Leading Innovation, Creating Tomorrow

Meta-MEC

# Low Voltage Circuit Breakers




Electric Equipment








LS Industrial Systems

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# Adjustable MCCBs

## AB-G type adjustable MCCBs up to 250A



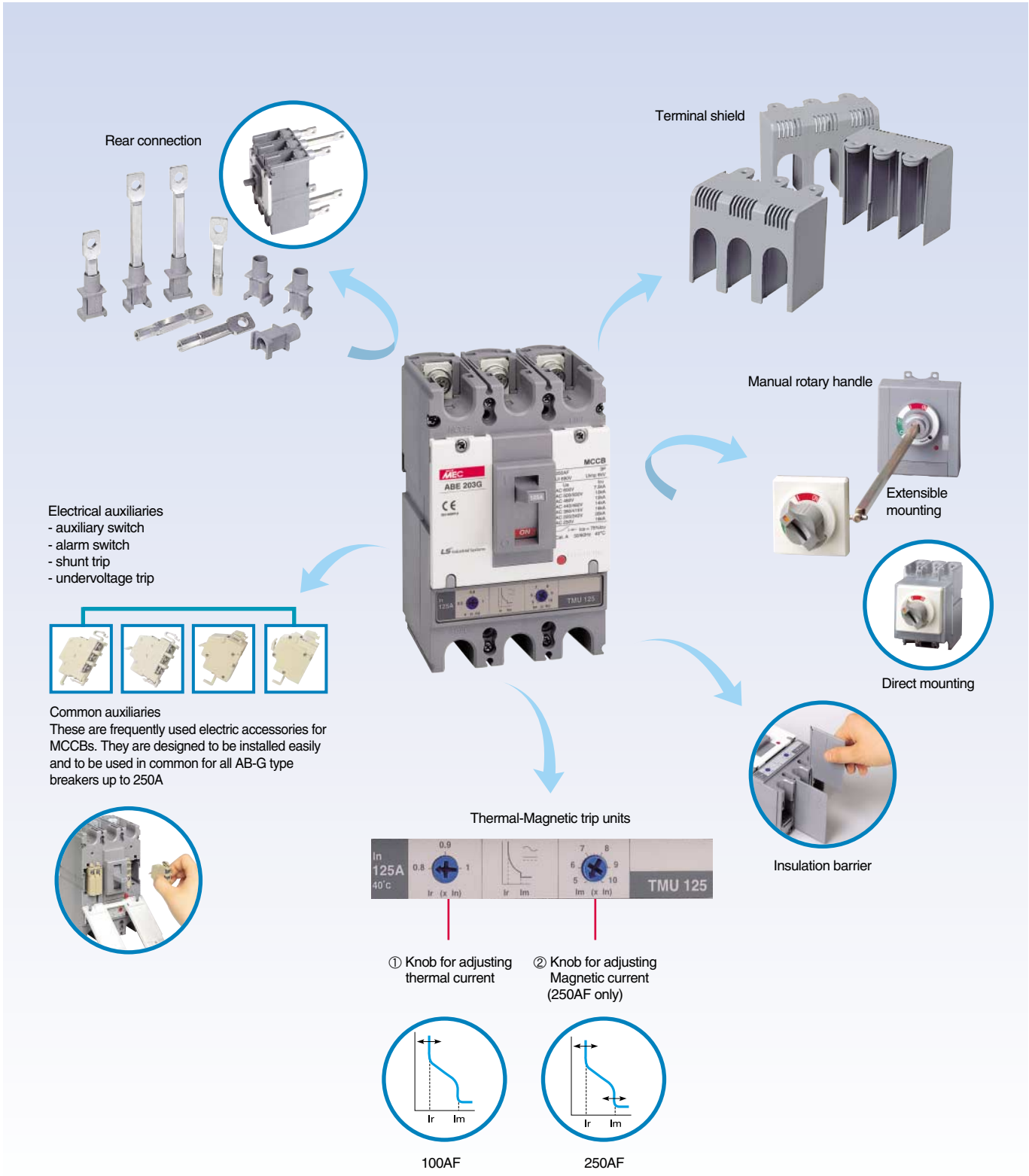

100AF

250AF

### Suitable for use in the system where common fault currents

- Interrupting capacify...16 and 25kA
- Employing a adjustable trip unit
- Current adjustments are made by knobs on the front of the trip unit
- Electric auxiliaries are common use up to 250 amperes

