


# MCCB

## UL489 Certified Molded Case Circuit Breakers

HD HYUNDAI ELECTRIC

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# UL-MCCB

## Molded Case Circuit Breakers


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MCCB

# Characteristics

## Outstanding protection coordination and maximized breaking capacity

### Simplified product ranges

- AF : 125 / 150 / 250 / 400 / 600 AF
- AT : 15 - 600A
- Number of Poles : 1/2/3P (125AF),
  2/3P (150 - 600AF)

### Various accessories

- Electrical auxiliaries [AUX, ALT, SHT, UVT]
- Extended and direct mounted rotary handle
- Flange handle with flexible cable and linkage
- Variable depth mechanism
- Locking devices
- LUG for CU cable with UL486

### High performance

- Ultimate breaking capacity
- Max 100 kA @480 Vac and 65 kA @600 Vac

### Standards

- UL 489

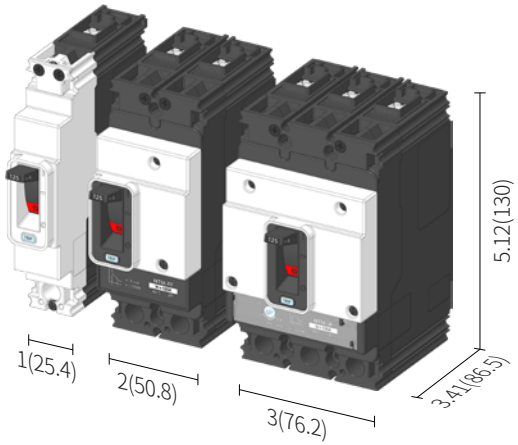
### Various trip units

MTM : Molded case circuit breaker(Thermal magnetic)

- FF : Fixed thermal & magnetic unit
- JF : Adjustable thermal & fixed magnetic unit
- JJ : Adjustable thermal & magnetic unit

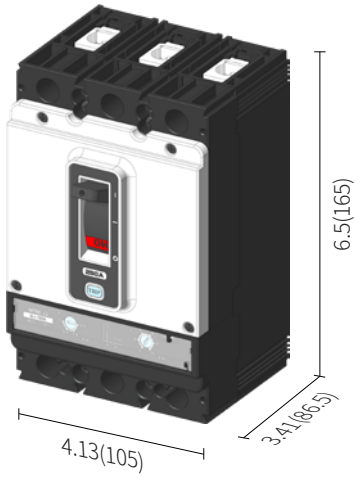
MCS : Molded Case Switch

MCP : Motor Circuit Protection




Trip device : Thermal magnetic type
Molded case switch

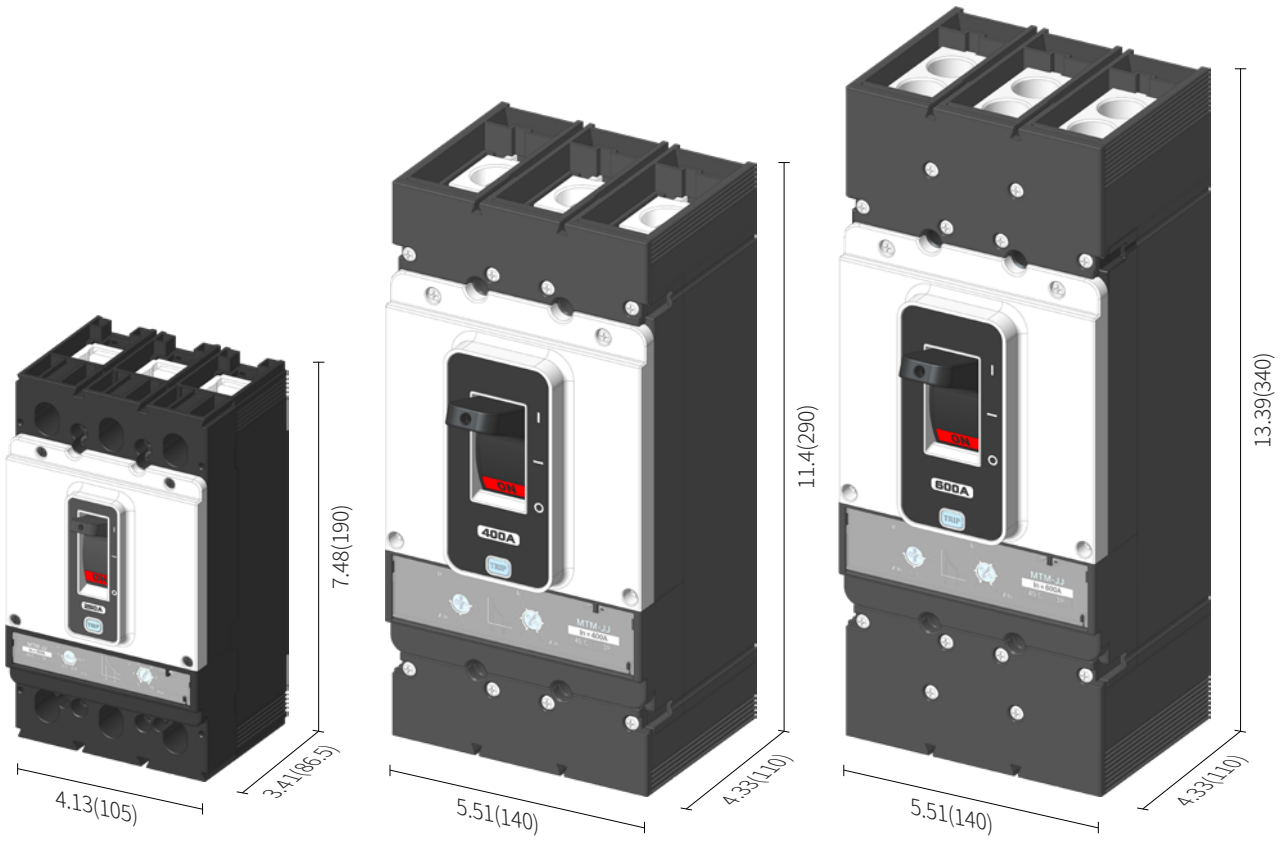
HGU 125




Trip device : Thermal magnetic type
Molded case switch
Motor circuit protection

HGU 150

Unit : inch(mm)




Trip device : Thermal magnetic type
Molded case switch
Motor circuit protection

**HGU 250**

Trip device : Thermal magnetic type
Molded case switch
Motor circuit protection

**HGU 400**

Trip device : Thermal magnetic type
Molded case switch
Motor circuit protection

**HGU 600**

Unit : inch(mm)

# Characteristics

## UL Molded Case Circuit Breaker

### High breaking capacity

Maximum breaking capacity was realized with regards to all frames

- 65kA at 480V, 35kA at 600Y/347V (125AF)
- 100kA at 480V, 65kA at 600V (150-600AF)

### Various rated currents

Various currents are available for all frames.

- HGU125/150/250/400: Basic rating 80%, 100%
- HGU600: Basic rating 80%

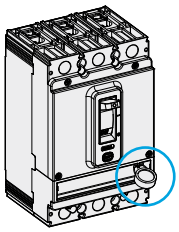
### Adjustable rated current

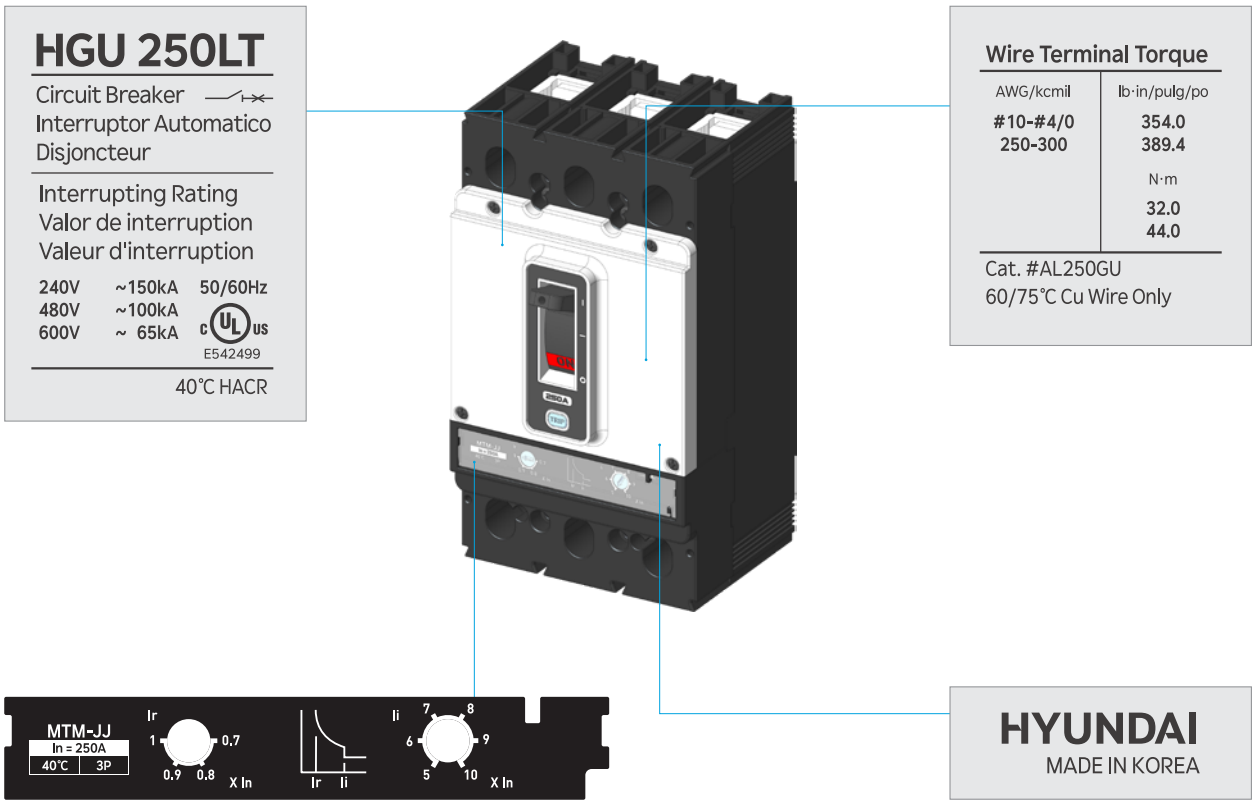
The adjustable rated current of up to 600 AF provides optimal protection for load variations in customer's equipment.

- Rated current
  thermal magnetic type :
  times the rated current
- Instantaneous current
  thermal magnetic type :
  5 - 6 - 7 - 8 - 9 - 10 times the rated current (6 Step)

### Sealing structure applied

Dial sealing structure was applied to prevent arbitrary change of the current set value using a protection cover (Prevent operation of thermal magnetic adjustment knob)





# UL MCCB Trip device

- The device to monitor the system and send a breaking signal to protect load and a cable.
- The external dimensions and accessories are for common use regardless of the type of a trip device.

## Thermal magnetic type




| Type | Rated current (A) | | | | |
|---|---|---|---|---|---|
| | 125AF | 150AF | 250AF | 400AF | 600AF |
| Thermal magnetic (Thermal fixed /Instantaneous fixed) | 15~125A | 15~150A | 150~250A | 250~400A | 500, 600A |
| Thermal magnetic (Thermal adjustable /Instantaneous fixed) | 25~125A | 40~150A | 160~250A | 300, 400A | 500, 600A |
| Thermal magnetic (Thermal adjustable /Instantaneous adjustable) | | 100~150A | 160~250A | 300, 400A | 500, 600A |
| MCS | 100, 125A | 150A | 175, 250A | 400A | 600A |
| MCP | | 2.5~150A | 220A | 320A | 500A |












**For protecting a cable and a device (Thermal magnetic)**

- MTM-FF : Thermal fixed / Instantaneous fixed
- MTM-JF: Thermal adjustable / Instantaneous fixed
- MTM-JJ : Thermal adjustable / Instantaneous adjustable

**For motor protection (Instantaneous)**

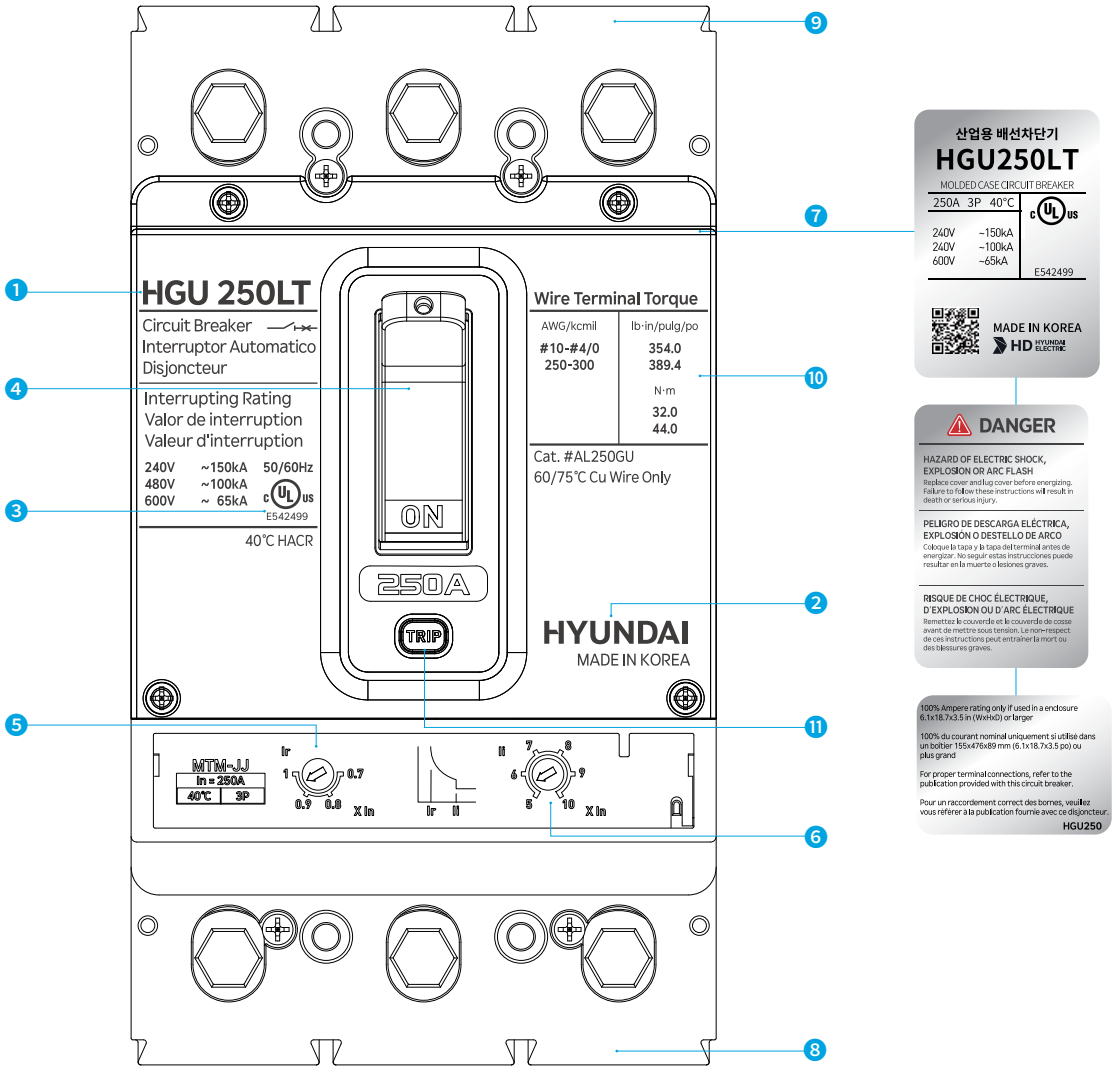
- MCP：Instantaneous adjustable

**Switch-disconnector**

- MCS：Instantaneous protection

# External structure and indications

## UL Molded Case Circuit Breaker

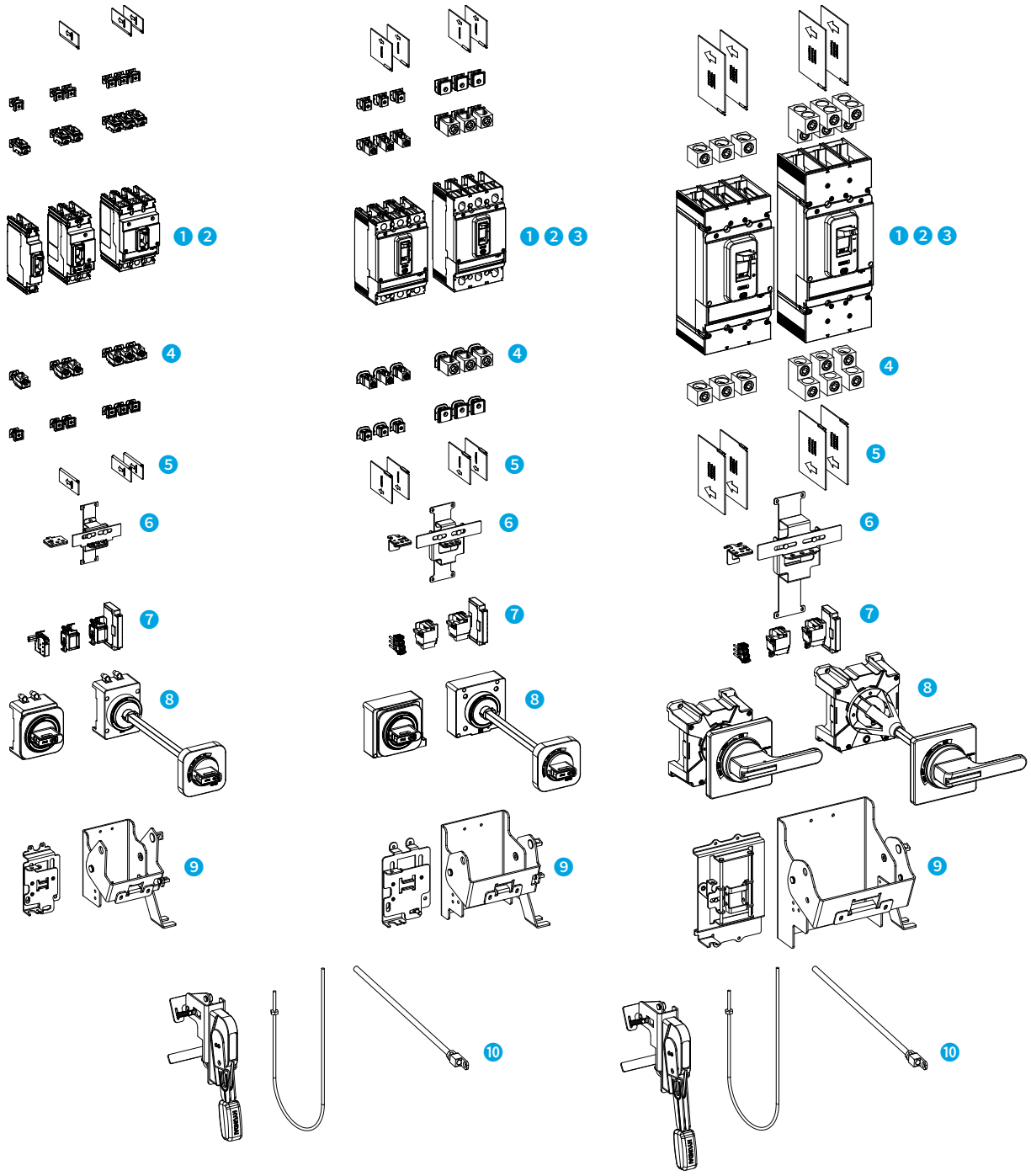



**UL Molded Case Circuit Breaker (UL-MCCB)**

1. Product name
2. Manufacturer
3. UL marking
4. Operating handle
5. Adjustable thermal dial
6. Adjustable magnetic dial
7. Nameplate & Label
8. Load side terminal
9. Line side terminal
10. LUG specification
11. Trip button

# Accessory

## UL Molded Case Circuit Breaker




**UL Molded Case Circuit Breaker (UL-MCCB)**

1. Molded case circuit breaker
2. Molded case switch
3. Motor circuit protector
4. Terminal mounting option (Lug/Bolt on)
5. Insulating barriers
6. Locking device (PLD, MIF)
7. Inner accessories (AUX, ALT, SHT, UVT)
8. Rotary handle (TFG, TFH)
9. Flange handle operating mechanism
10. Flange handle, cable, rod

# UL-MCCB

## Molded Case Circuit Breakers

**Series overview**

MCCB

# Series overview





| Frame | | | HGU125 | | | HGU125 | | | HGU125 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum rated current | | | 125A | | | 125A | | | 125A | | |
| Number of poles | | | 1 | | | 2 | | | 3 | | |
| UL 100% rated breaker | | | - | | | ● | | | ● | | |
| Breaker type | | | E | N | H | E | N | H | E | N | H |
| Interrupting capacity (kA rms) AC (50/60Hz) | | 120/240V | 50 | 65 | 100 | 50 | 65 | 100 | 50 | 65 | 100 |
| | | 240V | 50 | 65 | 100 | 50 | 65 | 100 | 50 | 65 | 100 |
| | | 277V | 25 | 35 | 65 | - | - | - | - | - | - |
| | | 347V | 10 | 14 | 18 | - | - | - | - | - | - |
| | | 480V | - | - | - | 25 | 35 | 65 | 25 | 35 | 65 |
| | | 600V | - | - | - | - | - | - | - | - | - |
| | | 600Y/347V | - | - | - | 14 | 18 | 35 | 14 | 18 | 35 |
| Trip units | Thermal magnetic (MTM) | Amperes | 15-125A | | | 15-125A | | | 15-125A | | |
| | | Thermal-fixed Magnetic-fixed | ● (15-125A) | | | ● (15-125A) | | | ● (15-125A) | | |
| | | Thermal-adjustable Magnetic-flixed | - | | | - | | | ● (25-125A) | | |
| | | Thermal-adjustable Magnetic-adjustable | - | | | - | | | - | | |
| | Motor circuit protector (MCP) | | - | | | - | | | - | | |
| | Molded-case switch (MCS) | | - | | | ● (100,125A) | | | ● (100,125A) | | |
| HACR | | | ● | | | ● | | | ● | | |
| SWD(≤347V) | | | ●(15,20A) | | | ●(15,20A) | | | ●(15,20A) | | |
| HID(≤480V) | | | ●(15-50A) | | | ●(15-50A) | | | ●(15-50A) | | |
| Auxiliary switch | | | - | | | ● | | | ● | | |
| Alarm switch | | | - | | | ● | | | ● | | |
| Shunt trip | | | - | | | ● | | | ● | | |
| Undervoltage trip | | | - | | | ● | | | ● | | |
| Mechanical interlocks | | | - | | | - | | | ● | | |
| Handle padlock attachment | | | ● | | | ● | | | ● | | |
| Direct rotary handle mechanism (Type 1) | | | - | | | - | | | ● | | |
| Variable depth rotary handle mechanism (Type 1) | | | - | | | - | | | ● | | |
| Variable depth rotary handle mechanism (1~4X) | | | - | | | - | | | ● | | |
| Flange cable handle | | | - | | | - | | | ● | | |
| Flange variable-depth handle | | | - | | | - | | | ● | | |
| Weight (MCCB only) lbs (kg) | 1 Pole | | 0.88(0.4) | | | | | | | | |
| | 2 Pole | | - | | | 1.54(0.7) | | | | | |
| | 3 Pole | | - | | | | | | 2.2(1.0) | | |
| Dimensions inch(mm) | W X H X D | | W | H | D | W | H | D | W | H | D |
| | 1 Pole | | 1(25.4) | 5.12(130) | 3.41(86.5) | - | - | - | - | - | - |
| | 2 Pole | | - | - | - | 2(50.8) | 5.12(130) | 3.41(86.5) | - | - | - |
| | 3 Pole | | - | - | - | - | - | - | 3(76.2) | 5.12(130) | 3.41(86.5) |









| HGU150 | | | HGU250 | | | HGU400 | | | HGU600 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 150A | | | 250A | | | 400A | | | 600A | | |
| 2, 3 | | | 2, 3 | | | 2, 3 | | | 2, 3 | | |
| ● | | | ● | | | ● | | | - | | |
| N | H | L | N | H | L | N | H | L | N | H | L |
| - | - | - | - | - | - | - | - | - | - | - | - |
| 65 | 100 | 150 | 65 | 100 | 150 | 65 | 100 | 150 | 65 | 100 | 150 |
| - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - |
| 35 | 65 | 100 | 35 | 65 | 100 | 35 | 65 | 100 | 35 | 65 | 100 |
| 18 | 35 | 65 | 18 | 35 | 65 | 18 | 35 | 65 | 18 | 35 | 65 |
| - | - | - | - | - | - | - | - | - | - | - | - |
| 15-150A | | | 150-250A | | | 250, 300, 350, 400 | | | 500, 600 | | |
| ● (15-150A) | | | ● (150-250A) | | | ● (250-400A) | | | ● (500, 600A) | | |
| ● (40-150A) | | | ● (160-250A) | | | ● (300, 400A) | | | ● (500, 600A) | | |
| ● (100-150A) | | | ● (160-250A) | | | ● (300, 400A) | | | ● (500, 600A) | | |
| ● (2.5-150A) | | | ● (220A) | | | ● (320A) | | | ● (500A) | | |
| ● (150A) | | | ● (175,250A) | | | ● (400A) | | | ● (600A) | | |
| ● | | | ● | | | ● | | | ● | | |
| ●(15,20A) | | | - | | | - | | | - | | |
| ●(15-50A) | | | - | | | - | | | - | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| ● | | | ● | | | ● | | | ● | | |
| - | | | - | | | - | | | - | | |
| 3.64(1.65) | | | 4.30(1.95) | | | 11.69(5.3) | | | 13.23(6.0) | | |
| 3.97(1.8) | | | 4.63(2.1) | | | 13.23(6) | | | 14.77(6.7) | | |
| W | H | D | W | H | D | W | H | D | W | H | D |
| - | - | - | - | - | - | - | - | - | - | - | - |
| 4.13(105) | 6.5(165) | 3.41(86.5) | 4.13(105) | 7.48(190) | 3.41(86.5) | 5.51(140) | 11.4(290) | 4.33(110) | 5.51(140) | 13.39(340) | 4.33(110) |
| 4.13(105) | 6.5(165) | 3.41(86.5) | 4.13(105) | 7.48(190) | 3.41(86.5) | 5.51(140) | 11.4(290) | 4.33(110) | 5.51(140) | 13.39(340) | 4.33(110) |

# UL-MCCB

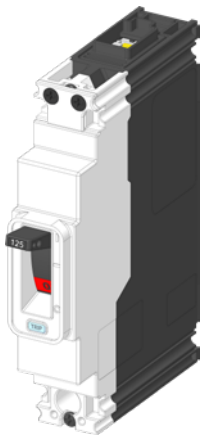
## Molded Case Circuit Breakers

**Selection guide**

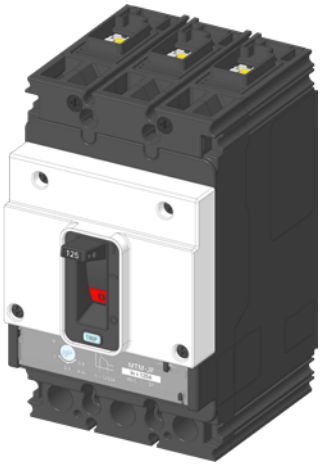
MCCB

# Selection guide

## HGU125







## Catalog numbering [Product selection]

### ① HGU125HT

Series & Frame: HGU 125AF

Rating & Short-circuit breaking capacity

| Pole | 80% | 100% | Rating | kA |
|---|---|---|---|---|
| 1P | E | - | 120/240V | 50 |
| | | | 277V | 25 |
| | | | 347V | 10 |
| | N | - | 120/240V | 65 |
| | | | 277V | 35 |
| | | | 347V | 14 |
| | H | - | 120/240V | 100 |
| | | | 277V | 65 |
| | | | 347V | 18 |
| 2P 3P | E | ET | 120/240V | 50 |
| | | | 480V | 25 |
| | | | 600Y/347V | 14 |
| | N | NT | 120/240V | 65 |
| | | | 480V | 35 |
| | | | 600Y/347V | 18 |
| | H | HT | 120/240V | 100 |
| | | | 480V | 65 |
| | | | 600Y/347V | 35 |

### ② 3P

Poles

| | |
|---|---|
| 1P | |
| 2P | |
| 3P | |

### ③ T4

Product description

| | |
|---|---|
| T4: Thermal magnet type(MTM), 40 °C | |
| DS: Molded-case switch(MCS) | |
| MP: Motor circuit protector(MCP) | |

### ④ LL

Terminal mounting

| Type | line side | load side |
|---|---|---|
| LL | Lug | Lug |
| SS | Bolt | Bolt |
| LS | Lug | Bolt |
| SL | Bolt | Lug |

### ⑤ 00

Auxiliary switch / Alarm switch

| | |
|---|---|
| 00 | Without |
| 10 | AUX1C |
| 20 | AUX2C |
| 01 | ALT1C |
| 02 | ALT2C |
| 11 | AUX1C+ALT1C |
| 22 | AUX2C+ALT2C |

### ⑥ 00

SHT/UVT

| | |
|---|---|
| 00 | Without |
| S1 | SHT 110Vac |
| S2 | SHT 220Vac |
| S3 | SHT 380Vac |
| S4 | SHT 440Vac |
| S5 | SHT 24Vdc |
| S6 | SHT 110Vdc |
| U1 | UVT 110Vac |
| U2 | UVT 220Vac |
| U3 | UVT 380Vac |
| U4 | UVT 440Vac |
| U5 | UVT 24Vdc |
| U6 | UVT 110Vdc |

### ⑦ C

Frequency

| | |
|---|---|
| C | 50/60Hz |

### ⑧ 00125

Rated current

| | | |
|---|---|---|
| 00015 | 00020 | 00025 |
| 00030 | 00035 | 00040 |
| 00045 | 00050 | 00060 |
| 00070 | 00080 | 00090 |
| 00100 | 00125 | |

### ⑨ F

Trip device

| | |
|---|---|
| - | Fixed thermal / Fixed magnetic(MTM-FF) |
| F | Adjustable thermal / Fixed magnetic(MTM-JF) |

# HGU125

- HGU125 breaker is HACR rated
- SWD switch duty rating (applied only to 15 and 20A /347Vac or less)
- HID high intensity discharge lighting rating (15~50A /480Vac or less)

## UL489 Ratings

| Breaker type | Rating | Number of pole | Interrupting capacity (kA rms) AC 50/60Hz | | |
|---|---|---|---|---|---|
| | | | 120/240Vac, 240Vac | 277Vac | 347Vac |
| HGU125E | 80% | 1 | 50 | 25 | 10 |
| HGU125N | 80% | 1 | 65 | 35 | 14 |
| HGU125H | 80% | 1 | 100 | 65 | 18 |

| Breaker type | Rating | Number of pole | Interrupting capacity (kA rms) AC 50/60Hz | | |
|---|---|---|---|---|---|
| | | | 120/240Vac, 240Vac | 480Vac | 600Vac |
| HGU125E | 80% | 2, 3 | 50 | 25 | 14 |
| HGU125ET | 100% | | | | |
| HGU125N | 80% | 2, 3 | 65 | 35 | 18 |
| HGU125NT | 100% | | | | |
| HGU125H | 80% | 2, 3 | 100 | 65 | 35 |
| HGU125HT | 100% | | | | |

## Dimensions

| Number of poles | Dimensions inch (mm) | | |
|---|---|---|---|
| | W | H | D |
| 1-Pole | 1(25.4) | 5.12(130) | 3.41(86.5) |
| 2-Pole | 2(50.8) | 5.12(130) | 3.41(86.5) |
| 3-Pole | 3(76.2) | 5.12(130) | 3.41(86.5) |

## Trip unit types

| | Thermal | Magnetic | Remarks |
|---|---|---|---|
| MTM-FF | Fixed | Fixed | Thermal magnetic |
| MTM-JF | Adjustable, 0.8~1 x In | Fixed | Thermal magnetic |
| MCS | N.A | Fixed, 10 x In | Magnetic only |

## Circuit breaker

| | | With MTM-FF trip unit (Fixed thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 50kA at 120/240Vac, 240Vac<br>25kA at 277Vac<br>10kA at 347Vac | 65kA at 120/240Vac, 240Vac<br>35kA at 277Vac<br>14kA at 347Vac | 100kA at 120/240Vac, 240Vac<br>65kA at 277Vac,<br>18kA at 347Vac |
| 15A | 1P | HGU125E1PT4LL0000C00015 | HGU125N1PT4LL0000C00015 | HGU125H1PT4LL0000C00015 |
| 20A | 1P | HGU125E1PT4LL0000C00020 | HGU125N1PT4LL0000C00020 | HGU125H1PT4LL0000C00020 |
| 25A | 1P | HGU125E1PT4LL0000C00025 | HGU125N1PT4LL0000C00025 | HGU125H1PT4LL0000C00025 |
| 30A | 1P | HGU125E1PT4LL0000C00030 | HGU125N1PT4LL0000C00030 | HGU125H1PT4LL0000C00030 |
| 35A | 1P | HGU125E1PT4LL0000C00035 | HGU125N1PT4LL0000C00035 | HGU125H1PT4LL0000C00035 |
| 40A | 1P | HGU125E1PT4LL0000C00040 | HGU125N1PT4LL0000C00040 | HGU125H1PT4LL0000C00040 |
| 45A | 1P | HGU125E1PT4LL0000C00045 | HGU125N1PT4LL0000C00045 | HGU125H1PT4LL0000C00045 |
| 50A | 1P | HGU125E1PT4LL0000C00050 | HGU125N1PT4LL0000C00050 | HGU125H1PT4LL0000C00050 |
| 60A | 1P | HGU125E1PT4LL0000C00060 | HGU125N1PT4LL0000C00060 | HGU125H1PT4LL0000C00060 |
| 70A | 1P | HGU125E1PT4LL0000C00070 | HGU125N1PT4LL0000C00070 | HGU125H1PT4LL0000C00070 |
| 80A | 1P | HGU125E1PT4LL0000C00080 | HGU125N1PT4LL0000C00080 | HGU125H1PT4LL0000C00080 |
| 90A | 1P | HGU125E1PT4LL0000C00090 | HGU125N1PT4LL0000C00090 | HGU125H1PT4LL0000C00090 |
| 100A | 1P | HGU125E1PT4LL0000C00100 | HGU125N1PT4LL0000C00100 | HGU125H1PT4LL0000C00100 |
| 125A | 1P | HGU125E1PT4LL0000C00125 | HGU125N1PT4LL0000C00125 | HGU125H1PT4LL0000C00125 |

* List based on 80% rating and line/load terminal lugs.

# HGU125

## Circuit breaker

| | | With MTM-FF trip unit (Fixed thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 50kA at 120/240Vac<br>25kA at 480Vac,<br>14kA at 600Y/347Vac | 65kA at 120/240Vac<br>35kA at 480Vac,<br>18kA at 600Y/347Vac | 100kA at 120/240Vac<br>65kA at 480Vac,<br>35kA at 600Y/347Vac |
| 15A | 2P | HGU125E2PT4LL0000C00015 | HGU125N2PT4LL0000C00015 | HGU125H2PT4LL0000C00015 |
| | 3P | HGU125E3PT4LL0000C00015 | HGU125N3PT4LL0000C00015 | HGU125H3PT4LL0000C00015 |
| 20A | 2P | HGU125E2PT4LL0000C00020 | HGU125N2PT4LL0000C00020 | HGU125H2PT4LL0000C00020 |
| | 3P | HGU125E3PT4LL0000C00020 | HGU125N3PT4LL0000C00020 | HGU125H3PT4LL0000C00020 |
| 25A | 2P | HGU125E2PT4LL0000C00025 | HGU125N2PT4LL0000C00025 | HGU125H2PT4LL0000C00025 |
| | 3P | HGU125E3PT4LL0000C00025 | HGU125N3PT4LL0000C00025 | HGU125H3PT4LL0000C00025 |
| 30A | 2P | HGU125E2PT4LL0000C00030 | HGU125N2PT4LL0000C00030 | HGU125H2PT4LL0000C00030 |
| | 3P | HGU125E3PT4LL0000C00030 | HGU125N3PT4LL0000C00030 | HGU125H3PT4LL0000C00030 |
| 35A | 2P | HGU125E2PT4LL0000C00035 | HGU125N2PT4LL0000C00035 | HGU125H2PT4LL0000C00035 |
| | 3P | HGU125E3PT4LL0000C00035 | HGU125N3PT4LL0000C00035 | HGU125H3PT4LL0000C00035 |
| 40A | 2P | HGU125E2PT4LL0000C00040 | HGU125N2PT4LL0000C00040 | HGU125H2PT4LL0000C00040 |
| | 3P | HGU125E3PT4LL0000C00040 | HGU125N3PT4LL0000C00040 | HGU125H3PT4LL0000C00040 |
| 45A | 2P | HGU125E2PT4LL0000C00045 | HGU125N2PT4LL0000C00045 | HGU125H2PT4LL0000C00045 |
| | 3P | HGU125E3PT4LL0000C00045 | HGU125N3PT4LL0000C00045 | HGU125H3PT4LL0000C00045 |
| 50A | 2P | HGU125E2PT4LL0000C00050 | HGU125N2PT4LL0000C00050 | HGU125H2PT4LL0000C00050 |
| | 3P | HGU125E3PT4LL0000C00050 | HGU125N3PT4LL0000C00050 | HGU125H3PT4LL0000C00050 |
| 60A | 2P | HGU125E2PT4LL0000C00060 | HGU125N2PT4LL0000C00060 | HGU125H2PT4LL0000C00060 |
| | 3P | HGU125E3PT4LL0000C00060 | HGU125N3PT4LL0000C00060 | HGU125H3PT4LL0000C00060 |
| 70A | 2P | HGU125E2PT4LL0000C00070 | HGU125N2PT4LL0000C00070 | HGU125H2PT4LL0000C00070 |
| | 3P | HGU125E3PT4LL0000C00070 | HGU125N3PT4LL0000C00070 | HGU125H3PT4LL0000C00070 |
| 80A | 2P | HGU125E2PT4LL0000C00080 | HGU125N2PT4LL0000C00080 | HGU125H2PT4LL0000C00080 |
| | 3P | HGU125E3PT4LL0000C00080 | HGU125N3PT4LL0000C00080 | HGU125H3PT4LL0000C00080 |
| 90A | 2P | HGU125E2PT4LL0000C00090 | HGU125N2PT4LL0000C00090 | HGU125H2PT4LL0000C00090 |
| | 3P | HGU125E3PT4LL0000C00090 | HGU125N3PT4LL0000C00090 | HGU125H3PT4LL0000C00090 |
| 100A | 2P | HGU125E2PT4LL0000C00100 | HGU125N2PT4LL0000C00100 | HGU125H2PT4LL0000C00100 |
| | 3P | HGU125E3PT4LL0000C00100 | HGU125N3PT4LL0000C00100 | HGU125H3PT4LL0000C00100 |
| 125A | 2P | HGU125E2PT4LL0000C00125 | HGU125N2PT4LL0000C00125 | HGU125H2PT4LL0000C00125 |
| | 3P | HGU125E3PT4LL0000C00125 | HGU125N3PT4LL0000C00125 | HGU125H3PT4LL0000C00125 |

* List based on 80% rating and line/load terminal lugs.

| | | With MTM-JF trip unit (Adjustable thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 50kA at 120/240Vac<br>25kA at 480Vac,<br>14kA at 600Y/347Vac | 65kA at 120/240Vac<br>35kA at 480Vac,<br>18kA at 600Y/347Vac | 100kA at 120/240Vac<br>65kA at 480Vac,<br>35kA at 600Y/347Vac |
| 25A | 3P | HGU125E3PT4LL0000C00025F | HGU125N3PT4LL0000C00025F | HGU125H3PT4LL0000C00025F |
| 40A | 3P | HGU125E3PT4LL0000C00040F | HGU125N3PT4LL0000C00040F | HGU125H3PT4LL0000C00040F |
| 60A | 3P | HGU125E3PT4LL0000C00060F | HGU125N3PT4LL0000C00060F | HGU125H3PT4LL0000C00060F |
| 80A | 3P | HGU125E3PT4LL0000C00080F | HGU125N3PT4LL0000C00080F | HGU125H3PT4LL0000C00080F |
| 100A | 3P | HGU125E3PT4LL0000C00100F | HGU125N3PT4LL0000C00100F | HGU125H3PT4LL0000C00100F |
| 125A | 3P | HGU125E3PT4LL0000C00125F | HGU125N3PT4LL0000C00125F | HGU125H3PT4LL0000C00125F |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.8~1.0 x In

## Molded case switch

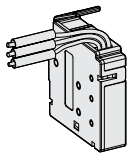
| | | With MCS trip unit (Fix magnet only) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 50kA at 120/240Vac<br>25kA at 480Vac<br>14kA at 600Y/347Vac | 65kA at 120/240Vac<br>35kA at 480Vac<br>18kA at 600Y/347Vac | 100kA at 120/240Vac<br>65kA at 480Vac<br>35kA at 600Y/347Vac |
| 100A | 2P | HGU125E2PDSLL0000C00100 | HGU125N2PDSLL0000C00100 | HGU125H2PDSLL0000C00100 |
| | 3P | HGU125E3PDSLL0000C00100 | HGU125N3PDSLL0000C00100 | HGU125H3PDSLL0000C00100 |
| 125A | 2P | HGU125E2PDSLL0000C00125 | HGU125N2PDSLL0000C00125 | HGU125H2PDSLL0000C00125 |
| | 3P | HGU125E3PDSLL0000C00125 | HGU125N3PDSLL0000C00125 | HGU125H3PDSLL0000C00125 |

* List based on 80% rating and line/load terminal lugs.

# Accessories for HGU125

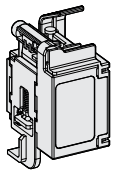
## Inner accessories

| Description | Ordering code |
|---|---|
| Auxiliary switch, AUX | AUX 12GU L1<br>AUX 12GU R2 |
| Alarm switch, ALT | ALT 12GU L1<br>ALT 12GU R2 |

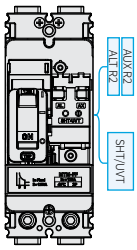


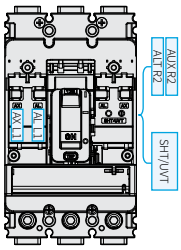
AUX12GU
ALT12GU

| Description | Control voltage | | Ordering code |
|---|---|---|---|
| Shunt trip, SHT | DC | 24V | SHT12GU DC24V |
| | DC | 100-110V | SHT12GU DC100-110V |
| | AC | 100-120V | SHT12GU AC100-120V |
| | AC | 200-230V | SHT12GU AC200-230V |
| | AC | 380-415V | SHT12GU AC380-415V |
| | AC | 440-480V | SHT12GU AC440-480V |
| Undervoltage trip, UVT | DC | 24V | UVT12GU DC24V |
| | DC | 100-110V | UVT12GU DC100-110V |
| | AC | 100-120V | UVT12GU AC100-120V |
| | AC | 200-230V | UVT12GU AC200-230V |
| | AC | 380-415V | UVT12GU AC380-415V |
| | AC | 440-480V | UVT12GU AC440-480V |



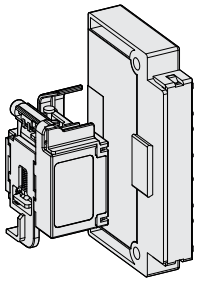
SHT12GU



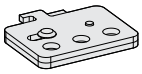




| Type | Left | Right |
|---|---|---|
| AUX | 1 | 1 |
| ALT | 1 | 1 |
| SHT | - | 1 |
| UVT | - | 1 |

* Applicable in indicated pole position-not synchronous
* 2P : Right only



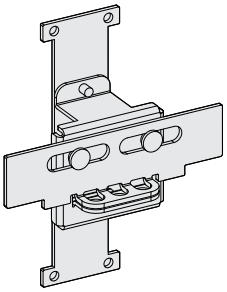
UVT12GU



PLD12GU

## Padlocking device

| Description | Ordering code |
|---|---|
| Lock in “ON” or “OFF” position | PLD12GU |



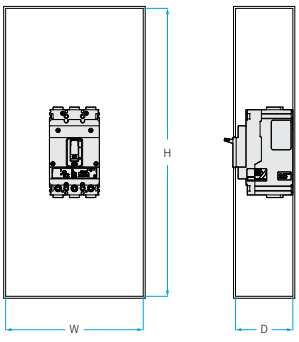
MIF12GU

## Mechanical interlocking device

| Description | Ordering code |
|---|---|
| For 3-pole breaker | MIF12GU |

## Enclosure

| Dimension (W X H X D) inch(mm) | Ordering code |
|---|---|
| 8.27(210) x 17.3(439.4) x 3.44(87.5) | - |

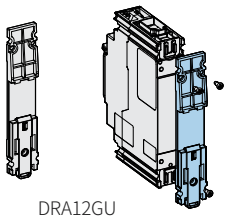



Enclosure

# Accessories for HGU125

## Din rail adaptor

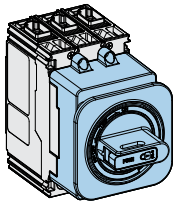
| Description | Pole | Ordering code | Remark |
|---|---|---|---|
| Din rail adaptor | 1P | DRA12GU | |



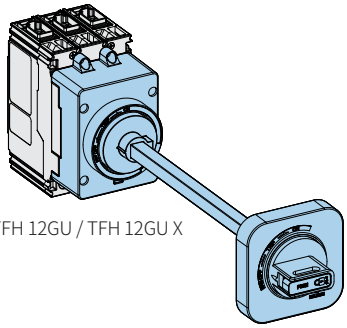
DRA12GU

## Rotary operating handles

| Description | Protection ratings | Ordering code | Remark |
|---|---|---|---|
| Directly mounted | NEMA Type1 | TFG 12GU U | Power: Upper side |
| | | TFG 12GU R | Power: Right side |
| | | TFG 12GU L | Power: Left side |
| Extended (Door-mounted) | NEMA Type1 | TFH 12GU | |
| | NEMA Type1, 12, 3, 3R, 4, 4X | TFH 12GU X | |



TFG 12GU U



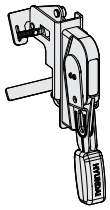
TFH 12GU / TFH 12GU X

## Flange handles

The flange handle consists of three configurable parts.

