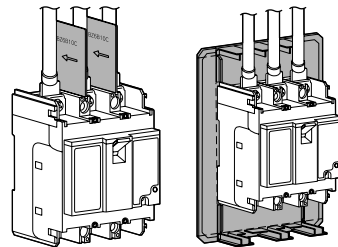


Variation of external accessory

Insulation barriers

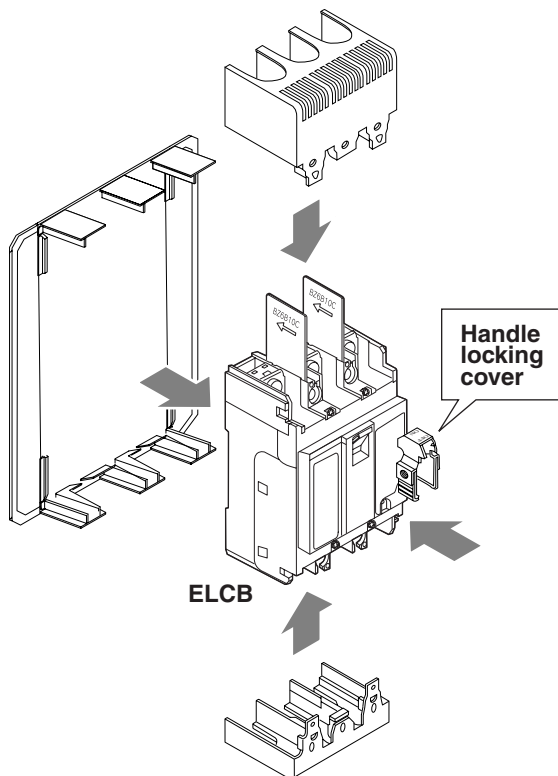
The interphase barrier reinforces the insulation between terminals, while the earth barrier increases the insulation between the terminal and the mounting panel.

See page 07/106



Interface barrier

Earth barrier



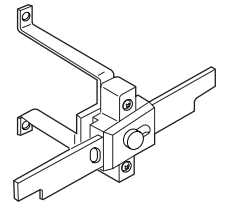
ELCB

Handle locking cover

Mechanical interlock device

The mechanical interlock device can be mounted onto two separate breakers to maintain a mutual ON or OFF condition. The device can also be locked with a padlock.

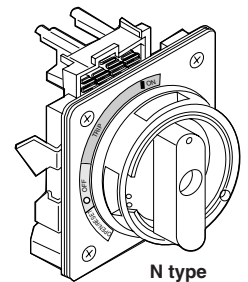
See page 07/88



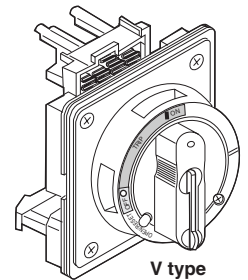
External operating handles

There are two handles available in the series: the V type handle on panel mount and the N type handle on breaker mount. An extension shaft (sold separately) for the V type handle allows the distance between the handle and the breaker to be adjusted. The protective structure of the V type handle operation section conforms to IP54. Both handle types can be locked with a padlock conforming to IEC 60204-1. The panel cutout dimensions are the same for both handles.

See page 07/91



N type

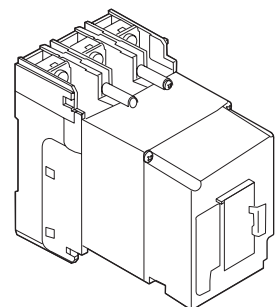


V type

Motor-operating mechanism

A new drive structure in the motor operating mechanism speeds up drive operation to drastically reduce ON/OFF switching time from 2s to 0.1s.

See page 07/85

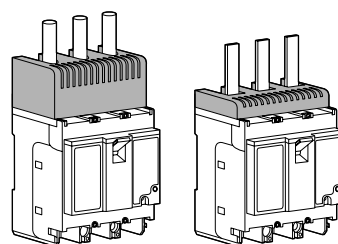


Terminal covers

Finger protection guards against shock from accidentally touching live terminals.

Two types of terminal covers are available—long type and short type.

See page 07/105



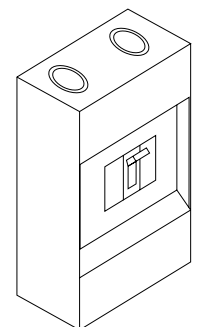
Long type

Short type

Steel enclosures

Enclosures are available in three types—two with V-type handle which allows the operation from the outside, and other direct operating.

See page 07/103



Motor-operated breakers

■ **Description**

The breaker is fitted with a motor operating mechanism which enables ON, OFF and RESET operations to be carried out electronically by remote control.
 4-pole motor operated breakers are also available.



■ **Types and ratings**

SG series	EG series	Motor rating			Power source capacity
		Operating voltage	Operating time	Time rating	
SG33C/M SG53C/M, 53RC/M SG63C/M, 63RC/M	EG33AC/M, 33C/M EG53AC/M, 53C/M EG63C/M EG102C/M, 103AC/M, 103C/M	100V DC 100/110V AC 200/220V AC	0.1s	15s per on-off operation	500VA
SG103C/M SG103RC/M		24V DC 48V DC 100V DC 100/110V AC 200/220V AC	2s	30s	50VA
SG203C/M SG203RC/M	EG203C/M		2.5s	30s	50VA
SG403C/M SG403RC/M SG603RC/M SG803RC/M	EG403C/M EG603C/M EG803C/M	100/110V DC 100/110V AC 200/220V AC	2s	30s	100VA at 100/110V DC, 100/110V AC 200VA at 200/220V AC

07

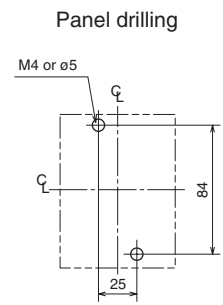
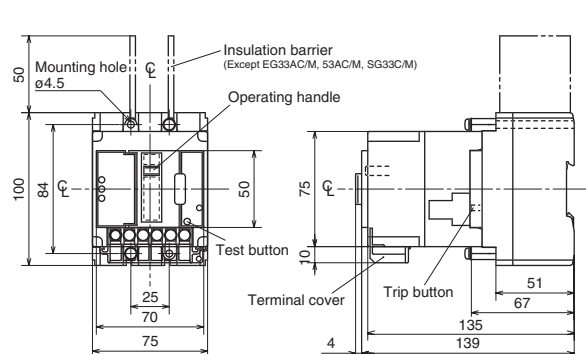
■ **Ordering information**

Specify the following:

1. Type number
2. Motor operating voltage

■ **Dimensions, mm / Front mounting, front connection**

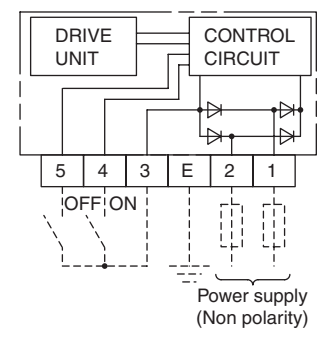
SG33C/M, SG53C/M, SG53RC/M, SG63C/M, SG63RC/M
 EG33AC/M, EG33C/M, EG53AC/M, EG53C/M, EG63C/M, EG102C/M, EG103C/M



Notes: • Trip button operation can be carried out at right side of the breaker.
 • IEC 35mm rail is not available.

■ **Wiring diagrams**

100/110V AC, 200/220V AC, 100V DC



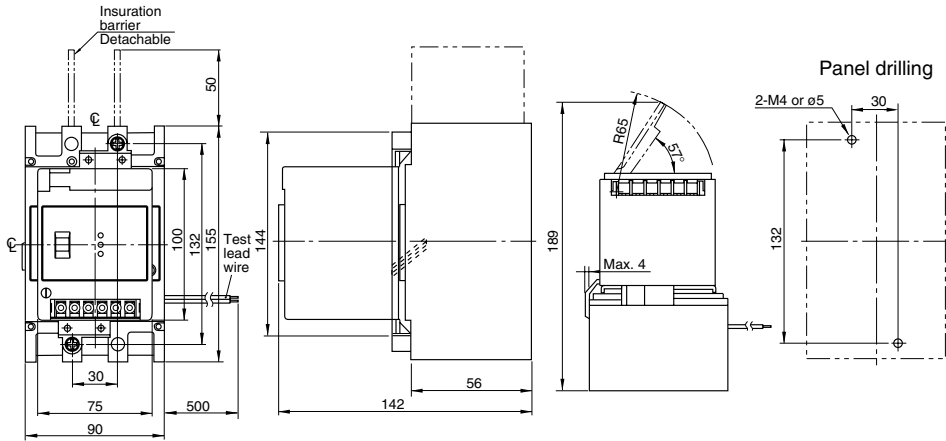
Earth Leakage Circuit Breakers

External accessories

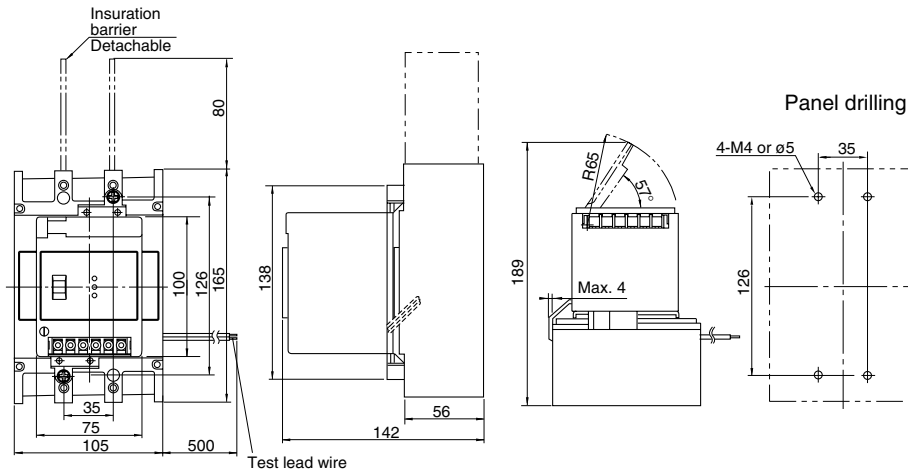
Motor-operated breakers

■ Dimensions, mm / Front mounting, front connection

SG103RC/M, SG103C/M



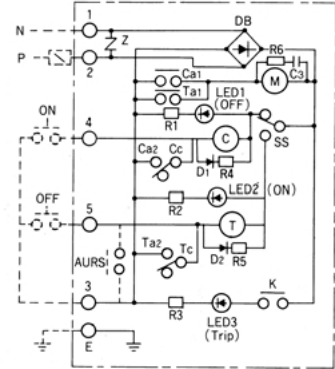
SG203C/M, SG203RC/M EG203C/M



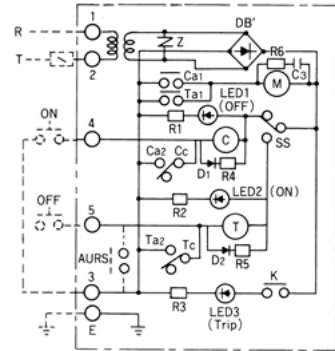
Note: Interphase insulation barriers are standard provided for the front mounting type breakers of 50AF to 225AF.