# Accessories

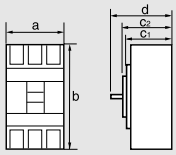


# Adjustable MCCBs

## Ratings

### 100AF

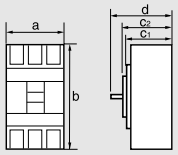


| Frame size | | | 100AF | | | |
|---|---|---|---|---|---|---|
| Type and Pole | | | ABE | | ABS | |
| | | 3-pole | ABE103G | | ABS103G | |
| | | 4-pole | ABE104G | | ABS104G | |
| Rated current, In | | | 16, 20, 25, 32, 40, 50, 63, 80, 100A<br>Thermally adjustable : (0.8-0.9-1.0) × In | | | |
| Rated operational voltage, Ue | | | AC : 600V | | | |
| | | | DC : 250V | | | |
| Rated insulation voltage, Ui | | | 690V | | | |
| Rated impulse withstand voltage, Uimp | | | 6kV | | | |
| Rated short-circuit breaking capacity, Icu | AC | 600V | 7.5kA | | 10kA | |
| IEC60947-2(Icu) | | 500/550V | 10kA | | 12kA | |
| Ics=75%Icu | | 480V | 12kA | | 14kA | |
| | | 440/460V | 14kA | | 22kA | |
| | | 380/415V | 16kA | | 25kA | |
| | | 220/240V | 35kA | | 50kA | |
| | DC | 250V | 10kA | | 14kA | |
| | | 125V | - | | - | |
| Protective function | | | Overload, Short-circuit | | | |
| Type of trip unit | | | Thermal-Magnetic | | | |
| Magnetic trip range | | | 10 × In (fixed ) | | | |
| Endurance | Mechanical | | 20000 operations | | | |
| | Electrical | | 10000 operations | | | |
| Connection | Standard | | Front connection | | | |
| | Optional | | Rear connection | | | |
| Mounting | Standard | | Screw fixing | | | |
| Dimensions(mm) | Pole | | 3p | 4p | 3p | 4p |
|  | a | | 90 | 120 | 90 | 120 |
| | b | | 140 | | 140 | |
| | c1 * | | 79 | | 79 | |
| | c2 * | | 86 | | 86 | |
| | d | | 115 | | 115 | |
| Weight, kg | Standard | | 1.2 | 1.5 | 1.2 | 1.5 |
| Certification | CE marking | | O | | O | |
| | KEMA | | O | | O | |

