |
|                                                                                                      |                  |               | Blue       | 200...250 | 32                 | 232-C6-I | 2CMA100208R1000 | 815    |
|                                                                                                      |                  |               | Blue       | 200...250 | 63                 | 263C6    | 2CMA166840R1000 | 3,385  |
|                                                                                                      | 3 (2P+E)         | IP67          | Blue       | 200...250 | 16                 | 216C6W   | 2CMA166538R1000 | 1,630  |
|                                                                                                      |                  |               | Blue       | 200...250 | 32                 | 232C6W   | 2CMA166584R1000 | 2,080  |
|                                                                                                      |                  |               | Blue       | 200...250 | 63                 | 263C6W   | 2CMA166874R1000 | 4,555  |
|                                                                                                      |                  |               | Blue       | 200...250 | 125                | 2125C6W  | 2CMA166918R1000 | 11,670 |
| <br>IP67 (3P+E)   | 4 (3P+E)         | IP44          | Red        | 380...415 | 16                 | 316-C6   | 2CMA193523R1000 | 760    |
|                                                                                                      |                  |               | Red        | 380...415 | 32                 | 332-C6   | 2CMA193529R1000 | 1,065  |
|                                                                                                      |                  |               | Red        | 380...415 | 63                 | 363C6    | 2CMA166850R1000 | 3,500  |
|                                                                                                      | 4 (3P+E)         | IP67          | Red        | 380...415 | 16                 | 316C6W   | 2CMA166554R1000 | 1,940  |
|                                                                                                      |                  |               | Red        | 380...415 | 32                 | 332C6W   | 2CMA166604R1000 | 2,240  |
|                                                                                                      |                  |               | Red        | 380...415 | 63                 | 363C6W   | 2CMA166894R1000 | 5,200  |
|                                                                                                      |                  |               | Red        | 380...415 | 125                | 3125C6W  | 2CMA166924R1000 | 13,500 |
| <br>IP67 (3P+N+E) | 5 (3P+N+E)       | IP44          | Red        | 346...415 | 16                 | 416-C6-I | 2CMA100207R1000 | 790    |
|                                                                                                      |                  |               | Red        | 346...415 | 32                 | 432-C6-I | 2CMA100209R1000 | 1,100  |
|                                                                                                      |                  |               | Red        | 346...415 | 63                 | 463C6    | 2CMA166862R1000 | 3,680  |
|                                                                                                      | 5 (3P+N+E)       | IP67          | Red        | 346...415 | 16                 | 416C6W   | 2CMA166572R1000 | 2,000  |
|                                                                                                      |                  |               | Red        | 346...415 | 32                 | 432C6W   | 2CMA166618R1000 | 2,575  |
|                                                                                                      |                  |               | Red        | 346...415 | 63                 | 463C6W   | 2CMA166906R1000 | 5,360  |
|                                                                                                      |                  |               | Red        | 346...415 | 125                | 4125C6W  | 2CMA166936R1000 | 14,590 |

# Wiring accessories

## Industrial plugs and sockets

Panel mounted socket - Unified angled flange

| Terminals / Pole                                                                                                                                                                                                                  | IP Protection | Color code                 | Voltage   | Current rating (A) | Type      | Order code      | LP (₹) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------|-----------|--------------------|-----------|-----------------|--------|
| <div>   </div> <div>IP44 (2P+E)</div> <div>IP67 (2P+E)</div>     | IP44          | <div><div></div>Blue</div> | 200...250 | 16                 | 216RAU6-I | 2CMA100218R1000 | 630    |
|                                                                                                                                                                                                                                   |               | <div><div></div>Blue</div> | 200...250 | 32                 | 232RAU6-I | 2CMA100220R1000 | 710    |
|                                                                                                                                                                                                                                   |               | <div><div></div>Blue</div> | 200...250 | 63                 | 263RAU6   | 2CMA167408R1000 | 2,810  |
|                                                                                                                                                                                                                                   | IP67          | <div><div></div>Blue</div> | 200...250 | 16                 | 216RAU6W  | 2CMA166996R1000 | 1,320  |
|                                                                                                                                                                                                                                   |               | <div><div></div>Blue</div> | 200...250 | 32                 | 232RAU6W  | 2CMA166948R1000 | 1,605  |
|                                                                                                                                                                                                                                   |               | <div><div></div>Blue</div> | 200...250 | 63                 | 263RAU6W  | 2CMA167442R1000 | 2,950  |
| <div>   </div> <div>IP44 (3P+E)</div> <div>IP67 (3P+E)</div>     | IP44          | <div><div></div>Red</div>  | 380...415 | 16                 | 316RAU6   | 2CMA193226R1000 | 710    |
|                                                                                                                                                                                                                                   |               | <div><div></div>Red</div>  | 380...415 | 32                 | 332RAU6   | 2CMA193274R1000 | 930    |
|                                                                                                                                                                                                                                   |               | <div><div></div>Red</div>  | 380...415 | 63                 | 363RAU6   | 2CMA167418R1000 | 3,085  |
|                                                                                                                                                                                                                                   | IP67          | <div><div></div>Red</div>  | 380...415 | 16                 | 316RAU6W  | 2CMA167012R1000 | 1,420  |
|                                                                                                                                                                                                                                   |               | <div><div></div>Red</div>  | 380...415 | 32                 | 332RAU6W  | 2CMA166964R1000 | 1,850  |
|                                                                                                                                                                                                                                   |               | <div><div></div>Red</div>  | 380...415 | 63                 | 363RAU6W  | 2CMA167452R1000 | 3,185  |
| <div>   </div> <div>IP44 (3P+N+E)</div> <div>IP67 (3P+N+E)</div> | IP44          | <div><div></div>Red</div>  | 346...415 | 16                 | 416RAU6-I | 2CMA100219R1000 | 760    |
|                                                                                                                                                                                                                                   |               | <div><div></div>Red</div>  | 346...415 | 32                 | 432RAU6-I | 2CMA100221R1000 | 950    |
|                                                                                                                                                                                                                                   |               | <div><div></div>Red</div>  | 346...415 | 63                 | 463RAU6   | 2CMA167430R1000 | 3,125  |
|                                                                                                                                                                                                                                   | IP67          | <div><div></div>Red</div>  | 346...415 | 16                 | 416RAU6W  | 2CMA167030R1000 | 1,655  |
|                                                                                                                                                                                                                                   |               | <div><div></div>Red</div>  | 346...415 | 32                 | 432RAU6W  | 2CMA166982R1000 | 1,960  |
|                                                                                                                                                                                                                                   |               | <div><div></div>Red</div>  | 346...415 | 63                 | 463RAU6W  | 2CMA167464R1000 | 3,420  |

Panel mounted sockets - Unified straight Flange

| Terminals / Pole                                                                                                                                                                                                                      | IP Protection | Color code                 | Voltage   | Current rating (A) | Type     | Order code      | LP (₹) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------|-----------|--------------------|----------|-----------------|--------|
| <div>   </div> <div>IP44 (2P+E)</div> <div>IP67 (2P+E)</div>     | IP44          | <div><div></div>Blue</div> | 200...250 | 16                 | 216RU6-I | 2CMA100210R1000 | 600    |
|                                                                                                                                                                                                                                       |               | <div><div></div>Blue</div> | 200...250 | 32                 | 232RU6-I | 2CMA100212R1000 | 675    |
|                                                                                                                                                                                                                                       |               | <div><div></div>Blue</div> | 200...250 | 63                 | 263RU6   | 2CMA167510R1000 | 2,810  |
|                                                                                                                                                                                                                                       | IP67          | <div><div></div>Blue</div> | 200...250 | 63                 | 263RU6W  | 2CMA167374R1000 | 3,685  |
|                                                                                                                                                                                                                                       |               | <div><div></div>Blue</div> | 200...250 | 125                | 2125RU6W | 2CMA167133R1000 | 11,350 |
| <div>   </div> <div>IP44 (3P+E)</div> <div>IP67 (3P+E)</div>     | IP44          | <div><div></div>Red</div>  | 380...415 | 16                 | 316RU6   | 2CMA193178R1000 | 655    |
|                                                                                                                                                                                                                                       |               | <div><div></div>Red</div>  | 380...415 | 32                 | 332RU6   | 2CMA193250R1000 | 780    |
|                                                                                                                                                                                                                                       |               | <div><div></div>Red</div>  | 380...415 | 63                 | 363RU6   | 2CMA167520R1000 | 2,905  |
|                                                                                                                                                                                                                                       | IP67          | <div><div></div>Red</div>  | 380...415 | 63                 | 363RU6W  | 2CMA167384R1000 | 3,690  |
|                                                                                                                                                                                                                                       |               | <div><div></div>Red</div>  | 380...415 | 125                | 3125RU6W | 2CMA167136R1000 | 11,480 |
| <div>   </div> <div>IP44 (3P+N+E)</div> <div>IP67 (3P+N+E)</div> | IP44          | <div><div></div>Red</div>  | 346...415 | 16                 | 416RU6-I | 2CMA100211R1000 | 670    |
|                                                                                                                                                                                                                                       |               | <div><div></div>Red</div>  | 346...415 | 32                 | 432RU6-I | 2CMA100213R1000 | 810    |
|                                                                                                                                                                                                                                       |               | <div><div></div>Red</div>  | 346...415 | 63                 | 463RU6   | 2CMA167532R1000 | 3,125  |
|                                                                                                                                                                                                                                       | IP67          | <div><div></div>Red</div>  | 346...415 | 63                 | 463RU6W  | 2CMA167396R1000 | 3,700  |
|                                                                                                                                                                                                                                       |               | <div><div></div>Red</div>  | 346...415 | 125                | 4125RU6W | 2CMA167142R1000 | 11,520 |



# Wiring accessories

## Industrial plugs and sockets

### Surface Sockets Outlet



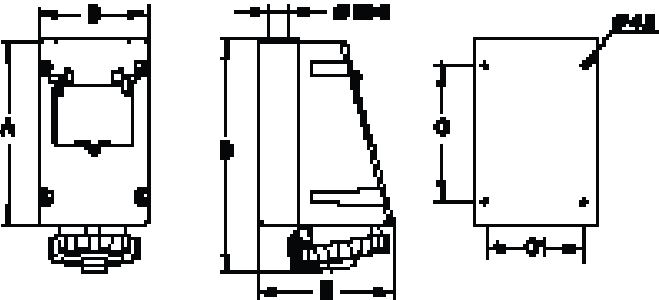
| Terminals / Pole | IP Protection | Color code | Voltage   | Current rating (A) | Type     | Order code      | LP (₹) |
|------------------|---------------|------------|-----------|--------------------|----------|-----------------|--------|
| 3 (2P+E)         | IP44          | Blue       | 200...250 | 16                 | 216RS6   | 2CMA193098R1000 | 715    |
|                  |               | Blue       | 200...250 | 32                 | 232RS6   | 2CMA193122R1000 | 975    |
|                  |               | Blue       | 200...250 | 63                 | 263RS6   | 2CMA167476R1000 | 3,415  |
|                  | IP67          | Blue       | 200...250 | 16                 | 216RS6W  | 2CMA167149R1000 | 1,570  |
|                  |               | Blue       | 200...250 | 32                 | 232RS6W  | 2CMA167172R1000 | 2,235  |
|                  |               | Blue       | 200...250 | 63                 | 263RS6W  | 2CMA167306R1000 | 4,695  |
| 4 (3P+E)         | IP44          | Red        | 380...415 | 16                 | 316RS6   | 2CMA193106R1000 | 765    |
|                  |               | Red        | 380...415 | 32                 | 332RS6   | 2CMA193130R1000 | 1,070  |
|                  |               | Red        | 380...415 | 63                 | 363RS6   | 2CMA167498R1000 | 3,700  |
|                  | IP67          | Red        | 380...415 | 16                 | 316RS6W  | 2CMA167157R1000 | 1,900  |
|                  |               | Red        | 380...415 | 32                 | 332RS6W  | 2CMA167180R1000 | 2,400  |
|                  |               | Red        | 380...415 | 63                 | 363RS6W  | 2CMA167316R1000 | 4,800  |
|                  |               | Red        | 380...415 | 125                | 3125RS6W | 2CMA167252R1000 | 13,300 |
| 5 (3P+N+E)       | IP44          | Red        | 346...415 | 16                 | 416RS6   | 2CMA193115R1000 | 825    |
|                  |               | Red        | 346...415 | 32                 | 432RS6   | 2CMA193139R1000 | 1,100  |
|                  |               | Red        | 346...415 | 63                 | 463RS6   | 2CMA167484R1000 | 3,880  |
|                  | IP67          | Red        | 346...415 | 16                 | 416RS6W  | 2CMA167166R1000 | 2,035  |
|                  |               | Red        | 346...415 | 32                 | 432RS6W  | 2CMA167189R1000 | 2,650  |
|                  |               | Red        | 346...415 | 63                 | 463RS6W  | 2CMA167328R1000 | 4,940  |
|                  |               | Red        | 346...415 | 125                | 4125RS6W | 2CMA167264R1000 | 13,500 |

### Surface socket outlet with protection

Housing in plastic (PBT). Cable entry with knock-outs 2 x Ø 25 mm.  
Cable area 1.5...4 mm2. Delivered without MCB/RCD. Space for 4 modules.



| Terminals / Pole | IP Protection | Color code                                                                               | Voltage   | Current rating (A) | Type     | Order code      | LP (₹) |
|------------------|---------------|------------------------------------------------------------------------------------------|-----------|--------------------|----------|-----------------|--------|
| 3 (2P+E)         | IP67          |  Blue | 200...250 | 16                 | 216RP6WP | 2CMA164572R1000 | 7,245  |
|                  |               |  Blue | 200...250 | 32                 | 232RP6WP | 2CMA164602R1000 | 8,330  |
| 5 (4P+E)         |               |  Red  | 346...415 | 16                 | 416RP6WP | 2CMA164589R1000 | 8,050  |
|                  |               |  Red  | 346...415 | 32                 | 432RP6WP | 2CMA164619R1000 | 8,500  |



| Type                  | A     | B   | C   | C1 | D   | E   |
|-----------------------|-------|-----|-----|----|-----|-----|
| 216RP...W...416RP...W | 199.5 | 120 | 170 | 90 | 253 | 149 |
| 232RP...W...432RP...W | 199.5 | 120 | 170 | 90 | 253 | 149 |

# Wiring accessories

## Industrial plugs and sockets

**Switched interlocked socket outlet - horizontal thermoplastic**  
Housing in plastic (PBT). Cable entry with knock-outs Ø 25 mm/M25. Cable area 1.5...4 mm<sup>2</sup>



| Terminals / Pole | IP Protection | Color code | Voltage   | Current rating (A) | Type     | Order code      | LP (₹) |
|------------------|---------------|------------|-----------|--------------------|----------|-----------------|--------|
| 3 (2P+E)         | IP44          | Blue       | 200...250 | 16                 | 216MHS6  | 2CMA167623R1000 | 6,460  |
|                  |               | Blue       | 200...250 | 32                 | 232MHS6  | 2CMA167669R1000 | 7,880  |
|                  |               | Blue       | 200...250 | 63                 | 263MHS6  | 2CMA167715R1000 | 13,705 |
|                  | IP67          | Blue       | 200...250 | 16                 | 216MHS6W | 2CMA167801R1000 | 6,460  |
|                  |               | Blue       | 200...250 | 32                 | 232MHS6W | 2CMA167848R1000 | 8,670  |
|                  |               | Blue       | 200...250 | 63                 | 263MHS6W | 2CMA167894R1000 | 15,760 |
| 4 (3P+E)         | IP44          | Red        | 380...415 | 16                 | 316MHS6  | 2CMA167631R1000 | 7,200  |
|                  |               | Red        | 380...415 | 32                 | 332MHS6  | 2CMA167677R1000 | 8,145  |
|                  |               | Red        | 380...415 | 63                 | 363MHS6  | 2CMA167721R1000 | 17,195 |
|                  | IP67          | Red        | 380...415 | 16                 | 316MHS6W | 2CMA167809R1000 | 7,790  |
|                  |               | Red        | 380...415 | 32                 | 332MHS6W | 2CMA167856R1000 | 9,595  |
|                  |               | Red        | 380...415 | 63                 | 363MHS6W | 2CMA167899R1000 | 18,610 |
| 5 (3P+N+E)       | IP44          | Red        | 346...415 | 16                 | 416MHS6  | 2CMA167640R1000 | 7,615  |
|                  |               | Red        | 346...415 | 32                 | 432MHS6  | 2CMA167686R1000 | 8,755  |
|                  |               | Red        | 346...415 | 63                 | 463MHS6  | 2CMA167727R1000 | 17,405 |
|                  | IP67          | Red        | 346...415 | 16                 | 416MHS6W | 2CMA167818R1000 | 8,375  |
|                  |               | Red        | 346...415 | 32                 | 432MHS6W | 2CMA167865R1000 | 9,635  |
|                  |               | Red        | 346...415 | 63                 | 463MHS6W | 2CMA167905R1000 | 18,765 |



# Table of contents

## Electrification products

### Installation products

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| 245     | Emergency lighting systems    |
| 246     | MV & HV apparatus             |

# Installation products

## Product brands overview

The acquisition of Thomas & Betts advances ABB’s strategy of expanding its electrification products division into new geographies, sectors and products. The combination of Thomas & Betts’ electrical components and ABB’s low voltage protection, control and measurement products offer more of the components you need every day than any other single manufacturer in the world.