■ Wiring diagrams

24V DC, 48V DC, 100V DC



100/110V AC, 200/220V AC



- C : Control relay for breaker closing
- T : Control relay for breaker open
- M : Motor
- Ca1-Cc : Relay terminal number for closing
- Ta1-Tc : Relay terminal number for open
- ➔ : Diode
- ⌋ Z : Z-trap (Surge absorber)
- SS : ON/OFF changeover switch
- E, 1-5 : Terminal number for external wire connection
- : Resistor
- ⊕ : LED
- ⬠ : Silicon diode
- ⊞ : Transformer
- ⌋ : Capacitor
- AURS : Automatic reset switch (supplied on request)

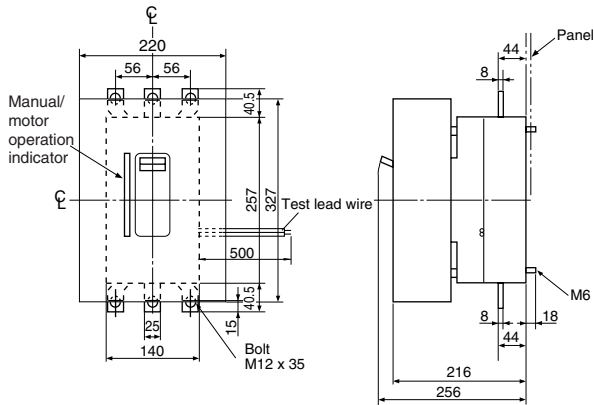
Earth Leakage Circuit Breakers

External accessories

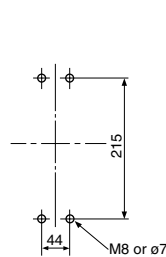
Motor-operated breakers

■ Dimensions, mm/Front mounting, front connection

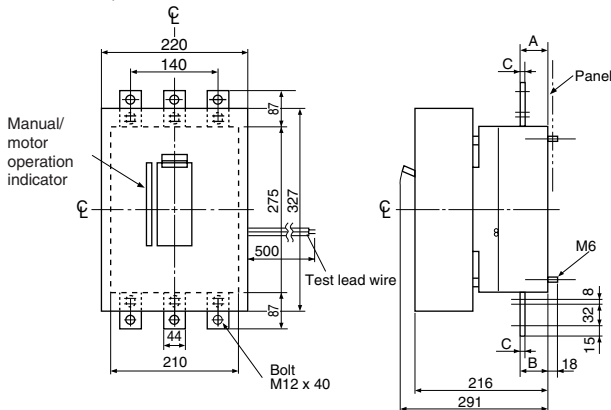
SG403C/M, SG403RC/M
EG403C/M



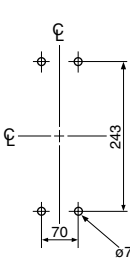
Panel drilling



SG603RC/M, SG803RC/M
EG603C/M, EG803C/M

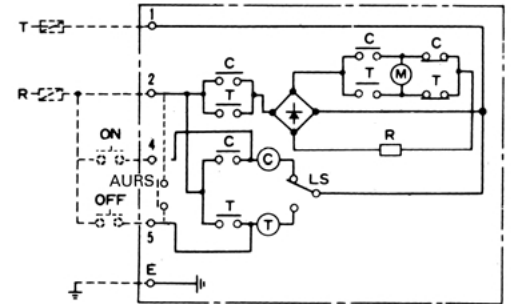


Panel drilling

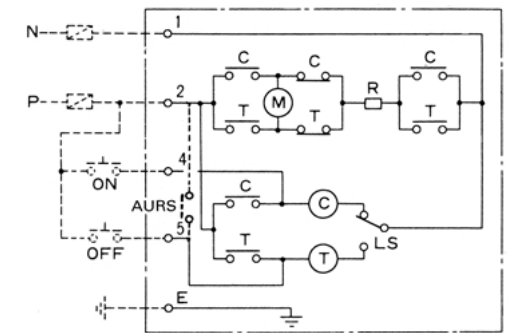


■ Wiring diagrams/400 to 800AF

100/110V AC, 200/220V AC, 50/60Hz



100/110V DC



C : Control relay for breaker closing R : Resistor
T : Control relay for breaker open LS : Limit switch
M : Motor
AURS: Automatic reset switch
(supplied on request)

Amp. frame	A (line side)	B (load side)	C
600AF	38.5	41.5	7
800AF	41.5	44.5	10

Dimensions for reference only. Confirm before construction begins.

Type (ELCB with motor operating mechanism)	Mass (kg)
SG33C/M, SG53C/M, SG53RC/M	1.2
EG33AC/M, EG33C/M, EG53AC/M, EG53C/M	
SG63C/M, SG63RC/M	1.3
EG63C/M, EG102C/M, EG103AC/M, EG103C/M	
SG103C/M	2.1
SG103RC/M	2.2
SG203C/M, SG203RC/M	2.3
EG203C/M	
SG403C/M, SG403RC/M, EG403C/M	14.2
SG603RC/M, EG603C/M	17.5
SG803RC/M, EG803C/M	18.5

Earth Leakage Circuit Breakers

External accessories

Mechanical interlocking device

Mechanical interlocking devices

■ Description

These interlocking devices are mounted on the two separate breakers to prevent them from both being closed at the same time.

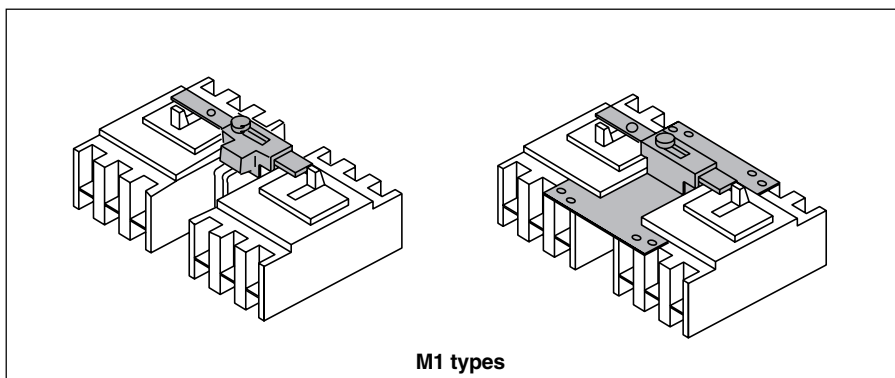
They employ a slide method and are operated manually.

These interlocking devices is possible to lock with a padlock (not supplied).

They are designed for use when changing over power supplies.

These can be mounted to 3 types of breakers: front-mounting front-connection type, front-mounting rear-connection type (type X), and plug-in mounting type (type P).

Interlock devices for flush mounting type breakers (type E, Y) are also available.



■ Types and applicable breakers

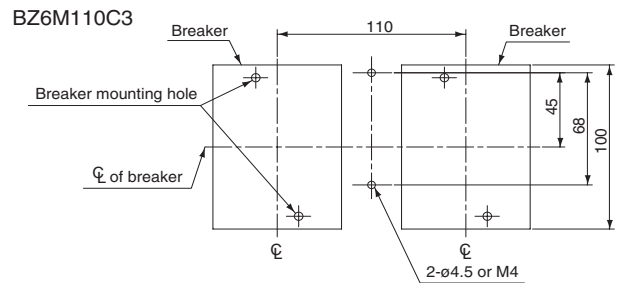
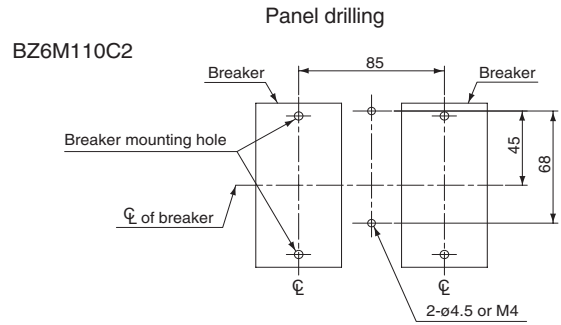
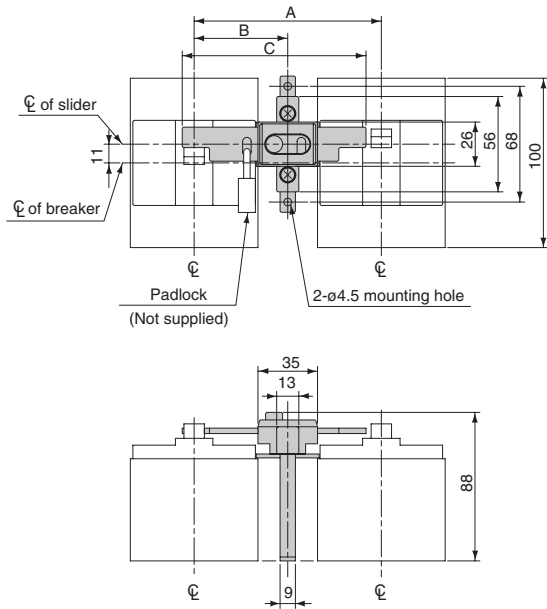
Type	Breaker type SG series	EG series
BZ6M110C2		EG32AC EG52AC
BZ6M110C3	SG33C SG53C, SG53RC SG63C, SG63RC	EG33AC, EG33C EG53AC, EG53C EG63C EG102C EG103AC, EG103C
BZ-M160C	SG403C, SG403RC	EG403C
BZ-M170C	SG603RC SG803RC	EG603C EG803C

