

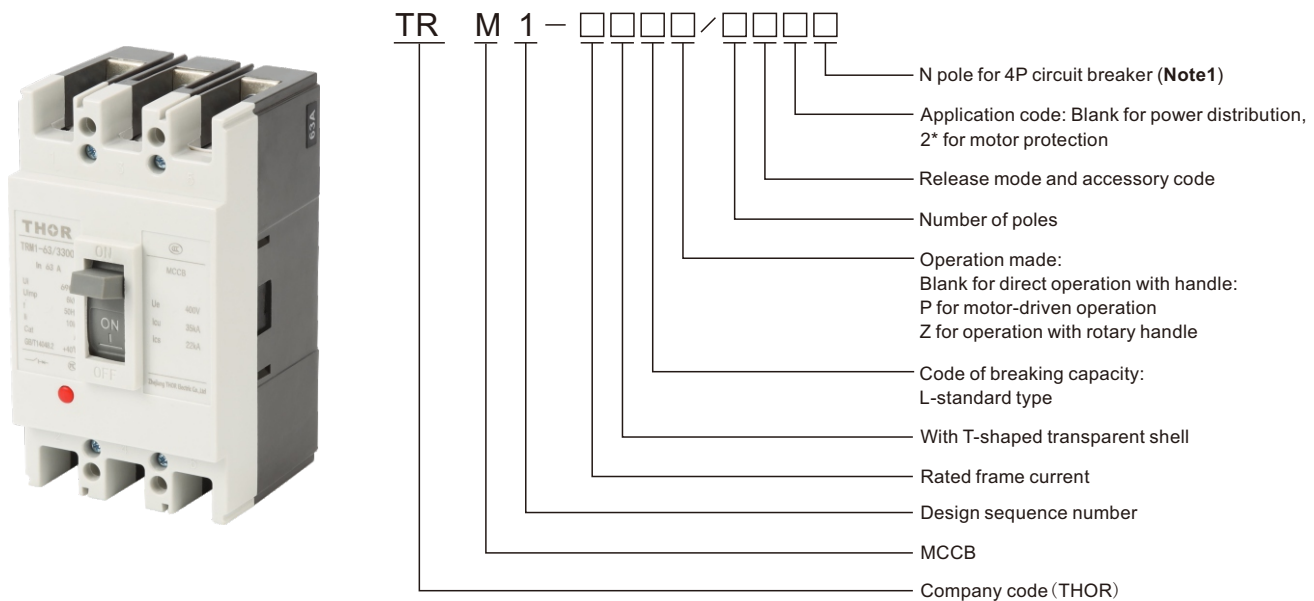
TRM1 Moulded Case Circuit Breaker (AC MCCB)

TRM1 series moulded case circuit breaker is a new type product developed and manufactured by Adopting international advanced technology.

It is supplied with rated insulation voltage 800V and used for circuit of AC 50/60Hz, rated operation voltage is up to 690V, rated operation current from 6A to 1250A for infrequent changing over and starting of the motors. Equipped with the protection devices for over-current, short circuit and under voltage, the product is capable of preventing damage of circuits and supply units. The product complies with GB140048.2 and IEC60947-2 standards.

TRM1 series MCCB has the characteristics of small size, high breaking capacity, short arcing (or no arcing), etc., making it an ideal product for users.

Model & Meaning



Note1 :According to the pole number of products,the neutral pole(N-pole) of the four-pole breakers has four types

- TypeA: N-pole without over-current release components, it has been connected all along, and does not act with other three-pole to turn on or off;
- Type B: N-pole without over-current release components, it could act with other three-pole;
- Type C: N-pole fixed with over-current release components, it could act with other three-pole;
- Type D: N-pole fixed with over-current release components, it has been connected all along, and does not act with other three-pole to turn on and off.

Working Condition

Ambient temperature is between -5°C ~ +40°C, The average value within 24h shall not exceed +35°C

Not over altitude 2000m

Air conditions:

At mounting site, relative humidity not exceed 50% at the max temperature of + 40°C, higher relative humidity is allowable under lower temperature. For example, RH could be 90% at + 20°C, special measures should be taken to occurrence of dew.