* Depth by door cut size : C1 for large cut, C2 for small cut

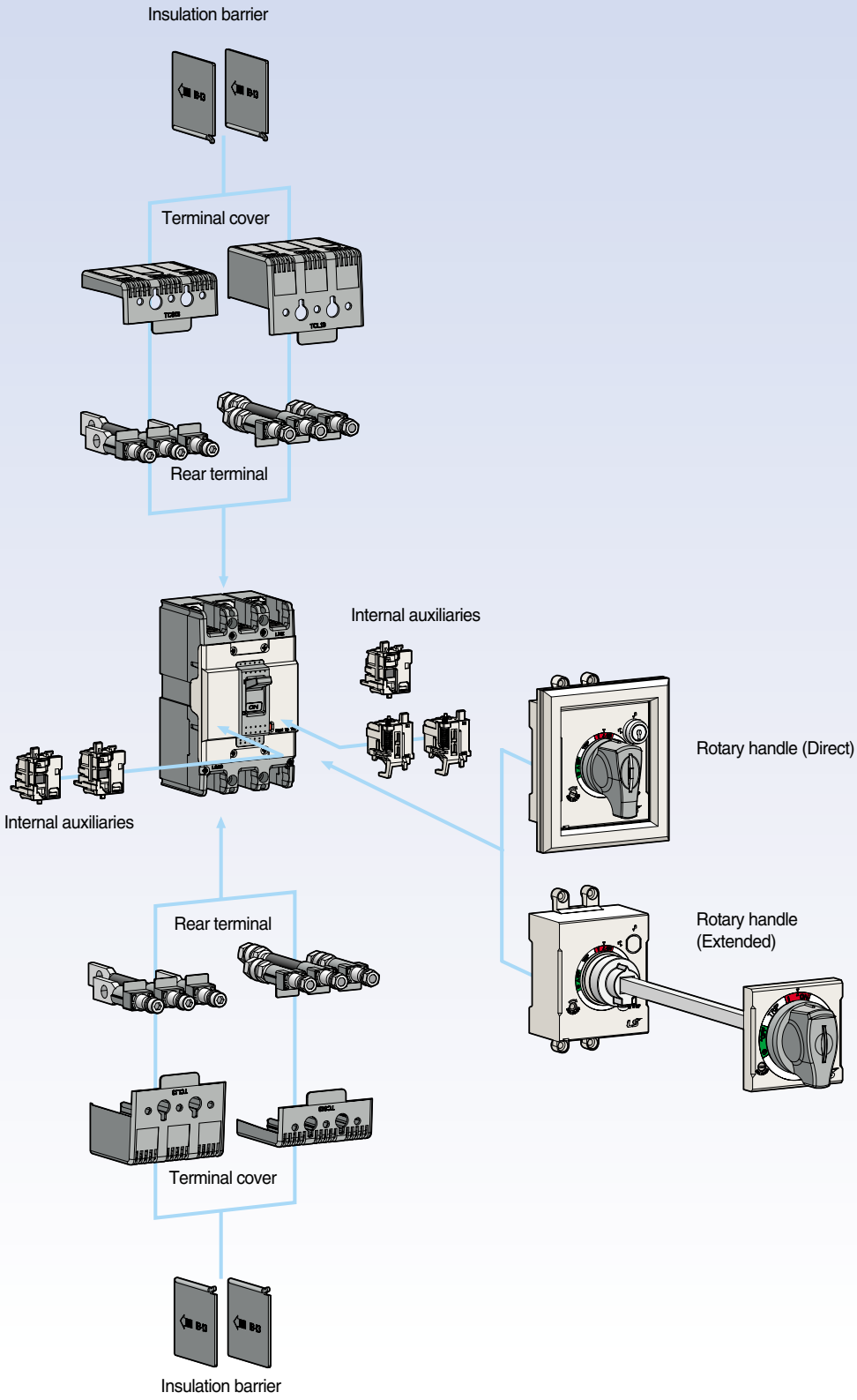
# 250AF



| Frame size | | | 250AF | | | |
|---|---|---|---|---|---|---|
| Type and Pole | | | ABE | | ABS | |
| | | 3-pole | ABE203G | | ABS203G | |
| | | 4-pole | ABE204G | | ABS204G | |
| Rated current, In | | | 125,160,200,250A<br>Thermally adjustable : (0.8-0.9-1.0) × In | | | |
| Rated operational voltage, Ue | | | AC : 600V<br>DC : 250V | | | |
| Rated insulation voltage, Ui | | | 690V | | | |
| Rated impulse withstand voltage, Uimp | | | 6kV | | | |
| Rated short-circuit breaking capacity, Icu | AC | 600V | 7.5kA | | 10kA | |
| IEC60947-2(Icu) | | 500/550V | 10kA | | 12kA | |
| Ics=75%Icu | | 480V | 12kA | | 14kA | |
| | | 440/460V | 14kA | | 22kA | |
| | | 380/415V | 16kA | | 25kA | |
| | | 220/240V | 35kA | | 50kA | |
| | DC | 250V | 10kA | | 14kA | |
| | | 125V | - | | - | |
| Protective function | | | Overload, Short-circuit | | | |
| Type of trip unit | | | Thermal-Magnetic | | | |
| Magnetic trip range | | | (5, 6, 7, 8, 9, 10)×In | | | |
| Endurance | Mechanical | | 10000 operations | | | |
| | Electrical | | 5000 operations | | | |
| Connection | Standard | | Front connection | | | |
| | Optional | | Rear connection | | | |
| Mounting | Standard | | Screw fixing | | | |
| Dimensions(mm) | Pole | | 3p | 4p | 3p | 4p |
|  | a | | 105 | 140 | 105 | 140 |
| | b | | 165 | | 165 | |
| | c1 * | | 79 | | 79 | |
| | c2 * | | 86 | | 86 | |
| | d | | 116 | | 116 | |
| Weight, kg | Standard | | 1.7 | 2.1 | 1.7 | 2.1 |
| Certification | CE marking | | O | | O | |
| | KEMA | | O | | O | |

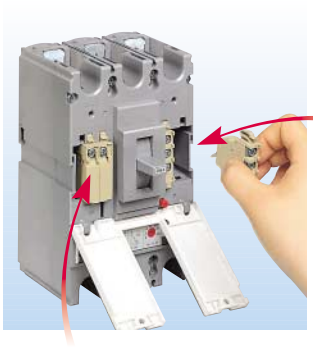
* Depth by door cut size : C1 for large cut, C2 for small cut

## Accessories



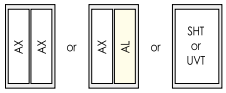
## Auxiliary switch, Alarm switch
## Shunt trip, Undervoltage trip

Common use for AB-G type breakers up to 250Amp.