Earth Leakage Circuit Breakers

External accessories

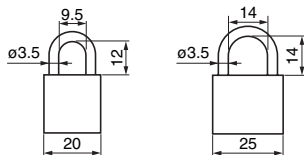
Mechanical interlocking device

■ Dimensions, mm
 • 30AF to EG100AF



Type	Breaker type SG series	EG series	Dimensions, mm			Mass (kg)
			A	B	C	
BZ6M110C2		EG32AC EG52AC	85	42.5	83	0.11
BZ6M110C3	SG33C SG53C SG63C SG53RC SG63RC	EG33AC EG33C EG53AC EG53C EG63C EG102C EG103AC EG103C	110	55	108	0.12

Notes: • BZ6M110C2 is not available for padlock.
 • Applicable padlock(ø3.5) dimensions, mm

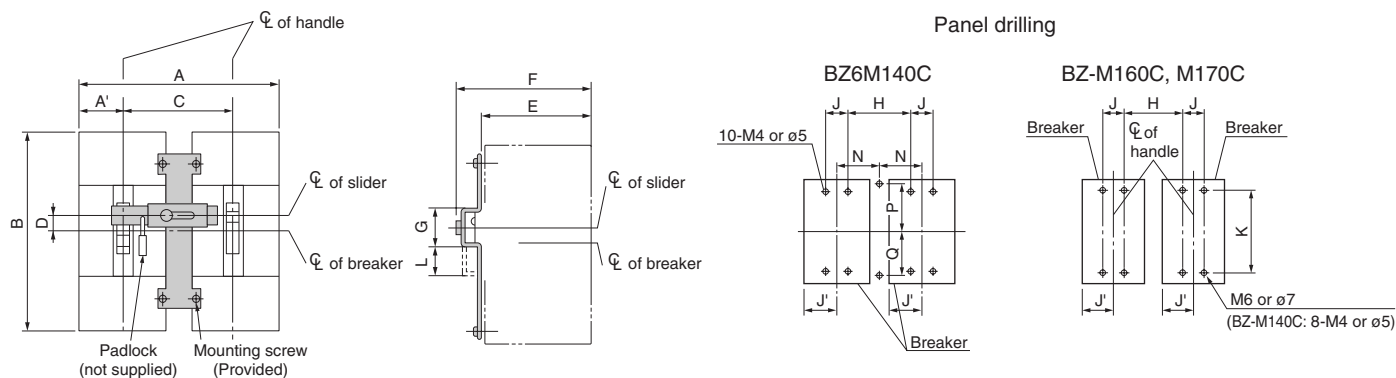


Earth Leakage Circuit Breakers

External accessories

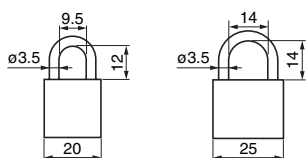
Mechanical interlocking device

■ Dimensions, mm



Type	Breaker type		Dimensions, mm											Mass (kg)
	SG series	EG series	A (A')	B	C	D	E	F	G	H	J (J')	K	L	
BZ-M160C	SG403C SG403RC	EG403C	355 (70)	257	215	0	94.5	126	54.5	171	44 (70)	215	38	0.56
BZ-M170C	SG603RC SG803RC	EG603C EG803C	500 (105)	275	290	20	94.5	126	54.5	220	70 (105)	243	38	0.64

Note: Applicable padlock(ø3.5) dimensions, mm



External operating handles

■ Description

Earth leakage circuit breaker handles are generally directly manual-operated but when mounted in motor control centers or on control panels they are sometimes required to be operated externally. To meet such applications FUJI offers the following three types of handles.

N type handle

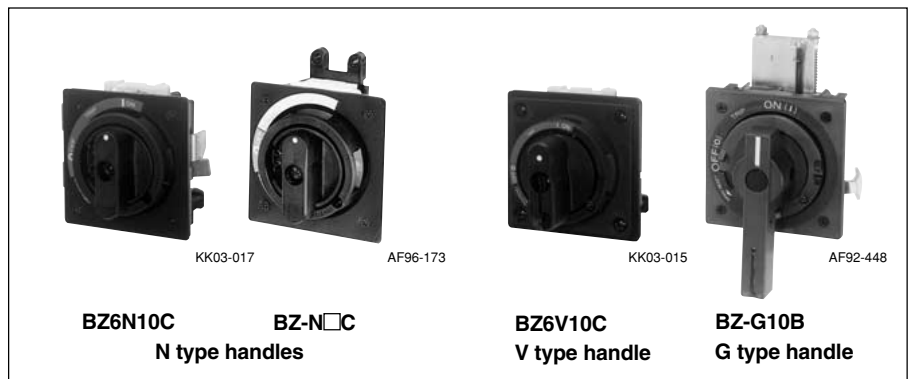
This type has a knob handle directly attached to the breaker. It is easily fitted by cutting a hole in the panel, which is provided with a door interlock. They may be fitted to all breakers up to 800 ampere frame sizes. N type handles for SG/EG30AF to EG100AF are UL508 listed.

V type handle

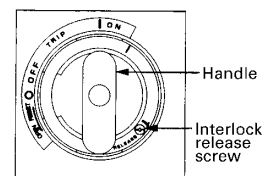
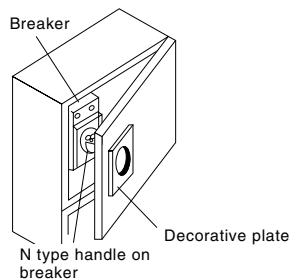
The V type handle may be fitted to breakers of up to 800AF. A separately sold extension shaft (BZ-VS1) provides distance adjustment between the handle and breaker. Conformed to EN60947-1 isolation function. Available for EN60204-1 power breaking device.

G type handle

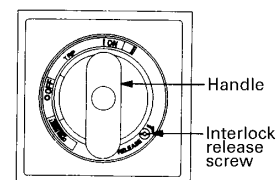
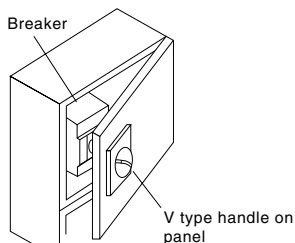
The G type handle is mounted on the panel, and also has a door-interlock. G type handle with a cylinder lock key is also available on request. G type handle with a padlockable handle lock plate is standard provided for circuit breaker of up to 225AF, and is optional for 400AF and larger.



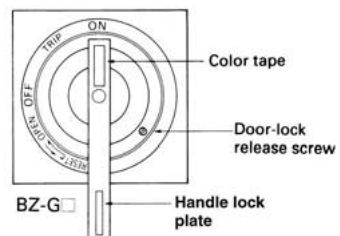
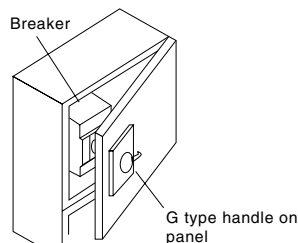
N type handles BZ-N□C



V type handles BZ6V□C



G type handles BZ-G10B



Earth Leakage Circuit Breakers

External accessories

Operating handles

● For α -TWIN breakers up to 800AF

N type handles

SG series	EG series	N type handle
SG33C SG53C SG53RC SG63C SG63RC	EG32AC, 33AC, 33C EG52AC, 53AC, 53C EG63C EG103AC, 102C, 103C	BZ6N10C UL508 (File No. E216772)
SG103C SG103RC	–	BZ-N30C
SG203C SG203RC	EG203C	BZ-N40C
SG403C SG403RC	EG403C	BZ-N60C
SG603RC SG803RC	EG603C EG803C	BZ-N70C

SG series	EG series	N type handle UL489 (File No. E93289)
SG53RCUL	EG102CUL, 103CUL	BZ6N10CP
SG103CUL	–	BZ6N30CP
SG203CUL	–	BZ6N40CP
SG403CUL	–	BZ6N60CP

Notes: • N type handles for up to 800AF can be padlocked. Padlock is not provided.
• N type handles are not CE marked.

● For breakers other than α -TWIN series

N type handles

SG series	EG series	HG series	N type handle
–	–	HG53B HG103B	BZ-N35B
–	–	HG203B	BZ-N50C
–	–	HG403B	BZ-N60C
–	–	HG603B HG803B	BZ-N70C
SGa104A, 104H	–	–	N-13EA
SGa204A, 204H	–	–	N-23EA
SGa404A	–	–	N-6EA
–	EG104A	–	N-6EA

G type handles

Type	Standard	Cylinder key type
HG53B, 103B	BZ-G35C	BZ-G35C-K
SGa104A, 104H	G-12A	G-12A-K
SGa204A, 204H	G-22A	G-22A-K
SGa404A	–	–
EG104A	G-5A	G-5A-K

V type handles

SG series	EG series	V type handle
SG33C SG53C SG53RC SG63C SG63RC SG53RCUL	EG32AC, 33AC, 33C EG52AC, 53AC, 53C EG63C EG103AC, 102C, 103C EG102CUL, 103CUL	BZ6V10C UL489 (File No. E93289)
SG103C SG103CUL SG103RC	–	BZ6V30C UL489 (File No. E93289)
SG203C SG203CUL SG203RC	EG203C	BZ6V40C UL489 (File No. E93289)
SG403C SG403CUL SG403RC	EG403C	BZ6V60C UL489 (File No. E93289)
SG603RC SG803RC	EG603C EG803C	BZ6V70C UL489 (File No. E93289)

V type handles

HG series	V type handle
HG203B	BZ-V50C
HG403B	BZ-V60C
HG603B, HG803B	BZ-V70C

N type operating handles

■ Operating instructions

1. ELCB operation

- Close the door with the handle in the OFF position. Turn the handle to the ON position and the ELCB will be ON.
- Turn the handle to the OFF position and ELCB will be OFF.
- When the breaker trips, the handle moves to the TRIP position. To reset, move the handle to the RESET position.

