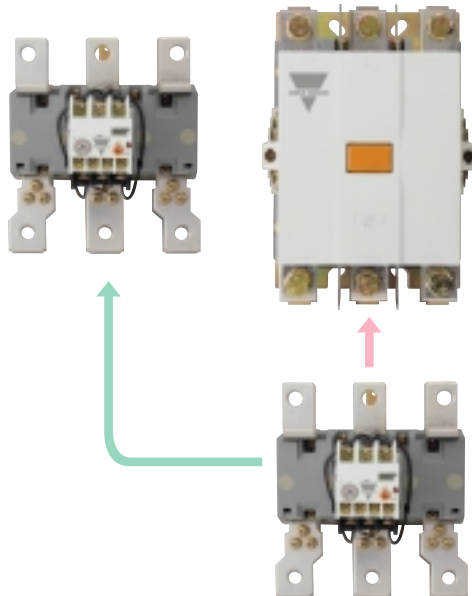


Overload Relays

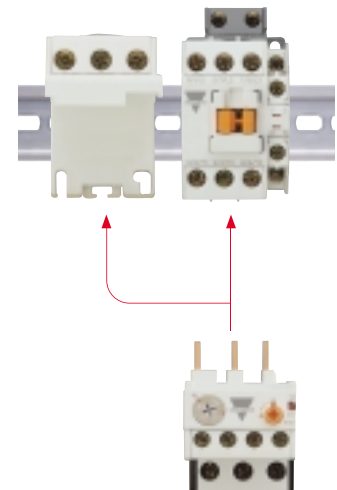
Thermal (Bimetallic) style up to 800A

CGT type overload relays are designed for the easy mounting directly to contactors or separately by using additional bases or brackets.

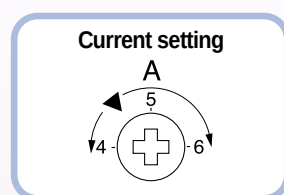


Relays frame current over 80A
Separate mount on panel with screws.
Bracket is required by type.

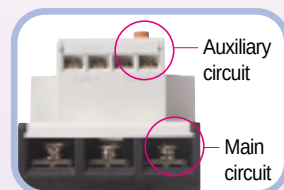
Relays frame current up to 80A
Optional bases are used to mount the relays separately either on 35mm DIN rail or on panel with screws.



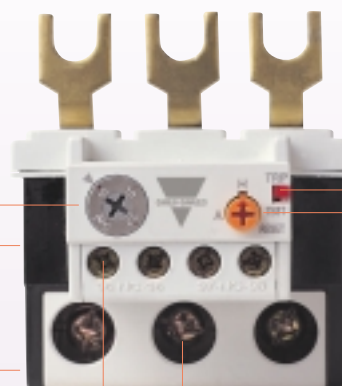
Overload relay structure



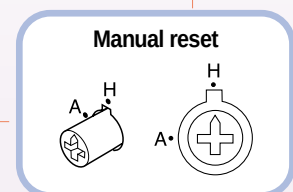
Finger proof design



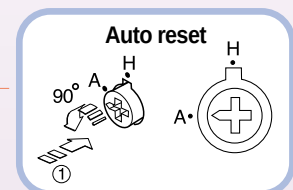
Main and auxiliary terminals are arranged to keep people from wrong wiring for the low current frame relays.



The bar indicator to be protruded by 2~3mm to indicate trip status visibly. Push it to reset the relay in the case of using manual reset mode.



Manual reset



Auto reset

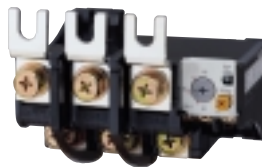
To set "Auto reset" mode push the orange bar and rotate it 90 degrees count clockwise.