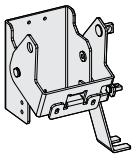
| Config. 1 | Protection ratings overview | Description | Ordering code | Remark |
|---|---|---|---|---|
| Handle | Type1, 12, 3, 3R, 4, 4X | Powder coating short | FHPCS | Usable with cable and variable-depth flange handles. |
| | | Powder coating long | FHPCL | |
| | | Nickel plating short | FHNPS[1)] | |
| | | Nickel plating long | FHNPL[1)] | |

※ Short type is recommended for 125AF, but long type is also applicable.
[1)] Please contact us before placing an order for the nickel plating type.

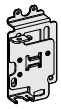


FHPCS/FHNPS

| Config. 2 | Description | Ordering code | Remark |
|---|---|---|---|
| Mechanism | Mounting base type | FMB12GU | For cable and variable-depth types. |
| | Sliding operation type | FSM12GU | Applicable only to cable type. |

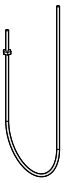


FMB12GU



FSM12GU

| Config. 3 | Description | Ordering code | Remark |
|---|---|---|---|
| Connection method | 30in cable | CBL30INCH | Applicable only to cable type. |
| | 48in cable | CBL48INCH | |
| | 60in cable | CBL60INCH | |
| | 72in cable | CBL72INCH | |
| | Threaded-rod 400mm(15.75in) | ROD400MM | Applicable only to variable-depth types. |



CBL

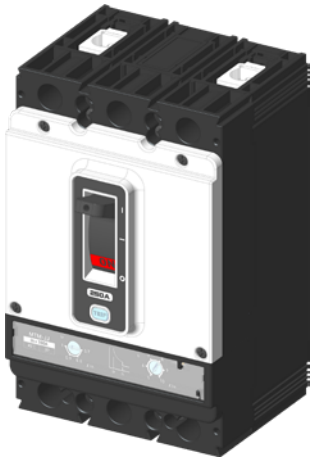


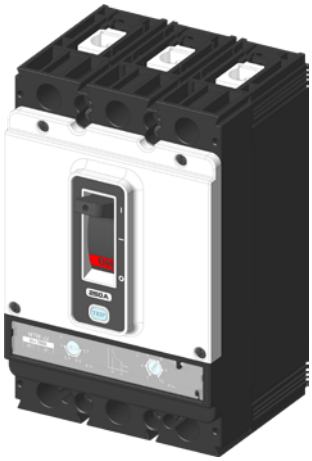
ROD

| Description | Directly mounted | Door mounted | Flange handle with cable operation mechanism | Flange handle with variable depth mechansim |
|---|---|---|---|---|
| NEMA Type 1 | TFG12GU U<br>TFG12GU R<br>TFG12GU L | TFH 12GU | - | - |
| NEMA Type 1, 12, 3, 3R, 4, 4X | - | TFH 12GU X | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL |

# Selection guide

## HGU150





## Catalog numbering [Product selection]

### ① HGU150HT

Series & Frame: HGU 150AF

Rating & Short-circuit breaking capacity

| Pole | 80% | 100% | Rating | kA |
|---|---|---|---|---|
| 2P 3P | N | NT | 240V | 65 |
| | | | 480V | 35 |
| | | | 600V | 18 |
| | H | HT | 240V | 100 |
| | | | 480V | 65 |
| | | | 600V | 35 |
| | L | LT | 240V | 150 |
| | | | 480V | 100 |
| | | | 600V | 65 |

### ② 3P

| Poles |
|---|
| **2P** |
| **3P** |

### ③ T4

| Product description |
|---|
| T4: Thermal magnet type(MTM), 40 °C |
| DS: Molded-case switch(MCS) |
| MP: Motor circuit protector(MCP) |

### ④ LL

| Terminal mounting | | |
|---|---|---|
| Type | line side | load side |
| **LL** | Lug | Lug |
| **SS** | Bolt | Bolt |
| **LS** | Lug | Bolt |
| **SL** | Bolt | Lug |

### ⑤ 00

| Auxiliary switch / Alarm switch | |
|---|---|
| **00** | Without |
| **10** | AUX1C |
| **20** | AUX2C |
| **01** | ALT1C |
| **02** | ALT2C |
| **11** | AUX1C+ALT1C |
| **22** | AUX2C+ALT2C |

### ⑥ 00

| SHT/UVT | |
|---|---|
| **00** | Without |
| **S1** | SHT 110Vac |
| **S2** | SHT 220Vac |
| **S3** | SHT 380Vac |
| **S4** | SHT 440Vac |
| **S5** | SHT 24Vdc |
| **S6** | SHT 110Vdc |
| **U1** | UVT 110Vac |
| **U2** | UVT 220Vac |
| **U3** | UVT 380Vac |
| **U4** | UVT 440Vac |
| **U5** | UVT 24Vdc |
| **U6** | UVT 110Vdc |

### ⑦ C

| Frequency | |
|---|---|
| **C** | 50/60Hz |

### ⑧ 00150

| Rated current | | |
|---|---|---|
| 002.5 | 003.2 | 006.3 |
| 012.5 | 00015 | 00020 |
| 00030 | 00032 | 00040 |
| 00050 | 00060 | 00070 |
| 00080 | 00090 | 00100 |
| 00125 | 00150 | |

### ⑨ H

| Trip device | |
|---|---|
| - | Fixed thermal / Fixed magnetic(MTM-FF) |
| **F** | Adjustable thermal / Fixed magnetic(MTM-JF) |
| **H** | Adjustable thermal / Adjustable magnetic(MTM-JJ) |

# HGU150

- HGU150 breaker is HACR rated
- SWD switch duty rating (applied only to 15 and 20A /347Vac or less)
- HID high intensity discharge lighting rating (15~50A /480Vac or less)

## UL489 Ratings

| Breaker type | Rating | Number of poles | Interrupting capacity (kA rms) AC 50/60Hz | | |
|---|---|---|---|---|---|
| | | | 240Vac | 480Vac | 600Vac |
| HGU150N<br>HGU150NT | 80%<br>100% | 2, 3 | 65 | 35 | 18 |
| HGU150H<br>HGU150HT | 80%<br>100% | 2, 3 | 100 | 65 | 35 |
| HGU150L<br>HGU150LT | 80%<br>100% | 2, 3 | 150 | 100 | 65 |

## Dimensions

| Number of poles | Dimensions inch (mm) | | |
|---|---|---|---|
| | W | H | D |
| 2-Pole<br>3-Pole | 4.13(105) | 6.5(165) | 3.41(86.5) |

## Trip unit types

| | Thermal | Magnetic | Remarks |
|---|---|---|---|
| MTM-FF | Fixed | Fixed | Thermal magnetic |
| MTM-JF | Adjustable, 0.7~1 x In | Fixed | Thermal magnetic |
| MTM-JJ | Adjustable, 0.7~1 x In | Adjustable, 5~10 x In | Thermal magnetic |
| MCS | N.A | Fixed, 10 x In | Magnetic only |
| MCP(2.5~100A) | N.A | Adjustable, 6~14 x In | Magnetic only |
| MCP(150A) | N.A | Adjustable, 6~12 x In | Magnetic only |

## Circuit breaker

| | | With MTM-FF trip unit (Fixed thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V<br>18kA at 600V | 100kA at 240V, 65kA at 480V<br>35kA at 600V | 150kA at 240V, 100kA at 480V<br>65kA at 600V |
| 15A | 2P | HGU150N2PT4LL0000C00015 | HGU150H2PT4LL0000C00015 | HGU150L2PT4LL0000C00015 |
| | 3P | HGU150N3PT4LL0000C00015 | HGU150H3PT4LL0000C00015 | HGU150L3PT4LL0000C00015 |
| 20A | 2P | HGU150N2PT4LL0000C00020 | HGU150H2PT4LL0000C00020 | HGU150L2PT4LL0000C00020 |
| | 3P | HGU150N3PT4LL0000C00020 | HGU150H3PT4LL0000C00020 | HGU150L3PT4LL0000C00020 |
| 30A | 2P | HGU150N2PT4LL0000C00030 | HGU150H2PT4LL0000C00030 | HGU150L2PT4LL0000C00030 |
| | 3P | HGU150N3PT4LL0000C00030 | HGU150H3PT4LL0000C00030 | HGU150L3PT4LL0000C00030 |
| 40A | 2P | HGU150N2PT4LL0000C00040 | HGU150H2PT4LL0000C00040 | HGU150L2PT4LL0000C00040 |
| | 3P | HGU150N3PT4LL0000C00040 | HGU150H3PT4LL0000C00040 | HGU150L3PT4LL0000C00040 |
| 50A | 2P | HGU150N2PT4LL0000C00050 | HGU150H2PT4LL0000C00050 | HGU150L2PT4LL0000C00050 |
| | 3P | HGU150N3PT4LL0000C00050 | HGU150H3PT4LL0000C00050 | HGU150L3PT4LL0000C00050 |
| 60A | 2P | HGU150N2PT4LL0000C00060 | HGU150H2PT4LL0000C00060 | HGU150L2PT4LL0000C00060 |
| | 3P | HGU150N3PT4LL0000C00060 | HGU150H3PT4LL0000C00060 | HGU150L3PT4LL0000C00060 |
| 70A | 2P | HGU150N2PT4LL0000C00070 | HGU150H2PT4LL0000C00070 | HGU150L2PT4LL0000C00070 |
| | 3P | HGU150N3PT4LL0000C00070 | HGU150H3PT4LL0000C00070 | HGU150L3PT4LL0000C00070 |
| 80A | 2P | HGU150N2PT4LL0000C00080 | HGU150H2PT4LL0000C00080 | HGU150L2PT4LL0000C00080 |
| | 3P | HGU150N3PT4LL0000C00080 | HGU150H3PT4LL0000C00080 | HGU150L3PT4LL0000C00080 |
| 90A | 2P | HGU150N2PT4LL0000C00090 | HGU150H2PT4LL0000C00090 | HGU150L2PT4LL0000C00090 |
| | 3P | HGU150N3PT4LL0000C00090 | HGU150H3PT4LL0000C00090 | HGU150L3PT4LL0000C00090 |
| 100A | 2P | HGU150N2PT4LL0000C00100 | HGU150H2PT4LL0000C00100 | HGU150L2PT4LL0000C00100 |
| | 3P | HGU150N3PT4LL0000C00100 | HGU150H3PT4LL0000C00100 | HGU150L3PT4LL0000C00100 |
| 125A | 2P | HGU150N2PT4LL0000C00125 | HGU150H2PT4LL0000C00125 | HGU150L2PT4LL0000C00125 |
| | 3P | HGU150N3PT4LL0000C00125 | HGU150H3PT4LL0000C00125 | HGU150L3PT4LL0000C00125 |
| 150A | 2P | HGU150N2PT4LL0000C00150 | HGU150H2PT4LL0000C00150 | HGU150L2PT4LL0000C00150 |
| | 3P | HGU150N3PT4LL0000C00150 | HGU150H3PT4LL0000C00150 | HGU150L3PT4LL0000C00150 |

* List based on 80% rating and line/load terminal lugs.

# HGU150

## Circuit breaker

| With MTM-JF trip unit (Adjustable thermal, Fixed magnetic) | | | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 40 | 2P | HGU150N2PT4LL0000C00040F | HGU150H2PT4LL0000C00040F | HGU150L2PT4LL0000C00040F |
| | 3P | HGU150N3PT4LL0000C00040F | HGU150H3PT4LL0000C00040F | HGU150L3PT4LL0000C00040F |
| 60 | 2P | HGU150N2PT4LL0000C00060F | HGU150H2PT4LL0000C00060F | HGU150L2PT4LL0000C00060F |
| | 3P | HGU150N3PT4LL0000C00060F | HGU150H3PT4LL0000C00060F | HGU150L3PT4LL0000C00060F |
| 80 | 2P | HGU150N2PT4LL0000C00080F | HGU150H2PT4LL0000C00080F | HGU150L2PT4LL0000C00080F |
| | 3P | HGU150N3PT4LL0000C00080F | HGU150H3PT4LL0000C00080F | HGU150L3PT4LL0000C00080F |
| 100 | 2P | HGU150N2PT4LL0000C00100F | HGU150H2PT4LL0000C00100F | HGU150L2PT4LL0000C00100F |
| | 3P | HGU150N3PT4LL0000C00100F | HGU150H3PT4LL0000C00100F | HGU150L3PT4LL0000C00100F |
| 125 | 2P | HGU150N2PT4LL0000C00125F | HGU150H2PT4LL0000C00125F | HGU150L2PT4LL0000C00125F |
| | 3P | HGU150N3PT4LL0000C00125F | HGU150H3PT4LL0000C00125F | HGU150L3PT4LL0000C00125F |
| 150 | 2P | HGU150N2PT4LL0000C00150F | HGU150H2PT4LL0000C00150F | HGU150L2PT4LL0000C00150F |
| | 3P | HGU150N3PT4LL0000C00150F | HGU150H3PT4LL0000C00150F | HGU150L3PT4LL0000C00150F |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.7~1.0 x In

## Circuit breaker

| With MTM-JJ trip unit (Adjustable thermal, Adjustable magnetic) | | | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 100 | 2P | HGU150N2PT4LL0000C00100H | HGU150H2PT4LL0000C00100H | HGU150L2PT4LL0000C00100H |
| | 3P | HGU150N3PT4LL0000C00100H | HGU150H3PT4LL0000C00100H | HGU150L3PT4LL0000C00100H |
| 125 | 2P | HGU150N2PT4LL0000C00125H | HGU150H2PT4LL0000C00125H | HGU150L2PT4LL0000C00125H |
| | 3P | HGU150N3PT4LL0000C00125H | HGU150H3PT4LL0000C00125H | HGU150L3PT4LL0000C00125H |
| 150 | 2P | HGU150N2PT4LL0000C00150H | HGU150H2PT4LL0000C00150H | HGU150L2PT4LL0000C00150H |
| | 3P | HGU150N3PT4LL0000C00150H | HGU150H3PT4LL0000C00150H | HGU150L3PT4LL0000C00150H |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.7~1.0 x In
* Adjustable magnetic 5~10 x In

## Molded case switch

| With MCS trip unit (Fix magnet only) | | | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 150 | 2P | HGU150N2PDSLL0000C00150 | HGU150H2PDSLL0000C00150 | HGU150L2PDSLL0000C00150 |
| | 3P | HGU150N3PDSLL0000C00150 | HGU150H3PDSLL0000C00150 | HGU150L3PDSLL0000C00150 |

* List based on 80% rating and line/load terminal lugs.

## Motor circuit protector

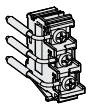
| With MCP trip unit (Ad magnetic only) | | | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 2.5A | 3P | HGU150N3PMPLL0000C002.5 | HGU150H3PMPLL0000C002.5 | HGU150L3PMPLL0000C002.5 |
| 3.2A | 3P | HGU150N3PMPLL0000C003.2 | HGU150H3PMPLL0000C003.2 | HGU150L3PMPLL0000C003.2 |
| 6.3A | 3P | HGU150N3PMPLL0000C006.3 | HGU150H3PMPLL0000C006.3 | HGU150L3PMPLL0000C006.3 |
| 12.5A | 3P | HGU150N3PMPLL0000C012.5 | HGU150H3PMPLL0000C012.5 | HGU150L3PMPLL0000C012.5 |
| 20A | 3P | HGU150N3PMPLL0000C00020 | HGU150H3PMPLL0000C00020 | HGU150L3PMPLL0000C00020 |
| 32A | 3P | HGU150N3PMPLL0000C00032 | HGU150H3PMPLL0000C00032 | HGU150L3PMPLL0000C00032 |
| 50A | 3P | HGU150N3PMPLL0000C00050 | HGU150H3PMPLL0000C00050 | HGU150L3PMPLL0000C00050 |
| 60A | 3P | HGU150N3PMPLL0000C00060 | HGU150H3PMPLL0000C00060 | HGU150L3PMPLL0000C00060 |
| 80A | 3P | HGU150N3PMPLL0000C00080 | HGU150H3PMPLL0000C00080 | HGU150L3PMPLL0000C00080 |
| 100A | 3P | HGU150N3PMPLL0000C00100 | HGU150H3PMPLL0000C00100 | HGU150L3PMPLL0000C00100 |
| 150A | 3P | HGU150N3PMPLL0000C00150 | HGU150H3PMPLL0000C00150 | HGU150L3PMPLL0000C00150 |

* List based on 80% rating and line/load terminal lugs.
* 2.5~100A : Adjustable magnetic 6~14 x In
* 150A : Adjustable magnetic 6~12 x In

# Accessories for HGU150

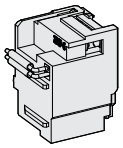
## Inner accessories

| Description | Ordering code |
|---|---|
| Auxiliary switch, AUX | AUX 25GU L1<br>AUX 25GU R2 |
| Alarm switch, ALT | ALT12GU L1<br>ALT12GU R2 |

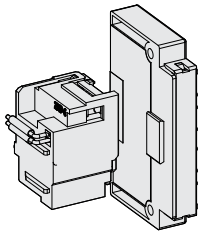


AUX25GU
ALT25GU

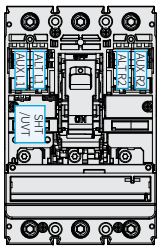
| Description | Control voltage | | Ordering code |
|---|---|---|---|
| Shunt trip, SHT | DC | 24V | SHT25GU DC24V |
| | DC | 100-110V | SHT25GU DC100-110V |
| | AC | 100-120V | SHT25GU AC100-120V |
| | AC | 200-230V | SHT25GU AC200-230V |
| | AC | 380-415V | SHT25GU AC380-415V |
| | AC | 440-480V | SHT25GU AC440-480V |
| Undervoltage trip, UVT | DC | 24V | UVT25GU DC24V |
| | DC | 100-110V | UVT25GU DC100-110V |
| | AC | 100-120V | UVT25GU AC100-120V |
| | AC | 200-230V | UVT25GU AC200-230V |
| | AC | 380-415V | UVT25GU AC380-415V |
| | AC | 440-480V | UVT25GU AC440-480V |



SHT25GU

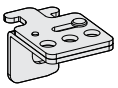


UVT25GU




| Type | Left | Right |
|---|---|---|
| AUX | 1 | 1 |
| ALT | 1 | 1 |
| SHT | 1 | 1 |
| UVT | 1 | 1 |

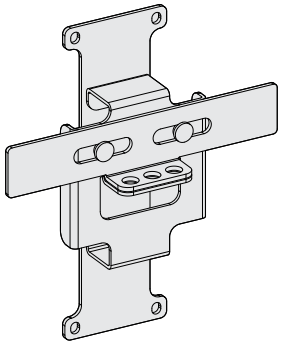
* Applicable in indicated pole position-not synchronous



PLD25GU

## Padlocking device

| Description | Ordering code |
|---|---|
| Lock in “OFF” position | PLD25GU |



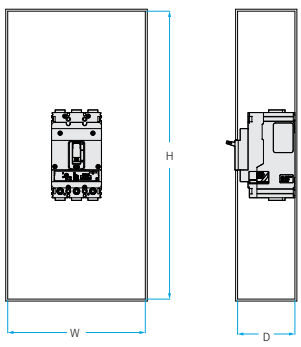
MIF25GU

## Mechanical interlocking device

| Description | Ordering code |
|---|---|
| For 3-pole breaker | MIF25GU |

## Enclosure

| Dimension (W X H X D) inch(mm) | Ordering code |
|---|---|
| 6.1(155) X 15.6(396) X 3.5(89) | - |

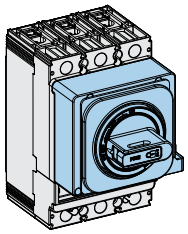



Enclosure

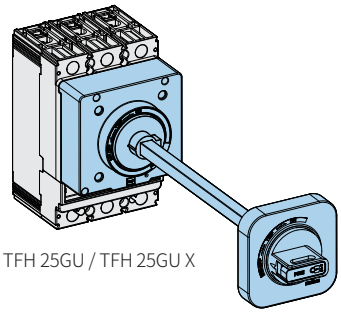
# Accessories for HGU150

## Rotary operating handles

| Description | Control voltage | Ordering code | Remark |
|---|---|---|---|
| Directly mounted | NEMA Type1 | TFG 25GU U | Power: Upper side |
| | | TFG 25GU R | Power: Right side |
| | | TFG 25GU L | Power: Left side |
| Extended (Door-mounted) | NEMA Type1 | TFH 25GU | |
| | NEMA Type1, 12, 3, 3R, 4, 4X | TFH 25GU X | |



TFG 25GU U



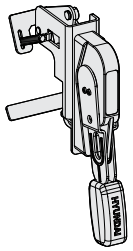
TFH 25GU / TFH 25GU X

## Flange handles

The flange handle consists of three configurable parts.

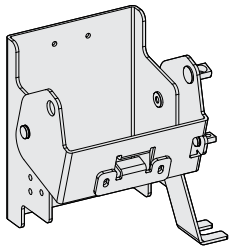
| Config. 1 | Protection ratings overview | Description | Ordering code | Remark |
|---|---|---|---|---|
| Handle | Type1, 12, 3, 3R, 4, 4X | Powder coating short | FHPCS | Usable with cable and variable-depth flange handles. |
| | | Powder coating long | FHPCL | |
| | | Nickel plating short | FHNPS[1)] | |
| | | Nickel plating long | FHNPL[1)] | |

※ Short type is recommended for 150AF, but long type is also applicable.
1) Please contact us before placing an order for the nickel plating type.



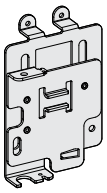
FHPCS/FHNPS

| Config. 2 | Description | Ordering code | Remark |
|---|---|---|---|
| Mechanism | Mounting base type | FMB25GU | For cable and variable-depth types. |
| | Sliding operation type | FSM25GU | Applicable only to cable type. |



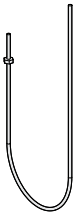
FMB25GU

| Config. 3 | Description | Ordering code | Remark |
|---|---|---|---|
| Connection method | 30in cable | CBL30INCH | Applicable only to cable type. |
| | 48in cable | CBL48INCH | |
| | 60in cable | CBL60INCH | |
| | 72in cable | CBL72INCH | |
| | Threaded-rod 400mm(15.75in) | ROD400MM | Applicable only to variable-depth types. |

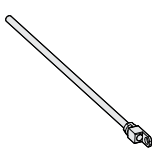


FSM25GU

| Description | Directly mounted | Door mounted | Flange handle with cable operation mechanism | Flange handle with variable depth mechansim |
|---|---|---|---|---|
| NEMA Type 1 | TFG25GU U<br>TFG25GU R<br>TFG25GU L | TFH 25GU | - | - |
| NEMA Type 1, 12, 3, 3R, 4, 4X | - | TFH 25GU X | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL |



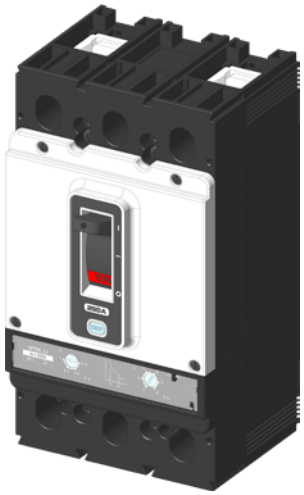
CBL



ROD

# Selection guide

## HGU250





## Catalog numbering [Product selection]

### ① HGU250HT

Series & Frame: HGU 250AF

Rating & Short-circuit breaking capacity

| Pole | 80% | 100% | Rating | kA |
|---|---|---|---|---|
| 2P 3P | N | NT | 240V | 65 |
| | | | 480V | 35 |
| | | | 600V | 18 |
| | H | HT | 240V | 100 |
| | | | 480V | 65 |
| | | | 600V | 35 |
| | L | LT | 240V | 150 |
| | | | 480V | 100 |
| | | | 600V | 65 |

### ② 3P

| Poles |
|---|
| 2P |
| 3P |

### ③ T4

| Product description |
|---|
| T4: Thermal magnet type(MTM), 40 °C |
| DS: Molded-case switch(MCS) |
| MP: Motor circuit protector(MCP) |

### ④ LL

| Terminal mounting | | |
|---|---|---|
| Type | line side | load side |
| LL | Lug | Lug |
| SS | Bolt | Bolt |
| LS | Lug | Bolt |
| SL | Bolt | Lug |

### ⑤ 00

| Auxiliary switch / Alarm switch | |
|---|---|
| 00 | Without |
| 10 | AUX1C |
| 20 | AUX2C |
| 01 | ALT1C |
| 02 | ALT2C |
| 11 | AUX1C+ALT1C |
| 22 | AUX2C+ALT2C |

### ⑥ 00

| SHT/UVT | |
|---|---|
| 00 | Without |
| S1 | SHT 110Vac |
| S2 | SHT 220Vac |
| S3 | SHT 380Vac |
| S4 | SHT 440Vac |
| S5 | SHT 24Vdc |
| S6 | SHT 110Vdc |
| U1 | UVT 110Vac |
| U2 | UVT 220Vac |
| U3 | UVT 380Vac |
| U4 | UVT 440Vac |
| U5 | UVT 24Vdc |
| U6 | UVT 110Vdc |

### ⑦ C

| Frequency | |
|---|---|
| C | 50/60Hz |

### ⑧ 00250

| Rated current | | |
|---|---|---|
| 00150 | 00160 | 00175 |
| 00200 | 00220 | 00225 |
| 00250 | | |

### ⑨ H

| Trip device | |
|---|---|
| - | Fixed thermal / Fixed magnetic(MTM-FF) |
| F | Adjustable thermal / Fixed magnetic(MTM-JF) |
| H | Adjustable thermal / Adjustable magnetic(MTM-JJ) |

# HGU250

• HGU250 breaker is HACR rated

### UL489 Ratings

| Breaker type | Rating | Number of poles | Interrupting capacity (kA rms) AC 50/60Hz | | |
|---|---|---|---|---|---|
| | | | 240Vac | 480Vac | 600Vac |
| HGU250N | 80% | 2, 3 | 65 | 35 | 18 |
| HGU250NT | 100% | | | | |
| HGU250H | 80% | 2, 3 | 100 | 65 | 35 |
| HGU250HT | 100% | | | | |
| HGU250L | 80% | 2, 3 | 150 | 100 | 65 |
| HGU250LT | 100% | | | | |

### Dimensions

| Number of poles | Dimensions inch (mm) | | |
|---|---|---|---|
| | 120/240V | 277V | 347V |
| 2-Pole | 4.13(105) | 7.48(190) | 3.41(86.5) |
| 3-Pole | | | |

### Trip unit types

| | Thermal | Magnetic | Remarks |
|---|---|---|---|
| MTM-FF | Fixed | Fixed | Thermal magnetic |
| MTM-JF | Adjustable, 0.7~1 x In | Fixed | Thermal magnetic |
| MTM-JJ | Adjustable, 0.7~1 x In | Adjustable, 5~10 x In | Thermal magnetic |
| MCS(175, 250A) | N.A | Fixed, 10 x In | Magnetic only |
| MCP(220A) | N.A | Adjustable, 6~12 x In | Magnetic only |

### Circuit breaker

| | | With MTM-FF trip unit (Fixed thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 150A | 2P | HGU250N2PT4S0000C00150 | HGU250H2PT4S0000C00150 | HGU250L2PT4S0000C00150 |
| | 3P | HGU250N3PT4S0000C00150 | HGU250H3PT4S0000C00150 | HGU250L3PT4S0000C00150 |
| 160A | 2P | HGU250N2PT4S0000C00160 | HGU250H2PT4S0000C00160 | HGU250L2PT4S0000C00160 |
| | 3P | HGU250N3PT4S0000C00160 | HGU250H3PT4S0000C00160 | HGU250L3PT4S0000C00160 |
| 175A | 2P | HGU250N2PT4S0000C00175 | HGU250H2PT4S0000C00175 | HGU250L2PT4S0000C00175 |
| | 3P | HGU250N3PT4S0000C00175 | HGU250H3PT4S0000C00175 | HGU250L3PT4S0000C00175 |
| 200A | 2P | HGU250N2PT4S0000C00200 | HGU250H2PT4S0000C00200 | HGU250L2PT4S0000C00200 |
| | 3P | HGU250N3PT4S0000C00200 | HGU250H3PT4S0000C00200 | HGU250L3PT4S0000C00200 |
| 225A | 2P | HGU250N2PT4S0000C00225 | HGU250H2PT4S0000C00225 | HGU250L2PT4S0000C00225 |
| | 3P | HGU250N3PT4S0000C00225 | HGU250H3PT4S0000C00225 | HGU250L3PT4S0000C00225 |
| 250A | 2P | HGU250N2PT4S0000C00250 | HGU250H2PT4S0000C00250 | HGU250L2PT4S0000C00250 |
| | 3P | HGU250N3PT4S0000C00250 | HGU250H3PT4S0000C00250 | HGU250L3PT4S0000C00250 |

* List based on 80% rating and line/load terminal lugs.

### Circuit breaker

| | | With MTM-JF trip unit (Adjustable thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 160A | 2P | HGU250N2PT4S0000C00160F | HGU250H2PT4S0000C00160F | HGU250L2PT4S0000C00160F |
| | 3P | HGU250N3PT4S0000C00160F | HGU250H3PT4S0000C00160F | HGU250L3PT4S0000C00160F |
| 200A | 2P | HGU250N2PT4S0000C00200F | HGU250H2PT4S0000C00200F | HGU250L2PT4S0000C00200F |
| | 3P | HGU250N3PT4S0000C00200F | HGU250H3PT4S0000C00200F | HGU250L3PT4S0000C00200F |
| 250A | 2P | HGU250N2PT4S0000C00250F | HGU250H2PT4S0000C00250F | HGU250L2PT4S0000C00250F |
| | 3P | HGU250N3PT4S0000C00250F | HGU250H3PT4S0000C00250F | HGU250L3PT4S0000C00250F |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.7~1.0 x In

# HGU250

## Circuit breaker

| | | With MTM-JJ trip unit (Adjustable thermal, Adjustable magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 160A | 2P | HGU250N2PT4LL0000C00160H | HGU250H2PT4LL0000C00160H | HGU250L2PT4LL0000C00160H |
| | 3P | HGU250N3PT4LL0000C00160H | HGU250H3PT4LL0000C00160H | HGU250L3PT4LL0000C00160H |
| 200A | 2P | HGU250N2PT4LL0000C00200H | HGU250H2PT4LL0000C00200H | HGU250L2PT4LL0000C00200H |
| | 3P | HGU250N3PT4LL0000C00200H | HGU250H3PT4LL0000C00200H | HGU250L3PT4LL0000C00200H |
| 250A | 2P | HGU250N2PT4LL0000C00250H | HGU250H2PT4LL0000C00250H | HGU250L2PT4LL0000C00250H |
| | 3P | HGU250N3PT4LL0000C00250H | HGU250H3PT4LL0000C00250H | HGU250L3PT4LL0000C00250H |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.7~1.0 x In
* Adjustable magnetic 5~10 x In

## Molded case switch

| | | With MCS trip unit (Fix magnet only) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 175 | 2P | HGU250N2PDSLL0000C00175 | HGU250H2PDSLL0000C00175 | HGU250L2PDSLL0000C00175 |
| | 3P | HGU250N3PDSLL0000C00175 | HGU250H3PDSLL0000C00175 | HGU250L3PDSLL0000C00175 |
| 250 | 2P | HGU250N2PDSLL0000C00250 | HGU250H2PDSLL0000C00250 | HGU250L2PDSLL0000C00250 |
| | 3P | HGU250N3PDSLL0000C00250 | HGU250H3PDSLL0000C00250 | HGU250L3PDSLL0000C00250 |

* List based on 80% rating and line/load terminal lugs.

## Motor circuit protector

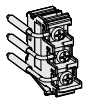
| | | With MCP trip unit | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 220A | 3P | HGU250N3PMPLL0000C00220 | HGU250H3PMPLL0000C00220 | HGU250L3PMPLL0000C00220 |

* List based on 80% rating and line/load terminal lugs.
* Adjustable magnetic 6~12 x In

# Accessories for HGU250

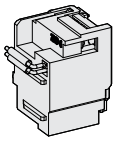
## Inner accessories

| Description | Ordering code |
|---|---|
| Auxiliary switch, AUX | AUX 25GU L1<br>AUX 25GU R2 |
| Alarm switch, ALT | ALT12GU L1<br>ALT12GU R2 |

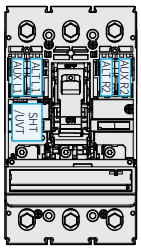


AUX25GU
ALT25GU

| Description | Control voltage | | Ordering code |
|---|---|---|---|
| Shunt trip, SHT | DC | 24V | SHT25GU DC24V |
| | DC | 100-110V | SHT25GU DC100-110V |
| | AC | 100-120V | SHT25GU AC100-120V |
| | AC | 200-230V | SHT25GU AC200-230V |
| | AC | 380-415V | SHT25GU AC380-415V |
| | AC | 440-480V | SHT25GU AC440-480V |
| Undervoltage trip, UVT | DC | 24V | UVT25GU DC24V |
| | DC | 100-110V | UVT25GU DC100-110V |
| | AC | 100-120V | UVT25GU AC100-120V |
| | AC | 200-230V | UVT25GU AC200-230V |
| | AC | 380-415V | UVT25GU AC380-415V |
| | AC | 440-480V | UVT25GU AC440-480V |

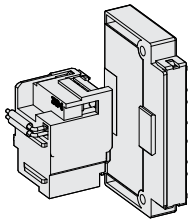


SHT25GU

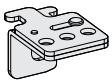



| Type | Left | Right |
|---|---|---|
| AUX | 1 | 1 |
| ALT | 1 | 1 |
| SHT | 1 | |
| UVT | 1 | |

* Applicable in indicated pole position-not synchronous



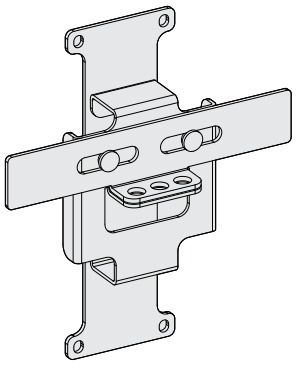
UVT25GU



PLD25GU

## Padlocking device

| Description | Ordering code |
|---|---|
| Lock in “OFF” position | PLD25GU |



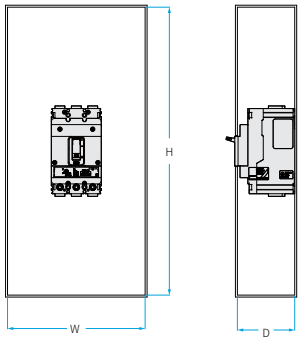
MIF25GU

## Mechanical interlocking device

| Description | Ordering code |
|---|---|
| For 3-pole breaker | MIF25GU |

## Enclosure

| Dimension (W X H X D) inch(mm) | Ordering code |
|---|---|
| 6.1(155) x 18.74(476) x 3.5(89) | - |

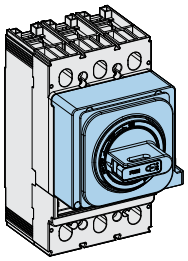



Enclosure

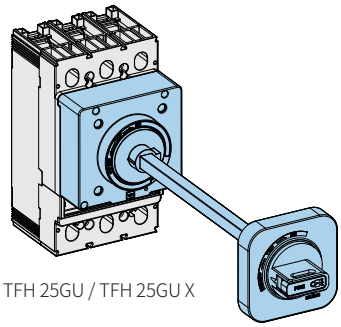
# Accessories for HGU250

## Rotary operating handles

| Description | Control voltage | Ordering code | Remark |
|---|---|---|---|
| Directly mounted | NEMA Type1 | TFG 25GU U | Power: Upper side |
| | | TFG 25GU R | Power: Right side |
| | | TFG 25GU L | Power: Left side |
| Extended (Door-mounted) | NEMA Type1 | TFH 25GU | |
| | NEMA Type1, 12, 3, 3R, 4, 4X | TFH 25GU X | |



TFG 25GU U



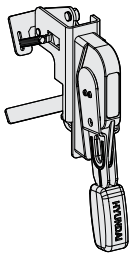
TFH 25GU / TFH 25GU X

## Flange handles

The flange handle consists of three configurable parts.

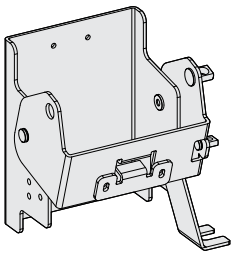
| Config. 1 | Protection ratings overview | Description | Ordering code | Remark |
|---|---|---|---|---|
| Handle | Type1, 12, 3, 3R, 4, 4X | Powder coating short | FHPCS | Usable with cable and variable-depth flange handles. |
| | | Powder coating long | FHPCL | |
| | | Nickel plating short | FHNPS[1)] | |
| | | Nickel plating long | FHNPL[1)] | |

※ Short type is recommended for 250AF, but long type is also applicable.
[1)] Please contact us before placing an order for the nickel plating type.



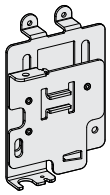
FHPCS/FHNPS

| Config. 2 | Description | Ordering code | Remark |
|---|---|---|---|
| Mechanism | Mounting base type | FMB25GU | For cable and variable-depth types. |
| | Sliding opertion type | FSM25GU | Applicable only to cable type. |



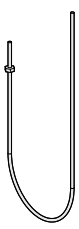
FMB25GU

| Config. 3 | Description | Ordering code | Remark |
|---|---|---|---|
| Connection method | 30in cable | CBL30INCH | Applicable only to cable type. |
| | 48in cable | CBL48INCH | |
| | 60in cable | CBL60INCH | |
| | 72in cable | CBL72INCH | |
| | Threaded-rod 400mm(15.75in) | ROD400MM | Applicable only to variable-depth types. |

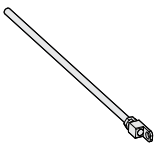


FSM25GU

| Description | Directly mounted | Door mounted | Flange handle with cable operation mechanism | Flange handle with variable depth mechansim |
|---|---|---|---|---|
| NEMA Type 1 | TFG25GU U<br>TFG25GU R<br>TFG25GU L | TFH 25GU | - | - |
| NEMA Type 1, 12, 3, 3R, 4, 4X | - | TFH 25GU X | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL |



CBL



ROD

# Selection guide

## HGU400





## Catalog numbering [Product selection]

### ① HGU400HT

Series & Frame: HGU 400AF

Rating & Short-circuit breaking capacity

| Pole | 80% | 100% | Rating | kA |
|---|---|---|---|---|
| 2P 3P | N | NT | 240V | 65 |
| | | | 480V | 35 |
| | | | 600V | 18 |
| | H | HT | 240V | 100 |
| | | | 480V | 65 |
| | | | 600V | 35 |
| | L | LT | 240V | 150 |
| | | | 480V | 100 |
| | | | 600V | 65 |

### ② 3P

| Poles |
|---|
| 2P |
| 3P |

### ③ T4

| Product description |
|---|
| T4: Thermal magnet type(MTM), 40 °C |
| DS: Molded-case switch(MCS) |
| MP: Motor circuit protector(MCP) |

### ④ LL

| Terminal mounting | | |
|---|---|---|
| Type | line side | load side |
| LL | Lug | Lug |
| SS | Bolt | Bolt |
| LS | Lug | Bolt |
| SL | Bolt | Lug |

### ⑤ 00

| Auxiliary switch / Alarm switch | |
|---|---|
| 00 | Without |
| 10 | AUX1C |
| 20 | AUX2C |
| 30 | AUX3C |
| 01 | ALT1C |
| 11 | AUX1C+ALT1C |
| 21 | AUX2C+ALT1C |
| 31 | AUX3C+ALT1C |

### ⑥ 00

| SHT/UVT | |
|---|---|
| 00 | Without |
| S1 | SHT 110Vac |
| S2 | SHT 220Vac |
| S3 | SHT 380Vac |
| S4 | SHT 440Vac |
| S5 | SHT 24Vdc |
| S6 | SHT 110Vdc |
| U1 | UVT 110Vac |
| U2 | UVT 220Vac |
| U3 | UVT 380Vac |
| U4 | UVT 440Vac |
| U5 | UVT 24Vdc |
| U6 | UVT 110Vdc |

### ⑦ C

| Frequency | |
|---|---|
| C | 50/60Hz |

### ⑧ 00400

| Rated current | | |
|---|---|---|
| 00250 | 00300 | 00350 |
| 00400 | | |

### ⑨ H

| Trip device | |
|---|---|
| - | Fixed thermal / Fixed magnetic(MTM-FF) |
| F | Adjustable thermal / Fixed magnetic(MTM-JF) |
| H | Adjustable thermal / Adjustable magnetic(MTM-JJ) |

# HGU400

• HGU400 breaker is HACR rated

### UL489 Ratings

| Breaker type | Rating | Number of poles | Interrupting capacity (kA rms) AC 50/60Hz | | |
|---|---|---|---|---|---|
| | | | 240Vac | 480Vac | 600Vac |
| HGU400N | 80% | 2, 3 | 65 | 35 | 18 |
| HGU400NT | 100% | | | | |
| HGU400H | 80% | 2, 3 | 100 | 65 | 35 |
| HGU400HT | 100% | | | | |
| HGU400L | 80% | 2, 3 | 150 | 100 | 65 |
| HGU400LT | 100% | | | | |

### Dimensions

| Number of poles | Dimensions inch (mm) | | |
|---|---|---|---|
| | W | H | D |
| 2-Pole | 5.51(140) | 11.4(290) | 4.33(110) |
| 3-Pole | | | |

### Trip unit types

| | Thermal | Magnetic | Remarks |
|---|---|---|---|
| MTM-FF | Fixed | Fixed, 10 x In | Thermal magnetic |
| MTM-JF | Adjustable, 0.8~1 x In | Fixed, 10 x In | Thermal magnetic |
| MTM-JJ | Adjustable, 0.8~1 x In | Adjustable, 5~10 x In | Thermal magnetic |
| MCS | N.A | Fixed, 10 x In | Magnetic only |
| MCP | N.A | Adjustable, 6~12 x In | Magnetic only |

### Circuit breaker

| | | With MTM-FF trip unit (Fixed thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 250A | 2P | HGU400N2PT4LL0000C00250 | HGU400H2PT4LL0000C00250 | HGU400L2PT4LL0000C00250 |
| | 3P | HGU400N3PT4LL0000C00250 | HGU400H3PT4LL0000C00250 | HGU400L3PT4LL0000C00250 |
| 300A | 2P | HGU400N2PT4LL0000C00300 | HGU400H2PT4LL0000C00300 | HGU400L2PT4LL0000C00300 |
| | 3P | HGU400N3PT4LL0000C00300 | HGU400H3PT4LL0000C00300 | HGU400L3PT4LL0000C00300 |
| 350A | 2P | HGU400N2PT4LL0000C00350 | HGU400H2PT4LL0000C00350 | HGU400L2PT4LL0000C00350 |
| | 3P | HGU400N3PT4LL0000C00350 | HGU400H3PT4LL0000C00350 | HGU400L3PT4LL0000C00350 |
| 400A | 2P | HGU400N2PT4LL0000C00400 | HGU400H2PT4LL0000C00400 | HGU400L2PT4LL0000C00400 |
| | 3P | HGU400N3PT4LL0000C00400 | HGU400H3PT4LL0000C00400 | HGU400L3PT4LL0000C00400 |

* List based on 80% rating and line/load terminal lugs.