2. Door locking

- The door cannot be opened when the handle is in the ON, OFF or TRIP position, and can be opened only when the handle is in the OPEN position.
- The breaker cannot be ON when the door is open.
- If it is necessary to open the door with the breaker closed, turn the doorclose lock release screw counterclockwise using a screwdriver.

3. Handle locking

The handle can be locked in either the ON or OFF position when a padlock (not supplied) is used. Pull out the handle lock plate and fit your padlock to the plate. If the breaker trips while it is locked in the ON position, the handle moves to the TRIP position.

■ Installation

● BZ6N10C to BZ-N40C

1. Drilling and cutting the door

Drill and cut the door. The dimensions for drilling and cutting are the same whether the ELCB is installed horizontally or vertically.

2. Preparing a base plate (Fig. 1)

Prepare a base plate to adjust breaker mounting position (base plate: not supplied). Front mounting, front connection type breakers can only be suitable for this handle. Drill the breaker mounting holes on the base plate.

3. Fitting the N-handle mechanism and ELCB to the base plate (Fig. 1)

Commonly tighten the N-handle body and ELCB to the base plate with the mounting screws. For N10C to N30C, tighten two mounting screws on a diagonal line, and for N40C, tighten four mounting screws. Assemble the driving unit so that the breaker handle engages the N handle arm. (Fig. 4)

4. Mounting the decorative plate

Mount the decorative plate and the retaining plate to the door with screws provided. (Fig. 2)

Adjust the position of the handle unit so that it does not tilt against the breaker. (Fig. 3)

Fig. 1

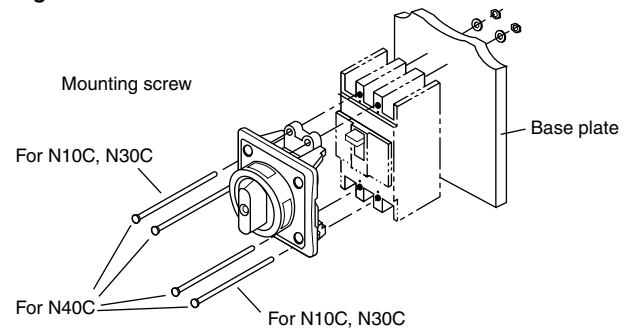


Fig. 2

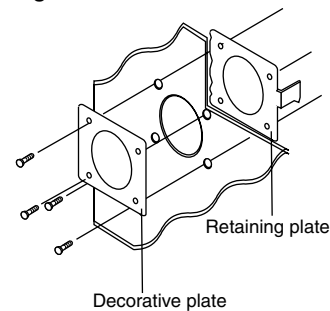


Fig. 3

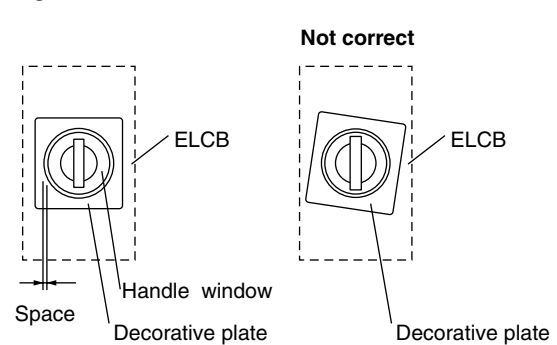
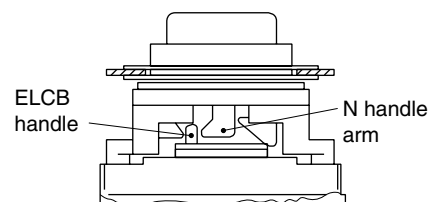


Fig. 4



Earth Leakage Circuit Breakers

External accessories

N type operating handles

■ Installation

● BZ-N60C, BZ-N70C

1. Drilling and cutting the door

Drill and cut the door. The dimensions for drilling and cutting are the same whether the ELCB is installed horizontally or vertically.

2. Preparing a base plate (Fig. 1)

Prepare a base plate to adjust breaker mounting position (base plate: not supplied). Front mounting, front connection type breakers can only be suitable for this handle. Drill the breaker mounting holes on the base plate.

3. Fitting the N-handle mechanism and ELCB to the base plate (Fig. 1)

Commonly tighten the N-handle body and ELCB to the base plate with the four mounting screws. Assemble the driving unit so that the breaker handle engages the N handle arm. (Fig. 4)

4. Mounting the decorative plate

Mount the decorative plate and the retaining plate to the door with screws provided. (Fig. 2)

Adjust the position of the handle unit so that it does not tilt against the breaker. (Fig. 3)

Fig. 1

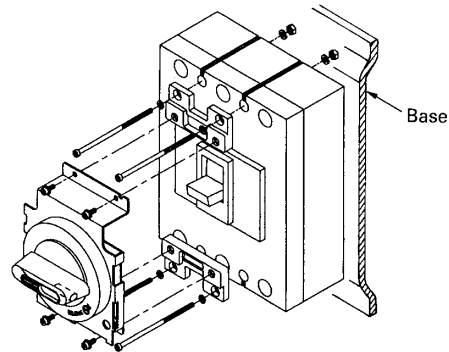


Fig. 2

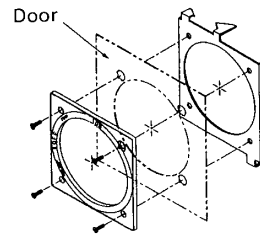


Fig. 3

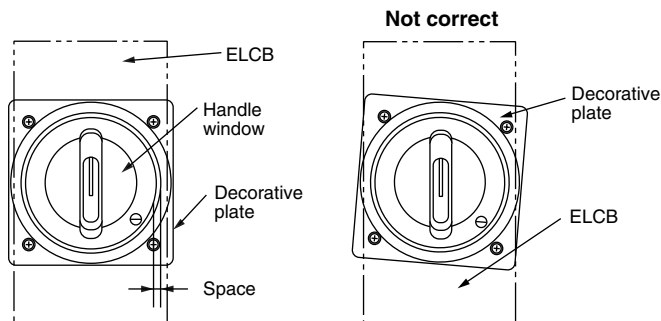
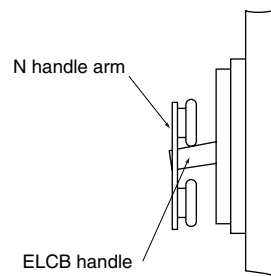


Fig. 4



■ Type number nomenclature

BZ - N □ C T - R

Installation

Blank: Vertically
R: Horizontally, right line side
L: Horizontally, left line side

Door locking device

Blank: Provided
T: Not provided

Basic type

BZ6N10C
BZ-N□C
N-□EA

Note:

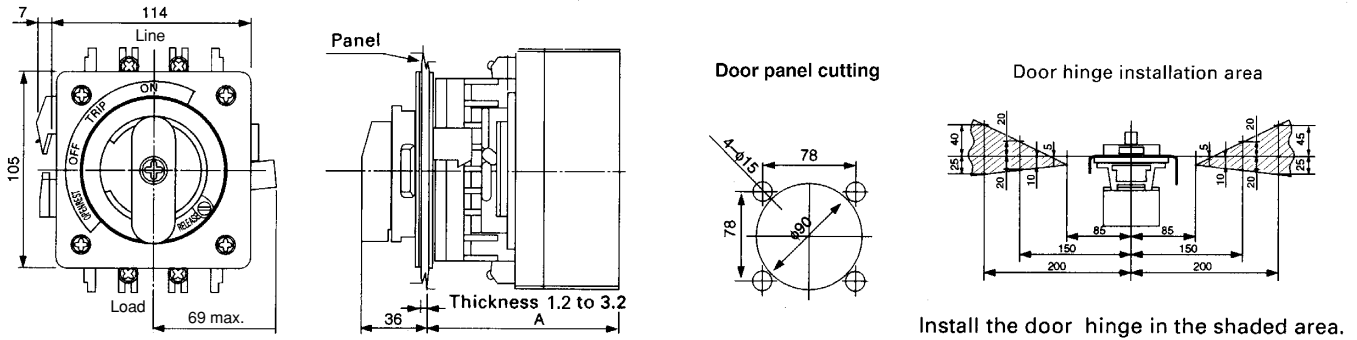
To order an N handle for front-mounting rear connection breakers, add "-X" to the type number, for plug-in mounting breakers, add "-P" to the type number.

