

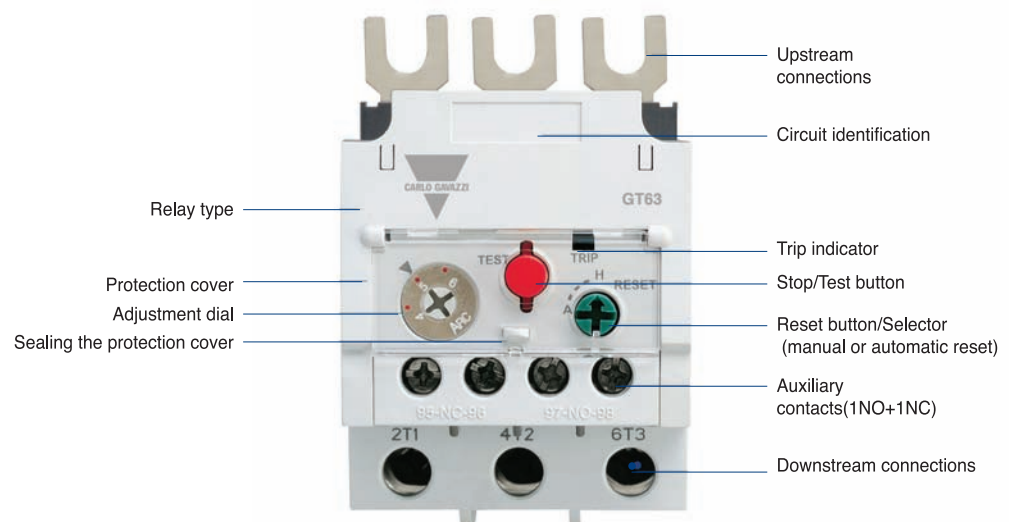
General Descriptions

Type GT, bimetal-style, overload relays are designed to protect AC circuits and motors against overloads, phase failure, long starting times and prolonged stalling of the motor.

Two versions are available according to the protection function and trip class as below.

1. Differential: 3pole-3bimetal(heater) and trip class 10
2. Differential: 3pole-3bimetal(heater) and trip class 20

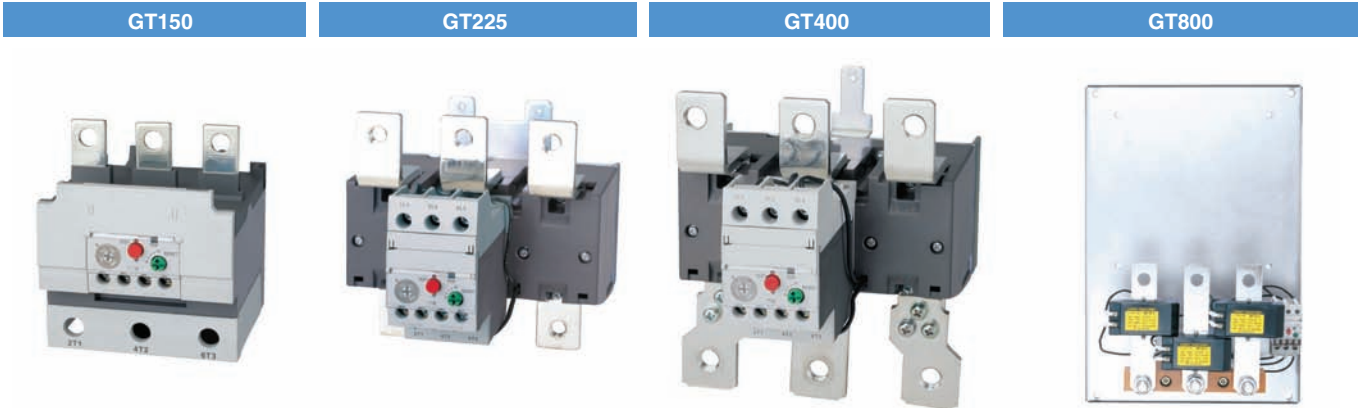
Configuration of the Front



Overloads Relays

Environment and Auxiliary Circuit

Environment				
Standards		IEC/EN 60947-1, IEC/EN 60947-4-1		IEC/EN 60947-1, IEC/EN 60947-4-1
Certifications		CE, CSA, UL		CE, CSA, UL
Rated operation voltage		Max. 690V		Max. 690V
Rated insulation voltage		690V		690V
Rated frequency		50/60Hz		50/60Hz
Degree of protection (Conforming to IEC 60 529)		IP 20		IP 20
Ambient air temperature	Storage	-55 ~ +80° C		-55 ~ +80° C
	Operation	-5 ~ +60° C		-5 ~ +60° C
Mounting position		Vertical plane		Vertical plane
Shock resistance (Conforming to IEC 68-2-7)		15gn - 11ms		15gn - 11ms
Vibration resistance (Conforming to IEC68-2-6)		6G		6G
Insulation strength (Conforming to IEC 255-5)		6kV		6kV
Rated impulse withstand voltage (Conforming to IEC 801-5)		6kV		6kV
Auxiliary contacts characteristics				
Composition		1a1b (1NO +1NC)		1NO+1NC
Rated thermal current		5A		5A
Rated operation current		C600, R300		C600, R300
AC15 duty (C600)	120V	1.5A		2.5A
	240V	0.75A		2A
	380V	0.47A		0.47A
	480V	0.375A		0.375A
	500V	0.35A		0.35A
	600V	0.3A		1A
DC13 duty (R300)	120V	0.22A		0.28A
	240V	0.1A		0.14A
Connecting conductor	Size	18AWG /1 mm ²		18AWG /1 mm ²
Connection to screw clamp terminals	Type	65/75 °C Cu-wire		65/75 °C Cu-wire



