

# Thermal overload relays

## Characteristics

### Application

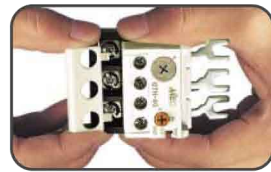
The TOR protect the motors Overload, Locking, Open phase(differential)

### Characteristics



① Direct mounting structure

The TOR is mounted directly to the contactor without additional breakers.



② Safety cover

The finger proof safety cover prevent accidental contact with electric conductor



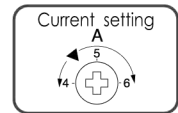
③ Separation of power part and operation part

The main circuit and the operation part are separately designed within the same unit for GTH-22, 40 and 85



④ Easy operation

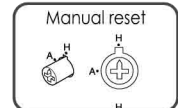
- 3steps current setting  
Rotating the reset button using a crosshead screw driver and set the rated current



- Manual / Auto reset setting

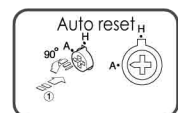
**Manual reset**

Rotate the reset button to the "H" position and this will protrude.



**Auto reset**

Press rotation the reset button to the "A" position.



- Trip / reset indicator

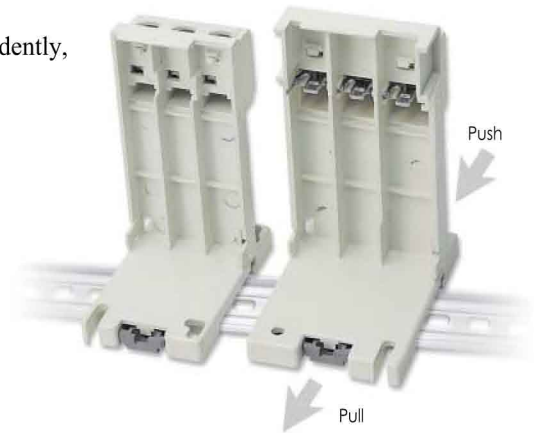
If the TOR is tripped, it protrudes 2~3mm and indicates the tripped condition.



### TOR-DIN rail adapter kit (AZ-□H)

In case of installing the overload relays independently, the separate mounting kits are available for screw or 35mm Din-rail mounting. (Applied model : GTH-22, 40, 85)

*Note)* Refer to Dimensions on page 207.



### Rating of the Aux.contacts

Type	Rated current (A)				
	AC15			DC13	
	110V	220V	550V	110V	110V
<b>GTH-22, 40, 85</b>	2.5(0.3)	2(0.3)	1(0.3)	0.28(0.28)	0.14(0.14)
<b>GTH-100, 150, 220, 400, 600</b>	2.5(0.3)	2(0.3)	1(0.3)	0.28(0.28)	0.14(0.14)

*Note)* Are the ratings of NO contact under auto reset mode.

### Combination of Contactor and TOR

Contactors	Thermal Overload Relays
<b>GMC - 9</b>	GTH(K) - 22
<b>GMC - 12</b>	
<b>GMC - 18</b>	
<b>GMC - 22</b>	
<b>GMC - 32</b>	GTH(K) - 40
<b>GMC - 40</b>	
<b>GMC - 50</b>	
<b>GMC - 65</b>	GTH(K) - 85
<b>GMC - 75</b>	
<b>GMC - 85</b>	
<b>GMC - 100</b>	GTH(K) - 100
<b>GMC - 125</b>	
<b>GMC - 150</b>	GTH(K) - 150
<b>GMC - 180</b>	
<b>GMC - 220</b>	GTH(K) - 220
<b>GMC - 300</b>	
<b>GMC - 400</b>	GTH(K) - 400
<b>GMC - 600</b>	
<b>GMC - 800</b>	GTH(K) - 600



# Thermal overload relays

## Setting range selection guide



GTK-22



GTK-100



GTK-220

### Class 10A

Three phase (4 pole) motor max. power						GTH(K)-22	GTH(K)-40	GTH(K)-85	GTH(K)-100	GTH(K)-150	GTH(K)-220	GTH(K)-400	GTH(K)-600
220V kW	380V kW	415V kW	440V kW	550V kW	660V kW								
•	•	•	•	•	•	0.1~0.16							
•	•	•	•	•	•	0.16~0.2							
•	•	•	•	•	0.37	0.25~0.4							
•	•	•	•	0.37	0.5	0.4~0.63							
•	0.37	•	0.55	0.75	1.1	0.63~1							
0.37	0.75	1.1	1.1	1.1	1.5	1~1.6							
0.5	1	1.5	1.5	1.5	2								
0.75	1.5	1.5	1.5	2.2	3	1.6~2.5							
1	2	2	2	3	4								
1.1	2.2	2.2	2.2	3	4	2.5~4	4~6						
1.5	3	3	3	4	5.5								
1.5	3	3.7	3.7	4	5.5	4~6	5~8						
2	4	5	5	5.5	7.5								
•	•	4	4	•	•	5~8	6~9						
2.2	4	5.5	5.5	•	•								
3	5.5	5.5	5.5	5.5	7.5	6~9	7~10	7~10					
3	5.5	5.5	5.5	7.5	10								
4	7.5	7.5	7.5	10	13.5	7~10	9~13	9~13					
4	7.5	9	9	10	15								
5.5	10	12	12	13.5	20	9~13	12~18	12~18					
5.5	11	11	11	•	•	12~18	16~22	16~22					
7.5	15	15	15	•	•								
5.5	11	11	11	15	18.5	16~22	18~26	18~26					
7.5	15	15	15	20	25								
7.5	15	15	15	18.5	22		24~36	24~36					
10	20	20	20	25	30								
•	15	•	•	18.5	•		28~40	28~40					
•	20	•	•	25	•								
11	22	25	25	30	37			34~50	34~50	34~50			
15	30	35	35	40	50								
15	25	30	30	37	45			45~65	39~57	39~57			
20	35	40	40	50	60								
18.5	30	37	37	45	55			54~75	43~65	43~65			
25	40	50	50	60	75								
22	37	45	45	55	63			63~85	54~80	54~80			
30	50	60	60	75	85								
25	51	55	59	63	90				65~100	65~100	70~100		
35	70	75	80	85	125								
30	59	59	63	80	110				85~125	85~125	85~125	85~125	
40	80	80	85	110	150								
45	80	80	90	100	129								
60	110	110	125	135	175				100~150	100~160	100~160		
55	90	100	110	110	160								
75	125	135	150	150	220						120~180	120~180	
63	110	129	140	160	200							160~240	
85	150	175	190	220	270								
80	150	160	160	200	257								200~300
110	205	220	220	270	350								200~300
110	185	200	220	257	335								260~400
150	250	270	300	350	455								260~400
180	315	355	375	425	500								400~600
245	430	480	510	580	680								400~600
220	400	425	450	500	•								520~800
300	545	580	610	680	•								520~800
<b>Applied contactors for direct starters</b>						GMC(D)-9 GMC(D)-12 GMC(D)-18 GMC(D)-22	GMC(D)-32 GMC(D)-40	GMC(D)-50 GMC(D)-65 GMC(D)-75 GMC(D)-85	GMC-100 GMC-125	GMC-150	GMC-180 GMC-220	GMC-300 GMC-400	GMC-600 GMC-800



