Thermal Overload Relays

IMO

Data according to IEC 947-4-1, IEC 947-5-1, VDE 0660, EN 60947-4-1, EN 60947-5-1

Type			MCOR-1	U12/16 [6]	MCOR-2	MCOR-3	MCOR-4	MCOR-5	MCOR-6	MCOR-7	MCOR-8
Rated insulation voltage U_i [1]		V~	690	690	690	690	750	690	1000	1000	690
Permissible ambient temperature operation	open	°C				-25 to +60				-25 to +55	
storage		°C				-50 to +70				-40 to +70	
Trip class according to IEC 947-4-1		A	10	10	10	10	10	20	10	10	10
Cable cross-section											
main connector	solid or stranded	mm²	0,75-6	0,75-6+0,75-2,5 [2]	0,75-10	4-35 [2]	3)	7)	-	7)	-
	flexible	mm²	1-4	0,75-4+0,5-2,5 [2]	0,75-6	6-25 [2]					
	flexible with multicore cable end	mm²	0,75-4	0,5-2,5+0,5-1,5	0,75-6	4-25					
Cables per clamp	number		2	1+1	2	1					
auxiliary connector	solid	mm²				0,75-2,5 [2]				1-2,5 [2]	
	flexible	mm²				0,5-2,5 [2]				1-2,5 [2]	
	flexible with multicore cable end	mm²				0,5-1,5				1-2,5 [2]	
Cables per clamp	number					2				2	

Type			MCOR-1	U12/16	MCOR-2	MCOR-3	MCOR-4	MCOR-5	MCOR-6	MCOR-7	MCOR-8
Auxiliary contacts											
Rated insulation voltage U_i [1]											
same potential		V~	690	690	690	690	690	690	690	500	690
different potential		V~	440	-	440	440	250	440	440	500	440
Utilization category AC15											
Rated operational	24V	A	3	4	5	5	4	5	3	4 [5]	5
current I_e	230V	A	2	2,5	3	3	2,5	3	2	2,5	3
	400V	A	1	1,5	2	2	1,5	2	1	1,5	2
	690V	A	0,5	0,6	0,6	0,6	0,6	0,6	0,5	0,6	0,6
Utilization category DC13											
Rated operational	24V	A	1	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2
current I_e	110V	A	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15
	220V	A	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
Short circuit prot. (without welding 1kA)											
highest fuse rating	gL (gG)	A	4	4	6	6	6	6	4	6	6

Type		MCOR-1	U12/16	U12/16E	MCOR-2	MCOR-2	MCOR-3	MCOR-3	MCOR-4
Setting range		all	to 23A	22 - 30A	to 28A	28 - 42A	to 52A	52 - 65A	all
Power loss per current path (max.)									
minimum setting value	W	1,1	1,1	1,7	1,3	1,3	2,0	2,9	1,1
maximum setting value	W	2,3	2,3	3,7	2,6	3,3	3,7	4,5	2,5

Data according to cULus

Type		MCOR-1	MCOR-2	U12/16E	MCOR-3	MCOR-4
Rated insulation voltage	V~	600	600	600	600	600
Rated current	A	32	23	42	74	85
Auxiliary contacts						
Rated voltage						
same potential	V AC	600	600	600	600	600
different potential	V~	150	150	150	150	150
Switching capacity	VA	500	500	600	600	600
of aux. contacts	A	2	4	4	4	4

Temperature Compensation

In case of higher ambient temperature use the following formula:
(Ambient temperature - 20) x 0,125 = correction factor in % of the full load motor current

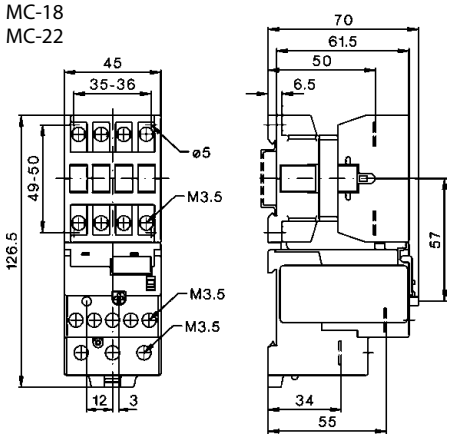
Example: Ambient temperature 70°C, full load motor current 7A
(70 - 20) x 0,125 = 6,25%
Setting value: 7A + 6,25% = 7,44A

1) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): U_{imp} = 4kV (at 440V), 6kV (at 690V). Data for other conditions on request.
2) Maximum cable cross-section with prepared conductor
3) Without terminals, suitable for bushing one connector 70mm² (stranded) per phase
4) Switching capacity of the start contact: AC15 300VA, max. 1,5A, DC13 (max. 220V) 30W, max. 1,5A
5) Switching capacity of the make contact: AC15 400VA, max. 1,7A, DC13 (max. 220V) 10W, max. 1A
6) U12/16E 30: Cable cross-section for main connector like type MCOR-2, one connector only

