Fuji Electric

Innovating Energy Technology

DISTRIBUTION

Molded Case Circuit Breakers & Earth Leakage Circuit Breakers

G-TWIN Series

62D1-E-0202

Molded case circuite breaker / Earth leakage circuite breaker

G-TWIN Series

Downsized, modular and multi-standard Breakers

G-TWIN
Global series

G-TWIN
Standard series

G-TWIN series

Icu at 400VAC [kA]	In [A]												
	15	32	40	50	63	100	125	160	250	400	500	630	800
1.5	32 ~ 100AF												
2.5													
7.5													
10													
18							250AF						
30	125AF								400AF		630/800AF		
36													
50													
65													
70													

Conforming to IEC & local Standards

Conforming to certifications and standards in major world markets
Expanded frame sizes in G-TWIN Global Series

G-TWIN Standard series

- IEC 60947-2
- EN 60947-2 (CE marking)
- GB 14048.2 (CCC)
- JIS C 8201-2-1
- JIS C 8201-2-2

G-TWIN Global series

- IEC 60947-2
- EN 60947-2 (CE marking)
- GB 14048.2 (CCC)
- JIS C 8201-2-1
- JIS C 8201-2-2
- UL 489
- CAN/CSA C22.2 NO.5
- NEMA AB1

Compact & High performance

Compact size meeting UL489 480V requirements & same dimensions for MCCB and ELCB.

MCCB (250AF)

Rated voltage 480V

(W105 × H181 × D68 mm)

Same Dimensions

ELCB (250AF)

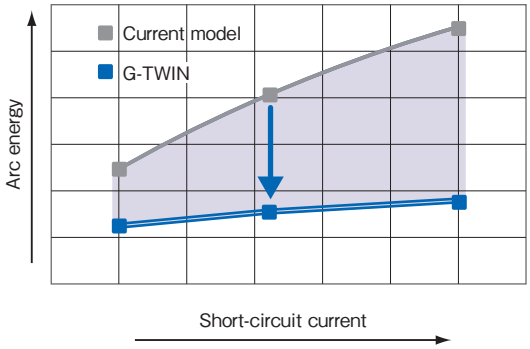
Rated voltage 480V

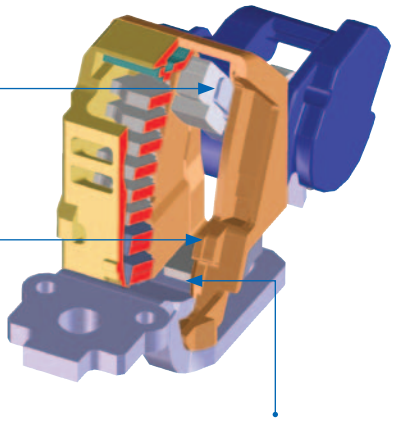
(W105 × H181 × D68 mm)

Effect of "ablation breaking technology"

- Short-circuit arc energy reduced by 30%

Reduced by 30% !





Moving contact cover

- Arcing prevention at the bottom of moving contact

Narrow slit resin

- Increased arc voltage due to narrow slit effect
- Increased arc voltage and high-speed moving contact opening by ablation effect
- Suppression of internal pressure rise by adjusting the narrow slit width

Magnetic yoke arrangement

- An increase in the repulsion force of the moving contact at initiation of contact opening

Ecology

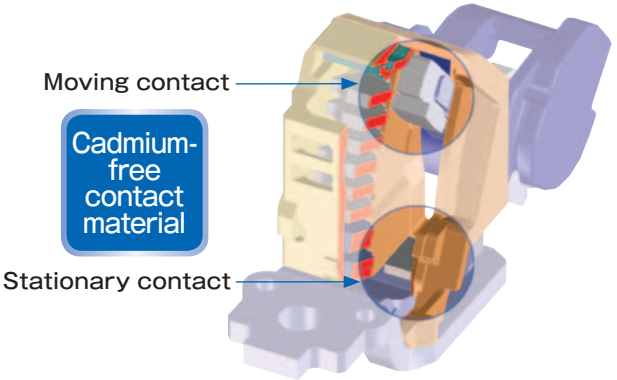
Lower environmental impact
Advanced green engineering and energy-saving support

Recycling

- For easier recycling, all major parts are marked with the names of the materials used.

Conforming to the RoHS Directive

- Lead-free (Pb-free) solder is used.
- Free of hexavalent chromium (Cr^{6+}-free)



Usefulness

A wider range of customer-mountable electrical accessories.

32 ~ 100AF

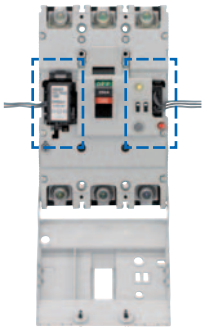
Shunt trip device
(MCCB)

Shunt trip device (ELCB)
Undervoltage trip device
(MCCB/ELCB)

Auxiliary switch
(MCCB/ELCB)

Alarm switch
(MCCB/ELCB)

125 ~ 250AF



Shunt trip device
(MCCB/ELCB)

Undervoltage trip device
(MCCB/ELCB)

Auxiliary switch
(MCCB/ELCB)

Alarm switch
(MCCB/ELCB)

Earth alarm switch
(ELCB)

400 ~ 800AF

Shunt trip device
(MCCB/ELCB)

Undervoltage trip device
(MCCB/ELCB)

Auxiliary switch
(MCCB/ELCB)

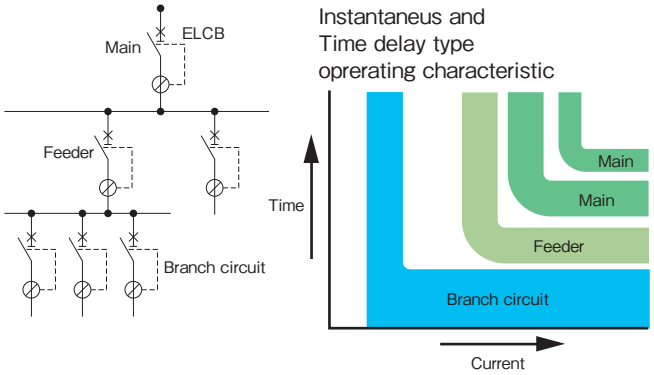
Alarm switch
(MCCB/ELCB)

Newly developed ELCB

Ground fault current protection cordination can be taken easily.

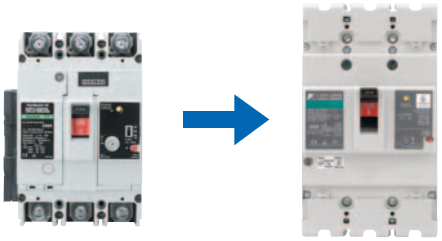
Four-step changeover switch(I∆n and tripping time setting)

I∆n (Change over type)	Maximum tripping time
100/200/500/1000mA	0.1/0.4/1/2second (changeover)



New three-phase power supply circuite functions in phase-loss state

The revised IEC60947-2 stipulates that the ELCB should trip when earth-leakage occurs even in phase loss state in threephase system.
The G-TWIN Series meets this requirement.



α -TWIN
(Current model)

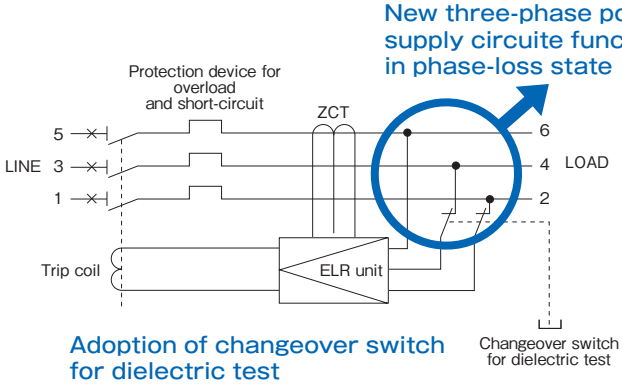
G-TWIN

Adoption of changeover switch for dielectric test

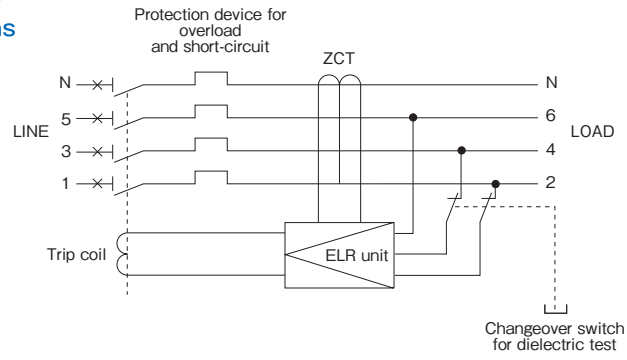
High workability can be obtained since the removal of ELCB wiring is not required at dielectric test during inspection (Adopted for 125AF or more).

ELCB internal wiring diagram

3-pole



4-pole



Why ELCB?

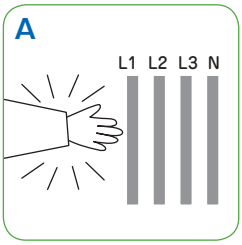
Purpose of ELCB installation

Prevention of hazards and damage (such as electrical shock, electrical fire, and device damage) that may occur in electrical equipment (as stipulated in IEC 60364).

Measures of protection against electrical shock
Protection against electric shock
(Protective measures are specified in IEC60364-4-41)

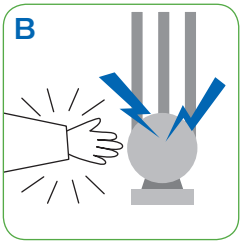
A. Protection against direct contact

Protection of persons from hazards (i.e., electrical shock) that may occur due to touching charged parts of electrical equipment.
Use of ELCB with rated sensitive current not exceeding 30mA is recommended as the additional protective device.

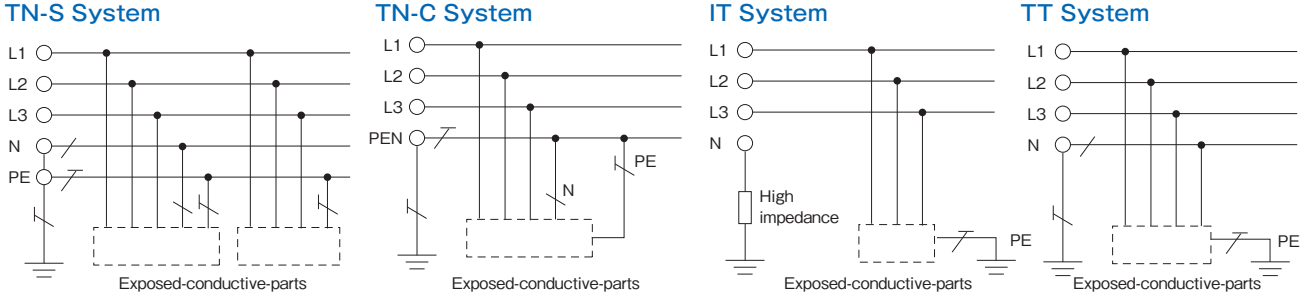


B. Protection against indirect contact

Protection of persons from electrical shock that may occur due to touching exposed conductive parts (such as metal frame of the device) when a fault occurs in electrical equipment.
As one of the protective measures, depending on the condition in TT or TN-S system, the automatic cutoff of power supply with ELCB is specified in IEC60364-4-41.
For the details of the installation systems and how to apply ELCB, please refer to the following chart and flowchart.



Types of installation systems in IEC 60364

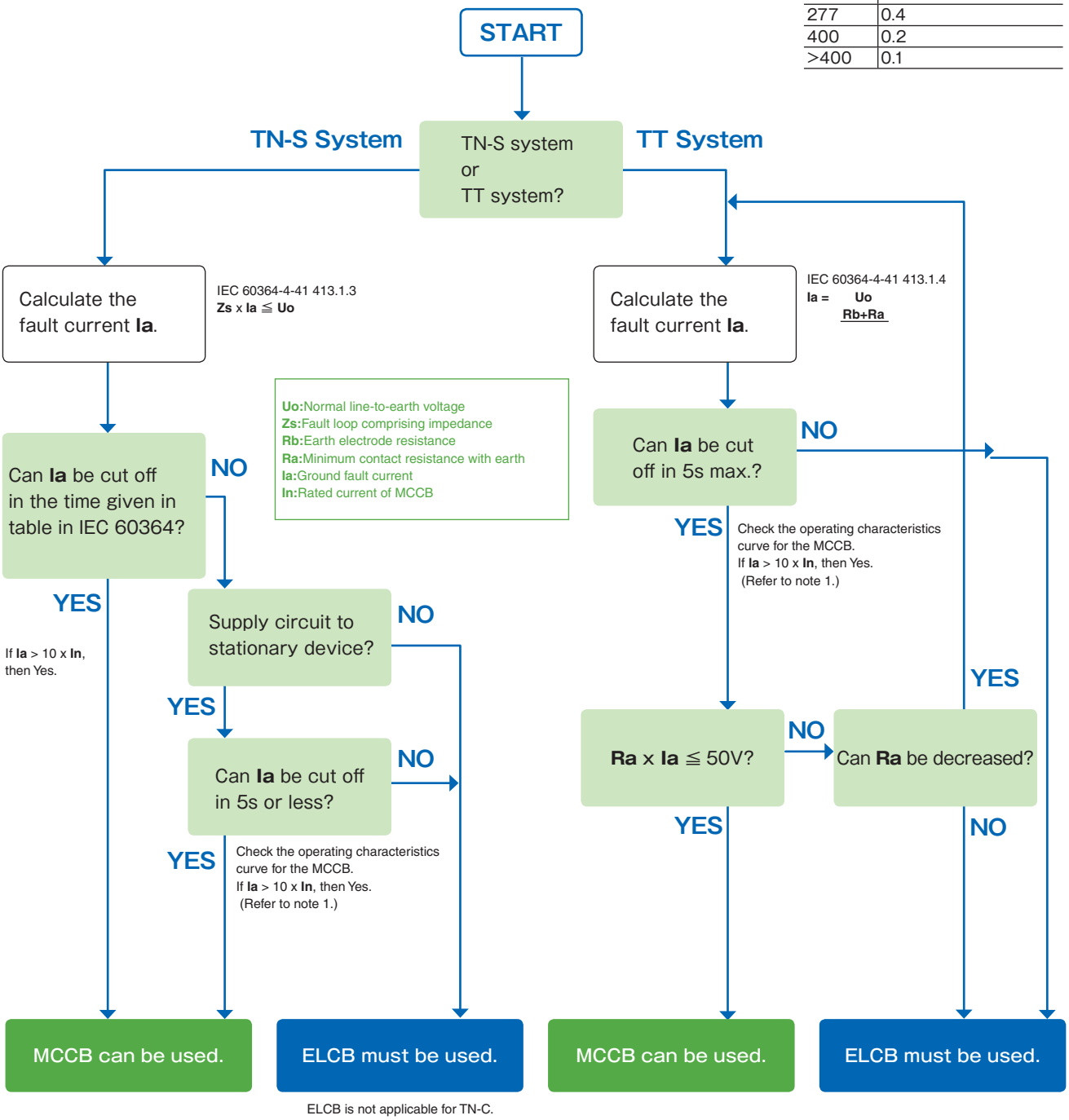


L1, L2, L3: Voltage poles, N: Neutral line, PE: Protective conductor
1: A TN-C system has a PEN conductor installed that combines neutral line N and protective conductor PE, and so ELCB cannot be used. (Ground faults cannot be detected.)
2: An IT system is a non-grounded system, and so ELCB cannot be used. (Ground faults cannot be detected.)

Flowchart for considering protection against indirect contact using automatic cutoff of power supply

Max. breaking time in TN system
(IEC 60364, table 41A)

Uo(V)	Breaking time (s)
120	0.8
230	0.4
277	0.4
400	0.2
>400	0.1



Note 1: The formula 10 x **In** is a rough guide to the current value for the overcurrent trip device to automatically cut off in 5s or less.

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⚠ Safety Considerations
- Operate (keep) in the environment specified in the operating instructions and manual. High temperature, high humidity, condensation, dust, corrosive gases, oil, organic solvents, excessive vibration or shock might cause electric shock, fire, erratic operation or failure.
- For safe operation, before using the product read the instruction manual or user manual that comes with the product carefully or consult the Fuji sales representative from which you purchased the product.
- Products introduced in this catalog have not been designed or manufactured for such applications in a system or equipment that will affect human bodies or lives.
- Customers, who want to use the products introduced in this catalog for special systems or devices such as for atomic-energy control, aerospace use, medical use, passenger vehicle, and traffic control, are requested to consult with Fuji Electric FA.
- Customers are requested to prepare safety measures when they apply the products introduced in this catalog to such systems or facilities that will affect human lives or cause severe damage to property if the products become faulty.
- For safe operation, wiring should be conducted only by qualified engineers who have sufficient technical knowledge about electrical work or wiring.
- Follow the regulations of industrial wastes when the product is to be discarded.
- For further questions, please contact your Fuji sales representative or Fuji Electric FA.

G-TWIN series

Page

MINIMUM ORDERS

Orders amounting to **less than ¥10,000** net per order will be charged as ¥10,000 net per order plus freight and other charges.

WEIGHTS AND DIMENSIONS

Weights and dimensions appearing in this catalog are the best information available at the time of going to press. FUJI ELECTRIC FA has a policy of continuous product improvement, and design changes may make this information out of date.
Please confirm such details before planning actual construction.

INFORMATION IN THIS CATALOG IS SUBJECT TO CHANGE WITHOUT NOTICE.

■ G-TWIN Standard Series (IEC/EN/GB/JIS conformed)

Line protection

AC415V Icu	BW32	BW50	BW63	BW100	BW125	BW160	BW250	BW400	BW630	BW800
1.5kA	AAG	AAG		AAG						
2.5kA	SAG	EAG	EAG							
7.5kA		SAG	SAG							
10kA		RAG	RAG	EAG						
18kA						EAG	EAG			
30kA					JAG	JAG	JAG	EAG		
36kA					SAG	SAG	SAG	SAG	EAG	EAG
50kA					RAG	RAG	RAG	RAG	RAG	RAG
65kA		HAG*			HAG*		HAG*			
70kA								HAG	HAG	HAG

Note: * There are no performance indications for GB standards for the BW50HAG, BW125HAG, and BW250HAG.

Motor protection

AC415V Icu	BW32	BW50	BW63	BW100	BW125	BW250
1.5kA	AAM					
2.5kA	SAM	EAM	EAM			
7.5kA		SAM	SAM			
10kA		RAM		EAM		
18kA						EAM
30kA					JAM	JAM
50kA					RAM	RAM

■ G-TWIN Global Series (IEC/EN/GB/JIS/UL/CSA conformed)

Line protection

AC415V Icu	BW50	BW100	BW125	BW250	BW400	BW630	BW800
10kA	RAGU	EAGU					
18kA				EAGU			
30kA			JAGU	JAGU	EAGU		
36kA					SAGU		
50kA			RAGU	RAGU	RAGU	RAGU	RAGU
70kA					HAGU	HAGU	HAGU

Type number nomenclature

■ Type number nomenclature

BW 250 EA G □ - 3P 225 X

Series
BW: G-TWIN series MCCB

Frame size
32: 32AF 63: 63AF 125: 125AF 250: 250AF 630: 630AF
50: 50AF 100: 100AF 160: 160AF 400: 400AF 800: 800AF

Breaking capacity

	Rated breaking capacity Icu (440V AC)									
	32AF	50AF	63AF	100AF	125AF	160AF	250AF	400AF	630AF	800AF
AA	1.5kA	1.5kA	–	1.5kA	–	–	–	–	–	–
EA	1.5kA	2.5kA	2.5kA	10kA	–	18kA	18kA	30kA	36kA	36kA
JA	–	–	–	–	30kA	30kA	30kA	–	–	–
SA	2.5kA	7.5kA	7.5kA	–	36kA	36kA	36kA	36kA	–	–
RA	–	10kA	10kA	–	50kA	50kA	50kA	50kA	50kA	50kA
HA	–	65kA	–	–	65kA	–	65kA	70kA	70kA	70kA

Model
G: Line protection M: Motor protection

G-TWIN series
Blank: Standard U: Global

No. of poles
2P: 2-pole 3P: 3-pole 4P: 4-pole

Rated current
See page 39.

Terminal combination (Global type)

Code	Terminal position		Applicable breaker type		
	Line	Load	BW50	BW100, 125, 250	BW400, 630, 800
Blank	Screw	Screw	●	●	–
Blank	Flat teminal	Flat teminal	–	–	●
SB	Block terminal	Block terminal	–	●	●
SF	Flat teminal	Flat teminal	●	●	–
S3	Screw	Flat terminal	●	●	–
S4	Flat teminal	Screw	●	●	–
S5	Screw	Block terminal	–	●	–
S6	Block terminal	Screw	–	●	–
S7	Flat teminal	Block terminal	–	●	●
S8	Block terminal	Flat terminal	–	●	●

Mounting and connection
• Standard type
Blank: Front mounting front connection
X: Front mounting rear connection
E: Flush mounting rear connection
Y: Flush mounting , top & buttom connection
P: Plug-in mounting

W K F□ R□ M□ A Q2 UC

Enclosure
UC: Standard
UV: Dust-proof (IP40)
UW: Rain-proof (IP54)

Pad locking device
Q2: Plate type

Connection method (internal accessories)
Blank: Lead-wire system
A: Terminal block system

With motor operating device (32 - 100AF)
□: DC100V
AC100-110V
AC200-220V

Undervoltage trip device (External)*
• 32/50/63/100AF
□: DC24V
: DC100-110V
: AC100V (50Hz) / AC100-110V (60Hz)
: AC200V (50Hz) / AC200-220V (60Hz)
: AC400V (50Hz) / AC400-440V (60Hz)

Undervoltage trip device (Internal)*

• 125/160/250AF	• 400/630/800AF
□: DC24V	AC/DC24V
: DC48V	AC/DC48V
: DC100-110V	AC/DC100-110V
: DC125V	AC120-130V / DC125V
: AC100-110V	AC200-240V / DC200-220V
: AC110-130V	AC277V
: AC200-240V	AC380-480V
: AC277V	
: AC380-415V	
: AC440-480V	

Shunt trip device (Internal)*
• 32/50/63/100AF
□: AC/DC24V
: AC100-120V / DC100-110V
: AC200-240V
: AC380-450V

Shunt trip device (Internal)*

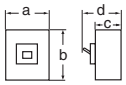
• 125/160/250AF	• 400/630/800AF
□: AC/DC24V	AC/DC24-48V
: AC/DC48V	AC100-240V / DC100-220V
: AC100-120V / DC100-110V	AC277V
: AC120-130V	AC380-550V
: AC200-240V / DC200-220V	
: AC277V	
: AC380-440V	
: AC440-480V	
: AC500-550V	

Alarm switch*
K: Standard SPDT
J: Standard 2PDT
8: For low level circuit SPDT
9: For low level circuit 2PDT

Auxiliary switch*
W: Standard SPDT
V: Standard 2PDT
1: For low level circuit SPDT
2: For low level circuit 2PDT

* For the available configuration of accessory, see page 78.

■ G-TWIN Standard Series

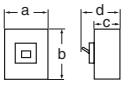
Ampere frame				32A			
Type				**BW32AAG**		**BW32SAG**	
Pole				2	3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		3, 5, 10, 15, 20, 30, 32			
Rated impulse withstand voltage		Uimp(kV)		6		6	
Isolation compliant				●		●	
Rated insulation voltage Ui (V)		AC		500		690	
		DC		–		250*1	
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	500V	–		1.5/1	
			440V	1.5/1		2.5/2	
			415V	1.5/1		2.5/2	
			400V	1.5/1		2.5/2	
			380V	1.5/1		2.5/2	
			240V	2.5/2		5/3	
			230V	2.5/2		5/3	
		DC	250V	–		2.5/2*1	
	GB14048.2	AC	400V	1.5/1		2.5/2	
			230V	2.5/2		5/3	
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)	
	CCC certificate			●		●	
	Electrical Appliance and Material Safety Law <PS>E*2			●		●	
Dimensions (mm) 			a	50	75	50	75
			b	100		100	
			c	60		60	
			d	84		84	
Mass (kg)				0.4	0.5	0.4	0.5
Tripping device				Hydraulic-magnetic			
Front mounting, front connection			No-mark	○	○	○	○
Front mounting, rear connection			X	○	○	○	○
Flush mounting, front connection			E	○	○	○	○
Flush mounting, top & bottom connection			Y	○	○	○	○
Plug-in mounting			P	○	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○	○
Internal accessories			Page 73				
Alarm switch			K	○	○	○	○
Auxiliary switch			W	○	○	○	○
Undervoltage trip			R	○	○	○	○
Shunt trip			F	○	○	○	○
External accessories			Page 76				
Handle padlocking device Cap type			QN	○	○	○	○
Handle padlocking device Plate type			Q2	▲	▲	▲	▲
Operating handle N-type			N	○	○	○	○
Operating handle V-type			V	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○
Earth			BL	○	○	○	○
Handle locking cover			L1	○	○	○	○
Flat terminal			SS	○	○	○	○
Block terminal			SL	–	–	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

Note: *1 Specify DC only when ordering circut breakers for DC circuit.

