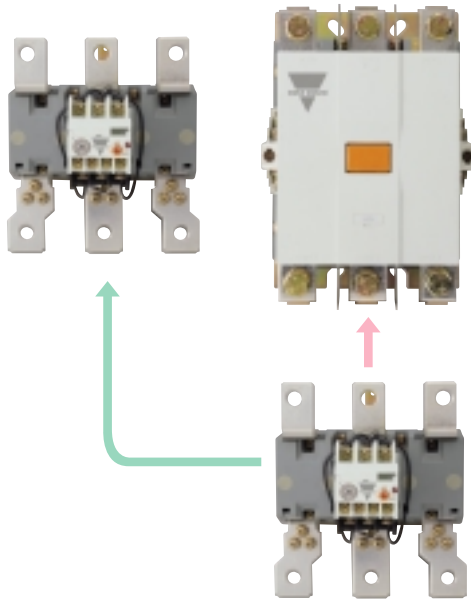


Overload Relays

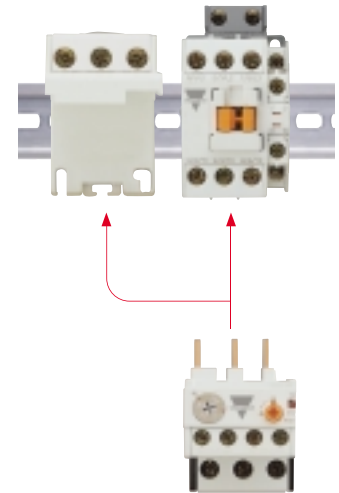
Thermal (Bimetallic) style up to 800A

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

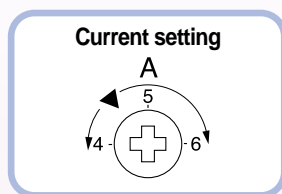


Relays frame current over 80A
Separate mount on panel with screws.
Bracket is required by type.

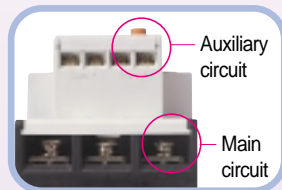
Relays frame current up to 80A
Optional bases are used to mount the relays separately either on 35mm DIN rail or on panel with screws.



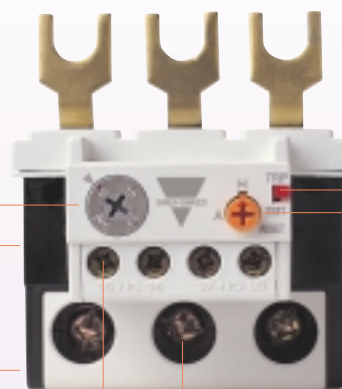
Overload relay structure



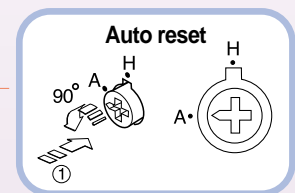
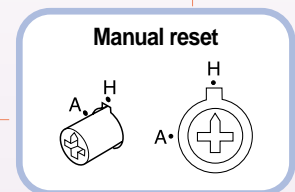
Finger proof design



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.



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

Thermal overload relays

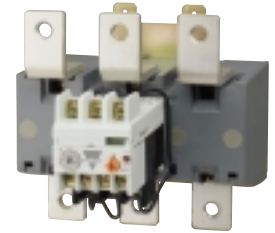
Setting range selection guide



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 | | | | | | | | |
| 40 | 80 | 80 | 85 | 110 | 150 | | | 85~125 | 85~125 | 85~125 | 85~125 | | |
| 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 | | | | | | | 260~400 | 260~400 |
| 150 | 250 | 270 | 300 | 350 | 455 | | | | | | | | |
| 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 | |

Description

- Directly mountable to the contactors with brackets and connectors.
CGT-125 for CGC-100, 125 contactors (100, 125A frames)
CGT-150 for CGC-150 contactor (150A frame)
- 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

Catalog No. for 100A frame



CGT-125

| Setting ranges(A) | Differential type | Non-differential type | |
|-------------------|-------------------|-----------------------|----------------|
| | 3-heater | 3-heater | 2-heater |
| 34 - 50 | CGT-125 · 50 | CGTH-125/3 · 50 | CGTH-125 · 50 |
| 39 - 57 | CGT-125 · 57 | CGTH-125/3 · 57 | CGTH-125 · 57 |
| 43 - 65 | CGT-125 · 65 | CGTH-125/3 · 65 | CGTH-125 · 65 |
| 54 - 80 | CGT-125 · 80 | CGTH-125/3 · 80 | CGTH-125 · 80 |
| 65 - 100 | CGT-125 · 100 | CGTH-125/3 · 100 | CGTH-125 · 100 |
| 85 - 125 | CGT-125 · 125 | CGTH-125/3 · 125 | CGTH-125 · 125 |

