

Thermal overload relay



Key Features

- Complies to the requirements of EN/IEC 60947-4-1 and VDE-0660
- Loadlimiter Thermal overload relays are electromechanical device provides protection against overload and phase failure.
- Three pole relay with bimetal tripping elements
- Auto/Manual reset facility.
- 1NO+1NC auxiliary contact
- Economical overload protection relay up to 95A Contactor and reliable Electronic overload protection relays above 95A-630A
- Trip Indication

MOTOR CONTACTORS TYPE MK - AC POWER/ DC CONTROL VOLTAGE - IEC/EN 60947-1, IEC/EN 60947-4

Model	Frame	Current Rating (A)	Suitable	Auxiliary Contacts		Dorman Smith Code	MOQ	Unit Price
				NO	NC			
MD25	25	0.1 To 0.16	Suitable for MD9	1	1	DOS-LOR/MD25/0.1-0.16	300	
		0.16 To 0.25		1	1	DOS-LOR/MD25/0.16-0.25	300	
		0.25 To 0.4		1	1	DOS-LOR/MD25/0.25-0.4	300	
		0.4 To 0.63		1	1	DOS-LOR/MD25/0.4-0.63	300	
		0.63 To 1.0		1	1	DOS-LOR/MD25/0.63-1	300	
		1.0 To 1.6		1	1	DOS-LOR/MD25/1.0-1.6	300	
		1.25 To 2.0		1	1	DOS-LOR/MD25/1.25-2		
		1.6 To 2.5		1	1	DOS-LOR/MD25/1.6-2.5	300	
		2.5 To 4.0		1	1	DOS-LOR/MD25/2.5-4	300	
		4.0 To 6.0		1	1	DOS-LOR/MD25/4.0-6.0	300	
		5.5 To 8.0		1	1	DOS-LOR/MD25/5.5-8	300	
		7 To 10	Suitable for MD12	1	1	DOS-LOR/MD25/7-10	300	
		9 To 13	Suitable for MD18	1	1	DOS-LOR/MD25/9-13	300	
12 To 18								
MD36	36	17 To 25	Suitable for MD25	1	1	DOS-LOR/MD25/17-25	300	
		22 To 33	Suitable for MD32	1	1	DOS-LOR/MD36/22-32	300	
MD95	95	28 To 36	Suitable for MD40	1	1	DOS-LOR/MD36/28-36	300	
		23 To 32	Suitable for MD32	1	1	DOS-LOR/MD95/23-32	300	
		30 To 40	Suitable for MD40	1	1	DOS-LOR/MD95/30-40	300	
		37 To 50	Suitable for MD50	1	1	DOS-LOR/MD95/37-50	#	
		48 To 65	Suitable for MD65	1	1	DOS-LOR/MD95/48-65	#	
		55 To 70	Suitable for MD80	1	1	DOS-LOR/MD95/55-70	#	
		63 To 80		1	1	DOS-LOR/MD95/63-80	#	
		80 To 93	Suitable for MD95	1	1	DOS-LOR/MD95/80-93	#	
MF220	F220	80 To 100	Suitable for MD115-MD185	1	1	DOS-LOR/MF100/80-100	#	
		100 To 160		1	1	DOS-LOR/MF150/100-160	#	
		132 To 220	Suitable for MD225-M265	1	1	DOS-LOR/MF225/225-265	#	

Ordering code

LOR/MD25/0.16-0.25

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- 3 : Relay current setting
- 2 : Frame & upper setting range
- 1 : Loadlimiter Thermal overload Relay

- Contact Dorman Smith for MOQ

Thermal Overload relay selection chart

DOL Starting				
3 ϕ Motor Rating at 415V 50Hz.		Approx. Full Load Current	Relay Range	Backup Fuse Rating
KW	HP	Amp.	Amp.	Amp.
0.37	0.5	1.0	1-1.6	4
0.55	0.75	1.6	1.6-2.5	4
0.75	1	2.0	1.6-2.5	6
1.5	2	3.5	2.5-4.0	10
2.2	3	5.0	4-6.0	16
3	4	6.5	5.5-8.0	20
3.7	5	7.5	7-10.0	20
5.5	7.5	11.2	9.0-13	25
7.5	10	14	12-18	25
9	12.5	18	12-18/17-25	32
11	15	21	17-25	50
15	20	28.5	23-32	50
18.5	25	35	30-40	63
22	30	42	37-50	80
30	40	57	48-65	100
37	50	66	55-70	15
45	60	81	80-93	125
55	75	100	80-100	160
63	85	112	100-160	160
75	100	135	100-160	200

Star Delta Starting					
3 ϕ Motor Rating at 415V 50Hz.		Full Load Line current	Full Load phase current	Relay Range	Backup Fuse Rating
KW	HP	Amp	Amp	Amp	Amp
5.5	7.5	11	6.35	5.5-8	20
7.5	10	14.8	9	7-10	20
9.3	12.5	18	10.39	9.0-13	25
11	15	21	12.12	9.0-13	25
15	20	28	16.1	12-18	32
18.5	25	35	20.2	17-25	50
22.5	30	42	24	17-25	50
26	35	47	26.9	23-32	63
30	40	57	33	28-36	80
37	50	66	38.1	30-40	80
45	60	80	47	37-50	100
55	75	100	58	48-65	100
67	90	120	69.2	55-70	160
75	100	135	77.9	63-80	160
90	125	165	95.3	60-100	160