Thermal overload relays

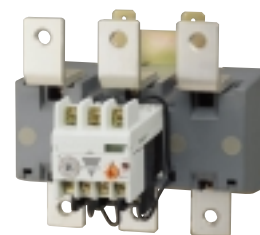
Setting range selection guide



CGT-22



CGT-125



CGT-220

Class 10A

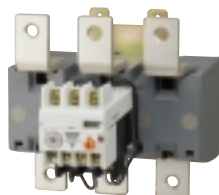
Three phase (4 pole) motor max. power						CGT(H)-22	CGT(H)-40	CGT(H)-85	CGT(H)-125	CGT(H)-150	CGT(H)-220	CGT(H)-400	CGT(H)-800
220V KW	380V KW	415V KW	440V KW	550V KW	660V KW								
•	•	•	•	•	•	0.1~0.16							
•	•	•	•	•	•	0.16~0.2							
•	•	•	•	•	•	5							
•	•	•	•	•	0.37	0.25~0.4							
•	•	•	•	0.37	0.55	0.4~0.63							
•	0.37	•	0.55	0.75	1.1	0.63~1							
0.37	0.5	•	0.75	1	1.5								
0.5	1	1.1	1.5	1.5	2	1~1.6							
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	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					
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				100~150	100~160	100~160		
60	110	110	125	135	175								
55	90	100	110	110	160						120~180	120~180	
75	125	135	150	150	220								
63	110	129	140	160	200						160~240	160~240	
85	150	175	190	220	270								
80	150	160	160	200	257								
110	205	220	220	270	350							200~300	200~300
110	185	200	220	257	335								
150	250	270	300	350	455							260~400	260~400
180	315	355	375	425	500								400~600
245	430	480	510	580	680								
220	400	425	450	500	•								520~800
300	545	580	610	680									
Applied contactors for direct starters						CGC-9A(D) CGC-12A(D) CGC-18A(D) CGC-22A(D)	CGC-32A(D) CGC-40A(D)	CGC-50A(D) CGC-65A(D) CGC-75A(D) CGC-85A(D)	CGC-100A(D) CGC-125A(D)	CGC-150A(D) CGC-180 CGC-220	CGC-300 CGC-400	CGC-600 CGC-800	

Thermal overload relays, Class 10A

220A 400A

Description

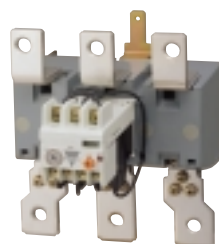
- Directly mountable to the contactors.
CGT-220 for CGC-180, 220 contactors (180, 220A frames)
CGT-400 for CGC-300, 400 contactors (300, 400A frames)
- 1NO+1NC trip contacts
- Trip class 10A
- Differential current/Phase failure protection : CGT types
- Non-differential CGTH types are available for the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



CGT-220

Catalog No. for 220A frame

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
65 - 100	CGT-220 · 100	CGTH-220/3 · 100	CGTH-220 · 100
85 - 125	CGT-220 · 125	CGTH-220/3 · 125	CGTH-220 · 125
100 - 160	CGT-220 · 160	CGTH-220/3 · 160	CGTH-220 · 160
120 - 180	CGT-220 · 180	CGTH-220/3 · 180	CGTH-220 · 180
160 - 240	CGT-220 · 240	CGTH-220/3 · 240	CGTH-220 · 240



CGT-400

Catalog No. for 400A frame

Setting ranges(A)	Differential type	Non-differential type	
	3-heater	3-heater	2-heater
85 - 125	CGT-400 · 125	CGTH-400/3 · 125	CGTH-400 · 125
100 - 160	CGT-400 · 160	CGTH-400/3 · 160	CGTH-400 · 160
120 - 180	CGT-400 · 180	CGTH-400/3 · 180	CGTH-400 · 180
160 - 240	CGT-400 · 240	CGTH-400/3 · 240	CGTH-400 · 240
200 - 300	CGT-400 · 300	CGTH-400/3 · 300	CGTH-400 · 300
260 - 400	CGT-400 · 400	CGTH-400/3 · 400	CGTH-400 · 400

Connection

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

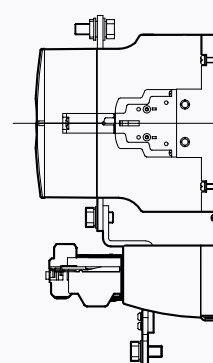
Ordering information

Specify catalog number

For more information

Technical specification	➔ page 122~133
Drawings	➔ page 149
Contactors	➔ page 48
Starters	➔ page 82
Operating curves	➔ page 135
Terminal covers	➔ page 119