Earth Leakage Circuit Breakers

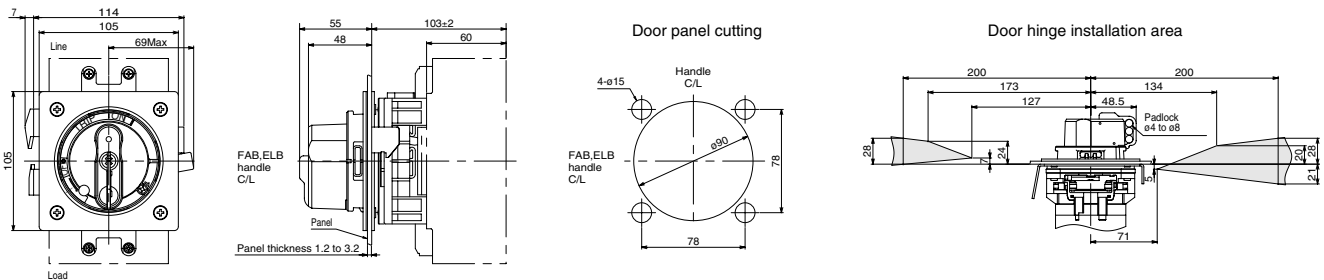
External accessories

N type operating handles

■ Dimensions, mm
BZ6N10C to BZ-N50C (Dust proof paking: BZ-NP-1C, optional)



BZ6N10CP, BZ6N30CP, BZ6N40CP (Dust proof paking: BZ-NP-1C, optional)



Breaker type	Handle type	A	Mounting screw	Mass (kg)
SG30C, SG50C, 50RC, SG60C, 60RC SG50RCUL EG30AC, 30C, EG50AC, 50C, EG60C EG100AC, 100C, 100CUL	BZ6N10C BZ6N10CP	103	M4 × 80	0.47
SG100C, 100RC, 100CUL	BZ-N30C BZ6N30CP	103	M4 × 85	0.56

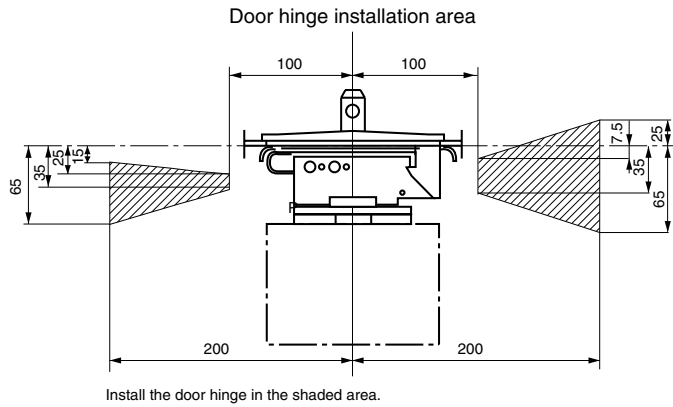
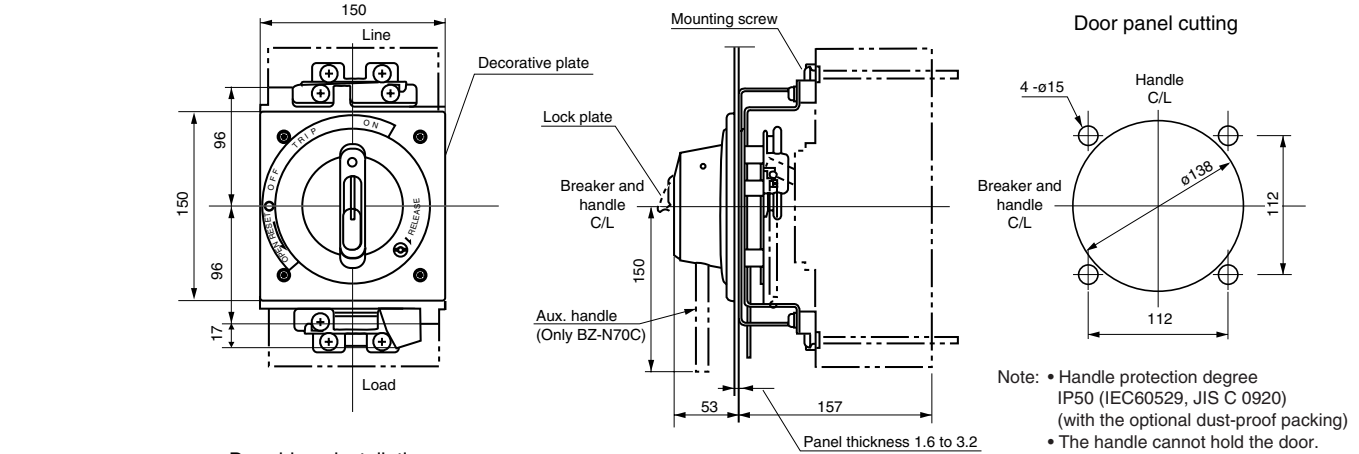
Breaker type	Handle type	A	Mounting screw	Mass (kg)
EG225C SG225C, 225RC, 225CUL	BZ-N40C BZ-N40CP	103	M4 × 85	0.56
HG225B	BZ-N50C	142	M4 × 125	0.62

Earth Leakage Circuit Breakers

External accessories

N type operating handles

BZ-N60C, BZ-N70C, BZ-N60CP, BZ-N70CP (Dust proof packing: BZ-NP-2, optional)



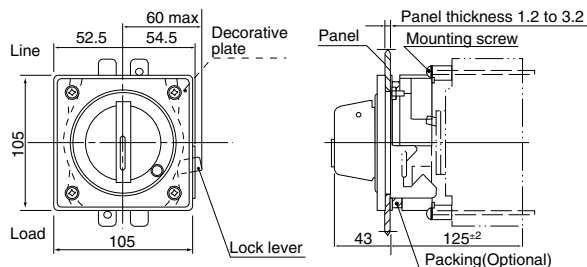
Notes:

- The N type handles are used with front mounting front connection type breakers. They are normally installed vertically. However, it is possible to install them horizontally if required. In this case please specify so in your order. (Example) Specify as follows:
BZ-N□C-R..... Installed horizontally, the line positioned on the right side.
BZ-N□C-L..... Installed horizontally, the line positioned on the left side.
- Breakers use different size screws for the P-type (Plug-in) breakers

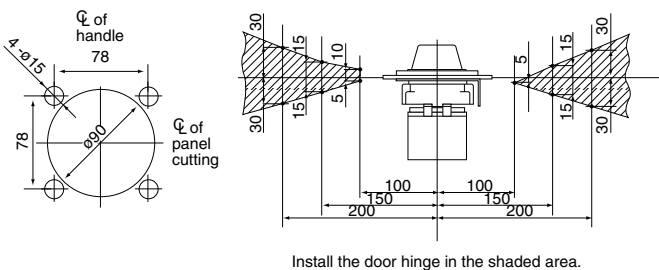
Breaker type	Handle type	Mounting screw	Mass (kg)
SG400C, SG400RC SG400CUL EG400C HG400B	BZ-N60C BZ-N60CP	M6 x 110	1.9
SG600RC, SG800RC EG600C, EG800C HG600B, HG800B	BZ-N70C BZ-N70CP	M6 x 110	1.9

■ Dimensions, mm

BZ-N35B (Dust proof packing: BZ-NP-1, optional)



Door panel cutting



Mass: 0.45kg

Dimensions for reference only. Confirm before construction begins.

Dimensions of N type handles for 4-pole: Contact FUJI.

V type operating handles, up to 225AF

■ Operating instructions

1. ELCB operation

- Close the door and turn the handle to the ON position and the breaker will be positioned at ON.
- When the breaker is interrupted automatically the handle will move to the TRIP position.
- To reset move the handle to the RESET position.

2. Door panel locking

- Turn the handle to the RESET position and the lock mechanism will be released thus allowing the door to be opened.
- The door cannot be opened when the breaker is positioned at ON.

3. Handle locking

The padlock can lock the handle in the OFF position.

- Locking ELCB with the door open : Fig.1
- Locking ELCB with the door closed : Fig.2

Pull out the lock plate and lock the padlock.

4. Interlock release

This type is provided with an interlock release screw. Turn this screw if it is necessary to open the door in the ON position. This release the lock and allows the door to be opened. When reclosing the door, make sure the handle of the breaker coincides with the position (ON or OFF) of the external handle position.

■ Installation

BZ6V10C to V50C

1. Drilling and cutting of the door panel

Drill and cut the door panel as shown in the drawing.

2. Mounting of the ELCB

The distance between the backside of the door panel and breaker mounting plate should be the dimension "H" shown in the drawing below.

H dimensions, mm (Fig.3)

- BZ6V10C: 105
- BZ6V30C: 105
- BZ6V40C: 105
- BZ-V50C: 144

3. Mounting the driving unit

- Set the breaker handle to the OFF position. Assemble the driving unit so that the breaker handle engages the V handle arm. (Fig.4)
- Secure the driving unit and breaker together to the mounting plate by tightening the four attached mounting screws. (Fig.5)

4. Mounting the handle unit

- Put the handle unit, cover holder, packing, and retainer in front of and behind the panel and tighten the screws temporarily as shown in Fig.6. Adjust the position of the handle unit so that it does not tilt against the breaker. (Fig.7)
- Put the handle of the handle unit in the OFF position and close the door. Check that the shaft engages the latch when the door closes. (Fig.8)

Fig. 1

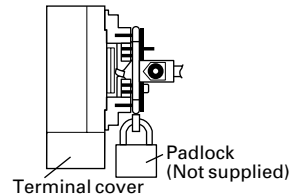


Fig. 2

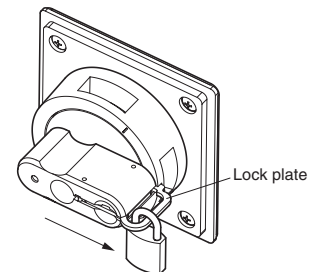


Fig. 3

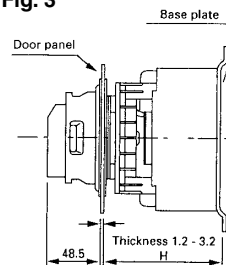


Fig. 4

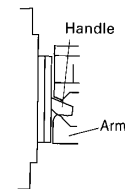


Fig. 5

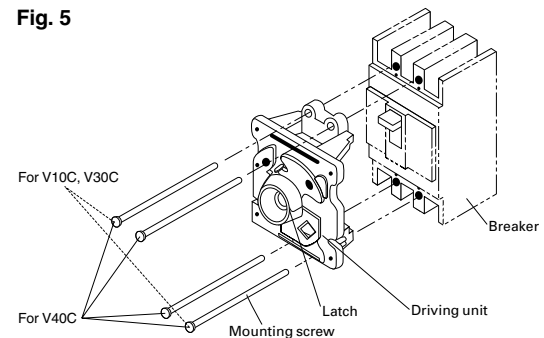


Fig. 6

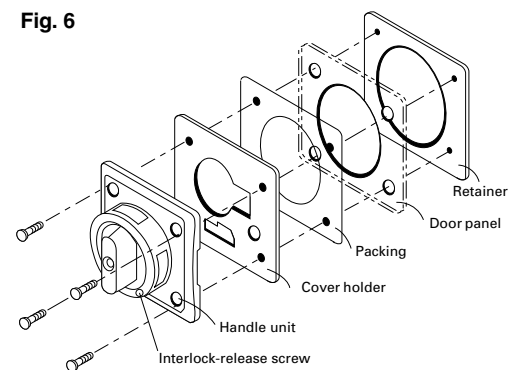


Fig. 7

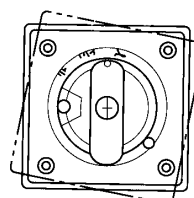
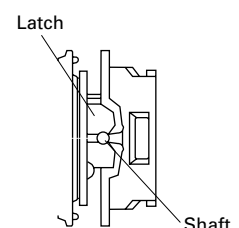