*2 Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series

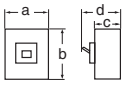
Ampere frame				50A									
Type				**BW50AAG**		**BW50EAG**		**BW50SAG**		**BW50RAG**		**BW50HAG**	
Pole				2	3	2	3	2	3	2	3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		5, 10, 15, 20, 30, 32, 40, 50						10, 15, 20, 30, 32, 40, 50		15, 20, 30, 40, 50	
Rated impulse withstand voltage		Uimp(kV)		6		6		6		6		6	
Isolation compliant				●		●		●		●		●	
Rated insulation voltage Ui (V)		AC		500		690		690		690		690	
		DC		–		250*1		250*1		250*1		250	
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	500V	–		1.5/1		5/3		7.5/4		25/7	
			440V	1.5/1		2.5/2		7.5/4		10/5		65/17	
			415V	1.5/1		2.5/2		7.5/4		10/5		65/17	
			400V	1.5/1		2.5/2		7.5/4		10/5		65/17	
			380V	1.5/1		2.5/2		7.5/4		10/5		65/17	
			240V	2.5/2		5/3		10/5		25/13		125/63	
			230V	2.5/2		5/3		10/5		25/13		125/63	
		DC	250V	–		2.5/2*1		5/3*1		5/3*1		40/20	
	GB14048.2	AC	400V	1.5/1		2.5/2		7.5/4		10/5		–	
			230V	2.5/2		5/3		10/5		25/13		–	
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)		● (TÜV)		● (TÜV)		●	
	CCC certificate			●		●		●		●		–	
	Electrical Appliance and Material Safety Law <PS>E*2			●		●		●		●		●	
Dimensions (mm) 			a	50	75	50	75	50	75	50	75	90	
			b	100		100		100		100		155	
			c	60		60		60		60		68	
			d	84		84		84		84		95	
Mass (kg)				0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.5	1.0	1.2
Tripping device				Hydraulic-magnetic								Thermal-magnetic	
Front mounting, front connection			No-mark	○	○	○	○	○	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○	○	○	○	○	○
Flush mounting, top & bottom connection			Y	○	○	○	○	○	○	○	○	–	–
Plug-in mounting			P	○	○	○	○	○	○	○	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○	○	○	○	○	○	–	–
Internal accessories			Page 73										
Alarm switch			K	○	○	○	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○	○	○	○
External accessories			Page 76										
Handle padlocking device	Cap type		Q1/QN	○	○	○	○	○	○	○	○	○	○
Handle padlocking device	Plate type		Q2	▲	▲	▲	▲	▲	▲	▲	▲	○	○
Operating handle	N-type		N	○	○	○	○	○	○	○	○	○	○
Operating handle	V-type		V	○	○	○	○	○	○	○	○	○	○
Terminal cover	Short		BT□S	○	○	○	○	○	○	○	○	○	○
Terminal cover	Long		BT□L	○	○	○	○	○	○	○	○	○	○
Insulation barrier	Interphase		BP	○	○	○	○	○	○	○	○	○	○
	Earth		BL	○	○	○	○	○	○	○	○	–	–
Handle locking cover			L1	○	○	○	○	○	○	○	○	○	○
Flat terminal			SS	○	○	○	○	○	○	○	○	○	○
Block terminal			SL	–	–	–	–	–	–	–	–	○	○

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

Note: *1 Specify DC only when ordering circut breakers for DC circuit.

*2 Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series

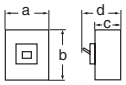
Ampere frame				63A					
Type				**BW63EAG**		**BW63SAG**		**BW63RAG**	
Pole				2	3	2	3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		60, 63					
Rated impulse withstand voltage		Uimp(kV)		6		6		6	
Isolation compliant				●		●		●	
Rated insulation voltage Ui (V)		AC		690		690		690	
		DC		250*1		250*1		250*1	
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	500V	1.5/1		5/3		7.5/4	
			440V	2.5/2		7.5/4		10/5	
			415V	2.5/2		7.5/4		10/5	
			400V	2.5/2		7.5/4		10/5	
			380V	2.5/2		7.5/4		10/5	
			240V	5/3		10/5		25/13	
			230V	5/3		10/5		25/13	
		DC	250V	2.5/2*1		5/3*1		5/3*1	
	GB14048.2	AC	400V	2.5/2		7.5/4		10/5	
			230V	5/3		10/5		25/13	
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)		● (TÜV)	
	CCC certificate			●		●		●	
	Electrical Appliance and Material Safety Law <PS>E*2			●		●		●	
Dimensions (mm) 			a	50	75	50	75	50	75
			b	100		100		100	
			c	60		60		60	
			d	84		84		84	
Mass (kg)				0.4	0.5	0.4	0.5	0.4	0.5
Tripping device				Hydraulic-magnetic					
Front mounting, front connection			No-mark	○	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○	○
Flush mounting, top & bottom connection			Y	○	○	○	○	○	○
Plug-in mounting			P	○	○	○	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○	○	○	○
Internal accessories			Page 73						
Alarm switch			K	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○
External accessories			Page 76						
Handle padlocking device Cap type			QN	○	○	○	○	○	○
Handle padlocking device Plate type			Q2	▲	▲	▲	▲	▲	▲
Operating handle N-type			N	○	○	○	○	○	○
Operating handle V-type			V	○	○	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○	○	○
Earth			BL	○	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○	○
Flat terminal			SS	○	○	○	○	○	○
Block terminal			SL	–	–	–	–	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

Note: *1 Specify DC only when ordering circut breakers for DC circuit.

*2 Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series

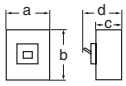
Ampere frame				100A			
Type				**BW100AAG**		**BW100EAG**	
Pole				2	3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		60, 63, 75, 100		50, 60, 63, 75, 100	
Rated impulse withstand voltage		Uimp(kV)		6		6	
Isolation compliant				●		●	
Rated insulation voltage Ui (V)		AC		500		690	
		DC		–		250*1	
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	500V	–		7.5/4	
			440V	–		10/5	
			415V	–		10/5	
			400V	1.5/1		10/5	
			380V	1.5/1		10/5	
			240V	5/3		25/13	
			230V	5/3		25/13	
		DC	250V	–		5/3*1	
	GB14048.2	AC	400V	1.5/1		10/5	
			230V	5/3		25/13	
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)	
	CCC certificate			●		●	
	Electrical Appliance and Material Safety Law <PS>E*2			●		●	
Dimensions (mm) 			a	50	75	50	75
			b	100		100	
			c	60		60	
			d	84		84	
Mass (kg)				0.4	0.5	0.4	0.5
Tripping device				Thermal -magnetic			
Front mounting, front connection			No-mark	○	○	○	○
Front mounting, rear connection			X	○	○	○	○
Flush mounting, front connection			E	○	○	○	○
Flush mounting, top & bottom connection			Y	○	○	○	○
Plug-in mounting			P	○	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○	○
Internal accessories			Page 73				
Alarm switch			K	○	○	○	○
Auxiliary switch			W	○	○	○	○
Undervoltage trip			R	○	○	○	○
Shunt trip			F	○	○	○	○
External accessories			Page 76				
Handle padlocking device Cap type			QN	○	○	○	○
Handle padlocking device Plate type			Q2	▲	▲	▲	▲
Operating handle N-type			N	○	○	○	○
Operating handle V-type			V	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○
Earth			BL	○	○	○	○
Handle locking cover			L1	○	○	○	○
Flat terminal			SS	○	○	○	○
Block terminal			SL	–	–	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

Note: *1 Specify DC only when ordering circut breakers for DC circuit.

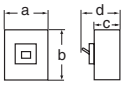
*2 Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series

Ampere frame				125A											
Type				**BW125JAG**			**BW125SAG**			**BW125RAG**			**BW125HAG**		
Pole				2	3	4	2	3	4	2	3	4	2	3	
Rated current Reference amb. temp. (40°C)		In(A)		15, 20, 30, 40, 50, 60, 75, 100, 125											
Rated impulse withstand voltage		Uimp(kV)		6			6			6			6		
Isolation compliant				●			●			●			●		
Rated insulation voltage Ui (V)		AC		690			690			690			690		
		DC		250			250			250			250		
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–	–		–			–			–		
			500V	5/3	8/4		10/5			10/5			25/7		
			440V	30/15	30/15		36/18			50/25			65/17		
			415V	30/15	30/15		36/18			50/25			65/17		
			400V	30/15	30/15		36/18			50/25			65/17		
			380V	30/15	30/15		36/18			50/25			65/17		
			240V	50/25	50/25		85/43			100/50			125/63		
			230V	50/25	50/25		85/43			100/50			125/63		
		DC	250V	15/8	15/8		30/15			40/20			40/20		
	GB14048.2	AC	400V	30/15	30/15		36/18			50/25			–		
			230V	50/25	50/25		85/43			100/50			–		
Conforming to standards	CE Marking			● (TÜV)			● (TÜV)			● (TÜV)			●		
	CCC certificate			●			●			●			–		
	Electrical Appliance and Material Safety Law <PS>E*2			● (except for 125A)			● (except for 125A)			● (except for 125A)			● (except for 125A)		
Dimensions (mm) 			a	60	90	120	90	90	120	90	90	120	90		
			b	155			155			155			155		
			c	68			68			68			68		
			d	95			95			95			95		
Mass (kg)				0.8	1.2	1.6	1.0	1.2	1.6	1.0	1.2	1.6	1.0	1.2	
Tripping device				Thermal-magnetic											
Front mounting, front connection			No-mark	○	○	○	○	○	○	○	○	○	○	○	
Front mounting, rear connection			X	○	○	○	○	○	○	○	○	○	○	○	
Flush mounting, front connection			E	○	○	○	○	○	○	○	○	○	○	○	
Plug-in mounting			P	○	○	–	○	○	–	○	○	–	○	○	
Internal accessories			Page 74												
Alarm switch			K	○	○	○	○	○	○	○	○	○	○	○	
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○	○	
Undervoltage trip			R	–	○	○	○	○	○	○	○	○	○	○	
Shunt trip			F	○	○	○	○	○	○	○	○	○	○	○	
External accessories			Page 76												
Handle padlocking device Cap type			Q1	○	○	○	○	○	○	○	○	○	○	○	
Handle padlocking device Plate type			Q2	–	○	○	○	○	○	○	○	○	○	○	
Operating handle N-type			N	○	○	○	○	○	○	○	○	○	○	○	
Operating handle V-type			V	○	○	○	○	○	○	○	○	○	○	○	
Terminal cover Short			BT□S	○	○	○	○	○	○	○	○	○	○	○	
Terminal cover Long			BT□L	○	○	○	○	○	○	○	○	○	○	○	
Insulation barrier Interphase			BP	○	○	○	○	○	○	○	○	○	○	○	
Handle locking cover			L1	○	○	○	○	○	○	○	○	○	○	○	
Flat terminal			SS	○	○	○	○	○	○	○	○	○	○	○	
Block terminal			SL	○	○	○	○	○	○	○	○	○	○	○	

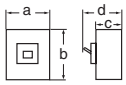
●: Approved ○: Available –: Not available
Note: * Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series

Ampere frame				160A									
Type				**BW160EAG**		**BW160JAG**			**BW160SAG**			**BW160RAG**		
Pole				2	3	2	3	4	2	3	4	2	3	4
Rated current Reference amb. temp. (40°C)		In(A)		125, 150, 160									
Rated impulse withstand voltage		Uimp(kV)		6		6			6			6		
Isolation compliant				●		●			●			●		
Rated insulation voltage Ui (V)		AC		690		690			690			690		
		DC		250		250			250			250		
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–		–			–			–		
			500V	5/3		8/4			10/5			10/5		
			440V	18/9		30/15			36/18			50/25		
			415V	18/9		30/15			36/18			50/25		
			400V	18/9		30/15			36/18			50/25		
			380V	18/9		30/15			36/18			50/25		
			240V	36/18		50/25			85/43			100/50		
			230V	36/18		50/25			85/43			100/50		
		DC	250V	10/5		20/10			30/15			30/15		
	GB14048.2	AC	400V	18/9		30/15			36/18			50/25		
			230V	36/18		50/25			85/43			100/50		
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)			● (TÜV)			● (TÜV)		
	CCC certificate			●		●			●			●		
	Electrical Appliance and Material Safety Law <PS>E*			–		–			–			–		
Dimensions (mm) 			a	105	105	105	105	140	105	105	140	105	105	140
			b	165		165			165			165		
			c	68		68			68			68		
			d	95		95			95			95		
Mass (kg)				1.4	1.6	1.4	1.6	2.2	1.4	1.6	2.2	1.4	1.6	2.2
Tripping device				Thermal-magnetic										
Front mounting, front connection			No-mark	○	○	○	○	○	○	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○	○	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○	○	○	○	○	○	○
Plug-in mounting			P	○	○	○	○	–	○	○	–	○	○	–
Internal accessories			Page 74											
Alarm switch			K	○	○	○	○	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○	○	○	○	○
External accessories			Page 76											
Handle padlocking device Cap type			Q1	○	○	○	○	○	○	○	○	○	○	○
Handle padlocking device Plate type			Q2	○	○	○	○	○	○	○	○	○	○	○
Operating handle N-type			N	○	○	○	○	○	○	○	○	○	○	○
Operating handle V-type			V	○	○	○	○	○	○	○	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○	○	○	○	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○	○	○	○	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○	○	○	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○	○	○	○	○	○	○
Flat terminal			SS	○	○	○	○	○	○	○	○	○	○	○
Block terminal			SL	○	○	○	○	○	○	○	○	○	○	○

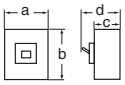
●: Approved ○: Available –: Not available
Note: * Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series

Ampere frame				250A													
Type				**BW250EAG**		**BW250JAG**			**BW250SAG**			**BW250RAG**			**BW250HAG**	
Pole				2	3	2	3	4	2	3	4	2	3	4	2	3
Rated current Reference amb. temp. (40°C)		In(A)		175, 200, 225, 250											125,150,160,175 200,225,250	
Rated impulse withstand voltage		Uimp(kV)		6		6			6			6			6	
Isolation compliant				●		●			●			●			●	
Rated insulation voltage Ui (V)		AC		690		690			690			690			690	
		DC		250		250			250			250			250	
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–		–			–			–			–	
			500V	5/3		8/4			10/5			10/5			25/7	
			440V	18/9		30/15			36/18			50/25			65/17	
			415V	18/9		30/15			36/18			50/25			65/17	
			400V	18/9		30/15			36/18			50/25			65/17	
			380V	18/9		30/15			36/18			50/25			65/17	
			240V	36/18		50/25			85/43			100/50			125/63	
			230V	36/18		50/25			85/43			100/50			125/63	
		DC	250V	10/5		20/10			30/15			30/15			40/20	
	GB14048.2	AC	400V	18/9		30/15			36/18			50/25			–	
			230V	36/18		50/25			85/43			100/50			–	
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)			● (TÜV)			● (TÜV)			●	
	CCC certificate			●		●			●			●			–	
	Electrical Appliance and Material Safety Law <PS>E*			–		–			–			–			–	
Dimensions (mm) 		a		105	105	105	105	140	105	105	140	105	105	140	105	
		b		165		165			165			165			165	
		c		68		68			68			68			68	
		d		95		95			95			95			95	
Mass (kg)				1.4	1.6	1.4	1.6	2.2	1.4	1.6	2.2	1.4	1.6	2.2	1.4	1.6
Tripping device				Thermal-magnetic												
Front mounting, front connection		No-mark		○	○	○	○	○	○	○	○	○	○	○	○	○
Front mounting, rear connection		X		○	○	○	○	○	○	○	○	○	○	○	○	○
Flush mounting, front connection		E		○	○	○	○	○	○	○	○	○	○	○	○	○
Plug-in mounting		P		○	○	○	○	–	○	○	–	○	○	–	○	○
Internal accessories		Page 74														
Alarm switch		K		○	○	○	○	○	○	○	○	○	○	○	○	○
Auxiliary switch		W		○	○	○	○	○	○	○	○	○	○	○	○	○
Undervoltage trip		R		○	○	○	○	○	○	○	○	○	○	○	○	○
Shunt trip		F		○	○	○	○	○	○	○	○	○	○	○	○	○
External accessories		Page 76														
Handle padlocking device Cap type		Q1		○	○	○	○	○	○	○	○	○	○	○	○	○
Handle padlocking device Plate type		Q2		○	○	○	○	○	○	○	○	○	○	○	○	○
Operating handle N-type		N		○	○	○	○	○	○	○	○	○	○	○	○	○
Operating handle V-type		V		○	○	○	○	○	○	○	○	○	○	○	○	○
Terminal cover Short		BT□S		○	○	○	○	○	○	○	○	○	○	○	○	○
Terminal cover Long		BT□L		○	○	○	○	○	○	○	○	○	○	○	○	○
Insulation barrier Interphase		BP		○	○	○	○	○	○	○	○	○	○	○	○	○
Handle locking cover		L1		○	○	○	○	○	○	○	○	○	○	○	○	○
Flat terminal		SS		○	○	○	○	○	○	○	○	○	○	○	○	○
Block terminal		SL		○	○	○	○	○	○	○	○	○	○	○	○	○

●: Approved ○: Available –: Not available
Note: * Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series

Ampere frame				400A										
Type				**BW400EAG**		**BW400SAG**		**BW400RAG**			**BW400HAG**			
Pole				2	3	2	3	2	3	4	2	3	4	
Rated current Reference amb. temp. (40°C)		In(A)		250, 300, 350, 400										
Rated impulse withstand voltage		Uimp(kV)		8		8		8			8			
Isolation compliant				●		●		●			●			
Rated insulation voltage Ui (V)		AC		690		690		690			690			
		DC		250		250		250			250			
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–		10/5		15/8			15/8			
			500V	18/9		20/10		36/18			42/21			
			440V	30/15		36/18		50/25			70/35			
			415V	30/15		36/18		50/25			70/35			
			400V	30/15		36/18		50/25			70/35			
			380V	30/15		36/18		50/25			70/35			
			240V	50/25		85/43		100/50			125/63			
			230V	50/25		85/43		100/50			125/63			
		DC	250V	20/10		20/10		40/20			40/20			
	GB14048.2	AC	400V	30/15		36/18		50/25			70/35			
			230V	50/25		85/43		100/50			125/63			
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)		● (TÜV)			● (TÜV)			
	CCC certificate			●		●		●			●			
	Electrical Appliance and Material Safety Law <PS>E*1			–		–		–			–			
Dimensions (mm) 			a	140	140	140	140	140	140	185	140	140	185	
			b	257		257		257			257			
			c	103		103		103			103			
			d	146		146		146			146			
Mass (kg)				4.6	5.6	4.6	5.6	4.6	5.6	7.4	4.6	5.6	7.4	
Tripping device				Thermal-magnetic										
Front mounting, front connection			No-mark	○	○	○	○	○	○	○	○	○	○	
Front mounting, rear connection			X	○	○	○	○	○	○	○	○	○	○	
Flush mounting, front connection			E	○	○	○	○	○	○	○	○	○	○	
Plug-in mounting			P	○	○	○	○	○	○	–	○	○	–	
Internal accessories			Page 75											
Alarm switch			K	○	○	○	○	○	○	○	○	○	○	
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○	
Undervoltage trip			R	○	○	○	○	○	○	○	○	○	○	
Shunt trip			F	○	○	○	○	○	○	○	○	○	○	
External accessories			Page 76											
Handle padlocking device	Cap type		QN	○	○	○	○	○	○	○	○	○	○	
Handle padlocking device	Plate type		Q2	○	○	○	○	○	○	○	○	○	○	
Operating handle	N-type		N	○	○	○	○	○	○	○	○	○	○	
Operating handle	V-type		V	○	○	○	○	○	○	○	○	○	○	
Terminal cover	Short		BT□S	○	○	○	○	○	○	○	○	○	○	
Terminal cover	Long		BT□L	○	○	○	○	○	○	○	○	○	○	
Insulation barrier	Interphase		BP	○	○	○	○	○	○	○	○	○	○	
Handle locking cover			L1	○	○	○	○	○	○	○	○	○	○	
Flat terminal			SS	○*2	○*2	○*2	○*2	○*2	○*2	○*2	○*2	○*2	○*2	
Block terminal			SL	○	○	○	○	○	○	○	○	○	○	

●: Approved ○: Available –: Not available

Note: *1 Electrical Appliance and Material Safety Law of Japan

*2 Standard provided

■ G-TWIN Standard Series

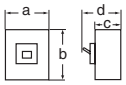
Ampere frame				630A					800A				
Type				**BW630EAG**	**BW630RAG**		**BW630HAG**		**BW800EAG**	**BW800RAG**		**BW800HAG**	
Pole				3	3	4	3	4	3	3	4	3	4
Rated current Reference amb. temp. (40°C)		In(A)		500, 600, 630					700, 800				
Rated impulse withstand voltage		Uimp(kV)		8	8		8		8	8		8	
Isolation compliant				●	●		●		●	●		●	
Rated insulation voltage Ui (V)		AC		690	690		690		690	690		690	
		DC		250	250		250		250	250		250	
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–	15/8		15/8		–	15/8		15/8	
			600V	–	–		–		–	–		–	
			500V	18/9	36/18		42/21		18/9	36/18		42/21	
			440V	36/18	50/25		70/35		36/18	50/25		70/35	
			415V	36/18	50/25		70/35		36/18	50/25		70/35	
			400V	36/18	50/25		70/35		36/18	50/25		70/35	
			380V	36/18	50/25		70/35		36/18	50/25		70/35	
			240V	50/25	100/50		125/63		50/25	100/50		125/63	
			230V	50/25	100/50		125/63		50/25	100/50		125/63	
		DC	250V	20/10	40/20		40/20		20/10	40/20		40/20	
	GB14048.2	AC	400V	36/18	50/25		70/35		36/18	50/25		70/35	
			230V	50/25	100/50		125/63		50/25	100/50		125/63	
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)		● (TÜV)		● (TÜV)	● (TÜV)		● (TÜV)	
	CCC certificate			●	●		●		●	●		●	
	Electrical Appliance and Material Safety Law <PS>E*1			–	–		–		–	–		–	
Dimensions (mm)			a	210	210	280	210	280	210	210	280	210	280
			b	275	275		275		275	275		275	
			c	103	103		103		103	103		103	
			d	146	146		146		146	146		146	
Mass (kg)				7.8	7.8	10.3	7.8	10.3	8.3	8.3	11	8.3	11
Tripping device				Thermal-magnetic									
Front mounting, front connection		No-mark		○	○	○	○	○	○	○	○	○	○
Front mounting, rear connection		X		○	○	○	○	○	○	○	○	○	○
Flush mounting, front connection		E		○	○	○	○	○	○	○	○	○	○
Plug-in mounting		P		○	○	–	○	–	○	○	–	○	–
Internal accessories		Page 75											
Alarm switch		K		○	○		○		○	○		○	
Auxiliary switch		W		○	○		○		○	○		○	
Undervoltage trip		R		○	○		○		○	○		○	
Shunt trip		F		○	○		○		○	○		○	
External accessories		Page 76											
Handle padlocking device	Cap type	QN		○	○		○		○	○		○	
Handle padlocking device	Plate type	Q2		○	○		○		○	○		○	
Operating handle	N-type	N		○	○		○		○	○		○	
Operating handle	V-type	V		○	○		○		○	○		○	
Terminal cover	Long	BT□L		○	○		○		○	○		○	
Insulation barrier	Interphase	BP		○	○		○		○	○		○	
Handle locking cover		L1		○	○		○		○	○		○	
Flat terminal		SS		○*2	○*2		○*2		○*2	○*2		○*2	
Block terminal		SL		○	○		○		○	○		○	