Direct mount to a contactor



Certificate

CE, ULcUL, Lloyd,
CCC(China)

Thermal overload relays with protection fuses

Type	AC1(A)	690V AC3 I _e (A)	Short-circuit test	
			Fuse available fault current 100,000A	U _e / "I"
CGT(H)-22	32	1.6	gL/gG 4A	690V/1kA
CGT(H)-22		2.5	gL/gG 6A	690V/1kA
CGT(H)-22		4	gL/gG 10A	690V/1kA
CGT(H)-22		22	gL/gG 50A	690V/3kA
CGT(H)-40	60	6	gL/gG 16A	690V/1kA
CGT(H)-40		8	gL/gG 20A	690V/1kA
CGT(H)-40		9	gL/gG 20A	690V/1kA
CGT(H)-40		40	gL/gG 80A	690V/3kA
CGT(H)-85	135	18	gL/gG 35A	690V/3kA
CGT(H)-85		22	gL/gG 50A	690V/3kA
CGT(H)-85		26	gL/gG 63A	690V/3kA
CGT(H)-85		36	gL/gG 80A	690V/3kA
CGT(H)-85		40	gL/gG 80A	690V/3kA
CGT(H)-85		50	gL/gG 100A	690V/3kA
CGT(H)-85		65	gL/gG 160A	690V/5kA
CGT(H)-85		75	gL/gG 160A	690V/5kA
CGT(H)-85	150	85	gL/gG 200A	690V/5kA
CGT(H)-125		65	gL/gG 150A	690V/5kA
CGT(H)-125	200	125	gL/gG 225A	690V/5kA
CGT(H)-150		100	gL/gG 200A	690V/5kA
CGT(H)-150	260	150	gL/gG 250A	690V/10kA
CGT(H)-220		150	gL/gG 250A	690V/10kA
CGT(H)-220	420	240	gL/gG 355A	690V/10kA
CGT(H)-400		300	gL/gG 400A	690V/10kA
CGT(H)-400	800	400	gL/gG 630A	690V/18kA
CGT(H)-800		400	gL/gG 630A	690V/18kA
CGT(H)-800		630	gL/gG 800A	690V/18kA
CGT(H)-800		800	gL/gG 1400A	690V/30kA

Note) Tables are based on a combination of tests on a previous range and technical comparison.

Technical informations

Cabling and tightening torque

3-pole Contactors

Type	Cable section		Screw size		Torque(Nm)	
	AWG /MCM	ISOmm ² MIN MAX	Contactor terminal	Coil terminal	Principal main	Aux.
CGC-9A	10 AWG	1,5 4	M4	M3.5	2,3	2,3
CGC-12A	10 AWG	1,5 4	M4	M3.5	2,3	2,3
CGC-18A	10 AWG	1,5 6	M4	M3.5	4	2,3
CGC-22A	8 AWG	2,5 10	M4	M3.5	4	2,3
CGC-32A	6 AWG	4 16	M5	M3.5	4	2,3
CGC-40A	6 AWG	4 16	M5	M3.5	4	2,3
CGC-50A	4 AWG	6 25	M6	M3.5	5	2,3
CGC-65A	2 AWG	10 35	M8	M3.5	5	2,3
CGC-75A	2 AWG	10 35	M8	M3.5	5	2,3
CGC-85A	0 AWG	10 50	M8	M3.5	5	2,3
CGC-100	00 AWG	25 70	M8	M4	9	2,3
CGC-125	00 AWG	25 70	M8	M4	9	2,3
CGC-150	0000 AWG	35 95	M8	M4	9	2,3
CGC-180	250 MCM	50 120	M10	M4	15	2,3
CGC-220	300 MCM	70 150	M10	M4	15	2,3
CGC-300	500 MCM	95 240	M12	M4	23	2,3
CGC-400	N°2 30×5	150	M12	M4	23	2,3
CGC-600	N°2 50×5	240	M16	M4	57	2,3
CGC-800	N°2 60×5	240	M16	M4	57	2,3