### Circuit breaker

| | | With MTM-JF trip unit (Adjustable thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 300A | 2P | HGU400N2PT4LL0000C00300F | HGU400H2PT4LL0000C00300F | HGU400L2PT4LL0000C00300F |
| | 3P | HGU400N3PT4LL0000C00300F | HGU400H3PT4LL0000C00300F | HGU400L3PT4LL0000C00300F |
| 400A | 2P | HGU400N2PT4LL0000C00400F | HGU400H2PT4LL0000C00400F | HGU400L2PT4LL0000C00400F |
| | 3P | HGU400N3PT4LL0000C00400F | HGU400H3PT4LL0000C00400F | HGU400L3PT4LL0000C00400F |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.8~1.0 x In

# HGU400

## Circuit breaker

| | | With MTM-JJ trip unit (Adjustable thermal, Adjustable magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V<br>18kA at 600V | 100kA at 240V, 65kA at 480V<br>35kA at 600V | 150kA at 240V, 100kA at 480V<br>65kA at 600V |
| 300A | 2P | HGU400N2PT4LL0000C00300H | HGU400H2PT4LL0000C00300H | HGU400L2PT4LL0000C00300H |
| | 3P | HGU400N3PT4LL0000C00300H | HGU400H3PT4LL0000C00300H | HGU400L3PT4LL0000C00300H |
| 400A | 2P | HGU400N2PT4LL0000C00400H | HGU400H2PT4LL0000C00400H | HGU400L2PT4LL0000C00400H |
| | 3P | HGU400N3PT4LL0000C00400H | HGU400H3PT4LL0000C00400H | HGU400L3PT4LL0000C00400H |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.8~1.0 x In
* Adjustable magnetic 5~10 x In

## Molded case switch

| | | With MCS trip unit (Fix magnet only) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V<br>18kA at 600V | 100kA at 240V, 65kA at 480V<br>35kA at 600V | 150kA at 240V, 100kA at 480V<br>65kA at 600V |
| 400A | 2P | HGU400N2PDSLL0000C00400 | HGU400H2PDSLL0000C00400 | HGU400L2PDSLL0000C00400 |
| | 3P | HGU400N3PDSLL0000C00400 | HGU400H3PDSLL0000C00400 | HGU400L3PDSLL0000C00400 |

* List based on 80% rating and line/load terminal lugs.

## Motor circuit protector

| | | With MCP trip unit | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V<br>18kA at 600V | 100kA at 240V, 65kA at 480V<br>35kA at 600V | 150kA at 240V, 100kA at 480V<br>65kA at 600V |
| 320A | 3P | HGU400N3PMPLL0000C00320 | HGU400H3PMPLL0000C00320 | HGU400L3PMPLL0000C00320 |

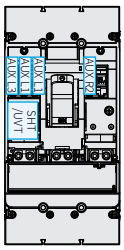
* List based on 80% rating and line/load terminal lugs.
* Adjustable magnetic 6~12 x In

# Accessories for HGU400

## Inner accessories

| Description | Ordering code |
|---|---|
| Auxiliary switch, AUX | AUX 60GU L1 |
| | AUX 60GU L2 |
| | AUX 60GU L3 |
| Alarm switch, ALT | ALT60GU R1 |

| Description | Control voltage | | Ordering code |
|---|---|---|---|
| Shunt trip, SHT | DC | 24V | SHT60GU DC24V |
| | DC | 100-110V | SHT60GU DC100-110V |
| | AC | 100-120V | SHT60GU AC100-120V |
| | AC | 200-230V | SHT60GU AC200-230V |
| | AC | 380-415V | SHT60GU AC380-415V |
| | AC | 440-480V | SHT60GU AC440-480V |
| Undervoltage trip, UVT | DC | 24V | UVT60GU DC24V |
| | DC | 100-110V | UVT60GU DC100-110V |
| | AC | 100-120V | UVT60GU AC100-120V |
| | AC | 200-230V | UVT60GU AC200-230V |
| | AC | 380-415V | UVT60GU AC380-415V |
| | AC | 440-480V | UVT60GU AC440-480V |




| Type | Left | Right |
|---|---|---|
| AUX | 3 | 0 |
| ALT | 0 | 1 |
| SHT | 1 | |
| UVT | 1 | |

* Applicable in indicated pole position-not synchronous

## Padlocking device

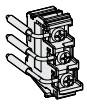
| Description | Ordering code |
|---|---|
| Lock in “OFF” position | PLD60GU |

## Mechanical interlocking device

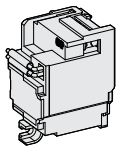
| Description | Ordering code |
|---|---|
| For 3-pole breaker | MIF60GU |

## Enclosure

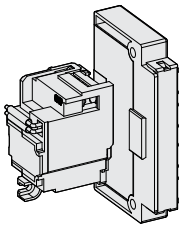
| Dimension (W X H X D) inch(mm) | Ordering code |
|---|---|
| 13.78(350) x 40.16(1020) x 5.98(152) | - |



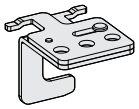
AUX60GU
ALT60GU



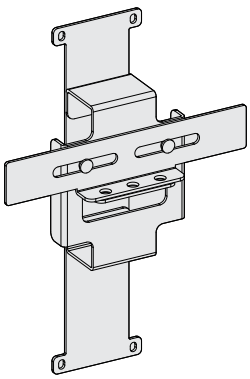
SHT60GU



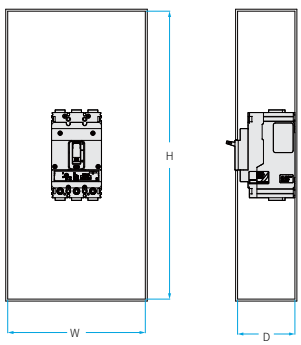
UVT60GU



PLD60GU



MIF60GU

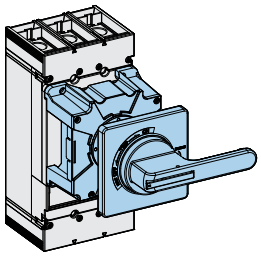



Enclosure

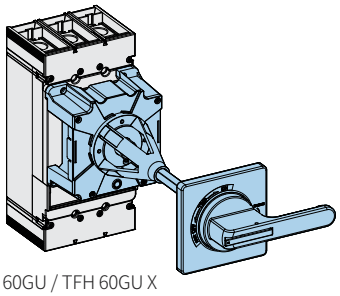
# Accessories for HGU400

### Rotary operating handles

| Description | Control voltage | Ordering code | Remark |
|---|---|---|---|
| Directly mounted | NEMA Type1 | TFG 60GU U | Power: Upper side |
| | | TFG 60GU R | Power: Right side |
| | | TFG 60GU L | Power: Left side |
| Extended (Door-mounted) | NEMA Type1 | TFH 60GU | |
| | NEMA Type1, 12, 3, 3R, 4, 4X | TFH 60GU X | |



TFG 60GU U



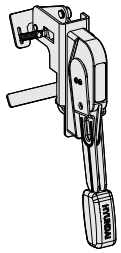
TFH 60GU / TFH 60GU X

### Flange handles

The flange handle consists of three configurable parts.

| Config. 1 | Protection ratings overview | Description | Ordering code | Remark |
|---|---|---|---|---|
| Handle | Type1, 12, 3, 3R, 4, 4X | Powder coating short | FHPCS | Usable with cable and variable-depth flange handles. |
| | | Powder coating long | FHPCL | |
| | | Nickel plating short | FHNPS[1)] | |
| | | Nickel plating long | FHNPL[1)] | |

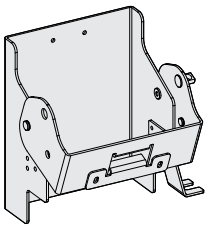
※. Long type is recommended for 400AF, but short type is also applicable.
[1)] Please contact us before placing an order for the nickel plating type.



FHPCL/FHNPL

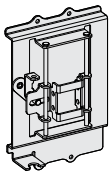
| Config. 2 | Description | Ordering code | Remark |
|---|---|---|---|
| Mechanism | Mounting base type | FMB60GU | For cable and variable-depth types. |
| | Sliding operation type | FSM60GU[2)] | Applicable only to cable type. |

[2)] Please contact us when placing an order for the sliding operation type.



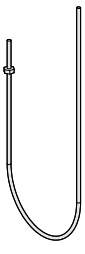
FMB60GU

| Config. 3 | Description | Ordering code | Remark |
|---|---|---|---|
| Connection method | 30in cable | CBL30INCH | Applicable only to cable type. |
| | 48in cable | CBL48INCH | |
| | 60in cable | CBL60INCH | |
| | 72in cable | CBL72INCH | |
| | Threaded-rod 400mm(15.75in) | ROD400MM | Applicable only to variable-depth types. |

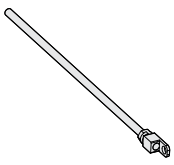


FSM60GU

| Description | Directly mounted | Door mounted | Flange handle with cable operation mechanism | Flange handle with variable depth mechansim |
|---|---|---|---|---|
| NEMA Type 1 | TFG 60GU U<br>TFG 60GU R<br>TFG 60GU L | TFH 60GU | - | - |
| NEMA Type 1, 12, 3, 3R, 4, 4X | - | TFH 60GU X | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL |



CBL



ROD

# Selection guide

## HGU600





## Catalog numbering [Product selection]

| ① HGU600LT | | | |
|---|---|---|---|
| Series & Frame: HGU 600AF | | | |
| Rating & Short-circuit breaking capacity | | | |
| Pole | 80% | Rating | kA |
| 2P<br>3P | N | 240V | 65 |
| | | 480V | 35 |
| | | 600V | 18 |
| | H | 240V | 100 |
| | | 480V | 65 |
| | | 600V | 35 |
| | L | 240V | 150 |
| | | 480V | 100 |
| | | 600V | 65 |

| ② 3P | |
|---|---|
| Poles | |
| **2P** | |
| **3P** | |

| ③ T4 | |
|---|---|
| Product description | |
| T4: Thermal magnet type(MTM), 40 °C | |
| DS: Molded-case switch(MCS) | |
| MP: Motor circuit protector(MCP) | |

| ④ LL | | |
|---|---|---|
| Terminal mounting | | |
| Type | line side | load side |
| **LL** | Lug | Lug |
| **SS** | Bolt | Bolt |
| **LS** | Lug | Bolt |
| **SL** | Bolt | Lug |

| ⑤ 00 | |
|---|---|
| Auxiliary switch / Alarm switch | |
| **00** | Without |
| **10** | AUX1C |
| **20** | AUX2C |
| **01** | ALT1C |
| **11** | AUX1C+ALT1C |
| **21** | AUX2C+ALT1C |
| **31** | AUX3C+ALT1C |
| **32** | AUX3C+ALT2C |

| ⑥ 00 | |
|---|---|
| SHT/UVT | |
| **00** | Without |
| **S1** | SHT 110Vac |
| **S2** | SHT 220Vac |
| **S3** | SHT 380Vac |
| **S4** | SHT 440Vac |
| **S5** | SHT 24Vdc |
| **S6** | SHT 110Vdc |
| **U1** | UVT 110Vac |
| **U2** | UVT 220Vac |
| **U3** | UVT 380Vac |
| **U4** | UVT 440Vac |
| **U5** | UVT 24Vdc |
| **U6** | UVT 110Vdc |

| ⑦ C | |
|---|---|
| Frequency | |
| **C** | 50/60Hz |

| ⑧ 00600 | |
|---|---|
| Rated current | |
| 500 | 600 |

| ⑨ H | |
|---|---|
| Trip device | |
| **-** | Fixed thermal / Fixed magnetic(MTM-FF) |
| **F** | Adjustable thermal / Fixed magnetic(MTM-JF) |
| **H** | Adjustable thermal / Adjustable magnetic(MTM-JJ) |

# HGU600

- HGU600 breaker is HACR rated

### UL489 Ratings

| Breaker type | Rating | Number of poles | Interrupting capacity (kA rms) AC 50/60Hz | | |
|---|---|---|---|---|---|
| | | | 240Vac | 480Vac | 600Vac |
| HGU600N | 80% | 2, 3 | 65 | 35 | 18 |
| HGU600H | 80% | 2, 3 | 100 | 65 | 35 |
| HGU600L | 80% | 2, 3 | 150 | 100 | 65 |

### Dimensions

| Number of poles | Dimensions inch (mm) | | |
|---|---|---|---|
| | W | H | D |
| 2-Pole<br>3-Pole | 5.51(140) | 11.4(290) | 4.33(110) |

### Trip unit types

| | Thermal | Magnetic | Remarks |
|---|---|---|---|
| MTM-FF | Fixed | Fixed, 10 x In | Thermal magnetic |
| MTM-JF | Adjustable, 0.8~1 x In | Fixed, 10 x In | Thermal magnetic |
| MTM-JJ | Adjustable, 0.8~1 x In | Adjustable, 5~10 x In | Thermal magnetic |
| MCS | N.A | Fixed, 10 x In | Magnetic only |
| MCP | N.A | Adjustable, 6~12 x In | Magnetic only |

### Circuit breaker

| | | With MTM-FF trip unit (Fixed thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65 at 600V |
| 500A | 2P | HGU600N2PT4LL0000C00500 | HGU600H2PT4LL0000C00500 | HGU600L2PT4LL0000C00500 |
| | 3P | HGU600N3PT4LL0000C00500 | HGU600H3PT4LL0000C00500 | HGU600L3PT4LL0000C00500 |
| 600A | 2P | HGU600N2PT4LL0000C00600 | HGU600H2PT4LL0000C00600 | HGU600L2PT4LL0000C00600 |
| | 3P | HGU600N3PT4LL0000C00600 | HGU600H3PT4LL0000C00600 | HGU600L3PT4LL0000C00600 |

* List based on 80% rating and line/load terminal lugs.

### Circuit breaker

| | | With MTM-JF trip unit (Adjustable thermal, Fixed magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 500A | 2P | HGU600N2PT4LL0000C00500F | HGU600H2PT4LL0000C00500F | HGU600L2PT4LL0000C00500F |
| | 3P | HGU600N3PT4LL0000C00500F | HGU600H3PT4LL0000C00500F | HGU600L3PT4LL0000C00500F |
| 600A | 2P | HGU600N2PT4LL0000C00600F | HGU600H2PT4LL0000C00600F | HGU600L2PT4LL0000C00600F |
| | 3P | HGU600N3PT4LL0000C00600F | HGU600H3PT4LL0000C00600F | HGU600L3PT4LL0000C00600F |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.8~1.0 x In

# HGU600

## Circuit breaker

| | | With MTM-JJ trip unit (Adjustable thermal, Adjustable magnetic) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 300A | 2P | HGU600N2PT4LL0000C00500H | HGU600H2PT4LL0000C00500H | HGU600L2PT4LL0000C00500H |
| | 3P | HGU600N3PT4LL0000C00500H | HGU600H3PT4LL0000C00500H | HGU600L3PT4LL0000C00500H |
| 400A | 2P | HGU600N2PT4LL0000C00600H | HGU600H2PT4LL0000C00600H | HGU600L2PT4LL0000C00600H |
| | 3P | HGU600N3PT4LL0000C00600H | HGU600H3PT4LL0000C00600H | HGU600L3PT4LL0000C00600H |

* List based on 80% rating and line/load terminal lugs.
* Adjustable thermal 0.8~1.0 x In
* Adjustable magnetic 5~10 x In

## Molded case switch

| | | With MCS trip unit (Fix magnet only) | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 600A | 2P | HGU600N2PDSLL0000C00600 | HGU600H2PDSLL0000C00600 | HGU600L2PDSLL0000C00600 |
| | 3P | HGU600N3PDSLL0000C00600 | HGU600H3PDSLL0000C00600 | HGU600L3PDSLL0000C00600 |

* List based on 80% rating and line/load terminal lugs.

## Motor circuit protector

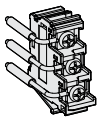
| | | With MCP trip unit | | |
|---|---|---|---|---|
| Ampere rating, In | Number of poles | 65kA at 240V, 35kA at 480V 18kA at 600V | 100kA at 240V, 65kA at 480V 35kA at 600V | 150kA at 240V, 100kA at 480V 65kA at 600V |
| 500A | 3P | HGU600N3PMPLL0000C00500 | HGU600H3PMPLL0000C00500 | HGU600L3PMPLL0000C00500 |

* List based on 80% rating and line/load terminal lugs.
* Adjustable magnetic 6~12 x In

# Accessories for HGU600

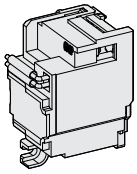
## Inner accessories

| Description | Ordering code |
|---|---|
| Auxiliary switch, AUX | AUX 60GU L1 |
| | AUX 25GU L2 |
| | AUX 25GU L3 |
| Alarm switch, ALT | ALT12GU R1 |

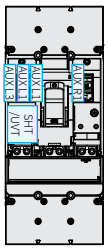


AUX60GU
ALT60GU

| Description | Control voltage | | Ordering code |
|---|---|---|---|
| Shunt trip, SHT | DC | 24V | SHT60GU DC24V |
| | DC | 100-110V | SHT60GU DC100-110V |
| | AC | 100-120V | SHT60GU AC100-120V |
| | AC | 200-230V | SHT60GU AC200-230V |
| | AC | 380-415V | SHT60GU AC380-415V |
| | AC | 440-480V | SHT60GU AC440-480V |
| Undervoltage trip, UVT | DC | 24V | UVT60GU DC24V |
| | DC | 100-110V | UVT60GU DC100-110V |
| | AC | 100-120V | UVT60GU AC100-120V |
| | AC | 200-230V | UVT60GU AC200-230V |
| | AC | 380-415V | UVT60GU AC380-415V |
| | AC | 440-480V | UVT60GU AC440-480V |

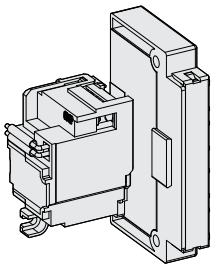


SHT60GU




| Type | Left | Right |
|---|---|---|
| AUX | 3 | 0 |
| ALT | 0 | 1 |
| SHT | 1 | |
| UVT | 1 | |

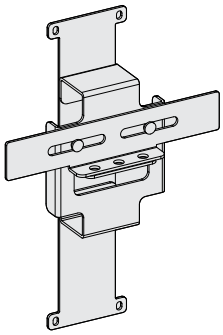
* Applicable in indicated pole position-not synchronous



UVT60GU

## Padlocking device

| Description | Ordering code |
|---|---|
| Lock in “OFF” position | PLD60GU |



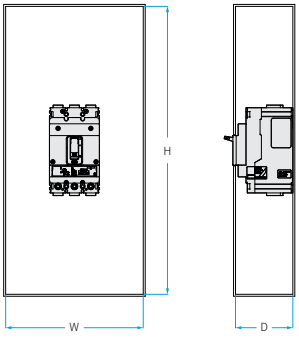
MIF60GU

## Mechanical interlocking device

| Description | Ordering code |
|---|---|
| For 3-pole breaker | MIF60GU |

## Enclosure

| Dimension (W X H X D) inch(mm) | Ordering code |
|---|---|
| 13.78(350) x 40.16(1020) x 5.98(152) | - |

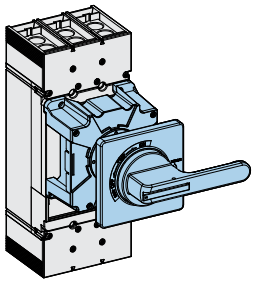



Enclosure

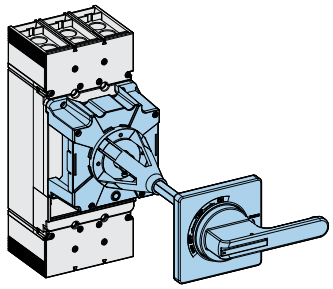
# Accessories for HGU600

## Rotary operating handles

| Description | Control voltage | Ordering code | Remark |
|---|---|---|---|
| Directly mounted | NEMA Type1 | TFG 60GU U | Power: Upper side |
| | | TFG 60GU R | Power: Right side |
| | | TFG 60GU L | Power: Left side |
| Extended (Door-mounted) | NEMA Type1 | TFH 60GU | |
| | NEMA Type1, 12, 3, 3R, 4, 4X | TFH 60GU X | |



TFG 60GU U



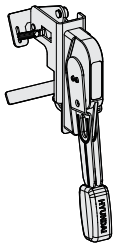
TFH 60GU / TFH 60GU X

## Flange handles

The flange handle consists of three configurable parts.

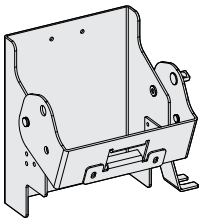
| Config. 1 | Protection ratings overview | Description | Ordering code | Remark |
|---|---|---|---|---|
| Handle | Type1, 12, 3, 3R, 4, 4X | Powder coating short | FHPCS | Usable with cable and variable-depth flange handles. |
| | | Powder coating long | FHPCL | |
| | | Nickel plating short | FHNPS[1)] | |
| | | Nickel plating long | FHNPL[1)] | |

※ Long type is recommended for 400AF, but short type is also applicable.
[1)] Please contact us before placing an order for the nickel plating type.



FHPCL/FHNPL

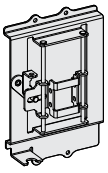
| Config. 2 | Description | Ordering code | Remark |
|---|---|---|---|
| Mechanism | Mounting base type | FMB60GU | For cable and variable-depth types. |
| | Sliding operation type | FSM60GU[2)] | Applicable only to cable type. |



FMB60GU

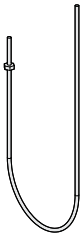
[2)] Please contact us when placing an order for the sliding operation type.

| Config. 3 | Description | Ordering code | Remark |
|---|---|---|---|
| Connection method | 30in cable | CBL30INCH | Applicable only to cable type. |
| | 48in cable | CBL48INCH | |
| | 60in cable | CBL60INCH | |
| | 72in cable | CBL72INCH | |
| | Threaded-rod 400mm(15.75in) | ROD400MM | Applicable only to variable-depth types. |

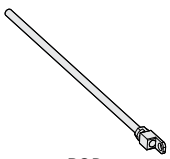


FSM60GU

| Description | Directly mounted | Door mounted | Flange handle with cable operation mechanism | Flange handle with variable depth mechansim |
|---|---|---|---|---|
| NEMA Type 1 | TFG 60GU U<br>TFG 60GU R<br>TFG 60GU L | TFH 60GU | - | - |
| NEMA Type 1, 12, 3, 3R, 4, 4X | - | TFH 60GU X | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL | FHPCS<br>FHPCL<br>FHNPS<br>FHNPL |



CBL



ROD

# UL-MCCB

## Molded Case Circuit Breakers

### Accessories

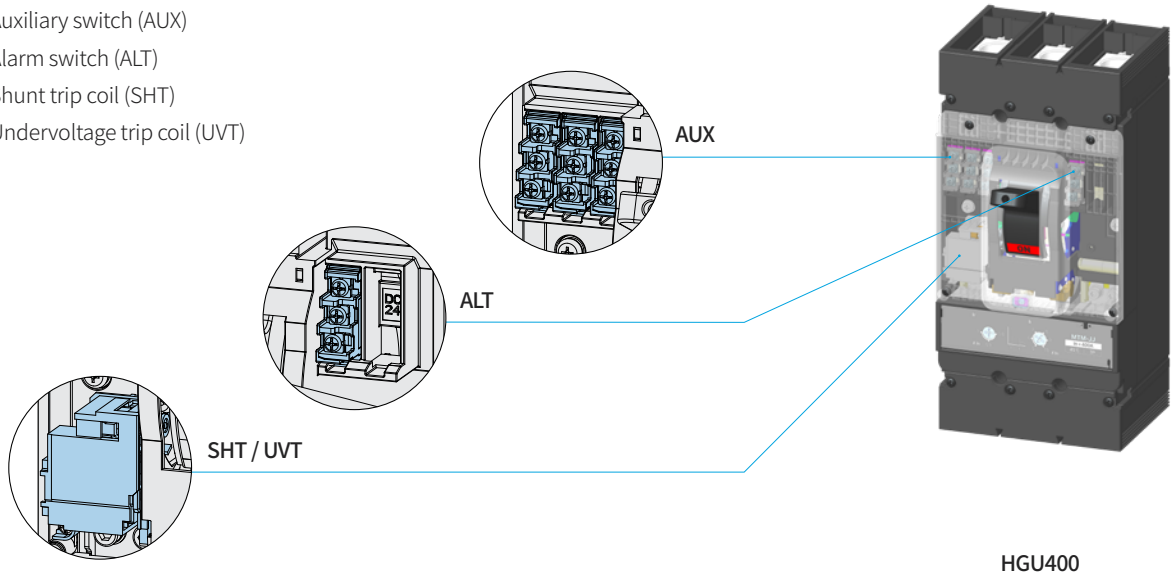
Internal accessories
External accessories

MCCB

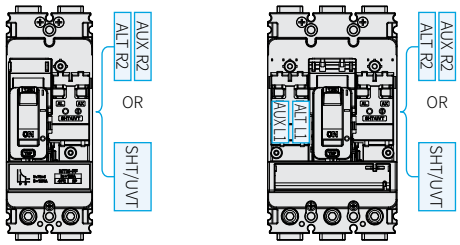
# Internal accessories

## HGU Type's internal accessories and possible location for installation

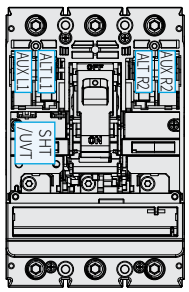
- Auxiliary switch (AUX)
- Alarm switch (ALT)
- Shunt trip coil (SHT)
- Undervoltage trip coil (UVT)



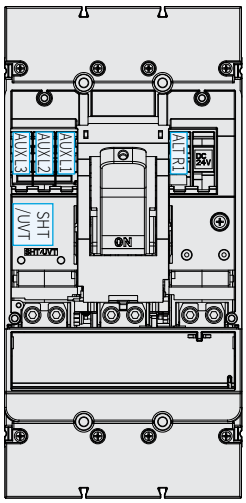

HGU125

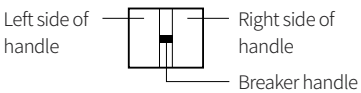



HGU150
HGU250




HGU400
HGU600




### Possible location for installation

| Type | Pole | AUX | ALT | SHT | UVT | SHT AUX | SHT ALT | UVT AUX | UVT ALT | SHT AUX ALT | UVT AUX ALT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HGU125 | 2 | | | | | | | | | | |
| HGU125 | 3 | | | | | | | | | | |
| HGU150 HGU250 | 2/3 | | | | | | | | | | |
| HGU400 HGU600 | 2/3 | | | | | | | | | | |

※ AUX : Auxiliary switch ☐ / ALT : Alarm switch ■ / SHT : Shunt trip ☑ / UVT : Under-voltage trip ☒

# Auxiliary switch (AUX)/ Trip alarm switch (ALT)

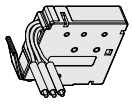
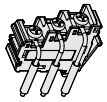
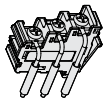
It is a contact for indication to inform the status of the circuit breaker in a remote position. This contact can be used to realize not only the indication function but also electrical functions such as electrical lock and relay.

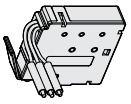
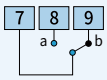
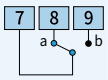
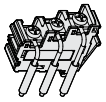
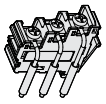
## Auxiliary switch (AUX)

- Indicates the position of the circuit breaker contacts(Open/ Closed)
- Auxiliary switch is for applications requiring remote “ON” and “OFF” indication.
- Each switch contains two contacts having a common connection.
- One is open and the other closed when the circuit breaker is open, and vice-versa.

## Trip alarm switch (ALT)

- Alarm switches indicate that the circuit breaker has tripped due to an overload, short circuit, shunt trip, or undervoltage trip or the “TRIP” button
- They are particularly useful in automated plants where operators must be signaled about changes in the electrical distribution system.
  This switch features a closed contact when the circuit breaker is tripped automatically. In other words, this switch does not function when the breaker is operated manually. Its contact is open when the circuit breaker is reset.

| AUX | Breaker Type | Wire size | On | Off/Trip |
|---|---|---|---|---|
|  | HGU125 | 22AWG (0.2 mm$^2$ ) |  |  |
|  | HGU150 HGU250 | 22AWG (0.2 mm$^2$ ) | | |
|  | HGU400 HGU600 | 22AWG (0.2 mm$^2$ ) | | |

| ALT | Breaker Type | Wire size | On/Off | Trip |
|---|---|---|---|---|
|  | HGU125 | 22AWG (0.2 mm$^2$ ) |  |  |
|  | HGU150 HGU250 | 22AWG (0.2 mm$^2$ ) | | |
|  | HGU400 HGU600 | 22AWG (0.2 mm$^2$ ) | | |

### Technical Data

| Conventional thermal current, Ith | | 5A | | | |
|---|---|---|---|---|---|
| Rated operational current, Ie with rated operational voltage, Ue | Voltage | Ie | | Minimum load current | |
| | | Resistance | Inductance | | |
| Alternating current 50/60Hz AC | 125V | 5A | 3A | 160mA, 5Vdc | HGU125 HGU150 HGU250 HGU400 HGU600 |
| | 250V | 3A | 2A | | |
| Direct current DC | 30V | 4A | 3A | | |
| | 125V | 0.4A | 0.4A | | |
| | 250V | 0.2A | 0.2A | | |

# Internal accessories

## Shunt trip device (SHT)

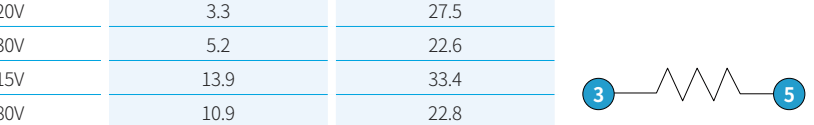
A voltage release can be used to trip the circuit breaker via a control signal.

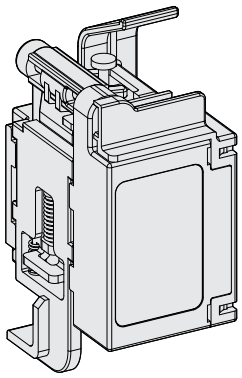
### Shunt trip device (SHT)

- The shunt trip opens the mechanism in response to an externally applied voltage signal.
- The releases include coil clearing contacts that automatically clear the signal circuit when the mechanism has tripped.

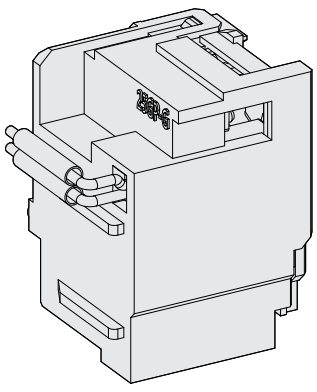
**HGU125/150/250/400/600 SHT**

| Control voltage, Un | | | Power consumption | | SHT Wiring |
|---|---|---|---|---|---|
| | | | W or VA | A(mA) | |
| Voltage | DC | 24V | 1.2 | 49.7 | SHT Only |
| | | 100~110V | 2.8 | 25 | |
| | AC (50/60Hz) | 100~120V | 3.3 | 27.5 | |
| | | 200~230V | 5.2 | 22.6 | |
| | | 380~415V | 13.9 | 33.4 | |
| | | 440~480V | 10.9 | 22.8 | |
| Max.opening time | | | 50ms | | |
| Operating voltage range | | | 0.7~1.1 X Un | | |
| Wire size | | | 22 AWG (0.2 $mm^2$) | | |

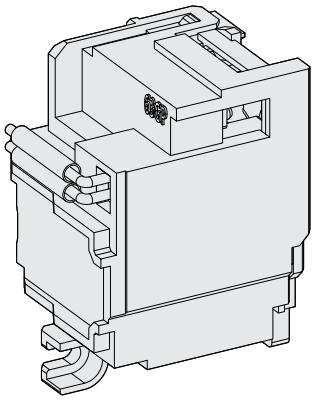


SHT12GU



SHT25GU



SHT60GU

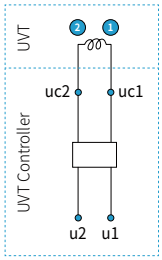
# Undervoltage device (UVT)

A voltage release can be used to trip the circuit breaker via a control signal.

## Undervoltage device (UVT)

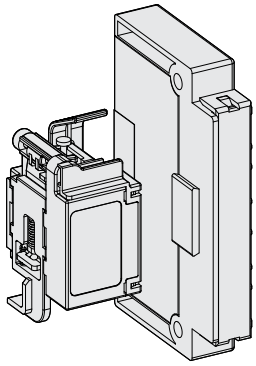
- The undervoltage release automatically opens a circuit breaker when voltage drops to a setting value of the line voltage
- The operation is instantaneous, and after tripping, the circuit breaker cannot be re-closed again until the voltage returns to a recover value of line voltage
- Continuously energized, the undervoltage release must be operating before the circuit breaker can be closed.

### HGU125/150/250/400/600 UVT

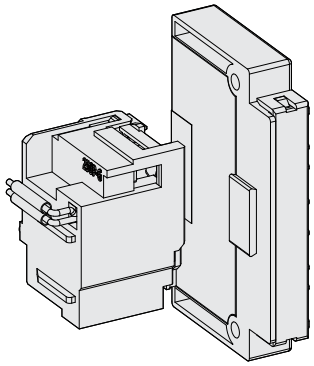
| Control voltage, Un | | | Power consumption | | UVT Wiring |
|---|---|---|---|---|---|
| | | | W or VA | A(mA) | |
| Voltage | DC | 24V | 2.6 | 110 |  |
| | | 100~110V | 5 | 45 | |
| | AC (50/60Hz) | 100~120V | 4.5 | 37.9 | |
| | | 200~230V | 5.6 | 24.3 | |
| | | 380~415V | 10.8 | 26 | |
| | | 440~480V | 12.5 | 26 | |
| Max.opening time | | | 50ms | | |
| Starting voltage | | Opening | 0.35~0.7 X Un | | |
| | | Closing | 0.85 X Un | | |
| Operating voltage range | | | 0.85~1.1 X Un | | |
| Wire size | | | 22 AWG (0.2 $mm^2$) | | |



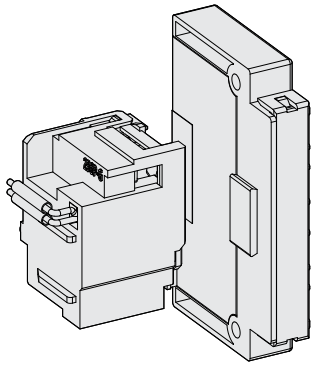
※ Do not use UVT for electrical interlocking sysytems.
※ Controller output voltage : DC45V



UVT12GU



UVT25GU

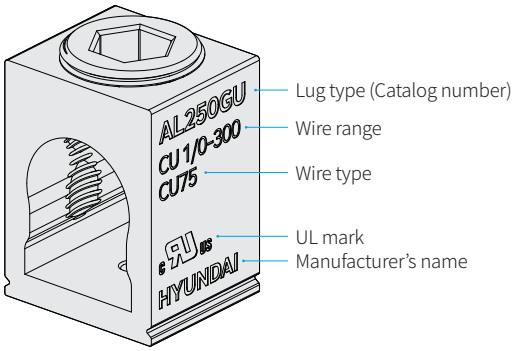


UVT60GU

# External accessories

## Mechanical lug kit

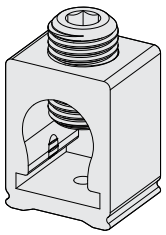
HGU125 to HGU600 frame circuit breakers can be ordered with mechanical line and load side lugs.
The standard lugs can be removed for the installation of bus connections. All lugs are UL/cUL Listed Certified for their proper application and marked for use with copper Lugs suitable for copper conductors are made of tin-plated aluminum.
Mechanical lugs are sold either factory installed.




### Mechanical lug kit for HGU125 circuit breakers

| Lug type | Terminal body material | Wire type | | Breaker amp range | Applicable wire (AWG) | Torque N*m (lb*in) |
|---|---|---|---|---|---|---|
| AL125GU | Aluminum | CU | 60°C | 15-30A | 14-10 | 5.0(44.3) |
| | | | | 35-100A | 8-1 | 5.6(49.6) |
| | | | 75°C | 15-30A | 14-10 | 5.0(44.3) |
| | | | | 35-125A | 8-1 | 5.6(49.6) |

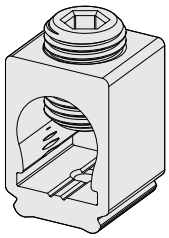
The AL125GU is for use exclusively with the HGU125 circuit breaker and must not be used for other applications.



### Mechanical lug kit for HGU150 circuit breakers

| Lug type | Terminal body material | Wire type | | Breaker amp range | Applicable wire (AWG) | Torque N*m (lb*in) |
|---|---|---|---|---|---|---|
| AL150GU | Aluminum | CU | 60°C | 2.5-15A | 14 | 3.4(30.1) |
| | | | | 20-30A | 12-10 | 5.4(47.8) |
| | | | | 32-100A | 8-1 | 15.1(134) |
| | | | 75°C | 2.5-15A | 14 | 5.0(44.3) |
| | | | | 20-30A | 12-10 | 5.4(47.8) |
| | | | | 32-150A | 8-2/0 | 15.1(134) |

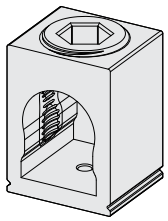
The AL150GU is for use exclusively with the HGU150 circuit breaker and must not be used for other applications.



### Mechanical lug kit for HGU250 circuit breakers

| Lug type | Terminal body material | Wire type | Breaker amp range | Applicable wire (AWG or kcmil) | Torque N*m (lb*in) |
|---|---|---|---|---|---|
| AL250GU | Aluminum | CU | 150-225 | 10-4/0 | 32(354.0) |
| | | | 250A | 250-300 | 44(389.4) |

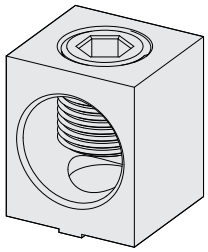
The AL250GU is for use exclusively with the HGU250 circuit breaker and must not be used for other applications.



### Mechanical lug kit for HGU400 circuit breakers

| Lug type | Terminal body material | Wire type | Breaker amp range | Applicable wire (AWG or kcmil) | Torque N*m (lb*in) |
|---|---|---|---|---|---|
| AL400GU | Aluminum | CU | 250 | 1/10-300 | 40.5(358.5) |
| | | | 300-400 | 350-500 | 54.0(477.9) |

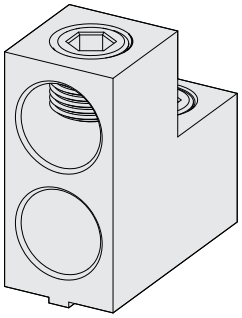
The AL400GU is for use exclusively with the HGU400 circuit breaker and must not be used for other applications.



### Mechanical lug kit for HGU600 circuit breakers

| Lug type | Terminal body material | Wire type | Breaker amp range | Applicable wire (AWG or kcmil) | Torque N*m (lb*in) |
|---|---|---|---|---|---|
| AL600GU | Aluminum | CU | 500, 600 | 2/0-350 | 40.5(358.5) |

The AL600GU is for use exclusively with the HGU600 circuit breaker and must not be used for other applications.



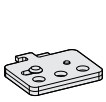
# External accessories

## Handle locking device using padlock (PLD)

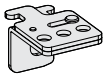
This device is used for locking the handle of circuit breaker to the OFF position by using a padlock. Padlock is not provided separately and up to 3 can be used. The applicable specifications of padlocks are as below.

| Description | Application | Padlock diameter | Remark |
|---|---|---|---|
| PLD12GU | HGU125 | 6mm | Lock in "ON" or "OFF" position |
| PLD25GU | HGU150, HGU250 | | Lock in "OFF" position |
| PLD60GU | HGU400, HGU600 | | Lock in "OFF" position |

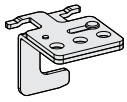
※ Padlock not included



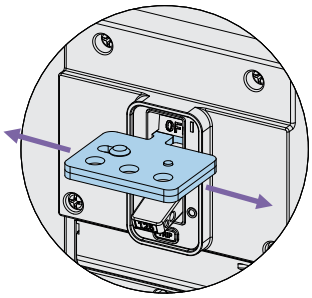
PLD12GU

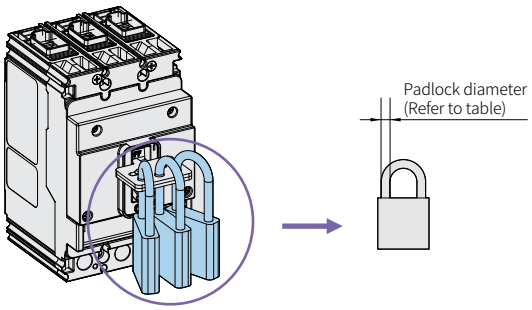


PLD25GU



PLD60GU



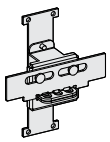

## Mechanical interlock (MIF)

This device interlocks two circuit breakers by using a mechanical interlock.

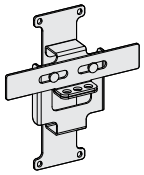
- It prevents two breakers from closing at the same time.
- All circuit breakers are turned OFF. The applicable specifications of padlocks are as below.

| Description | Application | Padlock diameter |
|---|---|---|
| MIF12GU | HGU125 3P | 6mm |
| MIF25GU | HGU150, HGU250 | |
| MIF60GU | HGU400, HGU600 | |

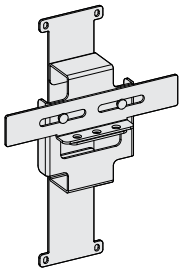
※ The MIF125 requires mounting holes for proper installation.



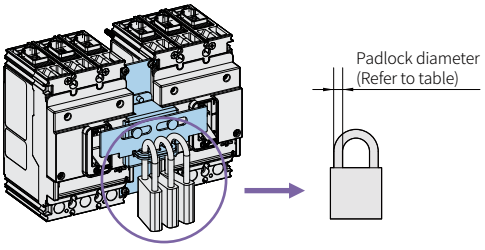
MIF12GU

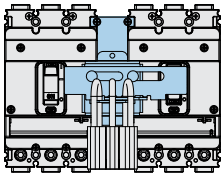


MIF25GU

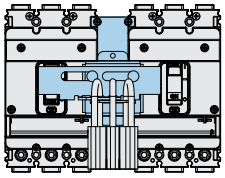


MIF60GU

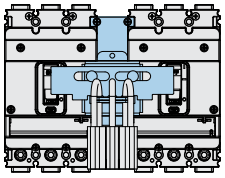


Right off lock



Left off lock



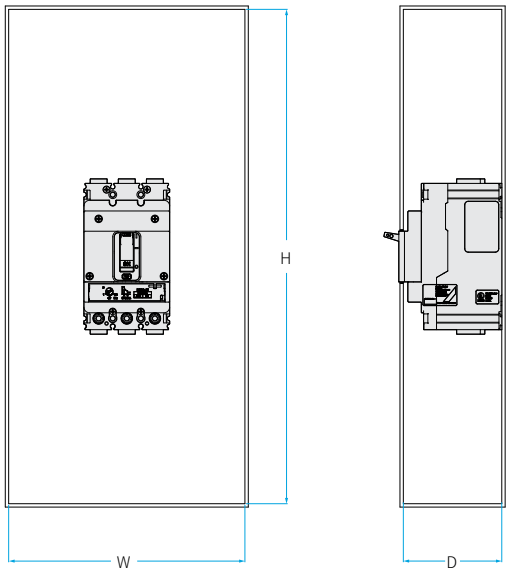
Double off lock

## Enclosure

The short circuit rating of an enclosed circuit breaker is equal to the rating of the circuit breaker installed, except as footnoted. Circuit breakers are ordered and shipped separately for field installation.