Our focus is on improving your business performance by providing practical, reliable electrical products and services that solve everyday problems in:

Wire & cable management - cable ties, wiring ducts, accessories.

Connectivity & grounding - connectors, terminals, earthing, lightning protection

Cable protection systems - rigid and flexible conduit & fittings

Lighting & systems - emergency lighting, lighting & battery systems

Explosion protection - IECex, UL, CSA lighting, boxes and conduit systems

Cable accessories and apparatus - MV and HV switches, cable accessories

Markets we protect & connect together.

- 1 Renewables  
Wind, solar, water & bio
- 2 Utilities  
Power generation, transmission & distribution, telecom & datacentre, water & waste
- 3 Extraction  
Oil, gas, mining
- 4 Transportation & Infrastructure  
Rail, road, marine, aerospace, rail track, motorways, waterways
- 5 Commercial & Institutional  
Office & storage, retail & leisure, healthcare & education, Government
- 6 Residential  
Residential towers & apartment blocks, housing development projects, HMOs & university accommodation
- 7 Industry processing chemicals, pharma, minerals, metals, materials, food & beverage, agriculture
- 8 Industry assembling & OEM  
OEM equipment & devices, machinery, automation, robotics

| Wire & cable management -<br>Energy & data connection                                                                                                                           | Cable protection systems -<br>Energy & data protection                                                                                                                                | Connectivity & grounding -<br>Critical process protection                                                                                                      | Lighting -<br>Safety & explosion proof                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>Ty-Rap®</b></p> <p>Premium cable ties</p>                                             |  <p><b>Adaptaflex</b></p> <p>Flexible conduit systems for critical power &amp; data protection</p> |  <p><b>furse</b></p> <p>Earthing &amp; lightning protection</p>             |  <p><b>EMERGI-LITE</b></p> <p>Emergency lighting systems</p>                |
|  <p><b>Ty-Met™</b></p> <p>Stainless steel cable ties</p>                                     |  <p><b>KOPEX</b></p> <p>Flexible conduit systems for hazardous areas</p>                           |  <p><b>elastimold</b></p> <p>Underground cable protection accessories</p>   |  <p><b>EMERGI-LITE</b></p> <p>Emergency safety systems</p>                  |
|  <p><b>T&amp;B Cable Tray</b></p> <p>Cable tray, ladder, support systems &amp; wire duct</p> |  <p><b>PMA</b></p> <p>Cable protection systems</p>                                                 |  <p><b>JOSLYN</b></p> <p>Overhead products for electrical power systems</p> |  <p><b>ETS</b></p> <p>Explosion-proof lighting &amp; emergency lighting</p> |
|  <p><b>E-Klips®</b></p> <p>Electrical &amp; mechanical steel spring fasteners</p>            |  <p><b>Harnessflex</b></p> <p>Automotive wiring harness protection</p>                             |  <p><b>Spec-Kon®</b></p> <p>Solderless crimp connectors</p>                 |  <p><b>ETS</b></p> <p>Custom built control panels for hazardous areas</p>   |

# Wire and cable management

## Fastening products

Thomas & Betts (today a member of the ABB Group) invented the Ty-Rap® cable tie to solve the problem of harnessing the hundreds of wires used in manufacturing aircraft and revolutionised the world of fastening. Today, the Ty-Rap® brand remains the benchmark for excellence and innovation in wire management.

ABB's broad offering of cable ties is designed to make the task of fastening, bundling, clamping and managing wires easier and quicker for industrial applications, construction, communications, utility and OEM professionals as well as home improvement specialists and do-it-yourself enthusiasts. When strength, aesthetics, reliability and performance are required, knowledgeable professionals turn to the original and the best source for cable ties and accessories. The corrosion-proof, non-magnetic stainless steel locking device inside the tie head guarantees the strongest and most durable locking you will ever find on the market. Ty-Rap® can be used in the most adverse conditions: humidity, heat, cold,... Engineered for labour savings and high performance, Ty-Rap® cable ties are commonly used in a variety of applications. When you choose a Ty-Rap® cable tie, you can count on quality, performance and innovation to make your work easier.



### Natural colour - indoor use

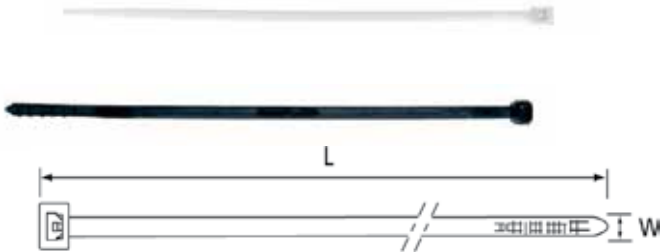
| Type code      | Ordering Code   | Description                           | UOM | MOQ   | SPQ  | M.R.P. |
|----------------|-----------------|---------------------------------------|-----|-------|------|--------|
| SKT100-80      | 7TCA300040R0000 | 100 mm length 2.5 mm width large pack | EA  | 10000 | 1000 | 0.66   |
| SKT100-80-100  | 7TCA300020R0000 | 100 mm length 2.5 mm width small pack | EA  | 10000 | 100  | 0.81   |
| SKT160-80      | 7TCA300040R0002 | 160 mm length 2.5 mm width large pack | EA  | 10000 | 1000 | 1.11   |
| SKT160-80-100  | 7TCA300020R0002 | 160 mm length 2.5 mm width small pack | EA  | 10000 | 100  | 1.30   |
| SKT200-180     | 7TCA300120R0001 | 200 mm length 2.5 mm width large pack | EA  | 10000 | 1000 | 1.73   |
| SKT200-180-100 | 7TCA300100R0001 | 200 mm length 2.5 mm width small pack | EA  | 10000 | 100  | 1.85   |
| SKT300-180     | 7TCA300120R0002 | 300 mm length 3.6 mm width large pack | EA  | 12000 | 1000 | 2.79   |
| SKT300-180-100 | 7TCA300100R0002 | 300 mm length 3.6 mm width small pack | EA  | 12000 | 100  | 2.98   |
| SKT370-180     | 7TCA300120R0003 | 370 mm length 3.6 mm width large pack | EA  | 12000 | 1000 | 4.45   |
| SKT370-180-100 | 7TCA300100R0003 | 370 mm length 3.6 mm width small pack | EA  | 12000 | 100  | 4.62   |
| SKT450-540-50  | 7TCA300260R0003 | 450 mm length 7.6 mm width small pack | EA  | 1000  | 50   | 13.64  |
| SKT750-540-50  | 7TCA300260R0002 | 750 mm length 7.6 mm width small pack | EA  | 1500  | 50   | 22.74  |
| SKT912-780-50  | 7TCA300340R0001 | 912 mm length 9 mm width small pack   | EA  | 500   | 50   | 33.44  |

### Black colour - indoor & outdoor use

| Type code       | Ordering Code   | Description                           | UOM | MOQ   | SPQ  | M.R.P. |
|-----------------|-----------------|---------------------------------------|-----|-------|------|--------|
| SKT100-80X      | 7TCA300080R0000 | 100 mm length 2.5 mm width large pack | EA  | 10000 | 1000 | 0.78   |
| SKT100-80X-100  | 7TCA300060R0000 | 100 mm length 2.5 mm width small pack | EA  | 10000 | 100  | 0.86   |
| SKT160-80X      | 7TCA300080R0002 | 160 mm length 2.5 mm width large pack | EA  | 10000 | 1000 | 1.25   |
| SKT160-80X-100  | 7TCA300060R0002 | 160 mm length 2.5 mm width small pack | EA  | 10000 | 100  | 1.30   |
| SKT200-180X     | 7TCA300160R0001 | 200 mm length 2.5 mm width large pack | EA  | 10000 | 1000 | 1.81   |
| SKT200-180X-100 | 7TCA300140R0001 | 200 mm length 2.5 mm width small pack | EA  | 10000 | 100  | 1.93   |
| SKT300-180X     | 7TCA300160R0002 | 300 mm length 3.6 mm width large pack | EA  | 12000 | 1000 | 2.78   |
| SKT300-180X-100 | 7TCA300140R0002 | 300 mm length 3.6 mm width small pack | EA  | 12000 | 100  | 3.01   |
| SKT370-180X     | 7TCA300160R0003 | 370 mm length 3.6 mm width large pack | EA  | 12000 | 1000 | 4.76   |
| SKT370-180X-100 | 7TCA300140R0003 | 370 mm length 3.6 mm width small pack | EA  | 12000 | 100  | 4.99   |
| SKT450-540X-50  | 7TCA300300R0003 | 450 mm length 7.6 mm width small pack | EA  | 1000  | 50   | 12.82  |
| SKT750-540X-50  | 7TCA300300R0002 | 750 mm length 7.6 mm width small pack | EA  | 1500  | 50   | 21.55  |
| SKT912-780X-50  | 7TCA300360R0001 | 912 mm length 9 mm width small pack   | EA  | 500   | 50   | 30.62  |

### Spec-Kon® general purpose cable ties

The right cable tie for the right application Characteristics A complete range of cable ties for indoor and outdoor Available in two different packaging quantities Available in different lengths and tensile strengths Technical Information Material: Polyamide 6.6; Halogen-free, Silicone-free Temperature range: -40°C to +85°C Colour: Natural and black (Type code with 'X' is black colour and UV resistant) Flammability rating: UL 94 V-2



# Wire and cable management

## Termination solution

### Experience the Spec-Kon® advantage!

Thomas & Betts (today a Member of the ABB group) developed the first tool-applied solderless terminals and connectors more than 60 years ago in response to industry awareness of the need for better performance of electrical systems.

Since then, the crimping technology, in which a permanent joining of wires/cables to connectors is achieved by the insertion of a conductor into the barrel of the connector, which is then compressed to form a solid joint, has proven its many advantages year after year. Reliability of connection, low installed cost, low level of skill required to produce repeatable and quality crimps, environmental compliance (versus soldering for instance) are examples of benefits that have given this technology its natural superiority.

### Easy entry design

This feature makes wire insertion faster and easier. Chamfering eliminates wire strand “hang up” and departure upon insertion into the terminal’s barrel. The loss of even a couple of wire strands can have negative results on electrical efficiency and resistance to mechanical strain.

### Spec-Kon® Insulated Tinned copper Easy-entry Terminal

| Type Code | Description                   | UOM | SPQ | M.R.P.       |
|-----------|-------------------------------|-----|-----|--------------|
| VT1E-RRΔ  | 0.5 - 1.5sq mm Ring Terminal  | pc  | 100 | Upon request |
| VT2E-BRΔ  | 1.5 - 2.5sq mm Ring Terminal  | pc  | 100 | Upon request |
| VT6E-YRΔ  | 4 - 6sq mm Ring Terminal      | pc  | 100 | Upon request |
| VT1E-RFΔ  | 0.5 - 1.5sq mm Fork Terminal  | pc  | 100 | Upon request |
| VT2E-BFΔ  | 1.5 - 2.5sq mm Fork Terminal  | pc  | 100 | Upon request |
| VT6E-YFΔ  | 4 - 6sq mm Fork Terminal      | pc  | 100 | Upon request |
| VT1E-RBΔ  | 0.5 - 1.5sq mm Blade Terminal | pc  | 100 | Upon request |
| VT2E-BBΔ  | 1.5 - 2.5sq mm Blade Terminal | pc  | 100 | Upon request |
| VT6E-YBΔ  | 4 - 6sq mm Blade Terminal     | pc  | 100 | Upon request |

### Color-Keyed®

#### Solderless compression connectors for power cables

The better method to install solderless compression connectors on power cables. Designed to provide a tight degree of reliability in electrical wiring, this method allows electrical workers to make installations with little effort and considerable savings in time.

#### A simple installation method in just three steps:

- First, the appropriate connector is chosen for the conductor size
- Next, the proper installing die is selected by matching the die colour to the connector colour
- Last, the die is installed in the tool, and the connector is compressed

### Color-Keyed® Electro-tin plated copper lug

| Type Code | Description              | UOM | SPQ | M.R.P.       |
|-----------|--------------------------|-----|-----|--------------|
| □MΔ-A     | Straight Lug             | pc  | 10  | Upon request |
| □MΔ-A-2   | Double hole Straight Lug | pc  | 10  | Upon request |
| □MΔ-A-45  | 45° bend Lug             | pc  | 10  | Upon request |
| □MΔ-A-90  | 90° bend Lug             | pc  | 10  | Upon request |

### Brazed seam/tubular construction

Spec-Kon® brazed seam connectors have a barrel with brazed seam (or a tubular construction), which provides increased mechanical properties (no barrel separation during the crimp process, higher wire pullout force) and electrical properties (reduced chances of wirestrand loss and electrical failure) compared to butted seam connectors.

### Double crimp

The double crimp feature has an extra copper sleeve within the barrel to ensure additional solid conductivity and pull-out-strenght. Ideal for high vibration or heavy industrial applications.

### Wide range of styles, materials and application tools

Extensive range of styles to suit the various applications: rings, forks, blades, pins, bootlace ferrules, disconnects, splices.... Non-insulated or insulated with various types of material (Polycarbonate, Vinyl, Nylon, Heat Shrink) according to the specific requirements (moisture protection, short circuits, dust, and solid crimping against vibration).

Complete range of tooling, from ergonomic hand tool to pneumatic and hydraulic power tools.



| Type Code | Description                | UOM | SPQ  | M.R.P.       |
|-----------|----------------------------|-----|------|--------------|
| NC05ΔCD   | 0.5sq mm Cord end Terminal | pc  | 1000 | Upon request |
| NC01ΔCD   | 1sq mm Cord end Terminal   | pc  | 1000 | Upon request |
| NC15ΔCD   | 1.5sq mm Cord end Terminal | pc  | 1000 | Upon request |
| NC25ΔCD   | 2.5sq mm Cord end Terminal | pc  | 1000 | Upon request |
| NC40ΔCD   | 4 sq mm Cord end Terminal  | pc  | 1000 | Upon request |
| NC60ΔCD   | 6 sq mm Cord end Terminal  | pc  | 1000 | Upon request |
| NC100ΔCD  | 10sq mm Cord end Terminal  | pc  | 1000 | Upon request |
| NC160ΔCD  | 16sq mm Cord end Terminal  | pc  | 1000 | Upon request |

Δ Complete with stud hole size

### Color-Keyed®: special lugs for special applications

ABB can solve your difficult wire bending and terminating problems in power distribution panels, switchgear and motor control enclosures.

- In addition to straight lugs, 45° and 90° angle lugs let you run the cable directly to a bus bar with no bending.
- One hole or two-hole configurations.
- Cross-sections from 10-400mm<sup>2</sup>
- All lugs meet the stringent requirements of IEC61238-1 Class A to deliver a high-level of performance and safety.



□ Complete with cable size

Δ Complete with stud hole size



# Wire and cable management

## Flexible conduit system

### Adaptaflex flexible conduit system

Adaptaflex is one of the market leading flexible conduit system brands that can be found all over the world. Combining innovative design with dedicated manufacture, it offers customers one of the world's broadest ranges of cable protection products and solutions. With a choice of over 6000 products the range covers metallic and non-metallic flexible conduit systems for the protection of critical power and data cables.

The system solutions from Adaptaflex need to perform in a wide variety of environments from high temperature to freezing subzero conditions. The products are designed and tested to withstand constant vibrations, water ingress, offer corrosion resistance and are available in halogen free, low smoke and low toxicity materials. An extensive range of engineered solutions are designed to withstand the rigours of some of the most technically demanding markets. So whatever your project involves, our experience will provide the answer, helping you to specify the correct flexible conduit system.