Fig. 8



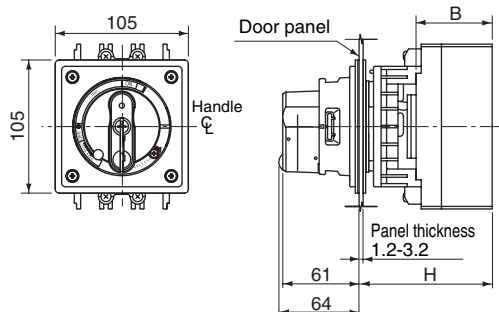
Earth Leakage Circuit Breakers

External accessories

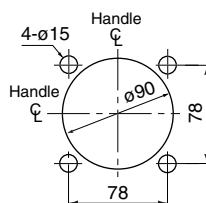
V type operating handles

■ Dimensions, mm

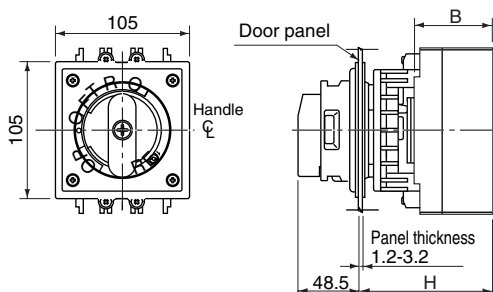
BZ6V10C, 6V30C, 6V40C



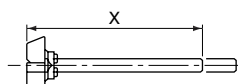
Door panel cutting



BZ-V40V, V50C

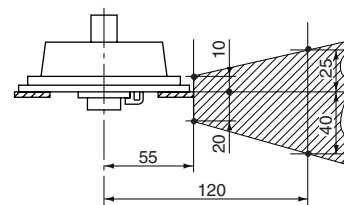


Optional shaft BZ-VS1
X = H - 96



The distance between the handle and breaker can be shortened by cutting the optional shaft.

Door hinge installation area



Install the door hinge in the shaded area.

Breaker type			Handle type	Standard type H	With the optional shaft (X=154)			Mounting screw	Mass (kg)
SG series	EG series	HG series			H	Area in which the hinge with H can be installed	B		
SG30C SG50C SG50RC SG60C SG60RC SG50RCUL	EG30AC EG30C EG50AC EG50C EG60C EG100AC EG100C EG100CUL	—	BZ6V10C	105	250	142 to 250	60	M4 x 80	0.64
SG100C SG100RC SG100CUL	—	—	BZ6V30C	105	250	142 to 250	60	M4 x 85	0.67
SG225C SG225RC SG225CUL	EG225C	—	BZ6V40C	105	250	142 to 250	60	M4 x 85	0.67
—	—	HG225B	BZ-V50C	144	289	181 to 289	99	M4 x 125	0.67

Notes:

- Handle protection degree IP54 (IEC60529, JIS C 0920)
- The handle cannot hold the door.

V type operating handles, 400AF to 800AF

■ Operating instructions

1. ELCB operation

- Close the door and turn the handle to the ON position and the ELCB will be positioned at ON.
- When the ELCB is interrupted automatically the handle will move to the TRIP position.
- To reset move the handle to the RESET position.

2. Door panel locking

- Turn the handle to the RESET position and the lock mechanism will be released thus allowing the door to be opened.
- The door cannot be opened when the breaker is positioned at ON.

3. Handle locking

The padlock can lock the handle in the OFF position.

- Locking ELCB with the door open: Fig. 1
- Locking ELCB with the door closed: Fig. 2

4. Interlock release

This type is provided with an interlock release screw. Turn this screw if it is necessary to open the door at the ON position. This releases the lock and allows the door to be opened. When reclosing the door, make sure the handle of the breaker coincides with the position (ON or OFF) of the external handle position.

■ Installation

BZ6V60C, 70C

1. Drilling and cutting of the door panel

Drill and cut the door panel as shown in the drawing.

2. Mounting of the ELCB

The distance between the backside of the door panel and ELCB mounting plate should be the dimension as shown in Fig.3.

3. Mounting the driving unit

- Set the ELCB handle to the OFF position. Assemble the driving unit so that the ELCB handle engages the V handle arm. (Fig. 4)
- Secure the driving unit and ELCB together to the mounting plate by tightening the four attached mounting screws. (Fig. 5)

4. Mounting the handle unit

- Put the handle unit, packing and retainer in front of and behind the door panel and tighten the screws temporarily as shown in Fig.6. Adjust the position of the handle unit so that it does not tilt against the ELCB. (Fig. 7)
- Put the handle of the handle unit at OFF position and check the latch engages the keeper and close the door while holding the handle unit cover by hand. Final tightening of the screws should be performed as keep the engaging position. (Fig. 8)

Fig. 1

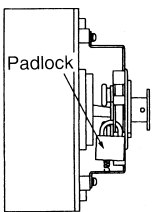


Fig. 2

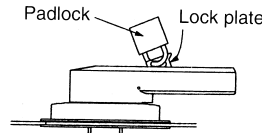


Fig. 3

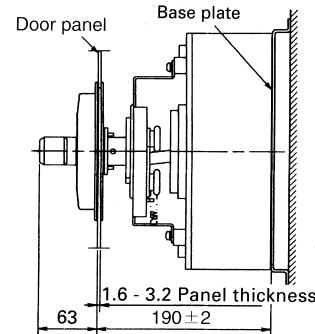


Fig. 4

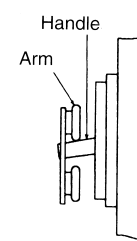


Fig. 5

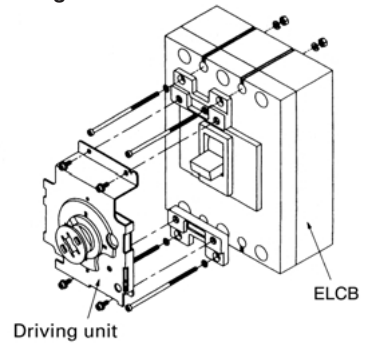


Fig. 6

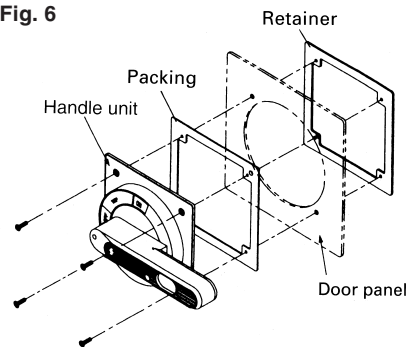


Fig. 7

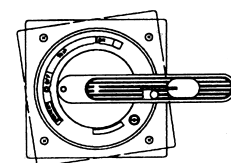
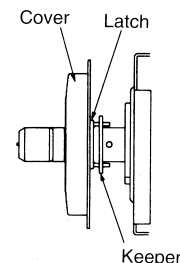


Fig. 8



■ Type number nomenclature

BZ6V □ C - □

Mounting

- Blank: Front mounting, front connection
- X: Front mounting, rear connection
- P: Plug-in mounting

Basic type

- BZ6V □ C
- BZ-V □ C

Note:

To order a V handle for front-mounting rear connection breakers, add "-X" to the type number; for plug-in mounting breakers, add "-P" to the type number.

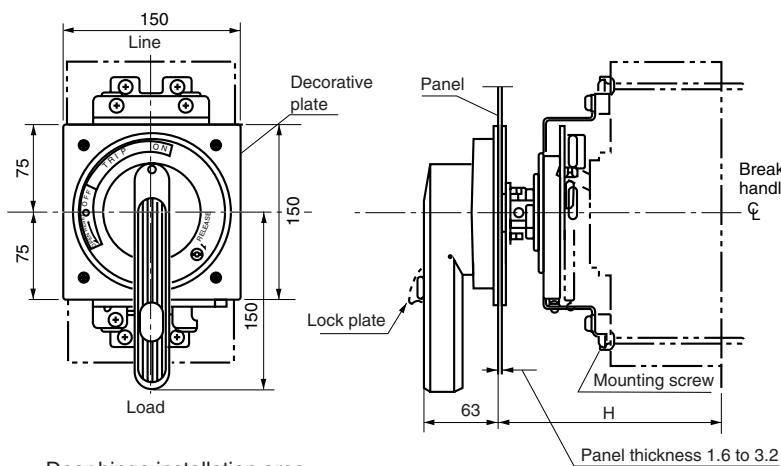
Earth Leakage Circuit Breakers

External accessories

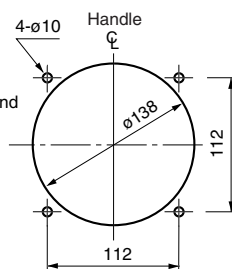
V type operating handles

■ Dimensions, mm

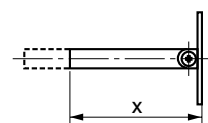
BZ6V60C, 6V70C, BZ-V60C, V70C



Door panel cutting

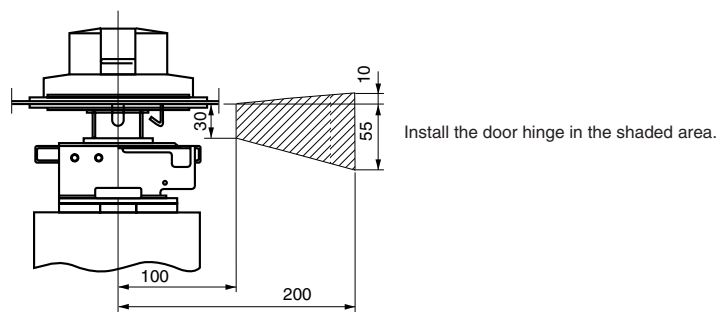


Optional shaft
(BZ-VS2)



The distance between the handle and breaker can be shortened by cutting the optional shaft.
($X = H - 161.5$)

Door hinge installation area



Breaker			Handle type	Standard type H	With the optional shaft		Mass (kg)
SG series	EG series	HG series			H	Area in which the hinge with H can be installed	
SG400C SG400RC SG400CUL	EG400C	—	BZ6V60C	190±2	250±2	202 to 250	2.2
—	—	HG400B	BZ-V60C				2.2
SG600RC SG800RC	EG600C EG800C	—	BZ6V70C				2.2
—	—	HG600B HG800B	BZ-V70C				2.2

Notes:

- Handle protection degree IP54 (IEC60529, JIS C0920).
- The handle cannot hold the door.
- Breakers use different size screws for the X type (rear connection) or P-type (Pulg-in) breakers.