Overloads Relay Specifications

GT Type Thermal Overload Relays



GT32

40AF

Frame size				
Trip class				
Type	Differential type			
Terminal type				
Number of poles				
Rated operational voltage (Ue)				
Rated insulation voltage (Ui)				
Rated impulse voltage (Uimp)				
Degree of protection (IEC 60 529)				
Temperature compensation (° C)				
Functions	Trip indicating			
	Stop			
	Test			
	Manual/Automatic Reset			
Setting range(A)				
Nominal current rating	Wire size			
	mm ²	AWG		
0.14	1	18		
0.21				
0.33				
0.52				
0.82				
1.3				
2.1				
3.3				
5				
6.5				
7.5	1~1.5	18~16		
8.5				
11	1.5~2.5	16~14		
15	2.5	14~12		
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				
Separate mounting unit				

40AF	
10	20
GT32	GT32L
Screw Clamp or Lug	
3	
690V	
Up to 690V	
6kV	

Overloads Relay Specifications

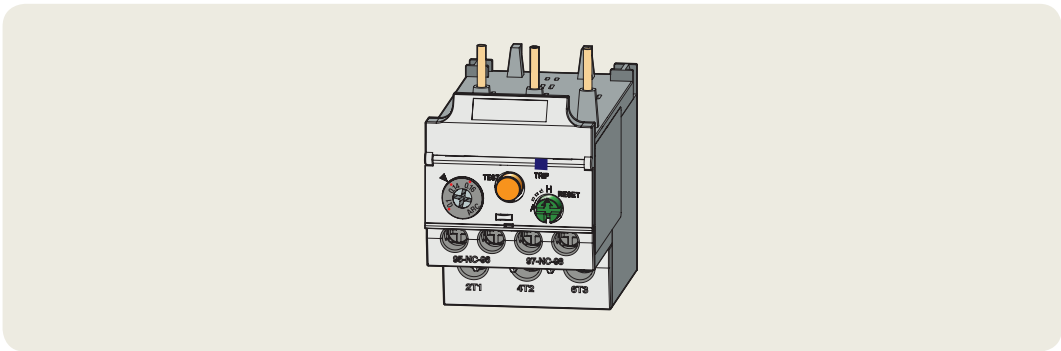
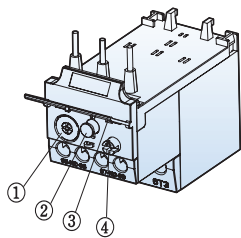
GT Type Thermal Overload Relays



Frame size				
Trip class				
Type	Differential type			
Terminal type				
Number of poles				
Rated operational voltage (Ue)				
Rated insulation voltage (Ui)				
Rated impulse voltage (Uimp)				
Degree of protection (IEC 60 529)				
Temperature compensation (° C)				
Functions	Trip indicating			
	Stop			
	Test			
	Manual/Automatic Reset			
Setting range(A)				
Nominal current rating	Wire size			
	mm ²	AWG		
42	10	8		
55	16	6		
65	25	4		
74	25	4		
80	35	3		
93	35	2		
107	50	1		
113	50	1		
130	50	0		
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				
Separate mounting unit				

150AF	
10	20
GT150	GT150L
Screw Clamp or Lug	
3	
690V	
690V	
6kV	
IP 20	
-5~+40°C	
■	
■	
■	
■	
34~150A	34~150A
34~50	
45~65	

Overloads Relay Operation

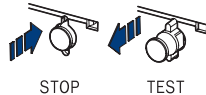


1. Adjustment dial



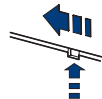
Before adjusting the dial open the protection cover.
Current setting can be done easily by using (+) or (-) driver.
Do not rotate the dial out of the setting range.

2. Stop/Test button



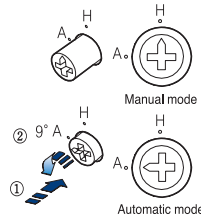
STOP function is executed by pushing the button,
which causes the next sequence.
In case of operation test pull this button.

3. Trip indicator



If relay is tripped it comes out.

4. Reset button/Selector



Using a driver the reset mode can be set.
In case of Manual mode(H) push the button to reset the relay.
To change to Automatic mode(A) from Manual mode push the button and rotate as shown in the fig.

5. Auxiliary contact operation

Terminal no.	Normal	STOP	TEST/TRIP	RESET
NC 95-96				

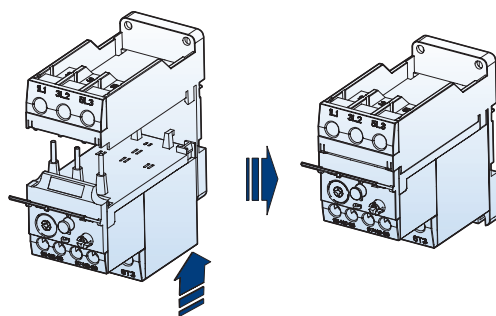
Overloads Relay Operation

Separate Mounting Units

These accessories are used to mount the relays separately from contactors.
If a relay is combined with a unit, it can be mounted on DIN rail or panel by fixing screws.