### Markets and industries

Adaptaflex flexible conduit systems are used to protect critical power and data cabling are available throughout a wide range of markets including:

- Commercial contracting
- Machinery
- Rail / Infrastructure
- Marine
- Mechanical
- Security / CCTV
- Data cabling
- Critical power

Many components are designed specifically for a market solution. These products uniquely meet an industry's needs - solving a specific application requirement, providing product innovation, saving installation and component costs, improving the quality and the integrity of the end product. Wherever you need mechanical and electrical protection for your cables you can be confident in specifying Adaptaflex products

### Type PA - Polyamide (Nylon) 6 conduit

| Type Code  | Description                            | UOM | MOQ | SPQ | M.R.P.* |
|------------|----------------------------------------|-----|-----|-----|---------|
| PAFL13/BL  | 13mm nominal dia Nylon conduit, black  | mtr | 50  | 50  | 105     |
| PAFL16/BL  | 16mm nominal dia Nylon conduit, black  | mtr | 50  | 50  | 145     |
| PAFL21/BL  | 21mm nominal dia Nylon conduit, black  | mtr | 50  | 50  | 230     |
| PACL28/BL  | 28mm nominal dia Nylon conduit, black  | mtr | 50  | 50  | 425     |
| PACL34/BL  | 34mm nominal dia Nylon conduit, black  | mtr | 50  | 50  | 499     |
| PACL42/BL  | 42mm nominal dia Nylon conduit, black  | mtr | 25  | 25  | 520     |
| PACL54/BL  | 54mm nominal dia Nylon conduit, black  | mtr | 25  | 25  | 825     |
| PACS80/BL  | 80mm nominal dia Nylon conduit, black  | mtr | 10  | 10  | 3,850   |
| PACS106/BL | 106mm nominal dia Nylon conduit, black | mtr | 10  | 10  | 4,950   |

\* Price per meter



#### Approvals



#### Temperature Range

Static applications: -40°C to +120°C

Moving applications: -5°C to +120°C

#### Flexibility & fatigue life

High flexibility - high fatigue life

#### Fire performance & EMI screen

Self extinguishing Halogen-free

#### UV resistance

Very high

### Type S - Galvanised steel general purpose conduit

| Type Code | Description                    | UOM | MOQ | SPQ | M.R.P.* |
|-----------|--------------------------------|-----|-----|-----|---------|
| S16       | 16mm nominal dia steel conduit | mtr | 10  | 10  | 515     |
| S20       | 20mm nominal dia steel conduit | mtr | 10  | 10  | 495     |
| S25       | 25mm nominal dia steel conduit | mtr | 10  | 10  | 575     |
| S32       | 32mm nominal dia steel conduit | mtr | 10  | 10  | 950     |
| S40       | 40mm nominal dia steel conduit | mtr | 10  | 10  | 1,310   |
| S50       | 50mm nominal dia steel conduit | mtr | 10  | 10  | 1,855   |
| S63       | 63mm nominal dia steel conduit | mtr | 10  | 10  | 4,840   |
| S75       | 75mm nominal dia steel conduit | mtr | 10  | 10  | 7,435   |

\* Price per meter



#### Approvals



#### Temperature range

Static applications: -50°C to +300°C

Moving applications: -45°C to +250°C

#### Flexibility & fatigue life

High flexibility - High fatigue life

#### Fire performance & EMI screen

#### UV resistance

Very high



### Type SP - Covered steel general purpose conduit

| Type Code | Description                                   | UOM | MOQ | SPQ | M.R.P.* |
|-----------|-----------------------------------------------|-----|-----|-----|---------|
| SP16/BL   | BL 16mm nom. dia covered steel conduit, black | mtr | 10  | 10  | 570     |
| SP20/BL   | 20mm nom. dia covered steel conduit, black    | mtr | 10  | 10  | 640     |
| SP25/BL   | 25mm nom. dia covered steel conduit, black    | mtr | 10  | 10  | 735     |
| SP32/BL   | 32mm nom. dia covered steel conduit, black    | mtr | 10  | 10  | 1,265   |
| SP40/BL   | 40mm nom. dia covered steel conduit, black    | mtr | 10  | 10  | 1,650   |
| SP50/BL   | 50mm nom. dia covered steel conduit, black    | mtr | 10  | 10  | 2,155   |
| SP63/BL   | 63mm nom. dia covered steel conduit, black    | mtr | 10  | 10  | 5,165   |
| SP75/BL   | 75mm nom. dia covered steel conduit, black    | mtr | 10  | 10  | 7,740   |

\* Price per meter

For any other specification/requirement of conduits and accessories kindly contact local ABB sales office



#### Approvals



#### Temperature range

Static applications: -25°C to +70°C

Moving applications: -5°C to +90°C

#### Flexibility & fatigue life

High flexibility - Medium fatigue life

#### Fire performance & EMI screen

Self extinguishing

#### UV resistance

Very high



# External lightning protection

## OPR - Optimized Pulse Rod

### The OPR efficiency (ΔT)

Lightning is one of the most spectacular meteorological phenomena. Generated by the interaction of clouds elements (water and ice), it can kill, injure and damage. The unique efficiency of the OPR Early streamer emission is based on the difference (ΔT), measured in a laboratory, in between the emission time of the OPR and the one from a simple rod. The OPR ESE air terminal is composed of a striking point connected to a down conductor to conduct the lightning to the ground.

### Complete autonomy

During a storm the ambient electric field may rise from 600 V to 10-20 kV/m. When the electric field reach this level representing a minimum risk for a lightning, the OPR begins to get activated and generates high voltage pulses, helping to create and propagating an upward leader. After a strike on the OPR, the lightning current is driven to ground by the down conductor to the earth termination system.

### Radius of protection

The radius of protection (Rp) of the OPR is calculated according to the NF C 17-102 (edition 2011). It depends on the OPR efficiency (ΔT) expressed in micro-seconds. The maximum value for ΔT is 60 μs.

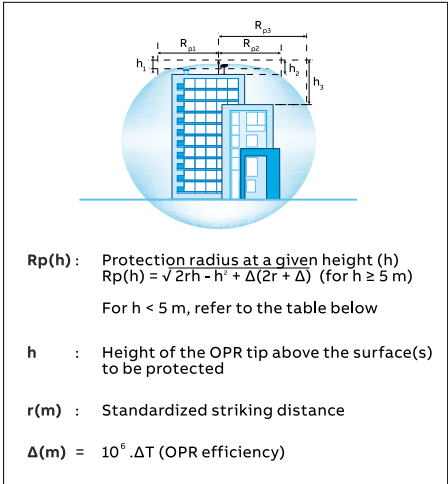
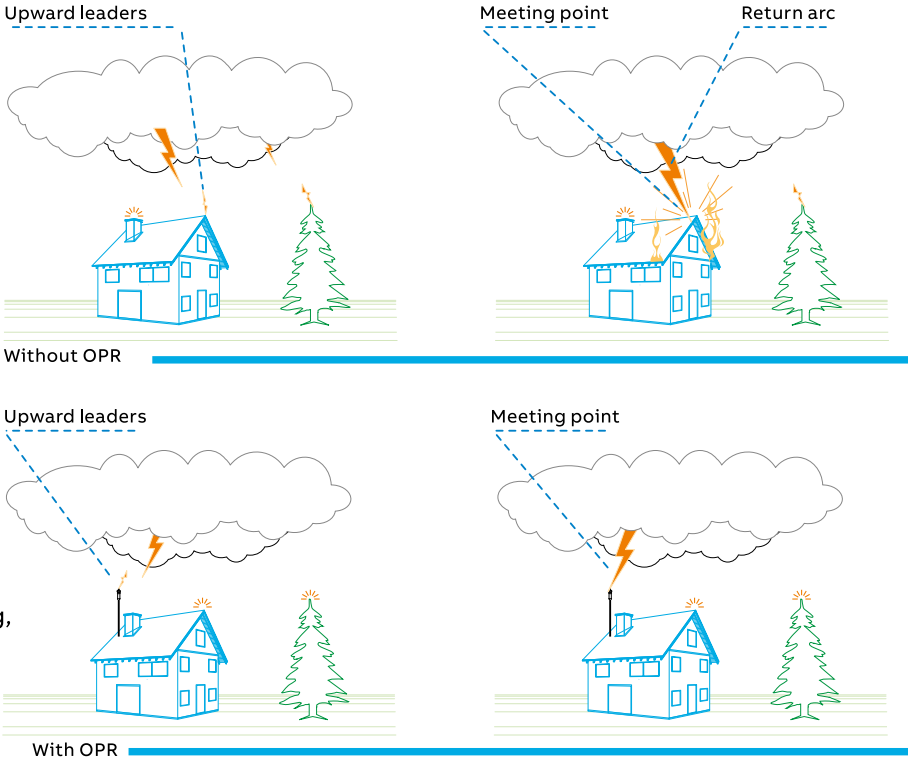
The risk assessment shall be calculated according to the NF C 17-102 Annex A / IEC 62305-2 and will define the protection level (LPL I, II, III or IV) which will be used in the determination of the OPR radius of protection.

### Installing/testing

The installation and verification of lightning protection systems using one or more OPR units must be performed in accordance with the manufacturer's recommendations and to the NF C 17-102 standard.

### OPR radius of protection

| Protection level | I (r = 20 m)                |        |        | II (r = 30 m) |        |        | III (r = 45 m) |        |        | IV (r = 60 m) |        |        |
|------------------|-----------------------------|--------|--------|---------------|--------|--------|----------------|--------|--------|---------------|--------|--------|
| OPR              | OPR 30                      | OPR 45 | OPR 60 | OPR 30        | OPR 45 | OPR 60 | OPR 30         | OPR 45 | OPR 60 | OPR 30        | OPR 45 | OPR 60 |
| h (m)            | Radius of protection Rp (m) |        |        |               |        |        |                |        |        |               |        |        |
| 2                | 19                          | 25     | 31     | 22            | 28     | 35     | 25             | 32     | 39     | 28            | 36     | 43     |
| 3                | 29                          | 38     | 47     | 33            | 42     | 52     | 38             | 48     | 58     | 43            | 57     | 64     |
| 4                | 38                          | 51     | 63     | 44            | 57     | 69     | 51             | 65     | 78     | 57            | 72     | 85     |
| 5                | 48                          | 63     | 79     | 55            | 71     | 86     | 63             | 81     | 97     | 71            | 89     | 107    |
| 6                | 48                          | 63     | 79     | 55            | 71     | 87     | 64             | 81     | 97     | 72            | 90     | 107    |
| 8                | 49                          | 64     | 79     | 56            | 72     | 87     | 65             | 82     | 98     | 73            | 91     | 108    |
| 10               | 49                          | 64     | 79     | 57            | 72     | 88     | 66             | 83     | 99     | 75            | 92     | 109    |
| 15               | 50                          | 65     | 80     | 58            | 73     | 89     | 69             | 85     | 101    | 78            | 95     | 111    |
| 20               | 50                          | 65     | 80     | 59            | 74     | 89     | 71             | 86     | 102    | 81            | 97     | 113    |
| 45               | 43                          | 65     | 76     | 58            | 75     | 89     | 75             | 90     | 105    | 89            | 104    | 119    |
| 50               | 40                          | 65     | 74     | 57            | 75     | 88     | 75             | 90     | 105    | 89            | 104    | 120    |
| 55               | 36                          | 65     | 72     | 55            | 75     | 86     | 74             | 90     | 105    | 90            | 105    | 120    |
| 60               | 30                          | 65     | 69     | 52            | 75     | 85     | 73             | 90     | 104    | 90            | 105    | 120    |



# External lightning protection

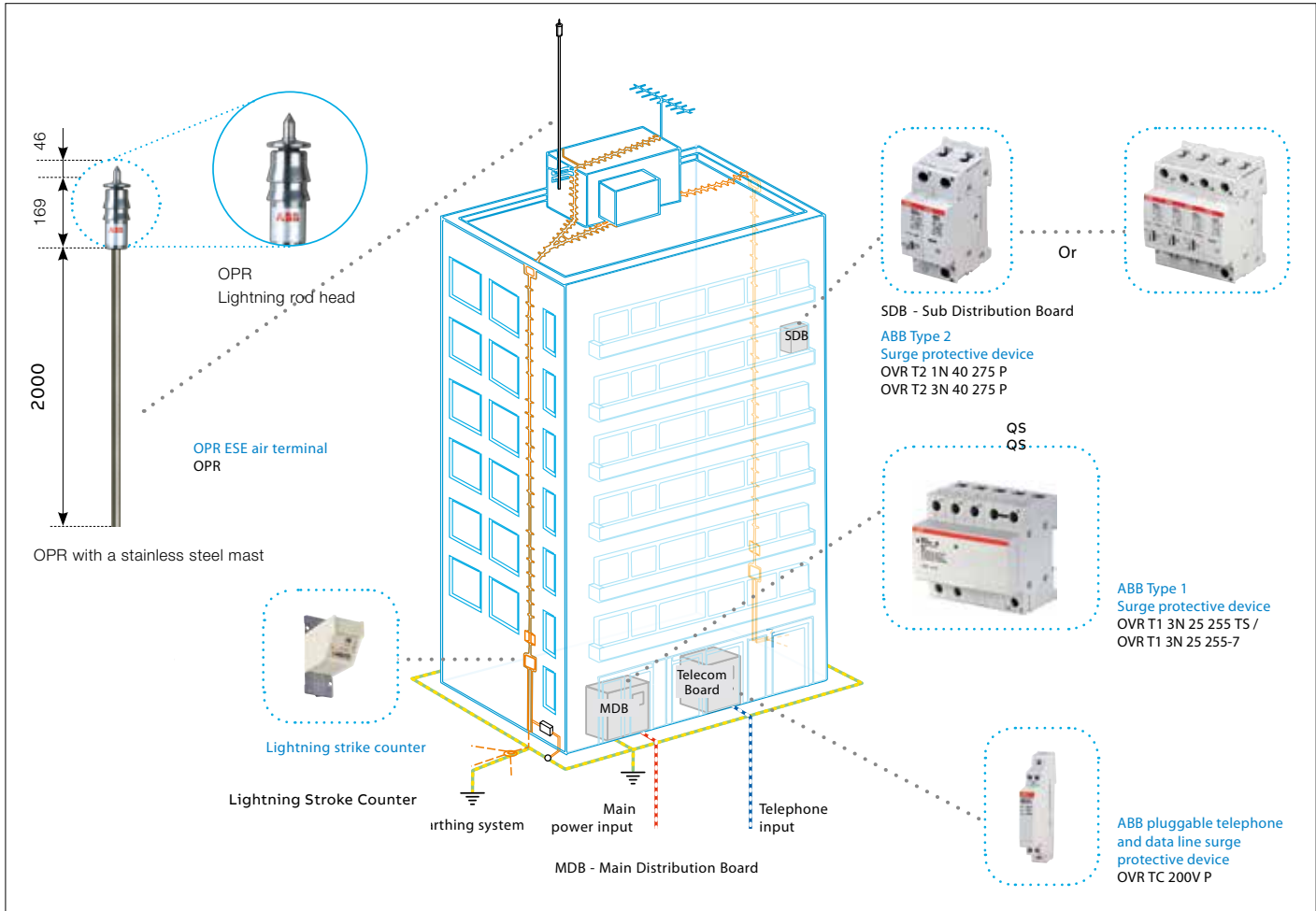
## OPR - Optimized Pulse Rod

OPR Range

| Type Code | Description                   | Length (m) | Weight (kg) | Time gain (µs) | Ordering code   | M.R.P. (₹) |
|-----------|-------------------------------|------------|-------------|----------------|-----------------|------------|
| OPR 30    | ESE Air terminal without mast | 0.215      | 2.4         | 30             | 2CTB899800R7000 | 1,18,200   |
| OPR 45    | ESE Air terminal without mast | 0.215      | 2.4         | 45             | 2CTB899800R7500 | 1,41,350   |
| OPR 60    | ESE Air terminal without mast | 0.215      | 2.4         | 60             | 2CTB899800R7100 | 1,55,650   |

Accessories

| Type Code  | Description                                       | Length (m) | Weight (kg) | Ordering code | M.R.P. (₹)    |
|------------|---------------------------------------------------|------------|-------------|---------------|---------------|
| LS COUNTER | Lightning stroke counter                          | -          | 0.56        | 2CTH0CCF2004  | 41,500        |
| MAST 2M30  | Mounting Mast, 2m, 30mm dia                       | 2          | 4.4         | H00003002L    | 7,650         |
| MAST 3M    | Mounting Mast, 3m with guywire and base plate     | 3          | 6.5         | H00003003LGB  | 15,150        |
| CM015      | Bentonite Moisture retainer - Powder              | -          | 25          | -             | Uppon enquiry |
| CM020      | Bentonite Moisture retainer - Granules            | -          | 25          | -             | Uppon enquiry |
| CM025      | FurseCEM conductive aggregate                     | -          | 25          | -             | Uppon enquiry |
| RB Δ □     | Copperbond earth rod                              | -          | -           | -             | Uppon enquiry |
| CR Δ □     | Rod to tape clamp                                 | -          | -           | -             | Uppon enquiry |
| PT205      | Light weight inspection pit with grey polymer lid | -          | -           | -             | Uppon enquiry |



# External lightning protection

## Furse - Earthing and lightning protection

Furse provides world leading earthing, lightning and electronic systems protection from our own designed and manufactured products through to risk assessment and systems design advice.

Our renowned Furse range of earthing & lightning protection design services provide a unique total solution.

### Expertise

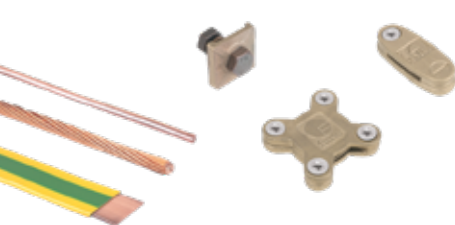
Specialist advice from our fully qualified technical engineers - focusing on your earthing & lightning protection issues and concerns.

### Experience

Experience to provide the optimum design - one that doesn't use more material than is necessary, saving you money.

### Knowledge

Our knowledge of the latest products ensures a tailored design that can be installed using the most appropriate and up-to-date products.



### Compliance, now & in the future

Furse designs comply with all recognised standards - national and international. Our engineers actively contribute to national and harmonised European / international standards, ensuring we remain at the forefront of new developments.