●: Approved ○: Available –: Not available

Note: *1 Electrical Appliance and Material Safety Law of Japan

*2 Standard provided

■ G-TWIN Global Series

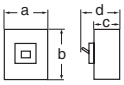
Ampere frame				50A				100A		
Type				**BW50RAGU**				**BW100EAGU**		
Pole				2		3		2		3
Rated current Reference amb. temp. (40°C)		In(A)		3, 5	10, 15, 20, 30, 32, 40, 50	3, 5	10, 15, 20, 30, 32, 40, 50	60, 63, 70, 75, 80, 90, 100		
Rated impulse withstand voltage		Uimp(kV)		6				6		
Isolation compliant				●				●		
Rated insulation voltage Ui (V)		AC		690				690		
Rated breaking capacity	IEC 60947-2 EN 60947-2 JIS C 8201-2-1 Icu/Ics (kA)	AC	500V	7.5/4				7.5/4		
			440V	10/5				10/5		
			415V	10/5				10/5		
			400V	10/5				10/5		
			380V	10/5				10/5		
			240V	25/13				25/13		
			230V	25/13				25/13		
	GB14048.2 Icu/Ics(kA)	AC	400V	7/4	10/5	7/4	10/5	10/5		
			230V	14/7	25/13	14/7	25/13	25/13		
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	240V	14		–		14		
Conforming to standards	CE Marking			● (TÜV)				● (TÜV)		
	CCC certificate			●				●		
	UL Listed (NEMA AB1)			●				●		
	Electrical Appliance and Material Safety Law <PS>E*1			●				●		
Dimensions (inch(mm)) 			a	1.969 (50)		2.953 (75)		1.969 (50)		2.953 (75)
			b	4.724 (120)				4.724 (120)		
			c	2.362 (60)				2.362 (60)		
			d	3.307 (84)				3.307 (84)		
Mass (kg)				0.5		0.6		0.5		0.6
Tripping device				Hydraulic-magnetic						
Connecting terminal		Page 36								
Screw		S□		○		○		○		○
Flat				○		○		○		○
Block				–		–		○		○
Internal accessories		Page 73								
Alarm switch		K		○		○		○		○
Auxiliary switch		W		○		○		○		○
Undervoltage trip		R		○		○		○		○
Shunt trip		F		○		○		○		○
External accessories		Page 76								
Handle padlocking device Cap type		QN		○		○		○		○
Operating handle N-type		N		○		○		○		○
Operating handle V-type		V		○		○		○		○
Terminal cover Short		BT□S		○*2		○		○		○
Terminal cover Long		BT□L		○		○		○		○
Insulation barrier Interphase		BP		○		○		○		○
Handle locking cover		L1		○		○		○		○

●: Approved ○: Available –: Not available

Note: *1 Electrical Appliance and Material Safety Law of Japan

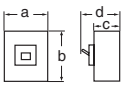
*2 Standard provided

■ G-TWIN Global Series

Ampere frame				125A				
Type				**BW125JAGU**		**BW125RAGU**		
Pole				2	3	2	3	
Rated current Reference amb. temp. (40°C)		In(A)		15, 20, 30, 40, 50, 60, 70, 75, 80, 90, 100, 125				
Rated impulse withstand voltage		Uimp(kV)		6		6		
Isolation compliant				●		●		
Rated insulation voltage Ui (V)		AC		690		690		
		DC		250		250		
Rated breaking capacity	IEC 60947-2 EN 60947-2 JIS C 8201-2-1 Icu/Ics (kA)	AC	690V	–		5/3		
			500V	15/8		36/18		
			440V	30/15		50/25		
			415V	30/15		50/25		
			400V	30/15		50/25		
			380V	30/15		50/25		
			240V	50/25		100/50		
			230V	50/25		100/50		
		DC	250V	15/8		40/20		
	GB14048.2 Icu/Ics(kA)	AC	400V	30/15		50/25		
			230V	50/25		100/50		
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	600V/Y	10	10	18		
			480V/Δ	–	30	50		
			480V/Y	30	30	50		
			240V	50	50	100		
		DC	125/250V	10	10	10		
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)		
	CCC certificate			●		●		
	UL Listed (NEMA AB1)			●		●		
	Electrical Appliance and Material Safety Law <PS>E*			● (except for 125A)		● (except for 125A)		
Dimensions (inch(mm)) 			a	2.362 (60)	3.543 (90)	3.543 (90)		
			b	6.732 (171)		6.732 (171)		
			c	2.677 (68)		2.677 (68)		
			d	3.740 (95)		3.740 (95)		
Mass (kg)				0.8	1.2	1.0	1.2	
Tripping device				Thermal-magnetic				
Connecting terminal			Page 36					
Screw			S□	○	○	○	○	
Flat				○	○	○	○	
Block				○	○	○	○	
Internal accessories			Page 74					
Alarm switch			K	○	○	○	○	
Auxiliary switch			W	○	○	○	○	
Undervoltage trip			R	–	○	○	○	
Shunt trip			F	○	○	○	○	
External accessories			Page 76					
Handle padlocking device	Cap type		Q1	○	○	○	○	
Handle padlocking device	Plate type		Q2	○	○	○	○	
Operating handle	N-type		N	–	○	○	○	
Operating handle	V-type		V	–	○	○	○	
Operating handle	F-type		F	–	○	○	○	
Terminal cover	Short		BT□S	○	○	○	○	
Terminal cover	Long		BT□L	○	○	○	○	
Insulation barrier	Interphase		BP	○	○	○	○	
Handle locking cover			L1	○	○	○	○	

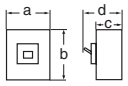
●: Approved ○: Available –: Not available
Note: * Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Global Series

Ampere frame				250A							
Type				**BW250EAGU**				**BW250JAGU**		**BW250RAGU**	
Pole				2	3			2	3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		125, 150, 160, 175, 200, 225, 250							
Rated impulse withstand voltage		Uimp(kV)		6				6		6	
Isolation compliant				●				●		●	
Rated insulation voltage Ui (V)		AC		690				690		690	
		DC		250				250		250	
Rated breaking capacity	IEC 60947-2 EN 60947-2 JIS C 8201-2-1 Icu/Ics (kA)	AC	690V	–				–		5/3	
			500V	10/5				18/9		36/18	
			440V	18/9				30/15		50/25	
			415V	18/9				30/15		50/25	
			400V	18/9				30/15		50/25	
			380V	18/9				30/15		50/25	
			240V	36/18				50/25		100/50	
			230V	36/18				50/25		100/50	
		DC	250V	10/5				20/10		40/20	
	GB14048.2 Icu/Ics(kA)	AC	400V	18/9				30/15		50/25	
			230V	36/18				50/25		100/50	
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	600V/Y	–				10		25	
			480V/Δ	–				30		50	
			480V/Y	–				30		50	
			240V	22				50		100	
		DC	125/250V	10				10		10	
Conforming to standards	CE Marking			● (TÜV)				● (TÜV)		● (TÜV)	
	CCC certificate			●				●		●	
	UL Listed (NEMA AB1)			●				●		●	
	Electrical Appliance and Material Safety Law <PS>E*			–				–		–	
Dimensions (inch(mm)) 			a	4.134 (105)				4.134 (105)		4.134 (105)	
			b	7.126 (181)				7.126 (181)		7.126 (181)	
			c	2.677 (68)				2.677 (68)		2.677 (68)	
			d	3.740 (95)				3.740 (95)		3.740 (95)	
Mass (kg)				1.4	1.6			1.4	1.6	1.4	1.6
Tripping device				Thermal-magnetic							
Connecting terminal		Page 36									
Screw		S□		○	○			○	○	○	○
Flat				○	○			○	○	○	○
Block				○	○			○	○	○	○
Internal accessories		Page 74									
Alarm switch		K		○	○			○	○	○	○
Auxiliary switch		W		○	○			○	○	○	○
Undervoltage trip		R		○	○			○	○	○	○
Shunt trip		F		○	○			○	○	○	○
External accessories		Page 76									
Handle padlocking device Cap type		Q1		○	○			○	○	○	○
Handle padlocking device Plate type		Q2		○	○			○	○	○	○
Operating handle N-type		N		○	○			○	○	○	○
Operating handle V-type		V		○	○			○	○	○	○
Operating handle F-type		F		○	○			○	○	○	○
Terminal cover Short		BT□S		○	○			○	○	○	○
Terminal cover Long		BT□L		○	○			○	○	○	○
Insulation barrier Interphase		BP		○	○			○	○	○	○
Handle locking cover		L1		○	○			○	○	○	○

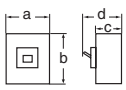
●: Approved ○: Available –: Not available
Note: * Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Global Series

Ampere frame				400A							
Type				**BW400EAGU**		**BW400SAGU**		**BW400RAGU**		**BW400HAGU**	
Pole				2	3	2	3	2	3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		250, 300, 350, 400							
Rated impulse withstand voltage		Uimp(kV)		8		8		8		8	
Isolation compliant				●		●		●		●	
Rated insulation voltage Ui (V)		AC		690		690		690		690	
		DC		250		250		250		250	
Rated breaking capacity	IEC 60947-2 EN 60947-2 JIS C 8201-2-1 Icu/Ics (kA)	AC	690V	–		10/5		15/8		15/8	
			500V	18/9		20/10		36/18		42/21	
			440V	30/15		36/18		50/25		70/35	
			415V	30/15		36/18		50/25		70/35	
			400V	30/15		36/18		50/25		70/35	
			380V	30/15		36/18		50/25		70/35	
			240V	50/25		85/43		100/50		125/63	
			230V	50/25		85/43		100/50		125/63	
		DC	250V	20/10		20/10		40/20		40/20	
	GB14048.2 Icu/Ics(kA)	AC	400V	30/15		36/18		50/25		70/35	
			230V	50/25		85/43		100/50		125/63	
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	600V/Δ	–		–		–		25	
			600V/Y	–		–		–		25	
			480V/Δ	–		35		50		65 (With block terminal:50)	
			480V/Y	–		35		50		65 (With block terminal:50)	
			240V	22		50		100		125	
		DC	125/250V	10		10		10		10	
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)		● (TÜV)		● (TÜV)	
	CCC certificate			●		●		●		●	
	UL Listed (NEMA AB1)			●		●		●		●	
	Electrical Appliance and Material Safety Law <PS>E*			–		–		–		–	
Dimensions (inch(mm)) 			a	5.512 (140)		5.512 (140)		5.512 (140)		5.512 (140)	
			b	10.12 (257)		10.12 (257)		10.12 (257)		10.12 (257)	
			c	4.055 (103)		4.055 (103)		4.055 (103)		4.055 (103)	
			d	5.748 (146)		5.748 (146)		5.748 (146)		5.748 (146)	
Mass (kg)				4.6	5.6	4.6	5.6	4.6	5.6	4.6	5.6
Tripping device				Thermal-magnetic							
Connecting terminal			Page 36								
Flat				○	○	○	○	○	○	○	○
Block				○	○	○	○	○	○	○	○
Internal accessories			Page 75								
Alarm switch			K	○	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○	○
External accessories			Page 76								
Handle padlocking device	Cap type		QN	○	○	○	○	○	○	○	○
Handle padlocking device	Plate type		Q2	○	○	○	○	○	○	○	○
Operating handle	N-type		N	○	○	○	○	○	○	○	○
Operating handle	V-type		V	○	○	○	○	○	○	○	○
Operating handle	F-type		F	○	○	○	○	○	○	○	○
Terminal cover	Short		BT□S	○	○	○	○	○	○	○	○
Terminal cover	Long		BT□L	○	○	○	○	○	○	○	○
Insulation barrier	Interphase		BP	○	○	○	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○	○	○	○

●: Approved ○: Available –: Not available
Note: * Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Global Series

Ampere frame				630A		800A	
Type				**BW630RAGU**	**BW630HAGU**	**BW800RAGU**	**BW800HAGU**
Pole				3	3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		500, 600, 630*1		700, 800*2	
Rated impulse withstand voltage		Uimp(kV)		8	8	8	8
Isolation compliant				●	●	●	●
Rated insulation voltage Ui (V)		AC		690	690	690	690
		DC		250	250	250	250
Rated breaking capacity	IEC 60947-2 EN 60947-2 JIS C 8201-2-1 Icu/Ics (kA)	AC	690V	15/8	15/8	15/8	15/8
			500V	36/18	42/21	36/18	42/21
			440V	50/25	70/35	50/25	70/35
			415V	50/25	70/35	50/25	70/35
			400V	50/25	70/35	50/25	70/35
			380V	50/25	70/35	50/25	70/35
			240V	100/50	125/63	100/50	125/63
			230V	100/50	125/63	100/50	125/63
		DC	250V	40/20	40/20	40/20	40/20
	GB14048.2 Icu/Ics(kA)	AC	400V	50/25	70/35	50/25	70/35
			230V	100/50	125/63	100/50	125/63
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	600V/Δ	–	25	–	25
			600V/Y	–	25	–	25
			480V/Δ	50	65 (With block terminal:50)	50	65 (With block terminal:50)
			480V/Y	–	65 (With block terminal:50)	50	65 (With block terminal:50)
			240V	100	125	100	125
		DC	125/250V	10	10	10	10
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)	● (TÜV)	● (TÜV)
	CCC certificate			●	●	●	●
	UL Listed (NEMA AB1)			●	●	●	●
	Electrical Appliance and Material Safety Law <PS>E*3			–	–	–	–
Dimensions (inch(mm)) 			a	8.268 (210)	8.268 (210)	8.268 (210)	8.268 (210)
			b	10.83 (275)	10.83 (275)	10.83 (275)	10.83 (275)
			c	4.055 (103)	4.055 (103)	4.055 (103)	4.055 (103)
			d	5.748 (146)	5.748 (146)	5.748 (146)	5.748 (146)
Mass (kg)				8.9	8.9	9.4	9.4
Tripping device				Thermal-magnetic			
Connecting terminal			Page 36				
Flat				○	○	○	○
Block				○	○	○	○
Internal accessories			Page 75				
Alarm switch			K	○	○	○	○
Auxiliary switch			W	○	○	○	○
Undervoltage trip			R	○	○	○	○
Shunt trip			F	○	○	○	○
External accessories			Page 76				
Handle padlocking device Cap type			QN	○	○	○	○
Handle padlocking device Plate type			Q2	○	○	○	○
Operating handle N-type			N	○	○	○	○
Operating handle V-type			V	○	○	○	○
Terminal cover			BT□L	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○
Handle locking cover			L1	○	○	○	○

●: Approved ○: Available –: Not available

Note: *1 Breakers for 630A cannot be manufactured with block terminals.

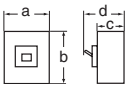
*2 Block terminals are standard for Breakers for 800A.

*3 Electrical Appliance and Material Safety Law of Japan

Motor protection breakers

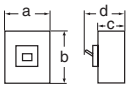
Motors are normally controlled by MCCBs and magnetic starters. In this case the MCCB carries out overcurrent or short-circuit current protection while the starter deals with ON-OFF switching of the motor and offers protection against sustained overload currents. These are the motor breakers which combine the two functions.
FUJI motor breakers are designed to eliminate erroneous operations due to the rush current produced at the time of starting the motor. They will trip in the face of sustained overcurrent when the integrated bimetal relay has operated.

■ G-TWIN Standard Series / Motor protection

Ampere frame				32A		
Type				**BW32AAM**	**BW32SAM**	
Pole				3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		1.4, 2.6, 4, 8, 10, 16, 24, 32	(2), (4), 5, 8, 10, 16	0.7, 1.4, 2, 2.6, 4, 5, 8, 10, 12, 16, 24, 32
Rated impulse withstand voltage		Uimp(kV)		6	6	6
Isolation compliant				●	●	●
Rated insulation voltage Ui (V)		AC		500	690	690
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–	–	–
			500V	–	1.5/1	1.5/1
			440V	1.5/1	2.5/2	2.5/2
			415V	1.5/1	2.5/2	2.5/2
			400V	1.5/1	2.5/2	2.5/2
			380V	1.5/1	2.5/2	2.5/2
			240V	2.5/2	5/3	5/3
			230V	2.5/2	5/3	5/3
	GB14048.2	AC	400V	1.5/1	2.5/2	2.5/2
			230V	2.5/2	5/3	5/3
Conforming to standards	CE Marking			●	●	●
	CCC certificate			●	●	●
	Electrical Appliance and Material Safety Law <PS>E*1			●	●	●
Dimensions (mm) 			a	75	50	75
			b	100	100	100
			c	60	60	60
			d	84	84	84
Mass (kg)				0.5	0.4	0.5
Tripping device				Hydraulic-magnetic	Hydraulic-magnetic	Hydraulic-magnetic
Front mounting, front connection		No-mark		○	○	○
Front mounting, rear connection		X		○	○	○
Flush mounting, front connection		E		○	○	○
Flush mounting, top & buttom connection		Y		○	○	○
Plug-in mounting		P		○	○	○
IEC 35mm wide rail mounting				○	○	○
Internal accessories		Page 73				
Alarm switch		K		○	○	○
Auxiliary switch		W		○	○	○
Undervoltage trip		R		○	○	○
Shunt trip		F		○	○	○
External accessories		Page 76				
Handle padlocking device Cap type		QN		○	○	○
Handle padlocking device Plate type		Q2		▲	▲	▲
Operating handle N-type		N		○	○	○
Operating handle V-type		V		○	○	○
Terminal cover Short		BT□S		○	○	○
Terminal cover Long		BT□L		○	○	○
Insulation barrier Interphase		BP		○	○	○
Insulation barrier Earth		BL		○	○	○
Handle locking cover		L1		○	○	○
Flat terminal		SS		○	○	○
Block terminal		SL		–	–	–

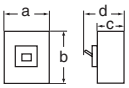
●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series / Motor protection

Ampere frame				50A		
Type				**BW50EAM**	**BW50SAM**	**BW50RAM**
Pole				3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		24, 32, 40, 45	0.7, 1.4, 2, 2.6, 4, 5, 8, 10, 12, 16, 24, 32, 40, 45	10, 12, 16, 24, 32, 40, 45
Rated impulse withstand voltage		Uimp(kV)		6	6	6
Isolation compliant				●	●	●
Rated insulation voltage Ui (V)		AC		500	690	690
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–	–	–
			500V	1.5/1	5/3	7.5/4
			440V	2.5/2	7.5/4	10/5
			415V	2.5/2	7.5/4	10/5
			400V	2.5/2	7.5/4	10/5
			380V	2.5/2	7.5/4	10/5
			240V	5/3	10/5	25/13
			230V	5/3	10/5	25/13
	GB14048.2	AC	400V	2.5/2	7.5/4	10/5
			230V	5/3	10/5	25/13
Conforming to standards	CE Marking			●	●	●
	CCC certificate			●	●	●
	Electrical Appliance and Material Safety Law <PS>E*1			●	●	●
Dimensions (mm) 			a	75	75	75
			b	100	100	100
			c	60	60	60
			d	84	84	84
Mass (kg)				0.5	0.5	0.5
Tripping device				Hydraulic-magnetic	Hydraulic-magnetic	Hydraulic-magnetic
Front mounting, front connection			No-mark	○	○	○
Front mounting, rear connection			X	○	○	○
Flush mounting, front connection			E	○	○	○
Flush mounting, top & buttom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting				○	○	○
Internal accessories			Page 73			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
External accessories			Page 76			
Handle padlocking device Cap type			QN	○	○	○
Handle padlocking device Plate type			Q2	▲	▲	▲
Operating handle N-type			N	○	○	○
Operating handle V-type			V	○	○	○
Terminal cover Short			BT□S	○	○	○
Terminal cover Long			BT□L	○	○	○
Insulation barrier Interphase			BP	○	○	○
Insulation barrier Earth			BL	○	○	○
Handle locking cover			L1	○	○	○
Flat terminal			SS	○	○	○
Block terminal			SL	–	–	–

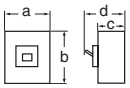
●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series / Motor protection

Ampere frame				63A		100A
Type				**BW63EAM**	**BW63SAM**	**BW100EAM**
Pole				3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		63	63	63, 75, 90
Rated impulse withstand voltage		Uimp(kV)		6	6	6
Isolation compliant				●	●	●
Rated insulation voltage Ui (V)		AC		690	690	690
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–	–	–
			500V	1.5/1	5/3	7.5/4
			440V	2.5/2	7.5/4	10/5
			415V	2.5/2	7.5/4	10/5
			400V	2.5/2	7.5/4	10/5
			380V	2.5/2	7.5/4	10/5
			240V	5/3	10/5	25/13
			230V	5/3	10/5	25/13
	GB14048.2	AC	400V	2.5/2	7.5/4	10/5
			230V	5/3	10/5	25/13
Conforming to standards	CE Marking			●	●	●
	CCC certificate			●	●	●
	Electrical Appliance and Material Safety Law <PS>E*1			●	●	●
Dimensions (mm) 			a	75	75	75
			b	100	100	100
			c	60	60	60
			d	84	84	84
Mass (kg)				0.6	0.6	0.6
Tripping device				Hydraulic-magnetic	Hydraulic-magnetic	Hydraulic-magnetic
Front mounting, front connection			No-mark	○	○	○
Front mounting, rear connection			X	○	○	○
Flush mounting, front connection			E	○	○	○
Flush mounting, top & buttom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting				○	○	○
Internal accessories			Page 73			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
External accessories			Page 76			
Handle padlocking device Cap type			QN	○	○	○
Handle padlocking device Plate type			Q2	▲	▲	▲
Operating handle N-type			N	○	○	○
Operating handle V-type			V	○	○	○
Terminal cover Short			BT□S	○	○	○
Terminal cover Long			BT□L	○	○	○
Insulation barrier Interphase			BP	○	○	○
Insulation barrier Earth			BL			
Handle locking cover			L1	○	○	○
Flat terminal			SS	○	○	○
Block terminal			SL	○	○	○

●: Approved ○: Available –: Not available ▲ : Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series / Motor protection

Ampere frame				125A		250A		
Type				**BW125JAM**	**BW125RAM**	**BW250EAM**	**BW250JAM**	**BW250RAM**
Pole				3	3	3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		16, 24, 32, 40, 45, 60, 75, 90		125, 150, 175, 225		
Rated impulse withstand voltage		Uimp(kV)		6	6	6	6	6
Isolation compliant				●	●	●	●	●
Rated insulation voltage Ui (V)		AC		690	690	690	690	690
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-1	AC	690V	–	–	–	–	–
			500V	8/4	10/5	5/3	8/4	10/5
			440V	30/15	50/25	18/9	30/15	50/25
			415V	30/15	50/25	18/9	30/15	50/25
			400V	30/15	50/25	18/9	30/15	50/25
			380V	30/15	50/25	18/9	30/15	50/25
			240V	50/25	100/50	36/18	50/25	100/50
			230V	50/25	100/50	36/18	50/25	100/50
	GB14048.2	AC	400V	30/15	50/25	18/9	30/15	50/25
			230V	50/25	100/50	36/18	50/25	100/50
Conforming to standards	CE Marking			●	●	●	●	●
	CCC certificate			●	●	●	●	●
	Electrical Appliance and Material Safety Law <PS>E*1			●	●	–	–	–
Dimensions (mm) 			a	90	90	105	105	105
			b	155	155	165	165	165
			c	68	68	68	68	68
			d	95	95	95	95	95
Mass (kg)				1.2	1.2	1.6	1.6	1.6
Tripping device				Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic
Front mounting, front connection			No-mark	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○
Flush mounting, top & buttom connection			Y	○	○	○	○	○
Plug-in mounting			P	○	○	○	○	○
IEC 35mm wide rail mounting				○	○	○	○	○
Internal accessories			Page 74					
Alarm switch			K	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○
Shunt trip			F	○	○	○	○	○
External accessories			Page 76					
Handle padlocking device Cap type			Q1	○	○	○	○	○
Handle padlocking device Plate type			Q2	○	○	○	○	○
Operating handle N-type			N	○	○	○	○	○
Operating handle V-type			V	○	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○
Flat terminal			SS	○	○	○	○	○
Block terminal			SL	○	○	○	○	○

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Mounting modifications

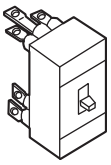
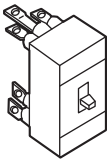
■ Mounting modifications

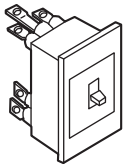
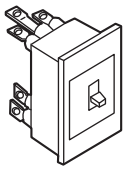
• Standard series

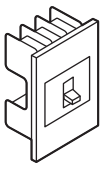
Standard type FUJI breakers are front mounting with front connections. The standard breaker can easily be modified to become front mounting rear connection type, flush mounting type and plug-in type. The additional parts such as insulation bases, barriers, covers and similar parts are added as required.