Relay	Unit	
	Type	Weight
GT32S	GUZ32S	38g
GT63S, GT63L	GUZ63S, GUZ63L	134g
GT95S, GT95L	GUZ95S, GUZ95L	230g
GT150S, GT150L	GUZ150S, GUZ150L	284g



Terminal Cover Units for Overload Relays



Relay	Unit type	Remarks
GT225	APT-225	2 pcs included
GT400	APT-400	
GT800	APT-600	

Accessories for Overload Relay

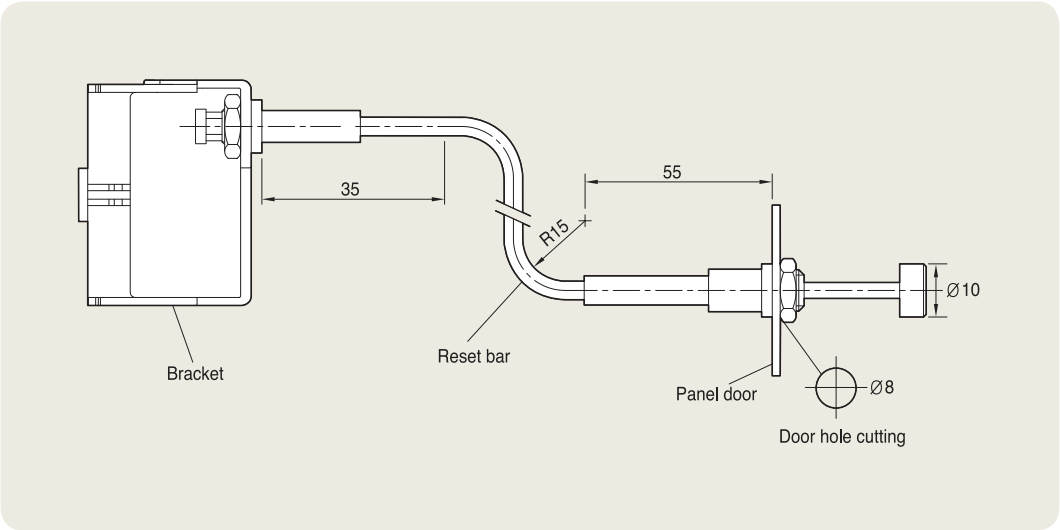
Remote Reset Units

These accessories are used to reset the relays on the panel door.



Type	Cable length (L)
GTTRR-16	400mm /16 in
GTTRR-20	500mm /20 in
GTTRR-24	600mm /24 in

1. Make the reset bar straight at least 55mm from the panel door and 35mm from the bracket.
2. The bending radius of the flexible reset bar should not be less than 15mm.



Overload Relay Ordering Types

Bimetallic Overload for 32AF Contactors

Direct mounting type



GT32

Setting Range (A)	Ordering Type Differential		Contactor	Separate mounting unit
	Class 10 Screw Terminal	Class 20 Screw Terminal		
0.1~0.16	GT32S0.16A	GT32LS0.16A	CC9 CC12 CC18 CC22 CC32 CC40	GUZ32S
0.16~0.25	GT32S0.25A	GT32LS0.25A		
0.25~0.4	GT32S0.4A	GT32LS0.4A		
0.4~0.63	GT32S0.63A	GT32LS0.63A		
0.63~1	GT32S1A	GT32LS1A		
1~1.6	GT32S1.6A	GT32LS1.6A		
1.6~2.5	GT32S2.5A	GT32LS2.5A		
2.5~4	GT32S4A	GT32LS4A		
4~6	GT32S6A	GT32LS6A		
5~8	GT32S8A	GT32LS8A		
6~9	GT32S9A	GT32LS9A		
7~10	GT32S10A			

Overload Relay Ordering Types

Bimetallic Overload for 65AF Contactors

Direct mounting type



GT63

Setting Range (A)	Ordering Type Differential Class 10		Ordering Type Differential Class 20		Contactor	Separate mounting unit
	Screw Terminal	Lug Terminal	Screw Terminal	Lug Terminal		
4~6	GT63S6A	GT63L6A	GT63LS6A	GT63LL6A	CC50 CC65	GUZ63S GUZ63L
5~8	GT63S8A	GT63L8A	GT63LS8A	GT63LL8A		
6~9	GT63S9A	GT63L9A	GT63LS9A	GT63LL9A		
7~10	GT63S10A	GT63L10A	GT63LS10A	GT63LL10A		
9~13	GT63S13A	GT63L13A	GT63LS13A	GT63LL13A		
12~18	GT63S18A	GT63L18A	GT63LS18A	GT63LL18A		
16~22	GT63S22A	GT63L22A	GT63LS22A	GT63LL22A		
18~25	GT63S25A	GT63L25A	GT63LS25A	GT63LL25A		
24~36	GT63S36A	GT63L36A	GT63LS36A	GT63LL36A		
28~40	GT63S40A	GT63L40A	GT63LS40A			

Overload Relay Ordering Types

Bimetallic Overload for 150AF Contactors



GT150

Setting Range (A)	Ordering Type Differential Class 10		Ordering Type Differential Class 20		Contactor	Separate mounting unit
	Screw Terminal	Lug Terminal	Screw Terminal	Lug Terminal		
34~50	GT150S50A	GT150L50A	GT150LS50A	GT150LL50A	CC130 CC150	GUZ150S
45~65	GT150S65A	GT150L65A	GT150LS65A	GT150LL65A		
54~75	GT150S75A	GT150L75A	GT150LS75A	GT150LL75A		
63~85	GT150S85A	GT150L85A	GT150LS85A	GT150LL85A		
80~105	GT150S105A	GT150L105A	GT150LS105A	GT150LL105A		
95~130	GT150S130A	GT150L130A	GT150LS130A	GT150LL130A		
110~150	GT150S150A	GT150L150A	GT150LS150A	GT150LL150A		

Note: overload terminal type must match contactors terminal type.