## Class 20

Three phase (4 pole) motor max. power						GTK-22/L	GTK-40/L	GTK-85/L	GTK-100/L	GTK-150/L	GTK-220/L	GTK-400/L	GTK-600/L
220V kW	380V kW	415V kW	440V kW	550V kW	660V kW								
0.37	0.75	1.1	1.1	1.1	1.5	1~1.6							
0.5	1	1.5	1.5	1.5	2								
0.75	1.5	1.5	1.5	2.2	3	1.6~2.5							
1	2	2	2	3	4								
1.1	2.2	2.2	2.2	3	4	2.5~4	4~6						
1.5	3	3	3	4	5.5								
1.5	3	3.7	3.7	4	5.5	4~6	5~8						
2	4	5	5	5.5	7.5								
•	•	4	4	•	•	5~8	6~9						
•	•	5.5	5.5	•	•								
2.2	4	4	4	5.5	7.5	6~9	7~10	7~10					
3	5.5	5.5	5.5	7.5	10								
3	5.5	5.5	5.5	7.5	10	7~10	9~13	9~13					
4	7.5	7.5	7.5	10	13.5								
4	7.5	9	9	10	15	9~13	12~18	12~18					
5.5	10	12	12	13.5	20								
5.5	11	11	11	•	•	12~18	16~22	16~22					
7.5	15	15	15	•	•								
5.5	11	11	11	15	18.5	16~22	18~26	18~26					
7.5	15	15	15	20	25								
7.5	15	15	15	18.5	22		24~36	24~36					
10	20	20	20	25	30								
•	15	•	•	18.5	•		28~40	28~40					
•	20	•	•	25	•								
11	22	25	25	30	37			34~50	34~50	34~50			
15	30	35	35	40	50								
15	25	30	30	37	45			45~65	39~57	39~57			
20	35	40	40	50	60								
18.5	30	37	37	45	55			54~75	43~65	43~65			
25	40	50	50	60	75								
22	37	45	45	55	63								
30	50	60	60	75	85			63~85	54~80	54~80			
25	51	55	59	63	90								
35	70	75	80	85	125								
30	59	59	63	80	110								
40	80	80	85	110	150								
45	80	80	90	100	129								
60	110	110	125	135	175					100~150	100~160	100~160	
55	90	100	110	110	160								
75	125	135	150	150	220						120~180	120~180	
63	110	129	140	160	200								
85	150	175	190	220	270						160~240	160~240	
80	150	160	160	200	257								
110	205	220	220	270	350								200~300
110	185	200	220	257	335								260~400
150	250	270	300	350	455								260~400
180	315	355	375	425	500								400~600
245	430	480	510	580	680								400~600
220	400	425	450	500	•								520~800
300	545	580	610	680	•								520~800

Applied contactors for direct starters

GMC(D)-9	GMC(D)-32	GMC(D)-50	GMC-100	GMC-150	GMC-180	GMC-300	GMC-600
GMC(D)-12	GMC(D)-40	GMC(D)-65	GMC-125		GMC-220	GMC-400	GMC-800
GMC(D)-18		GMC(D)-75					
GMC(D)-22		GMC(D)-85					

## Ratings of auxiliary contacts

Type	Rated current(A)				
	AC15			DC13	
	110V	220V	550V	110V	220V
GTK(K)-22, 40, 85	2.5(0.3)	2(0.3)	1(0.3)	0.28(0.28)	0.14(0.14)
GTK(K)-100, 150, 220, 400, 600	2.5(0.3)	2(0.3)	1(0.3)	0.28(0.28)	0.14(0.14)

Note) Values of ( ) are the ratings of NO contact under auto reset mode.

# Mini overload relays

## Bimetallic style



### Description

- Direct mount on the mini contactors with screw clamp connection.  
contactor types : GMC(D)-6M, GMC(D)-9M,  
GMC(D)-12M, GMC(D)-16M,
- DIN rail or screw mountable with the optional base AZ-22H
- Small physical size : 44 mm wide
- 1NO+1NC trip contacts
- Trip class 10A according to IEC60947-4-1
- Differential current/Phase failure protection : GTK types
- Non-differential GTH types are available for the economic solution
- Ambient compensated -5 to 40 °C
- Manual/Automatic reset convertible.
- Remote reset is optional
- Trip free designed



GT-12M



Separate mount

Direct mount



GT-12M

### Catalog No.

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
0.1 - 0.16	GTK-12M • 0.14	GTH-12M/3 • 0.14	GTH-12M • 0.14
0.16 - 0.25	GTK-12M • 0.21	GTH-12M/3 • 0.21	GTH-12M • 0.21
0.25 - 0.4	GTK-12M • 0.33	GTH-12M/3 • 0.33	GTH-12M • 0.33
0.4 - 0.63	GTK-12M • 0.52	GTH-12M/3 • 0.52	GTH-12M • 0.52
0.63 - 1	GTK-12M • 0.82	GTH-12M/3 • 0.82	GTH-12M • 0.82
1 - 1.6	GTK-12M • 1.3	GTH-12M/3 • 1.3	GTH-12M • 1.3
1.6 - 2.5	GTK-12M • 2.1	GTH-12M/3 • 2.1	GTH-12M • 2.1
2.5 - 4	GTK-12M • 3.3	GTH-12M/3 • 3.3	GTH-12M • 3.3
4 - 6	GTK-12M • 5	GTH-12M/3 • 5	GTH-12M • 5
5 - 8	GTK-12M • 6.5	GTH-12M/3 • 6.5	GTH-12M • 6.5
6 - 9	GTK-12M • 7.5	GTH-12M/3 • 7.5	GTH-12M • 7.5
7 - 10	GTK-12M • 8.5	GTH-12M/3 • 8.5	GTH-12M • 8.5
9 - 13	GTK-12M • 12	GTH-12M/3 • 12	GTH-12M • 12
12 - 16	GTK-12M • 14	GTH-12M/3 • 14	GTH-12M • 14

### Auxiliary (Trip) contact rating

AC15(11) duty			DC13(11) duty	
110V	220V	550V	110V	220V
2.5(0.3)A	2(0.3)A	1(0.3)A	0.28A	0.14A

Note) Values of ( ) are the ratings of NO contact under auto reset mode.

