

# Electronic overload relays

22A

## Description

- Wide and adjustable current range
- Adjustable trip time (trip class 5-10-15-20-30)
- Designed suitable for use with contactors  
Directly mountable on the CGC-9, 12, 18, 22 contactors  
Separate mount versions are also available  
Mounting on 35mm DIN rail is possible by optional base.
- 1NO+1NC trip contacts
- Manual reset as standard (Automatic reset optional)



## Extended protective functions

| Number of sensors |                 | 2CT             | 3CT             | 3CT                |
|-------------------|-----------------|-----------------|-----------------|--------------------|
| Types (CGE22-□)   |                 | (-2P, -2T, -2S) | (-3P, -3T, -3S) | (-3PR, -3TR, -3SR) |
| Functions         | Overcurrent     | ✓               | ✓               | ✓                  |
|                   | Phase loss      | ✓               | ✓               | ✓                  |
|                   | Locked rotor    | ✓               | ✓               | ✓                  |
|                   | Phase unbalance |                 | ✓               | ✓                  |
|                   | Phase reversed  |                 |                 | ✓                  |

## Selection

| Mount/Connection   | Sensor                                 | Setting range      | Catalog No.         |
|--|--|--------------------|---------------------|
| Directly on a contactor  | 2-sensor<br>( 2 CT )                   | 0.3 - 1.5A         | CGE22 - 2P - 1.5AN  |
|  |  | 1 - 5A             | CGE22 - 2P - 5AN    |
|  |  | 4.4 - 22A          | CGE22 - 2P - 22AN   |
|  | 3-sensor<br>( 3 CT )                   | 0.3 - 1.5A         | CGE22 - 3P - 1.5AN  |
|  |  | 1 - 5A             | CGE22 - 3P - 5AN    |
|  |  | 4.4 - 22A          | CGE22 - 3P - 22AN   |
|  | 3-sensor<br>Reverse phase<br>detection | 0.3 - 1.5A         | CGE22 - 3PR - 1.5AN |
|  |  | 1 - 5A             | CGE22 - 3PR - 5AN   |
|  |  | 4.4 - 22A          | CGE22 - 3PR - 22AN  |
| Separate mount ①   | 2-sensor<br>( 2 CT )                   | 0.3 - 1.5A         | CGE22 - 2S - 1.5A   |
|  |  | 1 - 5A             | CGE22 - 2S - 5A     |
|  |  | 4.4 - 22A          | CGE22 - 2S - 22A    |
|  | 3-sensor<br>( 3 CT )                   | 0.3 - 1.5A         | CGE22 - 3S - 1.5A   |
|  |  | 1 - 5A             | CGE22 - 3S - 5A     |
|  |  | 4.4 - 22A          | CGE22 - 3S - 22A    |
| 3-sensor<br>Reverse phase<br>detection   | 0.3 - 1.5A                             | CGE22 - 3SR - 1.5A |                     |
|  | 1 - 5A                                 | CGE22 - 3SR - 5A   |                     |
|  | 4.4 - 22A                              | CGE22 - 3SR - 22A  |                     |
| Separate mount ①<br>Connection<br>without a screw ②<br>- cables pass<br>through CT holes | 2-sensor<br>( 2 CT )                   | 0.3 - 1.5A         | CGE22 - 2T - 1.5A   |
|  |  | 1 - 5A             | CGE22 - 2T - 5A     |
|  |  | 4.4 - 22A          | CGE22 - 2T - 22A    |
|  | 3-sensor<br>( 3 CT )                   | 0.3 - 1.5A         | CGE22 - 3T - 1.5A   |
|  |  | 1 - 5A             | CGE22 - 3T - 5A     |
|  |  | 4.4 - 22A          | CGE22 - 3T - 22A    |
|  | 3-sensor<br>Reverse phase<br>detection | 0.3 - 1.5A         | CGE22 - 3TR - 1.5A  |
|  |  | 1 - 5A             | CGE22 - 3TR - 5A    |
|  |  | 4.4 - 22A          | CGE22 - 3TR - 22A   |