Specifications

Model	Rated Frame Current (A)	Rated Current I_n (A)	Rated Working Voltage U_e (V)	Rated Insulated Voltage U_i (V)	Limit short-circuit Breaking Capacity I_{cu} (KA)	Rated Running Breaking Capacity I_{cs} (KA)	Pole	Arcing distance (mm)
					400/690V	400/690V		
TRM1-63	63	16,20,25 32, 40,50,63	400	690	25*	12.5*	3	≤ 50
TRM1-125	125	25,32, 40,50, 63,80, 100,125	400	690	35/8	17.5/4	3	≤ 50
TRM1-250	250	125, 160 180,200,225,250	400	690	35/8	17.5/4	3	≤ 50
TRM1-400	400	400	400	690	50/10	25/5	3	≤ 100
TRM1-630	630	630	400	690	50/10	25/5	3	≤ 100
TRM1-800	80	800	400	690	75*	37.5*	3	≤ 100
TRM1- 1250	1250	1250	400	690	80*	40*	3	≤ 100

Note: * is the test parameter at 400V, 6A without thermal trip.

Inverse time breaking action characteristics of overcurrent release of distribution circuit breaker when all poles are energized simultaneously (**Table 1**)

Table 1

Serial number	Test current name	I/I_n	Conventional time	Initial state
1	conventional non-tripping current	1. 05	2h ($I_n > 63A$), 1h ($I_n \leq 63A$)	Cold
2	conventional tripping current	1. 30	2h ($I_n > 63A$), 1h ($I_n \leq 63A$)	Start immediately after test No. 1

Reflective limit breaking action characteristics of over current release of circuit breaker for motor protection when all poles are energized simultaneously(**Table 2**)

The instantaneous operating characteristics of the distribution circuit breaker is set to $10I_n \pm 20\%$, The instantaneous operating characteristics of the motor protection circuit breaker is set to $12I_n \pm 20\%$.

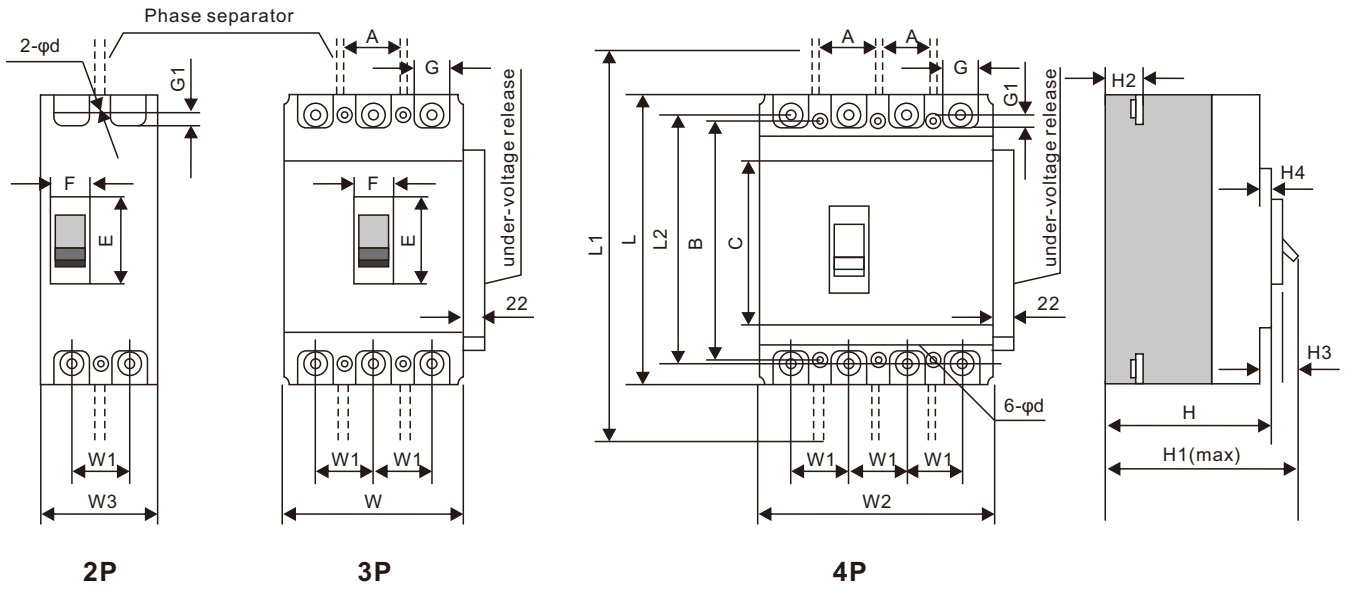
Table 2

Serial number	Setting current	Conventional time	Initial state	Mark
1	$1.01I_n$	$> 2h$	Cold	
2	$1.2I_n$	$\leq 2h$	Start immediately after test No. 1	
3	$1.5I_n$	$\leq 4min$	cold	$10 \leq I_n \leq 225$
		$\leq 8min$	cold	$225 \leq I_n \leq 630$
4	$7.2I_n$	$4s \leq T \leq 10s$	cold	$10 \leq I_n \leq 225$
		$6s \leq T \leq 20s$	cold	$225 \leq I_n \leq 630$