- BS EN/IEC 62305 protection against lightning
- NFPA 780 Standard for the installation of lightning protection systems
- IEEE Std 80:2000 IEEE guide for safety in AC substation grounding
- ENA TS 41-24 guidelines for the design, installation, testing & maintenance of main earthing systems in substations
- BS EN 50522:2010 - earthing of power installations exceeding 1.k Vac
- IS/IEC 62305 - protection against lightning



### Structural lightning protection

From Furse air termination systems including air rods and strike plates to capture lightning strikes, through to our comprehensive range of down conductors and lightning protection components which channel lightning energy safely to a Furse earth termination network.

- Air termination systems
- Lightning protection conductors
- Conductor clips, clamps and holdfasts
- Bimetallic connection components



### Electronic systems protection

Our exhaustive range of equipotential bonding and transient overvoltage SPDs providing fully co-ordinated protection against transient overvoltages on all incoming and outgoing metallic service lines including power, data, signal & telecoms.

- Lightning equipotential bonding SPDs
- Mains power transient overvoltage SPDs
- Data, signal & telecommunication lines SPDs
- DC power & photovoltaic SPDs

### Earthing

A combination of Furse earth electrodes, soil conditioning, conductors and equipotential bonding bars provide an effective, low resistance dissipation from the lightning protection system to earth.

- Earth rods and conductor systems
- Mechanical earth clamps and bonds
- Soil conditioning agents
- Earth bars and equipotential bonding



### FurseWELD - Exothermic welding

FurseWELD exothermic welding is a cost-efficient, self-contained system that uses the high temperature reaction of powdered copper oxide and aluminium, within a mould, to form permanent electrical connections.

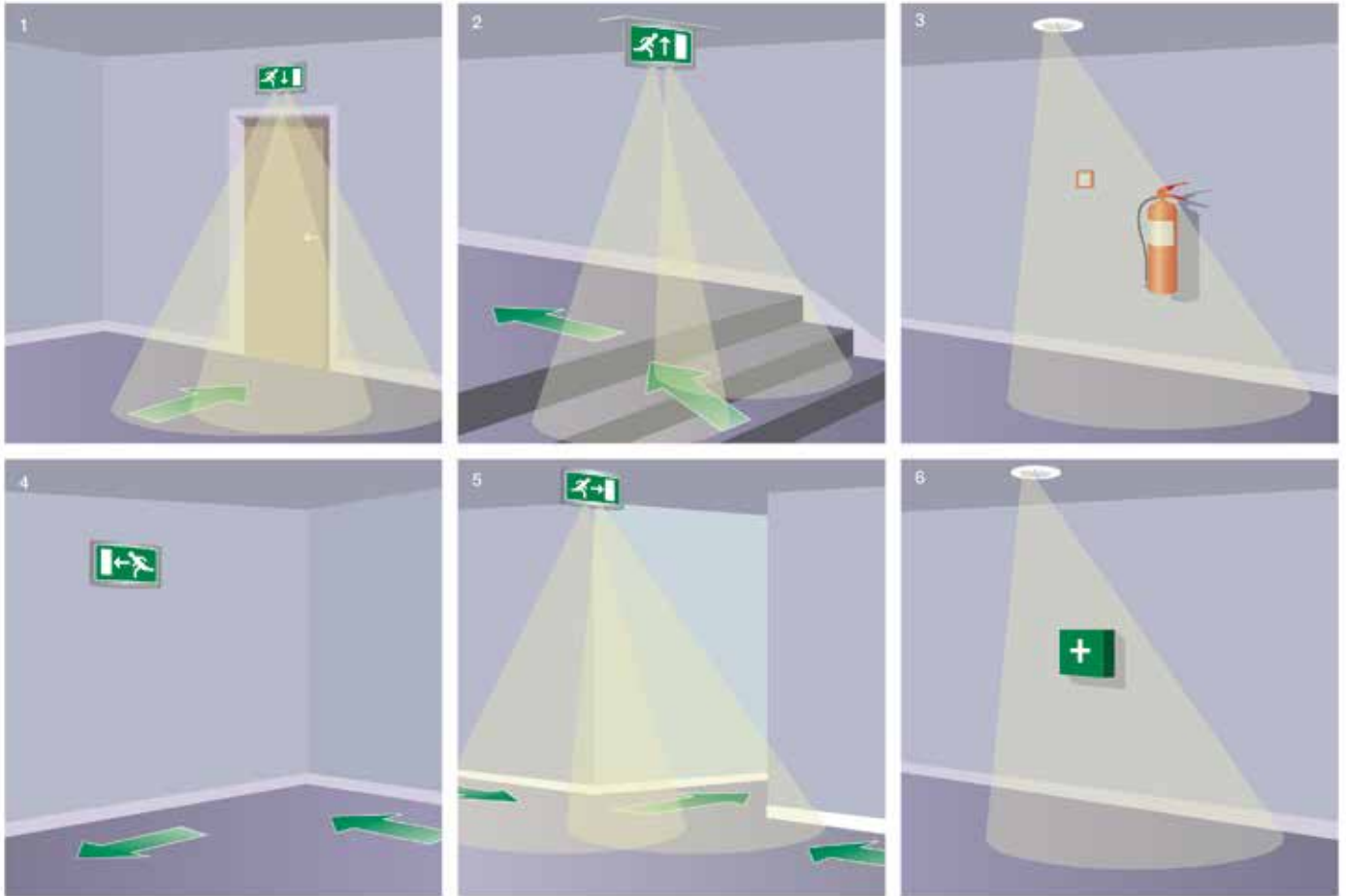
- Moulds
- Powder
- Handle clamps
- Accessories

# Emergency lighting systems

## Exit sign, light and battery system

The requirement for emergency lighting originates from the Fire Precautions Act, 1971 and was further enforced by the Fire Precautions (Workplace) Regulations, 1997 (Amended 1999).

The Emergi-Lite concept is clear and simple. Emergi-Lite offers you reliable total solutions for safe evacuation. The way in which we do this is what makes the difference. Emergi-Lite offers advantages to everybody involved in the construction process. That way, you know that Emergi-Lite is always the right choice, for both you and your customers.

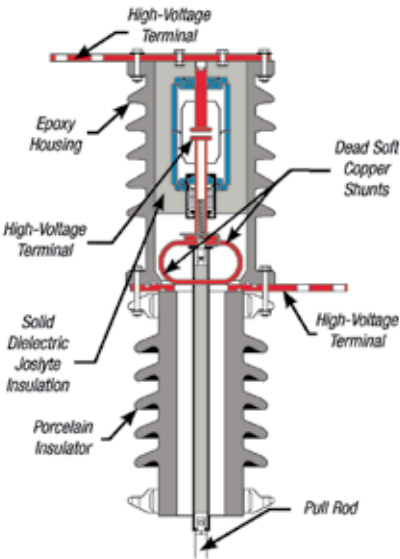


# MV and HV apparatus

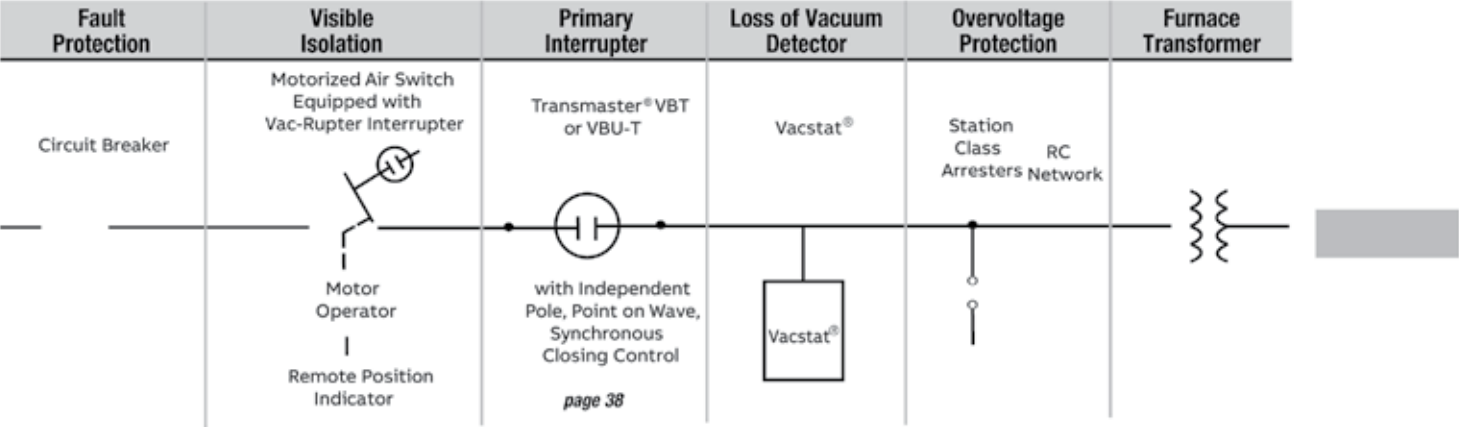
## Capacitor and furnace switches

**Transmaster® VBT Electric Furnace Switches**  
**Longest life product for electric furnaces!**  
**Joslyn Hi-Voltage® Transmaster®**  
**Electric Furnace Switch**

- Long, maintenance-free life under demanding conditions, designed for 100,000 operations
- No oil or gas used for interruption or insulation
- Safe - no visible or hazardous arcing and no hot exhaust or ionized gas dissemination
- Vacuum interrupter condition can be determined by a high-potential withstand test quickly
- Lightweight modular design - no special foundations or costly support required
- Removable fuses provide protection
- Vacuum contacts withstand excessive overloads and system short circuits at any power factor
- Eight heavy-duty auxiliary contacts are provided for remote indications, control and interlocking of other furnace functions or equipment
- Capacitor discharge circuit trips switch open upon loss of control voltage
- Circuit trips switch open if one mechanism does not close within the specified time



### Ideal Furnace System



| DESCRIPTION                                                      | 15.5kV                      |      |      |      |      |      | 38kV |      |      |      |      |      |  |
|------------------------------------------------------------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|--|
| h (m)                                                            | Radius of protection Rp (m) |      |      |      |      |      |      |      |      |      |      |      |  |
| Continuous Current (Amps)                                        | 600                         | 1000 | 1500 | 2000 | 3000 | 4000 | 600  | 1000 | 1500 | 2000 | 2500 | 3000 |  |
| Momentary Current (RMS Amps, Asymmetrical) (kA)                  | 20                          | 35   | 50   | 65   | 65   | 65   | 20   | 35   | 50   | 65   | 65   | 65   |  |
| Impulse Withstand Open-Gap (kV BIL)                              | 110                         | 110  | 110  | 110  | 110  | 110  | 200  | 200  | 200  | 200  | 200  | 200  |  |
| Impulse Withstand Line-to-Ground (kV BIL)                        | 150                         | 150  | 150  | 150  | 150  | 150  | 200  | 200  | 200  | 200  | 200  | 200  |  |
| Maximum 60 Cycle Withstand Line-to-Ground Dry (One Minute) (kV)  | 112                         | 112  | 112  | 112  | 112  | 112  | 112  | 112  | 112  | 112  | 112  | 112  |  |
| Maximum 60 Cycle Withstand Line-to-Ground Wet (Ten Seconds) (kV) | 55                          | 55   | 55   | 55   | 55   | 55   | 55   | 55   | 55   | 55   | 55   | 55   |  |
| Fault Interrupting Rating (Amps, Symmetric) (kA)                 | 4                           | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |  |



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| 253     | CLMD series capacitor for<br>heavy duty applications                      |
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# ABB's comprehensive range of low voltage capacitors and filter modules

The range of ABB Low Voltage Capacitors and Filter modules ranks amongst the most extensive in the market with a full range of innovative solutions for various applications, helping to optimise resources, reduce energy costs, boost productivity.

- Q Cap - L (normal duty and heavy duty) capacitors
  - Cylindrical type
  - Box type
- CLMD heavy duty capacitors
- APP type oil-filled capacitors
- Harmonic De Tuned filter modules
- APFC relays





# Q Cap - L Capacitors



## 440 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Normal Duty

| Description                           | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|---------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor CYL ND 1 kvar F5 V440    | 1 kvar    | 12                 | PC   | 1HYC414005-001-1 | 220        |
| LV Capacitor CYL ND 2.1 kvar F5 V440  | 2.1 kvar  | 12                 | PC   | 1HYC414005-002-1 | 540        |
| LV Capacitor CYL ND 3 kvar F5 V440    | 3 kvar    | 12                 | PC   | 1HYC414005-003-1 | 800        |
| LV Capacitor CYL ND 4.2 kvar F5 V440  | 4.2 kvar  | 12                 | PC   | 1HYC414005-004-1 | 1,140      |
| LV Capacitor CYL ND 5 kvar F5 V440    | 5 kvar    | 12                 | PC   | 1HYC414005-005-1 | 1,150      |
| LV Capacitor CYL ND 6 kvar F5 V440    | 6 kvar    | 12                 | PC   | 1HYC414005-006-1 | 1,350      |
| LV Capacitor CYL ND 7.5 kvar F5 V440  | 7.5 kvar  | 12                 | PC   | 1HYC414005-007-1 | 1,690      |
| LV Capacitor CYL ND 10 kvar F5 V440   | 10 kvar   | 12                 | PC   | 1HYC414005-008-1 | 2,250      |
| LV Capacitor CYL ND 12.5 kvar F5 V440 | 12.5 kvar | 12                 | PC   | 1HYC414005-009-1 | 2,800      |
| LV Capacitor CYL ND 15 kvar F5 V440   | 15 kvar   | 12                 | PC   | 1HYC414005-010-1 | 3,370      |
| LV Capacitor CYL ND 20 kvar F5 V440   | 20 kvar   | 12                 | PC   | 1HYC414005-011-1 | 4,490      |
| LV Capacitor CYL ND 25 kvar F5 V440   | 25 kvar   | 12                 | PC   | 1HYC414005-012-1 | 5,620      |



## 440 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Heavy Duty

| Description                           | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|---------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor CYL HD 1 kvar F5 V440    | 1 kvar    | 12                 | PC   | 1HYC414007-101-1 | 430        |
| LV Capacitor CYL HD 2 kvar F5 V440    | 2 kvar    | 12                 | PC   | 1HYC414007-102-1 | 850        |
| LV Capacitor CYL HD 3 kvar F5 V440    | 3 kvar    | 12                 | PC   | 1HYC414007-103-1 | 1,190      |
| LV Capacitor CYL HD 4 kvar F5 V440    | 4 kvar    | 12                 | PC   | 1HYC414007-104-1 | 1,620      |
| LV Capacitor CYL HD 5 kvar F5 V440    | 5 kvar    | 12                 | PC   | 1HYC414007-105-1 | 1,710      |
| LV Capacitor CYL HD 6 kvar F5 V440    | 6 kvar    | 12                 | PC   | 1HYC414007-106-1 | 2,060      |
| LV Capacitor CYL HD 7.5 kvar F5 V440  | 7.5 kvar  | 12                 | PC   | 1HYC414007-107-1 | 2,610      |
| LV Capacitor CYL HD 10 kvar F5 V440   | 10 kvar   | 12                 | PC   | 1HYC414007-108-1 | 3,510      |
| LV Capacitor CYL HD 12.5 kvar F5 V440 | 12.5 kvar | 12                 | PC   | 1HYC414007-109-1 | 4,420      |
| LV Capacitor CYL HD 15 kvar F5 V440   | 15 kvar   | 12                 | PC   | 1HYC414007-110-1 | 5,300      |
| LV Capacitor CYL HD 20 kvar F5 V440   | 20 kvar   | 12                 | PC   | 1HYC414007-111-1 | 7,120      |
| LV Capacitor CYL HD 25 kvar F5 V440   | 25 kvar   | 12                 | PC   | 1HYC414007-112-1 | 8,960      |



## 480 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Heavy Duty

| Description                           | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|---------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor CYL HD 5.5 kvar F5 V480  | 5.5 kvar  | 4                  | PC   | 1HYC414015-002-1 | 1,990      |
| LV Capacitor CYL HD 8.3 kvar F5 V480  | 8.3 kvar  | 4                  | PC   | 1HYC414015-003-1 | 3,050      |
| LV Capacitor CYL HD 11.1 kvar F5 V480 | 11.1 kvar | 4                  | PC   | 1HYC414015-005-1 | 4,120      |
| LV Capacitor CYL HD 12.5 kvar F5 V480 | 12.5 kvar | 4                  | PC   | 1HYC414015-006-1 | 4,670      |
| LV Capacitor CYL HD 13.8 kvar F5 V480 | 13.8 kvar | 4                  | PC   | 1HYC414015-007-1 | 5,150      |
| LV Capacitor CYL HD 16.6 kvar F5 V480 | 16.6 kvar | 4                  | PC   | 1HYC414015-009-1 | 6,210      |
| LV Capacitor CYL HD 20 kvar F5 V480   | 20 kvar   | 4                  | PC   | 1HYC414015-010-1 | 7,520      |
| LV Capacitor CYL HD 22.1 kvar F5 V480 | 22.1 kvar | 4                  | PC   | 1HYC414015-011-1 | 8,310      |
| LV Capacitor CYL HD 25 kvar F5 V480   | 25 kvar   | 4                  | PC   | 1HYC414015-012-1 | 8,900      |
| LV Capacitor CYL HD 27.7 kvar F5 V480 | 27.7 kvar | 4                  | PC   | 1HYC414015-013-1 | 10,440     |
| LV Capacitor CYL HD 30 kvar F5 V480   | 30 kvar   | 4                  | PC   | 1HYC414015-014-1 | 12,170     |