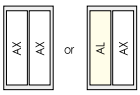



**Maximum possibilities**

**Left-hand seat**
Option of connecting 2AX or AX+AL or SHT or UVT

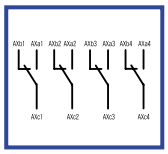



**Right-hand seat**
Option of connecting 2AX or AL+AX

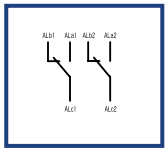




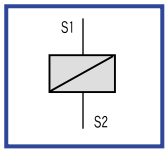
Auxiliary switch, AX




Alarm switch, AL

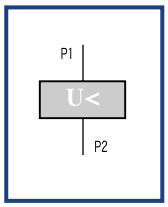



Shunt trip, SHT





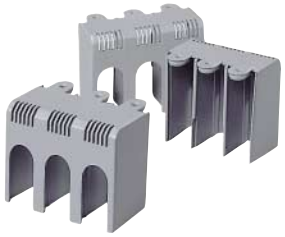
Under voltage trip, UVT




**Model**

| | |
|---|---|
| | **Auxiliary switch, AX** |
| | Signals the contact position of the breaker |
| | - opening by manual or fault |
| | - closing |
| | Consists of one change over switch per unit |
| **AX1G250** | 1 auxiliary switch (1NO+NC) |
| | **Alarm switch, AL** |
| | Signals the contact position of the breaker |
| | - tripping by manual or fault |
| | - not operated by normal opening or closing of a breaker Consists of one change over switch |
| **AL1G250** | 1 alarm switch (1NO+NC) |
| | **Shunt trip, SHT** |
| | Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied. This unit is fitted into the left-hand seat of a handle. |
| **ST12CG250** | For 12V AC/DC common use |
| **ST24CG250** | For 24V AC/DC common use |
| **ST48CG250** | For 48V AC/DC common use |
| **ST60CG250** | For 60V AC/DC common use |
| **ST100CG250** | For 100~125VAC / 100~110VDC |
| **ST200CG250** | For 200~240VAC / 200~220VDC |
| **ST250CG250** | For 250V AC/DC common use |
| **ST380AG250** | For 380~450V AC |
| **ST440AG250** | For 440~480V AC |
| **ST500AG250** | For 500~550V AC |
| **ST125DG250** | For 125V DC |
| **ST240DG250** | For 240V DC |
| | **Under voltage trip, UVT** |
| | Trips the breaker when control voltage disappears or falls. This unit is fitted into the left-hand seat of a handle. |
| **UV24CG250** | For 24V AC/DC common use |
| **UV48CG250** | For 48V AC/DC common use |
| **UV100CG250** | For 100~110V AC/DC common use |
| **UV200CG250** | For 200~220V AC/DC common use |
| **UV380AG250** | For 380~440V AC |
| **UV440AG250** | For 440~480V AC |