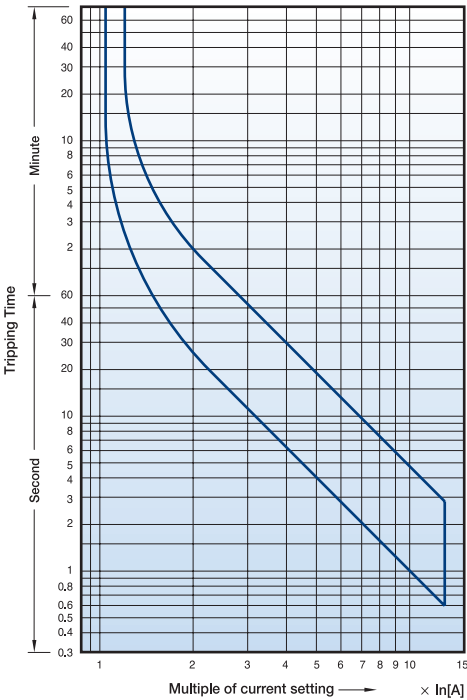
Bimetallic Overload for 225AF Contactors

Overload Relay Trip Curves

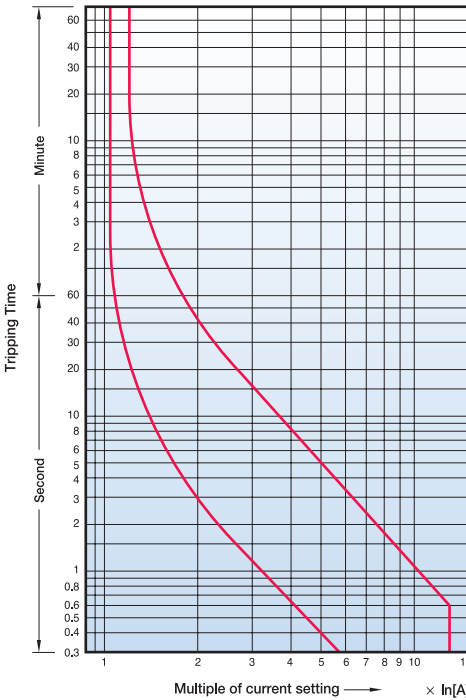
Class 10A, 40AF

GT32S

Cold starting



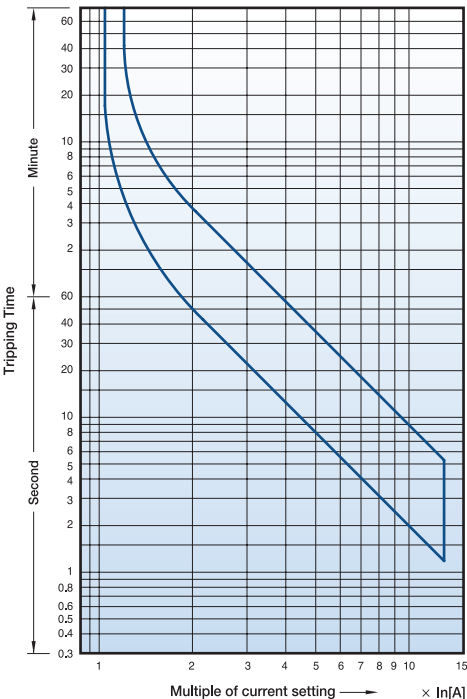
Hot starting



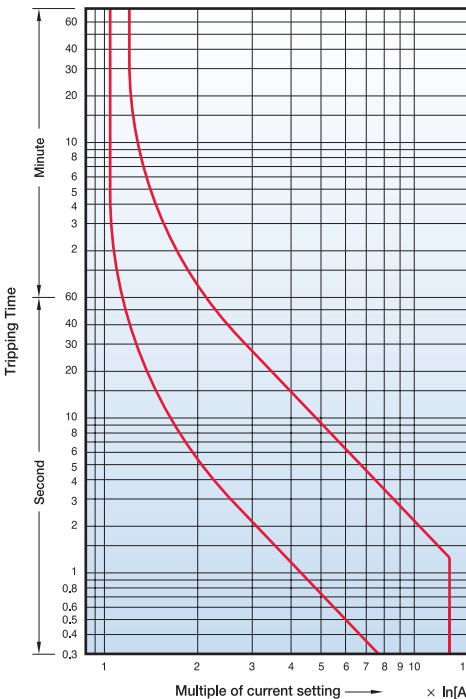
Class 20, 40AF

GT32LS

Cold starting



Hot starting

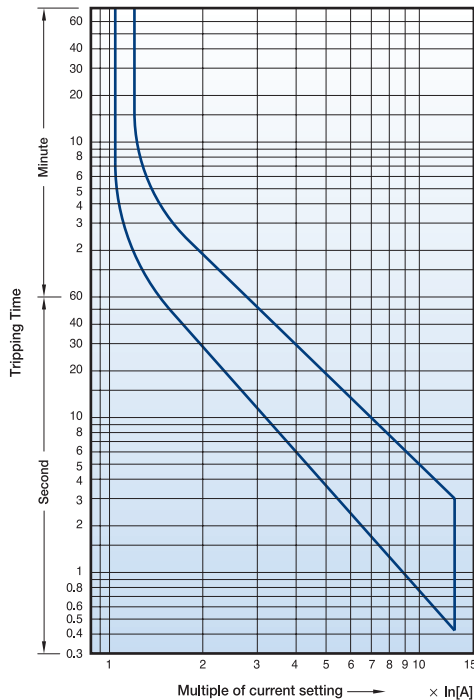


