



### **Motor Protection**

Thermal Overload Relay M23K for use  
with K' Range Contactors

#### **Fuse selection**

**Motor ratings**  
Full load currents (FLC) of 3 phase  
induction motors at voltages shown

D.O.L. start 7xFLC for 10 secs		Assisted start 3.5xFLC for 20 secs		Recommended fuse link rating									
Motor FLC, Amp		Motor FLC, Amp		Amp		@240V		@380V		@415V		@550V	
From	To	From	To	Amp	Amp	kW	hp	Amp	Amp	Amp	Amp	Type	D.O.L. Amp
0	0.7	0	1.4	2	0.55	0.75	2.3	1.5	—	1.06	0.85	0.12- 0.18	0.21- 0.31
0.8	1.1	1.5	2.1	4	0.75	1	3.1	2	2	1.67	1.2	0.18- 0.28	0.31- 0.49
1.2	1.6	2.2	3.1	6	1.1	1.5	4.1	2.6	2.5	2.26	2.1	0.28- 0.4	0.49- 0.69
1.7	2.6	3.2	5.4	10	1.5	2	5.6	3.5	3.5	3.03	2.6	0.4- 0.63	0.69- 1.0
2.7	5.2	5.5	10.0	16	2.2	3	7.9	5	5	4.31	3.8	0.56- 0.8	0.97- 1.4
5.3	7.5	10.1	14.3	20	3	4	10.6	6.6	6.5	5.8	5.1	0.63- 1.0	1.0 - 1.7
7.6	9.9	14.4	18.3	25	4	4	15.5	8.5	—	7.6	6.5	0.8 - 1.2	1.4 - 2
10.0	11.6	18.4	22.6	32	5.5	7.5	18.9	11.5	11	10.3	8.9	1.0 - 1.5	1.7 - 2.6
11.7	15.7	22.7	29.2	35	7.5	10	24.8	15.5	14	13.5	11.9	1.2 - 1.8	2 - 3
15.8	19.3	29.3	35.0	40	11	15	35.3	22	21	19.3	16.7	1.5 - 2.3	4 kW
19.4	22.9	35.1	42.8	50	15	20	48.2	30	28	26.3	22.5	1.8 - 2.8	2.6 - 4
23.0	28.6	42.9	55.0	63	18.5	25	58.7	37	35	32	28.5	2.3 - 3.5	3 - 5
28.7	41.4	55.1	74.2	80	30	40	92.7	60	55	50.1	44	2.8 - 4	4 - 6
41.5	54.3	74.3	97.3	100	37	50	114	72	66	61.9	54	3.5 - 5	5 - 7
45.4	71.5	97.4	125.0	125	45	60	136	85	80	73.9	64.5	4 - 6.3	6 - 8.7
71.6	94.4	125.1	160.0	160	55	75	166	105	—	90.3	79	5 - 7	7 - 11
94.5	127.0	160.1	180.0	200	75	100	226	140	135	123	106	5.6 - 8	7.1 - 11
127.1	164.0	180.1	225.0	250	90	125	268	170	165	146	128	7 - 10	12 - 17.3
164.1	166.0	225.1	250.0	315	110	150	327	205	200	178	156	8 - 12.5	14 - 21.7
186.1	257.0	250.1	325.0	355	132	180	393	245	—	214	186	10 - 15	17.3 - 26
257.1	307.0	325.1	350.0	400	147	200	432	273	260	236	207	11 - 17	17.3 - 26
307.1	371.0	350.1	425.0	450	160	220	471	295	—	256	220	15 - 23	15 kW
371.1	415.0	425.1	450.0	500	184	250	541	340	325	295	259	15 - 23	11 - 17
415.1	472.0	450.1	525.0	560	200	270	589	370	—	321	278	15 - 23	11 - 17
472.1	535.0	525.1	550.0	630	220	300	647	408	385	353	310	15 - 23	11 - 17
270	367	794	499	467	270	340	736	460	—	401	353	381	15 - 23

Thermal Overload Relay M40K for use  
with K' Range Contactors

Calibration range		Star Delta Amp		List No.	
Type	D.O.L. Amp	Type	D.O.L. Amp	Type	D.O.L. Amp
M40K	11	-17	11	-17	124563427
	16	-25	16	-25	124563527
	20	-32	20	-32	124563627
	25	-40	25	-40	124563727

Note: Overload Relays should be ordered separately.

## SELECTION TABLE

CONTACTORS AND  
MOTOR PROTECTION

Full load current (FLC) of 1 phase motor  
at 240V 50Hz

kW	hp	@240V	kW	hp	@240V
0.12	0.17	1.6	0.75	1.0	6.5
0.18	0.25	2.1	1.1	1.5	9.0
0.25	0.33	3.0	1.5	2.0	12.0
0.37	0.5	3.5	2.2	3.0	16.5
0.55	0.75	4.9	3.7	5.0	25.0

Note: Values of 1 and 3 phase full-load current indicated are typical,  
using average efficiencies and power factor of 4 pole machines.