## External accessories



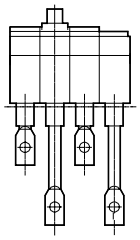
Terminal shield



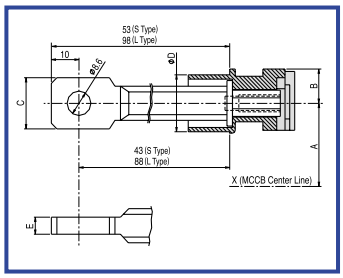
Insulation barriers



Rear connection kits



Bar type




## Insulation barriers
## Terminal shields
## Rear connection kits

| Model | |
|---|---|
| | **Insulation barriers** |
| | These are partitions for the insulation between the phases. |
| | Barriers for the line side of the breaker are supplied as standard. |
| | Barriers for the load side are optional. |
| | Common use for all AB-G type breakers up to 250Amp. |
| IBG250 | One(1) barrier |
| | **Terminal shields** |
| | These are applied to the line/load side of the breaker to prevent |
| | accidental contact with live parts. |
| | Different by breaker dimensions. |
| | Use 3pole shield for 2pole breakers |
| TB-13T | Long type shield for 3-p, 100AF |
| TB-14T | Long type shield for 4-p, 100AF |
| TBS-13T | Short type shield for 3-p, 100AF |
| TBS-14T | Short type shield for 4-p, 100AF |
| TB-23T | Long type shield for 3-p, 250AF |
| TB-24T | Long type shield for 4-p, 250AF |
| TBS-23T | Short type shield for 3-p, 250AF |
| TBS-24T | Short type shield for 4-p, 250AF |
| | **Rear connection kits ... Bar type** |
| X-103 | one set for 3-p, 100AF |
| X-104 | one set for 4-p, 100AF |
| X-203 | one set for 3-p, 250AF |
| X-204 | one set for 4-p, 250AF |

# Manual rotary handles

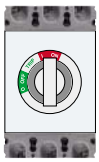


Direct mounting type



Extensible mounting type

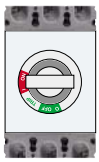
| Model | |
|---|---|
| | **Direct mounting** |
| | *Applicable for 100AF* |
| D-30S | Vertical type |
| D-30L | Horizontal (ON in left-hand) type |
| D-30R | Horizontal (ON in right-hand) type |
| | *Applicable for 250AF* |
| D-60S | Vertical type |
| D-60L | Horizontal (ON in left-hand) type |
| D-60R | Horizontal (ON in right-hand) type |
| | **Extensible mounting** |
| | *Applicable for 100AF* |
| E-30S | Vertical type |
| E-30L | Horizontal (ON in left-hand) type |
| E-30R | Horizontal (ON in right-hand) type |
| | *Applicable for 250AF* |
| E-60S | Vertical type |
| E-60L | Horizontal (ON in right-hand) type |
| E-60R | Horizontal (ON in right-hand) type |