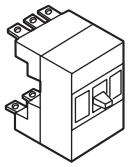
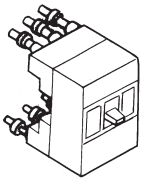
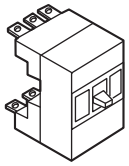
Front mounting
Front connection

BASIC DESIGN

Additional main parts	Front mounting Rear connection (X type)
Bar stud terminal 	BW32 BW50 BW63 BW100
Bar stud terminal 	BW50HAG BW125 BW160 BW250 BW400 BW630 BW800 Each stud can be turned by 90°

Additional main parts	Flush mounting Rear connection (E type)
Bar stud terminal 	BW32 BW50 BW63 BW100
Bar stud terminal 	BW50HAG BW125 BW160 BW250 BW400 BW630 BW800 Each stud can be turned by 90°

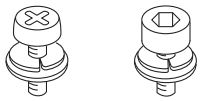
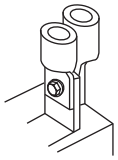
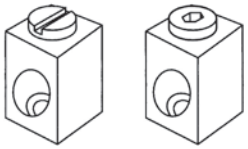
Additional main parts	Flush mounting Top and bottom connection (Y type)
Decorative flush plate 	BW32 BW50 BW63 BW100

Additional main parts	Plug-in mounting (P type)
Bar stud terminal 	BW32 BW50 BW63 BW100
Round stud terminal 	BW50HAG BW125
Bar stud terminal 	BW160 BW250 BW400 BW630 BW800 Each stud can be turned by 90°

• **Global series**

Front mounting
Front connection

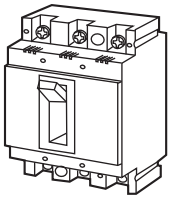
BASIC DESIGN

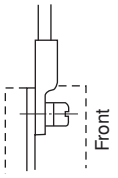
Screw	Flat terminal	Block terminal
		

Terminal connection

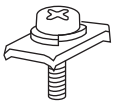
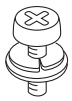
■ Terminal connection/Front mounting, front connection

• 32AF to 100AF



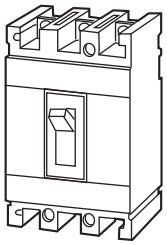


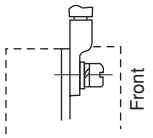
Flat terminal

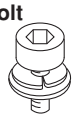
Self lifting screw	Breaker type	Tightening torque (N•m)	Size
	BW32 BW50 BW100*	2.3 to 2.8	M5 × 14
Pan-head screw 	BW63 BW100	5.5 to 7.5	M8 × 15

* Breaker of rated current : 50A

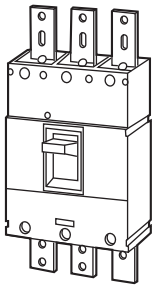
• 125AF to 250AF

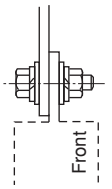




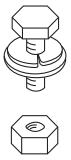
Pan-head screw	Breaker type	Tightening torque (N•m)	Size (mm)
	BW50HAG BW125	5.5 to 7.5	M8 × 16
Hexagonal socket head bolt 	BW160 BW250	8.0 to 13.0	M8 × 16

• 400AF to 800AF



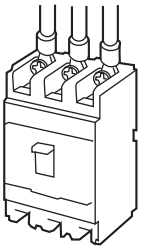


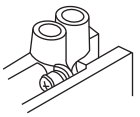
Flat terminal

Hexagonal head bolt	Breaker type	Tightening torque (N•m)	Size (mm)
	BW400	40 to 50	M12 × 35
	BW630 BW800	40 to 50	M12 × 40

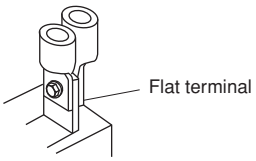
Type of connection/up to 250AF
Front mounting front connection

Direct connection





Flat terminal connection
Flat terminals are required.



Flat bar studs/1-hole type

Breaker type	Pole	Type of flat terminal
BW32 BW50	2 3	**BZ6S10C502** **BZ6S10C503**
BW63 BW100*	2 3	**BZ6S10C1002** **BZ6S10C1003**
BW50HAG BW125	2 3 4	**BW9SS0CA-2** **BW9SS0CA-3** **BW9SS0CA-4**
BW160 BW250	2 3 4	**BZ-S50B-2252** **BZ-S50B-2253** **BW9SS0GA-4**

* BW100 breaker of rated current 50A: BZ6S10C502 or 503.

Wire size and terminal

■ Wire size and crimp terminal

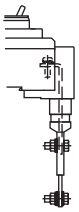
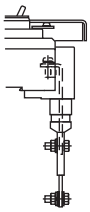
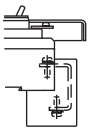
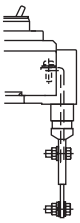
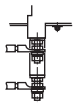
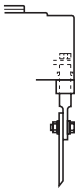
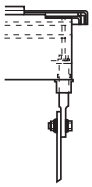
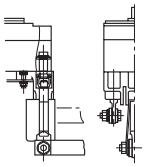
The following is the size recommendations for crimp terminals.

Crimp terminal R : JIS C2805
CB : JEM-1399
JST : Product of Japan Crimp Terminal Co., Ltd.

Ampere frame	Breaker	Wire size(mm^2)										
		1.04 | 2.63	2.63 | 6.64	6.64 | 10.52	10.52 | 16.78	16.78 | 26.66	26.66 | 42.42	42.42 | 60.57	96.3 | 117.2	117.2 | 152.05	192.6 | 242.27	242.27 | 325
32	BW32	R2-5	R5.5-5	R8-5	R14-5							
50	BW50AAG,EAG,SAG	R2-5	R5.5-5	R8-5	R14-5							
	BW50HAG	R2-8	R5.5-8	R8-8	R14-8	R22-8	JST38-S8	CB60-8				
63	BW63	R2-8	R5.5-8	R8-8	R14-8	JST22-S8						
100	BW100	R2-8	R5.5-8	R8-8	R14-8	JST22-S8	JST38-S8					
125	BW125	R2-8	R5.5-8	R8-8	R14-8	R22-8	JST38-S8	CB60-8				
160 250	BW160 BW250					R22-8	R38-8	R60-8	CB100-8			
400	BW400						R38-12	R60-12	R100-12	R150-12	R200-12	JST325-12
630	BW630								R100-12	R150-12	R200-12	JST325-12
800	BW800								R100-12	R150-12	R200-12	JST325-12

■ Breaker termination

• Standard

MCCB type	Front connection	Rear connection **X**	Flush mounting **E**	**Y**	Plug-in mounting **P**
BW32 BW50	Self-lifiting terminal				
BW63 BW100	Flat terminal				
BW50HAG BW125					
BW160 BW250	Flat terminal			—	
BW400 BW630 BW800	Flat terminal	90˚ rotational stud	90˚ rotational stud		90˚ rotational stud

Wire size and terminal

■ Notes on wiring (global series)

Notes on connecting wires (conductors)

- Connect wires to the UL breaker according to NEC (National Electric Code) or CEC (Canadian Electrical Code) Part 1.
- Use 75°C copper wires for wiring. UL-certified or CSA-certified wires are recommended.
- If a large current (for example, a short-circuit current) flows, it causes a huge electromagnetic force between wires. Therefore, be sure to secure the wires sufficiently.
- Re-tighten terminal screws periodically.

Code	Terminal position		Applicable breaker type		
	Line	Load	BW50	BW100, 125, 250	BW400, 630, 800
Blank	Screw	Screw	●	●	–
Blank	Flat teminal	Flat teminal	–	–	●
SB	Block terminal	Block terminal	–	●	●
SF	Flat teminal	Flat teminal	●	●	–
S3	Screw	Flat terminal	●	●	–
S4	Flat teminal	Screw	●	●	–
S5	Screw	Block terminal	–	●	–
S6	Block terminal	Screw	–	●	–
S7	Flat teminal	Block terminal	–	●	●
S8	Block terminal	Flat terminal	–	●	●

Block terminal connection

- Choose from the stranded wires shown in Table.

Wire size: AWG or MCM [mm^2]	No. of wires stranded
14 to 2 [2.1 to 33.6]	7
1 to 4/0 [42.4 to 107.2]	19
250 to 500 [127 to 250]	37

Values in [ ] are those converted from AWG or MCM sizes to mm^2.

* See the instruction manual that comes with the breaker for more details.

Precautions

- Two wires of different sizes cannot be connected to the same block terminal.
- Be sure to use stranded wires according to Table "Number of wires stranded."
- Multi-conductor wires cannot be connected.
- Do not solder wires together.

Wire size and crimp terminal

• Crimp terminal connection

MCCB	Rated current (A)	Applicable crimp terminal 75˚C wire			Connectable wire size (AWG)	Tightening torque (N•m)	Type of screw head and size (mm)
		J.S.T Mfg. Co., Ltd.	Nichifu Co., Ltd.	Daido Solderless Terminal Mfg. Co., Ltd.	75˚C wire		
BW50RAGU	3	R2-5	R2-5M R2-5	2-S5, 2-5	14AWG	2.3-2.8	Cross/straight slotted pan-head screw M5 x 14
	5						
	10						
	15						
	20	R5.5-5	R3.5-5S, R3.5-5L, 5.5-6N, R5.5-5S, R5.5-5	3.5-5, 5.5-S5, 5.5-5, 5.5-L5	12AWG		
	30				10AWG		
	40	R8-5	R8-5S, R8-5	8-S5, 8-5	8AWG		
	50						
BW100EAGU	60	R14-8	R14-8S, R14-8	R14-S8, R14-8	6AWG	5.5-7.5	Cross/straight slotted pan-head screw M8 x 15
	75	22-S8	R22-8S, R22-8	R22-S8, 22-8	4AWG		
	100	38-S8	R38-8S	38-S8	3AWG		
BW125JAGU BW125RAGU	15	R2-8	R2-8	2-8, 2-B8	14AWG	5.8 (5.3-6.4)	Cross/straight slotted pan-head screw M8 x 16
	20	5.5-S8, R5.5-8	R3.5-8, R5.5-8	3.5-8, 5.5-8	12AWG		
	30		R5.5-8	5.5-8	10AWG		
	40	8-8NS, R8-8	R8-8	8-8	8AWG		
	50						
	60	14-8NS, 14-S8, R14-8	R14-8S, R14-8	14-S8, 14-8	6AWG		
	70	22-S8, R22-8, CB22-S8	R22-8S, R22-8, CB22-8S	22-S8, 22-8, CB22-8	4AWG		
	75						
	80						
	90	38-S8	R38-8S	38-S8	3AWG		
	100						
	125				1AWG		
BW250EAGU BW250JAGU BW250RAGU	125	38-S8, R38-8	R38-8S, R38-8	38-S8, 38-8	1AWG	10.5 (8-13)	Hexagon socket head bolt M8 x 16
	150	60-S8, R60-8	R60-8, CB60-8, CB60-8S	60-8, CB60-8	1/0AWG		
	175	70-8	R70-8	70-8	2/0AWG		
	200	CB80-S8		CB80-8	3/0AWG		
	225	CB100-S8		CB100-8	4/0AWG		
	250	CB150-S8	CB150-8	CB150-8	250MCM		

Notes: • AWG/MCM is the UL approved wire unit.
• The allowable temperature of wire is 75˚C. (UL CSA approved)
• Be sure to use UL-certified or CSA-certified crimp tools commercially available.

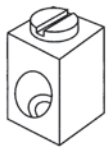
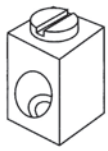
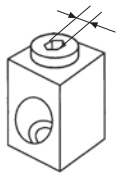
• Flat terminal connection

MCCB	Rated current (A)	Applicable crimp terminal 75˚C wire			Connectable wire size (AWG)	Tightening torque (N•m)		Type of screw head and size (mm)
		J.S.T Mfg. Co., Ltd.	Nichifu Co., Ltd.	Daido Solderless Terminal Mfg. Co., Ltd.	75˚C wire	Wire side	MCCB side	
BW50RAGU	3	R2-5	R2-5M R2-5	2-S5, 2-5	14AWG	3.5 to 4.5	2.3 to 2.8	Hexagon socket head bolt M5 x 16
	5							
	10							
	15							
	20	R5.5-5	R3.5-5S, R3.5-5L, 5.5-6N. R5.5-5S, R5.5-5	3.5-5, 5.5-S5 5.5-5, 5.5-L5	12AWG			
	30				10AWG			
	40	R8-5	R8-5S, R8-5	8-S5, 8-5	8AWG			
	50							
BW100EAGU	60	R14-8	R14-8S, R14-8	R14-S8, R14-8	6AWG	8 to 10	5.5 to 7.5	Hexagon socket head bolt M8 x 22
	75	22-S8	R22-8S, R22-8	R22-S8, 22-8	4AWG			
	100	38-S8	R38-8S	38-S8	3AWG			
BW125JAGU BW125RAGU	15	R2-8	R2-8	2-8, 2-B8	14AWG	9 (8 to 10)	5.8 (5.3 to 6.4)	Cross/straight slotted pan-head screw M8 x 16
	20	5.5-S8, R5.5-8	R3.5-8, R5.5-8	3.5-8, 5.5-8	12AWG			
	30		R5.5-8	5.5-8	10AWG			
	40	8-8NS, R8-8	R8-8	8-8	8AWG			
	50							
	60	14-8NS, 14-S8, R14-8	R14-8S, R14-8	14-S8, 14-8	6AWG			
	70	22-S8, R22-8, CB22-S8	R22-8S, R22-8, CB22-8S	22-S8, 22-8, CB22-8	4AWG			
	75							
	80							
	90	38-S8	R38-8S	38-S8	3AWG			
	100							
	125				1AWG			
BW250EAGU BW250JAGU BW250RAGU	125	38-S8, R38-8	R38-8S, R38-8	38-S8, 38-8	1AWG	9 (8 to 10)	10.5 (8 to 13)	Hexagon socket head bolt M8 x 16
	150	60-S8, R60-8	R60-8, CB60-8, CB60-8S	60-8, CB60-8	1/0AWG			
	175	70-8	R70-8	70-8	2/0AWG			
	200	CB80-S8		CB80-8	3/0AWG			
	225	CB100-S8		CB100-8	4/0AWG			
	250	CB150-S8	CB150-8	CB150-8	250MCM			
BW400EAGU BW400SAGU BW400RAGU BW400HAGU	250	150-12	R150-12		250MCM	45 (40 to 50)	43.5 (39.2 to 48)	Hexagon head bolt M12 x 35
	300	180-12	R180-12		350MCM			
	350	325-12	R325-12N		500MCM			
	400	325-12	R325-12N		500MCM			
		R80-12	R80-12		3/0AWG(x2)			
BW630RAGU BW630HAGU	500	R150-12		R150-12	250MCM(x2)	47.04 (42.4 to 51.7)	47.04 (42.4 to 51.7)	Hexagon head bolt M12 x 40
	600	180-12		R180-12	350MCM(x2)			
	630	325-12	R325-12N	R325-12 □	500MCM(x2)			
BW800RAGU BW800HAGU	700	325-12		R325-12 □	500MCM(x2)	47.04 (42.4 to 51.7)	47.04 (42.4 to 51.7)	Hexagon head bolt M12 x 40

Notes: • AWG/MCM is the UL approved wire unit.
• The allowable temperature of wire is 75˚C. (UL CSA approved)

Wire size and terminal

• Block terminal connection

MCCB	Rated current (A)	Connectable wire size (AWG)	Tightening torque (N•m)	Type of screw head and size (mm)	Figure
BW100EAGU	60	6AWG	5.8 (5.5 to 6.5)	Slotted set screw	
	70	4AWG			
	75				
	80				
	90	3AWG			
	100				
BW125JAGU BW125RAGU	15	14AWG	5.8 (5.8 to 6.4)	Slotted set screw	
	20	12AWG			
	30	10AWG			
	40	8AWG			
	50				
	60	6AWG			
	70	4AWG			
	75				
	80				
	90	3AWG			
	100				
	125	1AWG			
BW250EAGU BW250JAGU BW250RAGU	125	1AWG	23 (23 to 25.3)	Hexagon socket head setscrew: 8 mm (5/16 inch)	Screw head size 
	150	1/0AWG			
	175	2/0AWG			
	200	3/0AWG			
	225	4/0AWG			
	250	250MCM			
BW400EAGU BW400SAGU BW400RAGU BW400HAGU	250	250MCM	43.5 (43.5 to 48)	Hexagon socket head setscrew: 9.53 mm (3/8 inch)	
	300	350MCM			
	350	500MCM			
	400	3/0AWG(x2)	31.9 (31.9 to 35.1)	Hexagon socket head setscrew: 8 mm (5/16 inch)	
BW630RAGU BW630HAGU	500	250MCM(x2)	31.1 (31.1 to 34.2)	Hexagon socket head setscrew: 8 mm (5/16 inch)	
	600	350MCM(x2)			
BW800RAGU BW800HAGU	700	500MCM(x2)	31.1 (31.1 to 34.2)	Hexagon socket head setscrew: 8 mm (5/16 inch)	
	800	300MCM(x3)			

Notes: • AWG/MCM is the UL approved wire unit.
• The allowable temperature of wire is 75˚C. (UL CSA approved)

Type number/Line protection

■ Type number, Standard series (Line protection)

• AAG series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
32	3	BW32AAG-2P003□	Blank, X, E, Y, P
	5	BW32AAG-2P005□	
	10	BW32AAG-2P010□	
	15	BW32AAG-2P015□	
	20	BW32AAG-2P020□	
	30	BW32AAG-2P030□	
	32	BW32AAG-2P032□	
50	5	BW50AAG-2P005□	Blank, X, E, Y, P
	10	BW50AAG-2P010□	
	15	BW50AAG-2P015□	
	20	BW50AAG-2P020□	
	30	BW50AAG-2P030□	
	32	BW50AAG-2P032□	
	40	BW50AAG-2P040□	
	50	BW50AAG-2P050□	

Mounting	Connection	□
Front	Front	Blank
Front	Rear	X
Flush	Rear	E
Flush	Top and buttom	Y
Plug-in		P

• EAG series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
50	5	BW50EAG-2P005□	Blank, X, E, Y, P
	10	BW50EAG-2P010□	
	15	BW50EAG-2P015□	
	20	BW50EAG-2P020□	
	30	BW50EAG-2P030□	
	32	BW50EAG-2P032□	
	40	BW50EAG-2P040□	
	50	BW50EAG-2P050□	
63	60	BW63EAG-2P060□	Blank, X, E, Y, P
	63	BW63EAG-2P063□	
100	50	BW100EAG-2P050□	Blank, X, E, Y, P
	60	BW100EAG-2P060□	
	63	BW100EAG-2P063□	
	75	BW100EAG-2P075□	
	100	BW100EAG-2P100□	
160	125	BW160EAG-2P125□	Blank, X, E, P
	150	BW160EAG-2P150□	
	160	BW160EAG-2P160□	
250	175	BW250EAG-2P175□	Blank, X, E, P
	200	BW250EAG-2P200□	
	225	BW250EAG-2P225□	
	250	BW250EAG-2P250□	
400	250	BW400EAG-2P250□	Blank, X, E, P
	300	BW400EAG-2P300□	
	350	BW400EAG-2P350□	
	400	BW400EAG-2P400□	

• JAG series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
125	15	BW125JAG-2P015□	Blank, X, E, P
	20	BW125JAG-2P020□	
	30	BW125JAG-2P030□	
	40	BW125JAG-2P040□	
	50	BW125JAG-2P050□	
	60	BW125JAG-2P060□	
	75	BW125JAG-2P075□	
	100	BW125JAG-2P100□	
	125	BW125JAG-2P125□	
160	125	BW160JAG-2P125□	Blank, X, E, P
	150	BW160JAG-2P150□	
	160	BW160JAG-2P160□	
250	175	BW250JAG-2P175□	Blank, X, E, P
	200	BW250JAG-2P200□	
	225	BW250JAG-2P225□	
	250	BW250JAG-2P250□	

Type number/Line protection

• SAG series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
32	3	BW32SAG-2P003□	Blank, X, E, Y, P
	5	BW32SAG-2P005□	
	10	BW32SAG-2P010□	
	15	BW32SAG-2P015□	
	20	BW32SAG-2P020□	
	30	BW32SAG-2P030□	
	32	BW32SAG-2P032□	
50	5	BW50SAG-2P005□	Blank, X, E, Y, P
	10	BW50SAG-2P010□	
	15	BW50SAG-2P015□	
	20	BW50SAG-2P020□	
	30	BW50SAG-2P030□	
	32	BW50SAG-2P032□	
	40	BW50SAG-2P040□	
	50	BW50SAG-2P050□	
63	60	BW63SAG-2P060□	Blank, X, E, Y, P
	63	BW63SAG-2P063□	
125	15	BW125SAG-2P015□	Blank, X, E, P
	20	BW125SAG-2P020□	
	30	BW125SAG-2P030□	
	40	BW125SAG-2P040□	
	50	BW125SAG-2P050□	
	60	BW125SAG-2P060□	
	75	BW125SAG-2P075□	
	100	BW125SAG-2P100□	
	125	BW125SAG-2P125□	
160	125	BW160SAG-2P125□	Blank, X, E, P
	150	BW160SAG-2P150□	
	160	BW160SAG-2P160□	
250	175	BW250SAG-2P175□	Blank, X, E, P
	200	BW250SAG-2P200□	
	225	BW250SAG-2P225□	
	250	BW250SAG-2P250□	
400	250	BW400SAG-2P250□	Blank, X, E, P
	300	BW400SAG-2P300□	
	350	BW400SAG-2P350□	
	400	BW400SAG-2P400□	

• HAG series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
400	250	BW400HAG-2P250□	Blank, X, E, P
	300	BW400HAG-2P300□	
	350	BW400HAG-2P350□	
	400	BW400HAG-2P400□	

* See page 39.

• RAG series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
50	10	BW50RAG-2P010□	Blank, X, E, Y, P
	15	BW50RAG-2P015□	
	20	BW50RAG-2P020□	
	30	BW50RAG-2P030□	
	32	BW50RAG-2P032□	
	40	BW50RAG-2P040□	
	50	BW50RAG-2P050□	
63	60	BW63RAG-2P060□	Blank, X, E, Y, P
	63	BW63RAG-2P063□	
125	15	BW125RAG-2P015□	Blank, X, E, P
	20	BW125RAG-2P020□	
	30	BW125RAG-2P030□	
	40	BW125RAG-2P040□	
	50	BW125RAG-2P050□	
	60	BW125RAG-2P060□	
	75	BW125RAG-2P075□	
	100	BW125RAG-2P100□	
	125	BW125RAG-2P125□	
160	125	BW160RAG-2P125□	Blank, X, E, P
	150	BW160RAG-2P150□	
	160	BW160RAG-2P160□	
250	175	BW250RAG-2P175□	Blank, X, E, P
	200	BW250RAG-2P200□	
	225	BW250RAG-2P225□	
	250	BW250RAG-2P250□	
400	250	BW400RAG-2P250□	Blank, X, E, P
	300	BW400RAG-2P300□	
	350	BW400RAG-2P350□	
	400	BW400RAG-2P400□	

• HAG series, 2-pole IEC/EN/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
50	15	BW50HAG-2P015□	Blank, X, E, P
	20	BW50HAG-2P020□	
	30	BW50HAG-2P030□	
	40	BW50HAG-2P040□	
	50	BW50HAG-2P050□	
125	15	BW125HAG-2P015□	Blank, X, E, P
	20	BW125HAG-2P020□	
	30	BW125HAG-2P030□	
	40	BW125HAG-2P040□	
	50	BW125HAG-2P050□	
	60	BW125HAG-2P060□	
	75	BW125HAG-2P075□	
	100	BW125HAG-2P100□	
	125	BW125HAG-2P125□	
250	125	BW250HAG-2P125□	Blank, X, E, P
	150	BW250HAG-2P150□	
	160	BW250HAG-2P160□	
	175	BW250HAG-2P175□	
	200	BW250HAG-2P200□	
	225	BW250HAG-2P225□	
	250	BW250HAG-2P250□	

• AAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
32	3	BW32AAG-3P003□	Blank, X, E, Y, P
	5	BW32AAG-3P005□	
	10	BW32AAG-3P010□	
	15	BW32AAG-3P015□	
	20	BW32AAG-3P020□	
	30	BW32AAG-3P030□	
	32	BW32AAG-3P032□	
50	5	BW50AAG-3P005□	Blank, X, E, Y, P
	10	BW50AAG-3P010□	
	15	BW50AAG-3P015□	
	20	BW50AAG-3P020□	
	30	BW50AAG-3P030□	
	32	BW50AAG-3P032□	
	40	BW50AAG-3P040□	
	50	BW50AAG-3P050□	
100	60	BW100AAG-3P060□	Blank, X, E, Y, P
	63	BW100AAG-3P063□	
	75	BW100AAG-3P075□	
	100	BW100AAG-3P100□	

• EAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
50	5	BW50EAG-3P005□	Blank, X, E, Y, P
	10	BW50EAG-3P010□	
	15	BW50EAG-3P015□	
	20	BW50EAG-3P020□	
	30	BW50EAG-3P030□	
	32	BW50EAG-3P032□	
	40	BW50EAG-3P040□	
	50	BW50EAG-3P050□	
63	60	BW63EAG-3P060□	Blank, X, E, Y, P
	63	BW63EAG-3P063□	
100	50	BW100EAG-3P050□	Blank, X, E, Y, P
	60	BW100EAG-3P060□	
	63	BW100EAG-3P063□	
	75	BW100EAG-3P075□	
	100	BW100EAG-3P100□	
160	125	BW160EAG-3P125□	Blank, X, E, P
	150	BW160EAG-3P150□	
	160	BW160EAG-3P160□	
250	175	BW250EAG-3P175□	Blank, X, E, P
	200	BW250EAG-3P200□	
	225	BW250EAG-3P225□	
	250	BW250EAG-3P250□	
400	250	BW400EAG-3P250□	Blank, X, E, P
	300	BW400EAG-3P300□	
	350	BW400EAG-3P350□	
	400	BW400EAG-3P400□	
630	500	BW630EAG-3P500□	Blank, X, E, P
	600	BW630EAG-3P600□	
	630	BW630EAG-3P630□	
800	700	BW800EAG-3P700□	Blank, X, E, P
	800	BW800EAG-3P800□	

• JAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
125	15	BW125JAG-3P015□	Blank, X, E, P
	20	BW125JAG-3P020□	
	30	BW125JAG-3P030□	
	40	BW125JAG-3P040□	
	50	BW125JAG-3P050□	
	60	BW125JAG-3P060□	
	75	BW125JAG-3P075□	
	100	BW125JAG-3P100□	
	125	BW125JAG-3P125□	
160	125	BW160JAG-3P125□	Blank, X, E, P
	150	BW160JAG-3P150□	
	160	BW160JAG-3P160□	
250	175	BW250JAG-3P175□	Blank, X, E, P
	200	BW250JAG-3P200□	
	225	BW250JAG-3P225□	
	250	BW250JAG-3P250□	

* See page 39.