Dimension details (LOR-MD25/LOR-MD36/LOR-MD95/LOR-MF220)

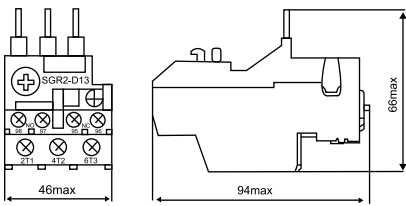


Fig 1 : LOR-MD25(0.1-25A) dimension

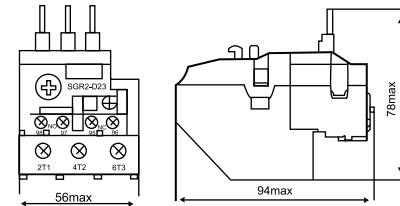


Fig 2 : LOR-MDB(22-36A) dimension

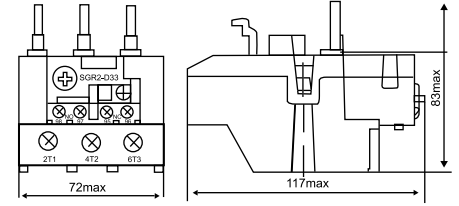
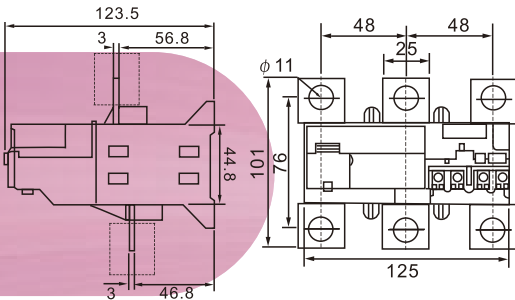
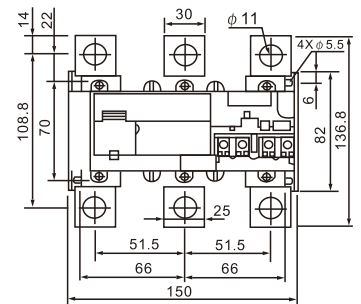
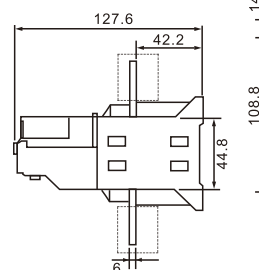
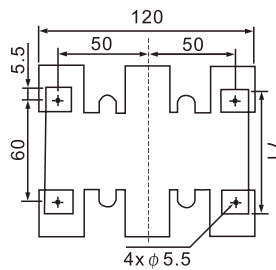


Fig 3 : LOR-MDB(23-93A) dimension

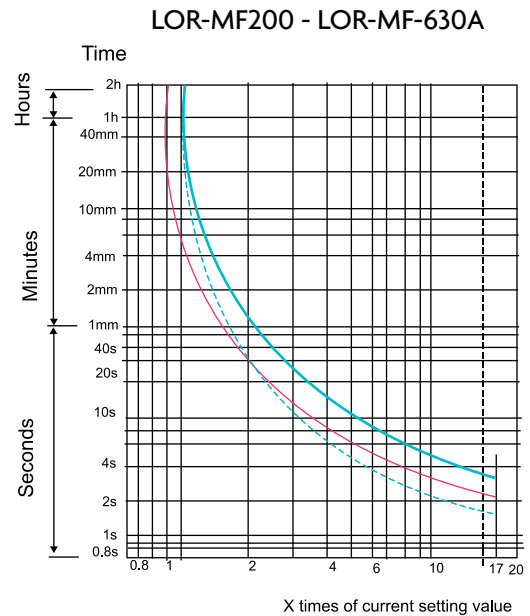
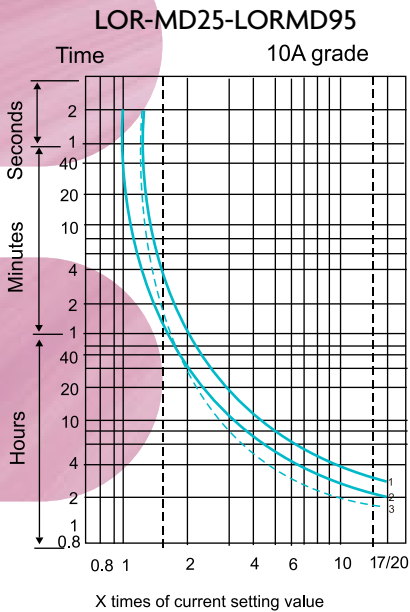


LOR-MF225(100A-265A)



LOR-MF 630(200A-630A)

Tripping curve for thermal relay



1. Equilibrium running, 3 phase, start from cold state
2. Equilibrium running, 2 phase, start from cold state
3. Equilibrium running, 3 phase, after long period of setting current (hot state)