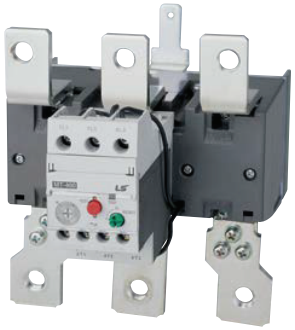
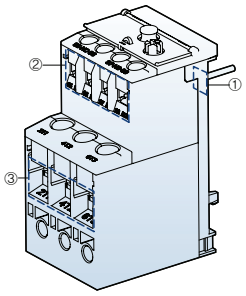
Environment and auxiliary circuit

Environment			MT-12~800
Standards			IEC/EN 60947-1, IEC/EN 60947-4-1
Certifications			CE, CSA, UL, CCC
Rated operation voltage			Max. 690V
Rated insulation voltage			690V
Rated frequency			50/60Hz
Degree of protection (Conforming to IEC 60 529)			IP 20
Ambient air temperature		Storage	-30 ~ +65℃
		Operation	-25 ~ +60℃ (MT refer to Graph)
Mounting position			Vertical plane
Shock resistance (Conforming to IEC 68-2-7)			15gn - 11ms
Vibration resistance (Conforming to IEC68-2-6)			6G
Insulation strength (Conforming to IEC 255-5)			6kV
Rated impulse withstand voltage (Conforming to IEC 801-5)			6kV
Auxiliary contacts characteristics			
Composition			1NO +1NC
Rated thermal current			5A
Rated operation current			C600, R300
	AC15 duty	120V	1.5A
	(C600)	240V	0.75A
		380V	0.47A
		480V	0.375A
		500V	0.35A
		600V	0.3A
	DC13 duty	120V	0.22A
	(R300)	240V	0.1A
Connecting conductor		Size	18AWG /1mm^2
Connection to screw clamp terminals		Type	65/75℃ Cu-wire

MT-150	MT-225	MT-400	MT-800
			

Overload relay specifications

MT type
Thermal Overload Relays



① Main terminals/upstream
② Auxiliary terminals
③ Main terminals/downstream

Frame size			18AF	
Trip class			10A	20
Type	Non-differential(3P-2 heater)		MT-12/2H□S	-
	Non-differential(3P-3 heater)		MT-12/3H□S	-
	Differential type		MT-12/3K□S	MT-12/3D□S
Terminals	Main-upstream		Screw clamp	
	Main-downstream		Screw clamp	
	Auxiliary		Screw clamp	
Number of poles			3	
Rated operational voltage (Ue)			690V	
Rated insulation voltage (Ui)			Up to 690V	
Rated impulse voltage (Uimp)			6kV	
Degree of protection (IEC 60 529)			IP 20	
Temperature compensation (℃)			-5~+40℃	
Functions	Trip indicating		■	
	Stop		-	
	Test		■	
	Manual/Automatic Reset		■	
Setting range(A)			0.1~18A	1~18A
Nominal current rating	Wire size mm²	Wire size AWG		
0.14	1	18	0.1~0.16	
0.21			0.16~0.25	
0.33			0.25~0.4	
0.52			0.4~0.63	
0.82			0.63~1	
1.3			1~1.6	1~1.6
2.1			1.6~2.5	1.6~2.5
3.3			2.5~4	2.5~4
5			4~6	4~6
6.5			5~8	5~8
7.5	1~1.5	18~16	6~9	6~9
8.5			7~10	7~10
11	1.5~2.5	16~14	9~13	9~13
15	2.5	14~12	12~18	12~18
19	2.5~4	12~10		
21.5				
27	4~6	10		
30	4~10	10~8		
34	6~10	10~8		
42	10	8		
54				
65	16~25	6~4		
74				
83	25~35	4~3		
90				
Applied contactors			MC-6a, 9a, 12a, 18a	
Separate mounting unit			UZ-12	

Note : Screw clamp and Lug types are available for the main terminals of 65AF, 100AF and 150AF relays.
The other AF relays provide Screw clamp types only.

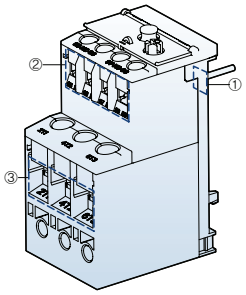
40AF	
10A	20
MT-32/2H□S	-
MT-32/3H□S	-
MT-32/3K□S	MT-32/3D□S
Screw clamp	
Screw clamp	
Screw clamp	
3	
690V	
Up to 690V	
6kV	
IP 20	
-5~+40℃	
■	
■	
■	
■	
0.1~40A	1~40A
0.1~0.16	
0.16~0.25	
0.25~0.4	
0.4~0.63	
0.63~1	
1~1.6	1~1.6
1.6~2.5	1.6~2.5
2.5~4	2.5~4
4~6	4~6
5~8	5~8
6~9	6~9
7~10	7~10
9~13	9~13
12~18	12~18
16~22	16~22
18~25	18~25
22~32	22~32
-	-
28~40	28~40
MC-9b, 12b, 18b, 22b, 32a, 40a	
UZ-32	