Type number/Line protection

• SAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
32	3	BW32SAG-3P003□	Blank, X, E, Y, P
	5	BW32SAG-3P005□	
	10	BW32SAG-3P010□	
	15	BW32SAG-3P015□	
	20	BW32SAG-3P020□	
	30	BW32SAG-3P030□	
	32	BW32SAG-3P032□	
50	5	BW50SAG-3P005□	Blank, X, E, Y, P
	10	BW50SAG-3P010□	
	15	BW50SAG-3P015□	
	20	BW50SAG-3P020□	
	30	BW50SAG-3P030□	
	32	BW50SAG-3P032□	
	40	BW50SAG-3P040□	
	50	BW50SAG-3P050□	
63	60	BW63SAG-3P060□	Blank, X, E, Y, P
	63	BW63SAG-3P063□	
125	15	BW125SAG-3P015□	Blank, X, E, P
	20	BW125SAG-3P020□	
	30	BW125SAG-3P030□	
	40	BW125SAG-3P040□	
	50	BW125SAG-3P050□	
	60	BW125SAG-3P060□	
	75	BW125SAG-3P075□	
	100	BW125SAG-3P100□	
	125	BW125SAG-3P125□	
160	125	BW160SAG-3P125□	Blank, X, E, P
	150	BW160SAG-3P150□	
	160	BW160SAG-3P160□	
250	175	BW250SAG-3P175□	Blank, X, E, P
	200	BW250SAG-3P200□	
	225	BW250SAG-3P225□	
	250	BW250SAG-3P250□	
400	250	BW400SAG-3P250□	Blank, X, E, P
	300	BW400SAG-3P300□	
	350	BW400SAG-3P350□	
	400	BW400SAG-3P400□	

• RAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
50	10	BW50RAG-3P010□	Blank, X, E, Y, P
	15	BW50RAG-3P015□	
	20	BW50RAG-3P020□	
	30	BW50RAG-3P030□	
	32	BW50RAG-3P032□	
	40	BW50RAG-3P040□	
	50	BW50RAG-3P050□	
63	60	BW63RAG-3P060□	Blank, X, E, Y, P
	63	BW63RAG-3P063□	
125	15	BW125RAG-3P015□	Blank, X, E, P
	20	BW125RAG-3P020□	
	30	BW125RAG-3P030□	
	40	BW125RAG-3P040□	
	50	BW125RAG-3P050□	
	60	BW125RAG-3P060□	
	75	BW125RAG-3P075□	
	100	BW125RAG-3P100□	
	125	BW125RAG-3P125□	
160	125	BW160RAG-3P125□	Blank, X, E, P
	150	BW160RAG-3P150□	
	160	BW160RAG-3P160□	
250	175	BW250RAG-3P175□	Blank, X, E, P
	200	BW250RAG-3P200□	
	225	BW250RAG-3P225□	
	250	BW250RAG-3P250□	
400	250	BW400RAG-3P250□	Blank, X, E, P
	300	BW400RAG-3P300□	
	350	BW400RAG-3P350□	
	400	BW400RAG-3P400□	
630	500	BW630RAG-3P500□	Blank, X, E, P
	600	BW630RAG-3P600□	
	630	BW630RAG-3P630□	
800	700	BW800RAG-3P700□	Blank, X, E, P
	800	BW800RAG-3P800□	

• HAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
400	250	BW400HAG-3P250□	Blank, X, E, P
	300	BW400HAG-3P300□	
	350	BW400HAG-3P350□	
	400	BW400HAG-3P400□	
630	500	BW630HAG-3P500□	Blank, X, E, P
	600	BW630HAG-3P600□	
	630	BW630HAG-3P630□	
800	700	BW800HAG-3P700□	Blank, X, E, P
	800	BW800HAG-3P800□	

* See page 39.

• JAG series, 4-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
125	15	BW125JAG-4P015□	Blank, X, E
	20	BW125JAG-4P020□	
	30	BW125JAG-4P030□	
	40	BW125JAG-4P040□	
	50	BW125JAG-4P050□	
	60	BW125JAG-4P060□	
	75	BW125JAG-4P075□	
	100	BW125JAG-4P100□	
	125	BW125JAG-4P125□	
160	125	BW160JAG-4P125□	Blank, X, E
	150	BW160JAG-4P150□	
	160	BW160JAG-4P160□	
250	175	BW250JAG-4P175□	Blank, X, E
	200	BW250JAG-4P200□	
	225	BW250JAG-4P225□	
	250	BW250JAG-4P250□	

• SAG series, 4-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
125	15	BW125SAG-3P015□	Blank, X, E
	20	BW125SAG-3P020□	
	30	BW125SAG-3P030□	
	40	BW125SAG-3P040□	
	50	BW125SAG-3P050□	
	60	BW125SAG-3P060□	
	75	BW125SAG-3P075□	
	100	BW125SAG-3P100□	
	125	BW125SAG-3P125□	
160	125	BW160SAG-3P125□	Blank, X, E
	150	BW160SAG-3P150□	
	160	BW160SAG-3P160□	
250	175	BW250SAG-3P175□	Blank, X, E
	200	BW250SAG-3P200□	
	225	BW250SAG-3P225□	
	250	BW250SAG-3P250□	

• RAG series, 4-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
125	15	BW125RAG-4P015□	Blank, X, E
	20	BW125RAG-4P020□	
	30	BW125RAG-4P030□	
	40	BW125RAG-4P040□	
	50	BW125RAG-4P050□	
	60	BW125RAG-4P060□	
	75	BW125RAG-4P075□	
	100	BW125RAG-4P100□	
	125	BW125RAG-4P125□	
160	125	BW160RAG-4P125□	Blank, X, E
	150	BW160RAG-4P150□	
	160	BW160RAG-4P160□	
250	175	BW250RAG-4P175□	Blank, X, E
	200	BW250RAG-4P200□	
	225	BW250RAG-4P225□	
	250	BW250RAG-4P250□	
400	250	BW400RAG-4P250□	Blank, X, E
	300	BW400RAG-4P300□	
	350	BW400RAG-4P350□	
	400	BW400RAG-4P400□	
630	500	BW630RAG-4P500□	Blank, X, E
	600	BW630RAG-4P600□	
	630	BW630RAG-4P630□	
800	700	BW800RAG-4P700□	Blank, X, E
	800	BW800RAG-4P800□	

• HAG series, 4-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
400	250	BW400HAG-4P250□	Blank, X, E
	300	BW400HAG-4P300□	
	350	BW400HAG-4P350□	
	400	BW400HAG-4P400□	
630	500	BW630HAG-4P500□	Blank, X, E
	600	BW630HAG-4P600□	
	630	BW630HAG-4P630□	
800	700	BW800HAG-4P700□	Blank, X, E
	800	BW800HAG-4P800□	

* See page 39.

Type number/Line protection

■ Type number, Global series (Line protection)

• EAGU series, 2-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
100	60	BW100EAGU-2P060□	Blank, SB, SF, S3
	63	BW100EAGU-2P063□	S4, S5, S6, S7, S8
	70	BW100EAGU-2P070□	
	75	BW100EAGU-2P075□	
	80	BW100EAGU-2P080□	
	90	BW100EAGU-2P090□	
	100	BW100EAGU-2P100□	
250	125	BW250EAGU-2P125□	Blank, SB, SF, S3
	150	BW250EAGU-2P150□	S4, S5, S6, S7, S8
	160	BW250EAGU-2P160□	
	175	BW250EAGU-2P175□	
	200	BW250EAGU-2P200□	
	225	BW250EAGU-2P225□	
	250	BW250EAGU-2P250□	
400	250	BW400EAGU-2P250□	Blank, SB, S7, S8
	300	BW400EAGU-2P300□	
	350	BW400EAGU-2P350□	
	400	BW400EAGU-2P400□	

• JAGU series, 2-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
125	15	BW125JAGU-2P015□	Blank, SB, SF, S3
	20	BW125JAGU-2P020□	S4, S5, S6, S7, S8
	30	BW125JAGU-2P030□	
	40	BW125JAGU-2P040□	
	50	BW125JAGU-2P050□	
	60	BW125JAGU-2P060□	
	70	BW125JAGU-2P070□	
	75	BW125JAGU-2P075□	
	80	BW125JAGU-2P080□	
	90	BW125JAGU-2P090□	
	100	BW125JAGU-2P100□	
	125	BW125JAGU-2P125□	
250	125	BW250JAGU-2P125□	Blank, SB, SF, S3
	150	BW250JAGU-2P150□	S4, S5, S6, S7, S8
	160	BW250JAGU-2P160□	
	175	BW250JAGU-2P175□	
	200	BW250JAGU-2P200□	
	225	BW250JAGU-2P225□	
	250	BW250JAGU-2P250□	

Terminal combination

□:	Terminal position		Breaker type		
Code	Line	Load	BW50	BW100,125,250	BW400,630,800
Blank	Screw	Screw	●	●	–
Blank	Flat terminal	Flat terminal	–	–	●
SB	Block terminal	Block terminal	–	●	●
SF	Flat terminal	Flat terminal	●	●	–
S3	Screw	Flat terminal	●	●	–
S4	Flat terminal	Screw	●	●	–
S5	Screw	Block terminal	–	●	–
S6	Block terminal	Screw	–	●	–
S7	Flat terminal	Block terminal	–	●	●
S8	Block terminal	Flat terminal	–	●	●

• SAGU series, 2-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
400	250	BW400SAGU-2P250□	Blank, SB, S7, S8
	300	BW400SAGU-2P300□	
	350	BW400SAGU-2P350□	
	400	BW400SAGU-2P400□	

• RAGU series, 2-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
50	3	BW50RAGU-2P003□	Blank, SF, S3, S4
	5	BW50RAGU-2P005□	
	10	BW50RAGU-2P010□	
	15	BW50RAGU-2P015□	
	20	BW50RAGU-2P020□	
	30	BW50RAGU-2P030□	
	32	BW50RAGU-2P032□	
	40	BW50RAGU-2P040□	
	50	BW50RAGU-2P050□	
125	15	BW125RAGU-2P015□	Blank, SB, SF, S3
	20	BW125RAGU-2P020□	S4, S5, S6, S7, S8
	30	BW125RAGU-2P030□	
	40	BW125RAGU-2P040□	
	50	BW125RAGU-2P050□	
	60	BW125RAGU-2P060□	
	70	BW125RAGU-2P070□	
	75	BW125RAGU-2P075□	
	80	BW125RAGU-2P080□	
	90	BW125RAGU-2P090□	
	100	BW125RAGU-2P100□	
	125	BW125RAGU-2P125□	
250	125	BW250RAGU-2P125□	Blank, SB, SF, S3
	150	BW250RAGU-2P150□	S4, S5, S6, S7, S8
	160	BW250RAGU-2P160□	
	175	BW250RAGU-2P175□	
	200	BW250RAGU-2P200□	
	225	BW250RAGU-2P225□	
	250	BW250RAGU-2P250□	
400	250	BW400RAGU-2P250□	Blank, SB, S7, S8
	300	BW400RAGU-2P300□	
	350	BW400RAGU-2P350□	
	400	BW400RAGU-2P400□	

• HAGU series, 2-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
400	250	BW400HAGU-2P250□	Blank, SB, S7, S8
	300	BW400HAGU-2P300□	
	350	BW400HAGU-2P350□	
	400	BW400HAGU-2P400□	

• EAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
100	60	BW100EAGU-3P060□	Blank, SB, SF, S3
	63	BW100EAGU-3P063□	S4, S5, S6, S7, S8
	70	BW100EAGU-3P070□	
	75	BW100EAGU-3P075□	
	80	BW100EAGU-3P080□	
	90	BW100EAGU-3P090□	
	100	BW100EAGU-3P100□	
250	125	BW250EAGU-3P125□	Blank, SB, SF, S3
	150	BW250EAGU-3P150□	S4, S5, S6, S7, S8
	160	BW250EAGU-3P160□	
	175	BW250EAGU-3P175□	
	200	BW250EAGU-3P200□	
	225	BW250EAGU-3P225□	
	250	BW250EAGU-3P250□	
400	250	BW400EAGU-3P250□	Blank, SB, S7, S8
	300	BW400EAGU-3P300□	
	350	BW400EAGU-3P350□	
	400	BW400EAGU-3P400□	

• JAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
125	15	BW125JAGU-3P015□	Blank, SB, SF, S3
	20	BW125JAGU-3P020□	S4, S5, S6, S7, S8
	30	BW125JAGU-3P030□	
	40	BW125JAGU-3P040□	
	50	BW125JAGU-3P050□	
	60	BW125JAGU-3P060□	
	70	BW125JAGU-3P070□	
	75	BW125JAGU-3P075□	
	80	BW125JAGU-3P080□	
	90	BW125JAGU-3P090□	
	100	BW125JAGU-3P100□	
	125	BW125JAGU-3P125□	
250	125	BW250JAGU-3P125□	Blank, SB, SF, S3
	150	BW250JAGU-3P150□	S4, S5, S6, S7, S8
	160	BW250JAGU-3P160□	
	175	BW250JAGU-3P175□	
	200	BW250JAGU-3P200□	
	225	BW250JAGU-3P225□	
	250	BW250JAGU-3P250□	

• SAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
400	250	BW400SAGU-3P250□	Blank, SB, S7, S8
	300	BW400SAGU-3P300□	
	350	BW400SAGU-3P350□	
	400	BW400SAGU-3P400□	

• RAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
50	3	BW50RAGU-3P003□	Blank, SB, S3, S4
	5	BW50RAGU-3P005□	
	10	BW50RAGU-3P010□	
	15	BW50RAGU-3P015□	
	20	BW50RAGU-3P020□	
	30	BW50RAGU-3P030□	
	32	BW50RAGU-3P032□	
	40	BW50RAGU-3P040□	
	50	BW50RAGU-3P050□	
125	15	BW125RAGU-3P015□	Blank, SB, SF, S3
	20	BW125RAGU-3P020□	S4, S5, S6, S7, S8
	30	BW125RAGU-3P030□	
	40	BW125RAGU-3P040□	
	50	BW125RAGU-3P050□	
	60	BW125RAGU-3P060□	
	70	BW125RAGU-3P070□	
	75	BW125RAGU-3P075□	
	80	BW125RAGU-3P080□	
	90	BW125RAGU-3P090□	
	100	BW125RAGU-3P100□	
	125	BW125RAGU-3P125□	
250	125	BW250RAGU-3P125□	Blank, SB, SF, S3
	150	BW250RAGU-3P150□	S4, S5, S6, S7, S8
	160	BW250RAGU-3P160□	
	175	BW250RAGU-3P175□	
	200	BW250RAGU-3P200□	
	225	BW250RAGU-3P225□	
	250	BW250RAGU-3P250□	
400	250	BW400RAGU-3P250□	Blank, SB, S7, S8
	300	BW400RAGU-3P300□	
	350	BW400RAGU-3P350□	
	400	BW400RAGU-3P400□	
630	500	BW630RAGU-3P500□	Blank, SB, S7, S8
	600	BW630RAGU-3P600□	
	630	BW630RAGU-3P630□	
800	700	BW800RAGU-3P700□	Blank, SB, S7, S8
	800	BW800RAGU-3P800□	

• HAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
400	250	BW400HAGU-3P250□	Blank, SB, S7, S8
	300	BW400HAGU-3P300□	
	350	BW400HAGU-3P350□	
	400	BW400HAGU-3P400□	
630	500	BW630HAGU-3P500□	Blank, SB, S7, S8
	600	BW630HAGU-3P600□	
	630	BW630HAGU-3P630□	
800	700	BW800HAGU-3P700□	Blank, SB, S7, S8
	800	BW800HAGU-3P800□	

* See page 44.

Type number/Motor protection

■ Type number, Standard series (Motor protection)

• SAM series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
32	0.7	BW32SAM-2P0P7□	Blank, X, E, Y, P
	1.4	BW32SAM-2P1P4□	
	2.6	BW32SAM-2P2P6□	
	4	BW32SAM-2P004□	
	8	BW32SAM-2P008□	
	10	BW32SAM-2P010□	
	16	BW32SAM-2P016□	
	24	BW32SAM-2P024□	
	32	BW32SAM-2P032□	

Mounting	Connection	□
Front	Front	Blank
Front	Rear	X
Flush	Rear	E
Flush	Top and buttom	Y
Plug-in		P

• AAM series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
32	1.4	BW32AAM-3P1P4□	Blank, X, E, Y, P
	2.6	BW32AAM-3P2P6□	
	4	BW32AAM-3P004□	
	8	BW32AAM-3P008□	
	10	BW32AAM-3P010□	
	16	BW32AAM-3P016□	
	24	BW32AAM-3P024□	
	32	BW32AAM-3P032□	

• EAM series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
50	24	BW50EAM-3P024□	Blank, X, E, Y, P
	32	BW50EAM-3P032□	
	40	BW50EAM-3P040□	
	45	BW50EAM-3P045□	
63	63	BW63EAM-3P063□	Blank, X, E, Y, P
100	63	BW100EAM-3P063□	Blank, X, E, Y, P
	75	BW100EAM-3P075□	
	90	BW100EAM-3P090□	
250	125	BW250EAM-3P125□	Blank, X, E, P
	150	BW250EAM-3P150□	
	175	BW250EAM-3P175□	
	225	BW250EAM-3P225□	

• JAM series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection
125	16	BW125JAM-3P016□	Blank, X, E, P
	24	BW125JAM-3P024□	
	32	BW125JAM-3P032□	
	40	BW125JAM-3P040□	
	60	BW125JAM-3P060□	
	75	BW125JAM-3P075□	
	90	BW125JAM-3P090□	
250	125	BW250JAM-3P125□	Blank, X, E, P
	150	BW250JAM-3P150□	
	175	BW250JAM-3P175□	
	225	BW250JAM-3P225□	

• SAM series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
32	0.7	BW32SAM-3P0P7□	Blank, X, E, Y, P
	1.4	BW32SAM-3P1P4□	
	2.6	BW32SAM-3P2P6□	
	4	BW32SAM-3P004□	
	8	BW32SAM-3P008□	
	10	BW32SAM-3P010□	
	16	BW32SAM-3P016□	
	24	BW32SAM-3P024□	
	32	BW32SAM-3P032□	
50	0.7	BW50SAM-3P0P7□	Blank, X, E, Y, P
	1.4	BW50SAM-3P1P4□	
	2	BW50SAM-3P002□	
	2.6	BW50SAM-3P2P6□	
	4	BW50SAM-3P004□	
	5	BW50SAM-3P005□	
	8	BW50SAM-3P008□	
	10	BW50SAM-3P010□	
	12	BW50SAM-3P012□	
	16	BW50SAM-3P016□	
	24	BW50SAM-3P024□	
	32	BW50SAM-3P032□	
	40	BW50SAM-3P040□	
	45	BW50SAM-3P045□	
63	63	BW63SAM-3P063□	Blank, X, E, Y, P

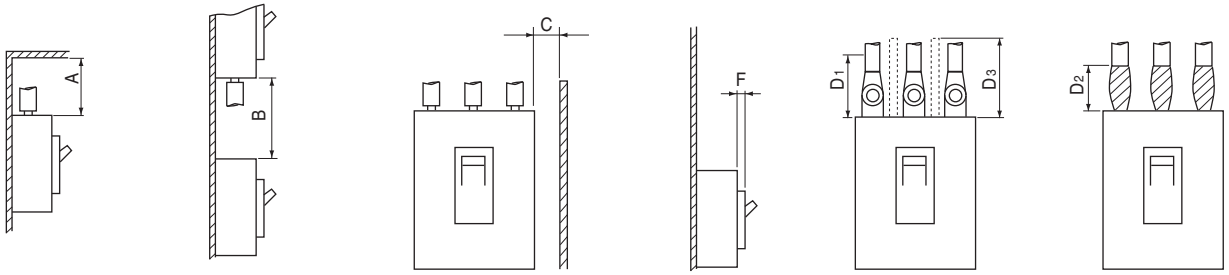
• RAM series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	□: Available mounting and connection*
50	0.7	BW50RAM-3P0P7□	Blank, X, E, Y, P
	1.4	BW50RAM-3P1P4□	
	2	BW50RAM-3P002□	
	2.6	BW50RAM-3P2P6□	
	4	BW50RAM-3P004□	
	5	BW50RAM-3P005□	
	8	BW50RAM-3P008□	
	10	BW50RAM-3P010□	
	12	BW50RAM-3P012□	
	16	BW50RAM-3P016□	
	24	BW50RAM-3P024□	
	32	BW50RAM-3P032□	
	40	BW50RAM-3P040□	
	45	BW50RAM-3P045□	
125	16	BW125RAM-3P016□	Blank, X, E, P
	24	BW125RAM-3P024□	
	32	BW125RAM-3P032□	
	40	BW125RAM-3P040□	
	60	BW125RAM-3P060□	
	75	BW125RAM-3P075□	
	90	BW125RAM-3P090□	
250	125	BW250RAM-3P125□	Blank, X, E, P
	150	BW250RAM-3P150□	
	175	BW250RAM-3P175□	
	225	BW250RAM-3P225□	

* See page 46.