### For more information

- Drawings → page 174
- Mini Contactors → page 24~27
- Starters → page 50
- Separate mounting unit → page 113

**Certificate**  
CE, ULcUL



# Thermal overload relays, Class 10A

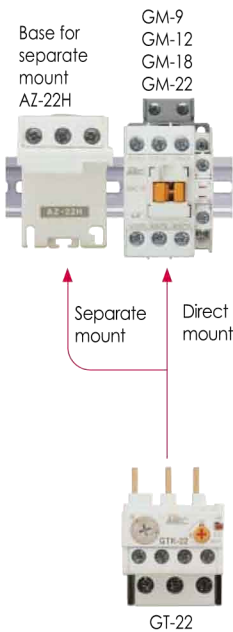
22A

## Description

- Direct mount on the GM-9, 12, 18, 22 contactors (9, 12, 18, 22A frames)
- DIN rail or screw mountable with the optional base AZ-22H
- Small physical size : 44 mm wide
- 1NO+1NC trip contacts
- Trip class 10A
- Differential current/Phase failure protection : GTK types
- Non-differential GTH types are available for the economic solution
- Ambient compensated -5 to 40°C
- Manual/Automatic reset
- Trip free design
- Bimetallic style



GT-22



## Catalog No.

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
0.1 - 0.16	GTK-22 · 0.14	GTH-22/3 · 0.14	GTH-22 · 0.14
0.16 - 0.25	GTK-22 · 0.21	GTH-22/3 · 0.21	GTH-22 · 0.21
0.25 - 0.4	GTK-22 · 0.33	GTH-22/3 · 0.33	GTH-22 · 0.33
0.4 - 0.63	GTK-22 · 0.52	GTH-22/3 · 0.52	GTH-22 · 0.52
0.63 - 1	GTK-22 · 0.82	GTH-22/3 · 0.82	GTH-22 · 0.82
1 - 1.6	GTK-22 · 1.3	GTH-22/3 · 1.3	GTH-22 · 1.3
1.6 - 2.5	GTK-22 · 2.1	GTH-22/3 · 2.1	GTH-22 · 2.1
2.5 - 4	GTK-22 · 3.3	GTH-22/3 · 3.3	GTH-22 · 3.3
4 - 6	GTK-22 · 5	GTH-22/3 · 5	GTH-22 · 5
5 - 8	GTK-22 · 6.5	GTH-22/3 · 6.5	GTH-22 · 6.5
6 - 9	GTK-22 · 7.5	GTH-22/3 · 7.5	GTH-22 · 7.5
7 - 10	GTK-22 · 8.5	GTH-22/3 · 8.5	GTH-22 · 8.5
9 - 13	GTK-22 · 11	GTH-22/3 · 11	GTH-22 · 11
12 - 18	GTK-22 · 15	GTH-22/3 · 15	GTH-22 · 15
16 - 22	GTK-22 · 19	GTH-22/3 · 19	GTH-22 · 19

## Connection

<b>Main</b>	Screw(M4) clamp terminal
<b>(Load)</b>	Cable capacity : 1.25~5.5mm <sup>2</sup> / ϕ 1.6~2.6
<b>Auxiliary</b>	Screw(M3.5) clamp terminal

## Ordering information

Specify catalog number

## For more information

- Technical specification → page 123~158
- Drawings → page 175
- Contactors → page 28
- Starters → page 51
- Separate mounting unit → page 171
- Electronic overload relay → page 100
- Operating curves → page 153

### Certificate

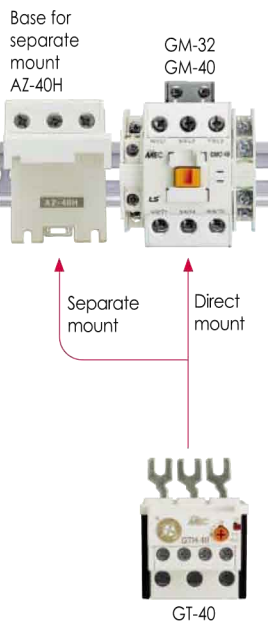
CE, ULcUL, Lloyd,  
CCC(China)

## Description

- Direct mount on the GM-32, 40 contactors (32, 40A frames)
- DIN rail or screw mountable with the optional base AZ-40H
- Small physical size : 53 mm wide
- 1NO+1NC trip contacts
- Trip class 10A
- Differential current/Phase failure protection : GTK types
- Non-differential GTH types are available for the economic solution
- Ambient compensated -5 to 40°C
- Manual/Automatic reset
- Trip free design
- Bimetallic style



GT-40



## Catalog No.

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
4 - 6	GTK-40 · 5	GTH-40/3 · 5	GTH-40 · 5
5 - 8	GTK-40 · 6.5	GTH-40/3 · 6.5	GTH-40 · 6.5
6 - 9	GTK-40 · 7.5	GTH-40/3 · 7.5	GTH-40 · 7.5
7 - 10	GTK-40 · 8.5	GTH-40/3 · 8.5	GTH-40 · 8.5
9 - 13	GTK-40 · 11	GTH-40/3 · 11	GTH-40 · 11
12 - 18	GTK-40 · 15	GTH-40/3 · 15	GTH-40 · 15
16 - 22	GTK-40 · 19	GTH-40/3 · 19	GTH-40 · 19
18 - 26	GTK-40 · 22	GTH-40/3 · 22	GTH-40 · 22
24 - 36	GTK-40 · 30	GTH-40/3 · 30	GTH-40 · 30
28 - 40	GTK-40 · 34	GTH-40/3 · 34	GTH-40 · 34