4-pole Contactors

Type	Cable section		Screw size		Torque(Nm)	
	AWG/MCM	ISOmm ²	Contactor terminal	Coil terminal	Principal main	Aux.
CGC-9A/4	10 AWG	4	M3.5	M3.5	2,3	2,3
CGC-12A/4	10 AWG	4	M3.5	M3.5	2,3	2,3
CGC-18A/4	8 AWG	6	M4	M3.5	4	2,3
CGC-22A/4	8 AWG	10	M4	M3.5	4	2,3
CGC-32A/4	6 AWG	16	M5	M3.5	4	2,3
CGC-40A/4	6 AWG	16	M5	M3.5	4	2,3
CGC-50A/4	4 AWG	25	M6	M3.5	5	2,3
CGC-65A/4	2 AWG	35	M8	M3.5	5	2,3
CGC-75A/4	2 AWG	35	M8	M3.5	5	2,3
CGC-85A/4	0 AWG	50	M8	M3.5	5	2,3
CGC-100/4	00 AWG	70	M8	M4	9	2,3
CGC-125/4	00 AWG	70	M8	M4	9	2,3
CGC-150/4	0000 AWG	95	M8	M4	9	2,3
CGC-180/4	250 MCM	120	M10	M4	15	2,3
CGC-220/4	300 MCM	150	M10	M4	15	2,3
CGC-300/4	500 MCM	240	M12	M4	23	2,3
CGC-400/4	N°2 30×5	150	M12	M4	23	2,3
CGC-600/4	N°2 50×5	240	M16	M4	57	2,3
CGC-800/4	N°2 60×5	240	M16	M4	57	2,3

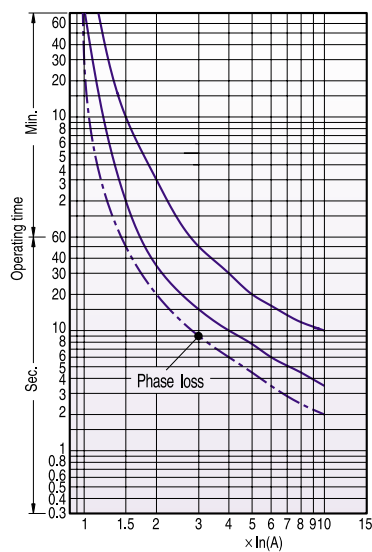
Thermal overload relays

Type	Setting range	Cable selection		Torque (Nm)	Tornillo screw size
		AWG /MCM	ISOmm ²		
CGT(H)-22	0.1~0.16	18AWG	1,5	2,3	M4
	0.16~0.25	18AWG	1,5	2,3	M4
	0.25~0.4	18AWG	1,5	2,3	M4
	0.4~0.63	18AWG	1,5	2,3	M4
	0.63~1	18AWG	1,5	2,3	M4
	1~1.6	18AWG	1,5	2,3	M4
	1.6~2.5	18AWG	1,5	2,3	M4
	2.5~4	18AWG	1,5	2,3	M4
	4~6	18AWG	1,5	2,3	M4
	5~8	16AWG	1,5	2,3	M4
	6~9	16AWG	1,5	2,3	M4
	7~10	16AWG	1,5	2,3	M4
	9~13	14AWG	1,5-2,5	2,3	M4
	12~18	12AWG	2,5	2,3	M4
	16~22	10AWG	2,5-4,0	2,3	M4
	4~6	18AWG	1,5	4	M5
CGT(H)-40	5~8	16AWG	1,5	4	M5
	6~9	16AWG	1,5	4	M5
	7~10	16AWG	1,5	4	M5
	9~13	14AWG	1,5-2,5	4	M5
	12~18	12AWG	2,5	4	M5
	16~22	10AWG	2,5-4,0	4	M5
	18~26	10AWG	2,5-6,0	4	M5
	24~36	10AWG	4,0-10	4	M5
	28~40	10AWG	6,0-10	4	M5
	7~10	16AWG	1,5	5,1	M6
	9~13	14AWG	1,5-2,5	5,1	M6
	12~18	12AWG	2,5	5,1	M6
	16~22	10AWG	2,5-4,0	5,1	M6
	18~26	10AWG	2,5-6,6	5,1	M6
	24~36	10AWG	4,0-10	5,1	M6
	28~40	10AWG	6,0-10	5,1	M6
CGT(H)-85	34~50	6AWG	10-16	5,1	M6
	45~65	4AWG	10-25	5,1	M8
	54~75	4AWG	16-25	5,1	M8
	63~85	3AWG	16-35	5,1	M8
	34~50	6AWG	10-16	9	M8
	39~57	6AWG	10-16	9	M8
	43~65	4AWG	10-25	9	M8
	54~80	4AWG	16-25	9	M8
	65~100	2AWG	25-35	9	M8
	85~125	1AWG	35-50	9	M8
	34~50	6AWG	10-16	9	M8
	39~57	6AWG	10-16	9	M8
	43~65	4AWG	10-25	9	M8
	54~80	4AWG	16-25	9	M8
	65~100	2AWG	25-35	9	M8
	85~125	1AWG	35-50	9	M8
CGT(H)-125	100~150	00AWG	35-70	9	M8
	65~100	2AWG	25-35	15	M10
	85~125	1AWG	35-50	15	M10
	100~160	00AWG	35-70	15	M10
	120~180	00AWG	50-95	15	M10
	160~240	250AWG	70-120	15	M10
	85~125	1AWG	35-50	23	M12
	100~160	00AWG	35-70	23	M12
	120~180	00AWG	50-95	23	M12
	160~240	250AWG	70-120	23	M12
	200~300	400AWG	95-185	23	M12
	260~400	500AWG	150-240	23	M12
	200~300	400AWG	95-185	57	M16
	260~400	500AWG	150-240	57	M16
	400~600	N°2 40×5	150-185	57	M16
	520~800	N°2 60×5	185-240	57	M16