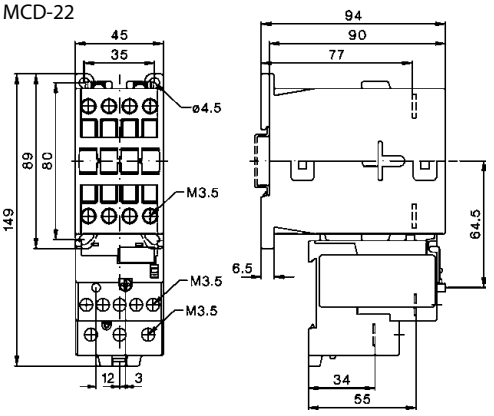
Thermal Overload Relays

Dimensions

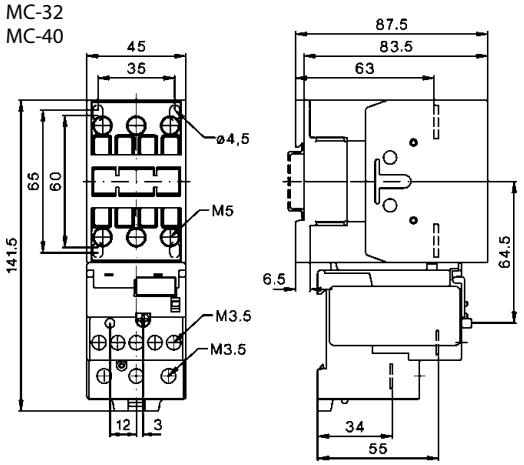
MC-10 + MCOR-1
MC-14
MC-18
MC-22



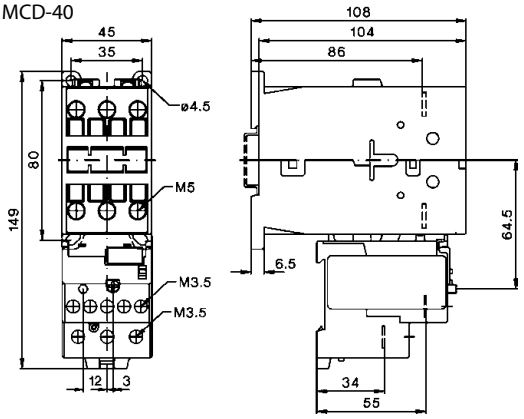
MCD-10 + MCOR-1
MCD-14
MCD-18
MCD-22



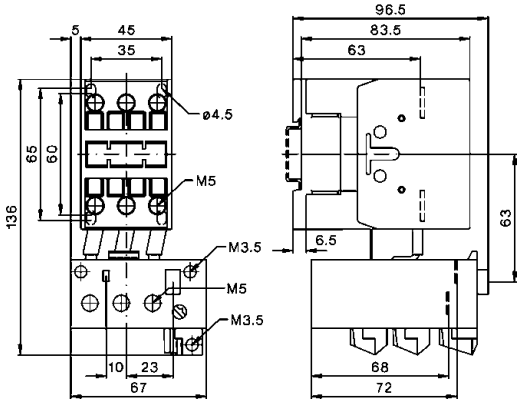
MC-24 + MCOR-1
MC-32
MC-40



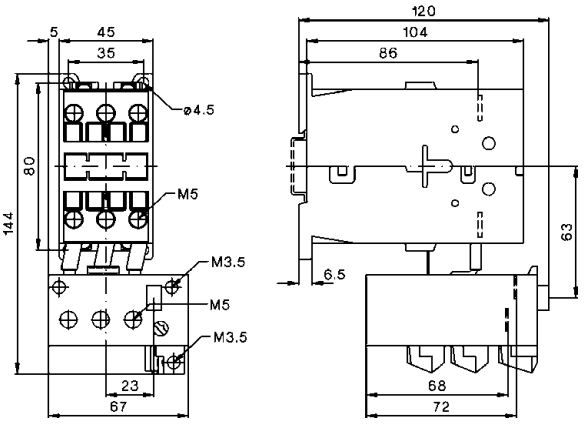
MCD-24 + MCOR-1
MCD-32
MCD-40



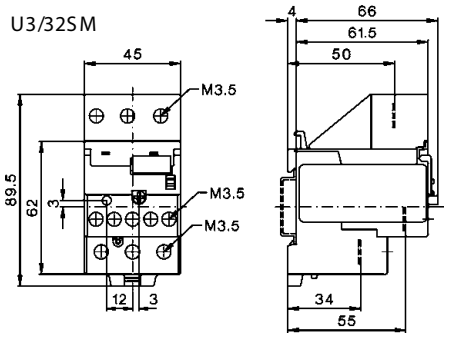
MC-24 + MCOR-2
MC-32
MC-40

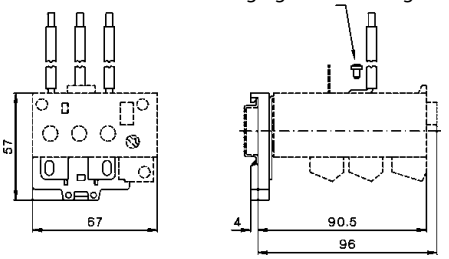


MCD-24 + MCOR-2
MCD-32
MCD-40



U3/32SM



U3/42G +LG5830-4.

Changing of connecting wire with 1,8Nm