**Certificate**  
CE, ULcUL

## Ordering information

Specify catalog number

## Front face configuration



### Current setting

- 0.1 - 1.5A
- 1 - 5A
- 4.4 - 22A

### LED indicator

- Operation status indication
- Normal operating
  - Overload
  - Phase unbalance
- Trip cause indication
- Overcurrent
  - Phase loss
  - Reverse phase

### Test/Reset button

### Trip time setting

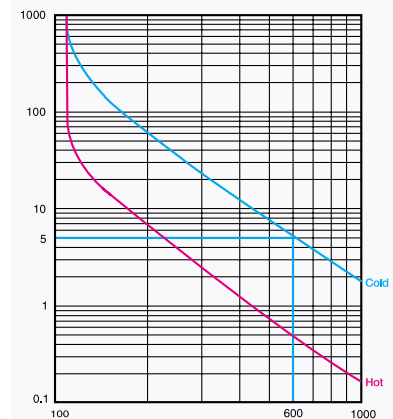
- 0 to 30 sec
- Set time is the trip time at 6 x set current



① To mount on 35mm DIN rail use the optional base



② Cable connection part can be modified between screw connection and passing CT hole



## Technical information

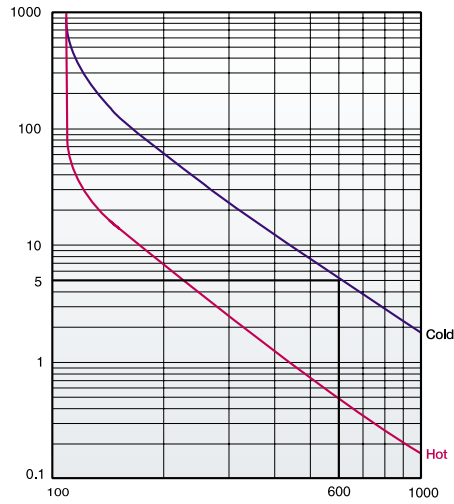
|                                  |  |
|----------------------------------|--|
| <b>Relay control voltage</b>     | 100 to 260V AC 50/60Hz   |
| <b>Auxiliary contact</b>         | 3A/250VAC at resistive load<br>1NO(97-98) + 1NC(95-96)                                 |
| <b>Setting tolerance</b>         | Current $\pm 5\%$<br>Time $\pm 5\%$ (or $\pm 0.5\text{sec}$ )                          |
| <b>Insulation resistance</b>     | Min 100 $\text{M}\Omega$ at 500V DC  |
| <b>Impulse withstand voltage</b> | 1.2x50 $\mu\text{s}$ 5kV (IEC1000-4-5)   |
| <b>Fast transient burst</b>      | 2kV/5min ( IEC1000-4-4)  |
| <b>Ambient temperature</b>       | -25 to 70 $^{\circ}\text{C}$ for operation<br>-30 to 80 $^{\circ}\text{C}$ for storage |
| <b>Humidity</b>                  | 30 to 90% RH   |

## For more information

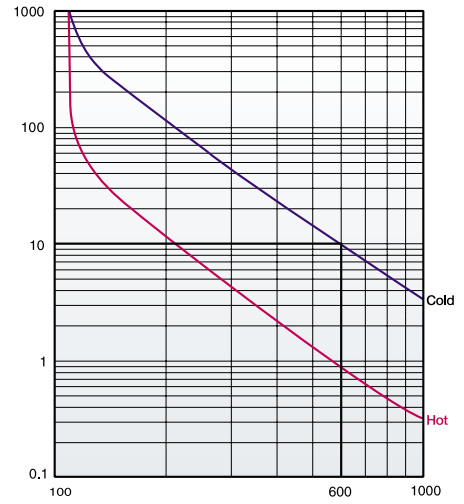
- Drawings  $\rightarrow$  page 169
- Connections  $\rightarrow$  page 170
- Contactors  $\rightarrow$  page 40
- Starters  $\rightarrow$  page 81
- Bimetallic overload relay  $\rightarrow$  page 64
- Operating curves  $\rightarrow$  page 137