The neutral pole (N) of a four-pole circuit breaker is set on the right side of the circuit breaker. Rated current of N-pole tripper in Type C and Type D

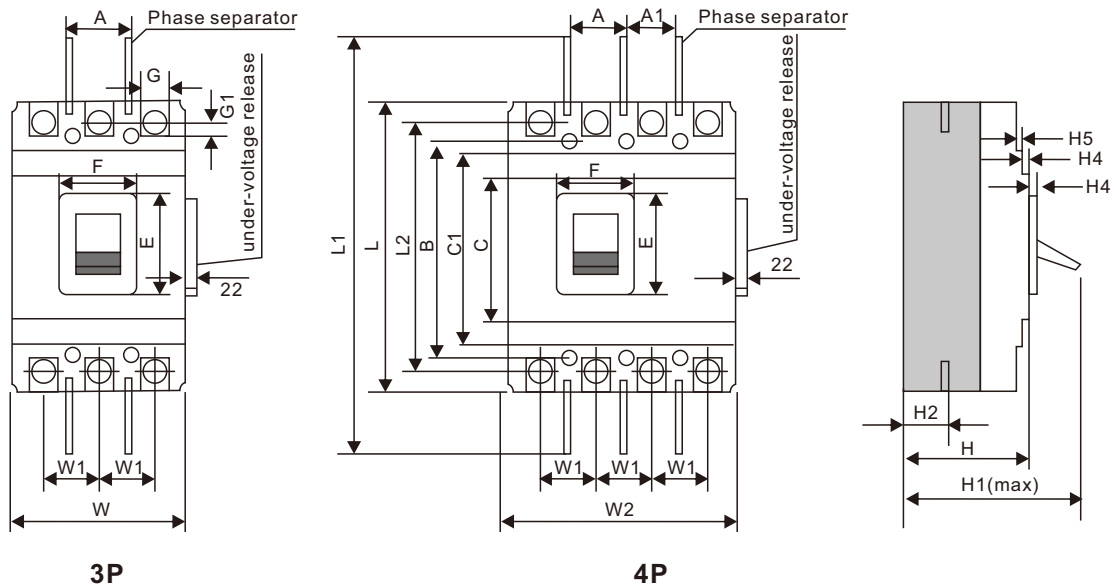
Rated Frame Current(A)	Rated Current (A)	Rated Current of N Pole (A)	Rated Frame Current(A)	Rated Current (A)	Rated Current of N Pole (A)
63	16	16	250	100	100
	20	20		125	100
	25	25		160	100
	32	32		180	100
	40	40		200	100
	50	50		225	125
	63	63		250	125
125	16	16	400	225	225
	20	20		250	225
	25	25		315	225
	32	32		350	250
	40	40		400	250
	50	50	630	400	250
	63	63		500	315
	80	80		630	350
	100	100			
	125	125			

Appearance & Installation Dimensions



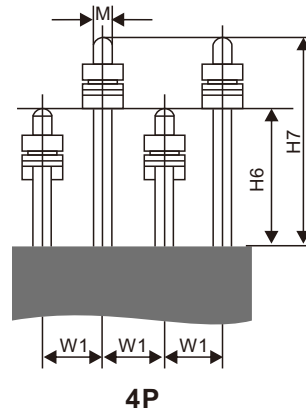
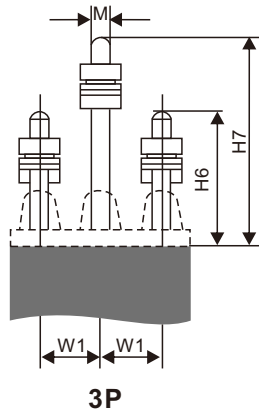
TRM1-63、125、250 Appearance & Installation Dimensions(Front wiring)