Overload Relay Trip Curves

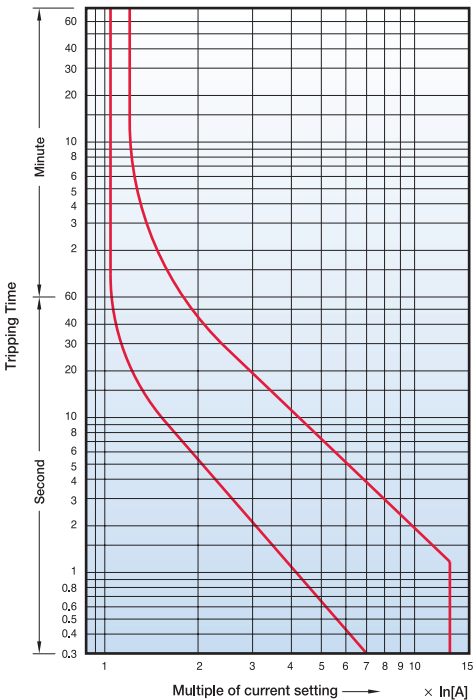
Class 10A, 65AF

GT63S
GT63L

Cold starting



Hot starting

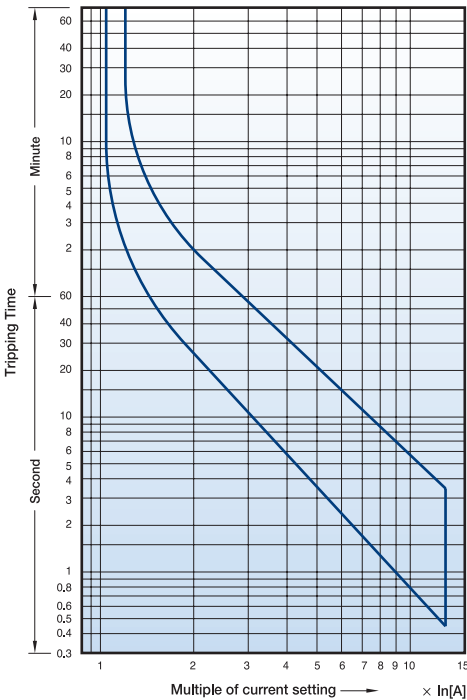


Overload Relay Trip Curves

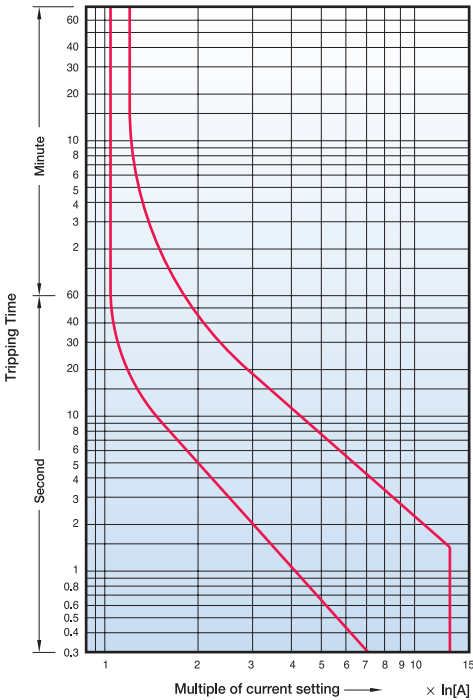
Class 10A, 100AF

GT95S
GT95L

Cold starting



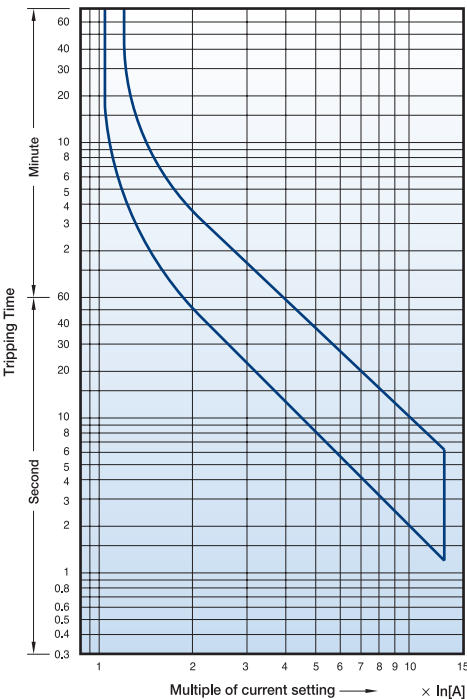
Hot starting



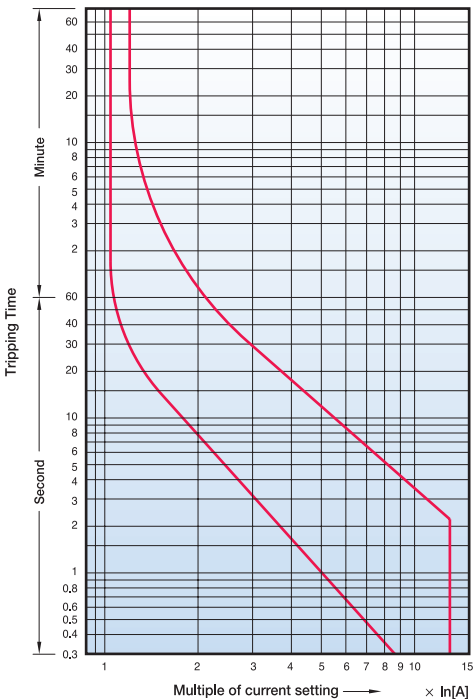