G type operating handles

■ Operating instructions

1. ELCB operation

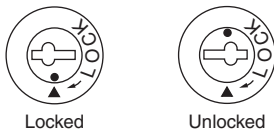
- Close the door and turn the handle to the ON position and the breaker will be positioned at ON.
- When the breaker is interrupted automatically the handle will move to the TRIP position.
- To reset move the handle to the RESET position.

2. Door panel locking

- Turn the handle to the OPEN position and the lock mechanism will be released thus allowing the door to be opened.
- The door cannot be opened when the breaker is positioned at ON.

3. Handle locking

The cylinder key can lock the handle in either the ON or OFF position. Even if it is locked at the ON position when the breaker trips, the handle will indicate TRIP.



4. Interlock release

This type is provided with an interlock release screw. Turn this screw if it is necessary to open the door at the ON position. This releases the lock and allows the door to be opened. When reclosing the door make sure the handle of the breaker coincides with the position (ON or OFF) of that of the external handle.

■ Type number nomenclature

BZ-G□C-K

Key

- Blank: Without key
- K: With cylinder key
- Q: With padlocking device

Basic type

- BZ-G□C
- G-□A

■ Installation

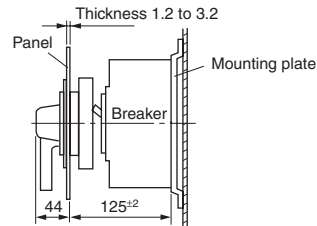
BZ-G35C

1. Drilling and cutting of the door panel

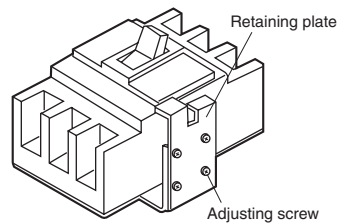
Drill and cut the door panel as shown in the drawing.

2. Mounting of the ELCB

The distance between the backside of the door panel and breaker mounting plate should be 125mm as shown in the drawing below.

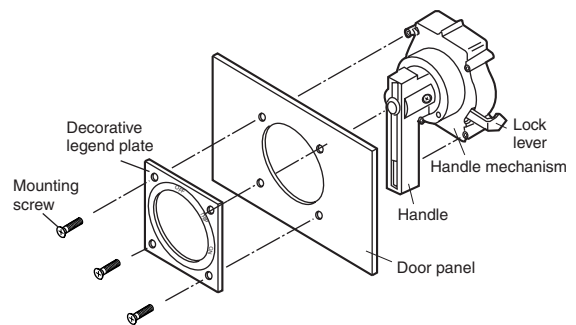


Mount the breaker and the retaining plate commonly to the panel board.



3. Fitting decorative plate and handle

Fit the decorative plate and handle mechanism to the door panel by means of the mounting screws as shown in the illustration.



4. Adjusting the retaining plate

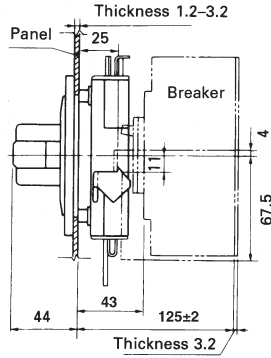
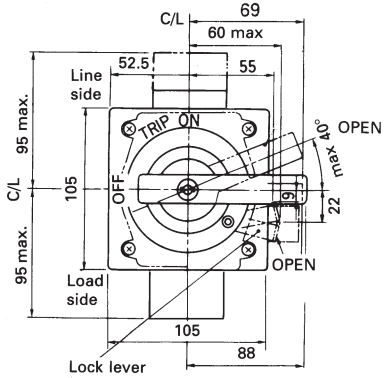
Adjust the height of the retaining plate by means of adjusting screws.

Earth Leakage Circuit Breakers

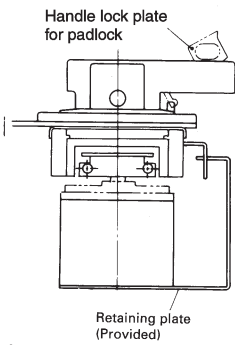
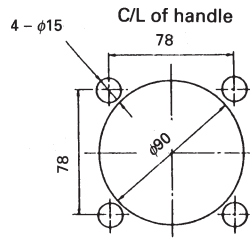
External accessories

G type operating handles

■ Dimensions, mm
BZ-G35C, BZ-G35C-K

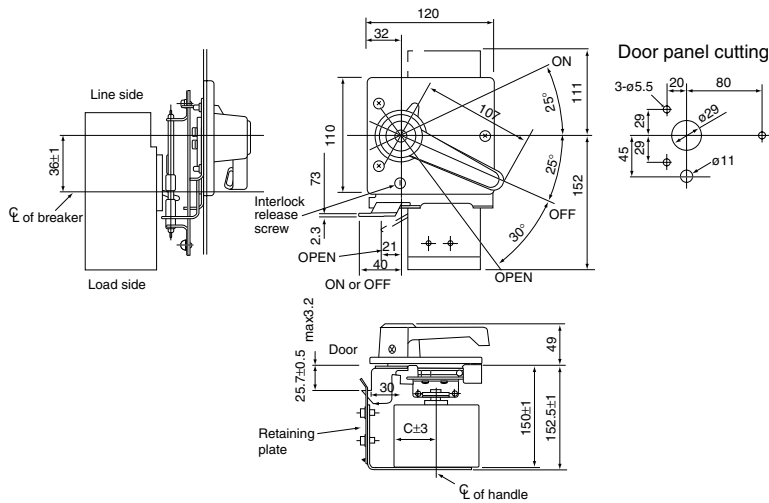


Door panel cutting

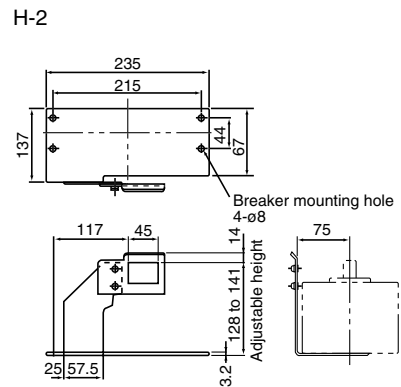


Mass: 1.2kg

G-22A, G-22A-K



Retaining plate and supporter (Sold separately)



Pressed steel enclosures

■ **Description**

BZ-type enclosures are available in three types — two with V and G-type handle which allows the operation from the outside and other with the operating handle of the breaker extending from it to allow it to be directly switched ON or OFF from outside the enclosure.

Enclosures with V and G-type handles are provided with a door interlocking mechanism which prevents the door from being opened in the ON condition.

Knockout holes for wiring use are provided as shown in the diagram.

(For G-type handles, contact FUJI.)



■ **Type of enclosures**

Breaker type			Enclosure		
SG series	EG series	HG series	Standard	With V type handle Dustproof IP40	Rainproof IP54 *
–	EG32AC EG52AC	–	BZ6C10C2	BZ6CV10C	BZ6CW10C
SG33C SG53C, SG53RC SG63C, SG63RC	EG33AC, EG33C EG53AC, EG53C EG63C	–	BZ6C10C3	BZ6CV10C	BZ6CW10C
–	EG102C EG103C, EG103AC	–	BZ6C25C3	BZ6CV25C	BZ6CW25C
SG103C, SG103RC	–	–	BZ6C30C3	BZ-CV30C	BZ-CW30C
–	–	HG53B HG103B	BZ-C35B	–	–
SG203C, SG203RC	EG203C	–	BZ-C40B	BZ-CV40C	BZ-CW40C
–	–	HG203B	BZ-C50B	–	–
SG403C, SG403RC	EG403C	HG403B	BZ-C60B	BZ-CV60C	BZ-CW60C
SG603RC SG803RC	EG603C EG803C	HG603B HG803B	BZ-C70B	BZ-CV70C	–

■ **Ordering information**

Specify the following:

1. Type number of enclosures

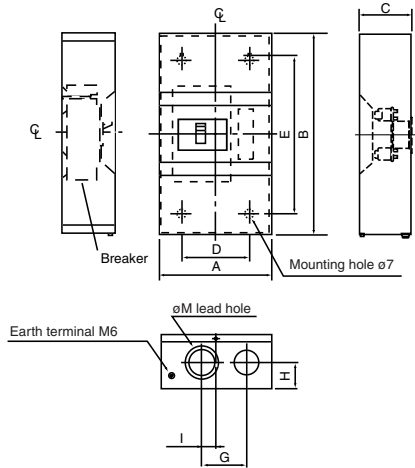
Earth Leakage Circuit Breakers

External accessories

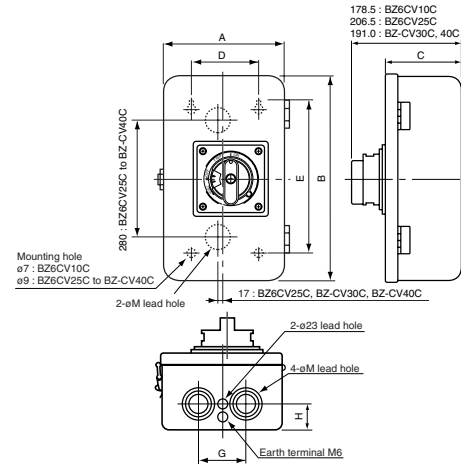
Steel enclosures

■ Dimensions, mm

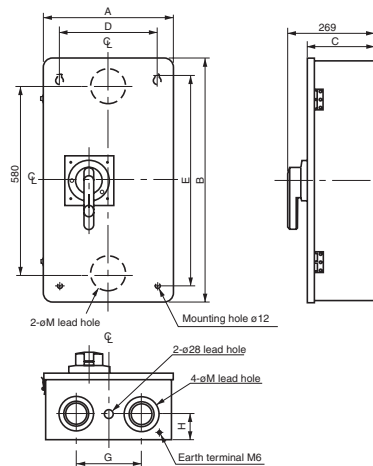
Standard



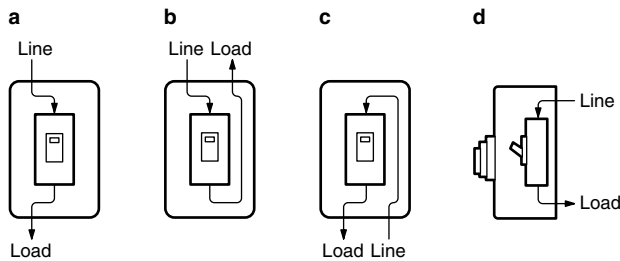
With V type handle BZ6CV10C to BZ-CV40C



BZ-CV60C, 70C



■ Connection method diagrams



Type	Connection	A	B	C	D	E	G	H	I	M (∅)	Mass (kg)
BZ6C10C2	a, b, c	135	225	95	90	170	65	40	25	22, 35	1.35
BZ6C10C3		135	225	95	90	170	65	40	25	22, 35	1.35
BZ6C25C3		200	320	95	120	240	80	40	25	30, 45	2.31
BZ6C30C3		200	320	95	120	240	80	40	25	30, 45	2.37
BZ-C35B		200	320	120	120	240	80	40	25	30, 45	2.68
BZ-C40B		200	360	95	120	280	80	45	25	40, 55	2.53
BZ-C50B		200	360	140	120	280	80	45	25	40, 55	3.09
BZ-C60B		400	750	175	300	650	200	80	100	63, 78, 106	19.3
BZ-C70B		400	750	175	300	650	200	80	100	63, 78, 106	19.3
BZ6CV10C	a, b, c, d	180	300	114	100	220	70	40	100	28, 35, 43	0.64
BZ6CV25C		250	400	142	170	320	110	50	100	35, 52, 63	6.40
BZ-CV30C		250	400	142	170	320	110	50	100	35, 52, 63	6.40
BZ-CV40C		250	400	142	170	320	110	50	100	35, 52, 63	6.53
BZ-CV60C		400	750	206	300	650	200	80	100	63, 78, 106	21.7
BZ-CV70C		400	750	206	300	650	200	80	100	63, 78, 106	21.7

Terminal covers

■ Description

These terminal covers are used as guards to prevent accidental touch with live line terminations.

These terminal covers can be fitted to either line or load side.

● Up to 225AF

Short type BZ-TS

- Snap-on fitting
- Transparent and black (BZ6TS10C only), sealing possible

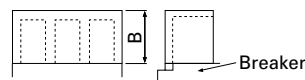
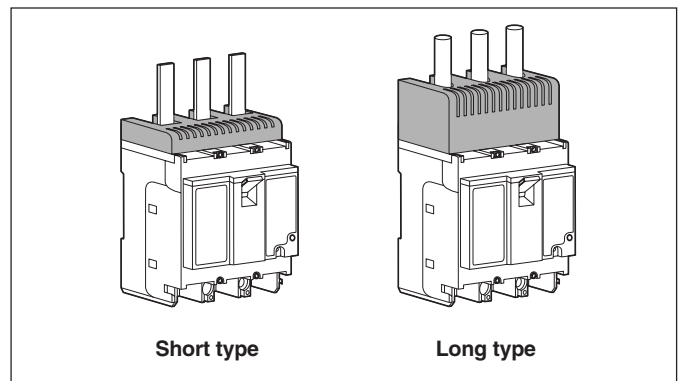
Long type BZ-TB

- Crimp connection use
- Transparent and black (BZ6TB10C only), sealing possible

● 400AF and larger

Long type BZ-TB

- Transparent



Packing quantity : 2 pcs.

Breaker type	EG series	HG series	Terminal cover Short type	B dimension (mm)	Mass (g)	Terminal cover Long type	B dimension (mm)	Mass (g)
–	EG32AC EG52AC	–	BZ6TS10C2 (Black) BZ6TSH10C2 (Transparent)	10	25	BZ6TB10C2 (Black) BZ6TBH10C2 (Transparent)	40	68
SG33C SG53C, SG53RC SG63C, SG63RC	EG33AC, EG33C EG53AC, EG53C EG63C EG102C EG103AC, EG103C	–	BZ6TS10C3 (Black) BZ6TSH10C3 (Transparent)	10	32	BZ6TB10C3 (Black) BZ6TBH10C3 (Transparent)	40	87
SG103C, SG103RC	–	–	BZ-TS30B-3	10	43	BZ-TB30B-3	40	86
–	–	HG53B HG103B	BZ-TS35B	10	60	BZ-TB35B	40	122
SG203C, SG203RC	EG203C	–	BZ-TS40B	10	60	BZ-TB40B	50	107
–	–	HG203B	BZ-TS50B	10	76	BZ-TB50B	40	175
SG403C, SG403RC	EG403C	HG403B	–	–	–	BZ-TB60B	116	549
SG603RC SG803RC	EG603C EG803C	HG603B HG803B	–	–	–	BZ-TB70B	135	568

Breaker type	Terminal cover	B dimension (mm)	Mass (g)
SG series	Long type		
SGa104A, SGa104H	A1-14	28	60

UL Listed

Breaker type	Terminal cover	Mass (g)	Terminal cover	Mass (g)	Terminal cover	Mass (g)
SG series	EG series	Short type	Long type	For flat terminal		
SG53RCUL	EG102CUL EG103CUL	BZ6TS10C3U (Black)*	33.5	BZ6TB10C3U (Black)	38.5	–
SG103CUL		BZ-TS30B-3	43	BZ-TB30B-3	86	BZ-TL30B-3
SG203CUL		BZ-TS40B	60	BZ-TB40B	107	BZ-TL40B
SG403CUL		–	–	BZ-TB60B	549	–

Note: * Standard-provided

Earth Leakage Circuit Breakers

External accessories

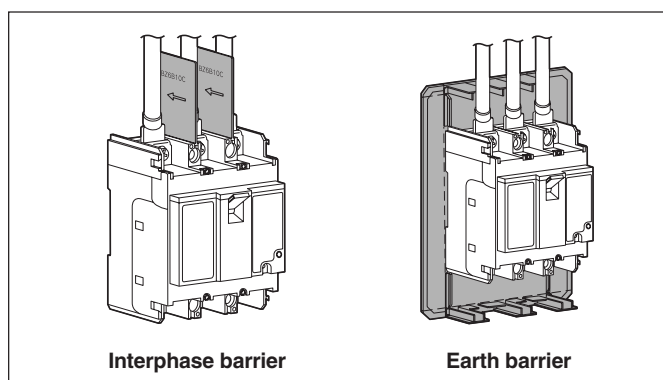
Insulation barriers

Insulation barriers

■ Description

The interphase barriers are provided on frame size of 30AF to 400AF breakers for front mounting. The barriers are installed in the molded slots between terminals.

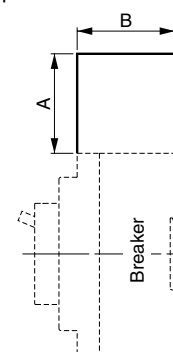
The earth barrier is used to increase the insulation with the mounting plate surface when two crimp terminals are wired. Installation of these barriers after wiring is possible even when an external accessory is installed.



● Interphase barrier

Breaker type			Interphase barrier				
SG series	EG series	HG series	Type	Dimensions, mm		Packing quantity	Mass (g)
				A	B		
–	EG32AC EG52AC EG102C	–	BZ6B10C	50	49	4	23
SG33C SG53C, 53RC SG63C, 63RC	EG33AC, 33C EG53AC, 53C EG63C EG103AC, 103C	–	BZ-B30B	50	51	4	29
SG103C, 103RC	–	–					
SG103CUL	–	–	BZ6B30CU	50	58	4	31
–	–	HG53B HG103B	BZ-B35B	50	73	4	38
SG203C, 203RC	EG203C	–	BZ-B40B	80	52	4	48
SG203CUL	–	–	BZ6B40CU	80	58.5	4	52
–	–	HG203B	BZ-B50B	80	90.5	4	82
SG403C, 403RC, 403CUL SG603RC SG803RC	EG403C EG603C EG803C	HG403B HG603B HG803B	B-43A	105	95	4	131
SGa204A, 204H SGa404A	–	–	B-44A	105	95	6	195

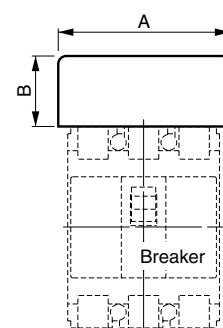
Interphase barrier



● Earth barrier

Breaker type			Earth barrier				
SG series	EG series	HG series	Type	Dimensions, mm*		Packing quantity	Mass (g)
				A	B		
–	EG32AC EG52AC	–	BZ6BL10C2	100 (50, 75)	43 (30)	2	33
SG33C SG53C, 53RC SG63C, 63RC	EG33AC, 33C EG53AC, 53C EG63C EG102C EG103AC, 103C	–	BZ6BL10C3	125 (75, 100)	43 (30)	2	41
SG103C, 103RC	–	HG53B HG103B	BZ-BL35B	130 (90, 110)	70 (40)	2	16
SG203C, 203RC	EG203C	–	BZ-BL40B	190 (105, 147)	100 (50, 72)	2	48
–	–	HG203B	BZ-BL50B	190 (105, 147)	100 (50, 72)	2	48

Earth barrier



Note: * The value in parentheses is the dimensions after the barrier is cut.