### Enclosure dimensions

| Circuit breaker | Amperage | Enclosure dimensions (W X H X D) inch (mm) | |
|---|---|---|---|
| | | 80% | 100% |
| HGU125 | 15~125 | 8.27(210) x 17.3(439.4) x 3.44(87.5) | |
| HGU150 | 15~150 | 6.1(155) x 15.59(396) x 3.5(89) | |
| HGU250 | 150~250 | 6.1(155) x 18.74(476) x 3.5(89) | |
| HGU400 | 250~400 | 13.78(350) x 40.16(1020) x 5.98(152) | |
| HGU600 | 500~600 | | |

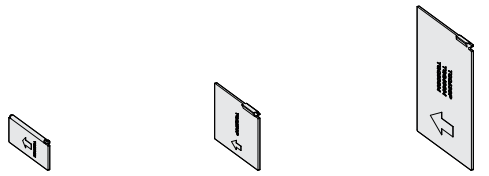



## Interphase barrier

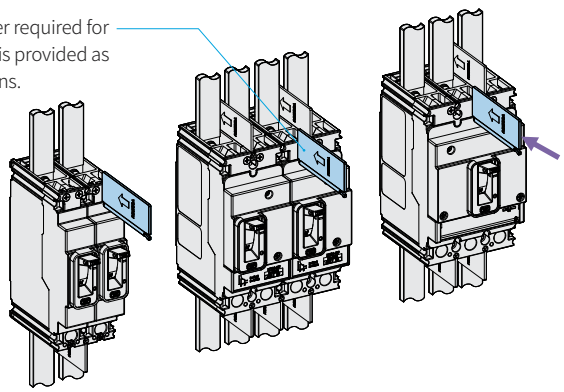
As a part used to prevent accidents with regards to insulation and conductive foreign substance between the circuit breaker terminals, It improves the performance of phase-to-phase insulation by installing it in the groove between the circuit breaker's terminals.
It can easily be assembled even if the circuit breaker has already been installed and in case the two circuit breakers have been installed side by side, it can also be assembled in the gap between the two circuit breakers.

| Ordering code | circuit breakers | Pole | Qty per set |
|---|---|---|---|
| TQQ12GU | HGU125 | 3P | 4 |
| TQQ25GU | HGU150 | 3P | 4 |
| | HGU250 | 3P | 4 |
| TQQ60GU | HGU400 | 3P | 4 |
| | HGU600 | 3P | 4 |

※ Install an Interphase barrier when mounting a busbar on a 125AF circuit breaker.




※ Additional barrier required for close mounting is provided as additional options.



# External accessories

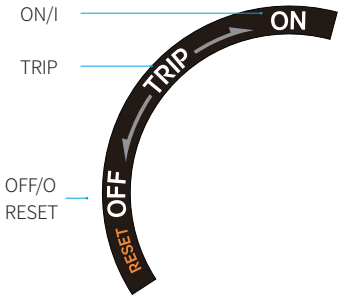
## Handle mechanism overview

All types of handles are suitable for field installation on molded case circuit breakers (MCCB), molded case switches (MCS), and motor circuit protectors (MCP). These include directly mounted rotary handles, door-mounted handles, and flange handles, all of which are compatible with the 3-pole size configurations of the products mentioned above. For extended rotary handles, the base lower case assembly must be installed on the circuit breaker. The handle should be mounted on the panel door and connected to the breaker via a shaft. For flange handles, the base lower case assembly must also be installed on the circuit breaker. The handle should be mounted on the panel door and connected to the breaker via a cable.

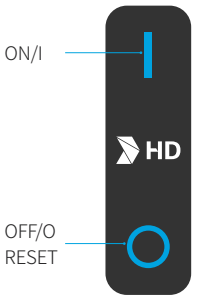
### Construction detail

Corrosion protection :
All iron and steel parts are protected against corrosion by painting or equivalent mean

Handle indication marking: The following marking are provided



[Rotary handle]



[Flange handle]

### Selection for rotary handles

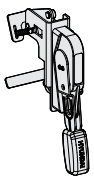
| ① TFG | |
|---|---|
| Handle types | |
| **TFG** | Direct rotary handle (Type 1) |
| **TFH** | Extended hatndle |

| ② 12GU | |
|---|---|
| Circuit breaker frame and model sizes | |
| **12GU** | 125AF 3P |
| **25GU** | 150/250AF |
| **60GU** | 400/600AF |

| ③ U | |
|---|---|
| Specifications | |
| **U** | Upper line (TFG only) |
| **R** | Right line(TFG only) |
| **L** | Left line(TFG only) |
| **-** | Type 1 (TFH only) |
| **X** | Type 1, 12, 3, 3R, 4, 4X(TFH only) |

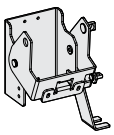
### Selection for flange handles

① FHPCS



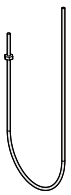
| Flange handle types | |
|---|---|
| **FHPCS** | Powder coating, Short type |
| **FHPCL** | Powder coating, Long type |
| **FHNPS** | Nickel plating, Short type |
| **FHNPL** | Nickel plating, Long type |

② FMB12GU



| Operating mechanism types | |
|---|---|
| **FMB12GU** | Mounting base type, 125AF 2/3P |
| **FMB25GU** | Mounting base type, 150/250 |
| **FMB60GU** | Mounting base type, 400/600 |
| **FSM12GU** | Sliding Op. Mechanism, 125AF 3P |
| **FSM25GU** | Sliding Op. Mechanism, 150/250 |
| **FSM60GU** | Sliding Op. Mechanism, 400/600 |

③ CBL30INCH



| Flange handle connection methods | |
|---|---|
| **CBL30INCH** | 30in Cable |
| **CBL48INCH** | 48in Cable |
| **CBL60INCH** | 60in Cable |
| **CBL72INCH** | 72in Cable |
| **ROD400MM** | Threaded-rod 400mm(15.75in) |

※ The flange handle is composed of a combination of the three components listed above.

## Application for handles

Handle mechanisms are used to operate molded case circuit breakers, molded case switches and motor circuit protectors. They are available in three basic configurations-Directly mounted, Door mounted and Flange mounted for providing safe, easy installation and dependable operation.

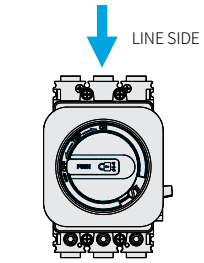
| Operation handle type name | Applied to UL 489 MCCB/MCS/MCP | |
|---|---|---|
| | Circuit breaker & Switch | Type |
| TFG12GUU<br>TFG12GUR<br>TFG12GUL<br>TFH12GU<br>TFH12GUX<br>FHPCS+FSM12GU+CBL30~72INCH<br>FHNPS+FSM12GU+CBL30~72INCH | MCCB / MCS | HGU125 3P |
| FHPCS+FMB12GU+CBL30~72INCH<br>FHNPS+FMB12GU+CBL30~72INCH<br>FHPCS+FMB12GU+ROD400MM<br>FHNPS+FMB12GU+ROD400MM | MCCB / MCS | HGU125 2, 3P |
| TFG25GUU<br>TFG25GUR<br>TFG25GUL<br>TFH25GU<br>TFH25GUX<br>FHPCS+FSM25GU+CBL30~72INCH<br>FHNPS+FSM25GU+CBL30~72INCH<br>FHPCS+FMB25GU+CBL30~72INCH<br>FHNPS+FMB25GU+CBL30~72INCH<br>FHPCS+FMB25GU+ROD400MM<br>FHNPS+FMB25GU+ROD400MM | MCCB / MCS / MCP | HGU150 2, 3P<br>HGU250 2, 3P |
| TFG60GUU<br>TFG60GUR<br>TFG60GUL<br>TFH60GU<br>TFH60GUX<br>FHPCL+FSM60GU+CBL30~72INCH<br>FHNPL+FSM60GU+CBL30~72INCH<br>FHPCL+FMB60GU+CBL30~72INCH<br>FHNPL+FMB60GU+CBL30~72INCH<br>FHPCL+FMB60GU+ROD40MM<br>FHNPL+FMB60GU+ROD40MM | MCCB / MCS / MCP | HGU400 2, 3P<br>HGU600 2, 3P |

- MCCB: Molded Case Circuit Breaker
- MCP: Motor Circuit Protector
- MCS: Molded Case Switch

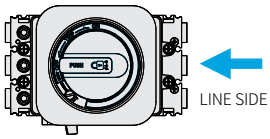
# External accessories (Rotary operating handles)

## Directly mounted rotary operating handle

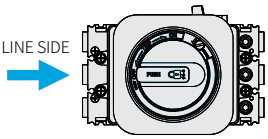
The directly mounted rotary handle is installed into the front cover mounting hole without removing the cover.
For HGU125, it is installed into a separate mounting hole.
The handle can be rotated clockwise to switch the circuit breaker to the “ON” position. Depending on the mounting direction of the MCCB, it is classified into upper line, right line, and left line configurations.



Up-power supply U-Type

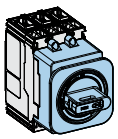
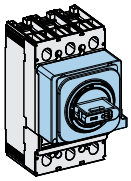
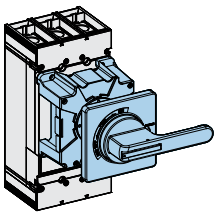


Right-power supply R-Type



Left-power supply L-Type

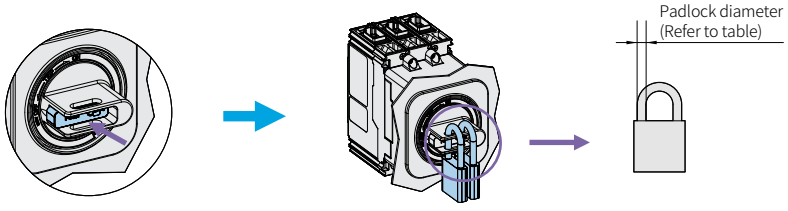
### Models

| HGU125 | HGU150/250 | HGU400/600 |
|---|---|---|
| TFG12GUU | TFG25GUU | TFG60GUU |
| TFG12GUR | TFG25GUR | TFG60GUR |
| TFG12GUL | TFG25GUL | TFG60GUL |
|  |  |  |

### TFG Handle locking function

| Lock function | Off state door lock | On state door lock | Reverse interlock | Handle padlock |
|---|---|---|---|---|
| Details | • Panel door locked when breaker is OFF<br>• Rotate handle to RESET to unlock | • Panel door locked when breaker is ON<br>• Rotate RELEASE screw to unlock door | • Breaker cannot turn ON while panel door is open<br>• 125/150/250AF TFG only | • Lockable in OFF position<br>• Padlock applicable |

| Application | D6 (mm) | D7 (mm) | D8 (mm) |
|---|---|---|---|
| 125/150/250AF | 1~2ea | | 1ea |
| 400/600AF | 1~3ea | | |




### Standard

The directly-mounted rotary operating handle is UL Degree of protection NEMA Type 1.

# External accessories (Rotary operating handles)

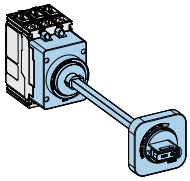
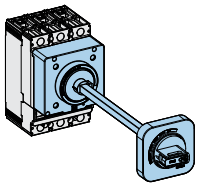
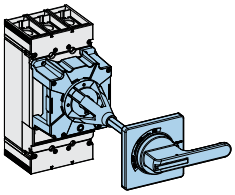
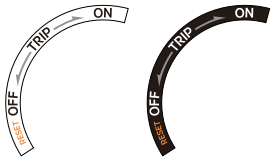
## Extended (Door-mounted) rotary operating handle

The extended rotary operating handle is installed into the front cover mounting hole without removing the cover.
For HGU125, it is installed into a separate mounting hole.

The extended rotary operating handle consists of:
- A handle assembly with front plate on the door that is always secured in the same position, whether the circuit breaker is installed vertically or horizontally
- A length-reducible extension shaft

The extended rotary operating handle makes it possible to operate circuit breakers installed in enclosure from the front.
- Suitability for isolation
- Indication of the three positions OFF (O), ON (I) and tripped
- Visibility of and access to trip unit settings when the door is open
- Defeatable interlock prevents opening of door when circuit breaker is on

### Models

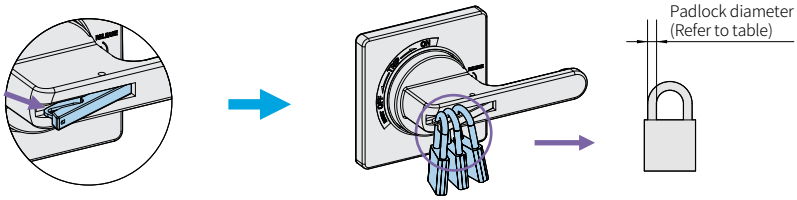
| HGU125 | HGU150/250 | HGU400/600 | Degree of protection |
|---|---|---|---|
| TFH12GU | TFH25GU | TFH60GU | Type 1 |
| TFH12GUX | TFH25GUX | TFH60GUX | Type 1, 12, 3, 3R, 4, 4X |
|  |  |  |  Type 1 X Type |

※ A 9.5 in (305 mm) shaft is provided and can be cut to adjust its length.

### TFG Handle locking function

| Lock function | Off state door lock | On state door lock | Handle padlock |
|---|---|---|---|
| Details | • Panel door locked when breaker is OFF<br>• Rotate handle to RESET to unlock | • Panel door locked when breaker is ON<br>• Rotate RELEASE screw to unlock door | • Lockable in “OFF” position<br>• Padlock applicable |

| Application | D6(mm) | D7(mm) | D8(mm) |
|---|---|---|---|
| 125/150/250AF | 1~3ea | | 2ea |
| 400/600AF | 1~3ea | | |




### Standard

Available in two types: Standard (NEMA Type 1) and X-type (NEMA Type 1, 12, 3, 3R, 4, 4X), both UL compliant.

# External accessories (Flange handle)

## Flange handle with sliding operating mechanism

Flange handle with sliding operating mechanism is for use with cable

The cable operator maintains:

- Suitability for isolation
- Indication of two positions: O (OFF) and I (ON)
- The circuit breaker may be locked in the off position by one to three padlocks
- Door can be locked closed due to interlocking features of the handle operator

Handle is mounted on flange of enclosure using specified mounting dimensions while circuit breaker and operating mechanism are mounted to inside of enclosure using screws

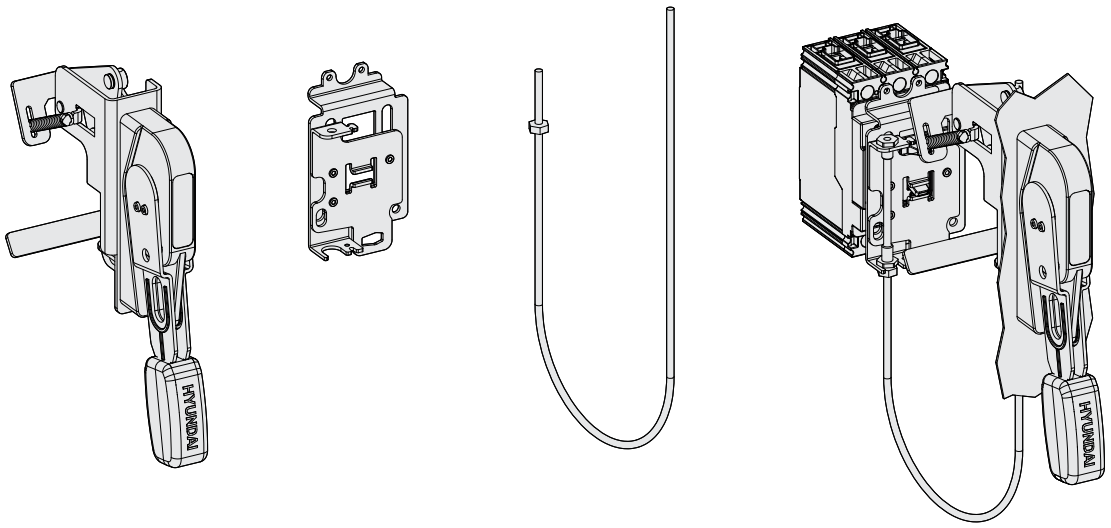
- All circuit breaker operating mechanisms are suitable for right-hand flange mounting on the job.

### Models

- Standard with powder coating handle (NEMA Type 1, 12, 3, 3R, 4, 4X)
- Out door with nickel plating handle (NEMA Type 1, 12, 3, 3R, 4, 4X)

| Application | HGU125 | HGU150/250 | HGU400/600 |
|---|---|---|---|
| ① Flange handle | FHPCS<br>FHNPS | FHPCS<br>FHNPS | FHPCL<br>FHNPL |
| ② Mechanism | FSM12GU | FSM25GU | FSM60GU |
| ③ Cable | | CBL30INCH<br>CBL48INCH<br>CBL60INCH<br>CBL72INCH | |

※ Sliding operating mechanism is applicable only with cable operation.




### Standard

The flange handle is UL degree of protection NEMA Type 1, 12, 3, 3R, 4, 4X

## Flange-mounted cable operating mechanism

The flange-mounted handle cable operating mechanism is used with flange handles and cables, and is especially suitable for tall and deep enclosures where installation flexibility is required.

The cable operator maintains:

- Suitability for isolation
- Indication of two positions: O (OFF) and I (ON)
- The circuit breaker may be locked in the off position by one to three padlocks
- Door can be locked closed due to interlocking features of the handle operator

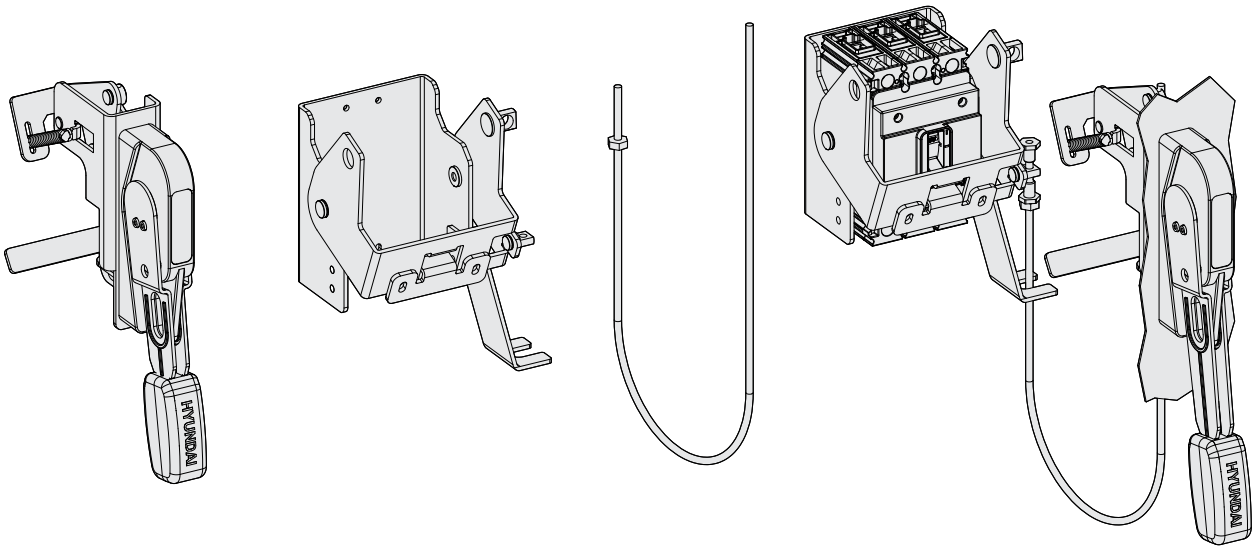
Handle is mounted on flange of enclosure using specified mounting dimensions while circuit breaker and operating mechanism are mounted to inside of enclosure using screw

- All circuit breaker operating mechanisms are suitable for right-hand flange mounting on the job.

### Models

- Standard with powder coating handle (NEMA Type 1, 12, 3, 3R, 4, 4X)
- Out door with nickel plating handle (NEMA Type 1, 12, 3, 3R, 4, 4X)

| Application | HGU125 | HGU150/250 | HGU400/600 |
|---|---|---|---|
| ① Flange handle | FHPCS<br>FHNPS | FHPCS<br>FHNPS | FHPCL<br>FHNPL |
| ② Mechanism | FMB12GU | FMB25GU | FMB60GU |
| ③ Cable | | CBL30INCH<br>CBL48INCH<br>CBL60INCH<br>CBL72INCH | |




### Standard

The flange handle is UL degree of protection NEMA Type 1, 12, 3, 3R, 4, 4X

# External accessories (Flange handle)

## Flange-mounted variable depth operating mechanism

Designed for installation in custom built control enclosures where main or branch circuit protective devices are required.

The cable operator maintains:

- Suitability for isolation
- Indication of two positions: O (OFF) and I (ON)
- The circuit breaker may be locked in the off position by one to three padlocks
- Door can be locked closed due to interlocking features of the handle operator

Handle is mounted on flange of enclosure using specified mounting dimensions while circuit breaker and operating mechanism are mounted to inside of enclosure using screw

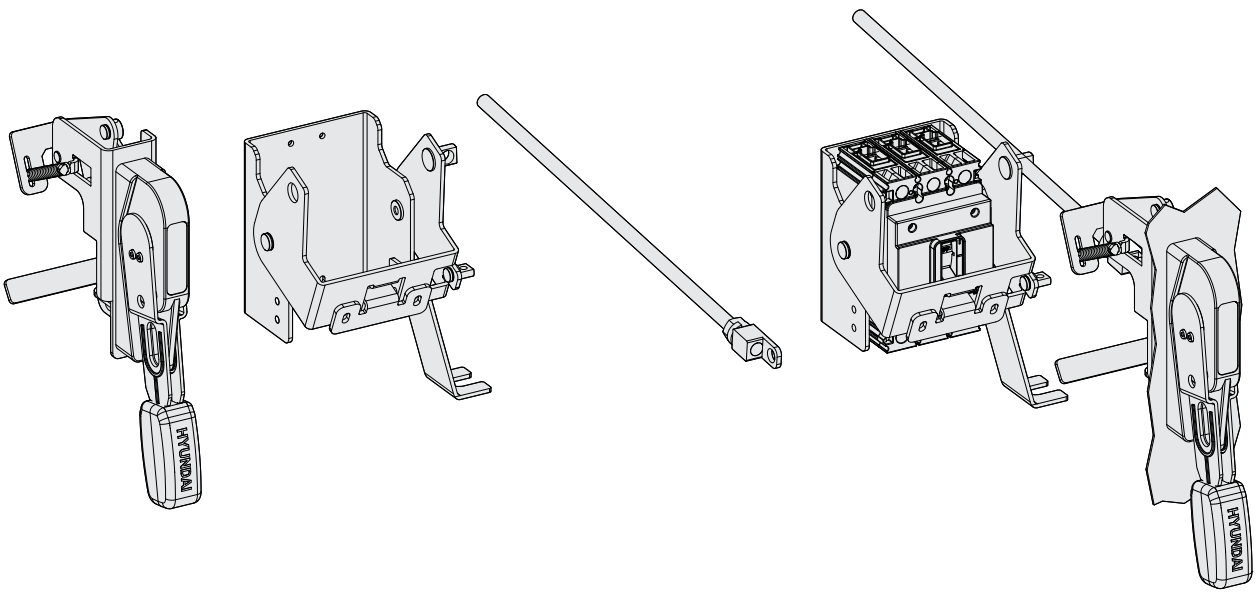
- All circuit breaker operating mechanisms are suitable for right-hand flange mounting on the job.

### Models

- Standard with powder coating handle (NEMA Type 1, 12, 3, 3R, 4, 4X)
- Out door with nickel plating handle (NEMA Type 1, 12, 3, 3R, 4, 4X)

| Application | HGU125 | HGU150/250 | HGU400/600 |
|---|---|---|---|
| ① Flange handle | FHPCS<br>FHNPS | FHPCS<br>FHNPS | FHPCL<br>FHNPL |
| ② Mechanism | FMB12GU | FMB25GU | FMB60GU |
| ③ Threaded-rod | ROD400MM[1)] | | |

[1)] Please cut the rod to the required length according to the assembly location.




### Standard

The flange handle is UL degree of protection NEMA Type 1, 12, 3, 3R, 4, 4X

# UL-MCCB

## Molded Case Circuit Breakers

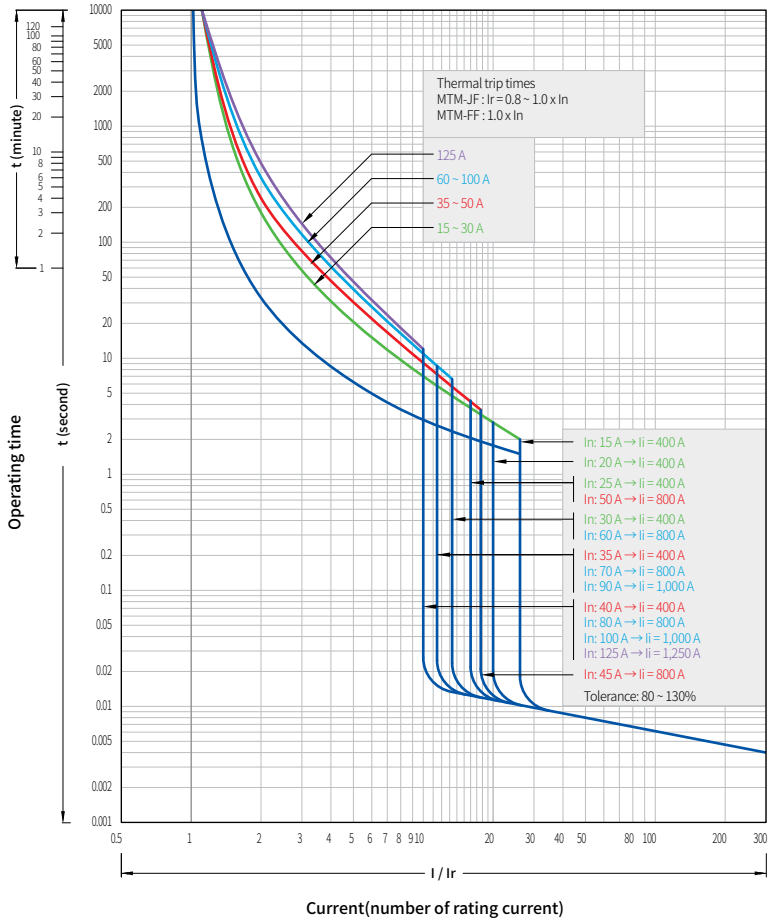
**Operation characteristic curve**

MCCB

# HGU125 Characteristic

This curve is to be used for application and coordination purposes only.
All time/current characteristic curve data is based on 40°C ambient cold start.

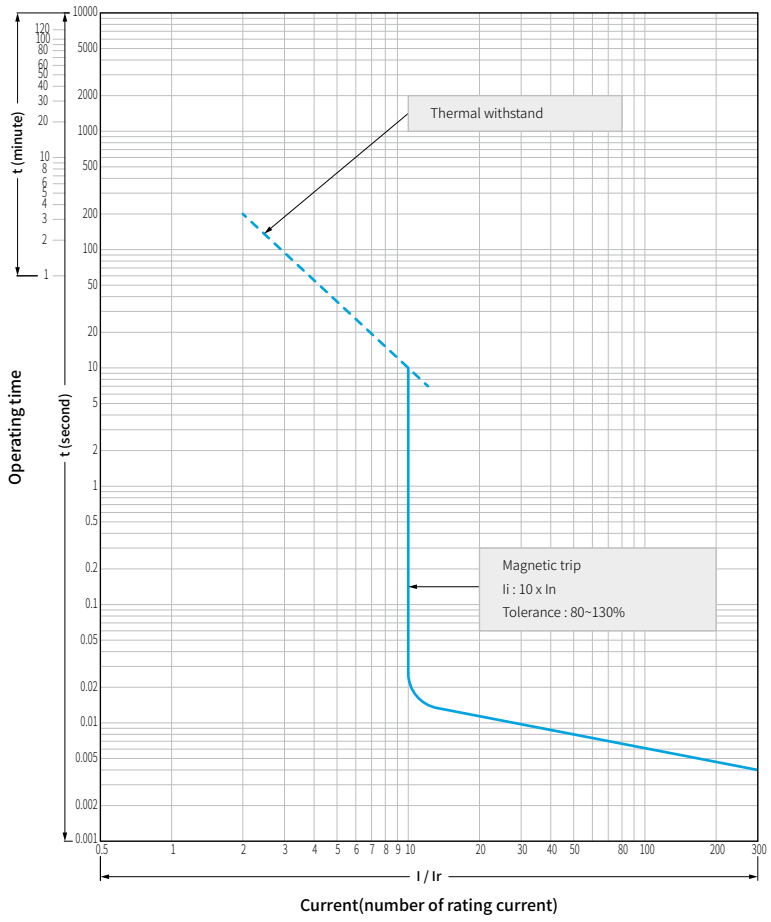
## HGU125 MTM-FF(15~125A) / MTM-JF(25~125A)




| Rating | MTM-FF | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 15 | ○ | ○ | ○ | 400A |
| 20 | ○ | ○ | ○ | |
| 25 | ○ | ○ | ○ | |
| 30 | ○ | ○ | ○ | |
| 35 | ○ | ○ | ○ | |
| 40 | ○ | ○ | ○ | |
| 45 | ○ | ○ | ○ | 800A |
| 50 | ○ | ○ | ○ | |
| 60 | ○ | ○ | ○ | |
| 70 | ○ | ○ | ○ | |
| 80 | ○ | ○ | ○ | |
| 90 | ○ | ○ | ○ | 1000A |
| 100 | ○ | ○ | ○ | |
| 125 | ○ | ○ | ○ | 1250A |

| Rating | MTM-JF | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 25 | - | - | ○ | 20~25A | 400A |
| 40 | - | - | ○ | 32~40A | |
| 60 | - | - | ○ | 48~60A | 800A |
| 80 | - | - | ○ | 64~80A | |
| 100 | - | - | ○ | 80~100A | 1000A |
| 125 | - | - | ○ | 100~125A | 1250A |

## HGU125 MCS (100A, 125A)

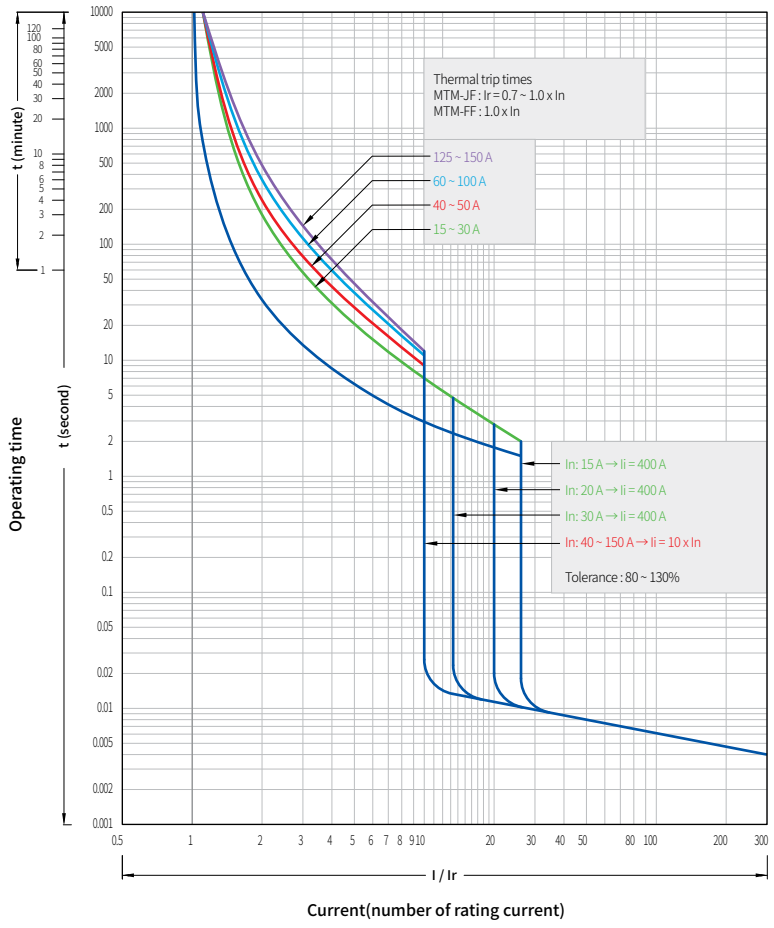



| Rating | MCS | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 100 | - | ○ | ○ | 1000A |
| 125 | - | ○ | ○ | 1250A |

# HGU150 Characteristic

This curve is to be used for application and coordination purposes only.
All time/current characteristic curve data is based on 40°C ambient cold start.

## HGU150 MTM-FF(15~150A) / MTM-JF(40~150A)

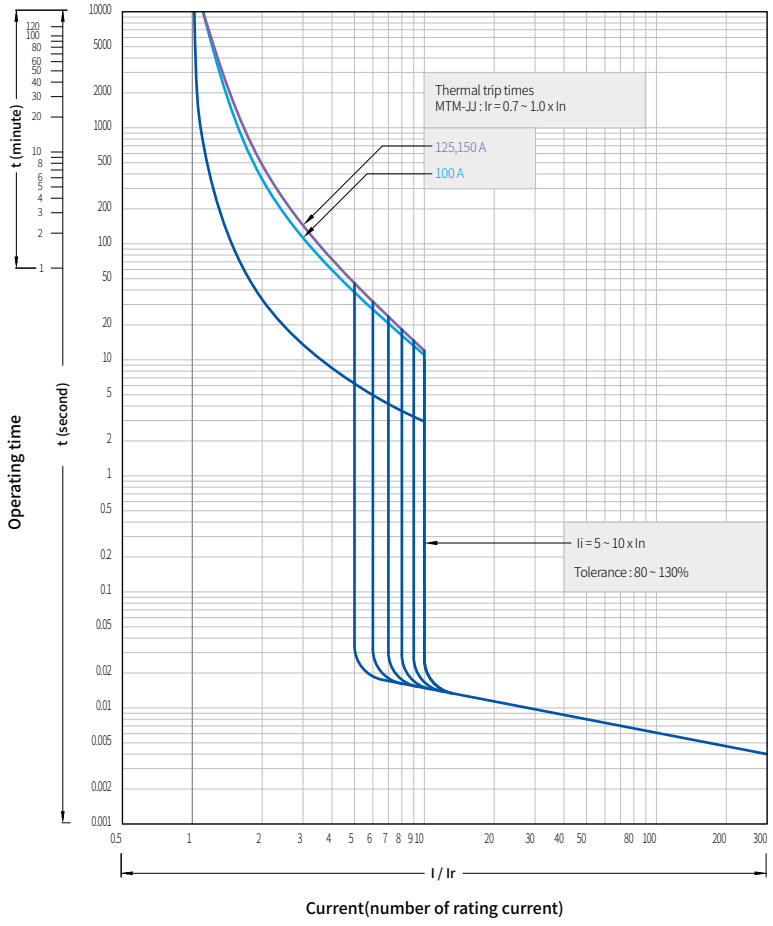



| Rating | MTM-FF (Thermal fiexd, | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 15 | - | ○ | ○ | 400A |
| 20 | - | ○ | ○ | |
| 30 | - | ○ | ○ | |
| 40 | - | ○ | ○ | |
| 50 | - | ○ | ○ | 500A |
| 60 | - | ○ | ○ | 600A |
| 70 | - | ○ | ○ | 700A |
| 80 | - | ○ | ○ | 800A |
| 90 | - | ○ | ○ | 900A |
| 100 | - | ○ | ○ | 1000A |
| 125 | - | ○ | ○ | 1250A |
| 150 | - | ○ | ○ | 1250A |

| Rating | MTM-JF | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 40 | - | ○ | ○ | 28~40A | 400A |
| 60 | - | ○ | ○ | 42~60A | 600A |
| 80 | - | ○ | ○ | 56~80A | 800A |
| 100 | - | ○ | ○ | 70~100A | 1000A |
| 125 | - | ○ | ○ | 88~125A | 1250A |
| 150 | - | ○ | ○ | 105~150A | 1500A |

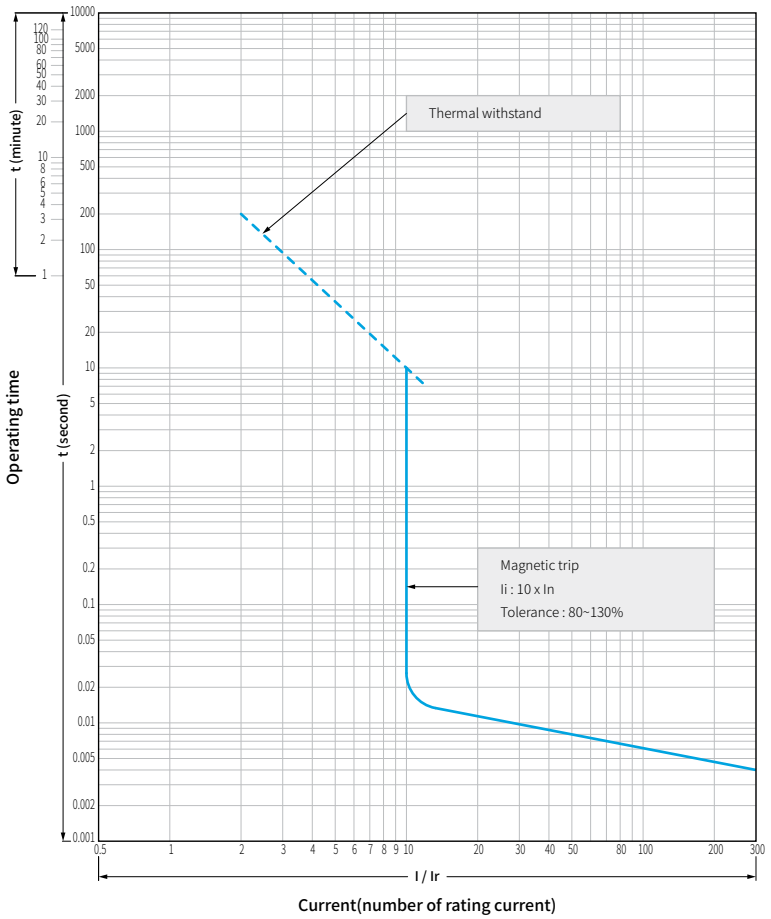
This curve is to be used for application and coordination purposes only.
All time/current characteristic curve data is based on 40°C ambient cold start.

## HGU150 MTM-JJ(40~150A)



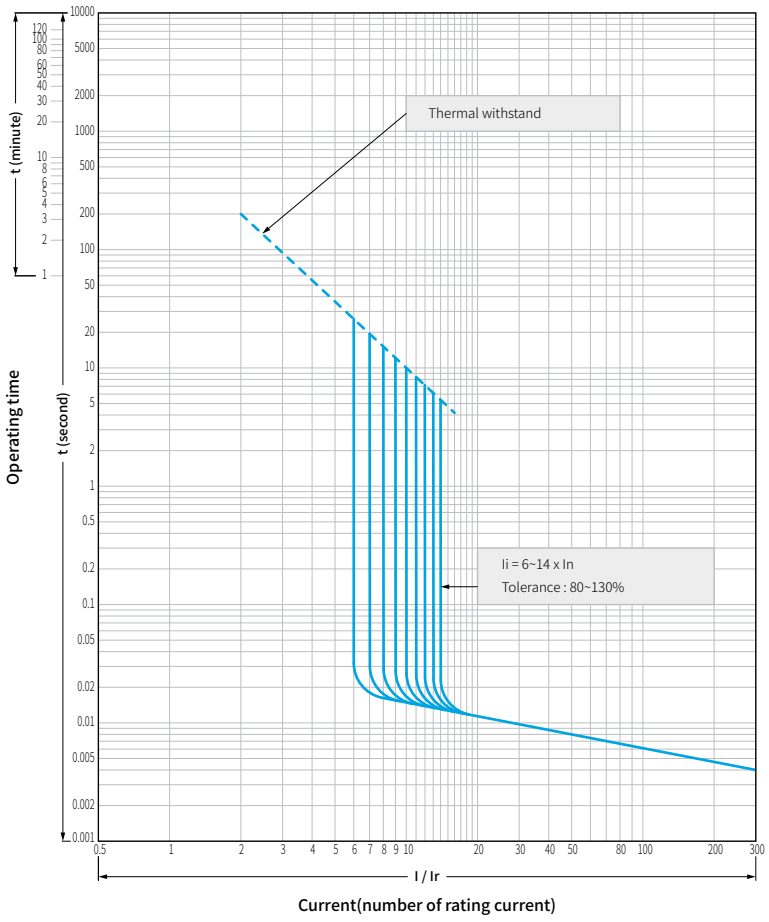

| Rating | MTM-JJ | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 100 | - | ○ | ○ | 70~100A | 500~1000A |
| 125 | - | ○ | ○ | 88~125A | 625~1250A |
| 150 | - | ○ | ○ | 105~150A | 750~1500A |

## HGU150 MCS (150A)



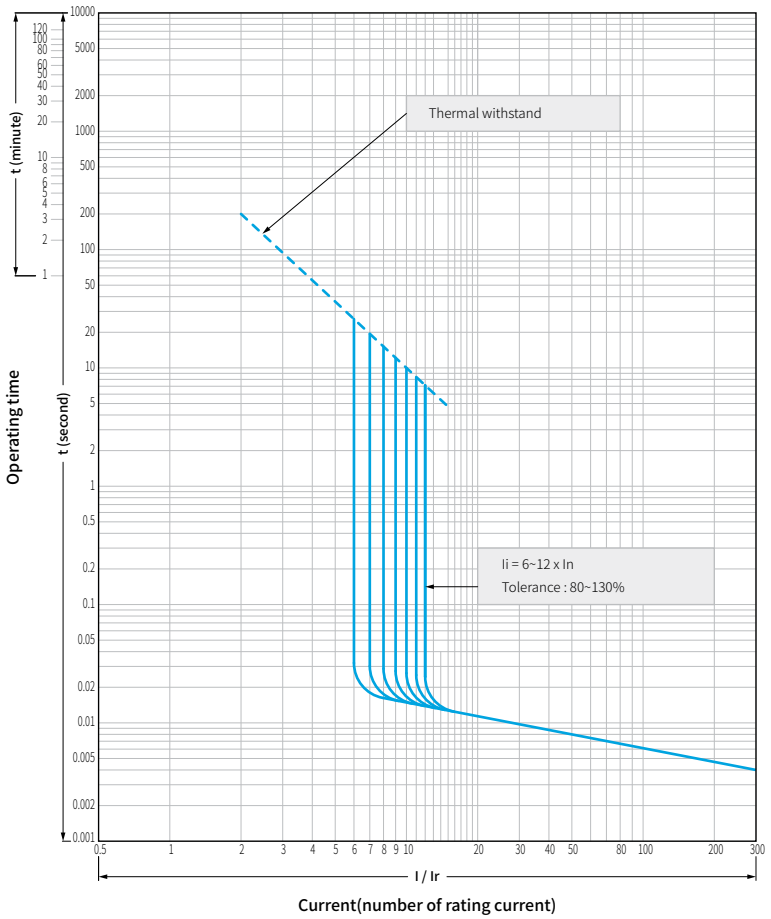

| Rating | MCS | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 150A | - | ○ | ○ | 1500A |

## HGU150 MCP (2.5~100A)




| Rating | MCP | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 2.5A | - | - | ○ | 15~35A |
| 3.2A | - | - | ○ | 19.2~44.8A |
| 6.3A | - | - | ○ | 37.8~88.2A |
| 12.5A | - | - | ○ | 75~175A |
| 20A | - | - | ○ | 120~280A |
| 32A | - | - | ○ | 192~448A |
| 50A | - | - | ○ | 300~700A |
| 60A | - | - | ○ | 360~840A |
| 80A | - | - | ○ | 480~1120A |
| 100A | - | - | ○ | 600~1400A |

## HGU150 MCP (150A)

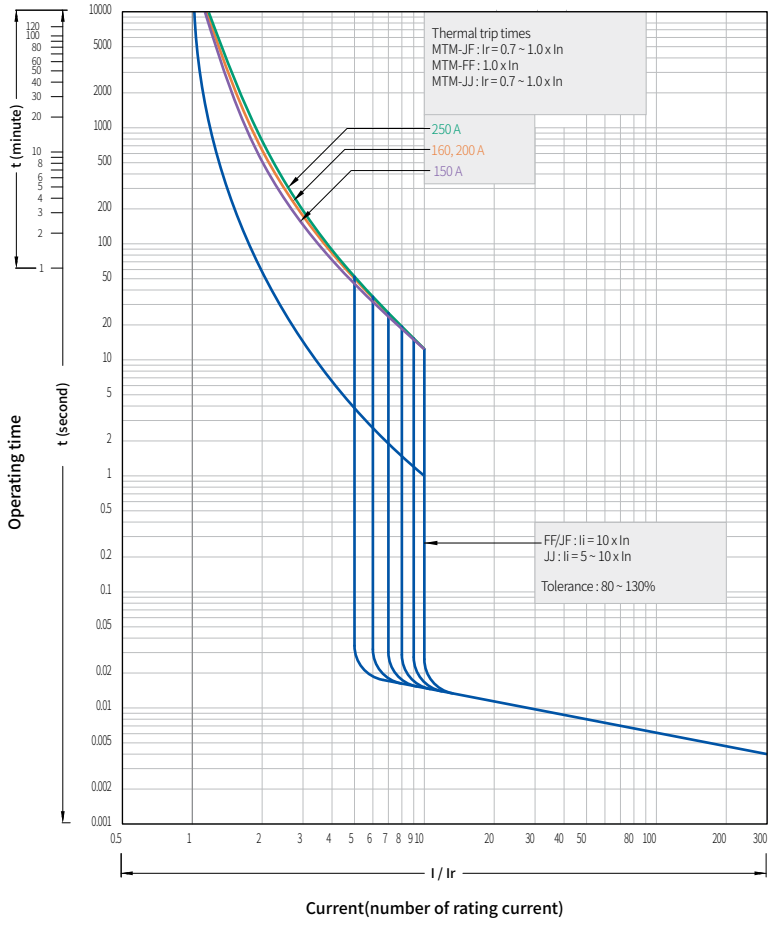



| Rating | MCP | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 150A | - | ○ | ○ | 900~1800A |

# HGU250 Characteristic

This curve is to be used for application and coordination purposes only.
All time/current characteristic curve data is based on 40°C ambient cold start.