Catalog No. for 150A frame



CGT-150

| Setting ranges(A) | Differential type | Non-differential type | |
|-------------------|-------------------|-----------------------|----------------|
| | 3-heater | 3-heater | 2-heater |
| 34 - 50 | CGT-150 · 50 | CGTH-150/3 · 50 | CGTH-150 · 50 |
| 39 - 57 | CGT-150 · 57 | CGTH-150/3 · 57 | CGTH-150 · 57 |
| 43 - 65 | CGT-150 · 65 | CGTH-150/3 · 65 | CGTH-150 · 65 |
| 54 - 80 | CGT-150 · 80 | CGTH-150/3 · 80 | CGTH-150 · 80 |
| 65 - 100 | CGT-150 · 100 | CGTH-150/3 · 100 | CGTH-150 · 100 |
| 85 - 125 | CGT-150 · 125 | CGTH-150/3 · 125 | CGTH-150 · 125 |
| 100 - 150 | CGT-150 · 150 | CGTH-150/3 · 150 | CGTH-150 · 150 |

Connection

| | |
|--------------------|---------------------------------------|
| Main (Load) | Screw(M8) clamp terminal |
| | Cable capacity : 2~100mm ² |
| Auxiliary | Screw(M4) clamp terminal |

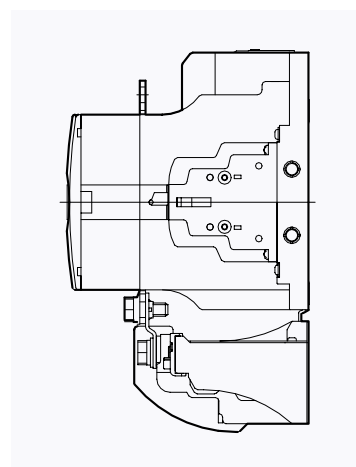
Ordering information

Specify catalog number

For more information

- Technical specification → page 122~133
- Drawings → page 148
- Contactors → page 46
- 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 Ie(A) | Short-circuit test | |
|------------|--------|----------------------|---|-----------|
| | | | Fuse available fault current 100,000A | Ue / "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)-125 | 150 | 85 | gL/gG 200A | 690V/5kA |
| CGT(H)-125 | | 65 | gL/gG 150A | 690V/5kA |
| CGT(H)-150 | 200 | 125 | gL/gG 225A | 690V/5kA |
| CGT(H)-150 | | 100 | gL/gG 200A | 690V/5kA |
| CGT(H)-220 | 260 | 150 | gL/gG 250A | 690V/10kA |
| CGT(H)-220 | | 150 | gL/gG 250A | 690V/10kA |
| CGT(H)-400 | 420 | 240 | gL/gG 355A | 690V/10kA |
| CGT(H)-400 | | 300 | gL/gG 400A | 690V/10kA |
| CGT(H)-800 | 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 | | Contactor terminal | Coil terminal | Principal main | Aux. |
| | | MIN | MAX | | | | |
| 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 |

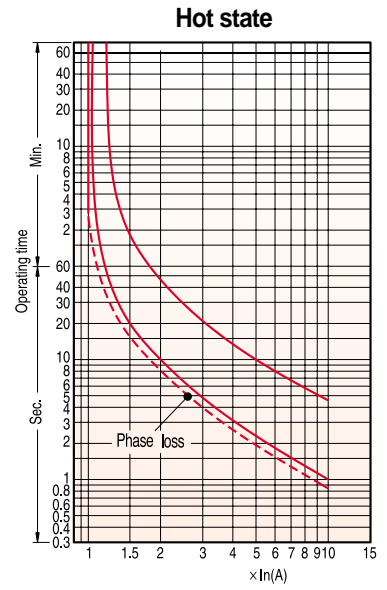
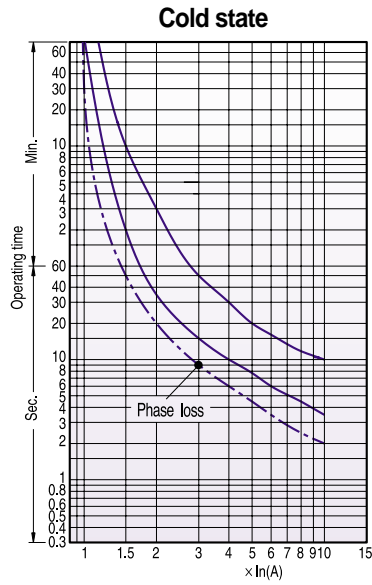
4-pole Contactors