65AF	
10A	20
MT-63/2H□S/L	-
MT-63/3H□S/L	-
MT-63/3K□S/L	MT-63/3D□S/L
Screw/Lug clamp	
Screw/Lug clamp	
Screw clamp	
3	
690V	
Up to 690V	
6kV	
IP 20	
-5~+40℃	
■	
■	
■	
■	
4~65A	
4~6	4~6
5~8	5~8
6~9	6~9
7~10	7~10
9~13	9~13
12~18	12~18
16~22	16~22
18~25	18~25
-	-
24~36	24~36
28~40	28~40
34~50	34~50
45~65	45~65
MC-50a, 65a	
UZ-63S/L	

100AF	
10A	20
MT-95/2H□S/L	-
MT-95/3H□S/L	-
MT-95/3K□S/L	MT-95/3D□S/L
Screw/Lug clamp	
Screw/Lug clamp	
Screw clamp	
3	
690V	
Up to 690V	
6kV	
IP 20	
-5~+40℃	
■	
■	
■	
■	
7~100A	
7~10	7~10
9~13	9~13
12~18	12~18
16~22	16~22
18~25	18~25
-	-
24~36	24~36
28~40	28~40
34~50	34~50
45~65	45~65
54~75	54~75
63~85	63~85
70~95	70~95
80~100	80~100
MC-75a, 85a, 100a	
UZ-95S/L	

Overload relay specifications

MT type
Thermal Overload Relays

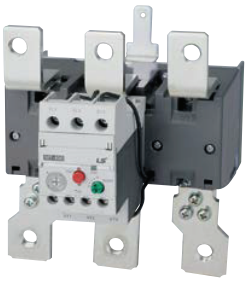


① Main terminals/upstream
② Auxiliary terminals
③ Main terminals/downstream

Frame size		150AF	
Trip class		10A	20
Type	Non-differential(3P-2 heater)	MT-150/2H□S/L	-
	Non-differential(3P-3 heater)	MT-150/3H□S/L	-
	Differential type	MT-150/3K□S/L	MT-150/3D□S/L
Terminals	Main-upstream	Screw/Lug clamp	
	Main-downstream	Screw/Lug clamp	
	Auxiliary	Screw clamp	
Number of poles		3	
Rated operational voltage (Ue)		690V	
Rated insulation voltage (Ui)		690V	
Rated impulse voltage (Uimp)		6kV	
Degree of protection (IEC 60 529)		IP 20	
Temperature compensation (°C)		-5~+40℃	
Functions	Trip indicating	■	
	Stop	■	
	Test	■	
	Manual/Automatic Reset	■	
Setting range(A)		34~150A	34~150A
Nominal current rating	Wire size mm²	AWG	
42	10	8	34~50
55	16	6	45~65
65	25	4	54~75
74	25	4	63~85
80	35	3	-
93	35	2	80~105
107	50	1	-
113	50	1	95~130
130	50	0	110~150
130	70	00	
153	95	000	
200	120	250	
265	185	350	
350	240	500	
515	185×2n	350×2n	
660	240×2n	300×3n	
Applied contactors		MC-130a, 150a	
Separate mounting unit		UZ-150S/L	

Note : Screw clamp and Lug types are available for the main terminals of 65AF, 100AF and 150AF relays.
The other AF relays provide Screw clamp types only.

225AF	
10A	20
MT-225/2H□S	-
MT-225/3H□S	-
MT-225/3K□S	MT-225/3D□S
Screw clamp	
Screw clamp	
Screw clamp	
3	
690V	
690V	
6kV	
IP 20	
-5~+40℃	
■	
■	
■	
■	
65~240A	65~240A
65~100	
-	
85~125	
-	
-	
100~160	
120~185	
160~240	
MC-185a, 225a	
-	



400AF	
10A	20
MT-400/2H□S	-
MT-400/3H□S	-
MT-400/3K□S	MT-400/3D□S
Screw clamp	
Screw clamp	
Screw clamp	
3	
690V	
690V	
6kV	
IP 20	
-5~+40℃	
■	
■	
■	
■	
85~400A	85~400A
85~125	
-	
-	
100~160	
120~185	
160~240	
200~330	
260~400	
MC-265a, 330a, 400a	
-	

800AF	
10A	20
MT-800/2H□S	-
MT-800/3H□S	-
MT-800/3K□S	MT-800/3D□S
Screw clamp	
Screw clamp	
Screw clamp	
3	
690V	
690V	
6kV	
IP 20	
-5~+40℃	
■	
■	
■	
■	
200~800A	200~800A
200~300	
260~400	
400~600	
520~800	
MC-500a, 630a, 800a	
-	