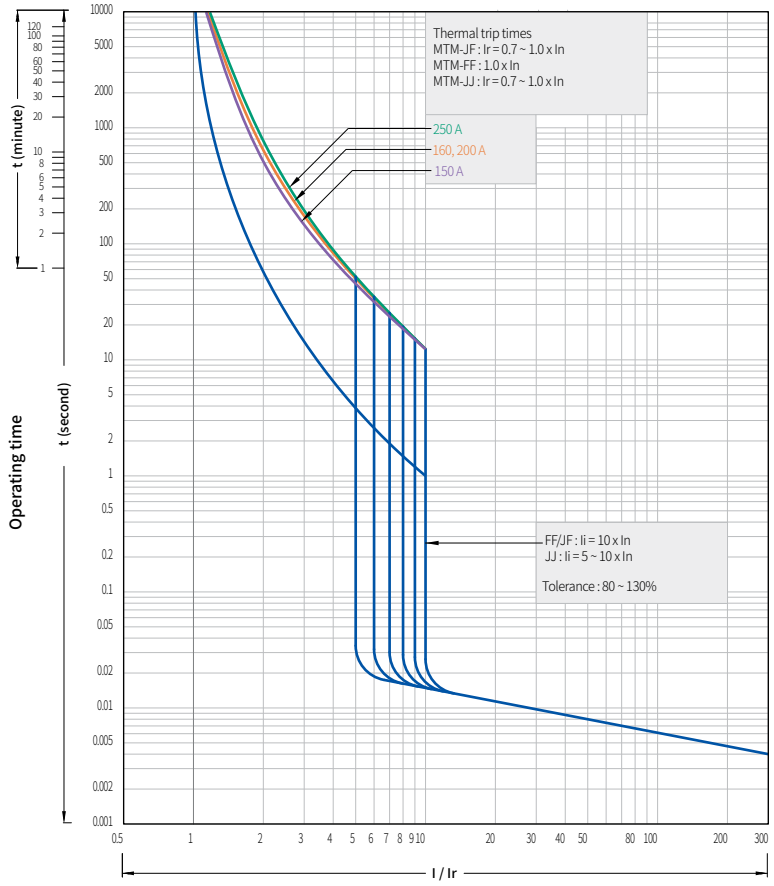
## HGU250 MTM-FF(150~250A) / MTM-JF(160~250A)




| Rating | MTM-FF (Thermal fiexd, | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 150 | - | ○ | ○ | 1500A |
| 160 | - | ○ | ○ | 1600A |
| 175 | - | ○ | ○ | 1750A |
| 200 | - | ○ | ○ | 2000A |
| 225 | - | ○ | ○ | 2250A |
| 250 | - | ○ | ○ | 2500A |

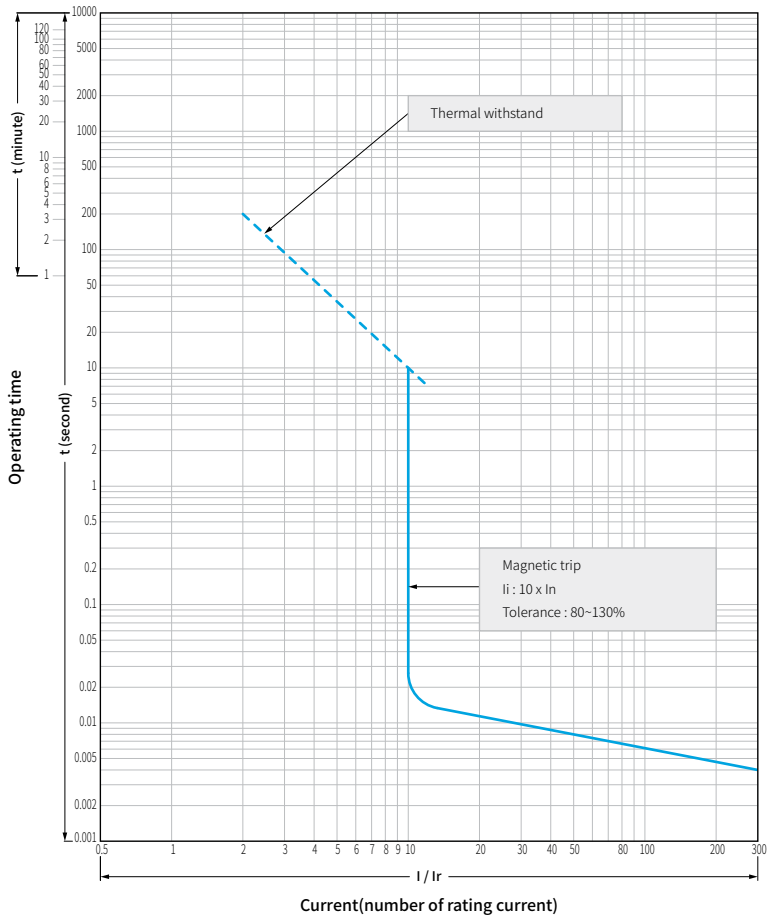
| Rating | MTM-JF | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 160 | - | ○ | ○ | 112~160A | 1600A |
| 200 | - | ○ | ○ | 140~200A | 2000A |
| 250 | - | ○ | ○ | 175~250A | 2500A |

## HGU250 MTM-JJ(160~250A)



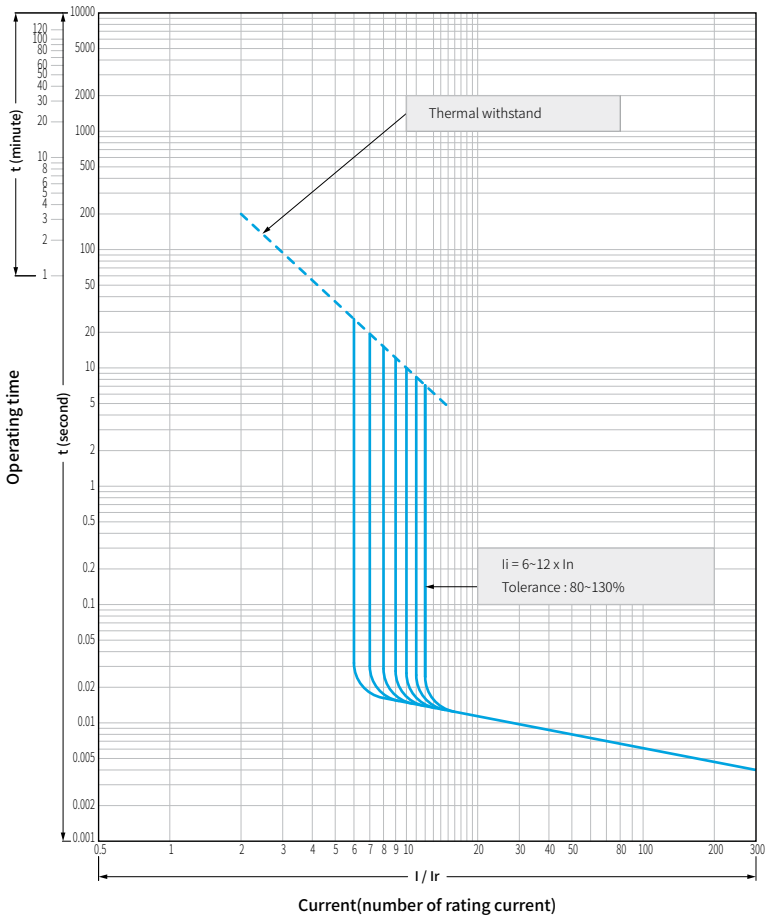

| Rating | MTM-JJ | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 160 | - | ○ | ○ | 112~160A | 800~1600A |
| 200 | - | ○ | ○ | 140~200A | 1000~2000A |
| 250 | - | ○ | ○ | 175~250A | 1250~2500A |

## HGU250 MCS (175, 250A)




| Rating | MCS | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 175A | - | ○ | ○ | 1750A |
| 250A | - | ○ | ○ | 2500A |

## HGU250 MCP (220A)

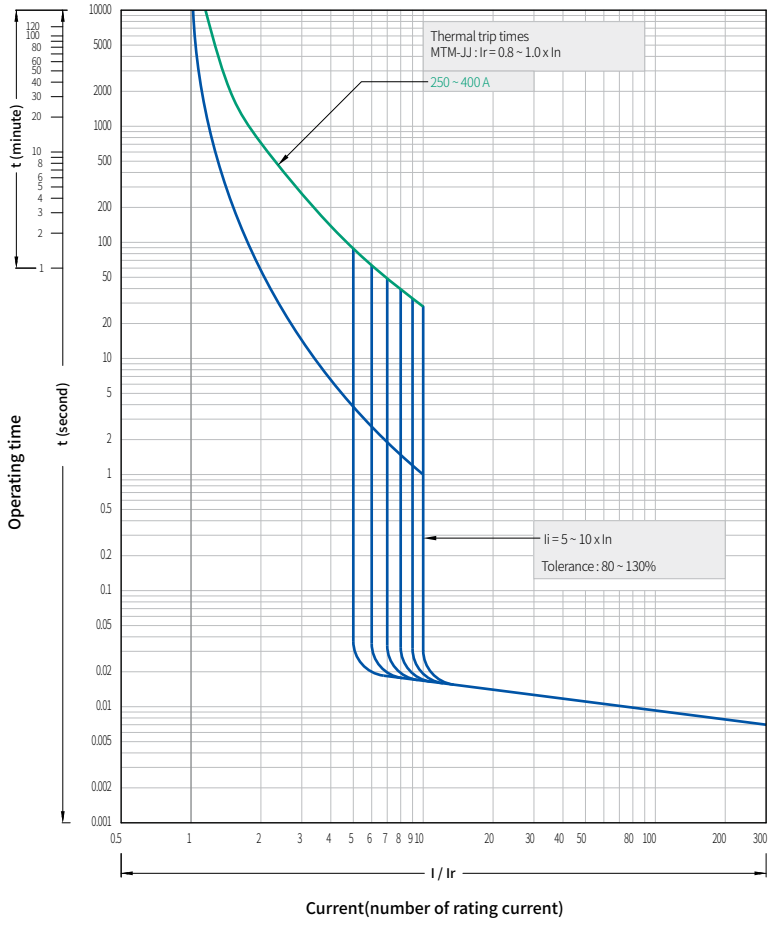



| Rating | MCP | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 220 | - | - | ○ | 1320~2640A |

# HGU400 Characteristic

This curve is to be used for application and coordination purposes only.
All time/current characteristic curve data is based on 40°C ambient cold start.

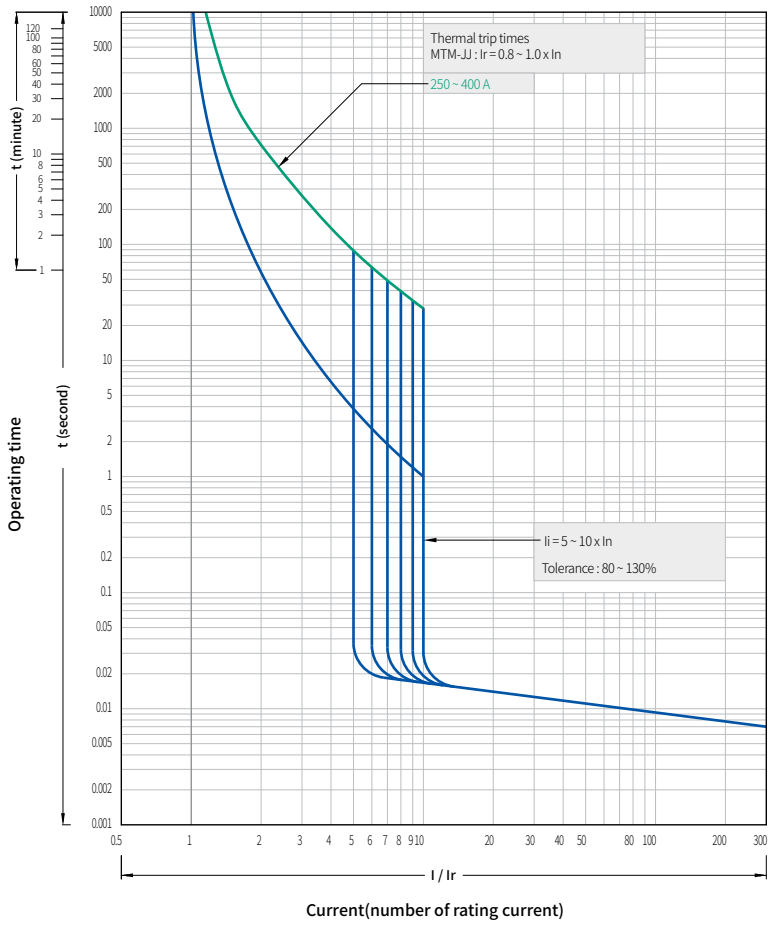
## HGU400 MTM-FF(250~400A) / MTM-JF(300, 400A)




| Rating | MTM-FF (Thermal fiexd, | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 250 | - | ○ | ○ | 2500A |
| 300 | - | ○ | ○ | 3000A |
| 350 | - | ○ | ○ | 3500A |
| 400 | - | ○ | ○ | 4000A |

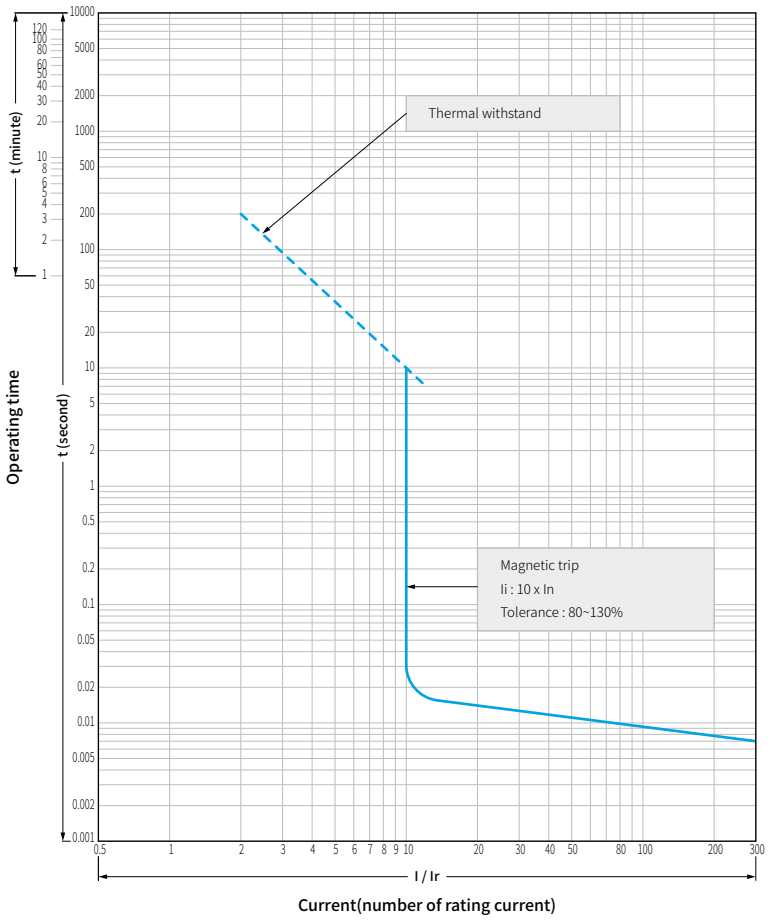
| Rating | MTM-JF | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 300 | - | ○ | ○ | 240~300A | 3000A |
| 400 | - | ○ | ○ | 320~400A | 4000A |

## HGU400 MTM-JJ(300, 400A)



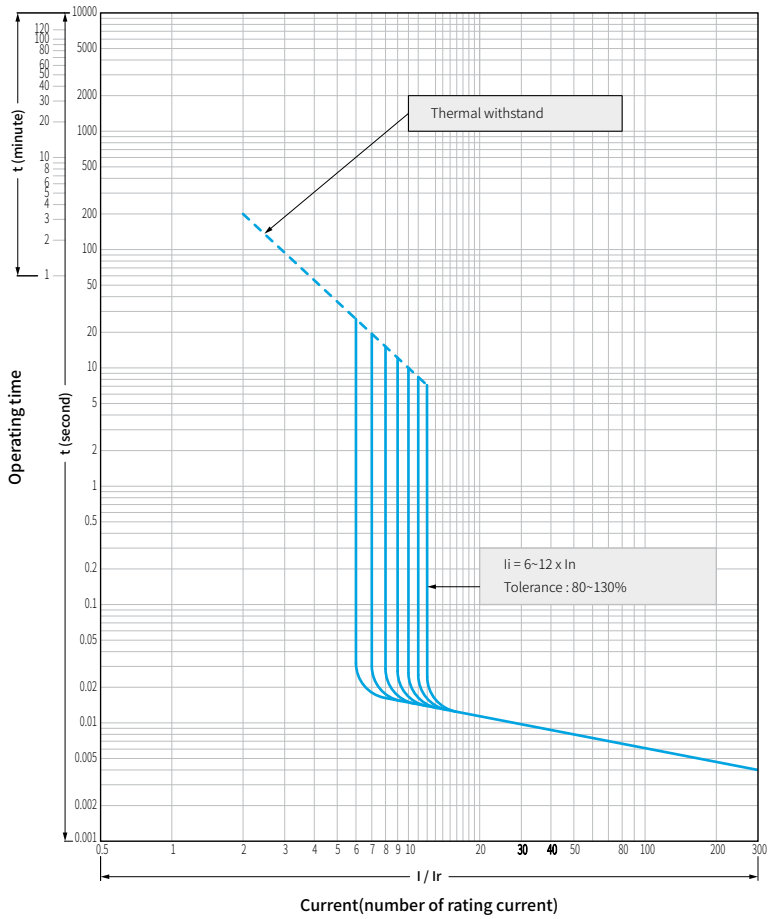

| Rating | MTM-JJ | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 300 | - | ○ | ○ | 240~300A | 1500~3000A |
| 400 | - | ○ | ○ | 320~400A | 2000~4000A |

## HGU400 MCS (400A)




| Rating | MCS | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 400A | - | ○ | ○ | 4000A |

## HGU400 MCP (320A)

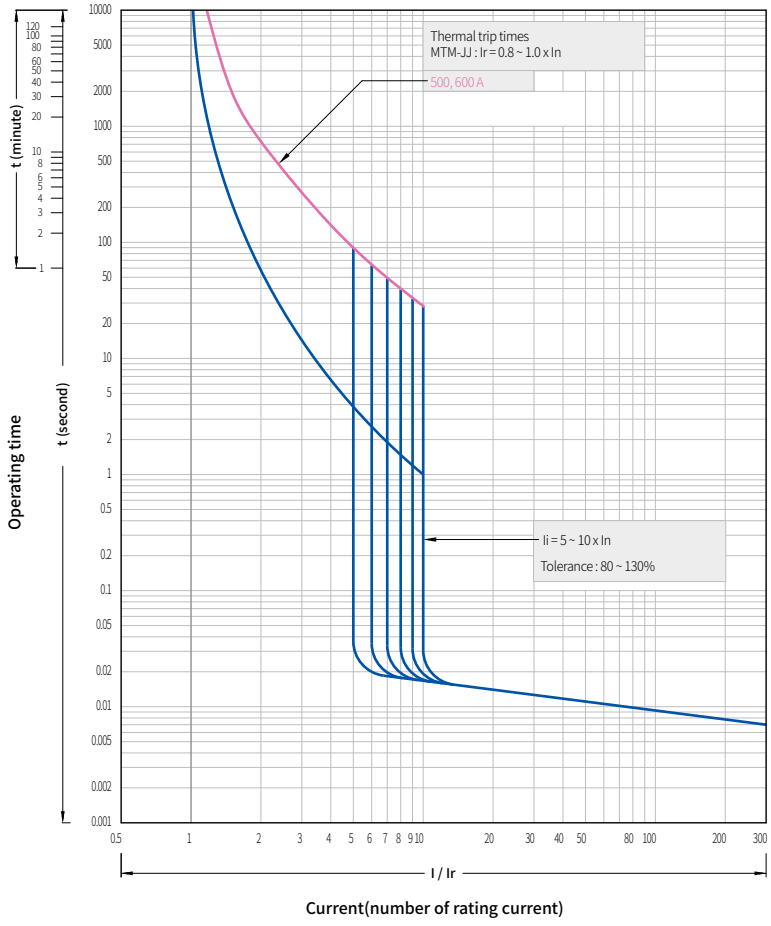



| Rating | MCP | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 320 | - | - | ○ | 1920~3840A |

# HGU600 Characteristic

This curve is to be used for application and coordination purposes only.
All time/current characteristic curve data is based on 40°C ambient cold start.

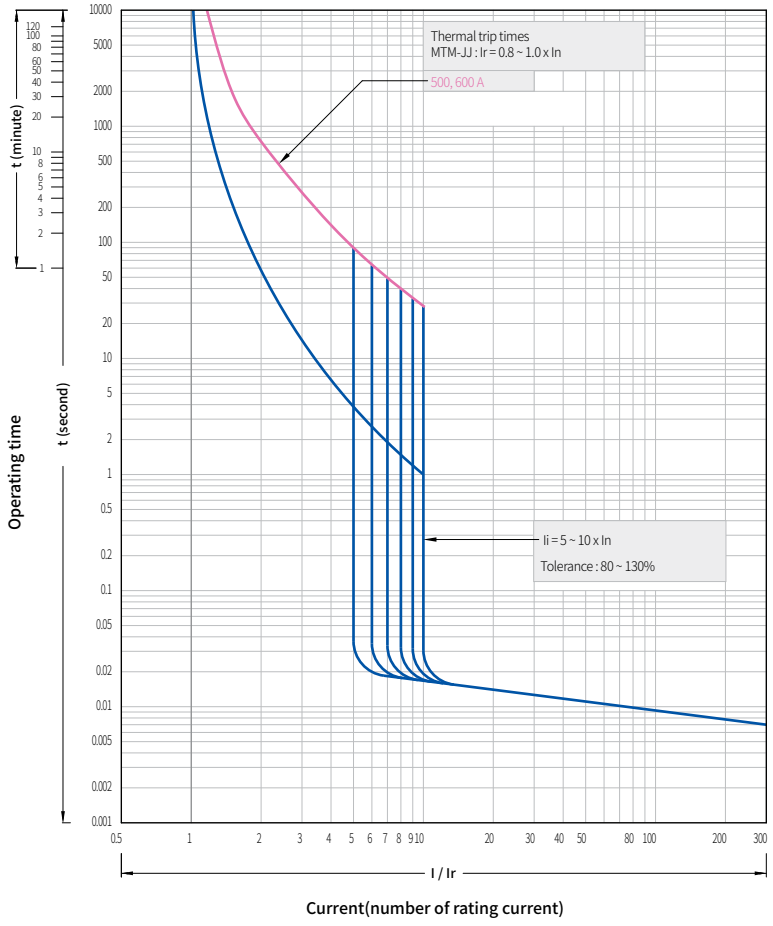
## HGU600 MTM-FF(500~600A) / MTM-JF(500, 600A)




| Rating | MTM-FF (Thermal fiexd, | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 500 | - | ○ | ○ | 5000A |
| 600 | - | ○ | ○ | 6000A |

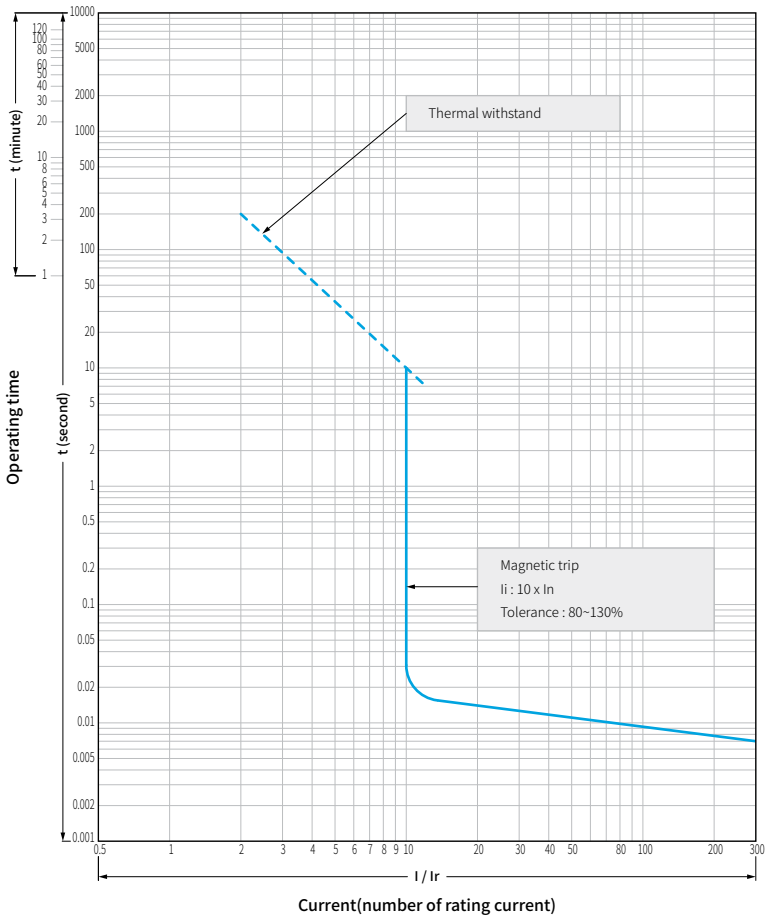
| Rating | MTM-JF | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 500 | - | ○ | ○ | 400~500A | 5000A |
| 600 | - | ○ | ○ | 480~600A | 6000A |

## HGU600 MTM-JJ(500, 600A)



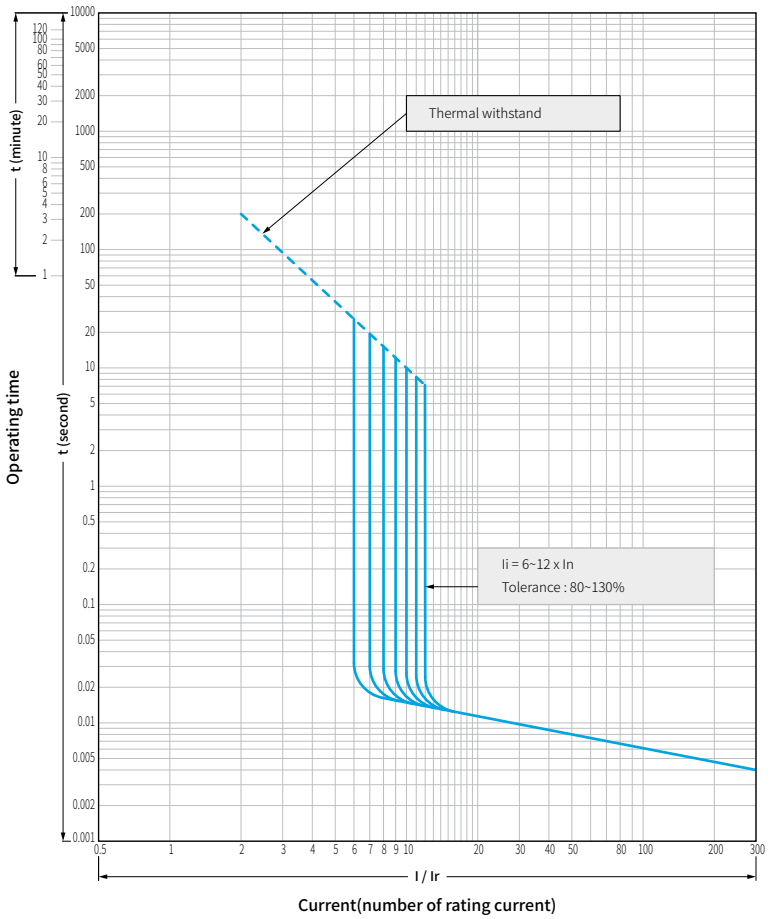

| Rating | MTM-JJ | | | | |
|---|---|---|---|---|---|
| | 1P | 2P | 3P | Rating range | Mag trip -20%~+30% |
| 500 | - | ○ | ○ | 400~500A | 2500~5000A |
| 600 | - | ○ | ○ | 480~600A | 3000~6000A |

## HGU600 MCS (600A)




| Rating | MCS | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 600A | - | ○ | ○ | 6000A |

## HGU600 MCP(500A)

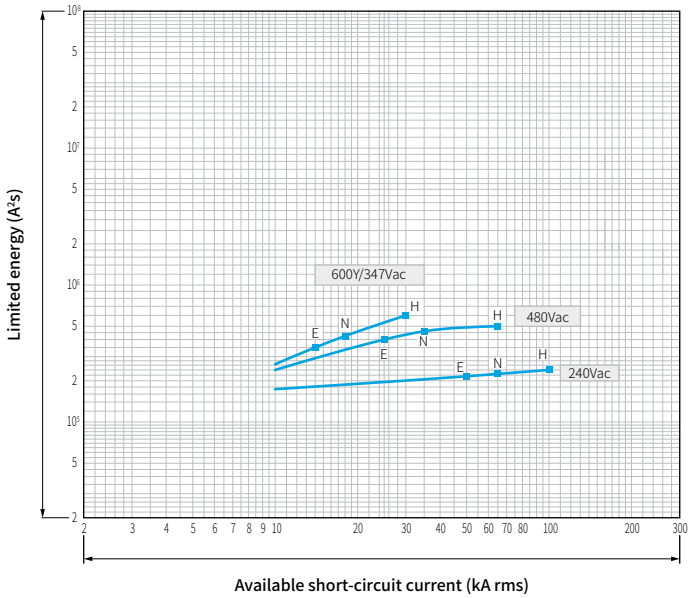



| Rating | MCP | | | |
|---|---|---|---|---|
| | 1P | 2P | 3P | Mag trip -20%~+30% |
| 500 | - | - | ○ | 3000~6000A |

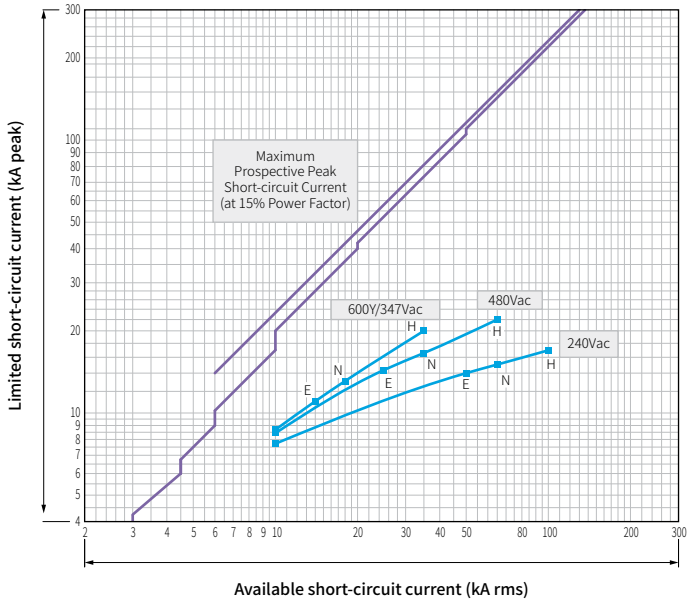
# HGU125 Characteristic

Based on typical values obtained throughout the circuit breaker development and UL test programs.

## Let-through energy $I^2t$ (240Vac, 480Vac AND 600Y/347Vac)



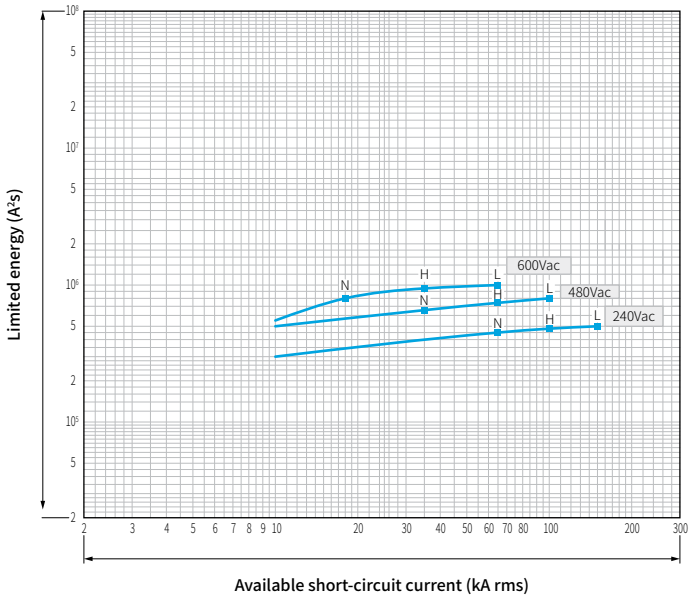

## Peak let-through current Ip (240Vac, 480Vac AND 600Y/347Vac)



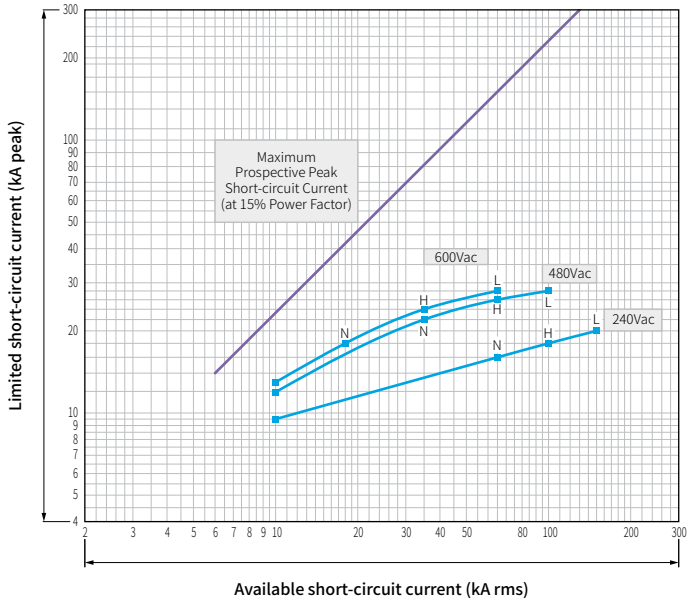
# HGU150 Characteristic

Based on typical values obtained throughout the circuit breaker development and UL test programs.

## Let-through energy $I^2t$ (240V, 480V AND 600V)



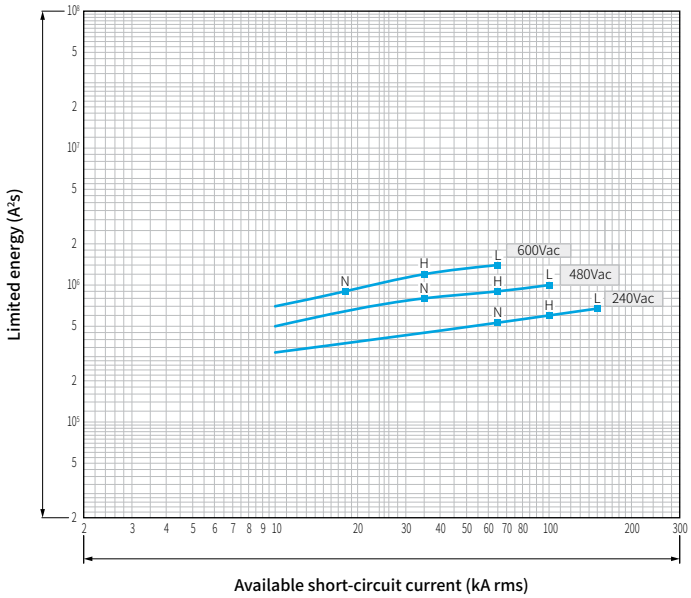

## Peak let-through current Ip (240V, 480V AND 600V)



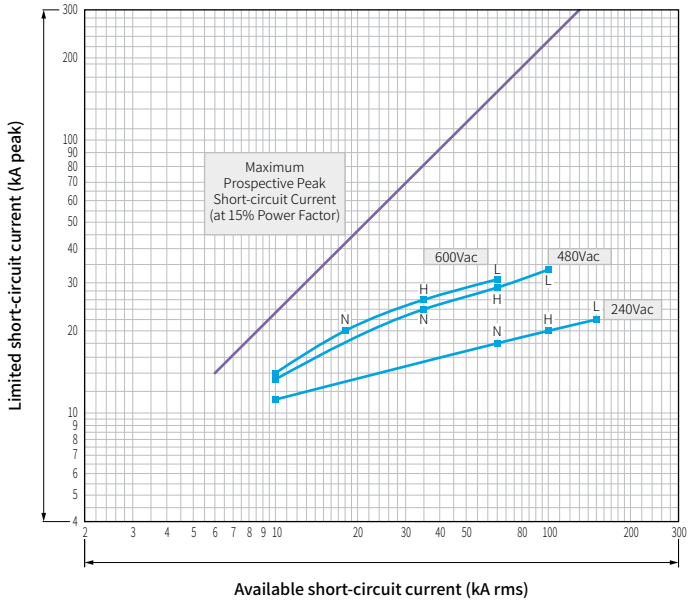
# HGU250 Characteristic

Based on typical values obtained throughout the circuit breaker development and UL test programs.

## Let-Through Energy I2t (240V, 480V AND 600V)



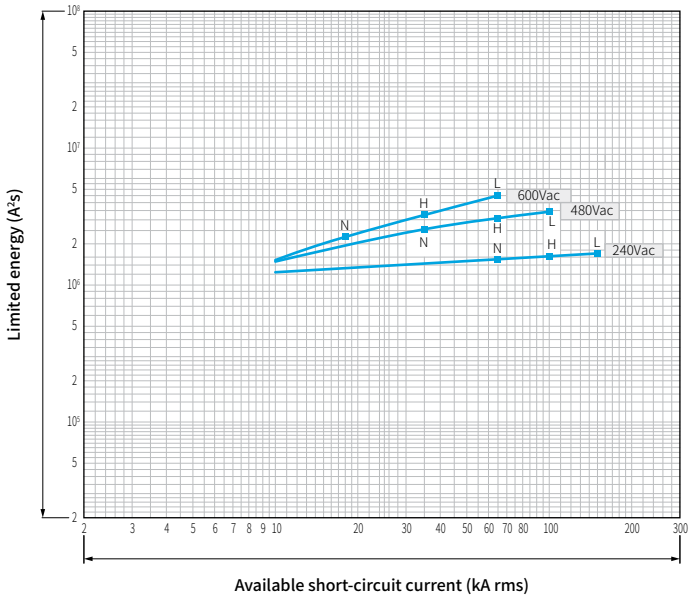

## Peak let-through current Ip (240V, 480V AND 600V)



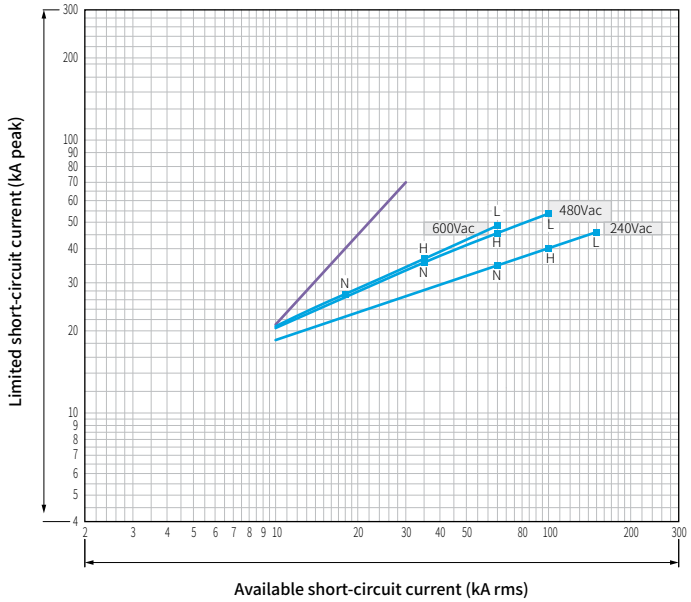
# HGU400/HGU600 Characteristic

Based on typical values obtained throughout the circuit breaker development and UL test programs.