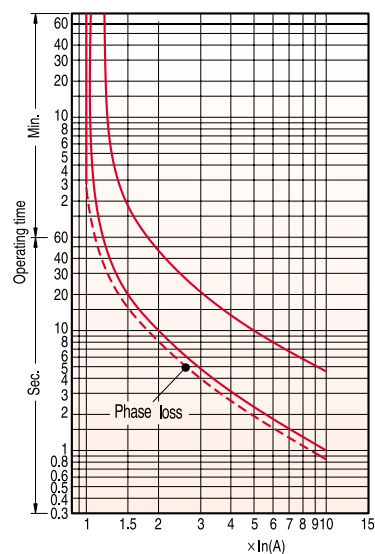
CGT(H)-125

CGT(H)-150

Cold state



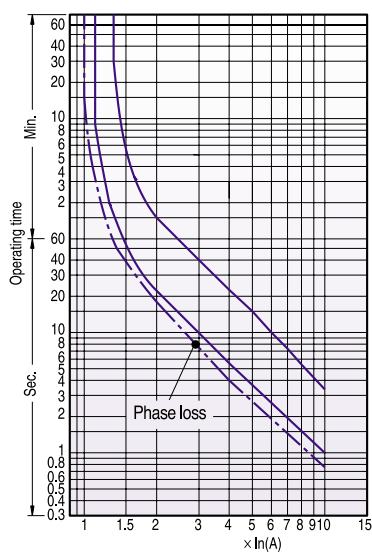
Hot state



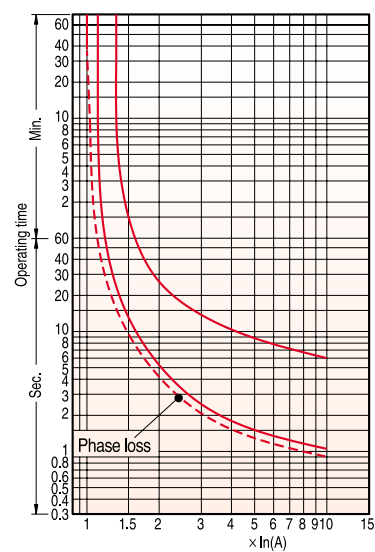
CGT(H)-220

CGT(H)-400

Cold state

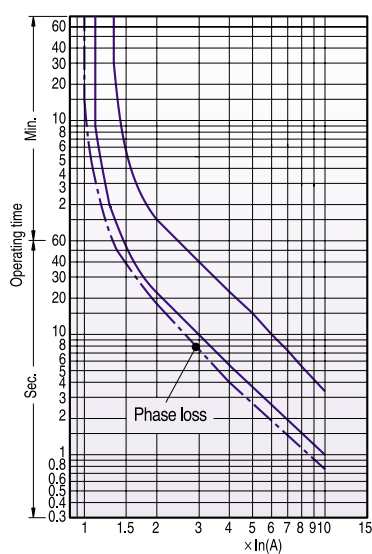


Hot state

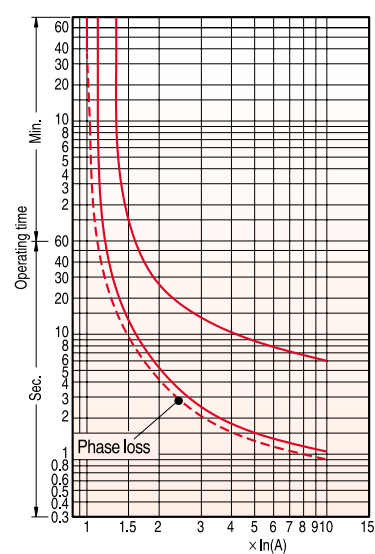


CGT(H)-800

Cold state



Hot state



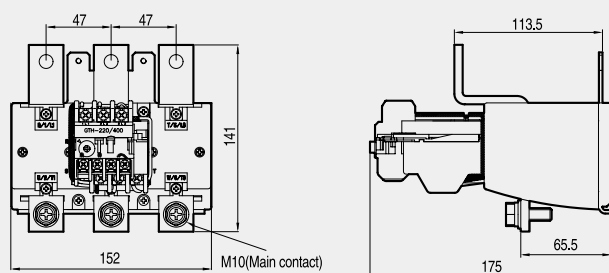