		Model		
		TRM1-63	TRM1-125	TRM1-250
Appearance dimensions	C	85	84	102
	E	48	50.5	50
	F	22	22	22
	G	14	17.5	23
	G1	6.5	7.5	11.5
	H	72	68	86
	H1	90	84	110
	H2	18	24	24
	H3	4	4	4
	H4	6	7	5
	L	135	155	165
	L1	235	355	360
	L2	117	136	144
	W	76	90	105
	W1	25	30	35
	W2	-	-	-
	W3	-	-	-
	A	25	30	35
Installation dimensions	B	117	129	126
	φd	3.5	4.5x6	5.5

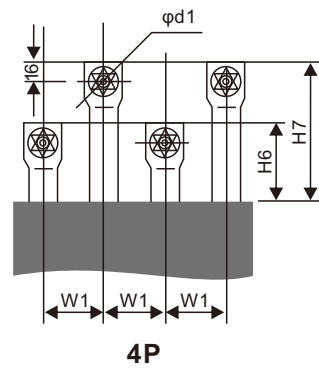
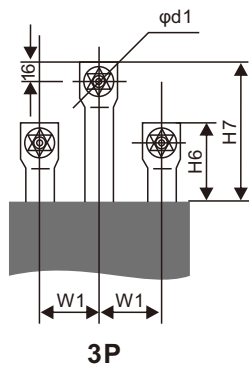


TRM1-400、630、800、1250 Appearance & Installation Dimensions(Front wiring)

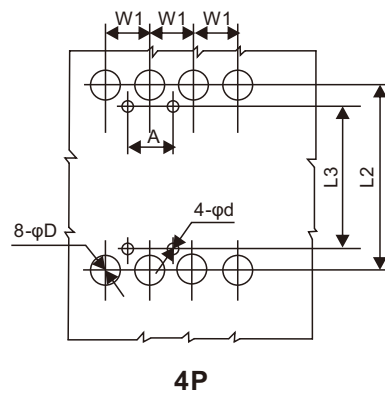
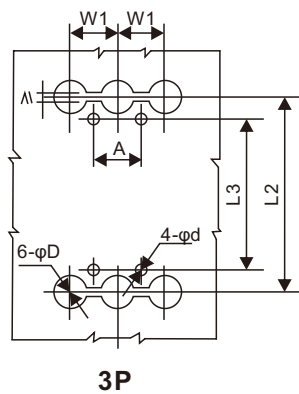
		Model			
		TRM1-400	TRM1-630	TRM1-800	TRM1-1250
Appearance dimensions	C	127.5	134	136	265.5
	C1	173.5	184	204	345.5
	E	90	89	81	97
	F	62	65.5	66	78
	G	30.5	44	45	-
	G1	11	13.5	12	-
	H	107	111	116	141
	H1	162	164.5	168	202
	H2	38	41.5	41.5	58
	H3	6	7	4.5	16.5
	H4	6	4.5	5	5
	H5	2.5	4.5	8	4.5
	L	257	270	280	470 (Without bronze medal 328)
	L1	457	470	485	715
	L2	224	234	243	375
	W	150	182	-	210
	W1	48	58	70	70
	W2	198	240	280	-
Installation dimensions	A1	44	58	70	70
	A	50	58	-	-
	B	194	200	243	300
	φd	7	7	7	10



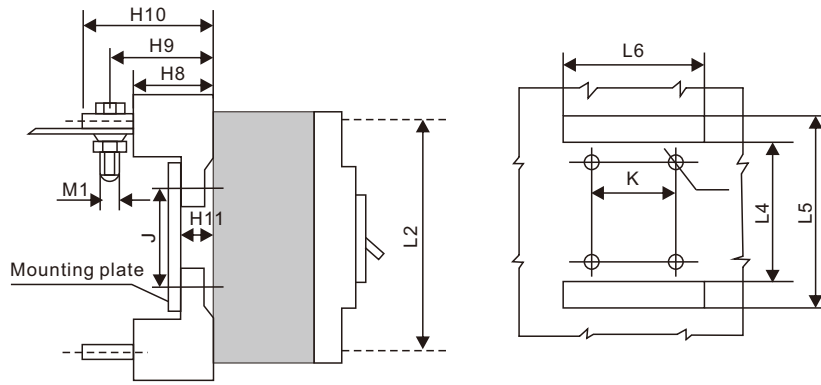
TRM1-63、125、250 Appearance & Installation Dimensions (Back wiring)



TRM1-400、630、800 Appearance & Installation Dimensions (Back wiring)