CGE

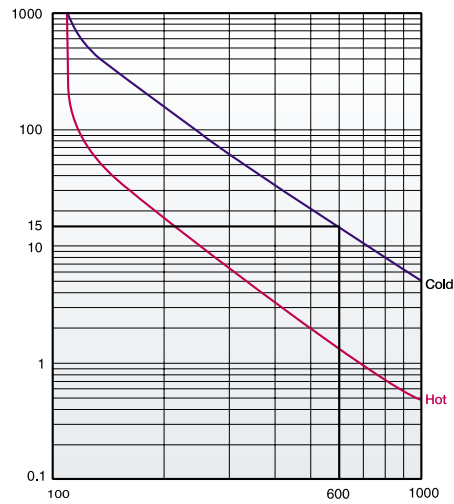
**Trip class 5**



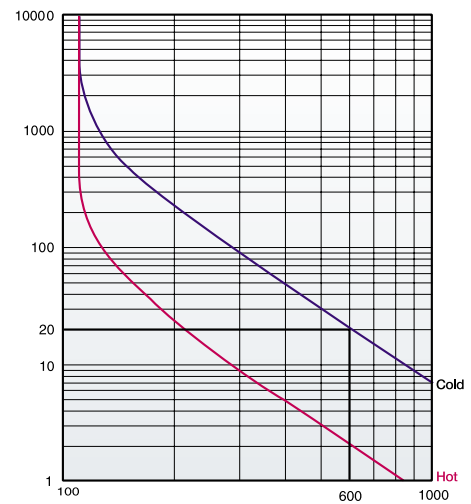
**Trip class 10**



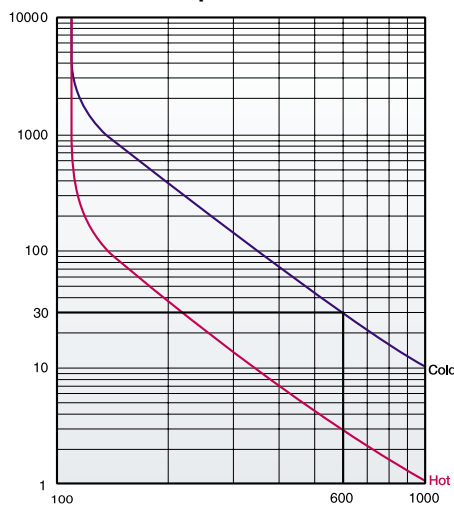
**Trip class 15**



**Trip class 20**



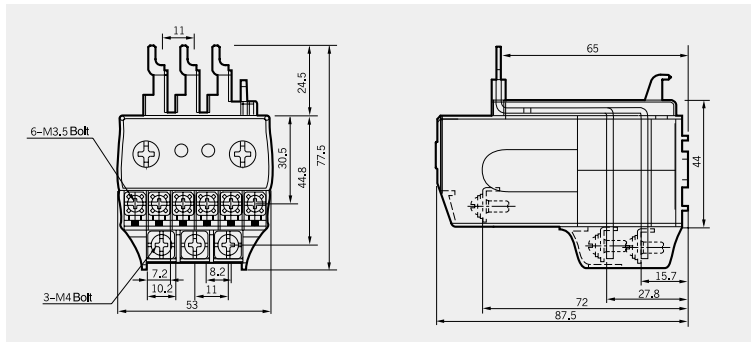
**Trip class 30**



# Dimensions

## Electronic Overload Relays

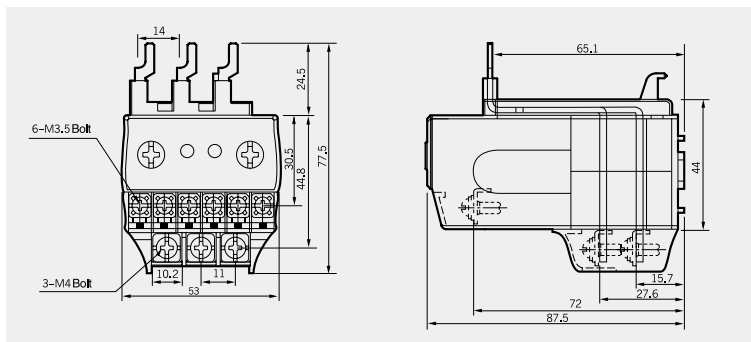
- CGE22-2P
- CGE22-3P
- CGE22-3PR