## Let-through energy $I^2t$ (240V, 480V AND 600V)




## Peak let-through current Ip (240V, 480V AND 600V)



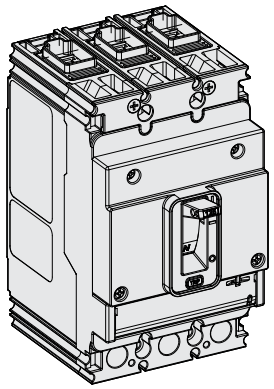
# UL-MCCB

## Molded Case Circuit Breakers

**Dimensions**

MCCB

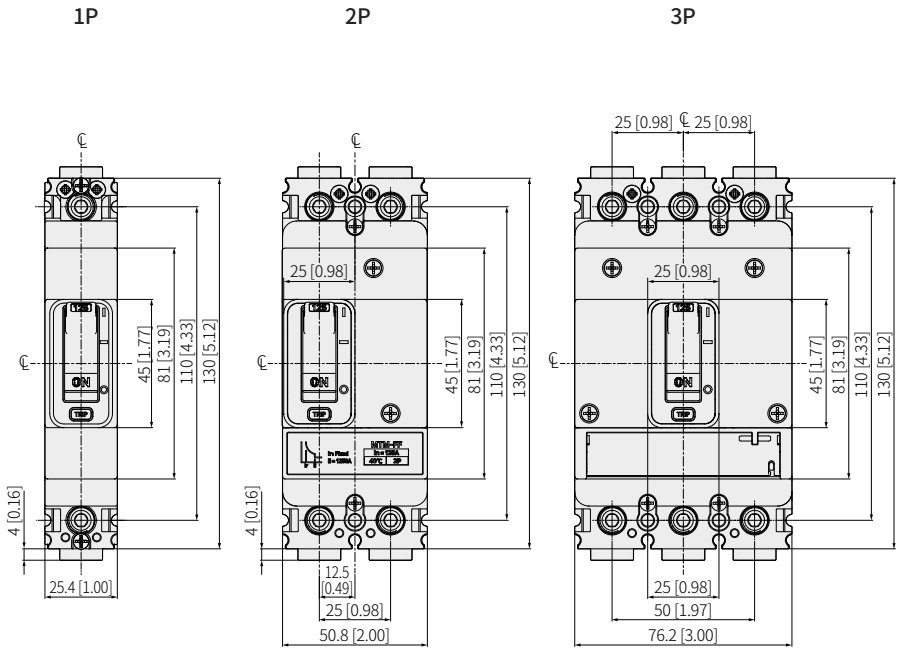
# Dimensions HGU125 circuit breakers



HGU125 1/2/3P
[Lug type]

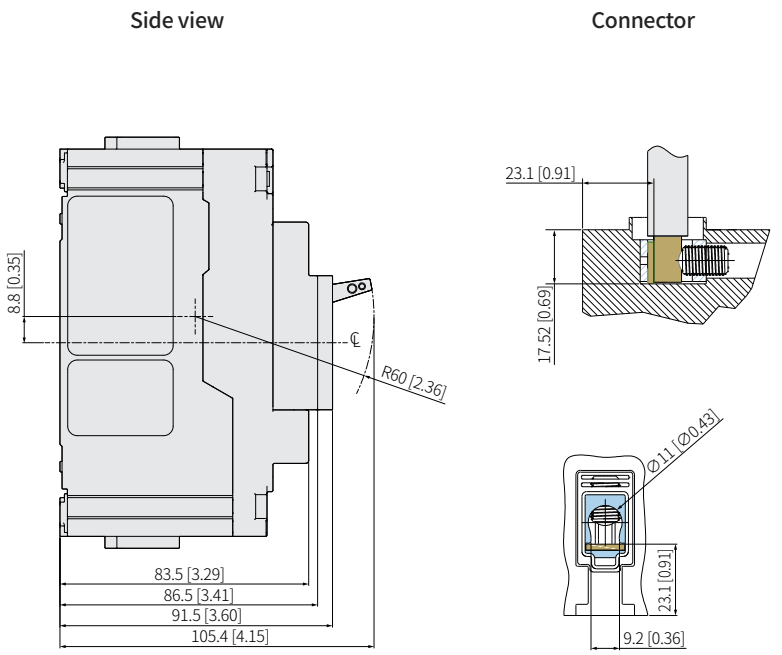
## External dimensions

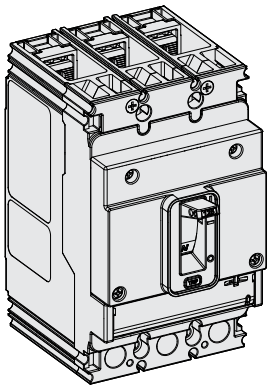
Dimension: mm [inch]




## External dimensions

Dimension: mm [inch]



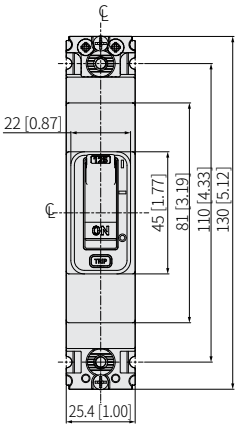


HGU125 1/2/3P
[Bolt on type]

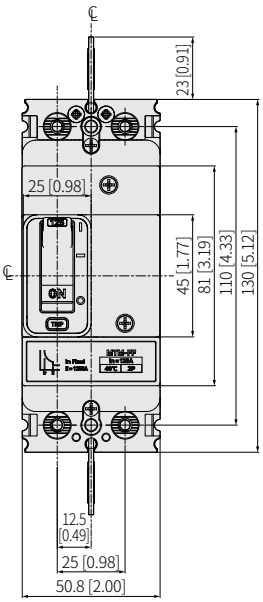
## External dimensions

Dimension: mm [inch]

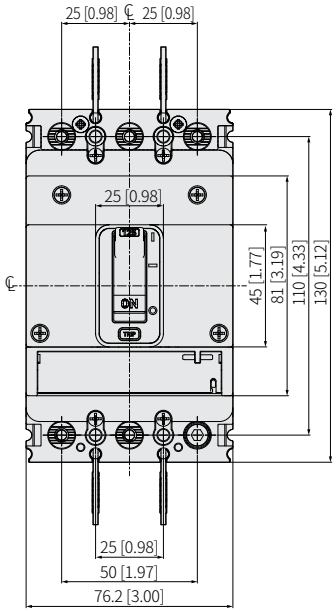
1P




2P



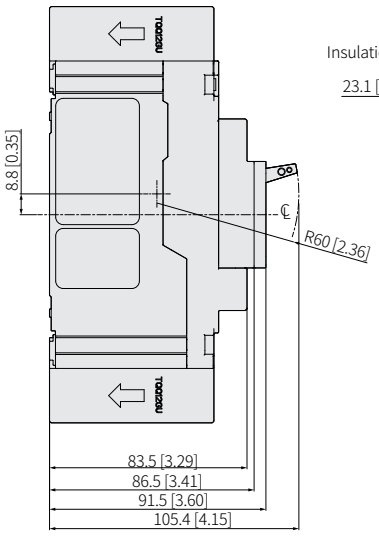

3P



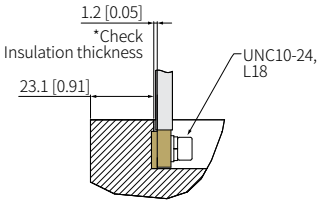

## External dimensions

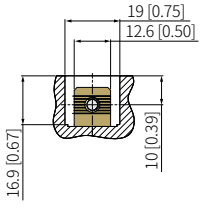
Dimension: mm [inch]

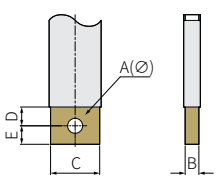
Side view




Connector

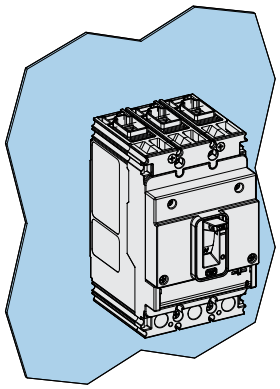



| Dimension dimensiones | Length longitud longueur |
|---|---|
| A | 0.41 in<br>5.1 mm |
| B | ≤ 0.31 in<br>≤ 8.0 mm |
| C | ≤ 0.67 in<br>≤ 17.0 mm |
| D | 0.26 in<br>6.5 mm |
| E | 0.25 in<br>6.4 mm |

# Dimensions HGU125 circuit breakers

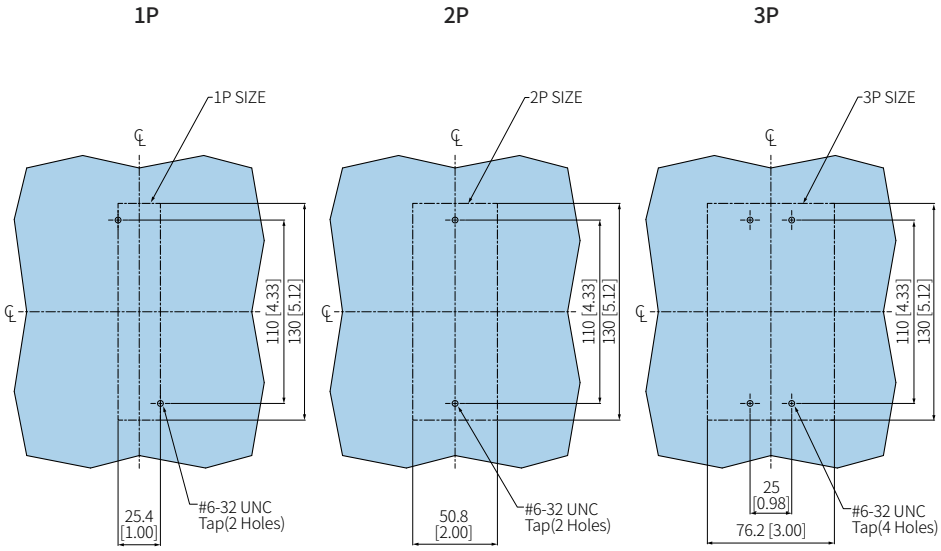


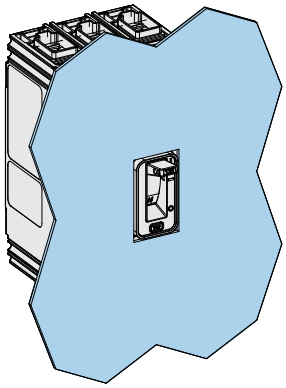
HGU125 1/2/3P

## Installation dimensions

Dimension: mm [inch]

### Backplate



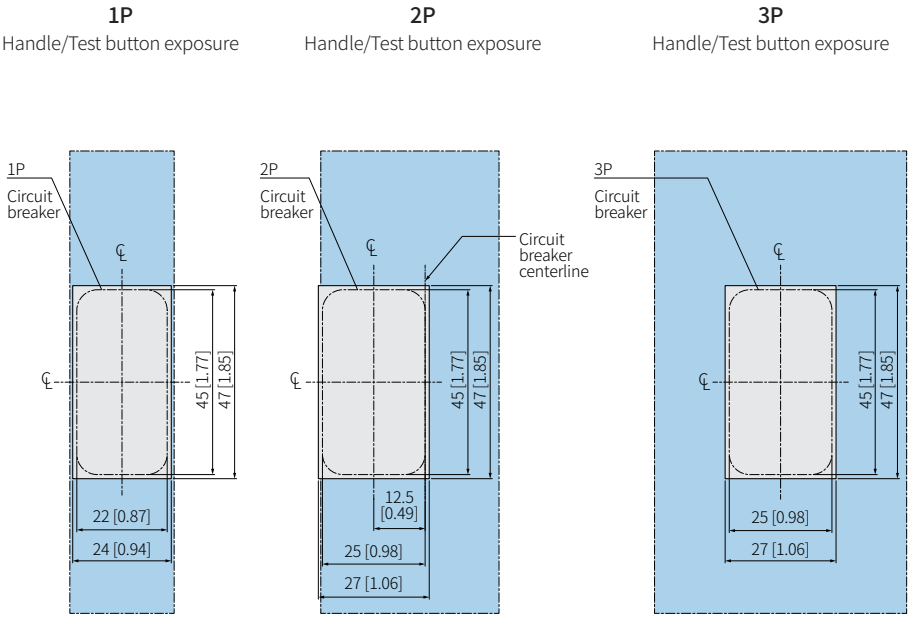



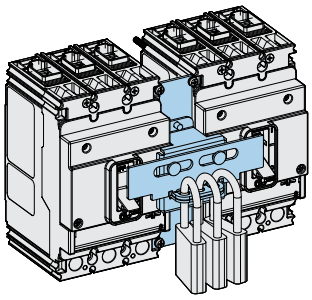
HGU125 1/2/3P

## Installation dimensions

Dimension: mm [inch]

### Panel cover



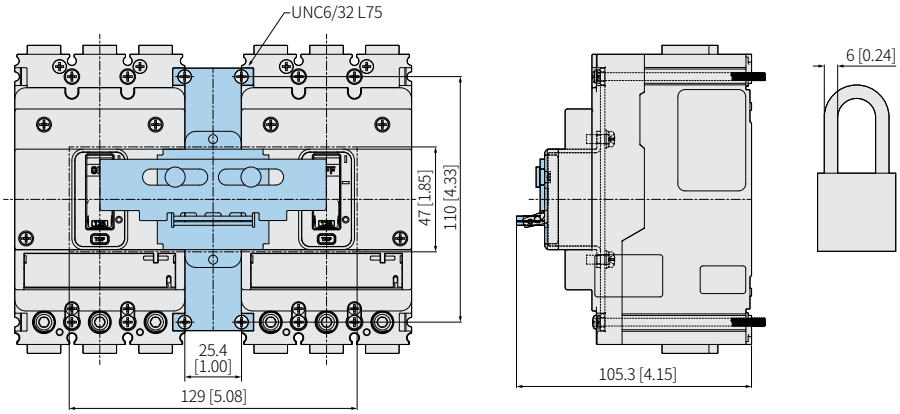


HGU125 3P
Mechanical interlock

MIF12GU

## External dimensions

Dimension: mm [inch]

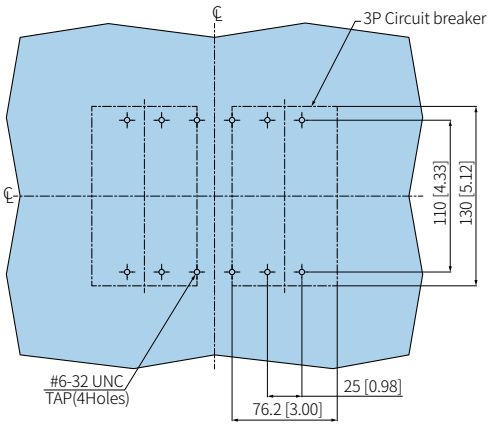



※ The MIF125 requires mounting holes for proper installation.

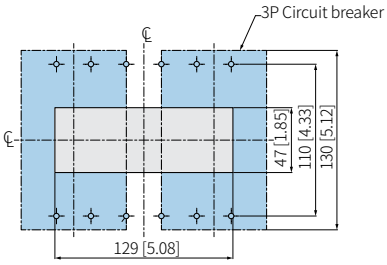
## Installation dimensions

Dimension: mm [inch]

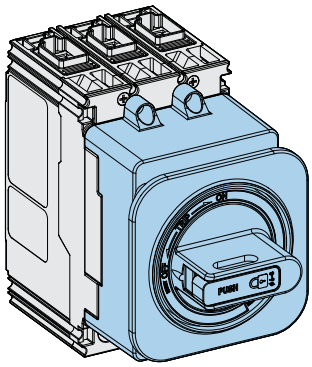
**Backplate**




**Panel cover**



# Dimensions HGU125 circuit breakers

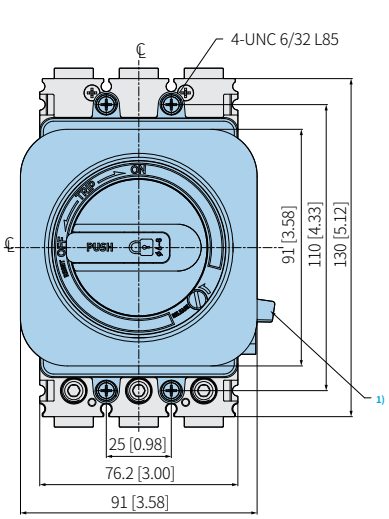


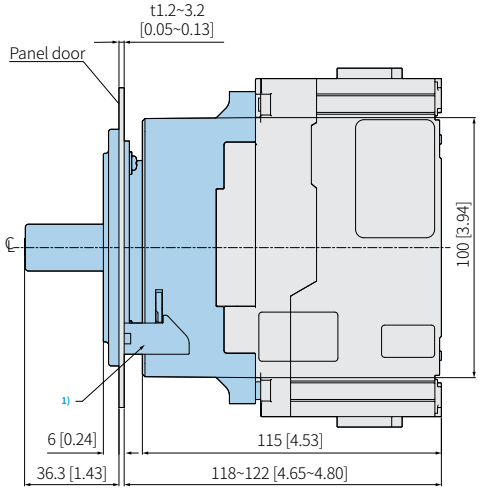
Rotary operating handle
Directly mounted

TFG12GU

## External dimensions

Dimension: mm [inch]



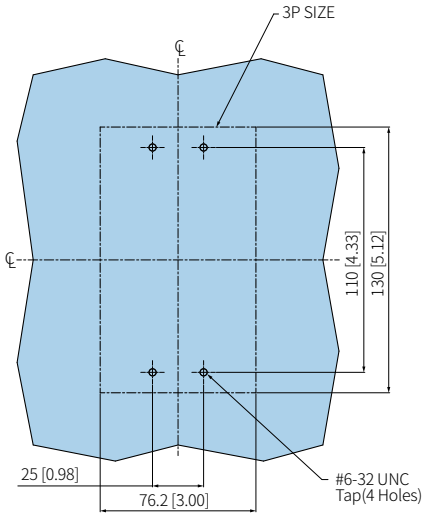




※ 1) Lock plate position may need adjustment for proper handle operation.

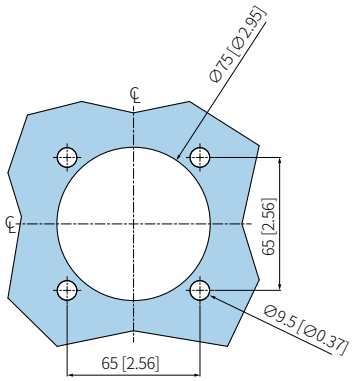
## Installation dimensions

Dimension: mm [inch]

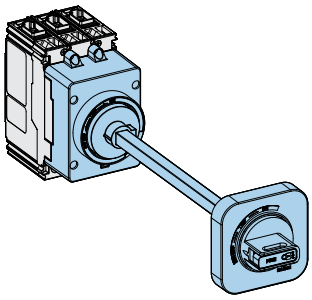
### Backplate




### Panel door




※ TFG12GU is installed in the circuit breaker mounting hole.
※ Please consider the external dimensions when mounting products in close proximity.

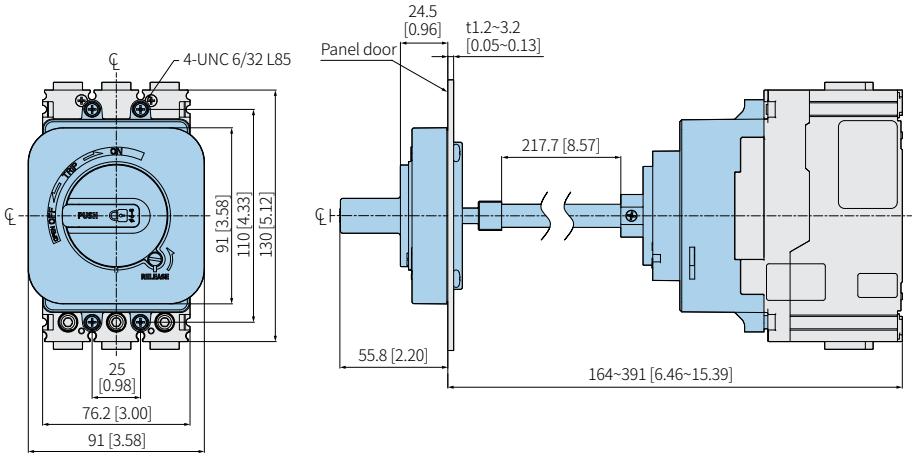


Rotary operating handle
Door-mounted

TFH12GU
TFH12GUX

## External dimensions

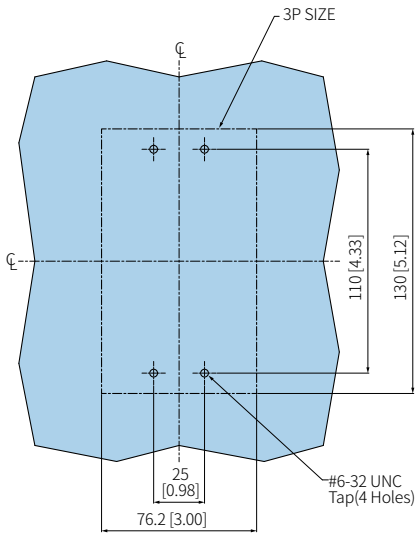
Dimension: mm [inch]



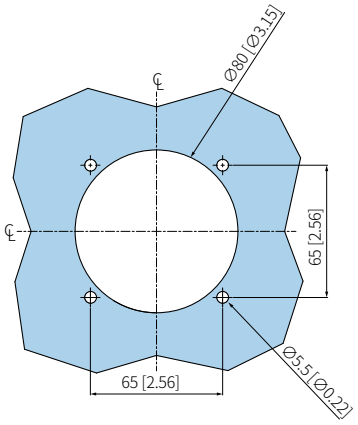

## Installation dimensions

Dimension: mm [inch]

**Backplate**

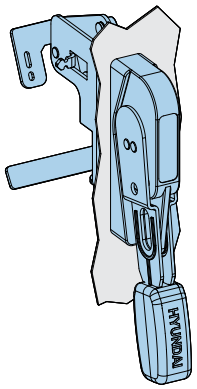



**Panel door**




※ TFH12GU is installed in the circuit breaker mounting hole.
※ Please consider the external dimensions when mounting products in close proximity.

# Dimensions HGU125 circuit breakers

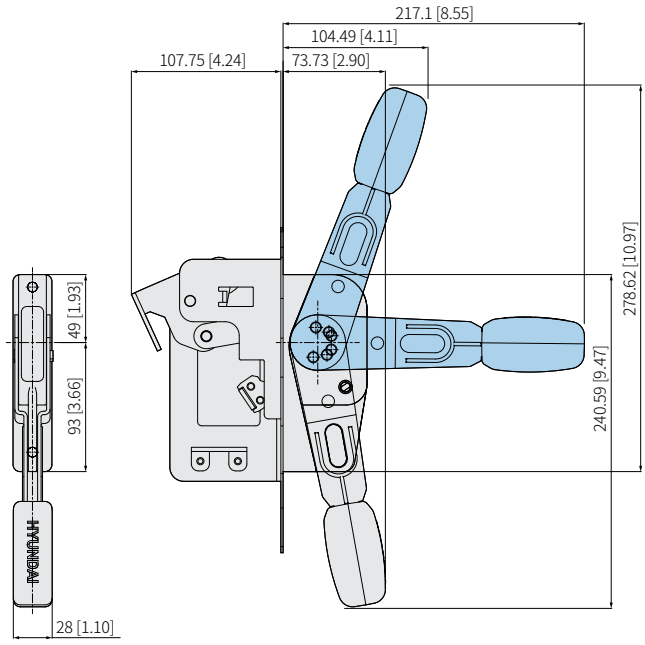


HGU125
Flange handle

FHPCS
FHNPS

## External dimensions

Dimension: mm [inch]

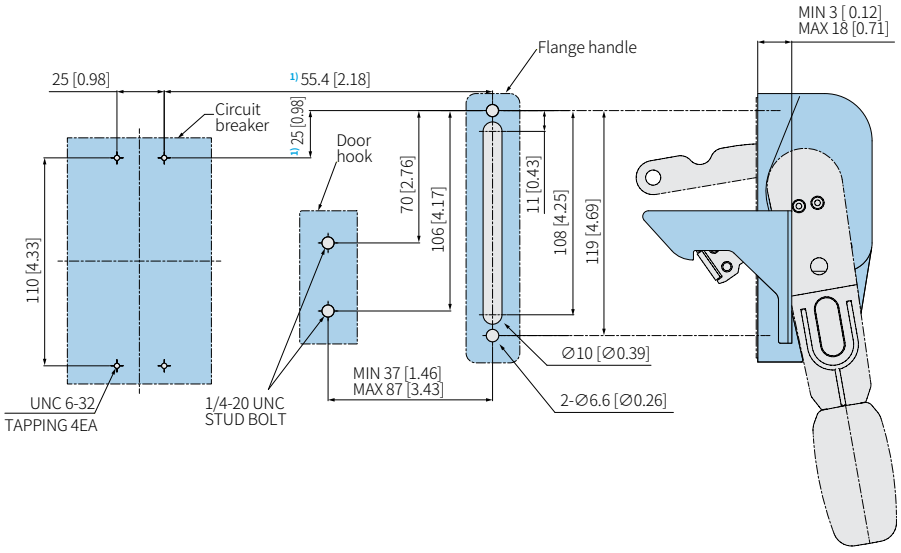



## Installation dimensions

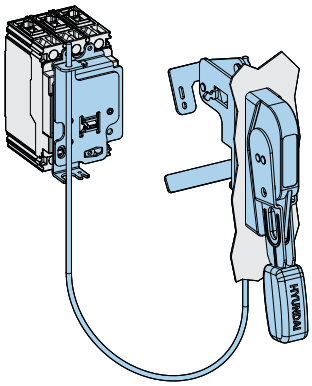
Dimension: mm [inch]

Backplate

Panel door




※ 1) Applicable to variable depth type only.

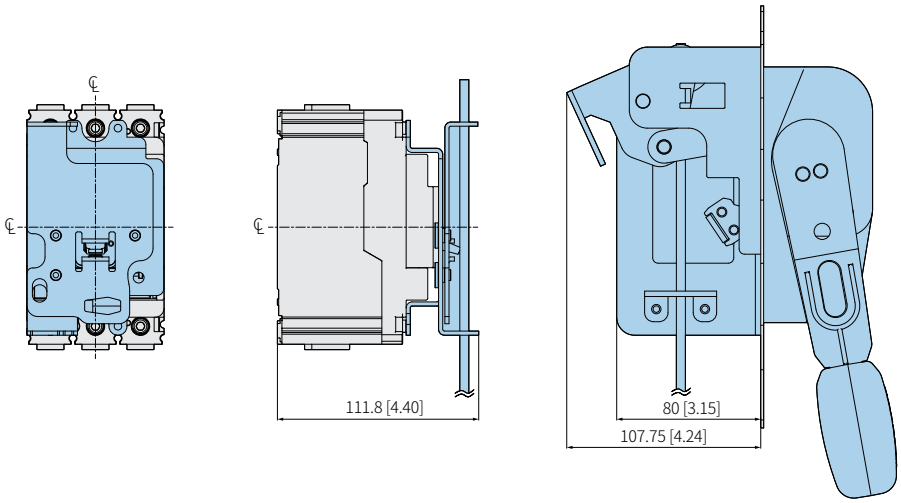


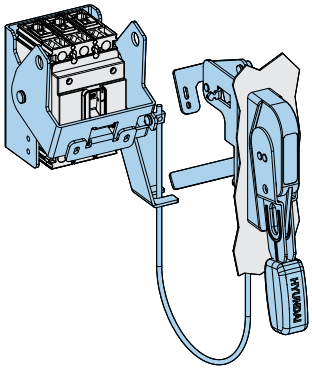
HGU125
Flange handle
Sliding operating
Mechanism

① FHPCS / FHNPS
+
② FSM12GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH

## External dimensions

Dimension: mm [inch]



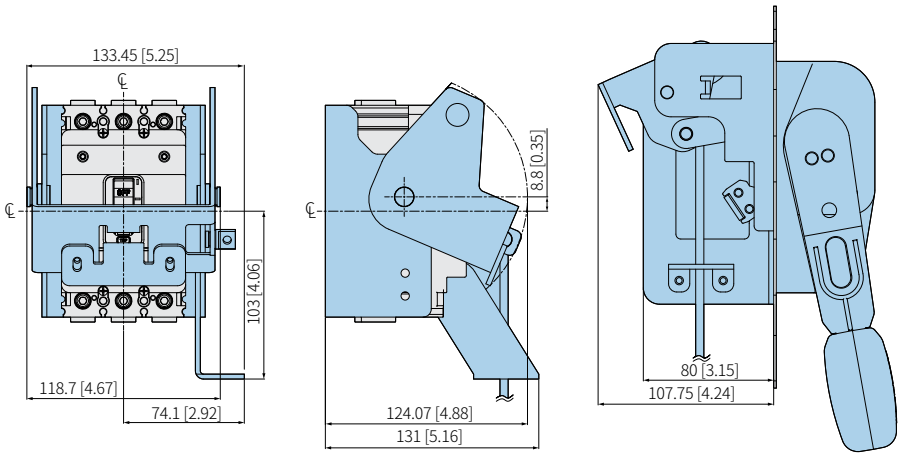



HGU125
Flange-mounted
Cable operating
Mechanism

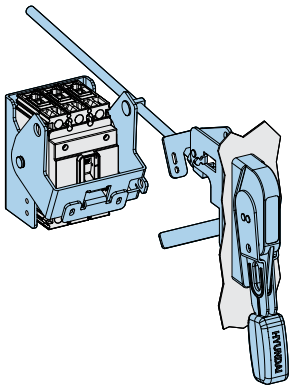
① FHPCS / FHNPS
+
② FMB12GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH

## External dimensions

Dimension: mm [inch]



# Dimensions HGU125 circuit breakers

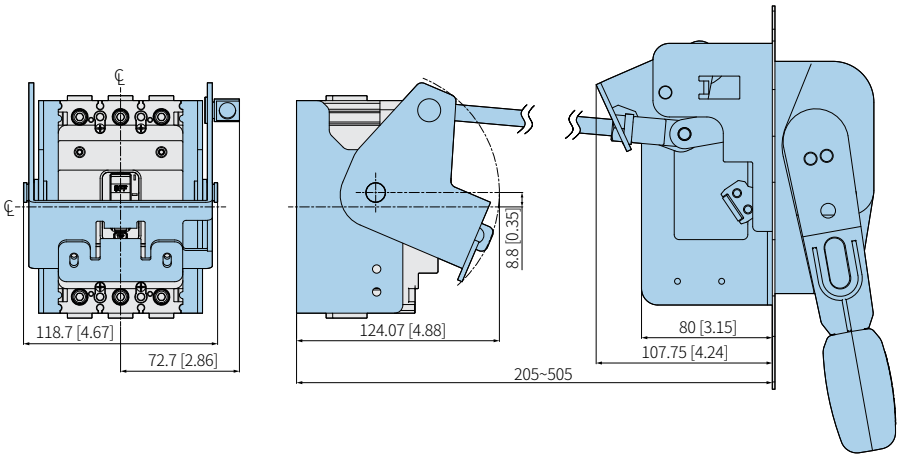


HGU125
Flange-mounted
Variable depth
Operating mechanism

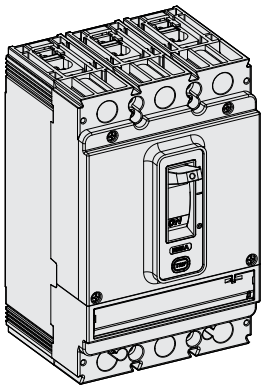
① FHPCS / FHNPS
+
② FMB12GU
+
③ ROD400MM

## External dimensions

Dimension: mm [inch]



# Dimensions HGU150 circuit breakers

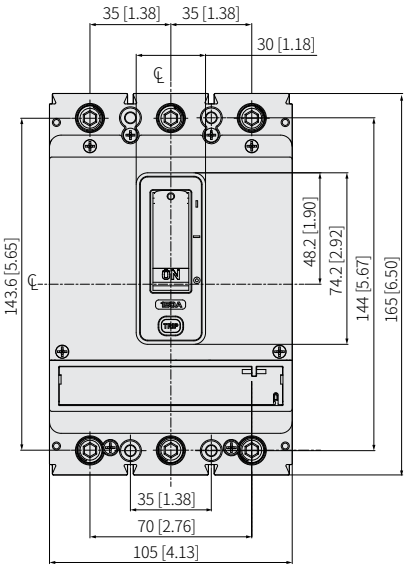


HGU150 2/3P
[Lug & Bolt on Type]

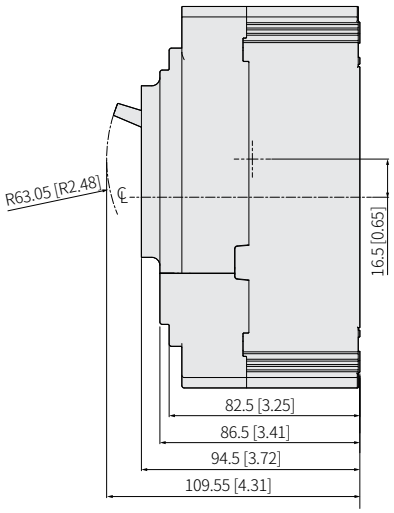
## External dimensions

Dimension: mm [inch]

2P/3P (Lug, Bolt on)



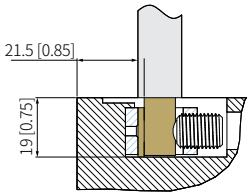

Side view



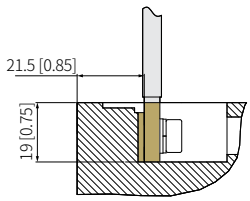

## External dimensions

Dimension: mm [inch]

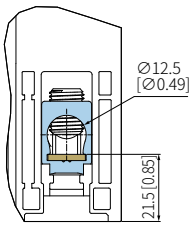
Connector(LUG)

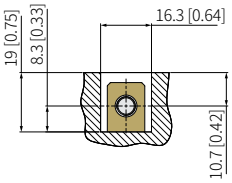


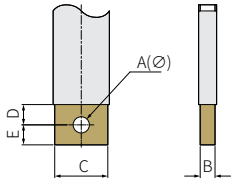

Connector(Bolt on)



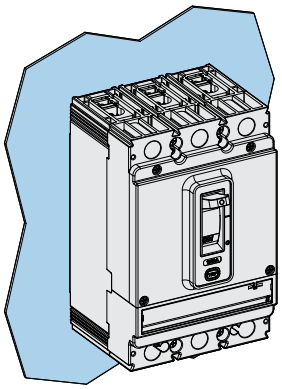

| Dimension dimensiones | Length longitud longueur |
|---|---|
| A | 0.26 in 6.5 mm |
| B | 0.12-0.24 in 3.1-6 mm |
| C | 0.51-0.63 in 13-16 mm |
| D | 0.49 in 12.5mm |
| E | 0.31 in 8 mm |



# Dimensions HGU150 circuit breakers

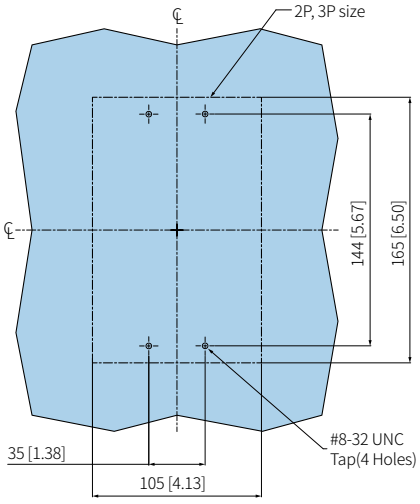


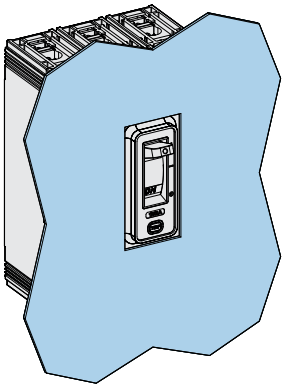
HGU150 2/3P

## Installation dimensions

Dimension: mm [inch]

Backplate



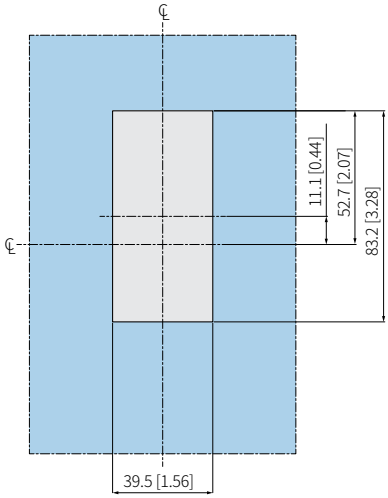



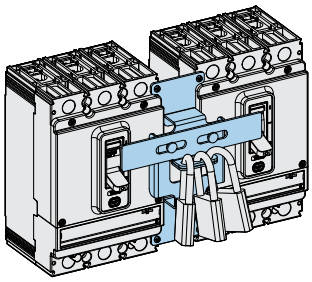
HGU150 2/3P

## Installation dimensions

Dimension: mm [inch]

Panel cover



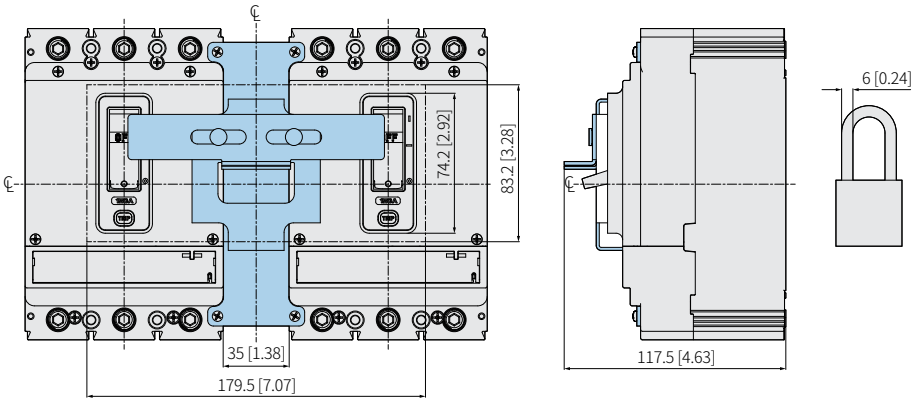


HGU150 2/3P
Mechanical interlock

MIF25GU

## External dimensions

Dimension: mm [inch]

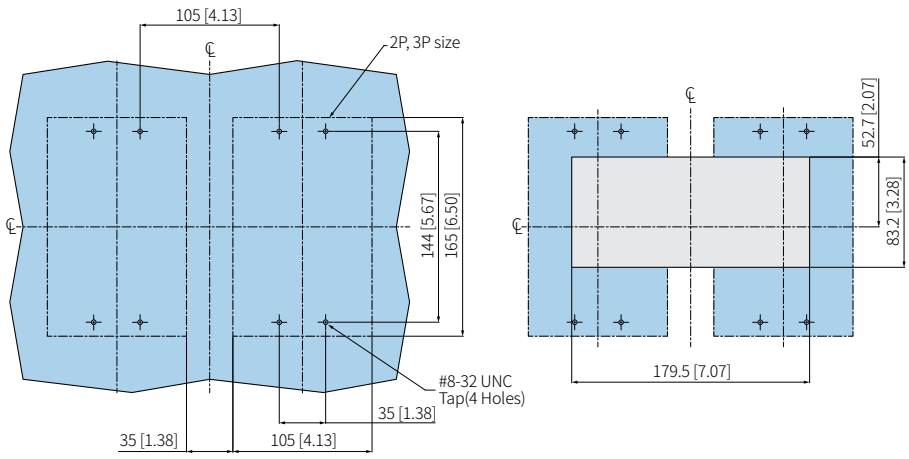



## Installation dimensions

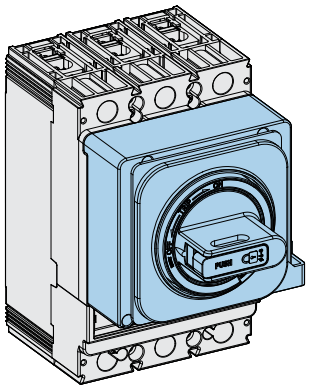
Dimension: mm [inch]

**Backplate**

**Panel door**



# Dimensions HGU150 circuit breakers

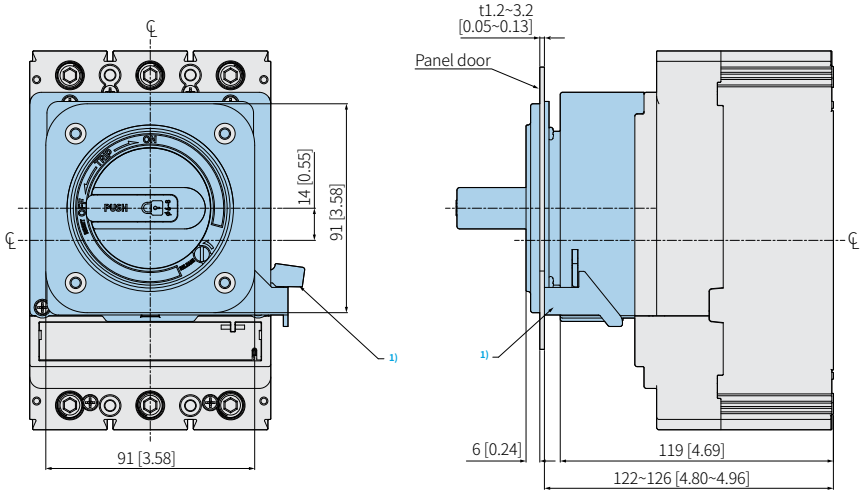


Rotary operating handle
Directly mounted

TFG25GU

## External dimensions

Dimension: mm [inch]

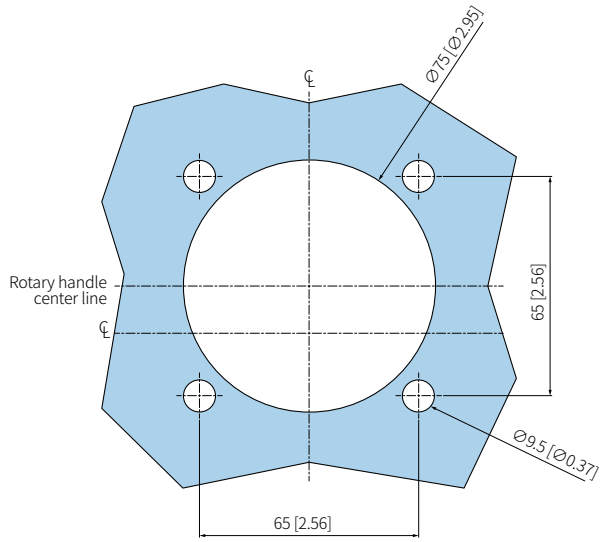



※ 1) Lock plate position may need adjustment for proper handle operation.

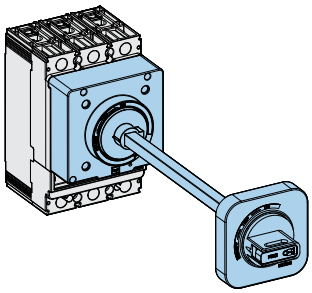
## Installation dimensions

Dimension: mm [inch]

Panel door




※ Please consider the external dimensions when mounting products in close proximity.

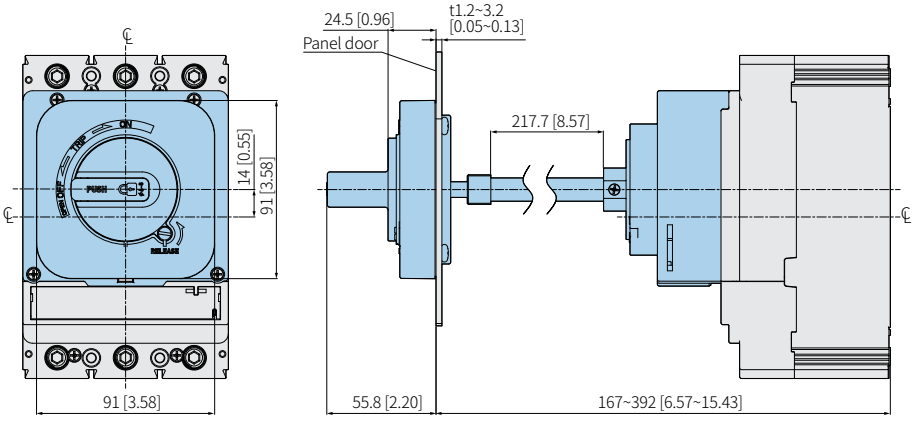


Rotary operating handle
Door-mounted

TFH25GU
TFH25GUX

## External dimensions

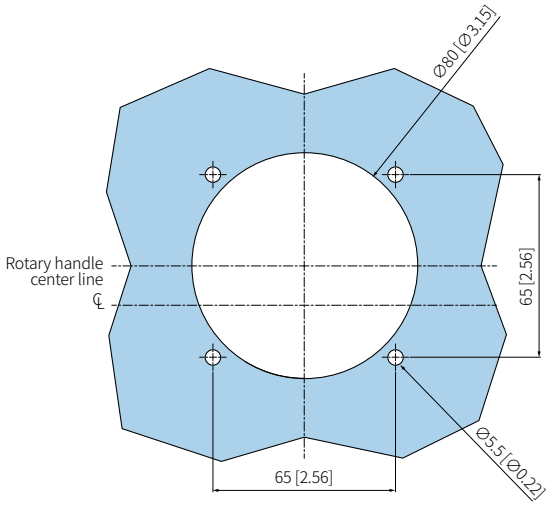
Dimension: mm [inch]




## Installation dimensions

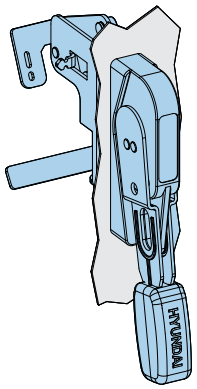
Dimension: mm [inch]

**Panel door**




※ Please consider the external dimensions when mounting products in close proximity.