Vertical type



Horizontal type
ON in right-hand



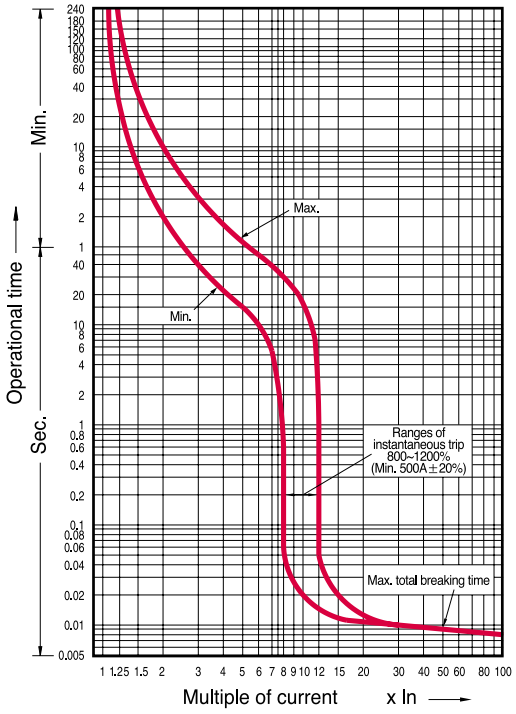
Horizontal type
ON in left-hand

# Adjustable MCCBs

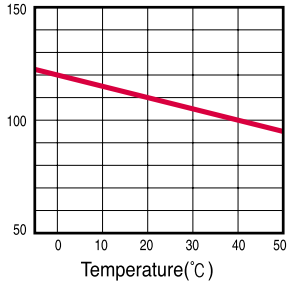
## Oprating curves

**ABE103G**
**ABE104G**
**ABS103G**
**ABS104G**

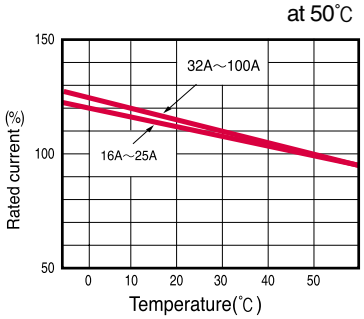
Operating curves




Compensation curves

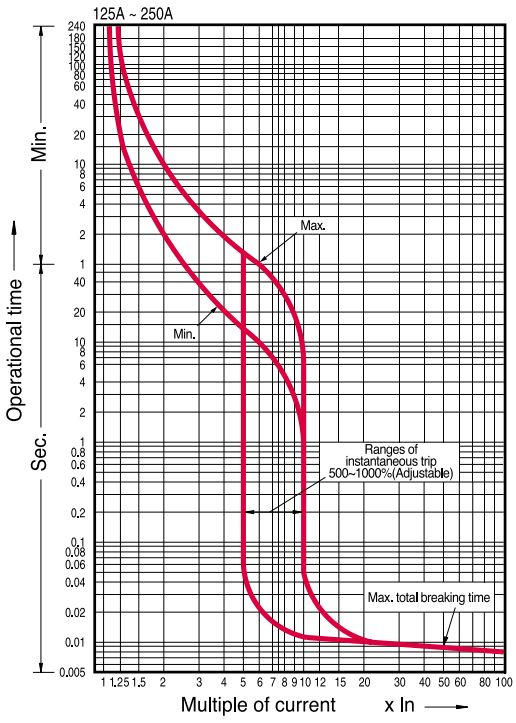



at 50℃

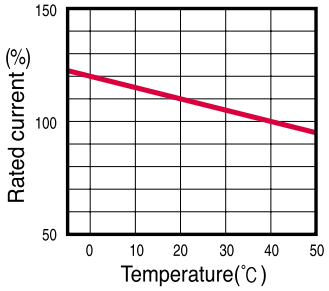



**ABE203G**
**ABE204G**
**ABS203G**
**ABS204G**

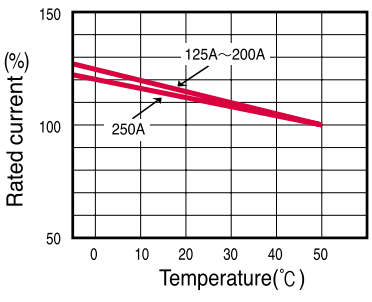
Operating curves




Compensation curves

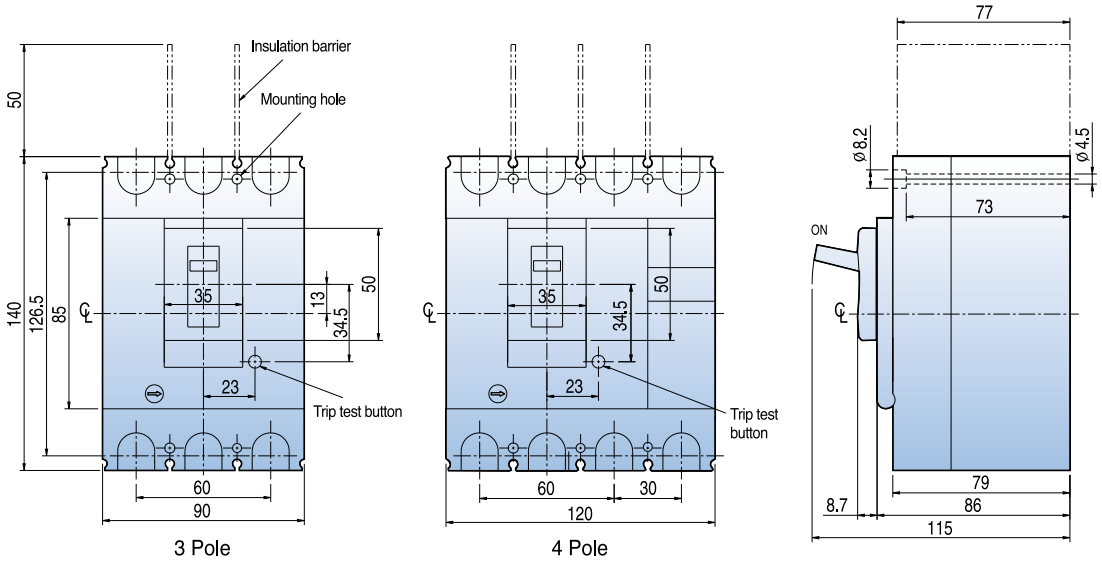



125A~250A at 50℃

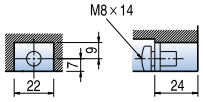


# Dimensions

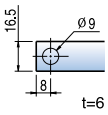
**ABE103G**
**ABE104G**
**ABS103G**
**ABS104G**



