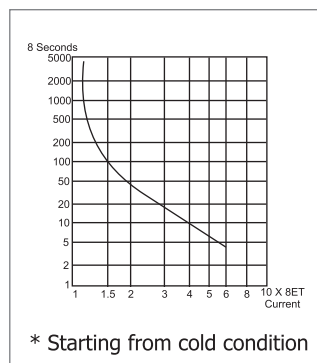
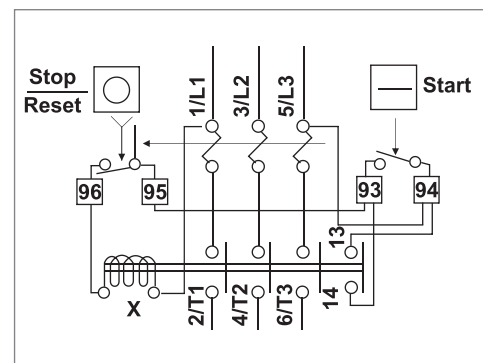




Tripping Curve*



Wiring Diagram



Relay Selection

Cat. No.	Motor Rating			Motor Rating			Relay	Back-up
	240 V - 1 Phase			415 V - 3 Phase			Range	Type HF Fuse
	HP	kW	In (A)	HP	kW	In (A)	Amps.	Rating
				0.05	0.037	0.085	0.15 - 0.25	2 A
				0.1	0.074	0.17	0.25 - 0.4	2 A
				0.125	0.09	0.4	0.25 - 0.4	2 A
				0.15	0.11	1.45	0.4 - 0.65	2 A
				0.2	0.15	0.57	0.4 - 0.65	2 A
				0.25	0.19	0.7	0.4 - 0.65	2 A
	0.125	0.11		0.25	0.19	0.7	0.6 - 1.0	4 A
				0.5	0.55	1.6	1.0 - 1.6	6 A
	0.25	0.12	2	0.75	0.55	1.6	1.5 - 2.6	6 A
				1	0.75	1.8	1.5 - 2.5	6 A
SS96210	0.5	0.4	3.6	1.25	0.92	2.1	2.5 - 4.0	10 A
				1.5	1.1	2.6	2.5 - 4.0	10 A
				1.75	1.3	3	2.5 - 4.0	10 A
				2	1.5	3.5	2.5 - 4.0	10 A
	0.75	0.55		2.5	1.8	4.8	4 - 6.5	16 A
				3	2.2	5	4 - 6.5	16 A
				4	3	6.2	4 - 6.5	16 A
				4	3	6.2	6 - 10	16 A
	1	0.75	7.5	5	3.7	7.5	6 - 10	20 A
	1.25	0.9	8	6	4.5	9	6 - 10	25 A
	1.75	2.33					9 - 4	25 A
	2	1.5	9.5	7.5	5.5	11	9 - 14	25 A
SS96211	2	1.5	9.5	7.5	5.5	11	11 - 18	25 A
SS96228	2	1.5	9.5	7.5	5.5	11	13 - 22	32 A

Note: Amp rating of back-up fuse refers to the recommended, HF type H.R.C. cartridge fuse.

Other Motor Starters Available

Type	For Motors upto	
	kW	HP
DOL		
MU1/MB1	7.5	10
MU2/MB2	11.0	15
ML2	15.0	20
ML3	22.5	30
STAR-DELTA		
MK1	11	15
MU1/MB1	11	15
MU2/MB2	22.5	30
ML2	26	35
ML3	37	50
ML4	55	75
ML6	90	125
ML10	185	250
ML12	300	400



MK1 Direct On-Line Motor Starter



Larsen & Toubro Limited
Electrical Standard Products
Powai Campus, Mumbai 400 072
Customer Interaction Center (CIC)
BSNL / MTNL (toll free) : 1800 233 5858
Reliance (toll free) : 1800 200 5858
Tel : 022 6774 5858, Fax : 022 6774 5859
E-mail : cic@LNTEBG.com
Website : www.LNTEBG.com

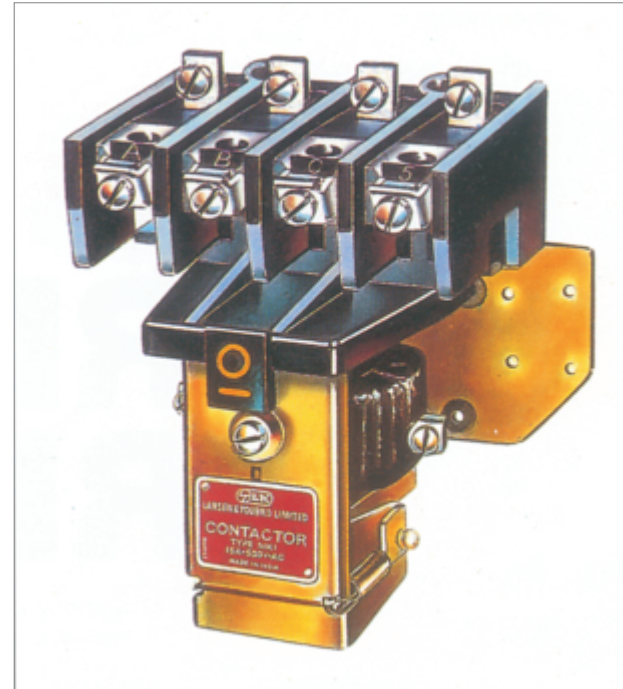


MK1 DOL Motor Starter

Motor protection starts with a starter that has all the features that guarantee reliability. These features are built into L&T's MK1 - the most wanted starter in India today. L&T's MK1 is manufactured at L&T's modern factories at Ahmednagar where quality systems are ISO-9001 certified by BVQI - one of the world's leading accredited agencies.