## Connection

<b>Main</b>	Screw(M5) clamp terminal
<b>(Load)</b>	Cable capacity : 2~14mm <sup>2</sup> / ϕ 1.6~3.6
<b>Auxiliary</b>	Screw(M3.5) clamp terminal

## Ordering information

Specify catalog number

## For more information

- Technical specification → page 123~158
- Drawings → page 175
- Contactors → page 30
- Starters → page 51
- Separate mounting unit → page 171
- Electronic overload relay → page 102
- Operating curves → page 153

## Certificate

CE, ULcUL, Lloyd, CCC(China)

# Thermal overload relays, Class 10A

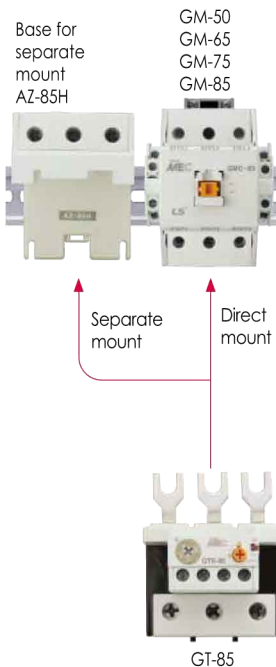
85A

## Description

- Direct mount on the GM-50, 65, 75, 85 contactors (50, 65, 75, 85A frames)
- DIN rail or screw mountable with the optional base AZ-85H
- Small physical size : 70 mm wide
- 1NO+1NC trip contacts
- Trip class 10A
- Differential current/Phase failure protection : GTK types
- Non-differential GTH types are available for the economic solution
- Ambient compensated -5 to 40°C
- Manual/Automatic reset
- Trip free design
- Bimetallic style



GT-85



## Catalog No.

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
7 - 10	GTK-85 · 8.5	GTH-85/3 · 8.5	GTH-85 · 8.5
9 - 13	GTK-85 · 11	GTH-85/3 · 11	GTH-85 · 11
12 - 18	GTK-85 · 15	GTH-85/3 · 15	GTH-85 · 15
16 - 22	GTK-85 · 19	GTH-85/3 · 19	GTH-85 · 19
18 - 26	GTK-85 · 22	GTH-85/3 · 22	GTH-85 · 22
24 - 36	GTK-85 · 30	GTH-85/3 · 30	GTH-85 · 30
28 - 40	GTK-85 · 34	GTH-85/3 · 34	GTH-85 · 34
34 - 50	GTK-85 · 42	GTH-85/3 · 42	GTH-85 · 42
45 - 65	GTK-85 · 55	GTH-85/3 · 55	GTH-85 · 55
54 - 75	GTK-85 · 65	GTH-85/3 · 65	GTH-85 · 65
63 - 85	GTK-85 · 74	GTH-85/3 · 74	GTH-85 · 74

## Connection

<b>Main (Load)</b>	<b>up to 50A</b>	Screw(M6) clamp terminal
		Cable capacity : 2-22mm <sup>2</sup>
<b>Auxiliary</b>	<b>above 50A</b>	Screw(M8) clamp terminal
		Cable capacity : 2-38mm <sup>2</sup>
<b>Auxiliary</b>		Screw(M3.5) clamp terminal

## Ordering information

Specify catalog number

## For more information

- Technical specification → page 123~158
- Drawings → page 175
- Contactors → page 32
- Starters → page 51
- Separate mounting unit → page 171
- Electronic overload relay → page 104
- Operating curves → page 153

## Certificate

CE, ULcUL, Lloyd,  
CCC(China)



## Description

- Directly mountable to the contactors with brackets and connectors.  
GT-100 for GMC-100, 125 contactors (100, 125A frames)  
GT-150 for GMC-150 contactor (150A frame)
- 1NO+1NC trip contacts
- Trip class 10A
- Differential current/Phase failure protection : GTK types
- Non-differential GTH types are available for the economic solution
- Ambient compensated -5 to 40°C
- Manual/Automatic reset
- Trip free design
- Bimetallic style

### Catalog No. for 100A frame



GT-100

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
34 - 50	GTK-100 · 41	GTH-100/3 · 41	GTH-100 · 41
39 - 57	GTK-100 · 48	GTH-100/3 · 48	GTH-100 · 48
43 - 65	GTK-100 · 56	GTH-100/3 · 56	GTH-100 · 56
54 - 80	GTK-100 · 67	GTH-100/3 · 67	GTH-100 · 67
65 - 100	GTK-100 · 80	GTH-100/3 · 80	GTH-100 · 80
85 - 125	GTK-100 · 107	GTH-100/3 · 107	GTH-100 · 107

### Catalog No. for 150A frame



GT-150

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
34 - 50	GTK-150 · 41	GTH-150/3 · 41	GTH-150 · 41
39 - 57	GTK-150 · 48	GTH-150/3 · 48	GTH-150 · 48
43 - 65	GTK-150 · 56	GTH-150/3 · 56	GTH-150 · 56
54 - 80	GTK-150 · 67	GTH-150/3 · 67	GTH-150 · 67
65 - 150	GTK-150 · 80	GTH-150/3 · 80	GTH-150 · 80
85 - 125	GTK-150 · 107	GTH-150/3 · 107	GTH-150 · 107
100 - 150	GTK-150 · 130	GTH-150/3 · 130	GTH-150 · 130

### Connection

<b>Main (Load)</b>	Screw(M8) clamp terminal
	Cable capacity : 2~100mm <sup>2</sup>
<b>Auxiliary</b>	Screw(M4) clamp terminal

### Ordering information

Specify catalog number

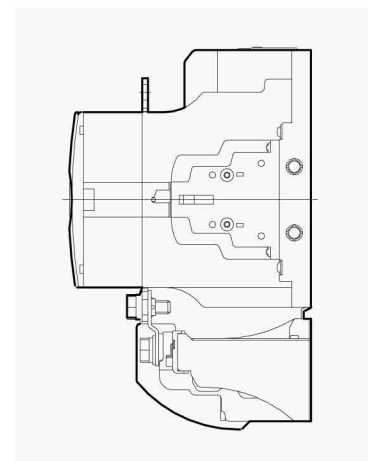
### For more information

- Technical specification → page 123~158
- Drawings → page 176
- Contactors → page 34
- Starters → page 51
- Operating curves → page 154
- Terminal covers → page 117