# Q Cap - L Capacitors



## 525 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Heavy Duty

| Description                           | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|---------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor CYL HD 6.6 kvar F5 V525  | 6.6 kvar  | 4                  | PC   | 1HYC414008-102-1 | 3,050      |
| LV Capacitor CYL HD 10 kvar F5 V525   | 10 kvar   | 4                  | PC   | 1HYC414008-104-1 | 5,130      |
| LV Capacitor CYL HD 12.5 kvar F5 V525 | 12.5 kvar | 4                  | PC   | 1HYC414008-105-1 | 5,780      |
| LV Capacitor CYL HD 15.4 kvar F5 V525 | 15.4 kvar | 4                  | PC   | 1HYC414008-107-1 | 6,340      |
| LV Capacitor CYL HD 16.6 kvar F5 V525 | 16.6 kvar | 4                  | PC   | 1HYC414008-108-1 | 6,830      |
| LV Capacitor CYL HD 20 kvar F5 V525   | 20 kvar   | 4                  | PC   | 1HYC414008-111-1 | 7,580      |
| LV Capacitor CYL HD 25 kvar F5 V525   | 25 kvar   | 4                  | PC   | 1HYC414008-112-1 | 9,360      |
| LV Capacitor CYL HD 33.1 kvar F5 V525 | 33.1 kvar | 4                  | PC   | 1HYC414008-113-1 | 12,390     |

## 440 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Super Heavy Duty

| Description                          | kvar    | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|--------------------------------------|---------|--------------------|------|------------------|------------|
| LV Capacitor CYL SHD 5 kvar F5 V440  | 5 kvar  | 12                 | PC   | 1HYC414017-101-1 | 1,940      |
| LV Capacitor CYL SHD 10 kvar F5 V440 | 10 kvar | 12                 | PC   | 1HYC414017-103-1 | 3,880      |
| LV Capacitor CYL SHD 15 kvar F5 V440 | 15 kvar | 12                 | PC   | 1HYC414017-105-1 | 5,820      |
| LV Capacitor CYL SHD 20 kvar F5 V440 | 20 kvar | 12                 | PC   | 1HYC414017-006-1 | 7,760      |
| LV Capacitor CYL SHD 25 kvar F5 V440 | 25 kvar | 12                 | PC   | 1HYC414017-007-1 | 9,700      |

## 480 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Super Heavy Duty

| Description                            | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|----------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor CYL SHD 5.5 kvar F5 V480  | 5.5 kvar  | 12                 | PC   | 1HYC414017-108-1 | 2,310      |
| LV Capacitor CYL SHD 11.1 kvar F5 V480 | 11.1 kvar | 12                 | PC   | 1HYC414017-109-1 | 4,660      |
| LV Capacitor CYL SHD 16.6 kvar F5 V480 | 16.6 kvar | 12                 | PC   | 1HYC414017-110-1 | 6,970      |
| LV Capacitor CYL SHD 22.1 kvar F5 V480 | 22.1 kvar | 12                 | PC   | 1HYC414017-111-1 | 9,280      |
| LV Capacitor CYL SHD 27.7 kvar F5 V480 | 27.7 kvar | 12                 | PC   | 1HYC414017-112-1 | 11,630     |
| LV Capacitor CYL SHD 30 kvar F5 V480   | 30 kvar   | 12                 | PC   | 1HYC414017-120-1 | 12,600     |

## 525 VOLTS, 3 PHASE, 50 Hz Cylindrical Type - Super Heavy Duty

| Description                            | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|----------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor CYL SHD 6.6 kvar F5 V525  | 6.6 kvar  | 12                 | PC   | 1HYC414017-113-1 | 2,570      |
| LV Capacitor CYL SHD 13.2 kvar F5 V525 | 13.2 kvar | 12                 | PC   | 1HYC414017-114-1 | 5,150      |
| LV Capacitor CYL SHD 15 kvar F5 V525   | 15 kvar   | 12                 | PC   | 1HYC414017-115-1 | 5,850      |
| LV Capacitor CYL SHD 20 kvar F5 V525   | 20 kvar   | 12                 | PC   | 1HYC414017-117-1 | 7,800      |
| LV Capacitor CYL SHD 25 kvar F5 V525   | 25 kvar   | 12                 | PC   | 1HYC414017-118-1 | 9,750      |
| LV Capacitor CYL SHD 33.1 kvar F5 V525 | 33.1 kvar | 12                 | PC   | 1HYC414017-119-1 | 12,910     |

## Q Cap - L Capacitors



### 440 VOLTS, 3 PHASE, 50 Hz

Box Type - Normal Duty

| Description                           | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P.(₹) |
|---------------------------------------|-----------|--------------------|------|------------------|-----------|
| LV Capacitor BOX NDW 1 kvar F5 V440   | 1 kvar    | 1                  | PC   | 1HYC414009-101-1 | 330       |
| LV Capacitor BOX NDW 2 kvar F5 V440   | 2 kvar    | 1                  | PC   | 1HYC414009-102-1 | 650       |
| LV Capacitor BOX NDW 3 kvar F5 V440   | 3 kvar    | 1                  | PC   | 1HYC414009-103-1 | 980       |
| LV Capacitor BOX NDW 4 kvar F5 V440   | 4 kvar    | 1                  | PC   | 1HYC414009-104-1 | 1,310     |
| LV Capacitor BOX ND 5 kvar F5 V440    | 5 kvar    | 1                  | PC   | 1HYC414009-105-1 | 1,460     |
| LV Capacitor BOX ND 6 kvar F5 V440    | 6 kvar    | 1                  | PC   | 1HYC414009-106-1 | 1,750     |
| LV Capacitor BOX ND 7.5 kvar F5 V440  | 7.5 kvar  | 1                  | PC   | 1HYC414009-107-1 | 2,220     |
| LV Capacitor BOX ND 10 kvar F5 V440   | 10 kvar   | 1                  | PC   | 1HYC414009-108-1 | 2,820     |
| LV Capacitor BOX ND 12.5 kvar F5 V440 | 12.5 kvar | 1                  | PC   | 1HYC414009-109-1 | 3,560     |
| LV Capacitor BOX ND 15 kvar F5 V440   | 15 kvar   | 1                  | PC   | 1HYC414009-110-1 | 4,300     |
| LV Capacitor BOX ND 20 kvar F5 V440   | 20 kvar   | 1                  | PC   | 1HYC414009-112-1 | 5,000     |
| LV Capacitor BOX ND 25 kvar F5 V440   | 25 kvar   | 1                  | PC   | 1HYC414009-114-1 | 7,120     |
| LV Capacitor BOX ND 50 kvar F5 V440.  | 50 kvar   | 1                  | PC   | 1HYC414009-120-1 | 14,360    |

### 440 VOLTS, 3 PHASE, 50 Hz

Box Type - Heavy Duty



| Description                           | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|---------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor BOX HD 1 kvar F5 V440    | 1 kvar    | 1                  | PC   | 1HYC414012-101-1 | 400        |
| LV Capacitor BOX HD 2 kvar F5 V440    | 2 kvar    | 1                  | PC   | 1HYC414012-102-1 | 880        |
| LV Capacitor BOX HD 3 kvar F5 V440    | 3 kvar    | 1                  | PC   | 1HYC414012-103-1 | 1,330      |
| LV Capacitor BOX HD 4 kvar F5 V440    | 4 kvar    | 1                  | PC   | 1HYC414012-104-1 | 1,820      |
| LV Capacitor BOX HD 5 kvar F5 V440    | 5 kvar    | 1                  | PC   | 1HYC414012-105-1 | 1,920      |
| LV Capacitor BOX HD 6 kvar F5 V440    | 6 kvar    | 1                  | PC   | 1HYC414012-106-1 | 2,330      |
| LV Capacitor BOX HD 7.5 kvar F5 V440  | 7.5 kvar  | 1                  | PC   | 1HYC414012-107-1 | 2,920      |
| LV Capacitor BOX HD 10 kvar F5 V440   | 10 kvar   | 1                  | PC   | 1HYC414012-108-1 | 3,940      |
| LV Capacitor BOX HD 12.5 kvar F5 V440 | 12.5 kvar | 1                  | PC   | 1HYC414012-109-1 | 4,960      |
| LV Capacitor BOX HD 15 kvar F5 V440   | 15 kvar   | 1                  | PC   | 1HYC414012-110-1 | 5,950      |
| LV Capacitor BOX HD 20 kvar F5 V440   | 20 kvar   | 1                  | PC   | 1HYC414012-112-1 | 7,930      |
| LV Capacitor BOX HD 25 kvar F5 V440   | 25 kvar   | 1                  | PC   | 1HYC414012-114-1 | 9,920      |
| LV Capacitor BOX HD 50 kvar F5 V440   | 50 kvar   | 1                  | PC   | 1HYC414012-120-1 | 19,950     |

### 480 VOLTS, 3 PHASE, 50 Hz

Box Type - Heavy Duty



| Description                           | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|---------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor BOX HD 5.5 kvar F5 V480  | 5.5 kvar  | 1                  | PC   | 1HYC414013-001-1 | 2,240      |
| LV Capacitor BOX HD 8.3 kvar F5 V480  | 8.3 kvar  | 1                  | PC   | 1HYC414013-002-1 | 3,420      |
| LV Capacitor BOX HD 11.1 kvar F5 V480 | 11.1 kvar | 1                  | PC   | 1HYC414013-003-1 | 4,620      |
| LV Capacitor BOX HD 13.8 kvar F5 V480 | 13.8 kvar | 1                  | PC   | 1HYC414013-004-1 | 5,770      |
| LV Capacitor BOX HD 16.6 kvar F5 V480 | 16.6 kvar | 1                  | PC   | 1HYC414013-006-1 | 6,960      |
| LV Capacitor BOX HD 22.1 kvar F5 V480 | 22.1 kvar | 1                  | PC   | 1HYC414013-008-1 | 9,260      |
| LV Capacitor BOX HD 25 kvar F5 V480   | 25 kvar   | 1                  | PC   | 1HYC414013-009-1 | 10,440     |
| LV Capacitor BOX HD 27.7 kvar F5 V480 | 27.7 kvar | 1                  | PC   | 1HYC414013-010-1 | 11,570     |



# Q Cap - L Capacitors

525 VOLTS, 3 PHASE, 50 Hz  
Box Type - Heavy Duty



| Description                           | kvar      | Standard Pkg. Qty. | Unit | Ordering code    | M.R.P. (₹) |
|---------------------------------------|-----------|--------------------|------|------------------|------------|
| LV Capacitor BOX HD 6.6 kvar F5 V525  | 6.6 kvar  | 1                  | PC   | 1HYC414013-011-1 | 2,760      |
| LV Capacitor BOX HD 13.2 kvar F5 V525 | 13.2 kvar | 1                  | PC   | 1HYC414013-013-1 | 5,620      |
| LV Capacitor BOX HD 15 kvar F5 V525   | 15 kvar   | 1                  | PC   | 1HYC414013-014-1 | 6,400      |
| LV Capacitor BOX HD 16.6 kvar F5 V525 | 16.6 kvar | 1                  | PC   | 1HYC414013-015-1 | 7,090      |
| LV Capacitor BOX HD 20 kvar F5 V525   | 20 kvar   | 1                  | PC   | 1HYC414013-016-1 | 8,540      |
| LV Capacitor BOX HD 25 kvar F5 V525   | 25 kvar   | 1                  | PC   | 1HYC414013-017-1 | 10,640     |
| LV Capacitor BOX HD 26.5 kvar F5 V525 | 26.5 kvar | 1                  | PC   | 1HYC414013-018-1 | 11,280     |
| LV Capacitor BOX HD 33.1 kvar F5 V525 | 33.1 kvar | 1                  | PC   | 1HYC414013-019-1 | 14,120     |

## CLMD series for heavy duty applications

415 Volts, 3 Phase, 50 Hz



| Voltage | Description | Rating in kvar | Ordering code  | M.R.P. (₹) |
|---------|-------------|----------------|----------------|------------|
| 415 V   | CLMD 13     | 5              | 1HYC414000-068 | 2,400      |
|         | CLMD 13     | 10             | 1HYC414000-063 | 4,800      |
|         | CLMD 13     | 15             | 1HYC414000-172 | 7,200      |
|         | CLMD 43     | 20             | 1HYC414000-143 | 12,300     |
|         | CLMD 43     | 25             | 1HYC414000-009 | 13,100     |
|         | CLMD 43     | 30             | 1HYC414000-069 | 13,300     |
|         | CLMD 53     | 40             | 1HYC414000-003 | 21,250     |
|         | CLMD 53     | 50             | 1HYC414000-013 | 26,500     |
|         | CLMD 63     | 60             | 1HYC414000-142 | 32,500     |
|         | CLMD 63     | 75             | 1HYC414000-029 | 39,990     |
|         | CLMD 83     | 100            | 1HYC414000-086 | 54,450     |

440 Volts, 3 Phase 50 Hz



| Voltage | Description | Rating in kvar | Ordering code  | M.R.P. (₹) |
|---------|-------------|----------------|----------------|------------|
| 440 V   | CLMD 13     | 5              | 1HYC414001-060 | 3,220      |
|         | CLMD 33     | 10             | 1HYC414000-060 | 6,450      |
|         | CLMD 33     | 15             | 1HYC414000-071 | 9,670      |
|         | CLMD 43     | 20             | 1HYC414000-007 | 12,900     |
|         | CLMD 43     | 25             | 1HYC414000-008 | 13,100     |
|         | CLMD 43     | 30             | 1HYC414000-021 | 13,250     |
|         | CLMD 53     | 40             | 1HYC414000-012 | 21,200     |
|         | CLMD 53     | 50             | 1HYC414000-001 | 24,900     |
|         | CLMD 63     | 60             | 1HYC414000-011 | 29,700     |
|         | CLMD 63     | 75             | 1HYC414000-042 | 34,900     |
|         | CLMD 83     | 100            | 1HYC414000-067 | 49,000     |

480 Volts, 3 Phase 50 Hz



| Voltage | Description | Rating in kvar | Ordering code  | M.R.P. (₹) |
|---------|-------------|----------------|----------------|------------|
| 480 V   | CLMD 13     | 6.6            | 1HYC414001-029 | 4170       |
|         | CLMD 13     | 12.5           | 1HYC414000-099 | 7900       |
|         | CLMD 43     | 20             | 1HYC414000-157 | 13000      |
|         | CLMD 33     | 25             | 1HYC414000-098 | 13300      |
|         | CLMD 53     | 33.5           | 1HYC414000-206 | 20300      |
|         | CLMD 53     | 50             | 1HYC414000-108 | 27990      |
|         | CLMD 63     | 62.5           | 1HYC414000-254 | 37300      |

# CLMD series for heavy duty applications



525 Volts, 3 Phase 50 Hz

| Voltage | Description | Rating in kvar | Ordering code  | M.R.P. (₹) |
|---------|-------------|----------------|----------------|------------|
| 525 V   | CLMD 13     | 6.6            | 1HYC414001-029 | 4,810      |
|         | CLMD 13     | 10             | 1HYC414000-230 | 7,400      |
|         | CLMD 33C    | 15             | 1HYC414000-101 | 7,250      |
|         | CLMD 43     | 20             | 1HYC414000-124 | 13,700     |
|         | CLMD 33     | 25             | 1HYC414000-109 | 13,850     |
|         | CLMD 53     | 34             | 1HYC414000-044 | 21,000     |
|         | CLMD 53     | 50             | 1HYC414000-095 | 28,550     |
|         | CLMD 63     | 69             | 1HYC414000-045 | 35,850     |
|         | CLMD 63     | 75             | 1HYC414000-080 | 36,800     |



CLMD 33 – Slim design capacitors for panel mounting

415 Volts, 3 Phase 50 Hz

| Voltage | Description | Rating in kvar | Ordering code  | M.R.P. (₹) |
|---------|-------------|----------------|----------------|------------|
| 415 V   | CLMD 33C    | 10             | 1HYC414000-065 | 7,200      |
|         | CLMD 33C    | 12.5           | 1HYC414000-088 | 6,900      |
|         | CLMD 33C    | 15             | 1HYC414000-097 | 6,950      |
|         | CLMD 33     | 25             | 1HYC414000-053 | 12,600     |



440 Volts, 3 Phase 50 Hz

| Voltage | Description | Rating in kvar | Ordering code  | M.R.P. (₹) |
|---------|-------------|----------------|----------------|------------|
| 440 V   | CLMD 33C    | 10             | 1HYC414000-066 | 6,250      |
|         | CLMD 33C    | 12.5           | 1HYC414000-096 | 6,400      |
|         | CLMD 33C    | 15             | 1HYC414000-119 | 6,900      |
|         | CLMD 33     | 25             | 1HYC414000-010 | 11,800     |