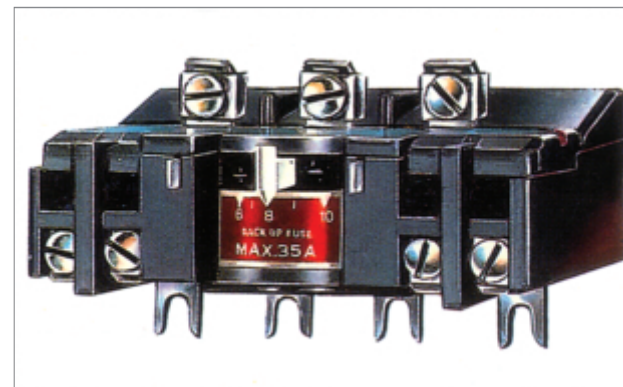
Contactors

The contactor in the MK1 starter is designed for exceptional endurance. The coil is tropicalised and subjected to rigorous tests for continuity, pick-up and drop-off. It also acts as undervoltage release disconnecting the supply to motor when voltage is low. Each starter or contactor can be fitted with two auxiliary contact blocks of 1NO + 1NC each for indicating lamps, sequence interlocks and other pilot circuits.



Thermal Overload Relay

The thermal overload relay in a motor starter protects the motor against overloads and resulting burnouts. The MK1 relay can be manually reset by just pressing the STOP button. The relays are ambient temperature compensated for operation between 5°C and 60°C. You can select from a wide range of relays with easily adjustable current settings. All overload relays are individually tested on an automated test bench to ensure foolproof operation.

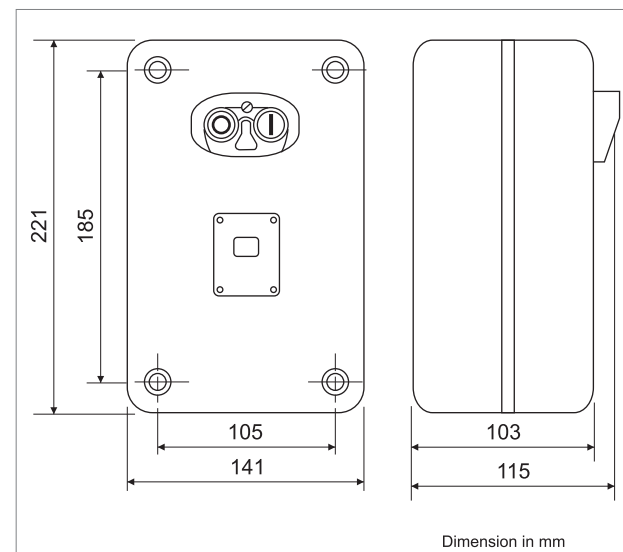


Push Button

The 'START-STOP' push buttons are designed for convenient operation. The stop push can be latched in the OFF position to prevent accidental starting.

Remote Control

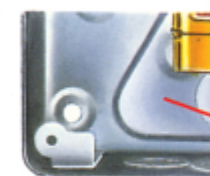
MK1 contactors and starters can be remotely controlled by push button stations, float switches, pressure switches, thermostats or any other auxiliary circuit.



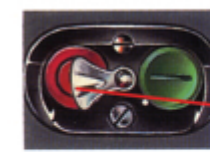
Technical Data

Main Contacts		Spares Kit	
No. of contacts	4	Cat. No.	SS 90983
Nominal rating at 50 Hz	15 A at 500 V	Contents	4 moving contacts 4 fixed contacts front 4 fixed contacts rear Spring & guides
Motor hp/kW at 415 V, 50 Hz for AC3	7.5/5.5		
Terminal Size		Also Available As A Spare:	
Wires upto	6 mm ²	Single moving contact SS91009	
		Spare Kit with Hardware - SS92845	
Coil Consumption		Separate Auxiliary Contact Block	
During closing	57 VA	(1NO + 1NC)	
When closed	13 VA (6W)		
Other Details		Cat. No.	SS 90120
max. number of full starts	30 per hour	Rating at 50 Hz	2 A at 500 V
Mechanical life	10 million operations	Terminal size - wires upto	2X2.5 mm ²
Contact life	More than 5 million operations for 15 A, AC3 duty	No. of blocks that can be fitted after tapping the holes provided for the same of the contactor.	2
Making capacity at 50 Hz	88 A at 0.3 pf at 457 V	For Cat. Nos. of the other coil voltages and spares, please refer to our price list.	
Breaking capacity at 50 Hz	88 A at 0.3 pf at 457 V		
Weight (unpacked) in kg	2.20 SS. Encl. 1.00 Unenclosed		

Unique Features



Enclosure
is dust, moisture and vermin proof with cord packing in the cover.



Latch
To prevent accidental starting; this latch keeps stop button pressed when required.



Window
Fool-proof ON/OFF indicator is visible through this window.

L&T's MK1 comes to you with improved packaging it is wrapped in a polythene bag to prevent ingress of dust and water



Contact System
Tested for millions of operations without failure. Robust silver tipped contacts. Double break, bounce-free design



Thermal Relay Unit
has accurately calibrated bimetallic elements with ambient temperature compensator for overload protection.



Solenoid Coil
Machine wound, taped; vacuum impregnated and baked; also tested for inter-turn short circuit and subjected to a 4000 Volts impulse test.