| 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 |

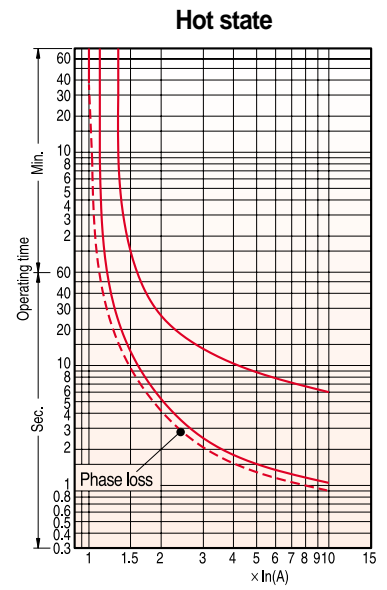
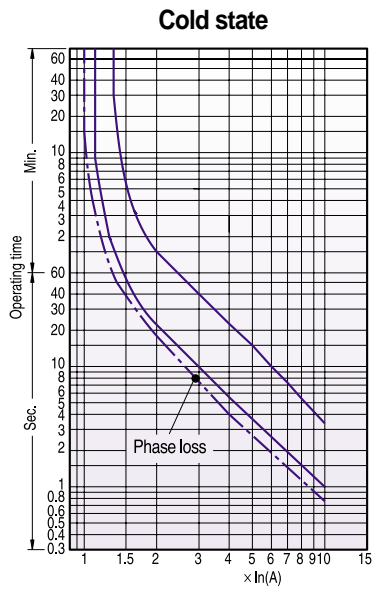
Thermal overload relays

| 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 | |
| | CGT(H)-40 | 4~6 | 18AWG | 1,5 | 4 | M5 |
| 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 | |
| CGT(H)-85 | 28~40 | 10AWG | 6,0-10 | 5,1 | M6 | |
| | 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 | |
| | CGT(H)-125 | 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 |
| | CGT(H)-150 | 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 | |
| 100~150 | | 00AWG | 35-70 | 9 | M8 | |
| 65~100 | | 2AWG | 25-35 | 15 | M10 | |
| 85~125 | | 1AWG | 35-50 | 15 | M10 | |
| CGT(H)-220 | 100~160 | 00AWG | 35-70 | 15 | M10 | |
| | 120~180 | 000AWG | 50-95 | 15 | M10 | |
| | 160~240 | 250AWG | 70-120 | 15 | M10 | |
| | 85~125 | 1AWG | 35-50 | 23 | M12 | |
| CGT(H)-400 | 100~160 | 00AWG | 35-70 | 23 | M12 | |
| | 120~180 | 000AWG | 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 | |
| | CGT(H)-800 | 400~600 | N° 2 40×5 | 150-185 | 57 | M16 |
| 520~800 | | N° 2 60×5 | 185-240 | 57 | M16 | |

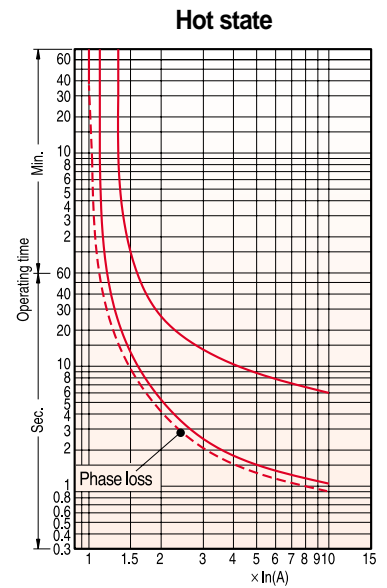
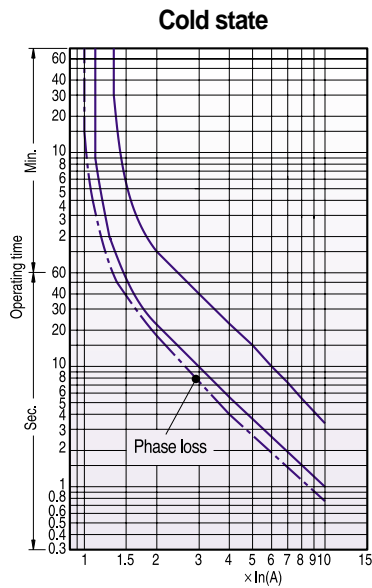
CGT(H)-125
CGT(H)-150