APP type for heavy duty applications

| Voltage | Rating in Kvar | Ordering code    | M.R.P. (₹) |
|---------|----------------|------------------|------------|
| 440 V   | 5              | 1HYC420000-020-V | 2480       |
|         | 10             | 1HYC420000-019-V | 4960       |
|         | 15             | 1HYC420000-018-V | 7800       |
|         | 20             | 1HYC420000-017-V | 9930       |
|         | 25             | 1HYC420000-015-V | 12410      |
|         | 50             | 1HYC420000-016-V | 34830      |
| 480 V   | 5.5            | 1HYC420000-030-V | 2730       |
|         | 11.1           | 1HYC420000-012-V | 5510       |
|         | 15             | 1HYC420000-006-V | 7450       |
|         | 20             | 1HYC420000-032-V | 9930       |
|         | 25             | 1HYC420000-014-V | 12410      |
|         | 28             | 1HYC420000-001-V | 13910      |
|         | 33             | 1HYC420000-002-V | 16380      |
| 525 V   | 6.6            | 1HYC420000-010-V | 3280       |
|         | 13.8           | 1HYC420000-009-V | 6850       |
|         | 20             | 1HYC420000-008-V | 9930       |
|         | 25             | 1HYC420000-028-V | 12410      |
|         | 33.5           | 1HYC420000-007-V | 16630      |
|         | 67             | 1HYC420000-035-V | 33270      |

# De tuned harmonic filter module

(Box heavy duty capacitor + 7% De tuned reactor)



| 7% Aluminium reactor |             |                               |                     |                   |                               |            |
|----------------------|-------------|-------------------------------|---------------------|-------------------|-------------------------------|------------|
| Type                 | BUS voltage | Effective KVAR at Bus voltage | Cap voltage (Volts) | Cap output (KVAR) | Reactor current rating (Amps) | M.R.P. (₹) |
| BOX                  | 440V        | 5                             | 480                 | 5.5               | 7.28                          | 5,800      |
|                      |             | 10                            | 480                 | 11.1              | 14.56                         | 9,700      |
|                      |             | 15                            | 480                 | 16.6              | 21.84                         | 13,450     |
|                      |             | 20                            | 480                 | 22.1              | 30.4                          | 16,400     |
|                      |             | 25                            | 480                 | 27.7              | 36.4                          | 19,600     |
|                      |             | 50                            | 480                 | 55.4              | 72.8                          | 34,000     |
|                      |             | 75                            | 480                 | 83.1              | 109.2                         | 48,250     |
|                      |             | 100                           | 480                 | 110.8             | 145.6                         | 61,820     |
| 7% Copper reactor    |             |                               |                     |                   |                               |            |
| BOX                  | 440V        | 5                             | 480                 | 5.5               | 7.28                          | 9,200      |
|                      |             | 10                            | 480                 | 11.1              | 14.56                         | 12,520     |
|                      |             | 15                            | 480                 | 16.6              | 21.84                         | 16,200     |
|                      |             | 20                            | 480                 | 22.1              | 30.4                          | 19,650     |
|                      |             | 25                            | 480                 | 27.7              | 36.4                          | 23,200     |
|                      |             | 50                            | 480                 | 55.4              | 72.8                          | 40,300     |
|                      |             | 75                            | 480                 | 83.1              | 109.2                         | 59,200     |
|                      |             | 100                           | 480                 | 110.8             | 145.6                         | 78,050     |

| 7% Aluminium reactor |             |                               |                     |                   |                               |            |
|----------------------|-------------|-------------------------------|---------------------|-------------------|-------------------------------|------------|
| Type                 | BUS voltage | Effective KVAR at Bus voltage | Cap voltage (Volts) | Cap output (KVAR) | Reactor current rating (Amps) | M.R.P. (₹) |
| BOX                  | 440V        | 5                             | 525                 | 6.6               | 7.28                          | 6,600      |
|                      |             | 10                            | 525                 | 13.2              | 14.56                         | 11,300     |
|                      |             | 15                            | 525                 | 20                | 21.84                         | 15,900     |
|                      |             | 20                            | 525                 | 26.5              | 30.4                          | 19,700     |
|                      |             | 25                            | 525                 | 33.1              | 36.4                          | 23,600     |
|                      |             | 50                            | 525                 | 66.2              | 72.8                          | 41,920     |
|                      |             | 75                            | 525                 | 99.3              | 109.2                         | 60,230     |
|                      |             | 100                           | 525                 | 132.4             | 145.6                         | 77,900     |
| 7% Copper reactor    |             |                               |                     |                   |                               |            |
| BOX                  | 440V        | 5                             | 525                 | 6.6               | 7.28                          | 9,990      |
|                      |             | 10                            | 525                 | 13.2              | 14.56                         | 14,200     |
|                      |             | 15                            | 525                 | 20                | 21.84                         | 18,800     |
|                      |             | 20                            | 525                 | 26.5              | 30.4                          | 22,900     |
|                      |             | 25                            | 525                 | 33.1              | 36.4                          | 27,100     |
|                      |             | 50                            | 525                 | 66.2              | 72.8                          | 48,400     |
|                      |             | 75                            | 525                 | 99.3              | 109.2                         | 71,200     |
|                      |             | 100                           | 525                 | 132.4             | 145.6                         | 94,180     |

# De tuned harmonic filter module

(Cylindrical heavy duty capacitor + 7% De tuned reactor)



| 7% Aluminium reactor |             |                               |                     |                   |                               |            |
|----------------------|-------------|-------------------------------|---------------------|-------------------|-------------------------------|------------|
| Type                 | BUS voltage | Effective KVAR at Bus voltage | Cap voltage (Volts) | Cap output (kvar) | Reactor current rating (Amps) | M.R.P. (₹) |
| Cylindrical          | 440V        | 5                             | 480                 | 5.5               | 7.28                          | 5,800      |
|                      |             | 10                            | 480                 | 11.1              | 14.56                         | 9,700      |
|                      |             | 15                            | 480                 | 16.6              | 21.84                         | 13,500     |
|                      |             | 20                            | 480                 | 22.1              | 30.4                          | 16,400     |
|                      |             | 25                            | 480                 | 27.7              | 36.4                          | 19,600     |
|                      |             | 50                            | 480                 | 55.4              | 72.8                          | 33,950     |
|                      |             | 75                            | 480                 | 83.1              | 109.2                         | 48,300     |
|                      |             | 100                           | 480                 | 110.8             | 145.6                         | 61,820     |
| 7% Copper reactor    |             |                               |                     |                   |                               |            |
| Cylindrical          | 440V        | 5                             | 480                 | 5.5               | 7.28                          | 9,300      |
|                      |             | 10                            | 480                 | 11.1              | 14.56                         | 12,600     |
|                      |             | 15                            | 480                 | 16.6              | 21.84                         | 16,200     |
|                      |             | 20                            | 480                 | 22.1              | 30.4                          | 19,700     |
|                      |             | 25                            | 480                 | 27.7              | 36.4                          | 23,000     |
|                      |             | 50                            | 480                 | 55.4              | 72.8                          | 40,350     |
|                      |             | 75                            | 480                 | 83.1              | 109.2                         | 59,150     |
|                      |             | 100                           | 480                 | 110.8             | 145.6                         | 78,050     |

|                   |             | 7% Aluminium reactor          |                     |                   |                               |            |
|-------------------|-------------|-------------------------------|---------------------|-------------------|-------------------------------|------------|
| Type              | BUS voltage | Effective KVAR at Bus voltage | Cap voltage (Volts) | Cap output (kvar) | Reactor current rating (Amps) | M.R.P. (₹) |
| Cylindrical       | 440V        | 5                             | 525                 | 6.6               | 13.01                         | 7,200      |
|                   |             | 10                            | 525                 | 15                | 14.56                         | 12,710     |
|                   |             | 15                            | 525                 | 20                | 21.84                         | 16,180     |
|                   |             | 20                            | 525                 | 25                | 30.4                          | 19,210     |
|                   |             | 25                            | 525                 | 33.1              | 36.4                          | 23,820     |
|                   |             | 50                            | 525                 | 66.2              | 72.8                          | 42,450     |
|                   |             | 75                            | 525                 | 99.3              | 109.2                         | 61,150     |
|                   |             | 100                           | 525                 | 132.4             | 145.6                         | 78820      |
| 7% Copper reactor |             |                               |                     |                   |                               |            |
| Cylindrical       | 440V        | 5                             | 525                 | 6.6               | 13.01                         | 10,200     |
|                   |             | 10                            | 525                 | 15                | 14.56                         | 15,600     |
|                   |             | 15                            | 525                 | 20                | 21.84                         | 18,900     |
|                   |             | 20                            | 525                 | 25                | 30.4                          | 22,400     |
|                   |             | 25                            | 525                 | 33.1              | 36.4                          | 27,300     |
|                   |             | 50                            | 525                 | 66.2              | 72.8                          | 48,900     |
|                   |             | 75                            | 525                 | 99.3              | 109.2                         | 71,950     |
|                   |             | 100                           | 525                 | 132.4             | 145.6                         | 94,950     |



# De tuned harmonic filter module

(CLMD heavy duty capacitor + 7% De tuned reactor)



| 7% Aluminium reactor |             |                               |                     |                   |                               |            |
|----------------------|-------------|-------------------------------|---------------------|-------------------|-------------------------------|------------|
| Type                 | BUS voltage | Effective KVAR at Bus voltage | Cap voltage (Volts) | Cap output (KVAR) | Reactor current rating (Amps) | M.R.P. (₹) |
| CLMD Square Type     | 440V        | 5                             | 480                 | 6                 | 7.28                          | 11,400     |
|                      |             | 10                            | 480                 | 12.5              | 14.56                         | 14,700     |
|                      |             | 15                            | 480                 | 16.6              | 21.84                         | 19,900     |
|                      |             | 20                            | 480                 | 22.1              | 30.4                          | 22,800     |
|                      |             | 25                            | 480                 | 28                | 36.4                          | 25,300     |
|                      |             | 50                            | 480                 | 56                | 72.8                          | 44,400     |
|                      |             | 75                            | 480                 | 84                | 109.2                         | 55,300     |
|                      |             | 100                           | 480                 | 112               | 145.6                         | 81,700     |

| 7% Copper reactor |      |     |     |      |       |          |
|-------------------|------|-----|-----|------|-------|----------|
| CLMD Square Type  | 440V | 5   | 480 | 6    | 7.28  | 15,600   |
|                   |      | 10  | 480 | 12.5 | 14.56 | 18,200   |
|                   |      | 15  | 480 | 16.6 | 21.84 | 23,150   |
|                   |      | 20  | 480 | 22.1 | 30.4  | 26,910   |
|                   |      | 25  | 480 | 28   | 36.4  | 29,490   |
|                   |      | 50  | 480 | 56   | 72.8  | 52,310   |
|                   |      | 75  | 480 | 84   | 109.2 | 68,550   |
|                   |      | 100 | 480 | 112  | 145.6 | 1,01,090 |

| 7% Aluminium reactor |      |     |     |      |       |          |
|----------------------|------|-----|-----|------|-------|----------|
| CLMD Square Type     | 440V | 5   | 525 | 6.6  | 7.28  | 11,700   |
|                      |      | 10  | 525 | 15   | 14.56 | 14,900   |
|                      |      | 15  | 525 | 20   | 21.84 | 19,950   |
|                      |      | 20  | 525 | 27.5 | 30.4  | 25,700   |
|                      |      | 25  | 525 | 34   | 36.4  | 32,290   |
|                      |      | 50  | 525 | 66   | 72.8  | 58,150   |
|                      |      | 75  | 525 | 100  | 109.2 | 86,400   |
|                      |      | 100 | 525 | 132  | 145.6 | 1,08,890 |

| 7% Copper reactor |      |     |     |      |       |          |
|-------------------|------|-----|-----|------|-------|----------|
| CLMD Square Type  | 440V | 5   | 525 | 6.6  | 7.28  | 15,990   |
|                   |      | 10  | 525 | 15   | 14.56 | 18,400   |
|                   |      | 15  | 525 | 20   | 21.84 | 23,400   |
|                   |      | 20  | 525 | 27.5 | 30.4  | 29,550   |
|                   |      | 25  | 525 | 34   | 36.4  | 36,400   |
|                   |      | 50  | 525 | 66   | 72.8  | 65,950   |
|                   |      | 75  | 525 | 100  | 109.2 | 99,700   |
|                   |      | 100 | 525 | 132  | 145.6 | 1,28,600 |

## RVC relay

| Type                  | Ordering code  | No of steps | M.R.P. (₹) |
|-----------------------|----------------|-------------|------------|
| RVC 6 ( 100 - 440V )  | 1HYC418006-014 | 6           | 18,000     |
| RVC 8 ( 100 - 440V )  | 1HYC418006-015 | 8           | 24,500     |
| RVC 10 ( 100 - 440V ) | 1HYC418006-016 | 10          | 26,800     |
| RVC 12 ( 100 - 440V ) | 1HYC418006-017 | 12          | 28,650     |

## RVT relay

| Type                           | No of steps     | Ordering code | M.R.P. (₹) |
|--------------------------------|-----------------|---------------|------------|
| RVT 6                          | 2GCA291720A0050 | 6             | 71,500     |
| RVT 12                         | 2GCA291721A0050 | 12            | 94,900     |
| RVT 6 with Modbus Adapter Kit  | 1HYC418006-049  | 6             | 97,950     |
| RVT 12 with Modbus Adapter Kit | 1HYC418006-048  | 12            | 1,10,000   |
| RVT 12 3Phase                  | 2GCA291722A0050 | 12            | 99,900     |

## Distribution automation



ABB offers innovative technology for complete protection of your distribution systems. With a wide range of products and systems based on electromechanical, static and numerical micro-processor based platforms, ABB offers complete protection solutions for utility and industry power distribution networks for improved performance, reliability and safety.

ABB solutions include application engineering, testing & commissioning, after sales service, troubleshooting and training. The products manufactured are approved by leading consultants in the electrical engineering field and are widely used by major utilities, industries and OEMs.

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## Notes:

- a) Price indicated in the price list are Ex-works, Maneja, Vadodara, Gujarat, India, inclusive of packing and forwarding. Freight & insurance charges are extra as applicable. The prices are exclusive of GST or any other taxes/duties which shall be charged at the rate prevailing at the time of supply.
- b) Refer standard delivery time document from factory for PO total lot quantity. New delivery times shall be communicated, if PO total quantity exceeds lot sizes. The delivery times indicated are Ex-works and excluding transportation time.
- c) We may also be able to offer priority deliveries. Check with your local ABB office.
- d) You can check delivery time from factory @ [https://abb.sharepoint.com/sites/MVP-EXT/Delivery\\_time\\_info/SitePages/Vadodara.aspx](https://abb.sharepoint.com/sites/MVP-EXT/Delivery_time_info/SitePages/Vadodara.aspx)
- e) Delivery time quoted are applicable from the date of receipt of a technically and commercially clear order.
- f) Prices “upon request” for numerical relays shall be provided as per the configuration requirement. Contact with your local ABB office.
- g) Combiflex accessories like sockets, crimping tool etc. need to be ordered separately for all the combiflex mounted electromechanical relays. Check with your local ABB office for necessary price offers.
- h) The price List is subject to “ABB General Terms and Conditions” of sale. The prices are subject to revision without prior notice.
- i) ABB reserve the right to make technical changes or modify the contents of this document without prior notice.
- j) ABB assumes no responsibility for any potential errors or possible lack of information in this document.
- k) Visit “<http://new.abb.com/medium-voltage/distribution-automation>” for catalogues.
- l) All postal/couriers should be addressed to :  
ABB India Limited  
Distribution Automation  
Maneja Works, Vadodara-390 013  
Gujarat, India
- m) All e-mails related to marketing & sales queries should be sent to :  
in-da.sales@abb.com

## Section I: Auxiliary relays, tripping relays and timers

| Type                      | Technical description                                                           | Auxiliary voltage                        | Type of mounting      | Contact configurations                      | Typical applications                               | List Price (INR) |
|---------------------------|---------------------------------------------------------------------------------|------------------------------------------|-----------------------|---------------------------------------------|----------------------------------------------------|------------------|
| <b>Auxiliary relays</b>   |                                                                                 |                                          |                       |                                             |                                                    |                  |
| CV2DJ                     | Single element auxiliary relay, self reset contacts with operation indicator    | 24/30/48/110/220/250 V DC                | Flush mounting        | 2NO+0NC/<br>1NO+1NC                         | Contact multiplication, signalling                 | 1,950            |
| CV2AJ                     | Single element auxiliary relay, self reset contacts with operation indicator    | 110/240 V AC                             | Flush mounting        | 2NO+0NC/<br>1NO+1NC                         | Contact multiplication, signalling                 | 2,380            |
| CV2D2J                    | Two element auxiliary relay, self reset contacts with operation indicator       | 24/30/48/110/220/250 V DC                | Flush mounting        | 4NO+0NC/<br>2NO+2NC/<br>3NO+1NC             | Contact multiplication, signalling                 | 2,700            |
| CV2A2J                    | Two element auxiliary relay, self reset contacts with operation indicator       | 110/240 V AC                             | Flush mounting        | 4NO+0NC/<br>2NO+2NC/<br>3NO+1NC             | Contact multiplication, signalling                 | 3,130            |
| P8nCH2J                   | Single element auxiliary relay, self reset contacts with operation indicator    | 24/30/48/110/125//220/250 V DC           | Flush mounting        | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC | Contact multiplication, signalling and tripping    | 3,610            |
| P8nCH2J                   | Single element auxiliary relay, self reset contacts without operation indicator | 110/240 V AC                             | Flush mounting        | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC | Contact multiplication, signalling and tripping    | 4,040            |
| P8nAHX                    | Single element auxiliary relay, self reset contacts without operation indicator | 24/30/48/110/125//220/250 V DC           | Plug-in base mounting | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC | Contact multiplication, signalling and tripping    | 3,990            |
| RXP8n                     | Single element auxiliary relay, self reset contacts without operation indicator | 24/30/48/110/220/250 V DC                | Combiflex mounting*   | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC | Contact multiplication, signalling and tripping    | 3,270            |
| <b>Supervision relays</b> |                                                                                 |                                          |                       |                                             |                                                    |                  |
| PN8nCH2J                  | No volt relay with reverse flag, self reset contacts                            | 24/30/48/110/220 V DC                    | Flush mounting        | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC | DC supply supervision                              | 3,590            |
| PN8nCH2J                  | No volt relay with reverse flag, self reset contacts                            | 110/240 V AC                             | Flush mounting        | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC | AC supply supervision                              | 3,910            |
| TCS                       | Trip circuit supervision relay                                                  | 24/30/48 V DC<br>110-125/220-250 V DC/AC | Flush mounting        | 1NO+1NC+2C/O                                | Trip circuit supervision                           | 4,285            |
| RXTCS                     | Trip circuit supervision relay                                                  | 24/30/48 V DC<br>110-125/220-250 V DC/AC | Combiflex mounting*   | 1NO+1NC+2C/O                                | Trip circuit supervision                           | 4,365            |
| UVT92M                    | Fuse failure relay                                                              | 110V AC, 50 Hz, 30/110/220 V DC          | Flush mounting        |                                             | Fuse failure supervision                           | 8,835            |
| NT10                      | Universal time relay                                                            | 18-80 V DC<br>80-265 V DC/AC             | Flush mounting        | 1NO+2C/O                                    | ON delay timer, OFF delay timer, Interval, flasher | 6,640            |

\*Combiflex accessories need to be ordered separately. Check with your local ABB office.