### Certificate

CE, ULcUL, Lloyd, CCC(China)

### Direct mount to a contactor



# Thermal overload relays, Class 10A

220A 400A

## Description

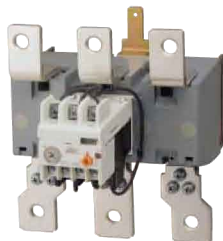
- Directly mountable to the contactors.
  - GT-220 for GMC-180, 220 contactors (180, 220A frames)
  - GT-400 for GMC-300, 400 contactors (300, 400A frames)
- 1NO+1NC trip contacts
- Trip class 10A
- Differential current/Phase failure protection : GTK types
- Non-differential GTH types are available for the economic solution
- Ambient compensated -5 to 40°C
- Manual/Automatic reset
- Trip free design
- Bimetallic style
- CT operated type



GT-220

### Catalog No. for 220A frame

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
65 - 100	GTK-220 · 80	GTH-220/3 · 80	GTH-220 · 80
85 - 125	GTK-220 · 107	GTH-220/3 · 107	GTH-220 · 107
100 - 160	GTK-220 · 130	GTH-220/3 · 130	GTH-220 · 130
120 - 180	GTK-220 · 150	GTH-220/3 · 150	GTH-220 · 150
160 - 240	GTK-220 · 200	GTH-220/3 · 200	GTH-220 · 200



GT-400

### Catalog No. for 400A frame

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
85 - 125	GTK-400 · 107	GTH-400/3 · 107	GTH-400 · 107
100 - 160	GTK-400 · 130	GTH-400/3 · 130	GTH-400 · 130
120 - 180	GTK-400 · 150	GTH-400/3 · 150	GTH-400 · 150
160 - 240	GTK-400 · 200	GTH-400/3 · 200	GTH-400 · 200
200 - 300	GTK-400 · 250	GTH-400/3 · 250	GTH-400 · 250
260 - 400	GTK-400 · 350	GTH-400/3 · 350	GTH-400 · 350

## Connection

Main (Load)	GT-220	Screw(M10) clamp terminal Cable capacity : 2~150mm <sup>2</sup>
	GT-400	Screw(M12) clamp terminal Cable capacity : 2~200mm <sup>2</sup>
Auxiliary		Screw(M3.5) clamp terminal

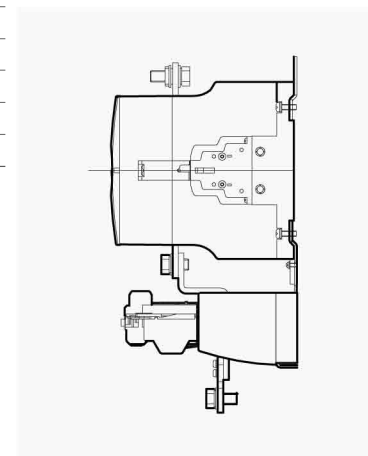
### Ordering information

Specify catalog number

### For more information

- Technical specification → page 123~158
- Drawings → page 177
- Contactors → page 36
- Starters → page 51
- Operating curves → page 154
- Terminal covers → page 117

## Direct mount to a contactor



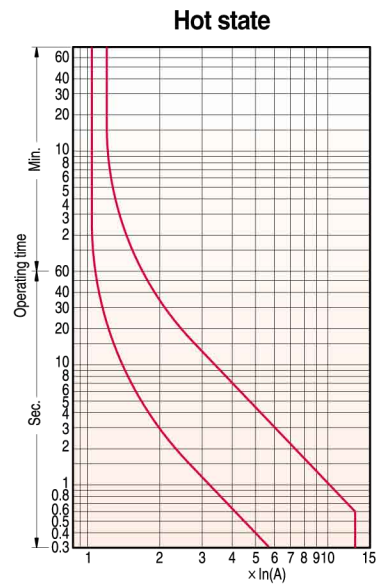
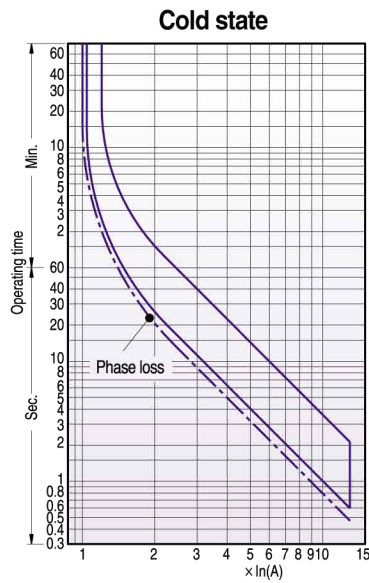
### Certificate

CE, ULcUL, Lloyd,  
CCC(China)

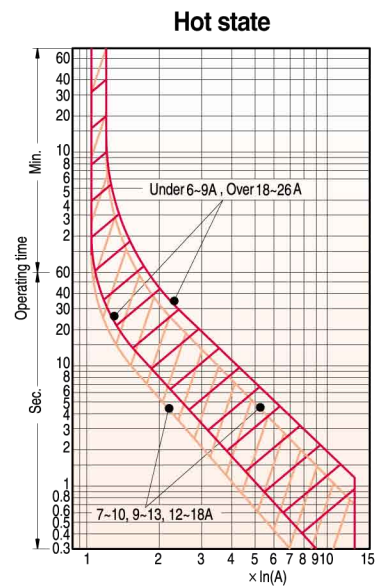
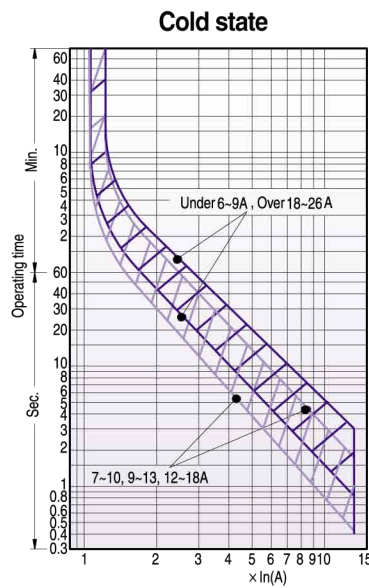
# Technical information