Terminal configuration : See Fig. 1 on the next page

0.18kg

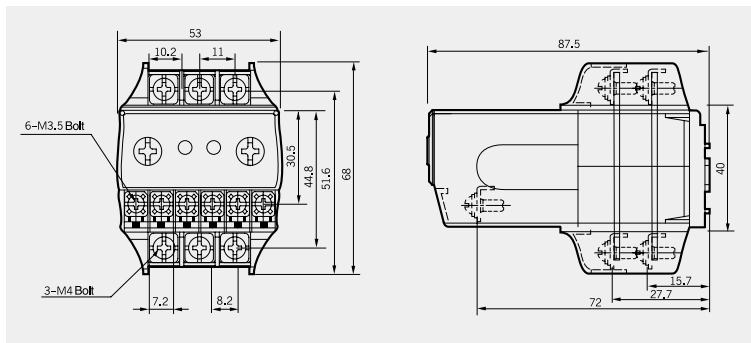
- CGE40-2P
- CGE40-3P
- CGE40-3PR



Terminal configuration : See Fig. 1 on the next page

0.20kg/0.22kg

- CGE22-2S
- CGE22-3S
- CGE22-3SR
- CGE40-2S
- CGE40-3S
- CGE40-3SR

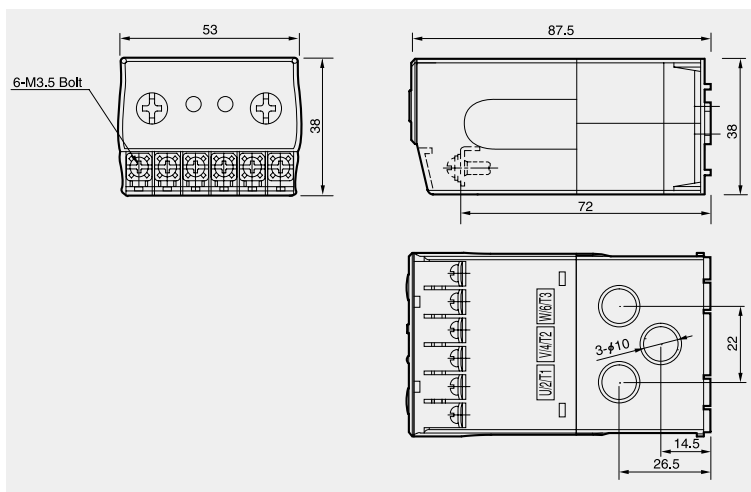


Terminal configuration : See Fig. 2 on the next page

(Mounting adapter)