# Dimensions HGU150 circuit breakers

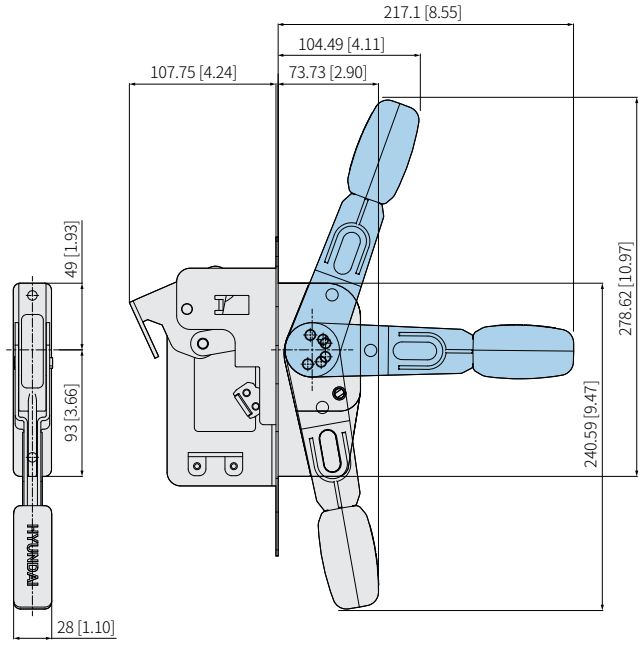


HGU150
Flange handle

FHPCS
FHNPS

## External dimensions

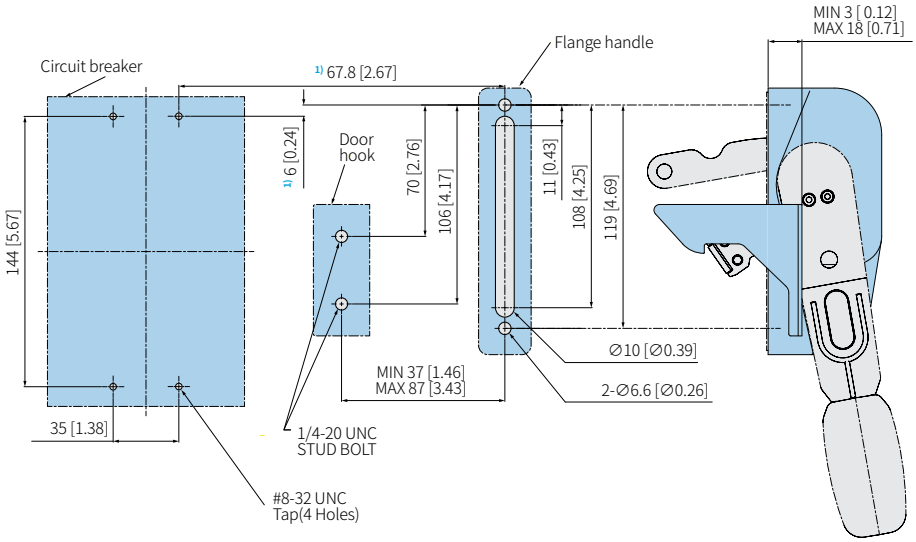
Dimension: mm [inch]




## Installation dimensions

Dimension: mm [inch]

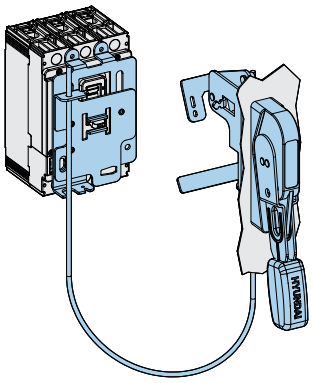
**Backplate** **Panel door**




※ 1) Applicable to variable depth type only.

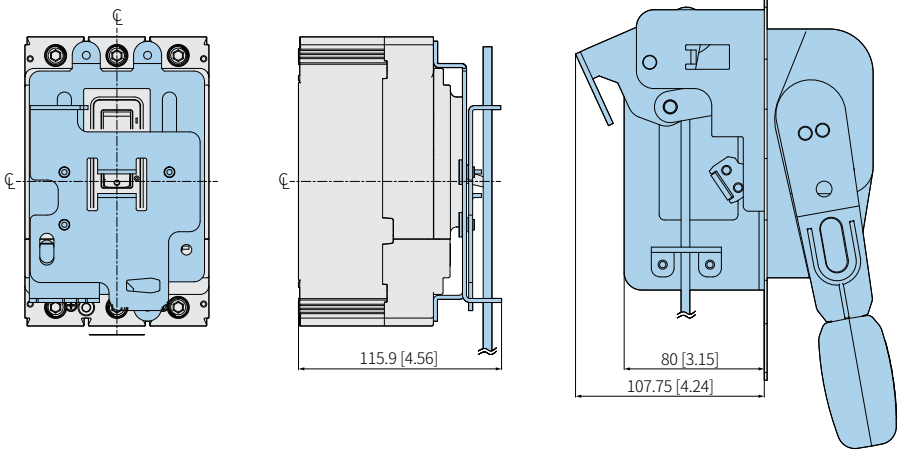
## External dimensions

Dimension: mm [inch]



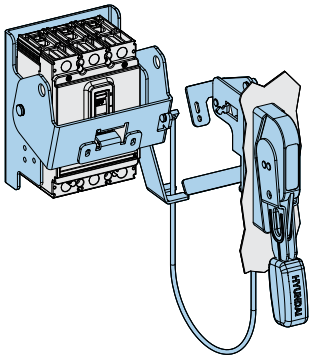
HGU150
Flange handle
Sliding operating
Mechanism

① FHPCS / FHNPS
+
② FSM25GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH



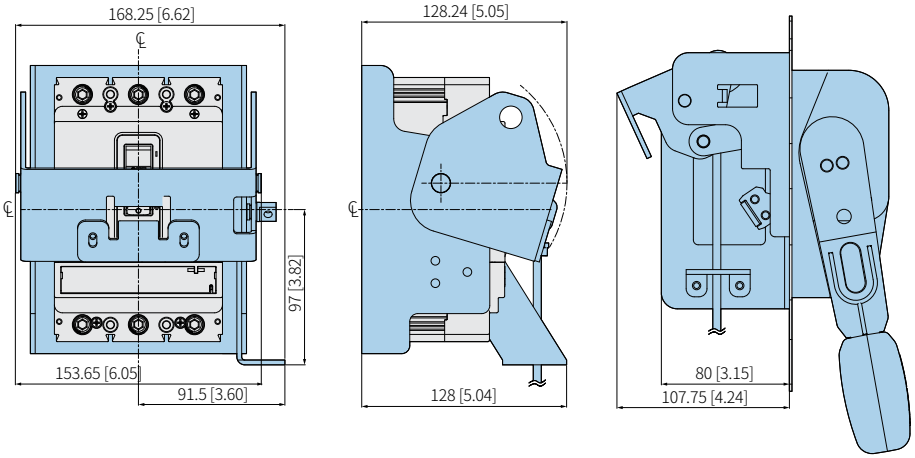

## External dimensions

Dimension: mm [inch]

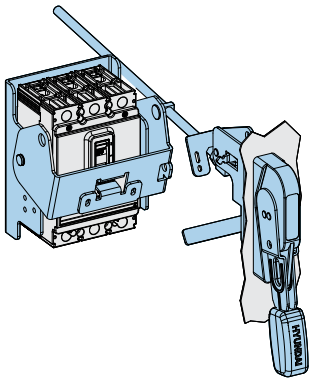


HGU150
Flange-mounted
Cable operating
Mechanism

① FHPCS / FHNPS
+
② FMB25GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH



# Dimensions HGU150 circuit breakers

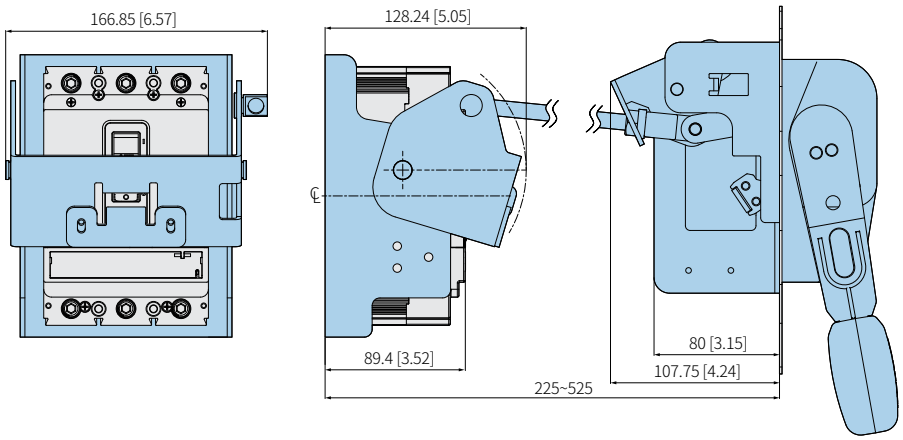


HGU150
Flange-mounted
Variable depth
Operating mechanism

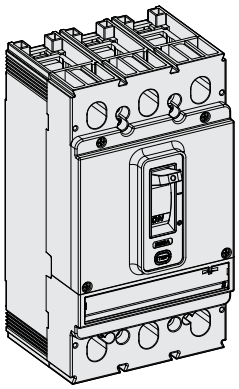
① FHPCS / FHNPS
+
② FMB25GU
+
③ ROD400MM

## External dimensions

Dimension: mm [inch]



# Dimensions HGU250 circuit breakers

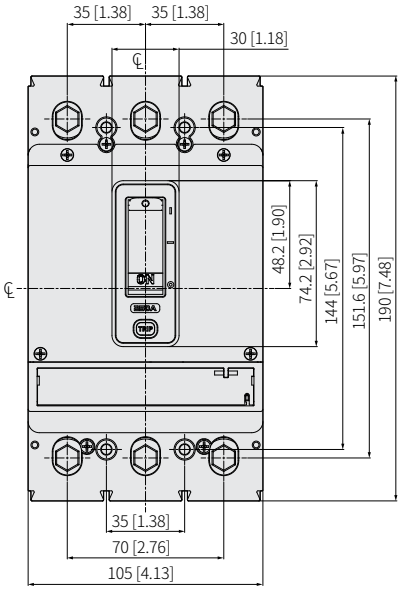


HGU250 2/3P
[Lug type]

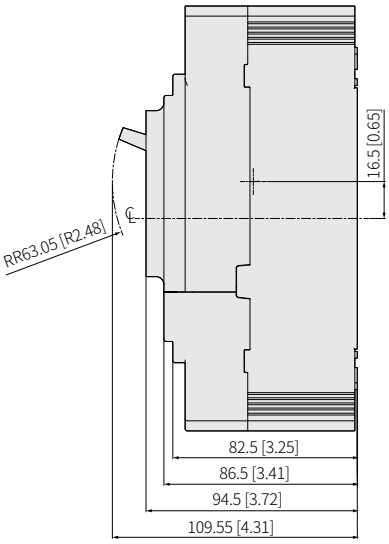
## External dimensions

Dimension: mm [inch]

2P/3P



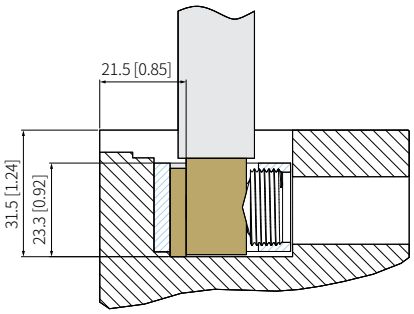

Side view

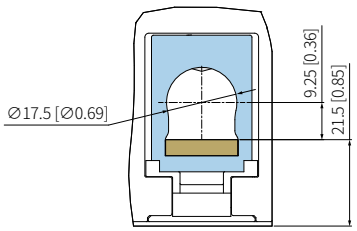



## External dimensions

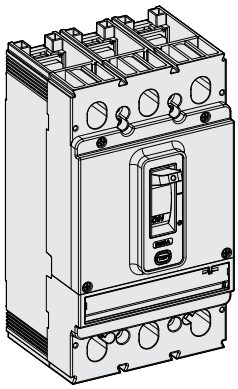
Dimension: mm [inch]

Connector(LUG)



# Dimensions HGU250 circuit breakers

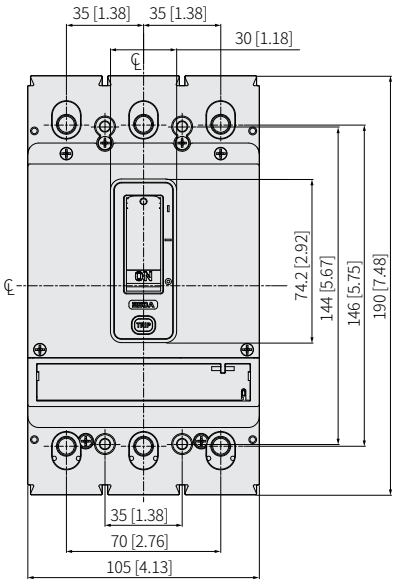


HGU250 2/3P
[Bolt on type]

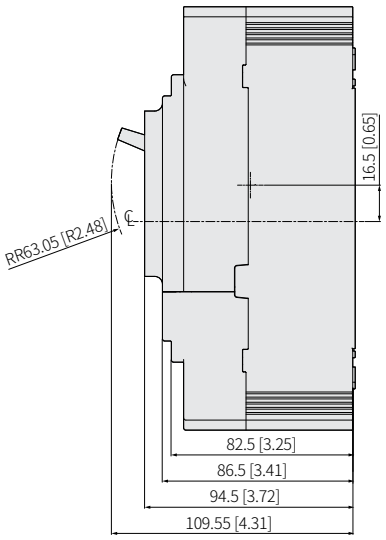
## External dimensions

Dimension: mm [inch]

2P/3P



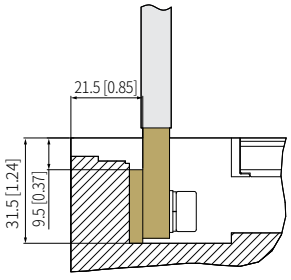

Side view

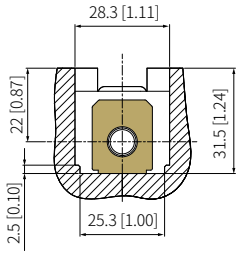



## External dimensions

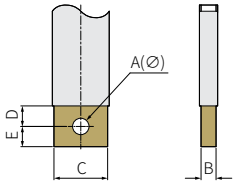
Dimension: mm [inch]

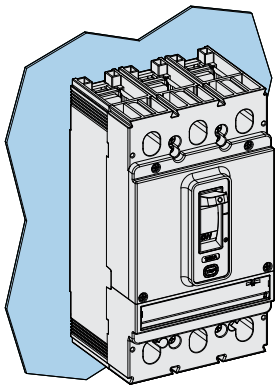
Connector(Bolt on)




| Dimension dimensiones | Length longitud longueur |
|---|---|
| A | 0.26 in 6.5 mm |
| B | 0.12-0.24 in 3.1-6 mm |
| C | 0.51-0.63 in 13-16 mm |
| D | 0.49 in 12.5mm |
| E | 0.31 in 8 mm |



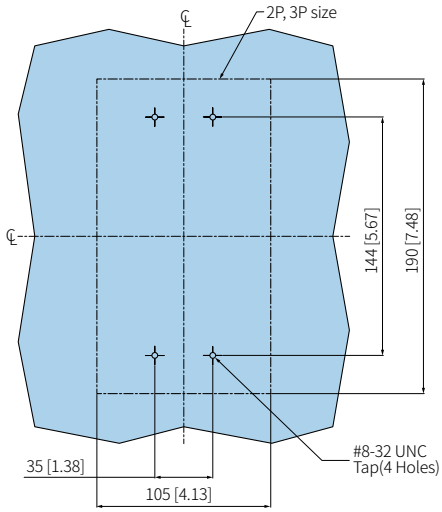


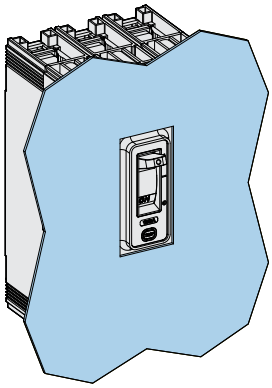
HGU250 2/3P

## Installation dimensions

Dimension: mm [inch]

Backplate



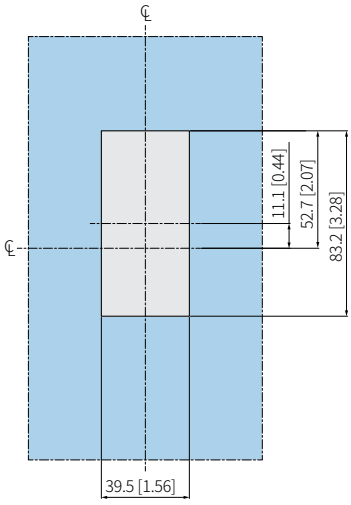



HGU250 2/3P

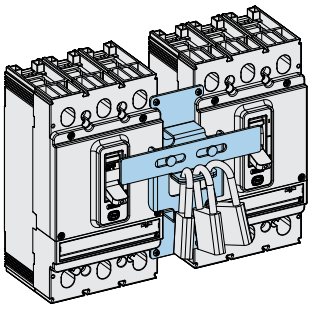
## Installation dimensions

Dimension: mm [inch]

Panel cover



# Dimensions HGU250 circuit breakers

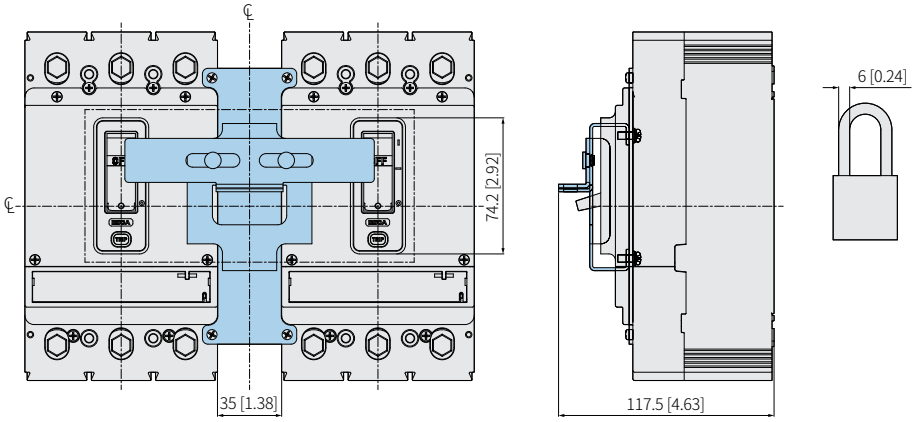


HGU250 2/3P
Mechanical interlock

MIF25GU

## External dimensions

Dimension: mm [inch]

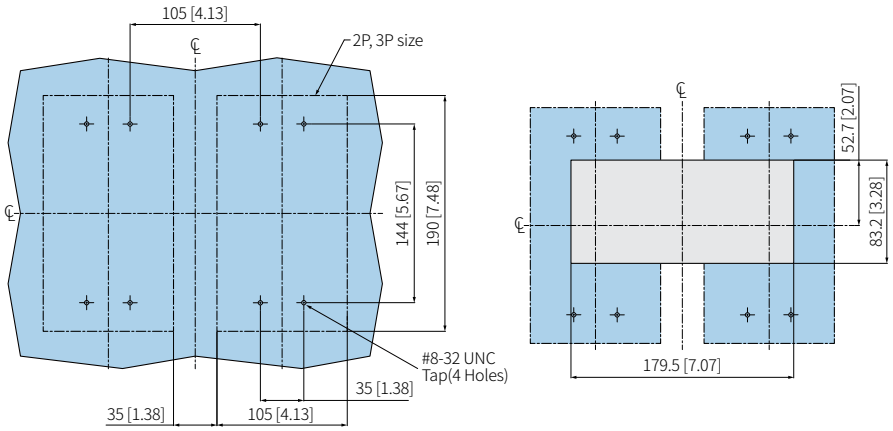


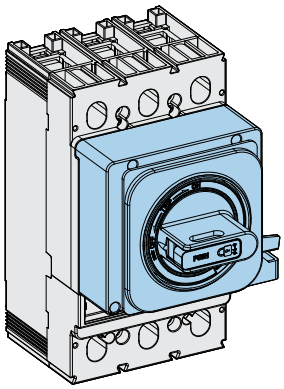

## Installation dimensions

Dimension: mm [inch]

Backplate

Panel cover



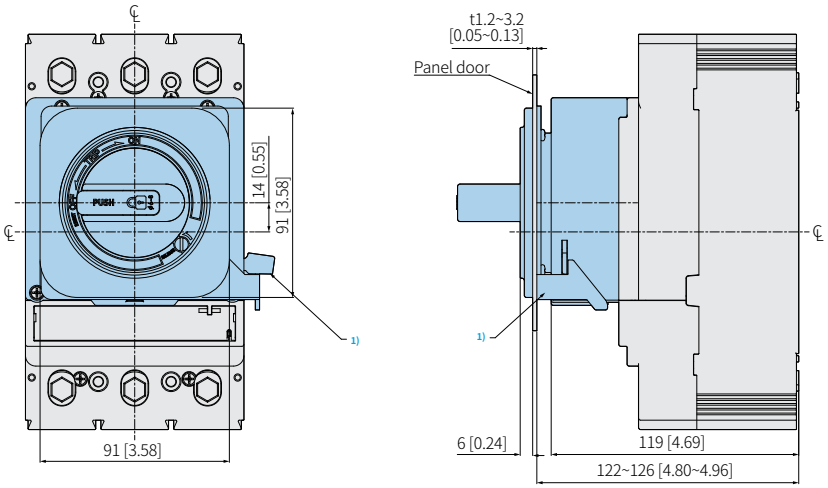


Rotary operating handle
Directly mounted

TFG25GU

## External dimensions

Dimension: mm [inch]

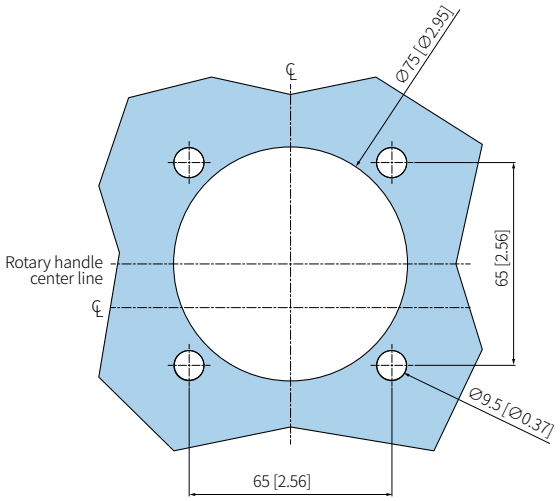



※ 1) Lock plate position may need adjustment for proper handle operation.

## Installation dimensions

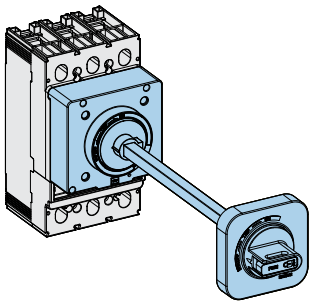
Dimension: mm [inch]

Panel door




※ Please consider the external dimensions when mounting products in close proximity.

# Dimensions HGU250 circuit breakers

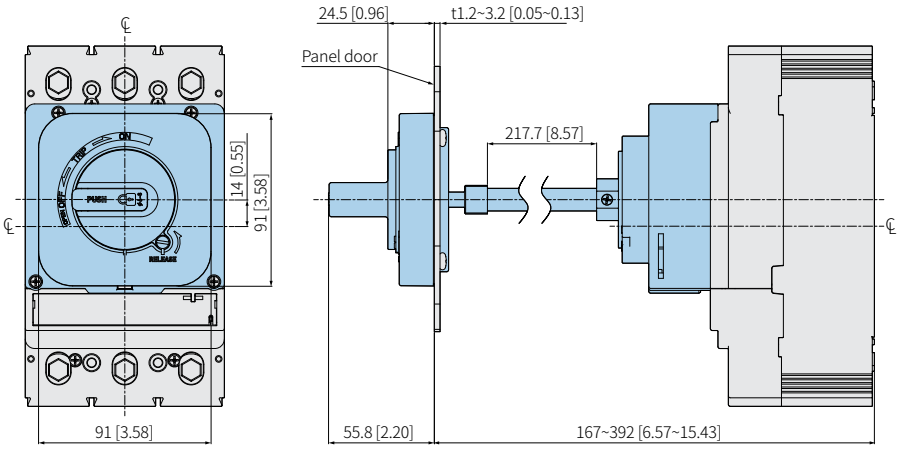


Rotary operating handle
Door-mounted

TFH25GU
TFH25GUX

## External dimensions

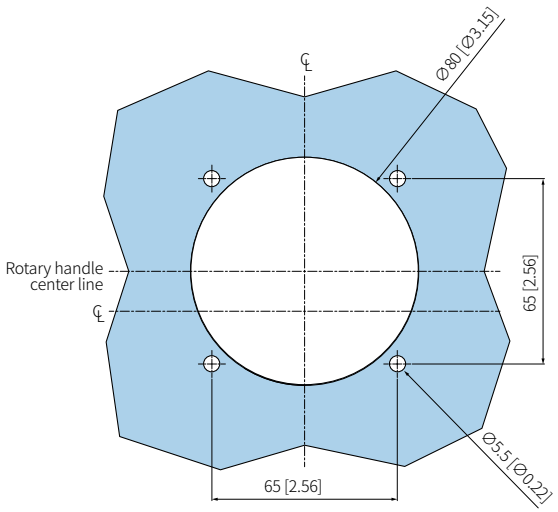
Dimension: mm [inch]



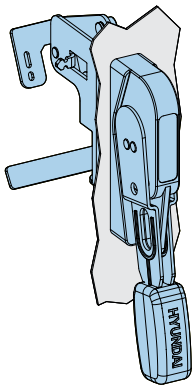

## Installation dimensions

Dimension: mm [inch]

Panel door




※ Please consider the external dimensions when mounting products in close proximity.

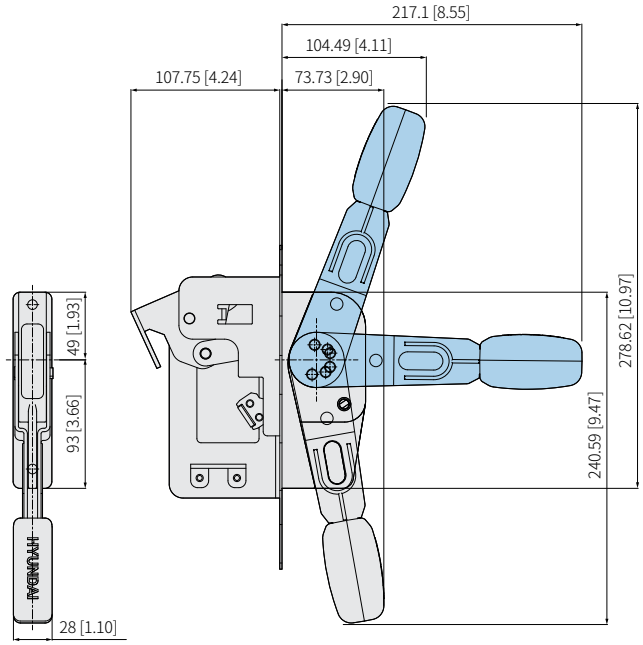


HGU250
Flange handle

FHPCS
FHNPS

## External dimensions

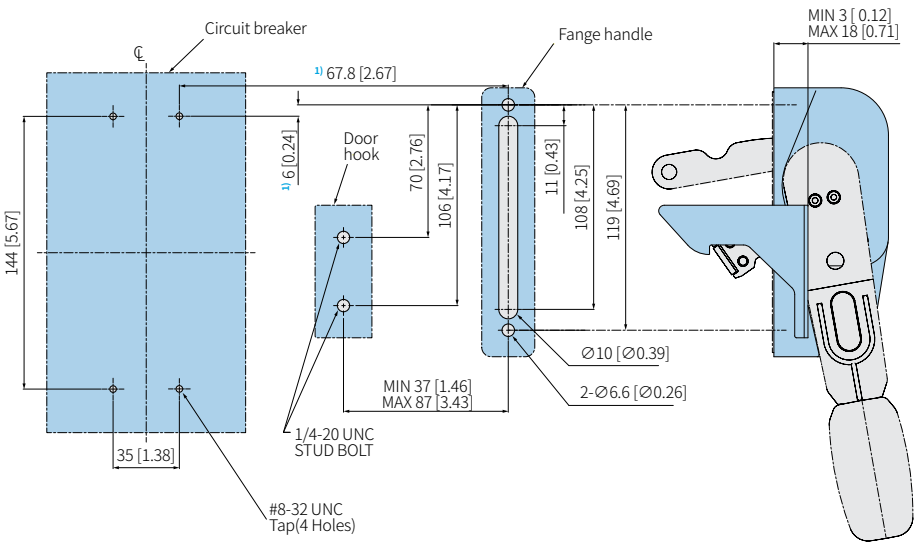
Dimension: mm [inch]




## Installation dimensions

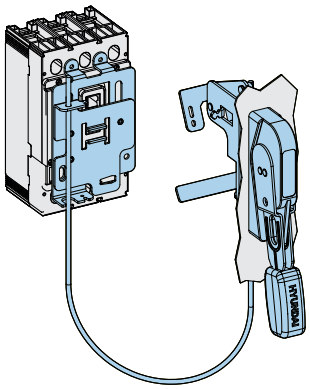
Dimension: mm [inch]

**Backplate** **Panel door**




※ 1) Applicable to variable depth type only.

# Dimensions HGU250 circuit breakers

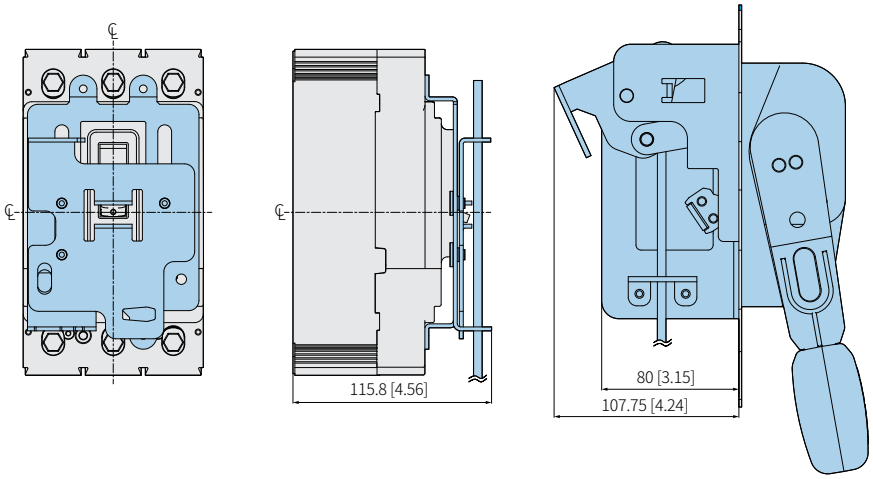


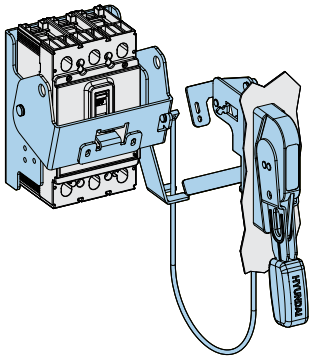
HGU250
Flange handle
Sliding operating
Mechanism

① FHPCS / FHNPS
+
② FSM25GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH

## External dimensions

Dimension: mm [inch]



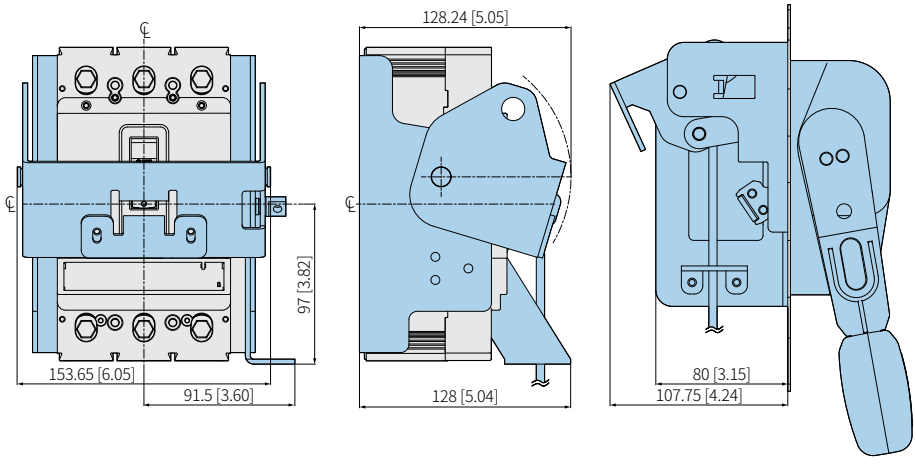



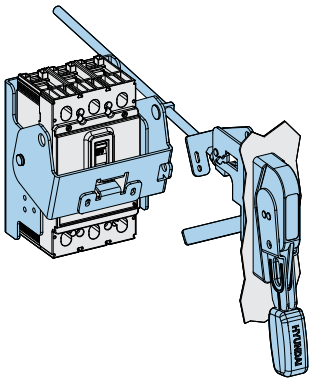
HGU250
Flange-mounted
Cable operating
Mechanism

① FHPCS/FHNPS
+
② FMB25GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH

## External dimensions

Dimension: mm [inch]



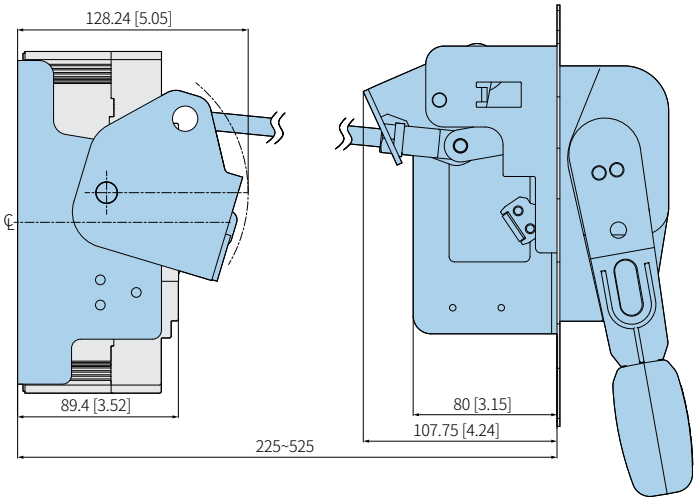


HGU250
Flange-mounted
Variable depth
Operating mechanism

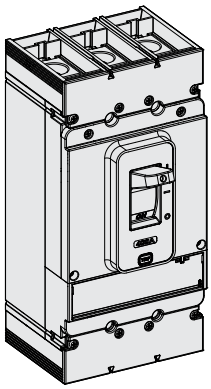
① FHPCS / FHNPS
+
② FMB25GU
+
③ ROD400MM

## External dimensions

Dimension: mm [inch]



# Dimensions HGU400 circuit breakers

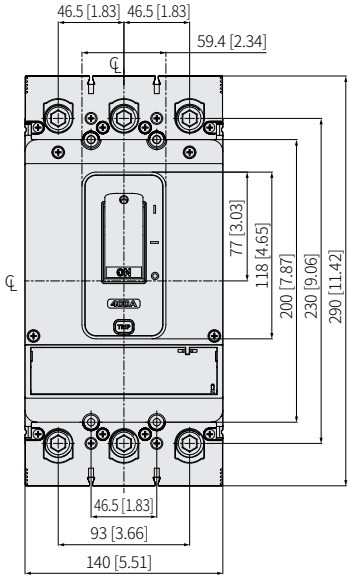


HGU400 2/3P
[Lug type]

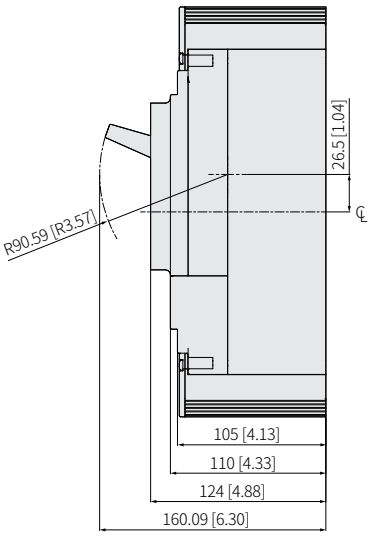
## External dimensions

Dimension: mm [inch]

2P/3P



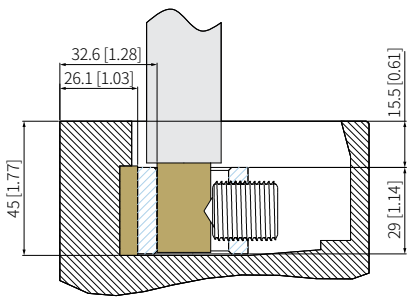

Side view

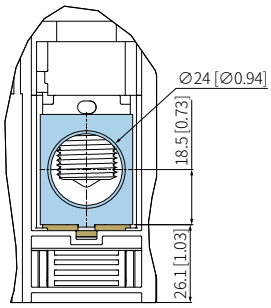


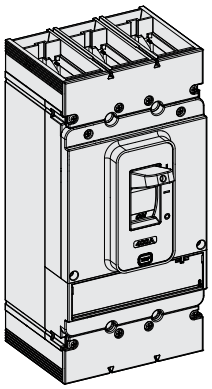

## External dimensions

Dimension: mm [inch]

Connector(LUG)



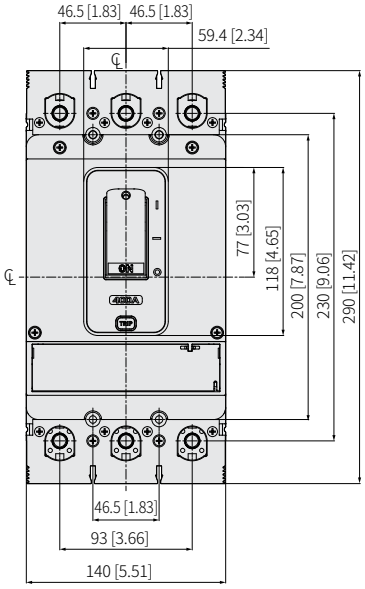


HGU400 2/3P
[Bolt on type]

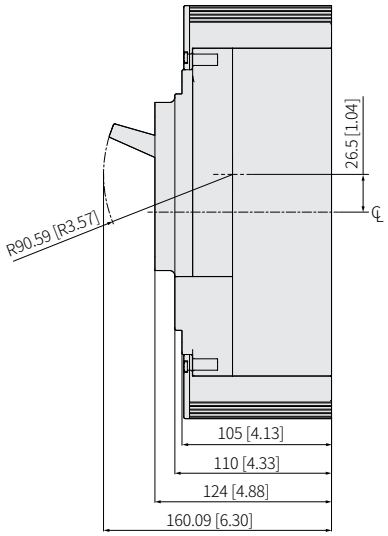
## External dimensions

Dimension: mm [inch]

2P/3P



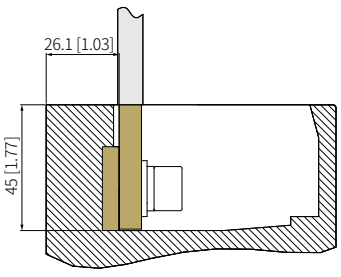

Side view

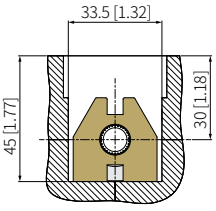



## External dimensions

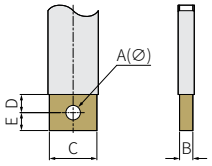
Dimension: mm [inch]

Connector(Bolt on)

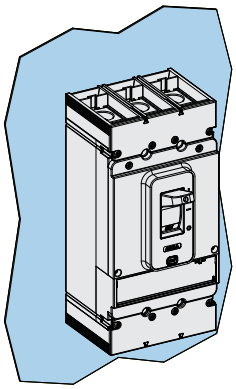



| Dimension dimensiones | Length longitud longueur |
|---|---|
| A | 0.41 in<br>10.5 mm |
| B | 0.11-0.31 in<br>3-8 mm |
| C | 1.18 in<br>30 mm |
| D | 1.18 in<br>30 mm |
| E | 0.57 in<br>14.5 mm |



# Dimensions HGU400 circuit breakers

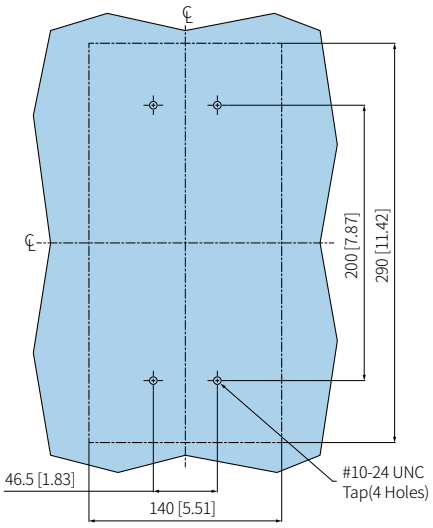


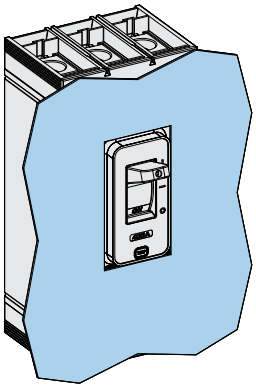
HGU400 2/3P

## Installation dimensions

Dimension: mm [inch]

Backplate



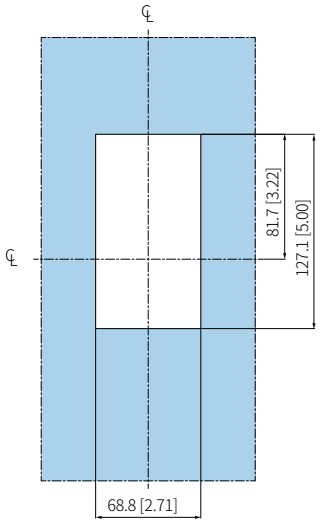



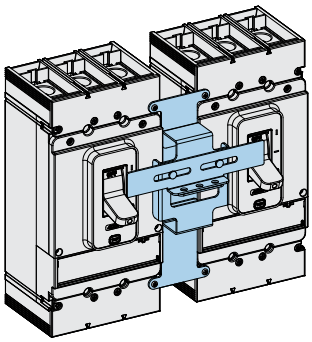
HGU400 2/3P

## Installation dimensions

Dimension: mm [inch]

Panel cover



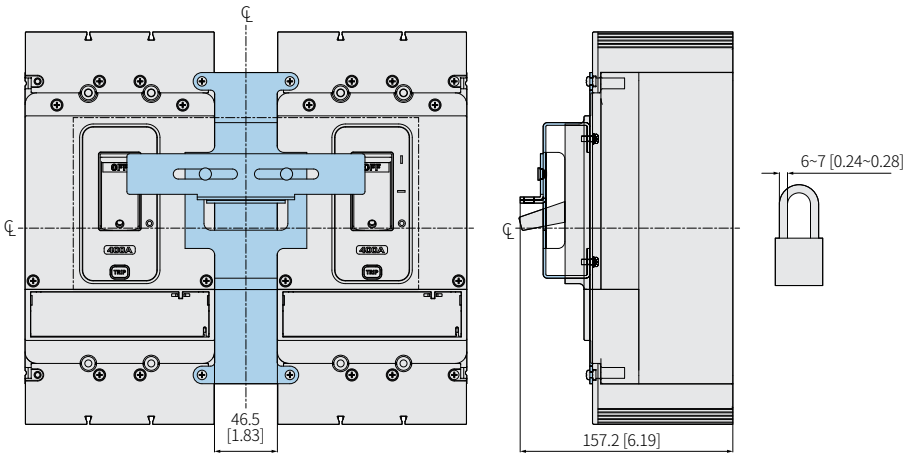


HGU400 2/3P
Mechanical interlock

MIF60GU

## External dimensions

Dimension: mm [inch]

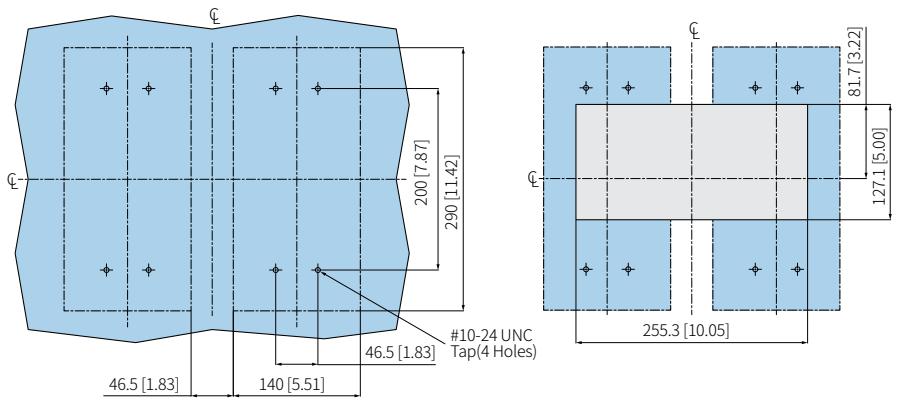



## Installation dimensions

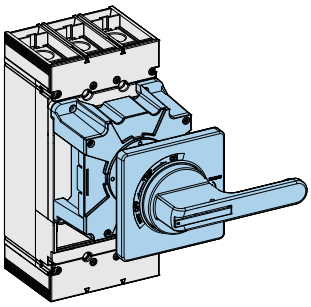
Dimension: mm [inch]

Backplate

Panel cover



# Dimensions HGU400 circuit breakers

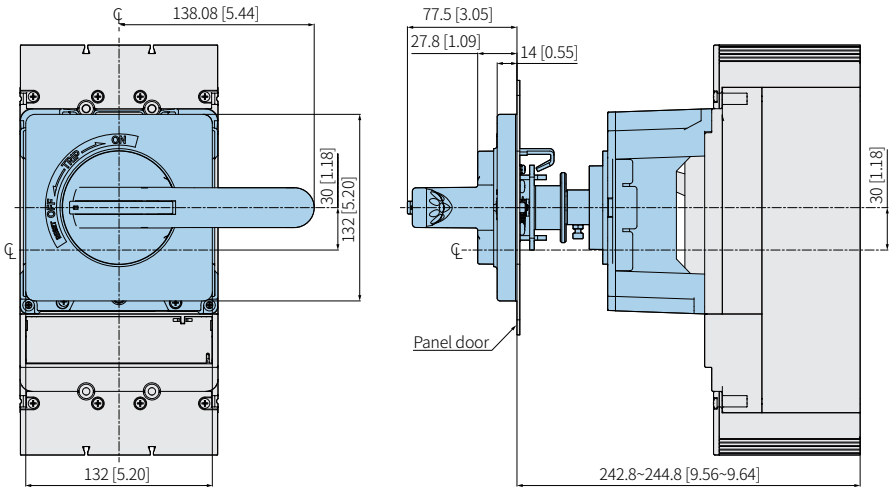


Rotary operating handle
Directly mounted

TFG60GU

## External dimensions

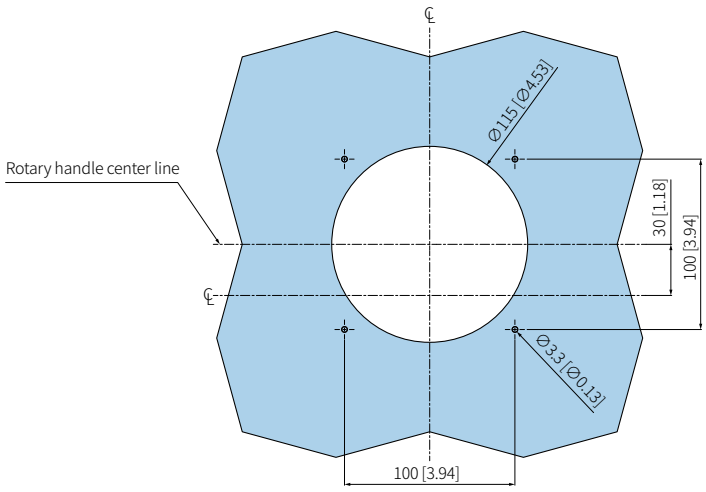
Dimension: mm [inch]



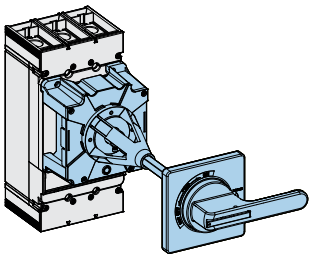

## Installation dimensions

Dimension: mm [inch]

Panel door




※ Please consider the external dimensions when mounting products in close proximity.