CGT(H)-220
CGT(H)-400



CGT(H)-800

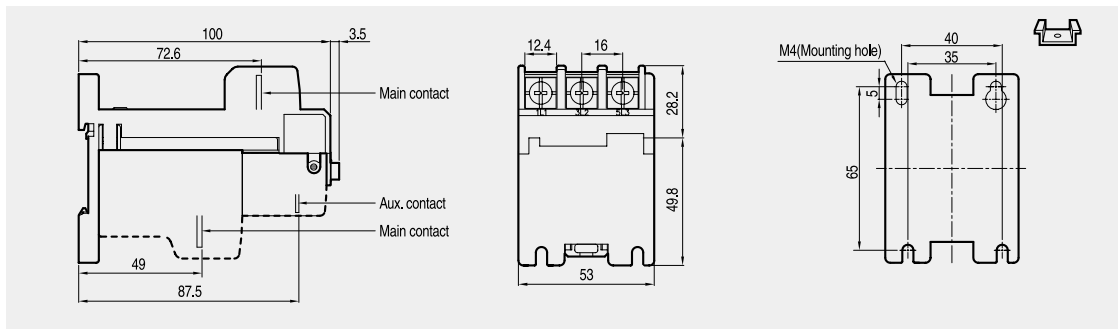


Dimensions

Separate mounting units for overload relays

AZ-40H

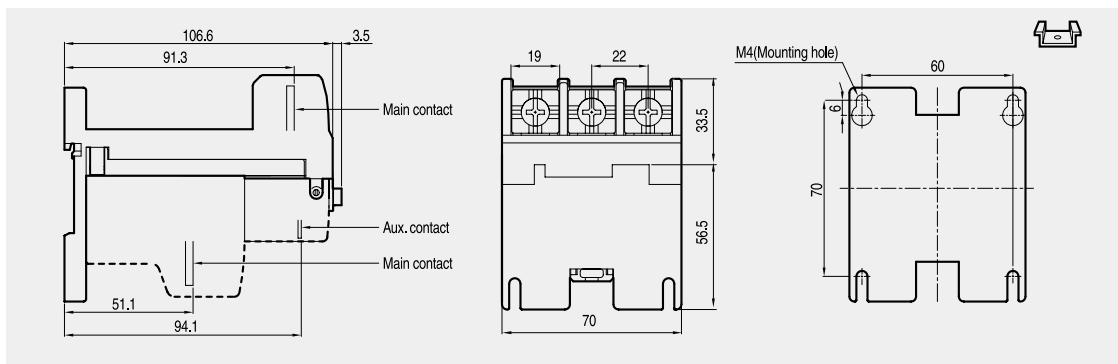
for use with
overload relay
CGT(H)-40



72g

AZ-85H

for use with
overload relay
CGT(H)-85



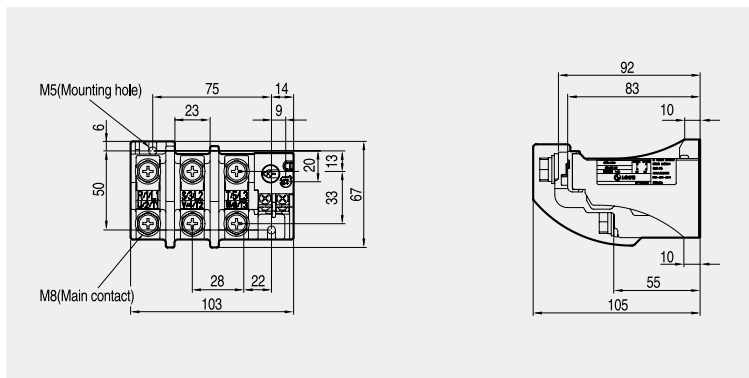
144g

Thermal overload relays

CGTH-125

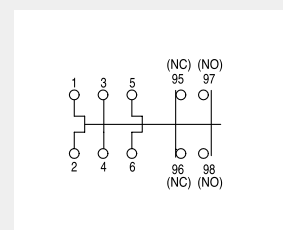
CGT-125

CGTH-125/3



Diagrams

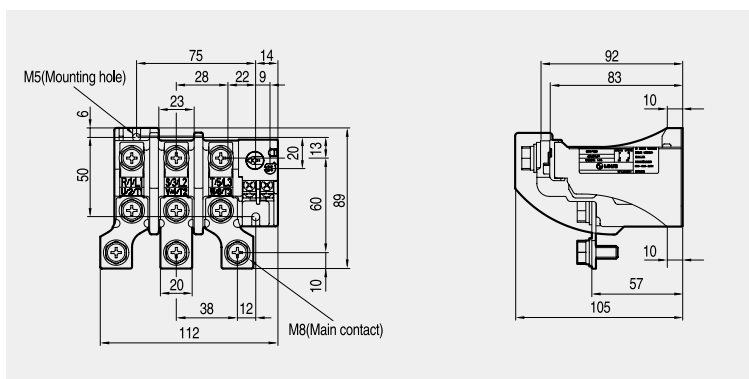
CGTH-125, 150 (2 heater types)



CGTH-150

CGT-150

CGTH-150/3



CGTH-125/3, 150/3 CGT-125, 150 (3 heater types)