## Section II: Electro-mechanical high speed tripping relays, bi-stable relays and static relays

| Type                              | Technical description                                                                           | Auxiliary voltage              | Type of mounting      | Contact configurations                                                                           | Typical applications | List Price (INR) |
|-----------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------|-----------------------|--------------------------------------------------------------------------------------------------|----------------------|------------------|
| <b>High speed tripping relays</b> |                                                                                                 |                                |                       |                                                                                                  |                      |                  |
| PQ5nCH2J                          | High speed tripping relay, hand reset contacts with operation indicator                         | 24/30/48/110/125//220/250 V DC | Flush mounting        | 4NO+0NC/<br>3NO+1NC                                                                              | Low burden tripping  | 3,280            |
| PQ5nCH2J                          | High speed tripping relay, hand reset contacts with operation indicator                         | 110/240 V AC                   | Flush mounting        | 4NO+0NC/<br>3NO+1NC                                                                              | Low burden tripping  | 3,705            |
| PQ8nCH2J                          | High speed tripping relay, hand reset contacts with operation indicator                         | 24/30/48/110/125//220/250 V DC | Flush mounting        | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC                                                      | Low burden tripping  | 3,920            |
| PQ8nCH2J                          | High speed tripping relay, hand reset contacts with operation indicator                         | 110/240 V AC                   | Flush mounting        | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC                                                      | Low burden tripping  | 4,240            |
| PQ8nC2JW                          | High speed high burden tripping relay, hand reset contacts with operation indicator             | 24-30/48/110-125//220-250 V DC | Flush mounting        | 6NO+0NC/<br>5NO+1NC/<br>4NO+2NC                                                                  | High burden tripping | 3,920            |
| RXPQ8n                            | High speed tripping relay, hand reset contacts with operation indicator                         | 24/30/48/110/220/250 V DC      | Combiflex mounting*   | 7NO+0NC/<br>6NO+1NC/<br>5NO+2NC/<br>4NO+3NC                                                      | Low burden tripping  | 3,320            |
| PSU14n-2X                         | High speed tripping relay, electrically reset contacts, with operation indicator                | 110/220 V DC                   | Plug-in base mounting | 14NO+0NC/<br>13NO+1NC/<br>12NO+2NC/<br>11NO+3NC/<br>10NO+4NC/<br>9NO+5NC/<br>8NO+6NC/<br>7NO+7NC | High burden tripping | 11,665           |
| RXPSU14n                          | High speed tripping relay, electrically reset contacts with operation indicator                 | 110/220 V DC                   | Combiflex mounting*   | 14NO+0NC/<br>13NO+1NC/<br>12NO+2NC/<br>11NO+3NC/<br>10NO+4NC/<br>9NO+5NC/<br>8NO+6NC/<br>7NO+7NC | High burden tripping | 11,665           |
| PSU6n-X                           | High speed trip relay without operation indicator                                               | 110/220 V DC                   | Plug-in base mounting | 6NO+0NC<br>5NO+1NC<br>4NO+2NC<br>3NO+3NC                                                         | High burden tripping | 7,070            |
| RXPSU6n                           | High speed trip relay without operation indicator                                               | 110/220 V DC                   | Combiflex mounting*   | 6NO+0NC<br>5NO+1NC<br>4NO+2NC<br>3NO+3NC                                                         | High burden tripping | 7,070            |
| PSU14nCJW                         | High speed high burden tripping relay, hand/ electrical reset contacts with operation indicator | 110/220 V DC                   | Flush Mounting        | 14NO+0NC<br>13NO+1NC/<br>12NO+2NC/<br>11NO+3NC/<br>10NO+4NC/<br>9NO+5NC/<br>8NO+6NC/<br>7NO+7NC  | High burden tripping | 12,585           |
| PSU6nCJW                          | High speed high burden tripping relay, hand/ electrical reset contacts with operation indicator | 110/220 V DC                   | Flush Mounting        | 6NO+0NC<br>5NO+1NC/<br>4NO+2NC/<br>3NO+3NC                                                       | High burden tripping | 7,630            |

| Type                           | Technical description                                                   | Auxiliary voltage                                                                      | Type of mounting      | Contact configurations                                                                           | Typical applications                                                                                                             | List Price (INR) |
|--------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Bi-stable relays</b>        |                                                                         |                                                                                        |                       |                                                                                                  |                                                                                                                                  |                  |
| PSU6n-X                        | Bistable relay, electrically reset contacts without operation indicator | 24/30/48/110/125//220/250 V DC                                                         | Plug-in base mounting | 6NO+0NC/<br>5NO+1NC/<br>4NO+2NC/<br>3NO+3NC                                                      | CB/ Isolation/<br>Earth switch/<br>Contact multiplication/<br>Voltage selection/ CT switching                                    | 6,425            |
| PSU14n-2X                      | Bistable relay, electrically reset contacts with operation indicator    | 24/30/48/110/125//220/250 V DC                                                         | Plug-in base mounting | 14NO+0NC/<br>13NO+1NC/<br>12NO+2NC/<br>11NO+3NC/<br>10NO+4NC/<br>9NO+5NC/<br>8NO+6NC/<br>7NO+7NC | CB/ Isolation/<br>Earth switch/<br>Contact multiplication/<br>Voltage selection/ CT switching                                    | 10,600           |
| RXPSU6n                        | Bistable relay, electrically reset contacts without operation indicator | 24/30/48/110/125//220/250 V DC                                                         | Combiflex mounting*   | 6NO+0NC/<br>5NO+1NC/<br>4NO+2NC/<br>3NO+3NC                                                      | CB/ Isolation/<br>Earth switch/<br>Contact multiplication/<br>Voltage selection/ CT switching                                    | 6,425            |
| RXPSU14n                       | Bistable relay, electrically reset contacts, with operation Indicator   | 24/30/48/110/125//220/250 V DC                                                         | Combiflex mounting*   | 14NO+0NC/<br>13NO+1NC/<br>12NO+2NC/<br>11NO+3NC/<br>10NO+4NC/<br>9NO+5NC/<br>8NO+6NC/<br>7NO+7NC | CB/ Isolation/<br>Earth switch/<br>Contact multiplication/<br>Voltage selection/ CT switching                                    | 10,600           |
| <b>Static protection relay</b> |                                                                         |                                                                                        |                       |                                                                                                  |                                                                                                                                  |                  |
| IRXm                           | Circulating current relay                                               | 24/30/48 V DC<br>110-125/220-250 V DC                                                  | Flush mounting        | 2NO+1NC                                                                                          | Restricted earth fault protection for generators and transformers, high impedance differential protection for motors, generators | 6,960            |
| VHXM22A                        | Under relay without time delay                                          | 63.5/110/240 V AC, 40-80%,<br>24/30/48/110/220 V DC                                    | Flush mounting        | 6NO+0NC/<br>3NO+3NC/                                                                             | Under voltage protection/<br>Residual (dead bus) monitoring                                                                      | 7,710            |
| VHXM22B                        | Under voltage relay with variable time delay                            | 63.5/110/240 V AC, 40-80%,<br>0.1-1.0 sec/0.5-5.0 sec/1-10 sec, 24/30/48/110/220 V DC  | Flush mounting        | 6NO+0NC/<br>3NO+3NC/                                                                             | Under voltage protection                                                                                                         | 11,245           |
| VHXM23A                        | Over voltage relay without time delay                                   | 63.5/110/240 V AC, 80-140%,<br>24/30/48/110/220 V DC                                   | Flush mounting        | 6NO+0NC/<br>3NO+3NC/                                                                             | Over voltage relay                                                                                                               | 7,710            |
| VHXM23B                        | Over voltage relay with variable time delay                             | 63.5/110/240 V AC, 80-140%,<br>0.1-1.0 sec/0.5-5.0 sec/1-10 sec, 24/30/48/110/220 V DC | Flush mounting        | 6NO+0NC/<br>3NO+3NC/                                                                             | Over voltage relay                                                                                                               | 11,245           |

\*Combiflex accessories need to be ordered separately. Check with your local ABB office.

## Section III: Numerical protection and control relays

| Type                      | Product description                                                               | L.P.(₹)      |
|---------------------------|-----------------------------------------------------------------------------------|--------------|
| <b>Relion® 605 series</b> |                                                                                   |              |
| REF601                    | Numerical feeder protection and control relay                                     | Upon request |
| REJ601                    | Numerical feeder protection relay                                                 | Upon request |
| REM601                    | Numerical motor protection and control / Motor protection relay                   | Upon request |
| REJ603                    | Numerical self-powered feeder protection relay                                    | Upon request |
| <b>Relion® 611 series</b> |                                                                                   |              |
| REF611                    | Numerical feeder protection and control relay                                     | Upon request |
| REM611                    | Numerical motor protection and control relay                                      | Upon request |
| REB611                    | Numerical busbar and multipurpose differential protection and control relay       | Upon request |
| REU611                    | Numerical voltage protection and control relay                                    | Upon request |
| <b>Relion® 615 series</b> |                                                                                   |              |
| REF615                    | Numerical feeder protection and control relay                                     | Upon request |
| REM615                    | Numerical motor protection and control relay                                      | Upon request |
| RED615                    | Numerical line differential protection and control relay                          | Upon request |
| RET615                    | Numerical transformer protection and control relay                                | Upon request |
| REV615                    | Numerical capacitor bank protection and control relay                             | Upon request |
| REU615                    | Numerical voltage protection and control relay                                    | Upon request |
| REC615                    | Grid automation, numerical remote monitoring and control relay                    | Upon request |
| RER615                    | Grid automation, numerical recloser protection and control relay                  | Upon request |
| REG615                    | Numerical generator protection and control relay                                  | Upon request |
| <b>Relion® 620 series</b> |                                                                                   |              |
| REF620                    | Numerical feeder protection and control relay                                     | Upon request |
| RET620                    | Numerical transformer protection and control relay                                | Upon request |
| REM620                    | Numerical motor protection and control relay                                      | Upon request |
| <b>Relion® 630 series</b> |                                                                                   |              |
| REF630                    | Numerical feeder protection and control relay                                     | Upon request |
| RET630                    | Numerical transformer protection and control relay                                | Upon request |
| REG630                    | Numerical generator protection and control                                        | Upon request |
| REM630                    | Numerical motor protection and control                                            | Upon request |
| <b>Relion® 640 series</b> |                                                                                   |              |
| REX640                    | All-in-one protection for advanced power generation and distribution applications | Upon request |

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Prices "Upon request" for Numerical relays shall be provided as per the configuration requirement.





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# Type 2 co-ordination

## MS132/MS165 DOL-NS-IE1/IE2

SCPD type : MMS rated voltage : 400/415 V  
Short circuit current: 50 kA starting type : DOL-NS  
Co-ordination type: IEC Type 2 overload relay: embedded  
Frequency: 50-60 Hz

| Motor       |               |            | Manual motor starter           |                       | Contactor |
|-------------|---------------|------------|--------------------------------|-----------------------|-----------|
| Rated power | Rated current |            | Instantaneous tripping current | Current setting range |           |
| [kW]        | [A]           | Type       | [A]                            | [A]                   | Type      |
| 0.06        | 0.2           | MS132-0,25 | 2.44                           | 0.16 - 0.25           | A9        |
| 0.09        | 0.3           | MS132-0,40 | 3.9                            | 0.25 - 0.40           | A9        |
| 0.12        | 0.44          | MS132-0,63 | 6.14                           | 0.40 - 0.63           | A9        |
| 0.18        | 0.6           | MS132-0,63 | 6.14                           | 0.40 - 0.63           | A9        |
| 0.25        | 0.85          | MS132-1,0  | 11.5                           | 0.63 - 1.00           | A9        |
| 0.37        | 1.1           | MS132-1,6  | 18.4                           | 1.00 - 1.60           | A9        |
| 0.55        | 1.5           | MS132-1,6  | 18.4                           | 1.00 - 1.60           | A9        |
| 0.75        | 1.9           | MS132-2,5  | 28.75                          | 1.60 - 2.50           | A9        |
| 1.1         | 2.7           | MS132-4,0  | 50                             | 2.50 - 4.00           | A16       |
| 1.5         | 3.6           | MS132-4,0  | 50                             | 2.50 - 4.00           | A16       |
| 2.2         | 4.9           | MS132-6,3  | 78.75                          | 4.00 - 6.30           | A26       |
| 3           | 6.5           | MS132-10   | 150                            | 6.30 - 10.00          | A26       |
| 4           | 8.5           | MS132-10   | 150                            | 6.30 - 10.00          | A26       |
| 5.5         | 11.5          | MS132-12   | 180                            | 8.00 - 12.00          | A26       |
| 7.5         | 15.5          | MS132-16   | 240                            | 10.00 - 16.00         | A30       |
| 11          | 22            | MS132-25   | 375                            | 20.00 - 25.00         | A30       |
| 15          | 29            | MS132-32   | 480                            | 25.00 - 32.00         | A30       |
| 18.5        | 35            | MS165-42   | 630                            | 30.00 - 42.00         | A63       |
| 22          | 41            | MS165-54   | 810                            | 40.00 - 54.00         | A63       |
| 25          | 46.6          | MS165-54   | 810                            | 40.00-54.00           | A75       |
| 30          | 45.5          | MS165-65   | 975                            | 52.00-65.00           | A75       |

## MS132/MS165 SD-NS-IE3

Co-ordination type: IEC Type 2  
SCPD type: MMS rated voltage : 400/415 V  
Short circuit current: 50 kA starting type : SD-NS  
Overload relay: Embedded frequency : 50-60 Hz

| Rated power | Rated current |              | Instantaneous tripping current | Current setting range |      |       |      |
|-------------|---------------|--------------|--------------------------------|-----------------------|------|-------|------|
| [kW]        | [A]           | Type         | [A]                            | [A]                   | Line | Delta | Star |
| 0.06        | 0.20          | MS132-0,25   | 3.13                           | 0.16 - 0.25           | A9   | A9    | A9   |
| 0.09        | 0.30          | MS132-0,40   | 5.0                            | 0.25 - 0.40           | A9   | A9    | A9   |
| 0.12        | 0.44          | MS132-0,63   | 7.88                           | 0.40 - 0.63           | A9   | A9    | A9   |
| 0.18        | 0.60          | MS132-0.63   | 7.88                           | 0.40 - 0.63           | A9   | A9    | A9   |
| 0.25        | 0.85          | MS132-1,00   | 12.5                           | 0.63 - 1.00           | A9   | A9    | A9   |
| 0.37        | 1.10          | MS132-1,60   | 20.0                           | 1.00 - 1.60           | A9   | A9    | A9   |
| 0.55        | 1.50          | MS132-1,60   | 20.0                           | 1.00 - 1.60           | A9   | A9    | A9   |
| 0.75        | 1.90          | MS132-2,50   | 31.25                          | 1.60 - 2.50           | A9   | A9    | A9   |
| 1.1         | 2.70          | MS132-4,00   | 50                             | 2.50 - 4.00           | A26  | A26   | A26  |
| 1.5         | 3.60          | MS132-4,00   | 50                             | 2.50 - 4.00           | A26  | A26   | A26  |
| 2.2         | 4.90          | MS132-6,30   | 78.75                          | 4.00 - 6.30           | A26  | A26   | A26  |
| 3.0         | 6.5           | MS132-10.00  | 150                            | 6.30-10.00            | A26  | A26   | A26  |
| 4.0         | 8.5           | MS132-10.00  | 150                            | 6.30-10.00            | A26  | A26   | A26  |
| 5.5         | 11.5          | MS132-16.00  | 240                            | 10.00-16.00           | A26  | A26   | A26  |
| 7.5         | 18.5          | MS132-20.00  | 300                            | 16.00-20.00           | A30  | A26   | A26  |
| 11.0        | 22.0          | MS132- 25.00 | 375                            | 20.00-25.00           | A30  | A26   | A26  |
| 15.0        | 29.0          | MS132- 32.00 | 480                            | 25.00-32.00           | A30  | A26   | A26  |
| 15.0        | 29.0          | MS165 -32.00 | 480                            | 23.00-32.00           | A40  | A40   | A40  |
| 18.5        | 35.0          | MS165 -42.00 | 630                            | 30.00-42.00           | A40  | A40   | A40  |
| 22.0        | 41.0          | MS165 -54.00 | 810                            | 40.00-54.00           | A50  | A40   | A40  |
| 25.0        | 46.6          | MS165 -54.00 | 810                            | 40.00-54.00           | A63  | A40   | A40  |
| 30.0        | 55.0          | MS165 -65.00 | 975                            | 52.00-65.00           | A63  | A40   | A40  |