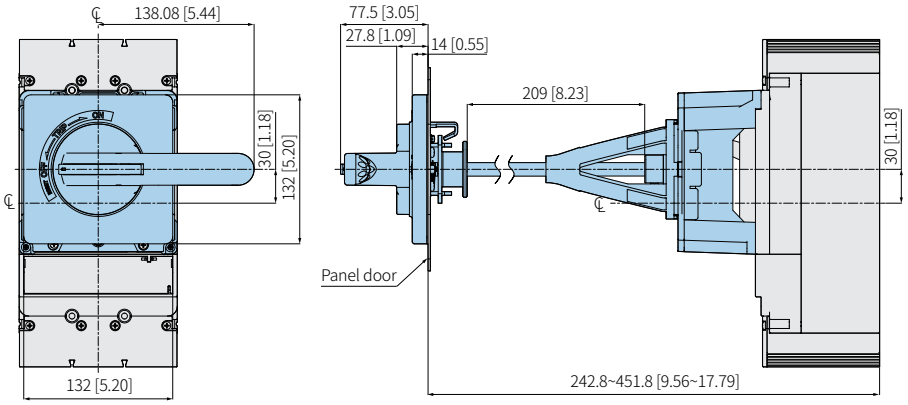


Rotary operating handle
Door-mounted

TFH60GU
TFH60GUX

## External dimensions

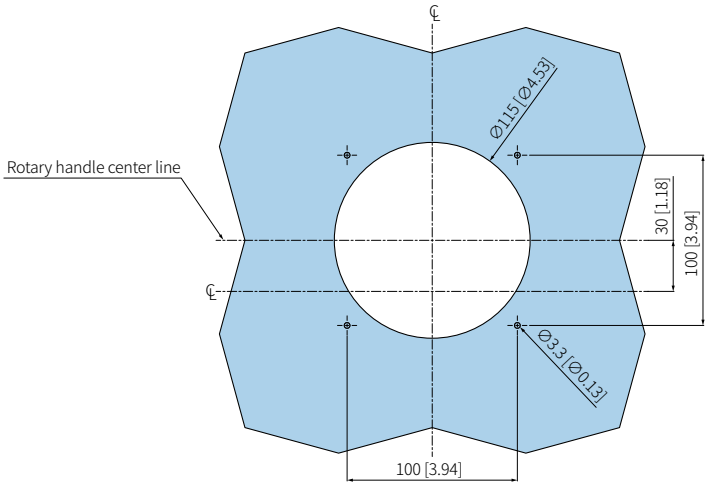
Dimension: mm [inch]




## Installation dimensions

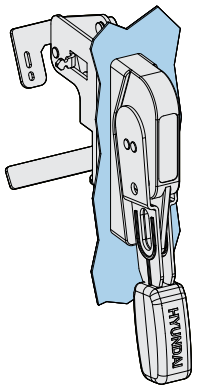
Dimension: mm [inch]

**Panel door**




※ Please consider the external dimensions when mounting products in close proximity.

# Dimensions HGU400 circuit breakers

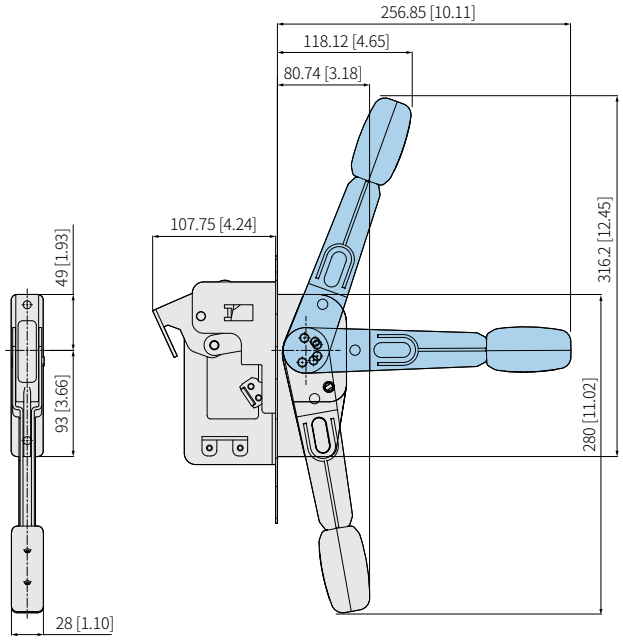


HGU400
Flange handle

FHPCL
FHNPL

## External dimensions

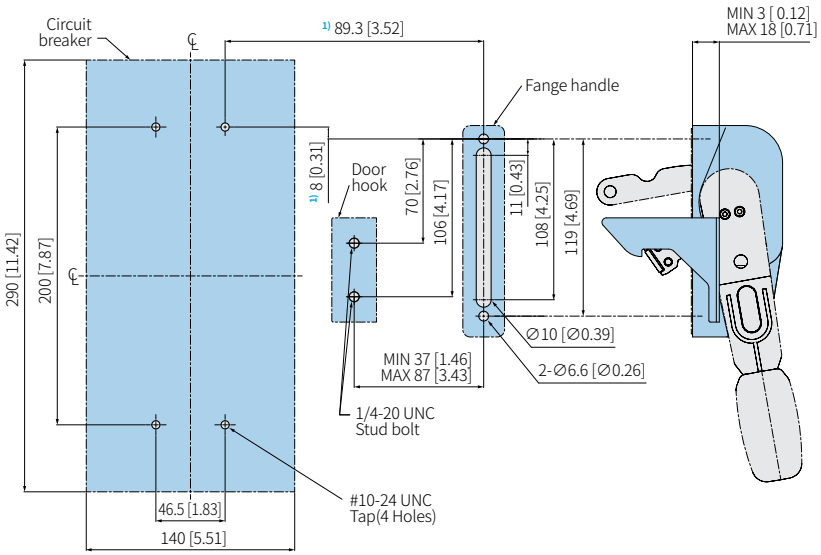
Dimension: mm [inch]




## Installation dimensions

Dimension: mm [inch]

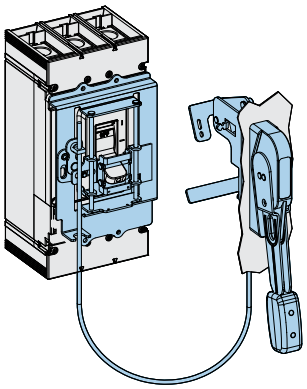
**Backplate** **Panel door**




※ 1) Applicable to variable depth type only.

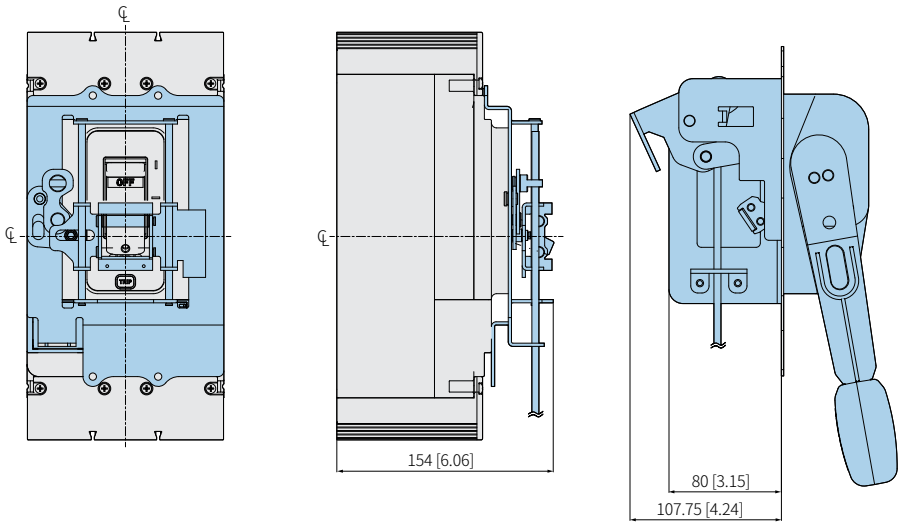
## External dimensions

Dimension: mm [inch]



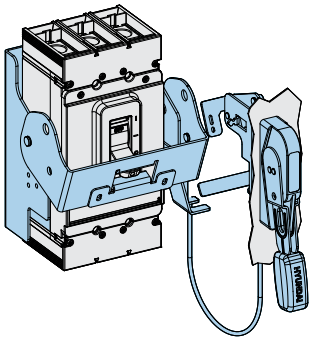
HGU400
Flange handle
Sliding operating
Mechanism

① FHPCS / FHNPS
+
② FSM60GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH



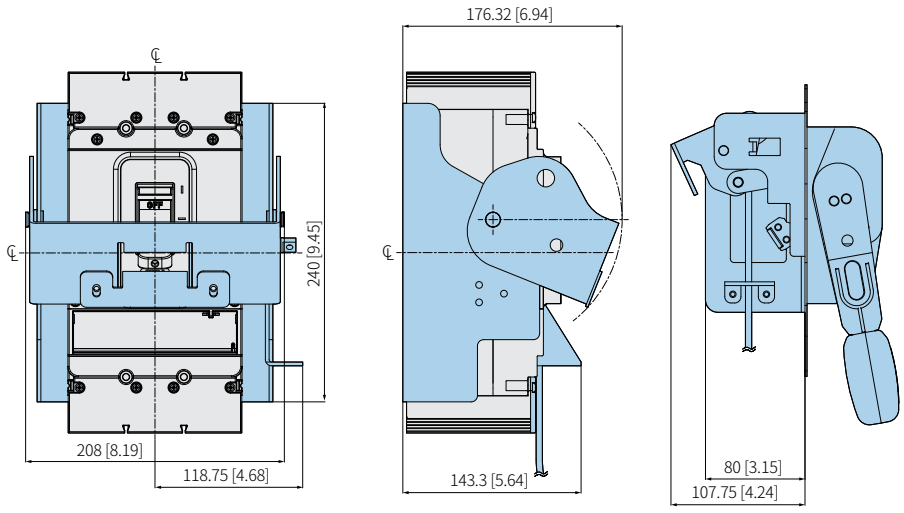

## External dimensions

Dimension: mm [inch]

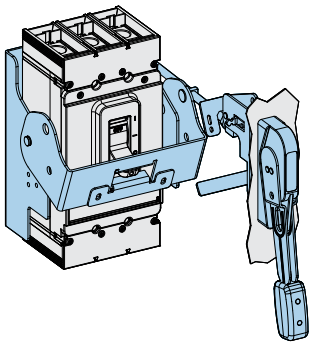


HGU400
Flange-mounted
Cable operating
Mechanism

① FHPCS / FHNPS
+
② FMB60GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH



# Dimensions HGU400 circuit breakers

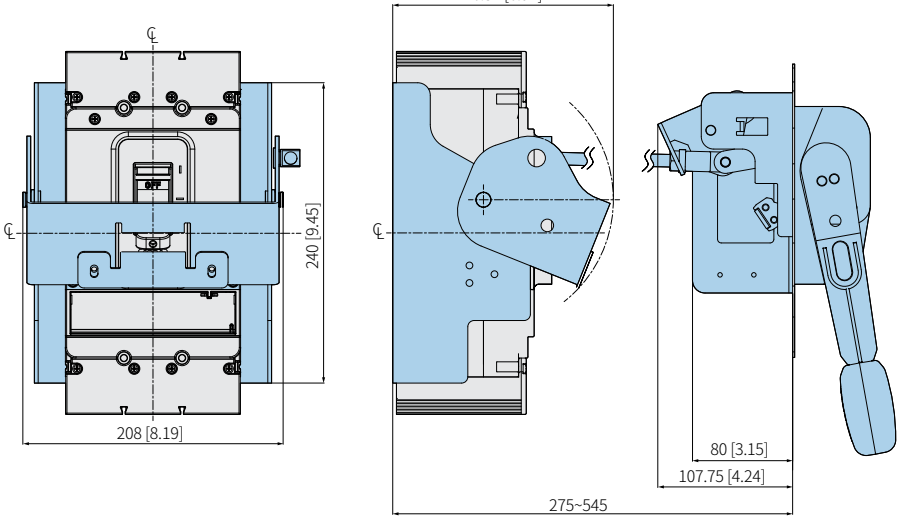


HGU400
Flange-mounted
Variable depth
Operating mechanism

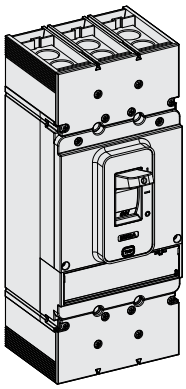
① FHPCS / FHNPS
+
② FMB60GU
+
③ ROD400MM

## External dimensions

Dimension: mm [inch]



# Dimensions HGU600 circuit breakers

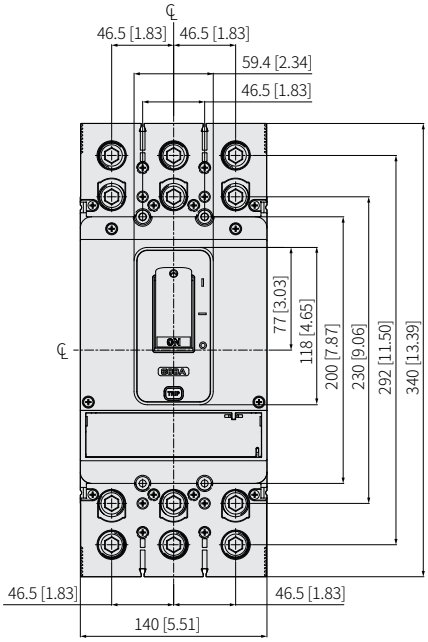


HGU600 2/3P
[Lug type]

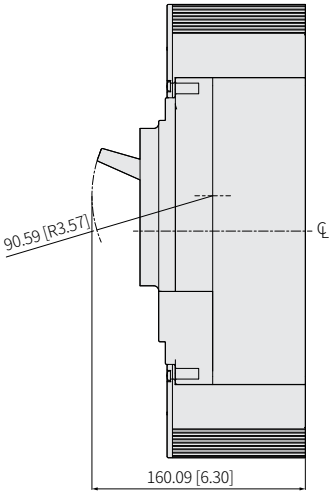
## External dimensions

Dimension: mm [inch]

2P/3P



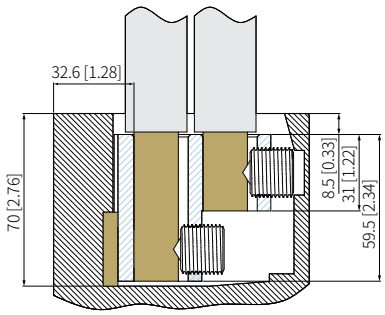

Side view

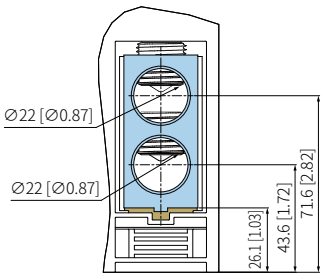



## External dimensions

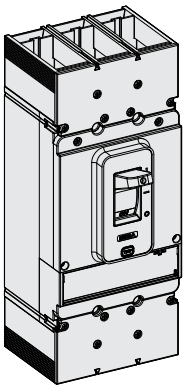
Dimension: mm [inch]

Connector(LUG)



# Dimensions HGU600 circuit breakers

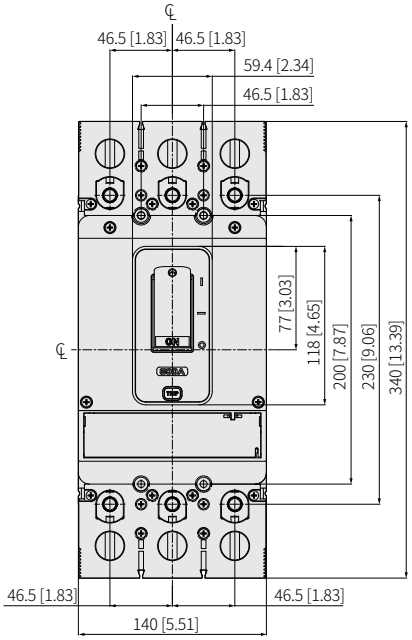


HGU600 2/3P
[Bolt on type]

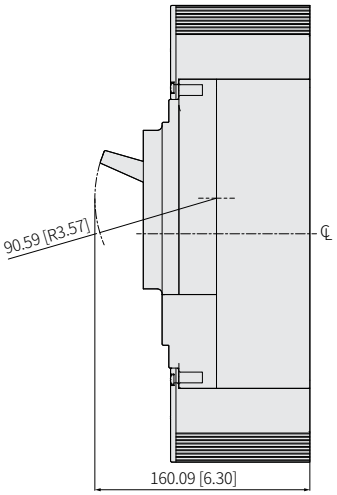
## External dimensions

Dimension: mm [inch]

2P/3P



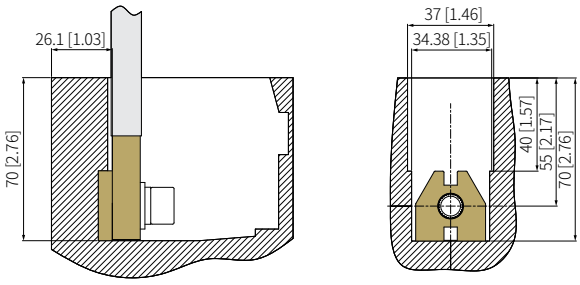

Side view



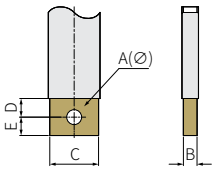

## External dimensions

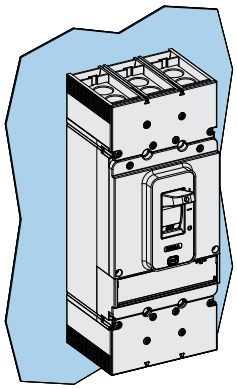
Dimension: mm [inch]

Connector(Bolt on)




| Dimension dimensiones | Length longitud longueur |
|---|---|
| A | 0.41 in<br>10.5 mm |
| B | 0.11-0.47 in<br>3-12 mm |
| C | 1.18 in<br>30 mm |
| D | 1.18 in<br>30 mm |
| E | 0.57 in<br>14.5 mm |



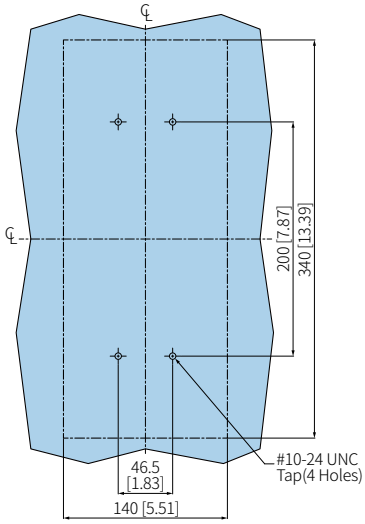


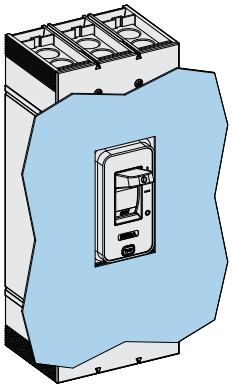
HGU600 2/3P

## Installation dimensions

Dimension: mm [inch]

Backplate



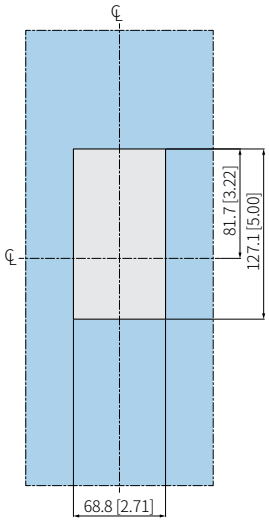



HGU600 2/3P

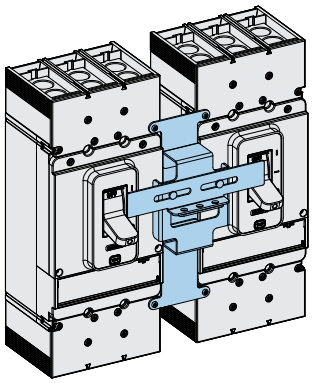
## Installation dimensions

Dimension: mm [inch]

Panel cover



# Dimensions HGU600 circuit breakers

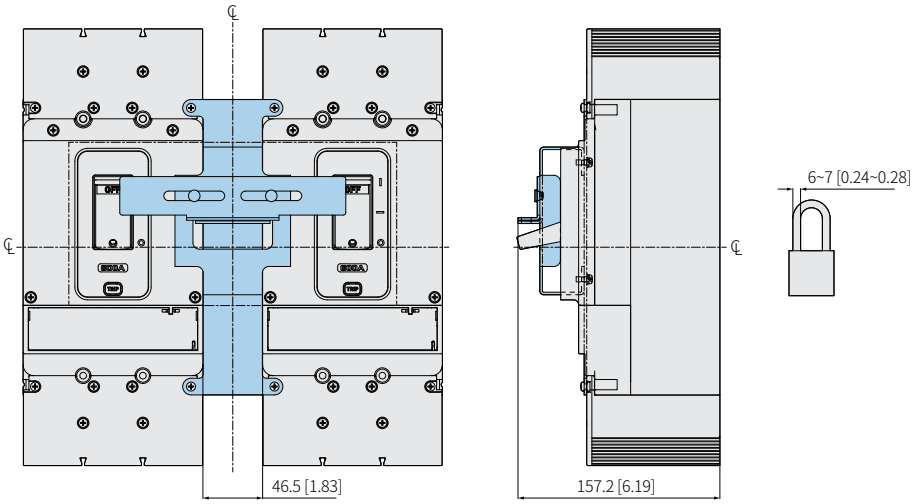


HGU600 2/3P
Mechanical interlock

MIF60GU

## External dimensions

Dimension: mm [inch]

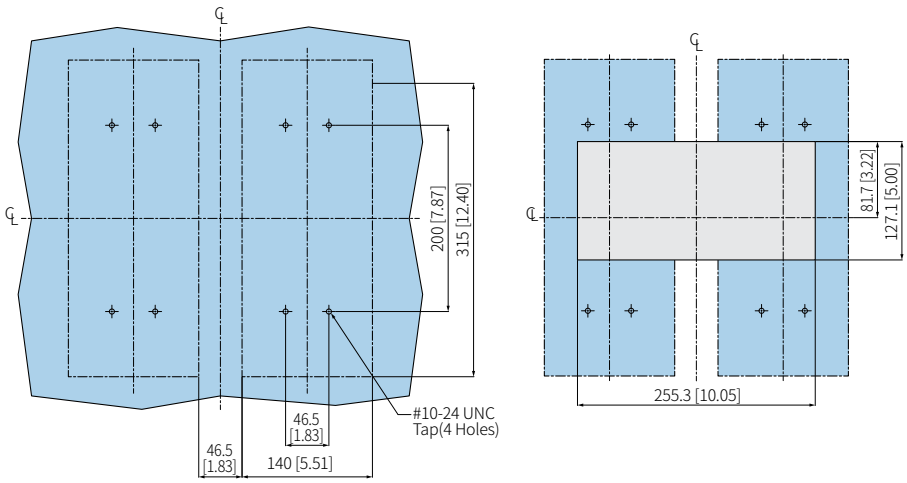


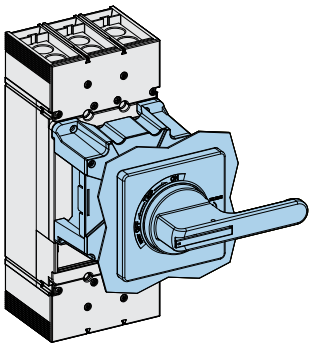

## Installation dimensions

Dimension: mm [inch]

Backplate

Panel cover



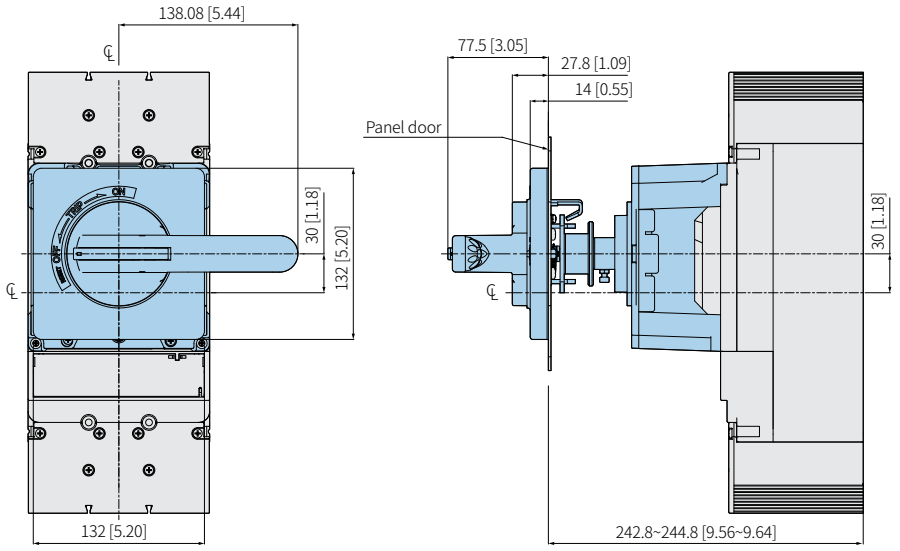


Rotary operating handle
Directly mounted

TFG60GU

## External dimensions

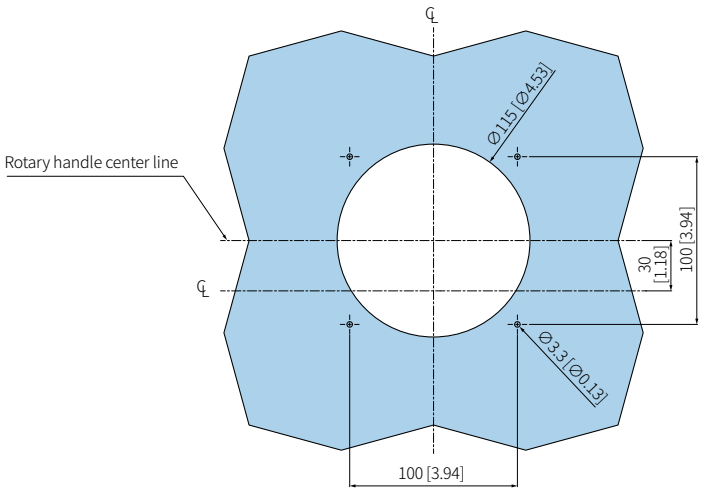
Dimension: mm [inch]




## Installation dimensions

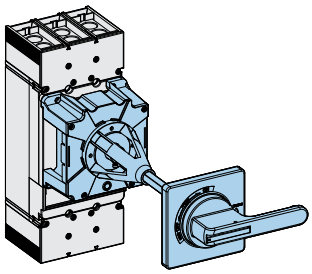
Dimension: mm [inch]

**Panel door**




※ Please consider the external dimensions when mounting products in close proximity.

# Dimensions HGU600 circuit breakers

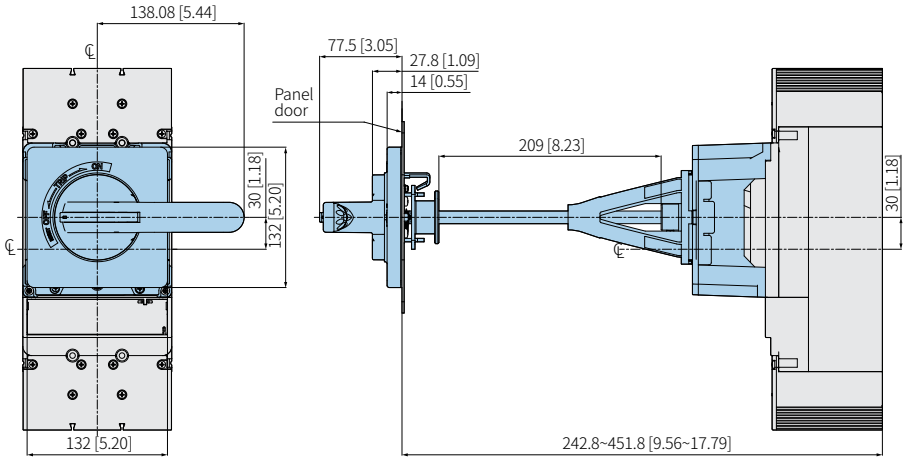


Rotary operating handle
Door-mounted

TFH60GU
TFH60GUX

## External dimensions

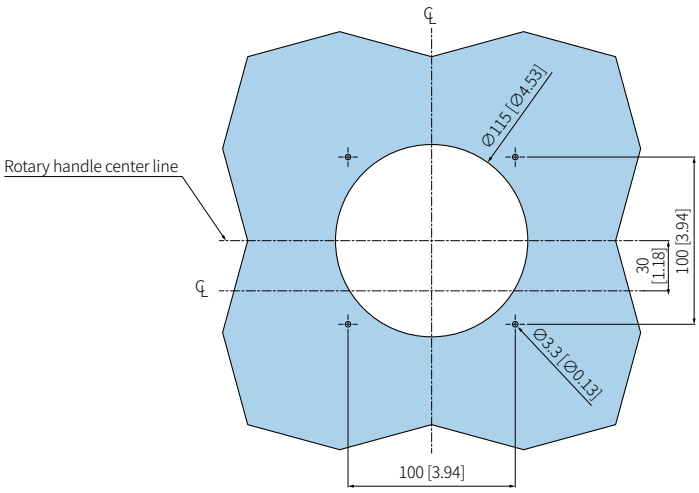
Dimension: mm [inch]



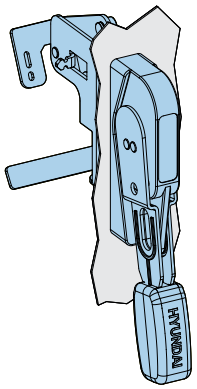

## Installation dimensions

Dimension: mm [inch]

**Panel door**




※ Please consider the external dimensions when mounting products in close proximity.

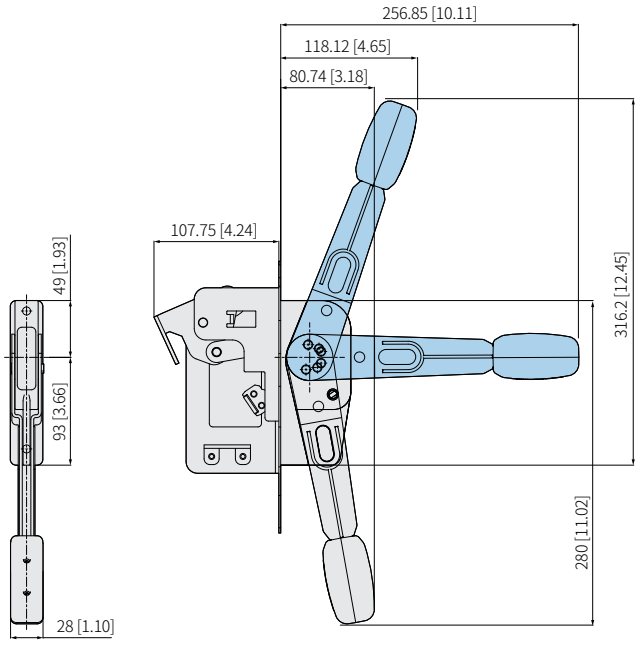


HGU600
Flange handle

FHPCL
FHNPL

## External dimensions

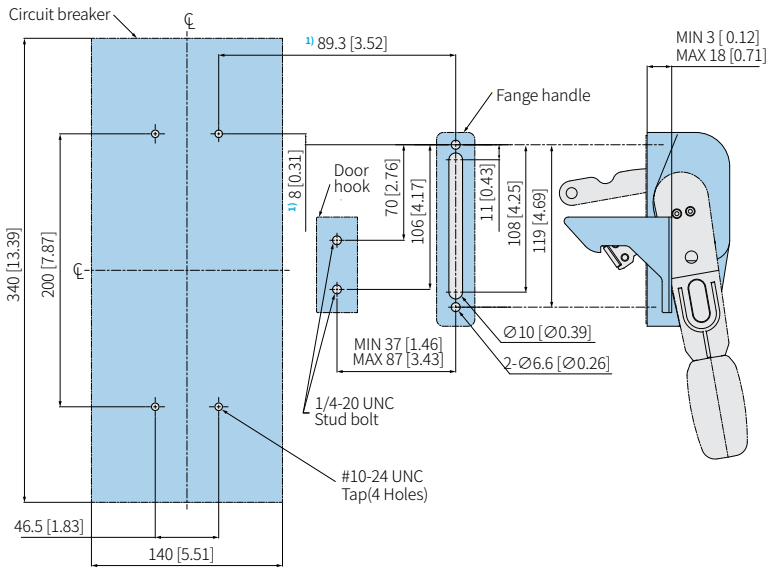
Dimension: mm [inch]




## Installation dimensions

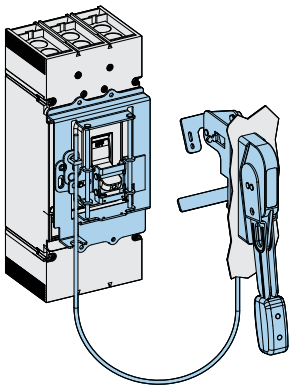
Dimension: mm [inch]

**Backplate** **Panel door**




※ 1) Applicable to variable depth type only.

# Dimensions HGU600 circuit breakers

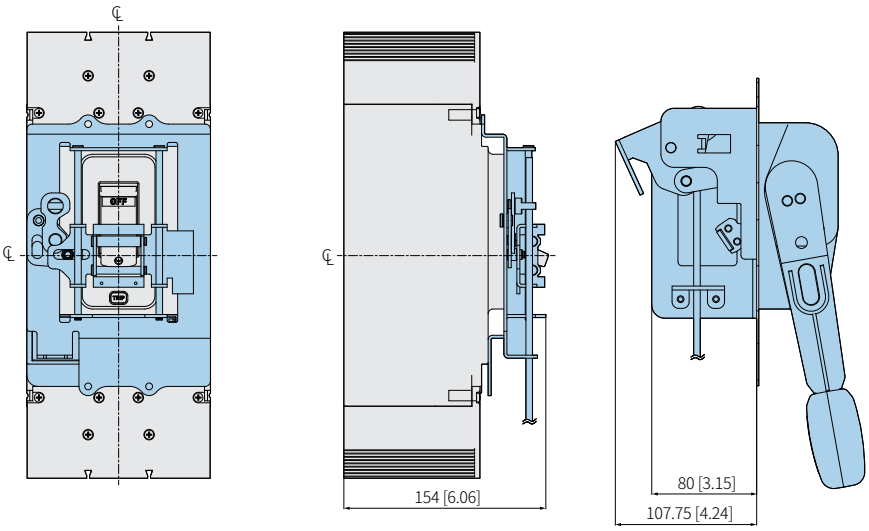


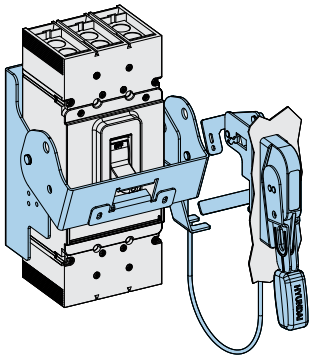
HGU600
Flange handle
Sliding operating
Mechanism

① FHPCS / FHNPS
+
② FSM60GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH

## External dimensions

Dimension: mm [inch]



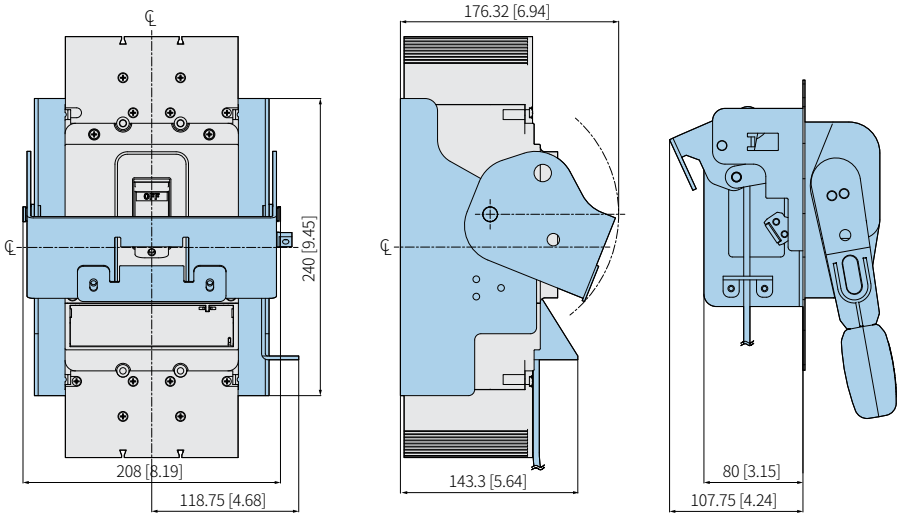



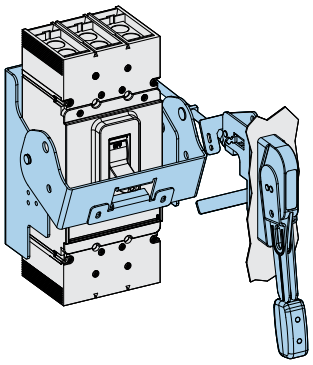
HGU600
Flange-mounted
Cable operating
Mechanism

① FHPCS / FHNPS
+
② FMB60GU
+
③ CBL30INCH / CBL48INCH
CBL60INCH / CBL72INCH

## External dimensions

Dimension: mm [inch]



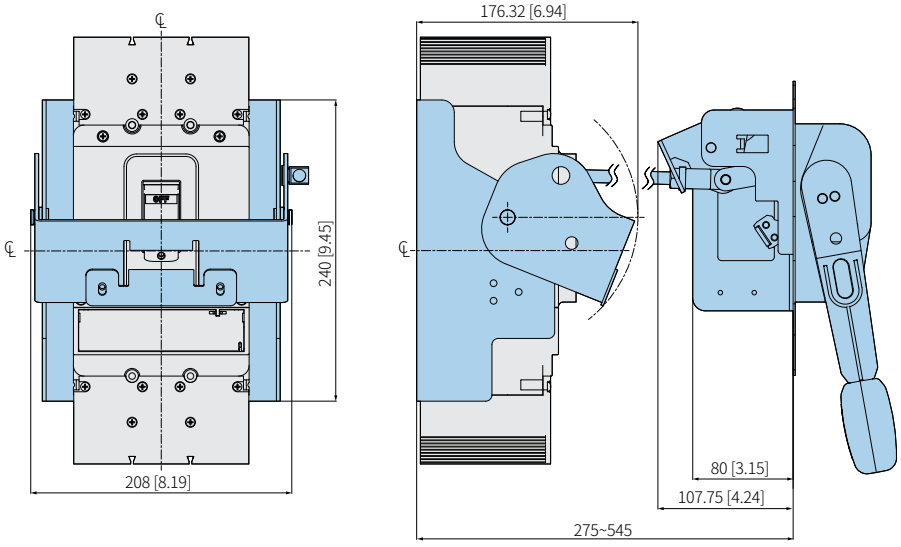


HGU600
Flange-mounted
Variable depth
Operating mechanism

① FHPCS / FHNPS
+
② FMB60GU
+
③ ROD400MM

## External dimensions

Dimension: mm [inch]



Essential for Today
Potential for Tomorrow

HD HYUNDAI ELECTRIC

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