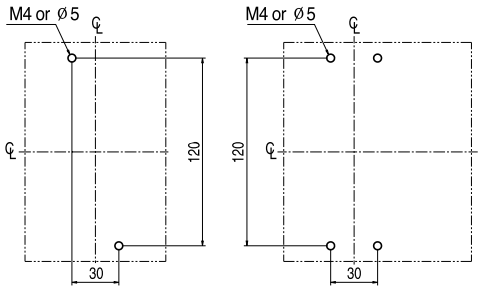

Detailed terminal



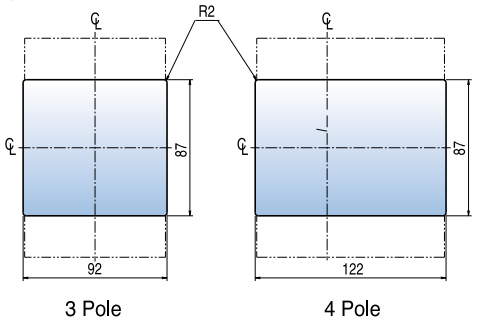

Hole size of a conductor




Mounting



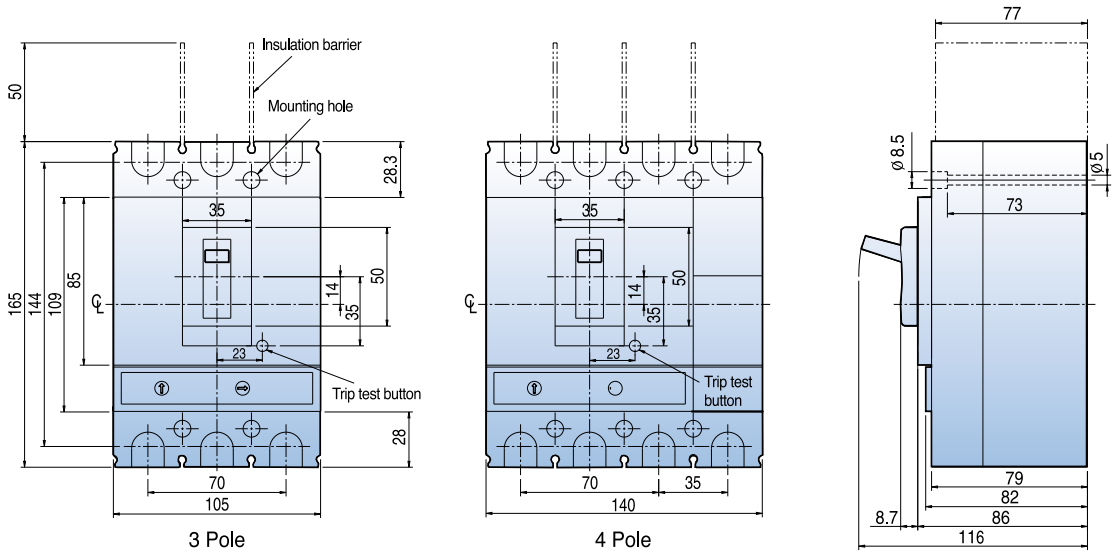

Slot



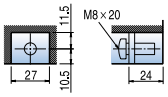
# Adjustable MCCBs

## Dimensions

ABE203G
ABE204G
ABS203G
ABS204G



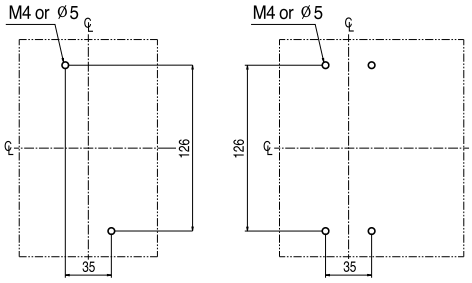

Detailed terminal



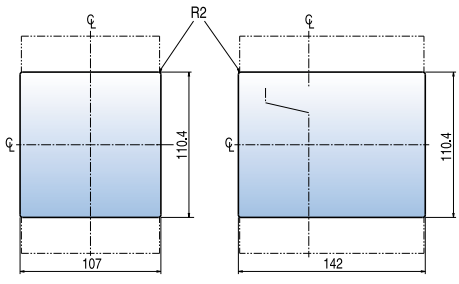
Hole size of a conductor



Mounting




Slot



# Memo

# Memo

Leading Innovation, Creating Tomorrow



Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact qualified service technician when you need maintenance.
  Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.

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# LS Industrial Systems Co., Ltd.

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## CHEONG-JU PLANT

Cheong-Ju Plant #1, Song Jung Dong, Hung Duk Ku,
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Specifications in this catalog are subject to change without notice due to continuous product development and improvement.

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