Rear board wiring hole diagram



Mounting plate

Board wiring hole diagram

Plug-in type

		Model					
		TRM1-63	TRM1-125	TRM1-250	TRM1-400	TRM1-630	TRM1-800
Rear board wiring plug-in dimensions	A	25	30	35	44	58	70
	φd	4.5	4.5x6Long hole	5.5	7	7	7
	φd1	-	-	-	Φ 12. 5	Φ 12. 5	Φ 16. 5
	φd2	6	8	8	9	9	12
	φD	8	10	12	33	33	37
	φD1	8	10	12	33	33	37
	H6	44	68	66	60	65	48
	H7	66	108	110	120	125	125
	H8	28	50	51	60	60	87
	H9	38	67.5	72	88	92	143.7
	H10	44	81	84.5	111	110	158.7
	H11	8.5	18	18	22	21	26.5
	L2	117	136	144	224	234	243
	L3	117	130.5	126	194	200	243
	L4	97	93	90	163	165	173
	L5	138	180	190	285	302	305
	L6	80	95	110	150	185	215
	M	M6	M8	M10	-	-	-
	K	50.2	60	70	60	100	90
	J	60.7	62	54	130. 4	123	143
	M1	M5	M8	M8	M10	M12	M14
	W1	25	30	35	48	58	70.7

The total height of the circuit breaker installation electric operating mechanism (mm)

Model	TRM1-63	TRM1-63	TRM1-125	TRM1-125 TRM1-125	TRM1-250	TRM1-250 TRM1-250	TRM1-400	TRM1-400 TRM1-400	TRM1-630 TRM1-630	TRM1-630 TRM1-800 TRM1-800
Height	167	175	164	162	195	212	227	230	234	232

Distribution circuit breaker time limit protection characteristic curve (Chart 1-12)