Arc space

■ Arc space, mm



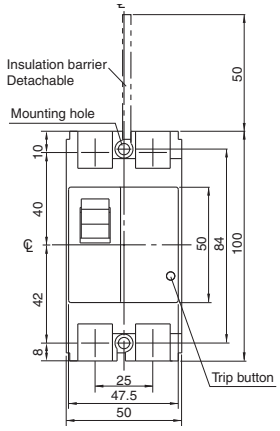
Frame size	MCCB basic type	Ceiling distance A		Vertical distance B		Side plate distance C		Front plate distance F Painted		Front plate distance F No painted		Taping Crimp type terminal lug	Taping Bus-bar	Barrier
		440V	230V	440V	230V	440V	230V	440V	230V	440V	230V	D1	D2	D3
32A	BW32A	–	10	–	10	–	10	–	0	–	0	Exposed live part dimension +20	10	10
	BW32S	10	10	30	30	20	15	0	0	0	0		30	30
50A	BW50A	–	10	–	10	–	10	–	0	–	0		10	10
	BW50E	10	10	30	30	25	15	0	0	0	0		30	30
	BW50S	30	10	40	40	25	15	0	0	0	0		30	30
	BW50R	50	25	50	50	25	15	0	0	10	5		50	50
	BW50H	60	60	80	80	50	20	5	0	10	5		80	80
63A	BW63E	10	10	30	30	25	15	0	0	0	0		30	30
	BW63S	30	10	40	40	25	15	0	0	0	0		30	30
	BW63R	50	25	50	50	25	15	0	0	10	5		50	50
100A	BW100A	–	10	–	20	–	15	–	0	–	0		50	50
	BW100E	50	25	50	50	25	15	0	0	10	5		50	50
125A	BW125J	40	40	50	50	25	20	0	0	10	5		50	50
	BW125S	40	40	60	60	25	20	5	0	10	5		50	50
	BW125R	40	40	60	60	25	20	5	0	10	5		50	50
	BW125H	60	60	80	80	50	20	5	0	10	5		80	80
160A	BW160E	40	40	50	50	50	15	0	0	10	5		80	80
	BW160J	40	40	60	60	50	20	0	0	10	5		80	80
	BW160S	40	40	80	80	50	20	5	0	10	10		80	80
	BW160R	40	40	80	80	50	20	5	0	10	10		80	80
250A	BW250E	40	40	50	50	50	15	0	0	10	5		80	80
	BW250J	40	40	60	60	50	20	0	0	10	5		80	80
	BW250S	40	40	80	80	50	20	5	0	10	10		80	80
	BW250R	40	40	80	80	50	20	5	0	10	10		80	80
	BW250H	60	60	80	80	60	60	5	0	10	10		80	80
400A	BW400E	100	80	100	80	50	20	0	0	10	5		100	100
	BW400S	100	80	100	80	50	20	0	0	10	5		100	100
	BW400R	100	80	100	80	80	40	5	0	20	10		100	100
	BW400H	100	80	100	80	80	40	5	0	20	10		100	100
630A	BW630E	100	80	100	80	80	40	0	0	10	5		100	100
	BW630R	100	80	100	80	80	40	5	0	20	10		100	100
	BW630H	120	100	120	100	80	40	5	0	20	10		120	120
800A	BW800E	100	80	100	80	80	40	0	0	10	5		100	100
	BW800R	100	80	100	80	80	40	5	0	20	10		100	100
	BW800H	120	100	120	100	80	40	5	0	20	20		120	120

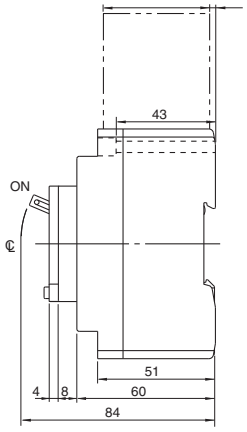
Dimensions / Standard

■ **Dimensions, mm**

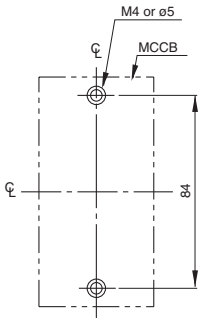
● **Front mounting, front connection**

BW32□-2P, BW50□-2P

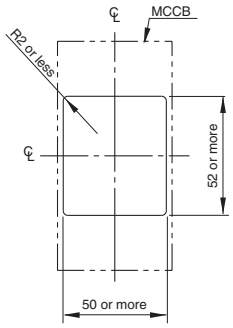




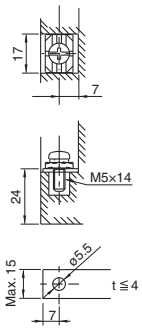
Panel drilling



Front panel cutting

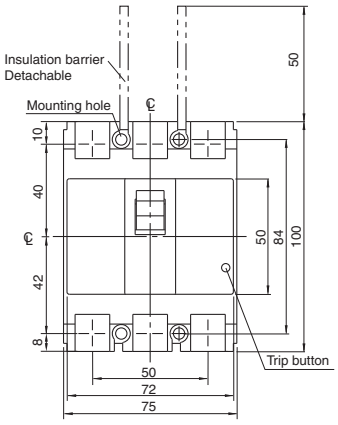


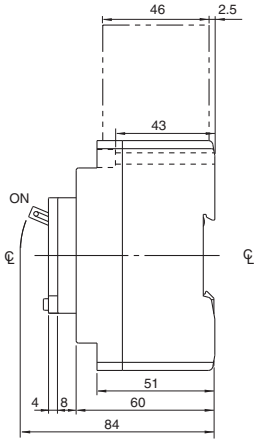
Terminal section



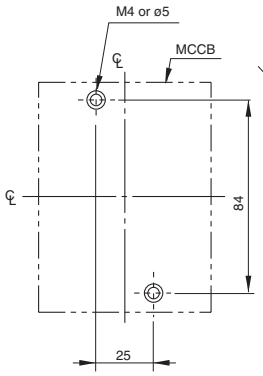
Insulation barriers
Standard provided: BW50SAG, BW50RAG
Optional: BW32AAG, BW32SAG, BW50EAG

BW32□-3P, BW50□-3P

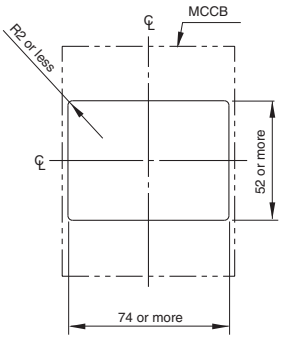




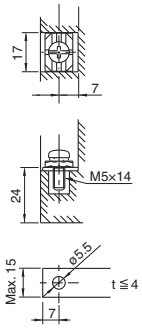
Panel drilling



Front panel cutting

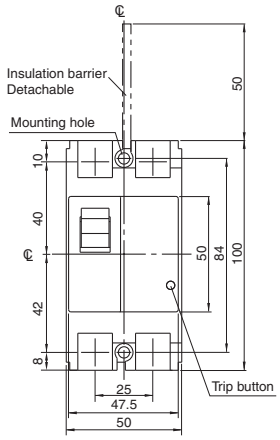


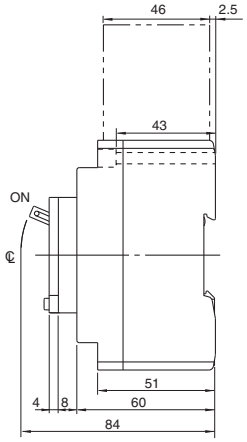
Terminal section



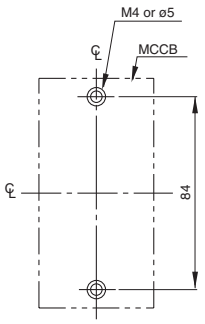
Insulation barriers
Standard provided: BW50SAG, BW50RAG
Optional: BW32AAG, BW32SAG, BW50EAG

BW63□-2P

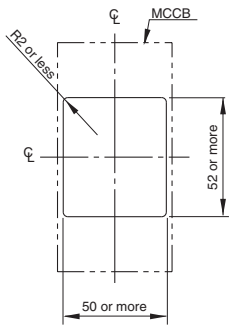




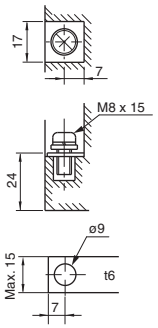
Panel drilling



Front panel cutting



Terminal section

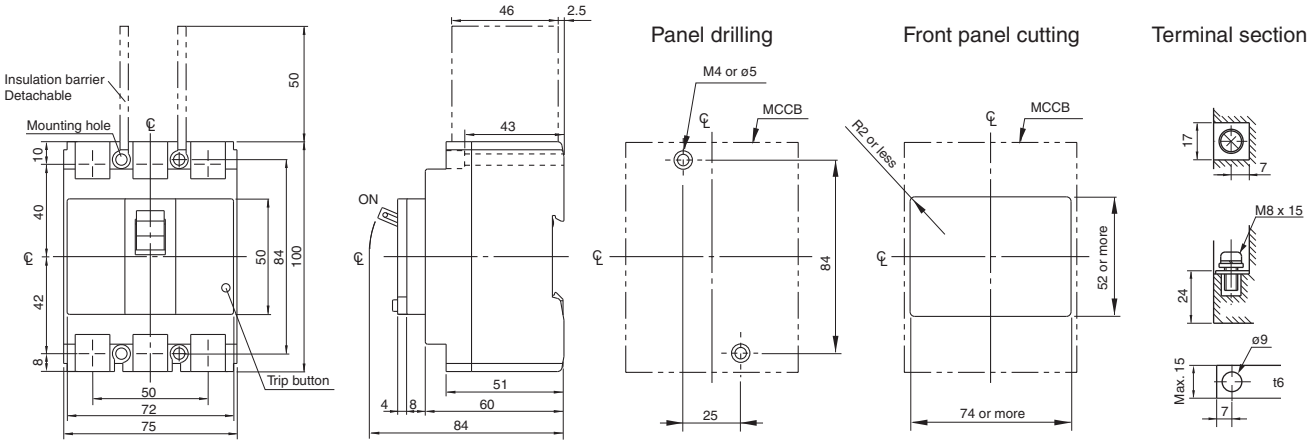


Dimensions / Standard

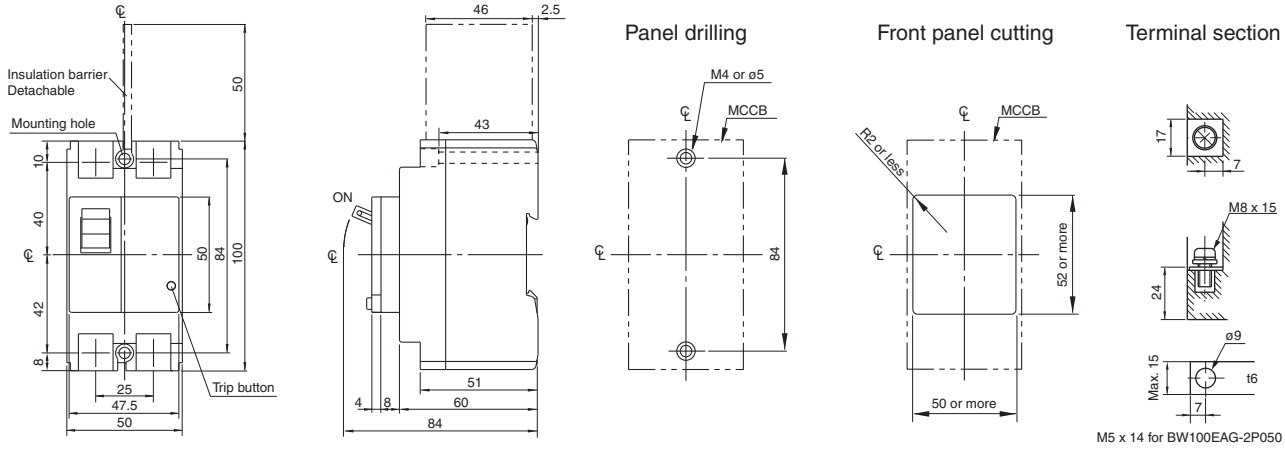
■ **Dimensions, mm**

● **Front mounting, front connection**

BW63□-3P

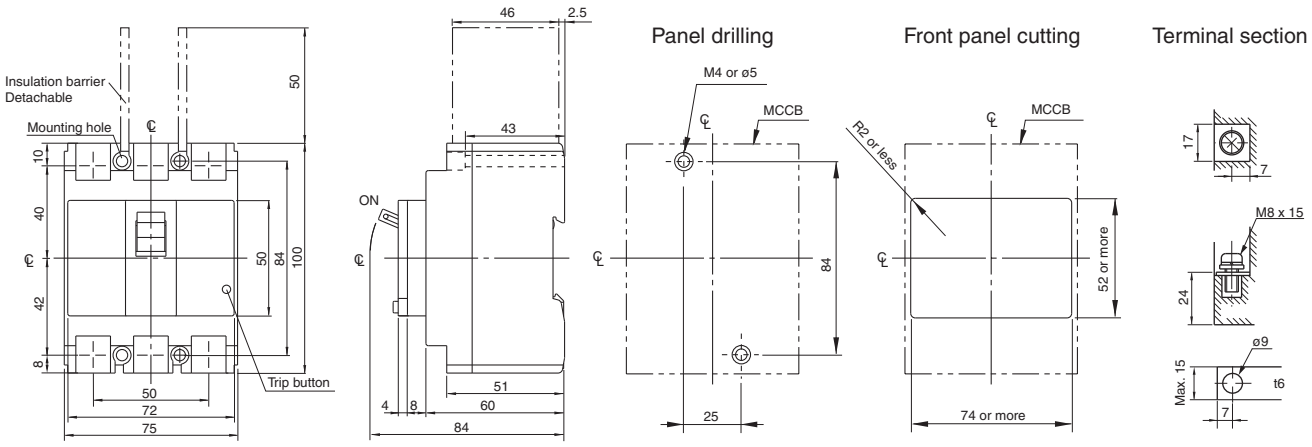


BW100□-2P



M5 x 14 for BW100EAG-2P050

BW100□-3P



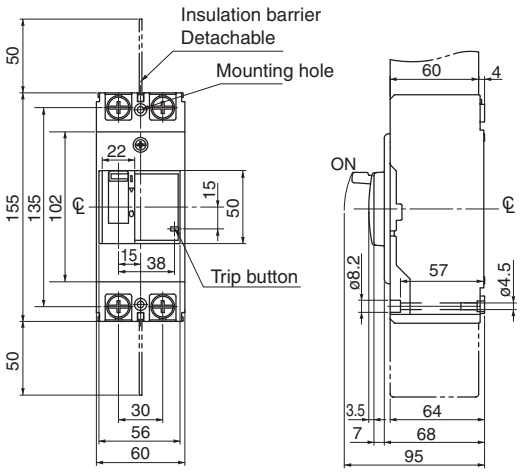
Insulation barriers
Standard provided: BW100EAG
Optional: BW100AAG

M5 x 14 for BW100EAG-3P050

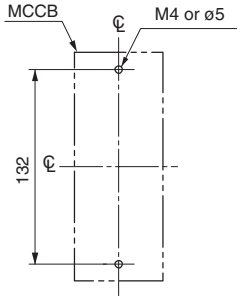
■ Dimensions, mm

● Front mounting, front connection

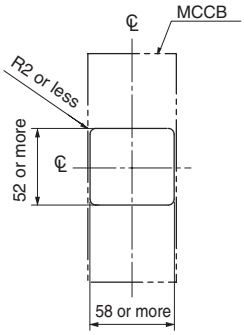
BW125JAG-2P



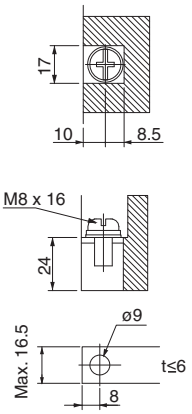
Panel drilling



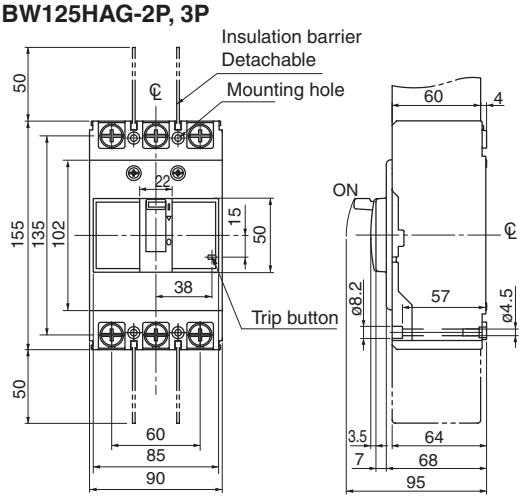
Front panel cutting



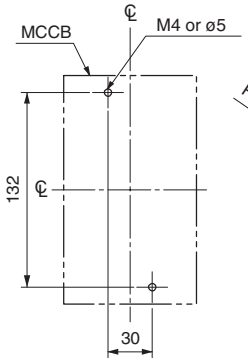
Terminal section



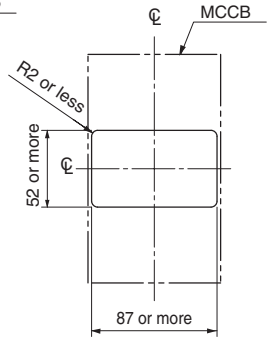
BW50HAG-2P, 3P, BW125JAG-3P,
BW125SAG-2P, 3P, BW125RAG-2P, 3P
BW125HAG-2P, 3P



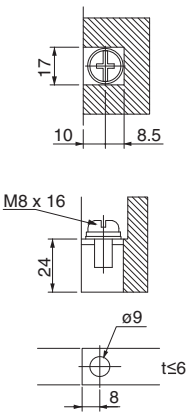
Panel drilling



Front panel cutting

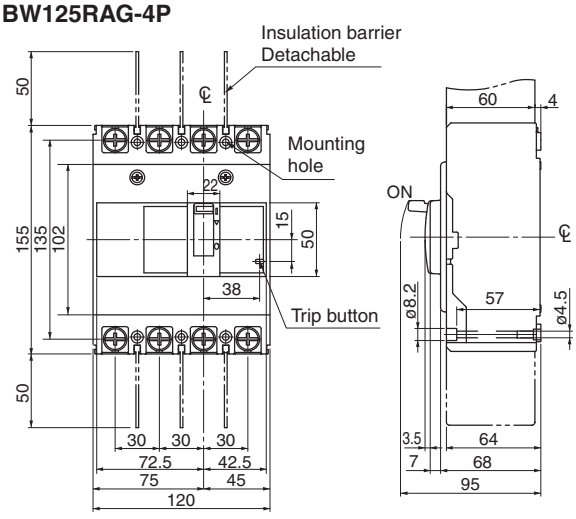


Terminal section

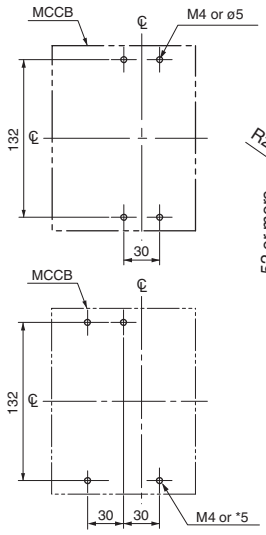


Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW125JAG-4P
BW125SAG-4P
BW125RAG-4P