Class 20, 100AF

GT95LS
GT95LL

Cold starting



Hot starting

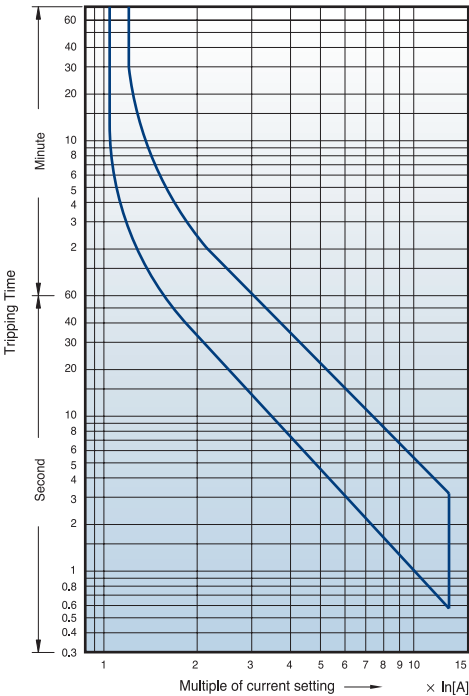


Overload Relay Trip Curves

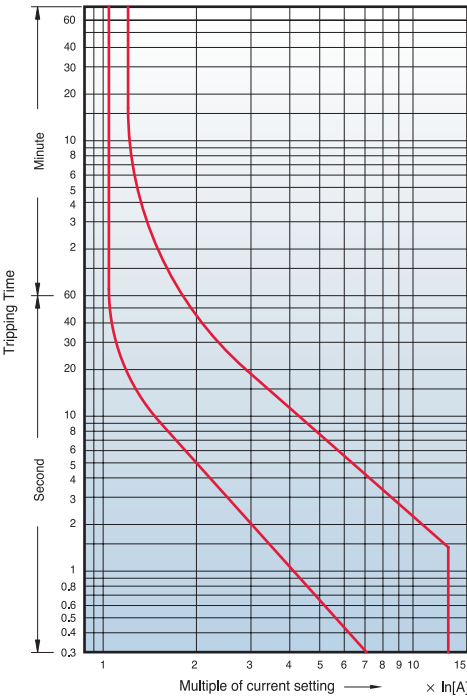
Class 10A, 150AF

GT150S
GT150L

Cold starting



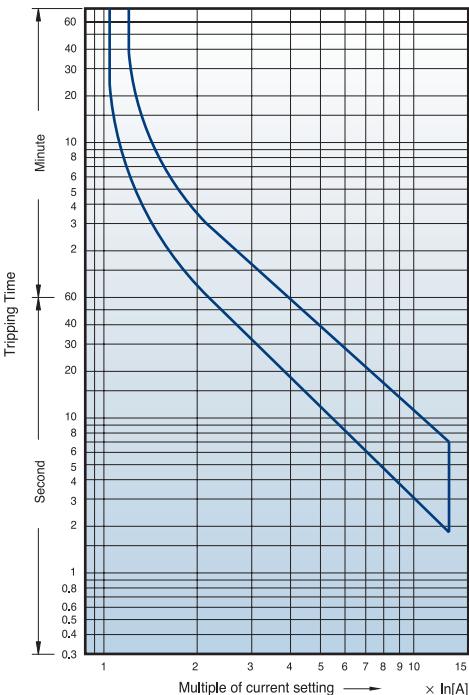
Hot starting



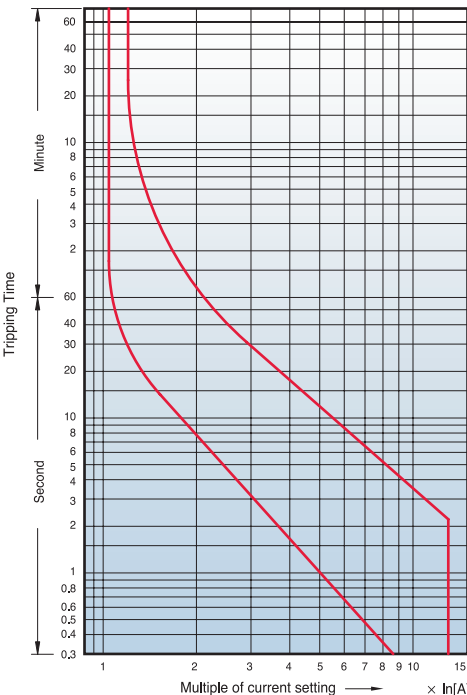
Class 20, 150AF

GT150LS
GT150LL

Cold starting