Thermal overload relays

CARLO GAVAZZI

CGTH-220

CGT-220

CGTH-220/3

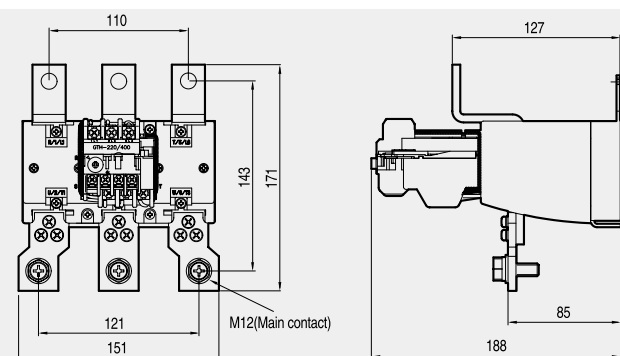


2.5kg

CGTH-400

CGT-400

CGTH-400/3

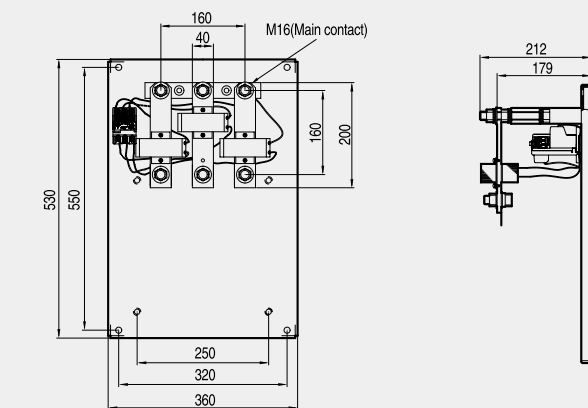


2.6kg

CGTH-800

CGT-800

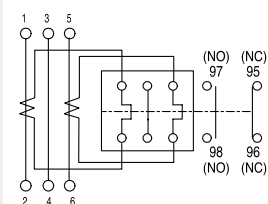
CGTH-800/3



5.5kg

Diagrams

CGTH- 220, 400, 600
(2 heater types)



CGTH-220/3, 400/3, 600/3
CGT-220, 400, 600
(3 heater types)