## Trip curves for thermal overload relays

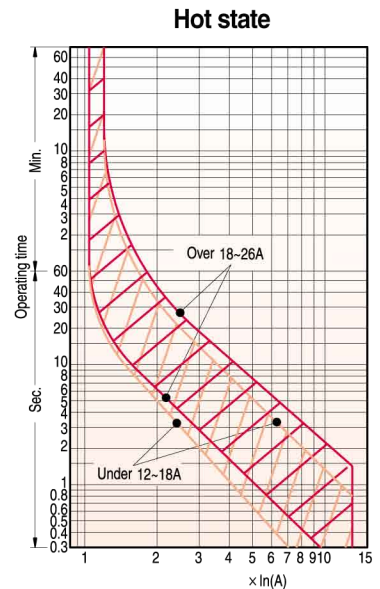
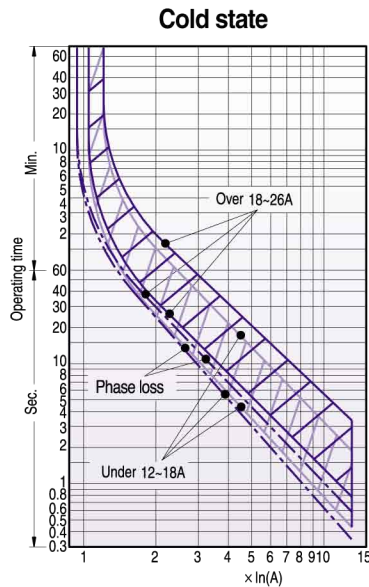
GTH(K)-22



GTH(K)-40



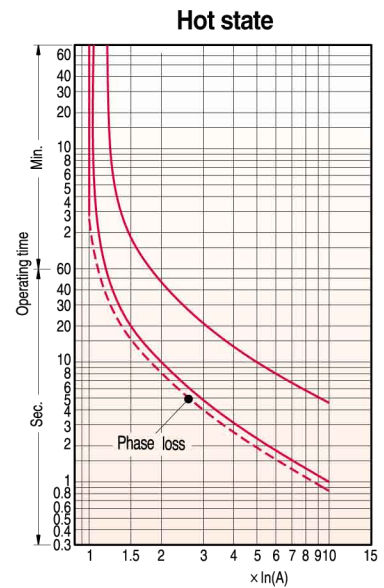
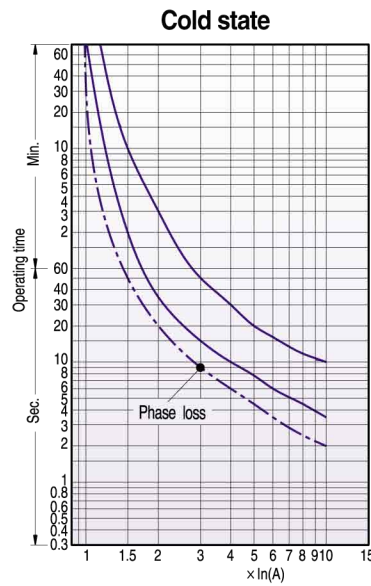
GTH(K)-85



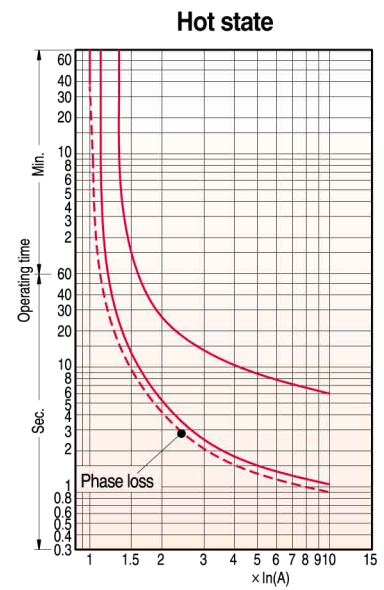
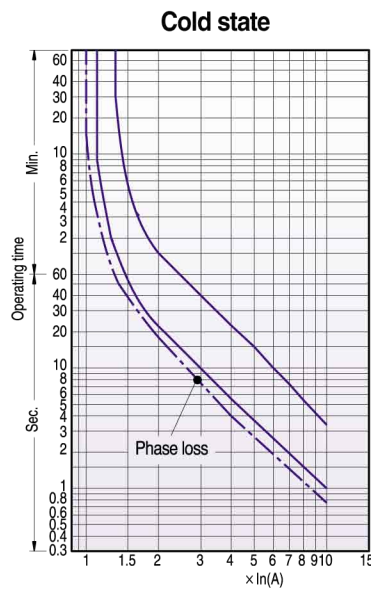
# Trip curves for thermal overload relays



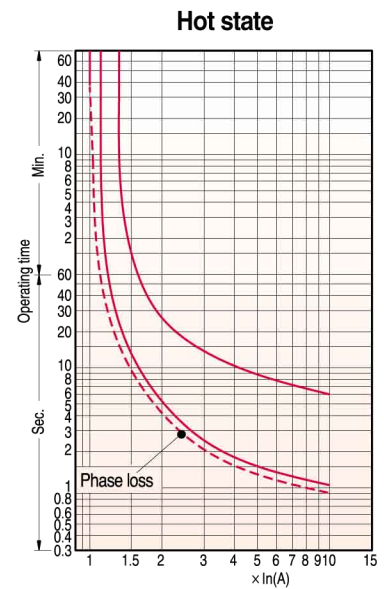
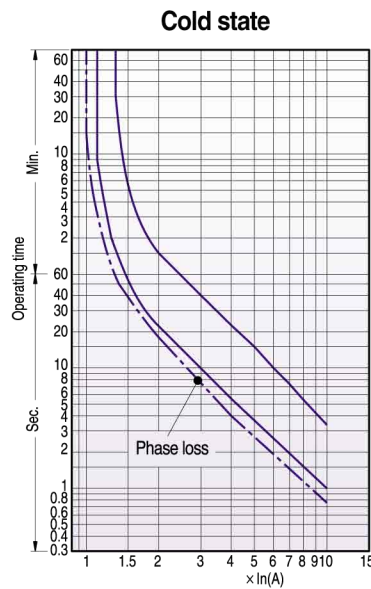
GTH(K)-100  
GTH(K)-150