0.19kg/0.21kg

- CGE22-2T
- CGE22-3T
- CGE22-3TR
- CGE40-2T
- CGE40-3T
- CGE40-3TR

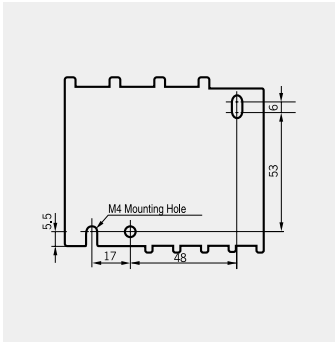
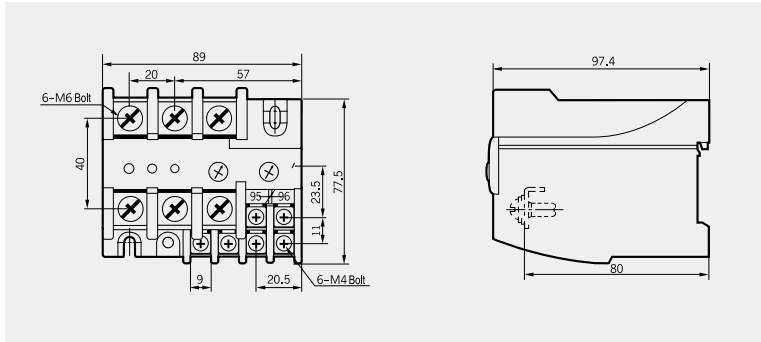


Terminal configuration : See Fig. 3 on the next page

(Mounting adapter)

0.14kg/0.16kg

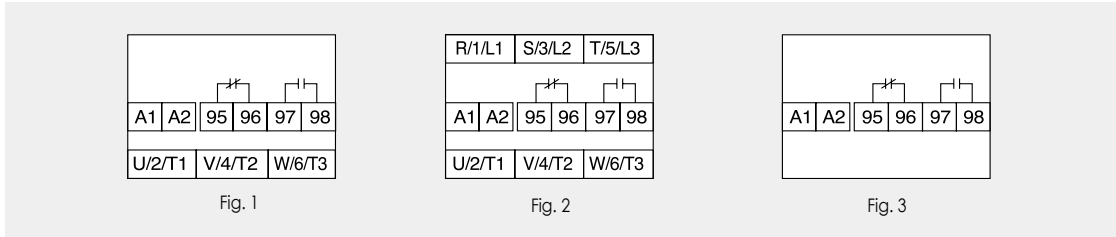
- CGE80-2S
- CGE80-3S
- CGE80-3SR



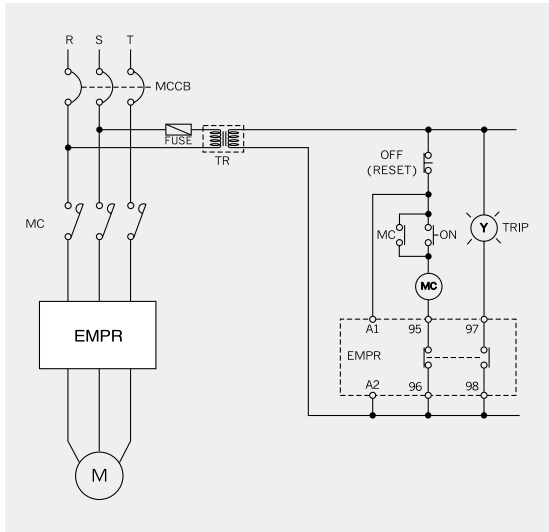
Terminal configuration : See Fig. 2

0.42kg/0.46kg

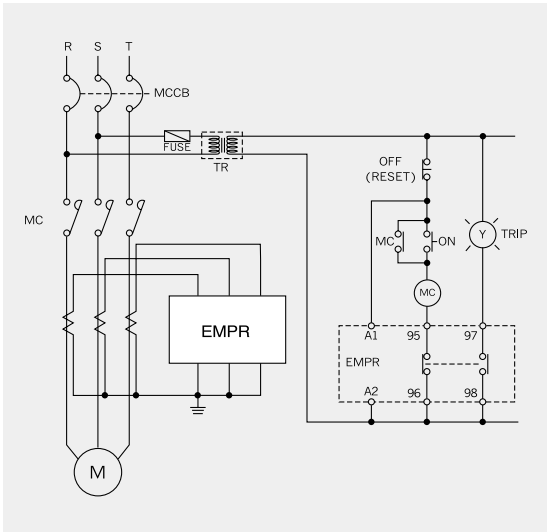
### Terminal configuration



### Circuit diagram



Without additional CTs



In case of using additional CTs