Chart1 TRM1-63、125(16~32):Operating characteristic curve

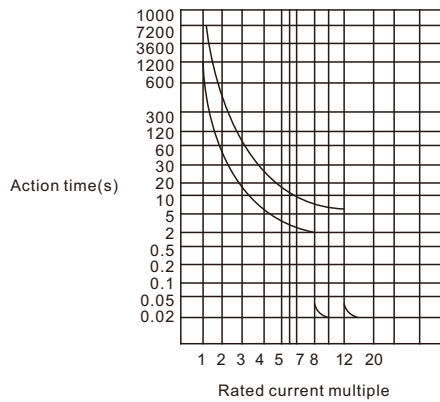


Chart2 TRM1-63、125(40~100):Operating characteristic curve

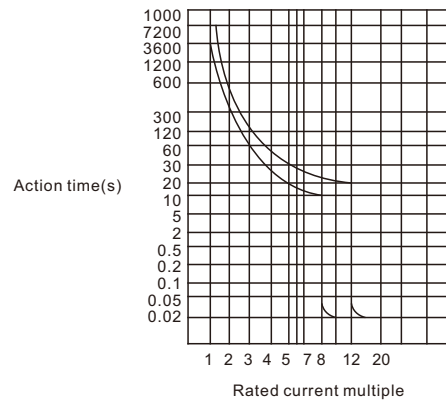


Chart3 TRM1-63、125(16~32):Temperature calibration curve

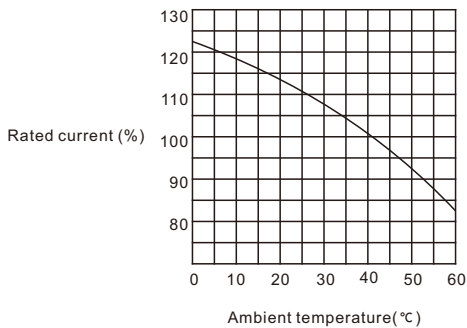


Chart4 TRM1-63、125(40~100):Temperature calibration curve

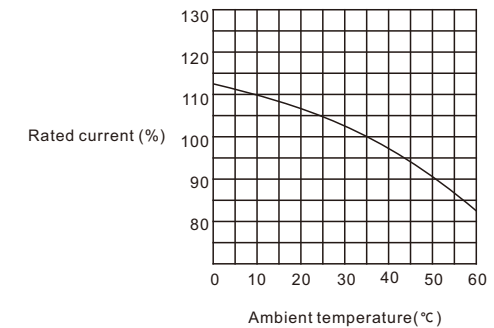


Chart5 TRM1-250:Operating characteristic curve

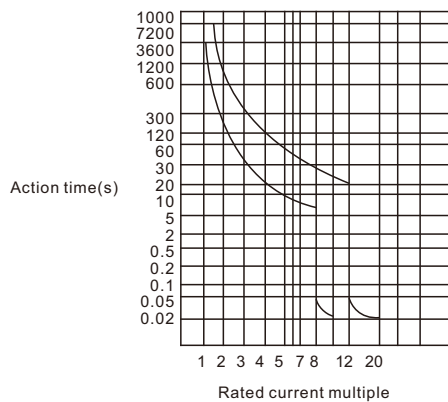


Chart6 TRM1-125:Operating characteristic curve

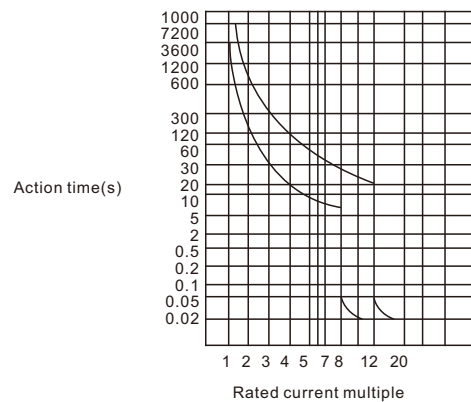


Chart7 TRM1-250:Temperature calibration curve

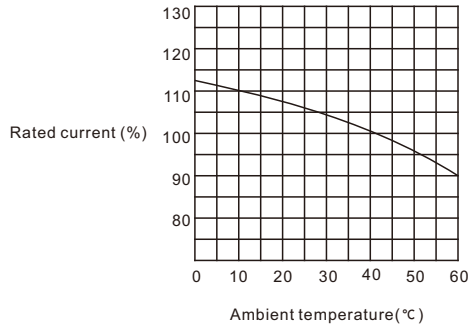


Chart8 TRM1-400:Temperature calibration curve

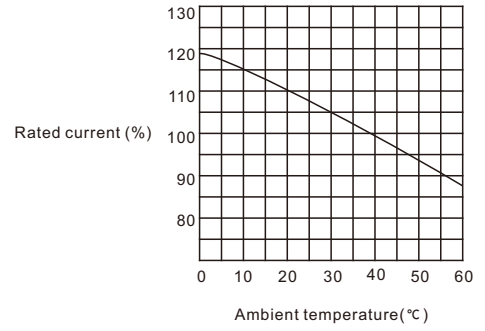


Chart9 TRM1-630、800:TOperating characteristic curve

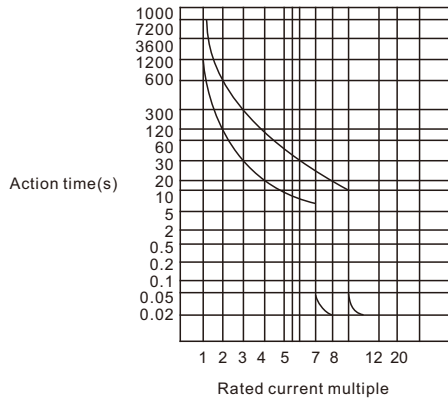


Chart10 TRM1-1250:TOperating characteristic curve

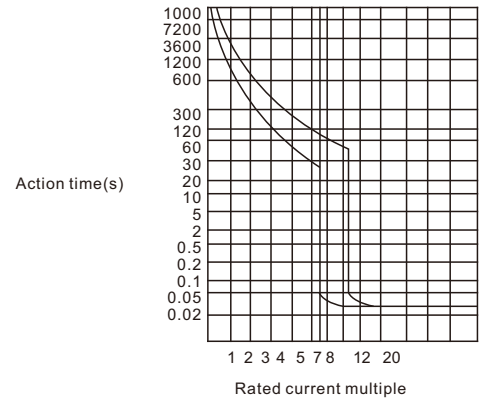


Chart11 TRM1-630、800:Temperature calibration curve

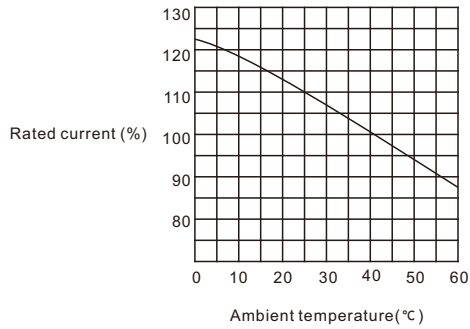


Chart12 TRM1-1250:Temperature calibration curve