GTH(K)-220  
GTH(K)-400



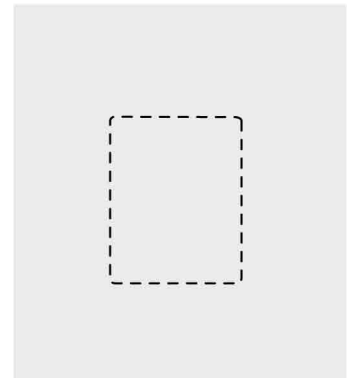
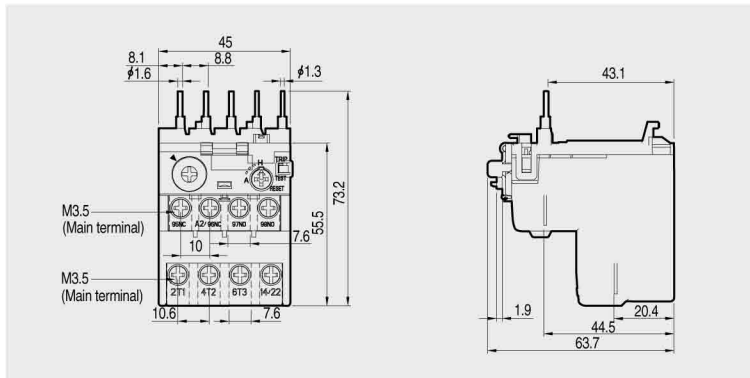
GTH(K)-600



# Dimensions

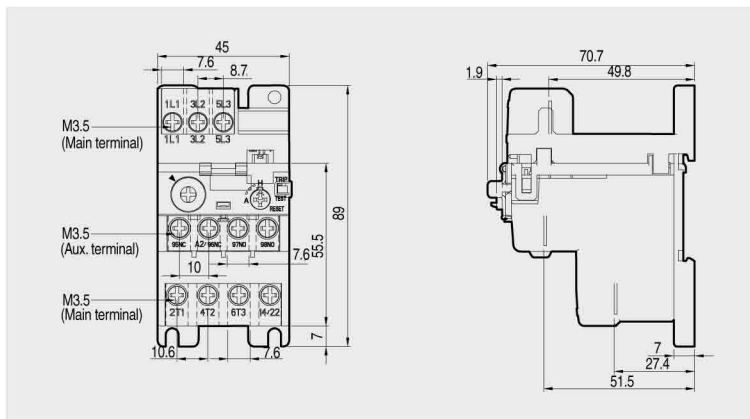
## Thermal overload relays for Mini contactors

**GTH(K)-12M**



0.1kg

**GTH(K)-12MH**



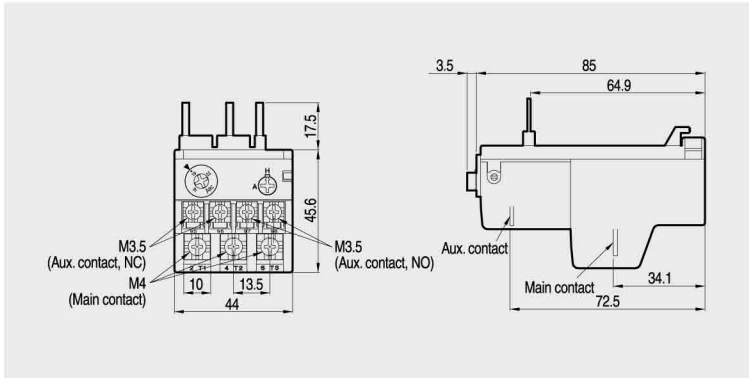
0.4kg



# Thermal overload relays (Class 10A)



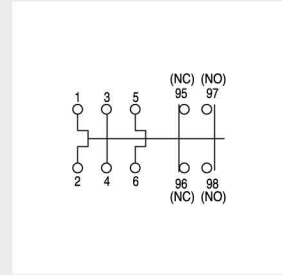
- GTH-22
- GTK-22
- GTH-22/3



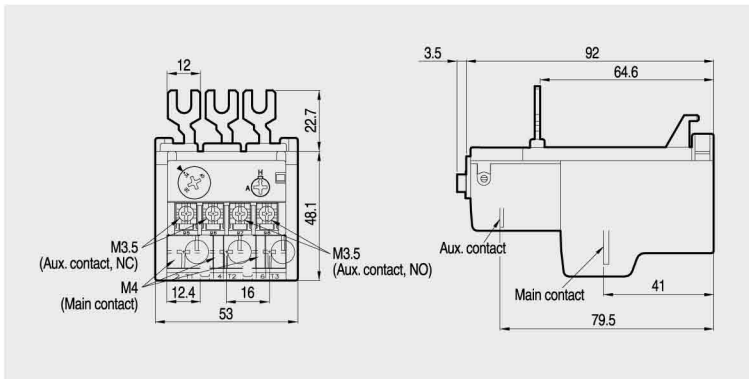
0.11kg

## Diagrams

GTH-22, 40, 85  
(2 heater types)

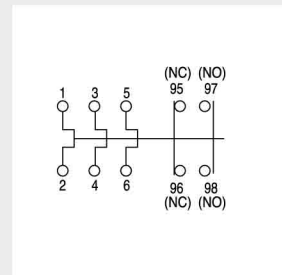


- GTH-40
- GTK-40
- GTH-40/3

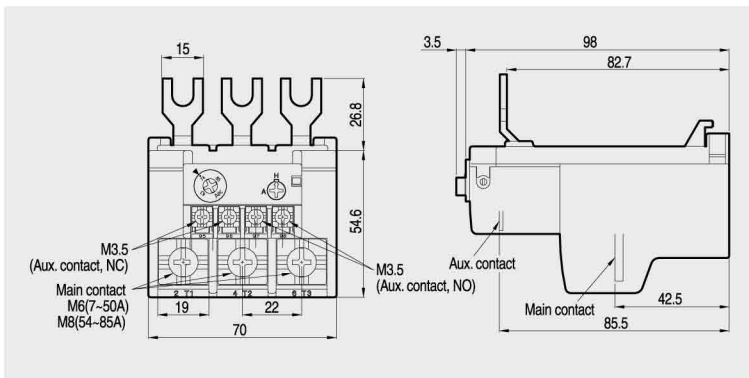


0.17kg

GTH-22/3, 40/3, 85/3  
GTK-22, 40, 85  
(3 heater types)