Hot starting

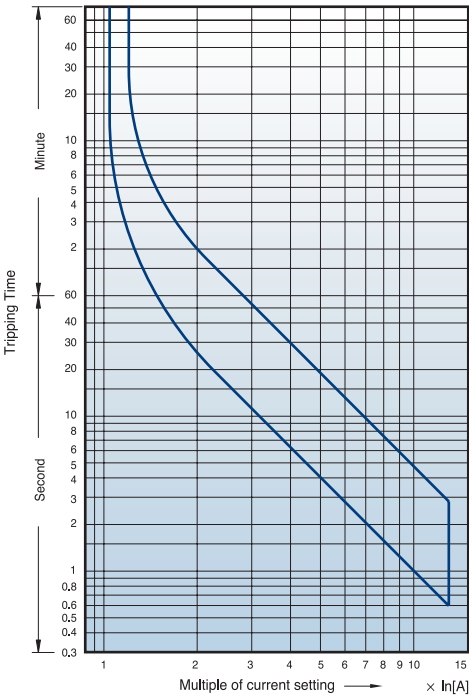


Overload Relay Trip Curves

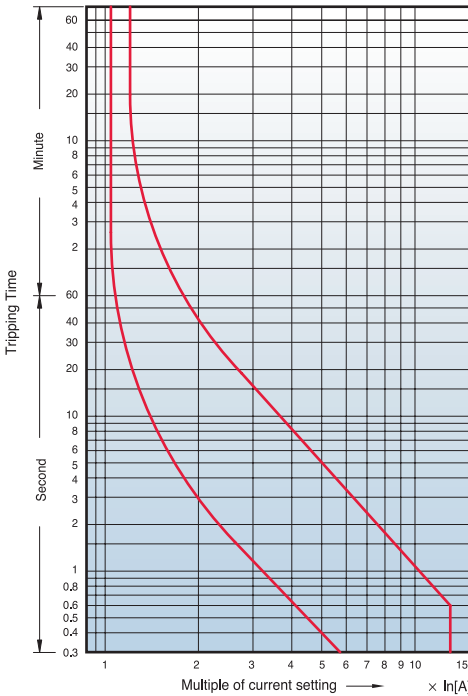
Class 10A, 225AF

GT225S

Cold starting



Hot starting

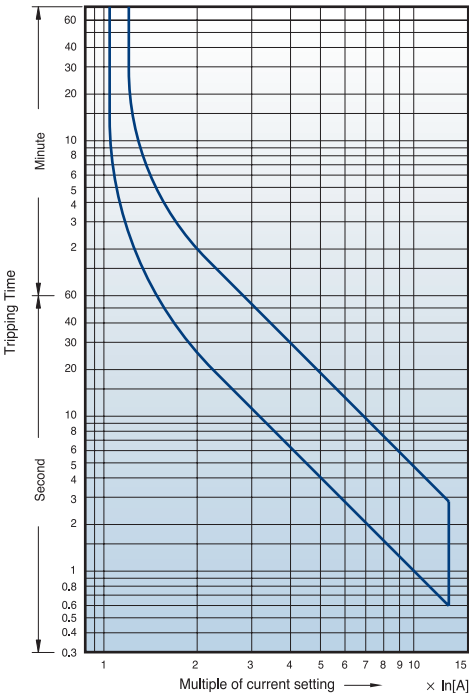


Overload Relay Trip Curves

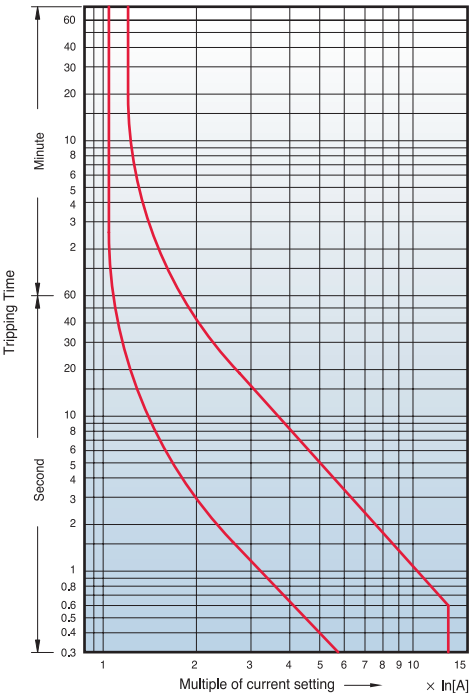
Class 10A, 400AF

GT400S

Cold starting



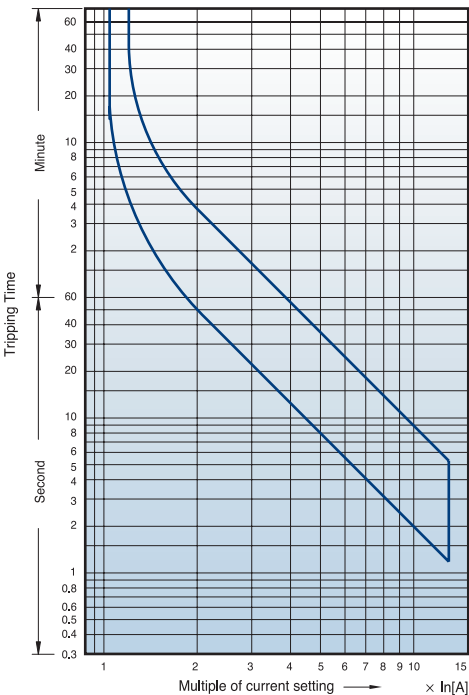