# Type 2 co-ordination

## MCCB DOL-NS

SCPD type: MCCB  
Rated voltage: 400/415 V  
Short circuit current: 50 kA  
Starting type: DOL-NS  
Coordination type: IEC Type 2 / IE1 /IE2  
Overload relay: TOL  
Frequency: 50-60 Hz

| Motor       |               | Moulded case circuit breakers  |      | Contactor |            | Overload relay        |
|-------------|---------------|--------------------------------|------|-----------|------------|-----------------------|
| Rated power | Rated current | Instantaneous tripping current |      |           |            | Current setting range |
| [kW]        | [A]           | Type                           | [A]  | Type      | Type       | [A]                   |
| 0.37        | 1.1           | XT2S160 MF 2                   | 28   | A9        | TA25DU1.4  | 1 - 1.4               |
| 0.55        | 1.5           | XT2S160 MF 2                   | 28   | A9        | TA25DU1.8  | 1.3 - 1.8             |
| 0.75        | 1.9           | XT2S160 MF 2                   | 28   | A9        | TA25DU2.4  | 1.7 - 2.4             |
| 1.1         | 2.7           | XT2S160 MF 4                   | 56   | A9        | TA25DU4    | 2.8 - 4               |
| 1.5         | 3.6           | XT2S160 MF 4                   | 56   | A16       | TA25DU5    | 3.5 - 5               |
| 2.2         | 4.9           | XT2S160 MF 8.5                 | 120  | A26       | TA25DU6.5  | 4.5 - 6.5             |
| 3           | 6.5           | XT2S160 MF 8.5                 | 120  | A26       | TA25DU8.5  | 6 - 8.5               |
| 4           | 8.5           | XT2S160 MF 12.5                | 175  | A30       | TA25DU11   | 7.5 - 11              |
| 5.5         | 11.5          | XT2S160 MF 12.5                | 175  | A30       | TA25DU14   | 10 - 14               |
| 7.5         | 15.5          | XT2S160 MA 20                  | 210  | A30       | TA25DU19   | 13 - 19               |
| 11          | 22            | XT2S160 MA 32                  | 288  | A30       | TA42DU25   | 18 - 25               |
| 15          | 29            | XT2S160 MA 52                  | 392  | A50       | TA75DU42   | 29 - 42               |
| 18.5        | 35            | XT2S160 MA 52                  | 469  | A50       | TA75DU52   | 36 - 52               |
| 22          | 41            | XT2S160 MA 52                  | 547  | A50       | TA75DU52   | 36 - 52               |
| 30          | 55            | XT2S160 MA 80                  | 840  | A63       | TA75DU80   | 60 - 80               |
| 37          | 66            | XT2S160 MA 80                  | 960  | A75       | TA75DU80   | 60 - 80               |
| 45          | 80            | XT2S160 MA 100                 | 1200 | A95       | TA110DU110 | 80 - 110              |
| 55          | 97            | XT3S250 MA 160                 | 1440 | A110      | TA110DU110 | 80 - 110              |
| 75          | 132           | XT3S250 MA 200                 | 1800 | A145      | TA200DU175 | 130 - 175             |
| 90          | 160           | XT3S250 MA 200                 | 2400 | A185      | TA200DU200 | 150 - 200             |
| 110         | 193           | T5S400 PR221-I In320           | 2720 | AF205     | EF205-210  | 63 - 210              |
| 132         | 230           | T5S400 PR221-I In400           | 3200 | AF265     | EF370-380  | 115 - 380             |
| 160         | 280           | T5S400 PR221-I In400           | 4000 | AF305     | EF370-380  | 115 - 380             |
| 200         | 350           | T5S630 PR221-I In630           | 5040 | AF370     | EF370-380  | 115 - 380             |
| 250         | 430           | T6S630 PR221-I In630           | 6300 | AF460     | EF460-500  | 150 - 500             |
| 290         | 520           | T6S800 PR221-I In800           | 8000 | AF580     | EF750-800  | 250 - 800             |
| 315         | 540           | T6S800 PR221-I In800           | 8000 | AF580     | EF750-800  | 250 - 800             |
| 355         | 610           | T6S800 PR221-I In800           | 8000 | AF750     | EF750-800  | 250 - 800             |

# Type 2 co-ordination

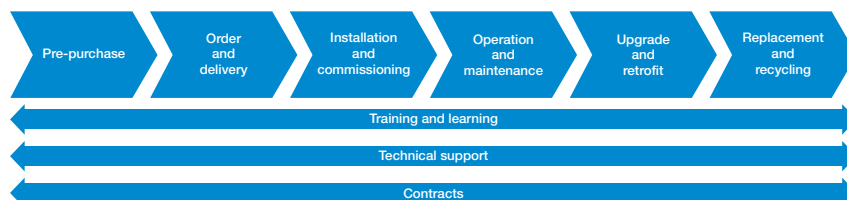
## MCCB SD-NS

SCPD type: MCCB  
Rated voltage: 400/415 V  
Short circuit current: 50 kA  
Starting type: SD-NS  
Coordination type: IEC Type 2 / IE1 / IE2  
Overload relay: TOL  
Frequency: 50-60 Hz

| Motor   |        | MCCB                 |        | Contactor |            |           | Thermal release |         |
|---------|--------|----------------------|--------|-----------|------------|-----------|-----------------|---------|
| Pe [kW] | Ie [A] | Type                 | Im [A] | Line type | Delta type | Star type | Type            | [A]     |
| 18.5    | 35     | XT2S160 MA52         | 469    | A50       | A50        | A26       | TA75DU25        | 18-25   |
| 22      | 41     | XT2S160 MA52         | 547    | A50       | A50        | A26       | TA75DU32        | 22-32   |
| 30      | 55     | XT2S160 MA80         | 720    | A63       | A63        | A30       | TA75DU42        | 29-42   |
| 37      | 66     | XT2S160 MA80         | 840    | A75       | A75        | A30       | TA75DU52        | 36-52   |
| 45      | 80     | XT2S160 MA100        | 1050   | A75       | A75        | A30       | TA75DU63        | 45-63   |
| 55      | 97     | XT2S160 MA100        | 1200   | A75       | A75        | A40       | TA75DU63        | 45-63   |
| 75      | 132    | XT3S250 MA160        | 1700   | A95       | A95        | A75       | TA110DU90       | 66-90   |
| 90      | 160    | XT3S250 MA200        | 2000   | A110      | A110       | A95       | TA110DU110      | 80-110  |
| 110     | 195    | XT3S250 MA200        | 2400   | A145      | A145       | A95       | TA200DU135      | 100-135 |
| 132     | 232    | T5S400 PR221-I In320 | 2880   | A145      | A145       | A110      | EF205-210       | 60-200  |
| 160     | 282    | T5S400 PR221-I In400 | 3600   | A185      | A185       | A145      | EF205-210       | 60-200  |
| 200     | 350    | T5S630 PR221-I In630 | 5040   | AF265     | AF265      | AF190     | EF370-380       | 115-380 |
| 250     | 430    | T6S630 PR221-I In630 | 6300   | AF265     | AF265      | AF190     | EF370-380       | 115-380 |
| 290     | 520    | T6S630 PR221-I In630 | 8000   | AF580     | AF580      | AF400     | EF750-800       | 250-800 |
| 315     | 540    | T6S800 PR221-I In800 | 8000   | AF580     | AF580      | AF400     | EF750-800       | 250-800 |
| 355     | 610    | T6S800 PR221-I In800 | 8000   | AF580     | AF580      | AF400     | EF750-800       | 250-800 |

# Service portfolio

Low voltage products division delivers a vast range of services to cover the whole product lifecycle. The services offered by ABB's low voltage products and systems span the entire value chain, from the moment a customer makes the first enquiry to disposal and recycling of the product. Throughout the value chain, ABB provides training, technical support and customized contracts. All of this is supported by one of the most extensive country sales and service network.



## Installation and commissioning

ABB provides comprehensive installation and commissioning services to achieve a problem-free start up, by following installation and commissioning procedures. The use of service personnel from ABB LP service ensures that the switchgear is installed in a safe and correct way.

## Operation and maintenance

ABB can guide the customer through a fast and efficient fault finding procedure as well as analyze the operation of the product and the customer's process. From site surveys to preventive, predictive maintenance and reconditioning, ABB has all the options covered to keep its customers' processes operational.

## Upgrade and retrofits

### Upgrades

An existing ABB product can often be upgraded to the latest software or hardware to improve the performance of the application. Existing processes can be economically modernized by upgrading with the latest technology.

### Retrofits

Replacing old LV Switchgear of any make with ABB's latest versions can be done using the ABB special conversion kits which enable quick installation without structural modifications to the original compartment. In addition complete "turnkey" solutions are available. Specific conversion kits have been developed in order to replace old components with new ones that can be found in the latest switchgears.

## Replacement and Recycling

ABB can advise on the best replacement products while ensuring that the existing products are disposed of in a way that meets all local regulations.

## Entire value chain services

The main services available throughout the entire value chain include:

## Training and learning – Hands on

ABB LP service carries out training programs. Those trainings can be either general or bespoke and have the aim of providing the personnel in charge of management/maintenance with the necessary know-how to achieve an excellent level of operating ability in certain situations. The manager of an electrical

site can find it convenient to have certain maintenance capabilities available within his own team.

The courses mainly cover:

- Operating equipment
- Maintenance principles
- Repairs for small faults

## Technical support

At each stage of the value chain, an ABB expert is available to offer advice to keep the customer's process or plant operational.

## Spare parts

Availability of original spare parts is essential for fast and efficient maintenance activities. This becomes even more critical when the product was produced some years ago and has components in it which are no longer in production.

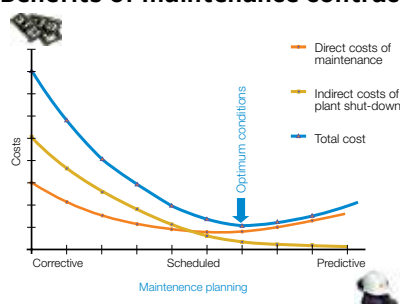
ABB LP service is the only one able to supply original and guaranteed spare parts. These can be easily selected and ordered through the authorized channel.

## Maintenance contracts

In addition to the corrective maintenance of a faulty unit, which includes any type of emergency intervention, there is a complete preventive maintenance service package, ensuring those who manage the plant gain considerable advantages in terms of reliability, safety and reduction of costs. Also customized contracts can be devised between the customer and ABB. Depending on the severity of the intervention needed, it can often be done on-site by our skilled and experienced engineers and is a faster way of resolution.

ABB LP service has an effective service network across the country and dedicated service workshops. For all your service requirements, contact our nearest Sales office.

## Benefits of maintenance contracts



# General conditions of sale

## General terms and conditions of sale:

- All prices mentioned in this price list are in Indian Rupees (INR) and this supersedes all previous price lists
- Prices are based on Ex-work basis
- Maximum retail prices (MRPs) mentioned in the publication are maximum recommended selling prices
- List prices (LPs) mentioned are exclusive of all taxes
- Prices are subject to revision without prior notice

Terms of delivery: Ex- work, Nelamangala or any other ABB warehouse in India

## Standard delivery terms

Ex-stock or 30 working days

## Address of Nelamangala warehouse

### ABB INDIA LIMITED

#126, Hanchipura Village, Kasaba Hobli  
Nelamangala Taluk, Bangalore-562 123

Tel: +91 80 2770 0081

Tel: +91 80 2770 0082

Tel: +91 80 2770 0083

## Address of Works

Nelamangala

Survey No: 88/3, 88/4, Basavanhalli, Kasaba Hobli,  
Nelamangala Taluk, Bangalore - 562 123

Karnataka, India

Tel: +91 80 2294 6618

Tel: +91 80 2294 6619

Fax: +91 80 2294 9999

Peenya

Plot no. 5 & 6, II Phase,

Peenya Industrial Area, Bangalore - 560 058

Karnataka, India

Tel: +91 80 22949354/9585

Fax: +91 80 22949389

LV capacitor factory:

Plot No. 485/6, 14th Cross, IV Phase,

Peenya Industrial Area, Bangalore - 560 058

Karnataka, India

E-mail: lvcapacitors-sales@in.abb.com

Vadodara

Maneja Works, Maneja,

Vadodara - 390 013

Gujarat, India

E-mail: in-da.sales@abb.com

Tollfree No: 1800-4200-707

## Warranty policy

ABB guarantees the supply according to the law. Upon expiration, the warranty expires even if the devices have not been operated for any reason. In the case of faults, as long as this does not depend on assembly errors by the customer or third parties, on incorrect use of the materials, lack of or incorrect maintenance, normal wear and tear, faults caused by inexperience or negligence by the purchaser or by transport, by the improper storage of the materials, or failure by the customer to adopt measures to reduce eventual dysfunction, overload with respect to the contractual limits, by unauthorized intervention, by tampering or action effected by the customer, to force majeure, ABB will, throughout the warranty period, repair or replace any defective part of supply free of charge, in the shortest possible time, at its premises. Where the repair cannot be executed at ABB premises, except as otherwise agreed, all the supplementary or relevant expenses shall be borne by the customer.

Repair or replacement will be executed only if the customer has performed all its obligations to that date. The customer may not suspend performance of the obligations in any case in which this warranty is invoked. The term for the repair or replacement of the faulty supply will be agreed by ABB and the customer. The shipment of any supply claimed to be faulty by the customer to ABB and subsequently by ABB to the customer, shall be at the risk and under the responsibility of the customer, who shall arrange adequate insurance coverage. The supply repaired or replaced is shipped at the expense and risk of the customer. Any dispute about a shipment has no effect on the remainder of the supply. The products replaced by ABB become the property of ABB.

# General conditions of sale

Any claim regarding the supply, machinery, plant or components not compliant with the specifications or the contractual documentation must be raised in writing, within a maximum term of 8 days from delivery, when the time limit for action expires. In the case of systems, this term is 60 days from execution of the disputed service when the time limit for action expires.

In the case of latent defects, the terms indicated above run from the date of discovery. Once the warranty period has expired claims are not accepted, even for latent defect. Where the claim is timely and justified, ABB's obligation is limited to replacement of the goods found not in compliance or repetition of execution of the non-compliant service, excluding all rights to the Customer to seek termination of the contract and/or compensation of damages.

With reference to the provision of spare parts, ABB reserves the right to provide materials either from the original supplier or from equivalent supplier.

## Warranty period:

1. **Breakers & switches:** The warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.
2. **Control products:** The warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.
3. **Enclosures & Din Rail components:** The warranty period is 5 years from the date of ABB's invoice if the components are used in ABB's enclosure. If non- ABB enclosure is used, Warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.

## 4a. **Wiring accessories:** 10 years of warranty.

The company at its discretion will repair or replace products if they have any manufacturing defect within 10 years from date of purchases for switches (without LED Lamp) and power sockets. For other ABB wiring accessories, the warranty will be for 2 years. ABB mounting boxes are not covered under warranty. Warranty for all the products will not be valid: If devices are not used with original ABB mounting boxes. If devices are altered, dismantled, rectified or tampered. Warranty states company's entire liability. This does not extend to cover consequential losses or damage or installation cost arising from defective products. Since product improvement is a continuous process, the data furnished in this brochure may undergo revision. For the latest information, you may contact our nearest sales office.

## 4b. **Plug & sockets:** The warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.

## 5. **LV capacitor:** The warranty is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.

## Liability clause:

The manufacturer shall not be liable for any consequential loss, injury or damages attributable to defect or failure of its products.





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**ABB India Helpline.**

Technical telephone support for  
customers and channel partners.

Toll free: (BSNL) +91 1800 420 07 07.

**website: [new.abb.com/low-voltage](http://new.abb.com/low-voltage)**