- GTH-85
- GTK-85
- GTH-85/3



0.3kg

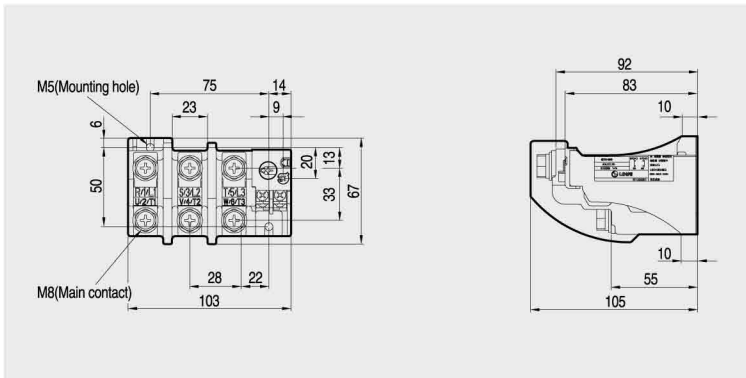
# Dimensions

## Thermal overload relays (Class 10A)

GTH-100

GTK-100

GTH-100/3

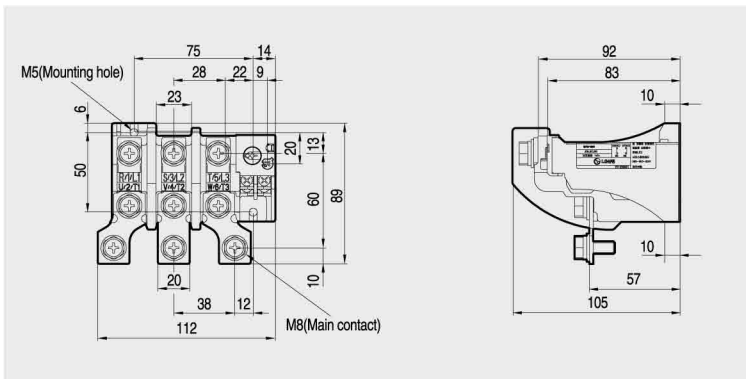


0.48kg

GTH-150

GTK-150

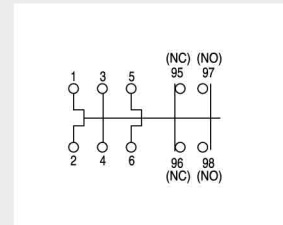
GTH-150/3



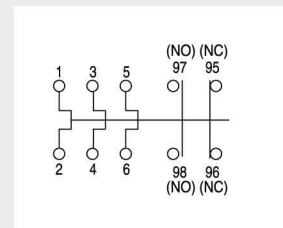
0.6kg

### Diagrams

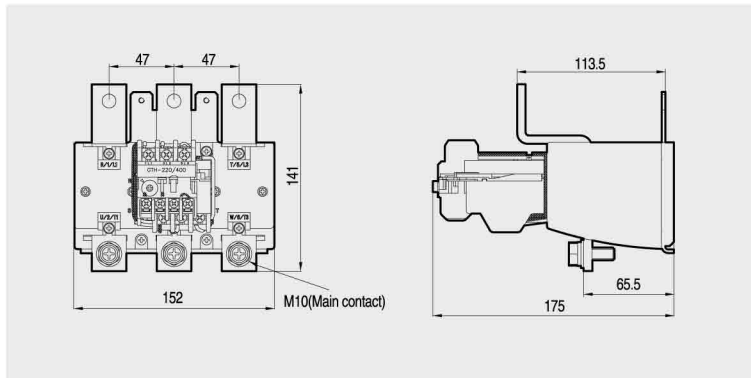
GTH-100, 150  
(2 heater types)



GTH-100/3, 150/3  
GTK-100, 150  
(3 heater types)

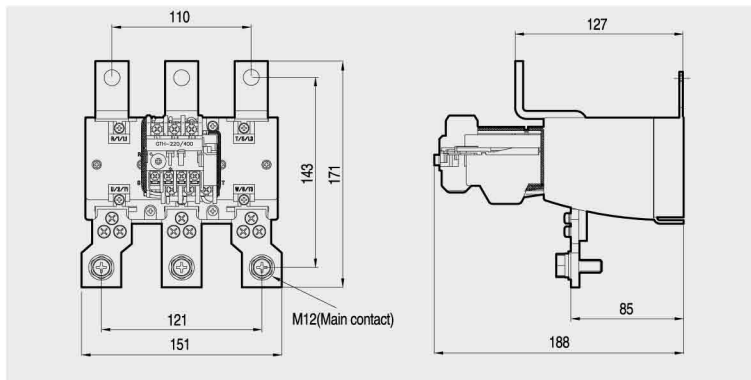


- GTH-220
- GTK-220
- GTH-220/3



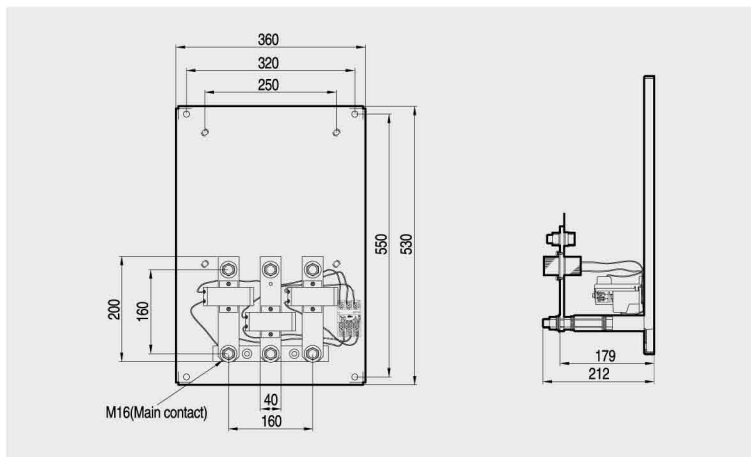
2.5kg

- GTH-400
- GTK-400
- GTH-400/3



2.6kg

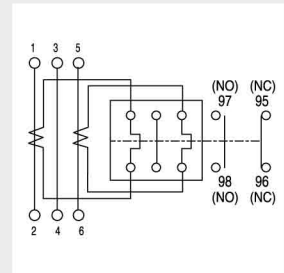
- GTH-600
- GTK-600
- GTH-600/3



11.5kg

### Diagrams

**GTH- 220, 400, 600**  
**(2 heater types)**



**GTH-220/3, 400/3, 600/3**  
**GTK-220, 400, 600**  
**(3 heater types)**