Hot starting



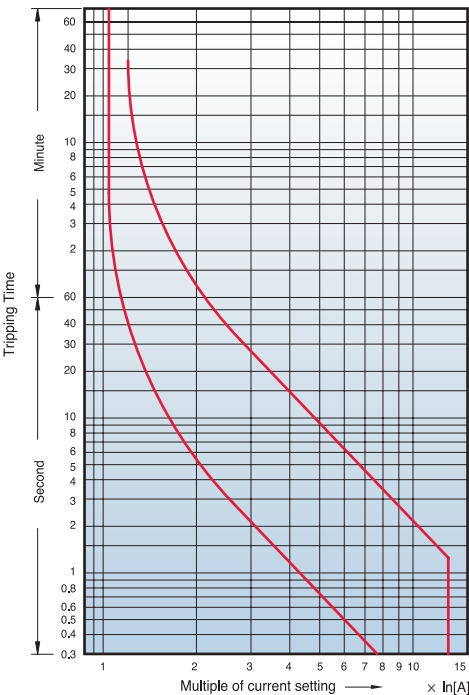
Class 20, 400AF

GT400LS

Cold starting



Hot starting

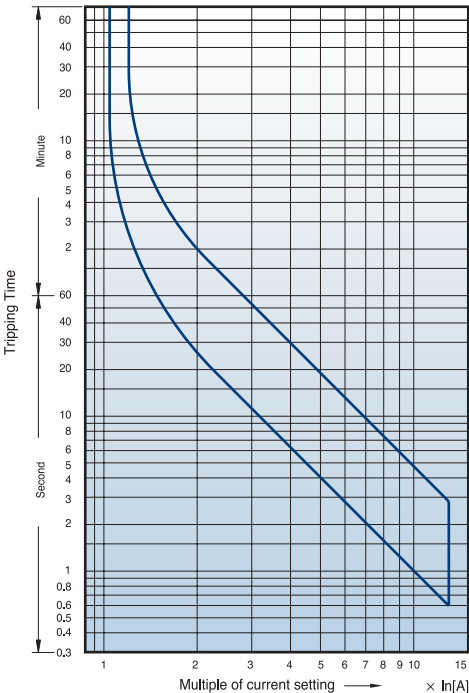


Overload Relay Trip Curves

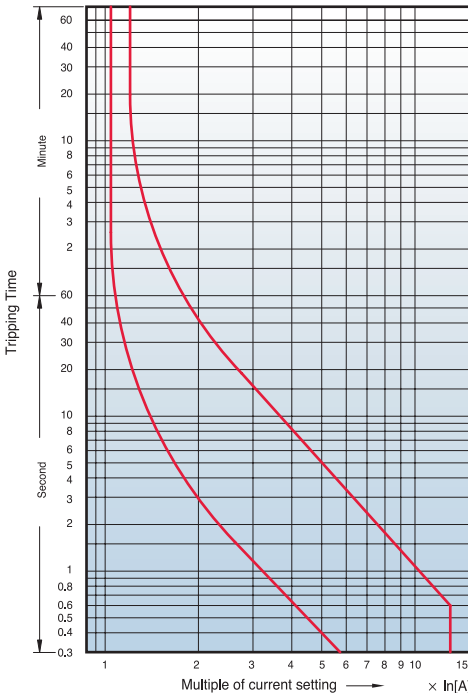
Class 10A, 800AF

GT800S

Cold starting



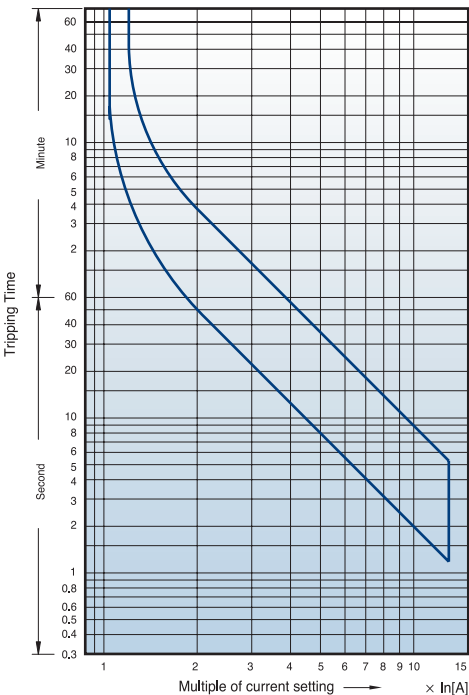
Hot starting



Class 20, 800AF

GT800LS

Cold starting



Hot starting