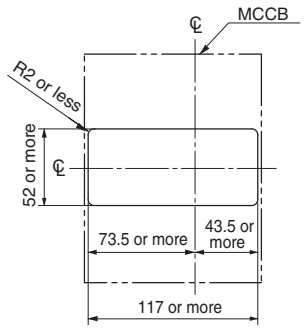


Panel drilling

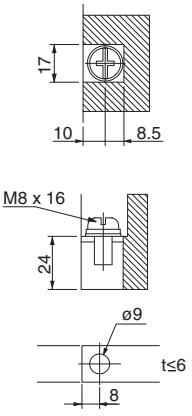


For V, N-type hadle

Front panel cutting



Terminal section

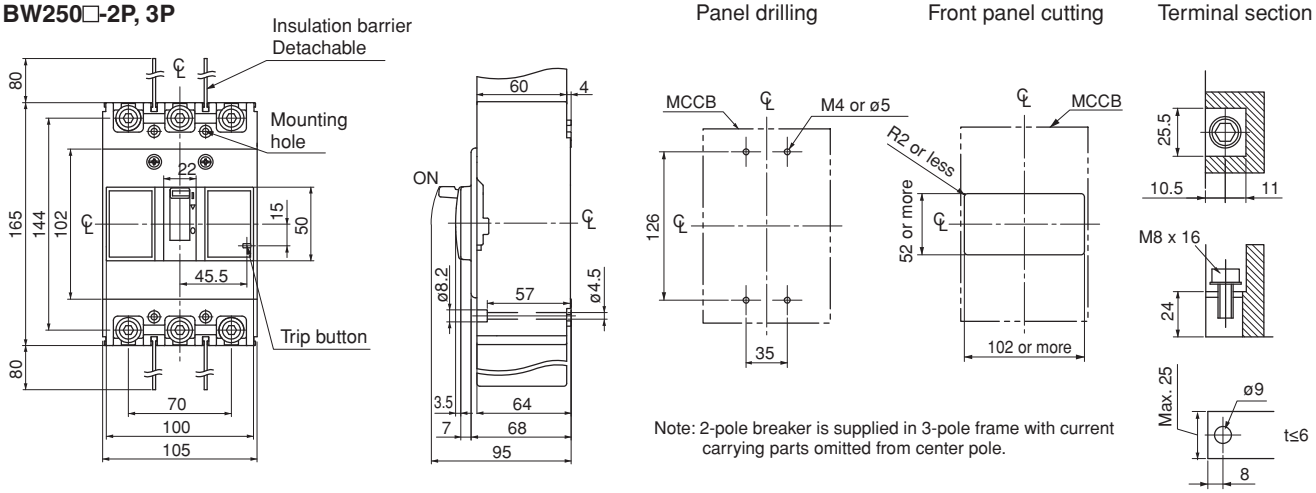


Dimensions / Standard

■ **Dimensions, mm**

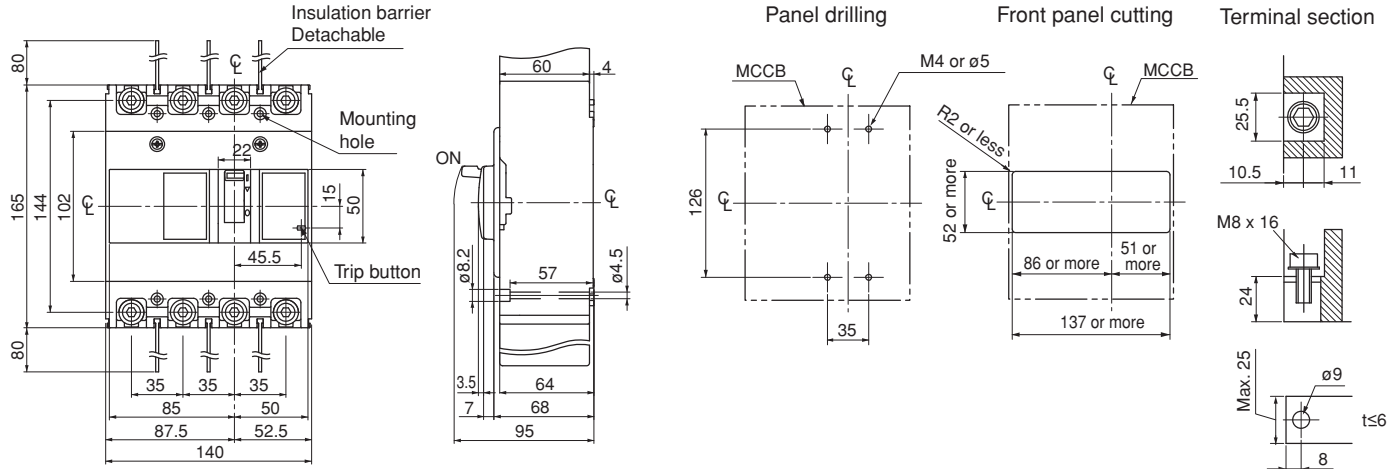
● **Front mounting, front connection**

BW160□-2P, 3P
BW250□-2P, 3P



Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

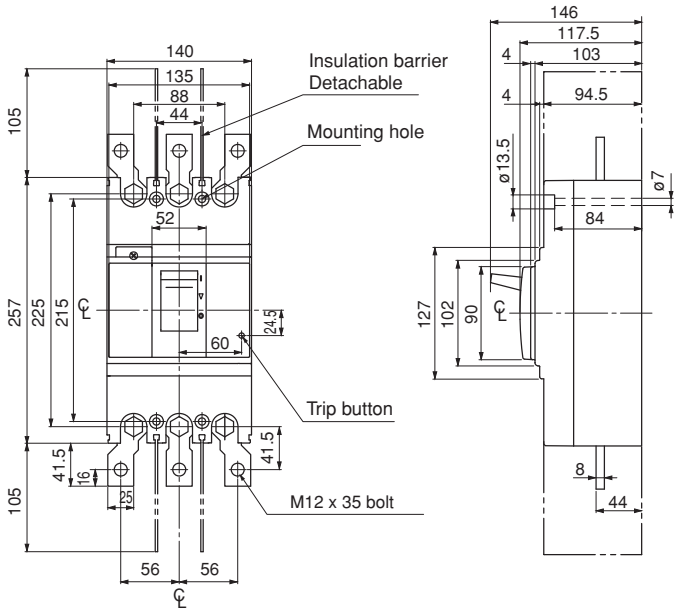
BW160□-4P
BW250□-4P

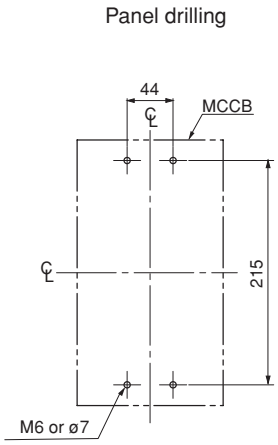


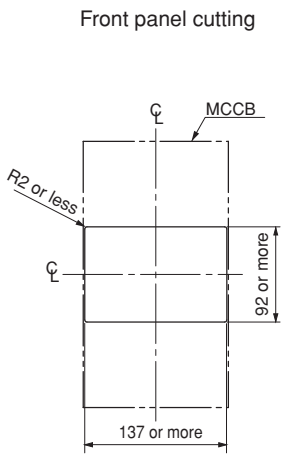
■ **Dimensions, mm**

● **Front mounting, front connection**

BW400□-2P, 3P

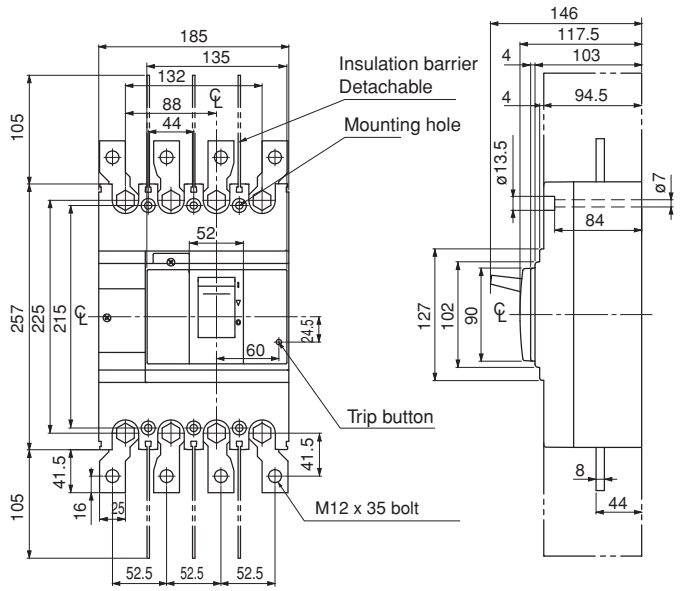


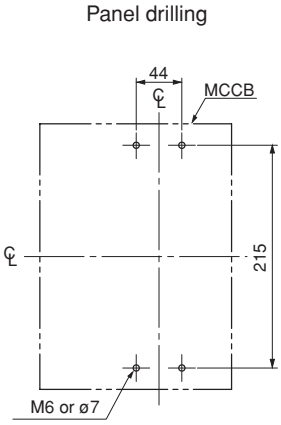


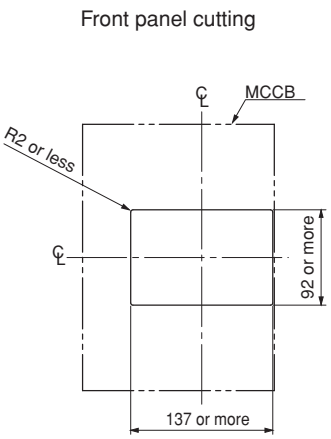


Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW400□-4P



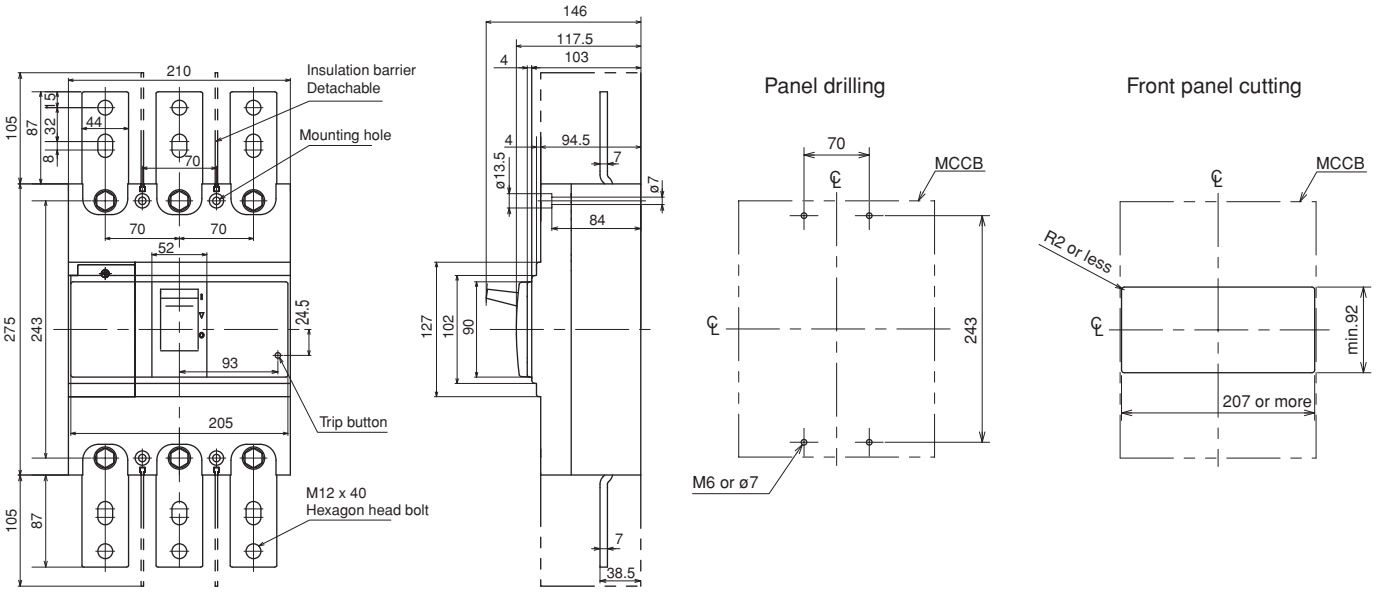




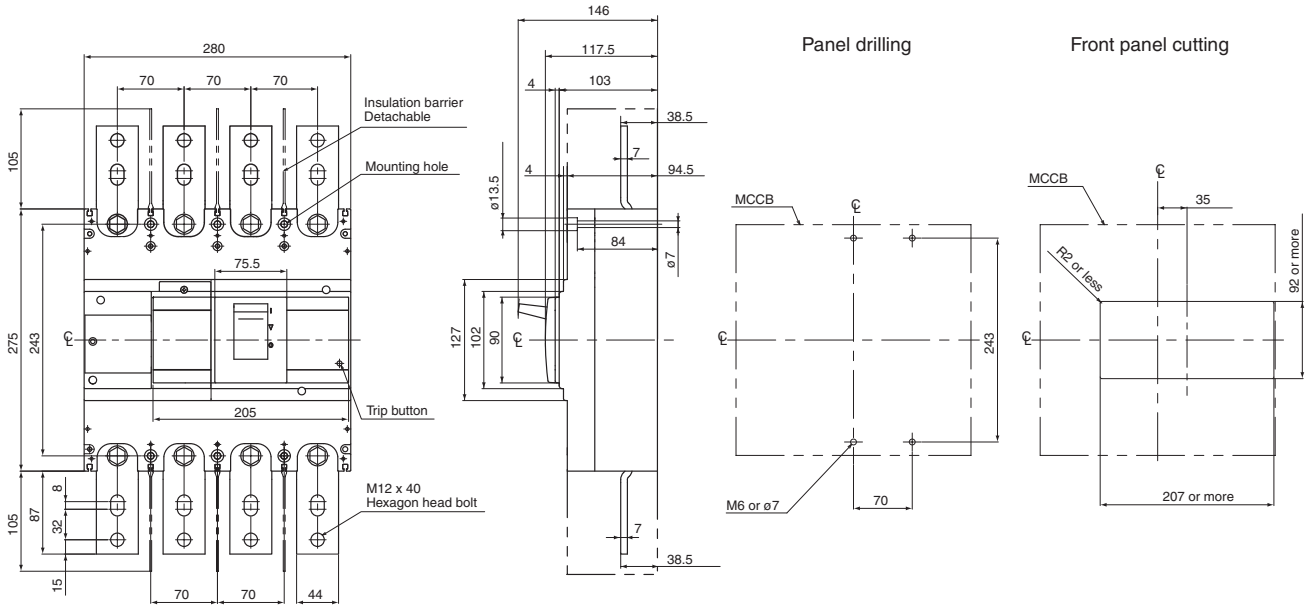
■ **Dimensions, mm**

● **Front mounting, front connection**

BW630□-3P



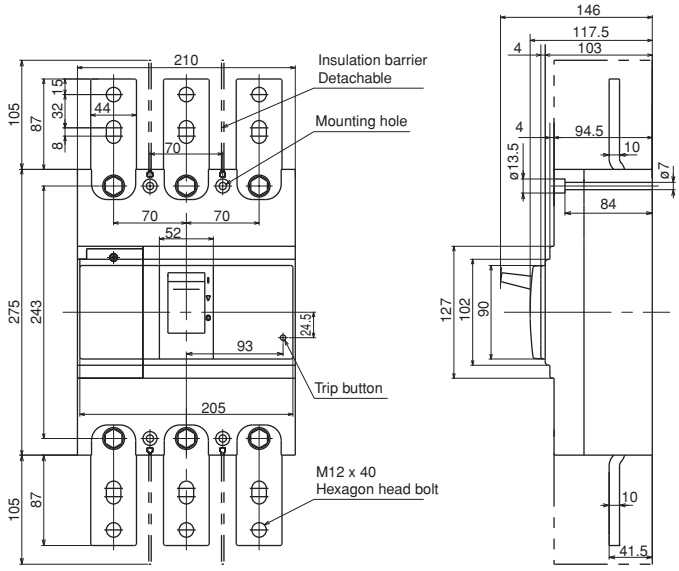
BW630□-4P



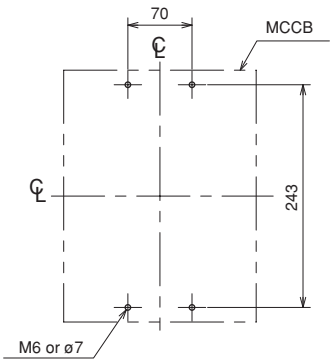
■ **Dimensions, mm**

● **Front mounting, front connection**

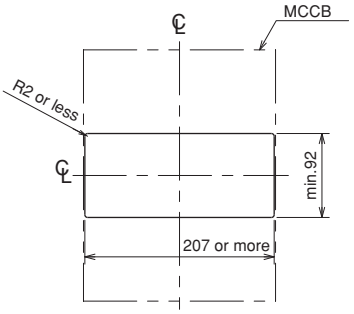
BW800□-3P



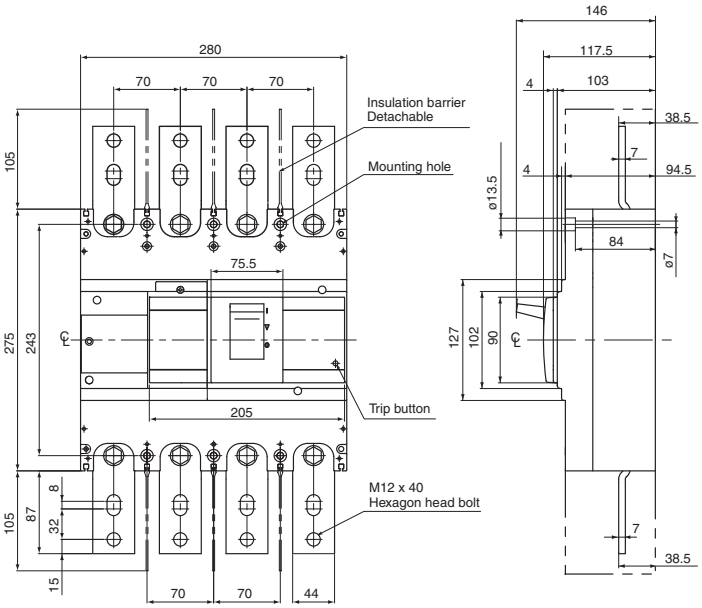
Panel drilling



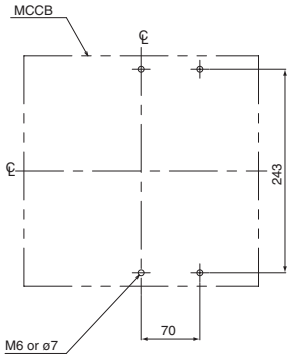
Front panel cutting



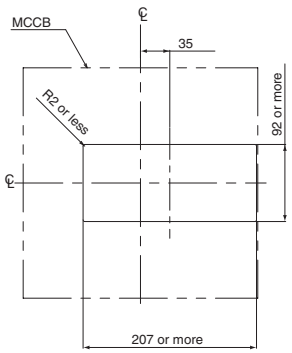
BW800□-4P



Panel drilling



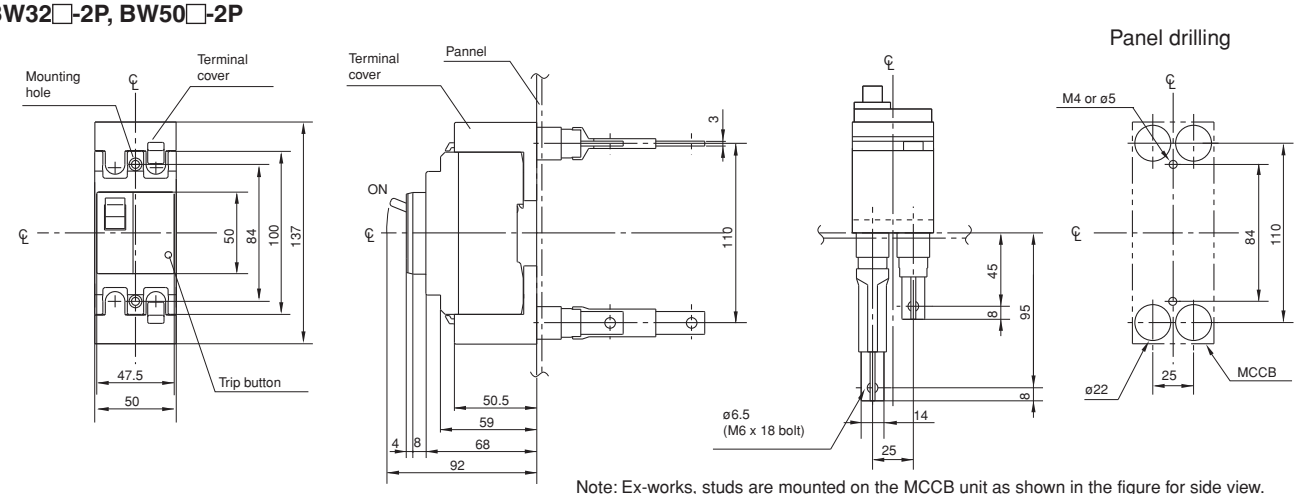
Front panel cutting



■ Dimensions, mm

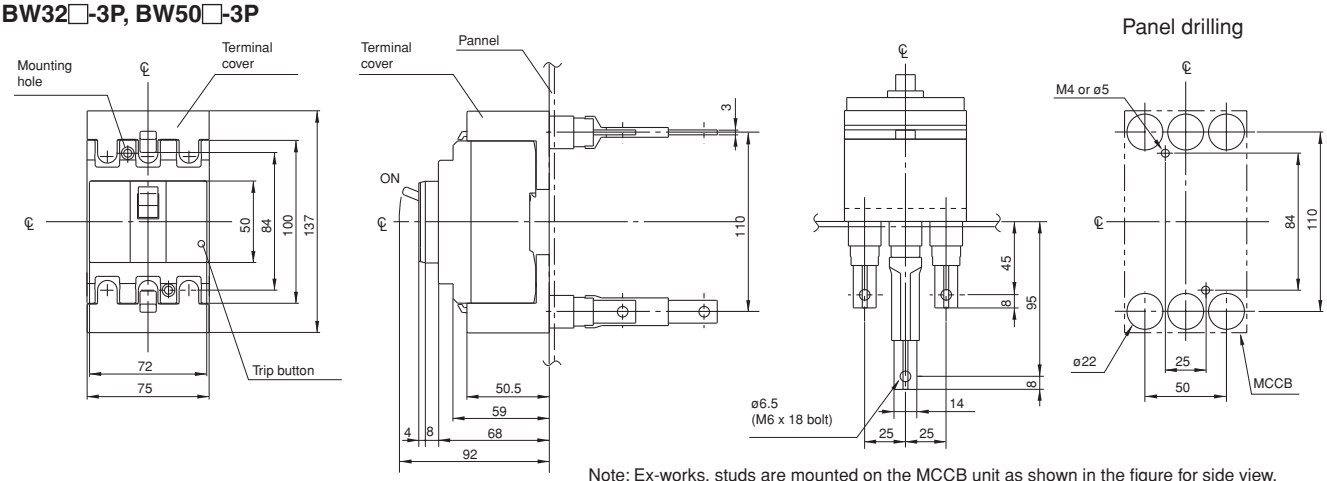
● Front mounting, rear connection (type X)

BW32□-2P, BW50□-2P



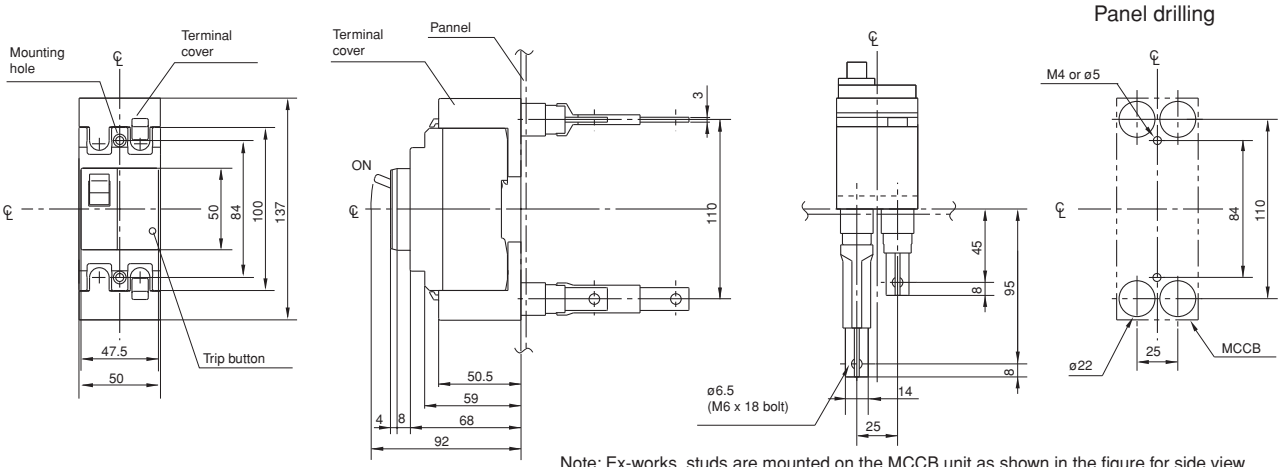
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

BW32□-3P, BW50□-3P



Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW63□-2P

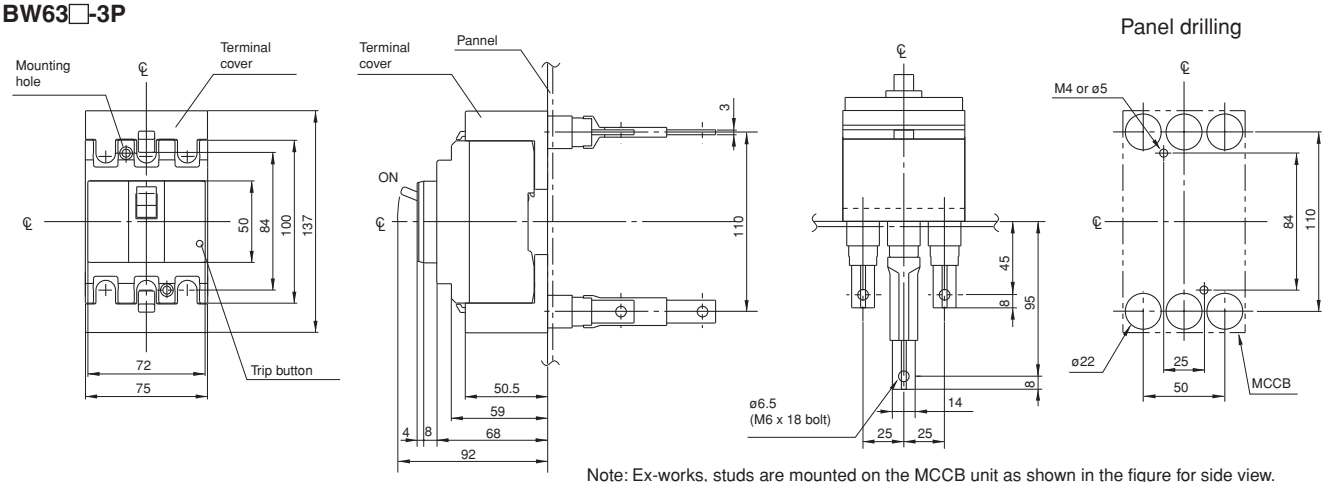


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

■ Dimensions, mm

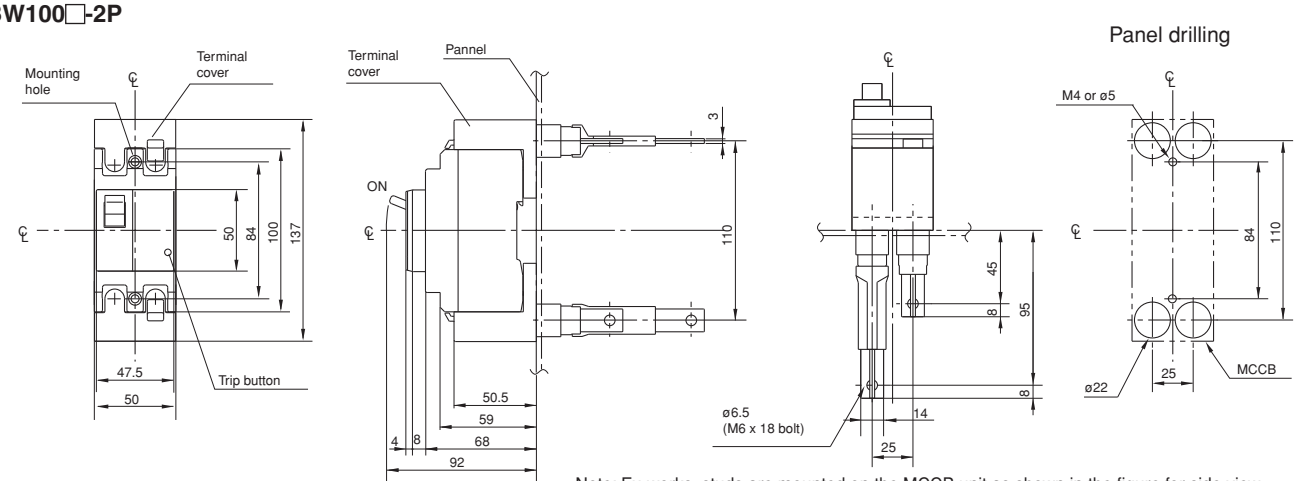
● Front mounting, rear connection (type X)

BW63□-3P



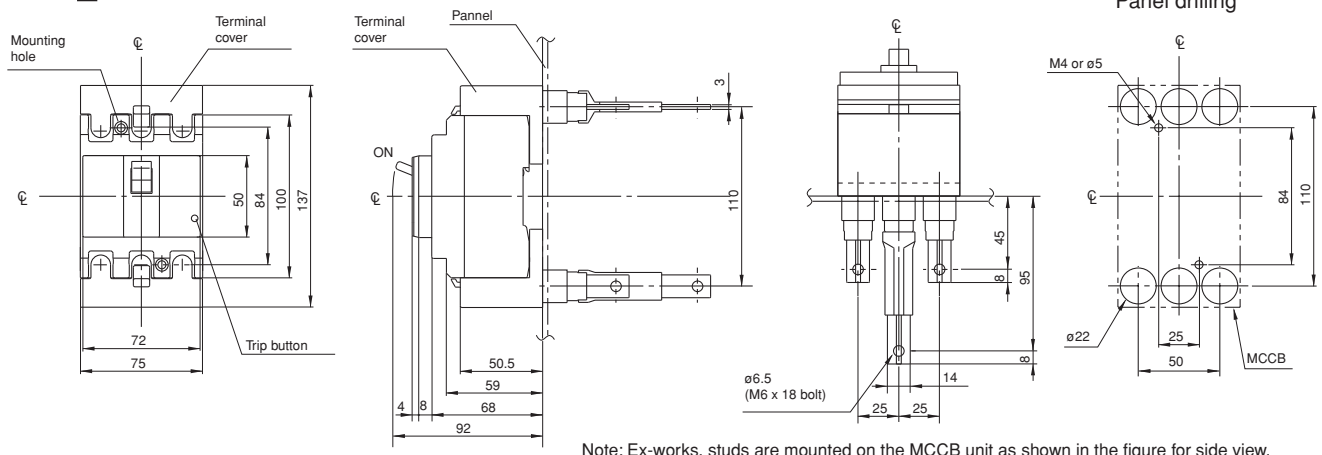
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW100□-2P



Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

BW100□-3P

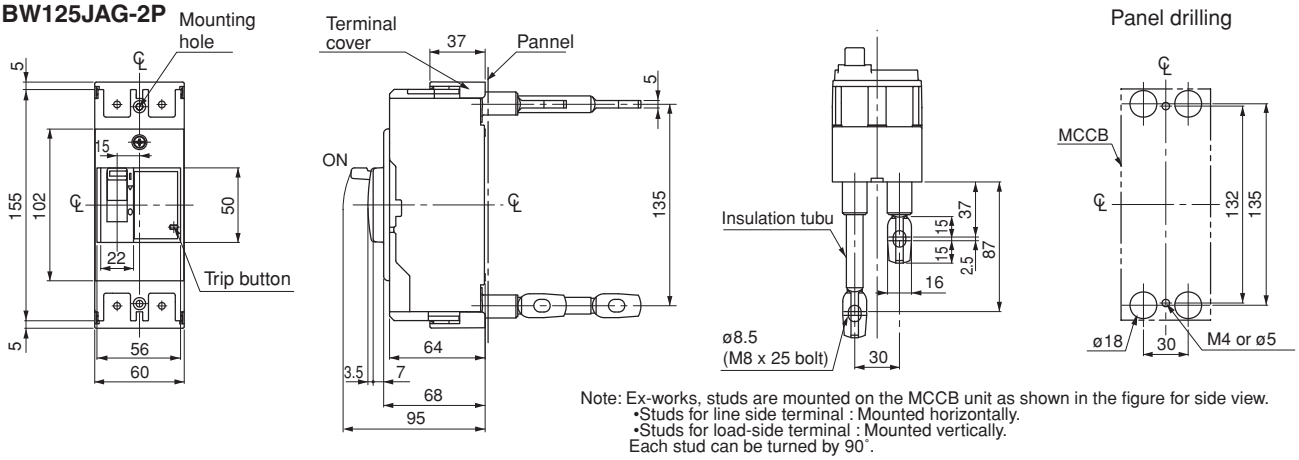


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

■ **Dimensions, mm**

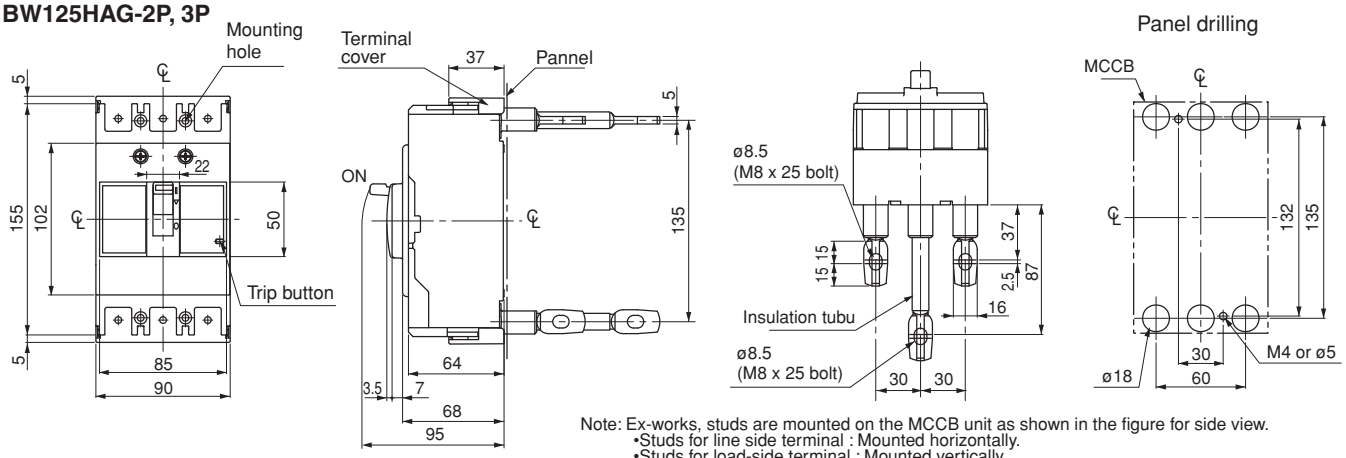
● **Front mounting, rear connection (type X)**

BW125JAG-2P



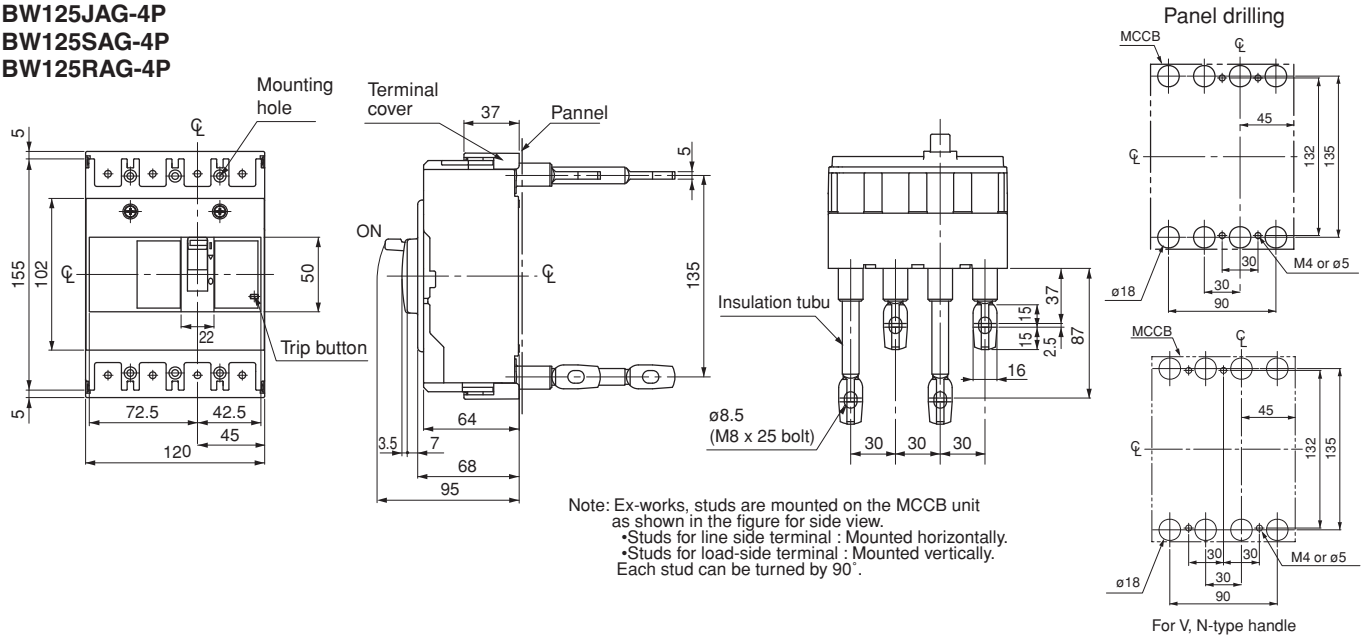
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

BW50HAG-2P, 3P, BW125JAG-3P
BW125SAG-2P, 3P, BW125RAG-2P, 3P
BW125HAG-2P, 3P



Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW125JAG-4P
BW125SAG-4P
BW125RAG-4P



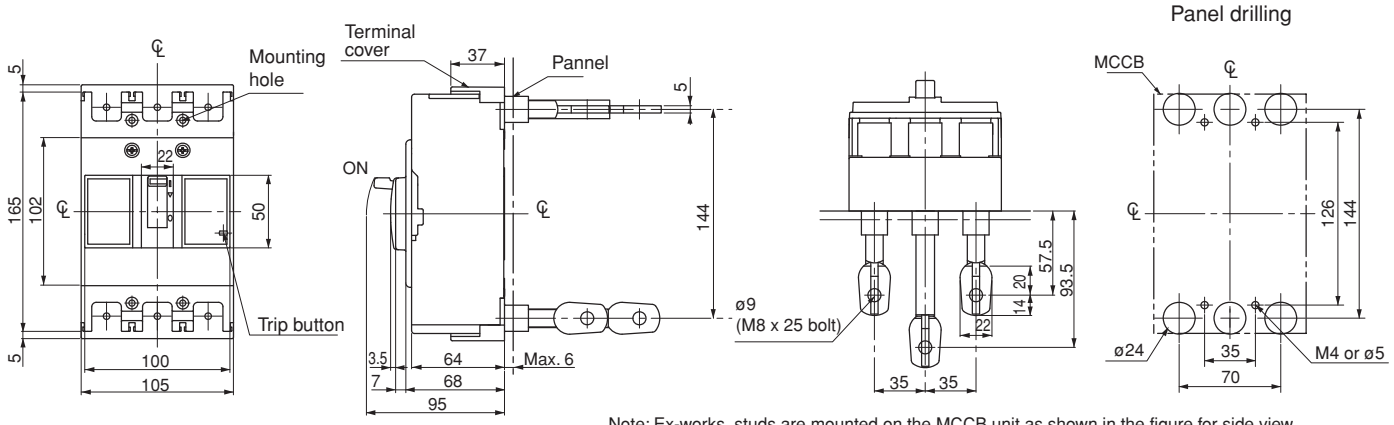
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

For V, N-type handle

■ **Dimensions, mm**

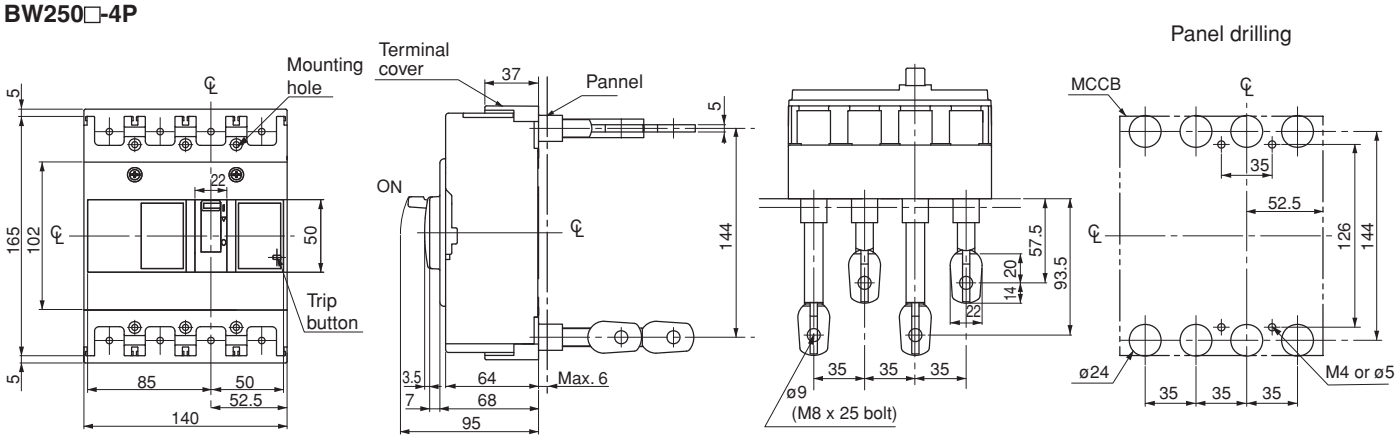
● **Front mounting, rear connection (type X)**

BW160□-2P, 3P
BW250□-2P, 3P



Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW160□-4P
BW250□-4P

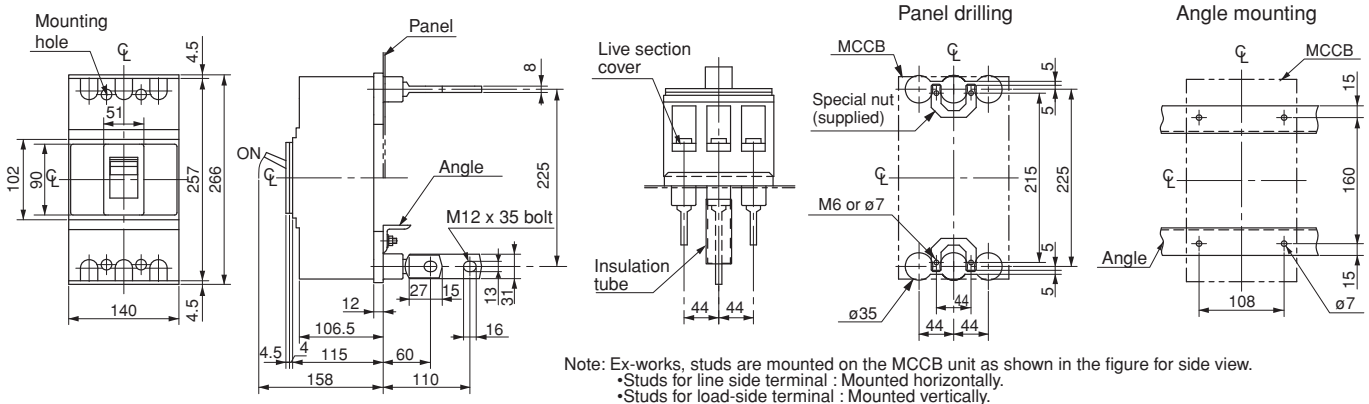


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

■ **Dimensions, mm**

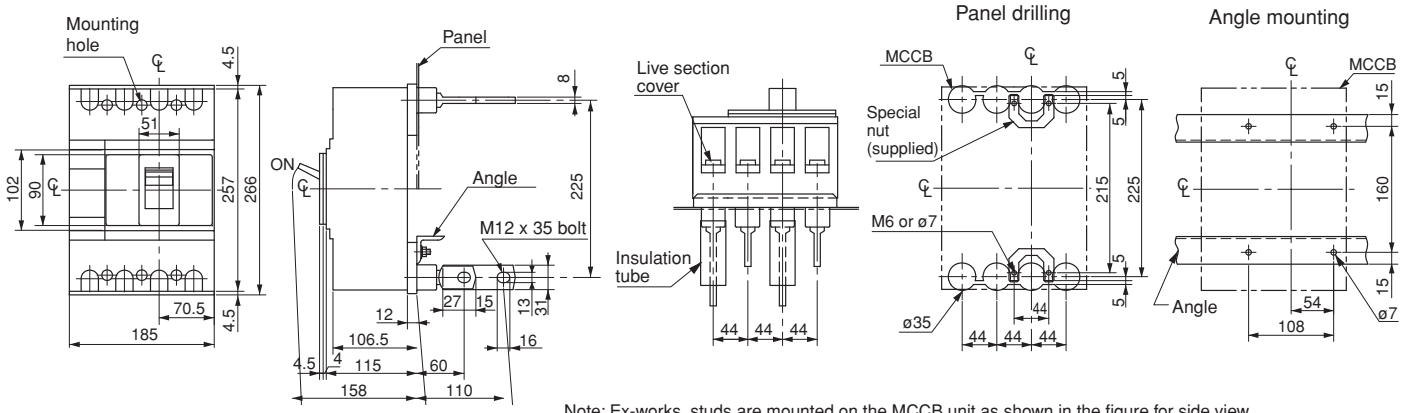
● **Front mounting, rear connection (type X)**

BW400□-2P, 3P



Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW400□-4P

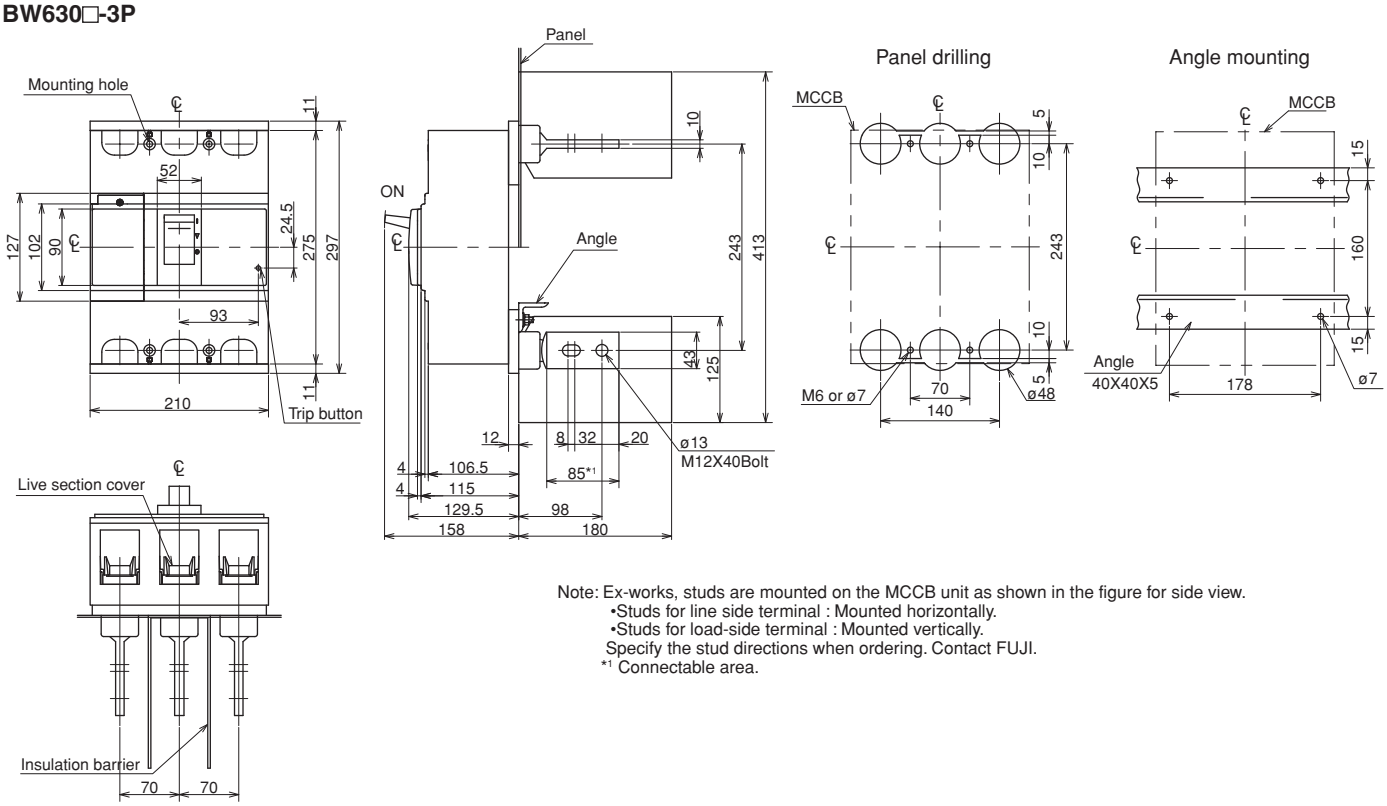


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

■ Dimensions, mm

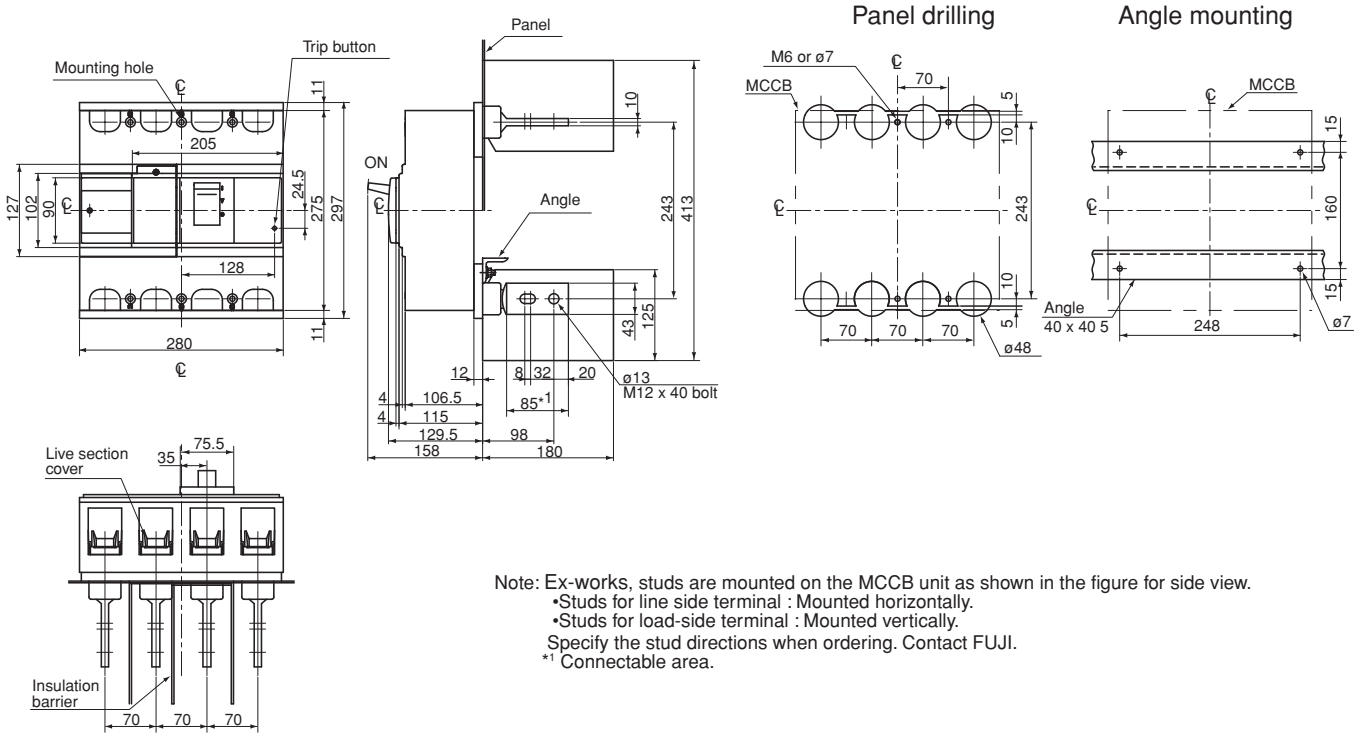
● Front mounting, rear connection (type X)

BW630□-3P



Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

BW630□-4P

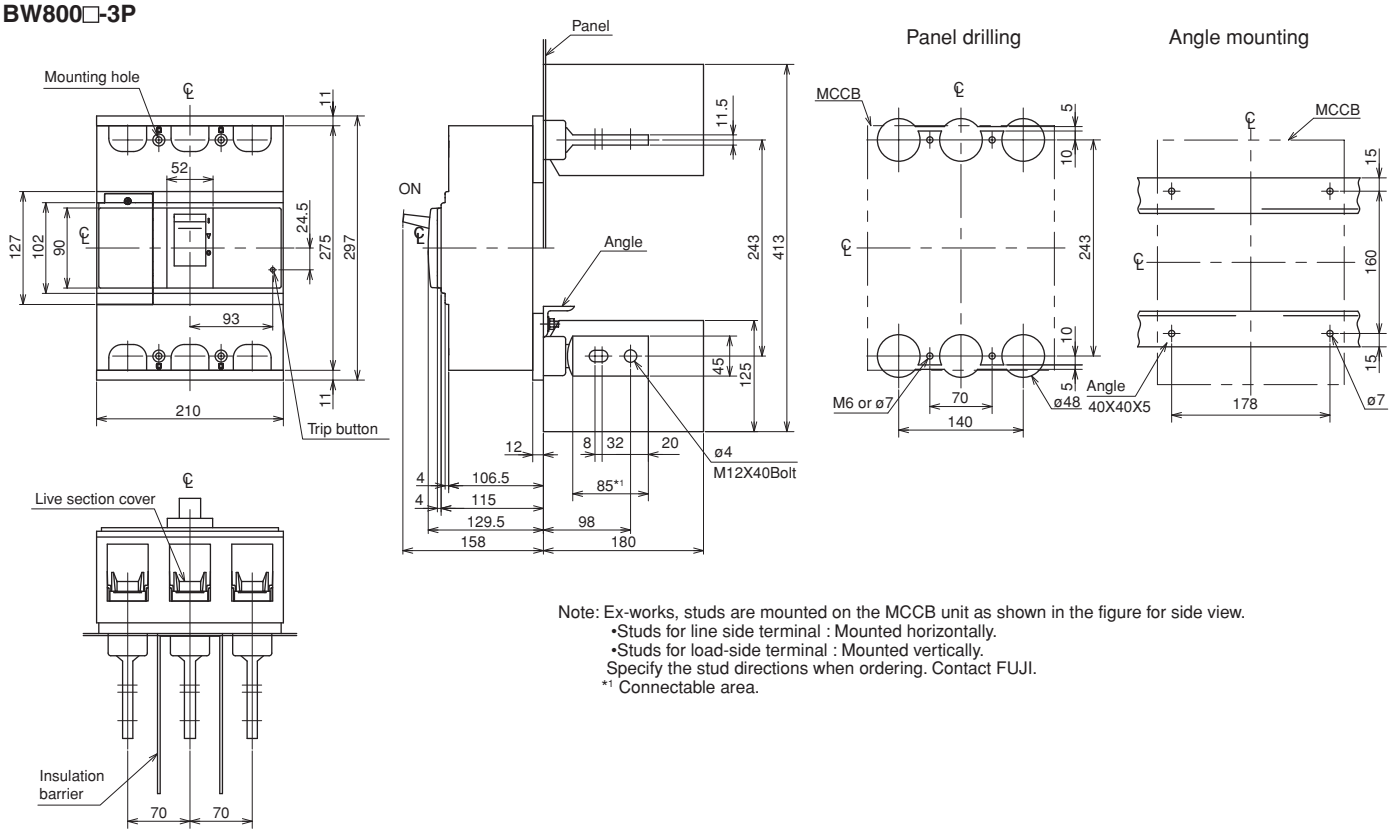


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

■ **Dimensions, mm**

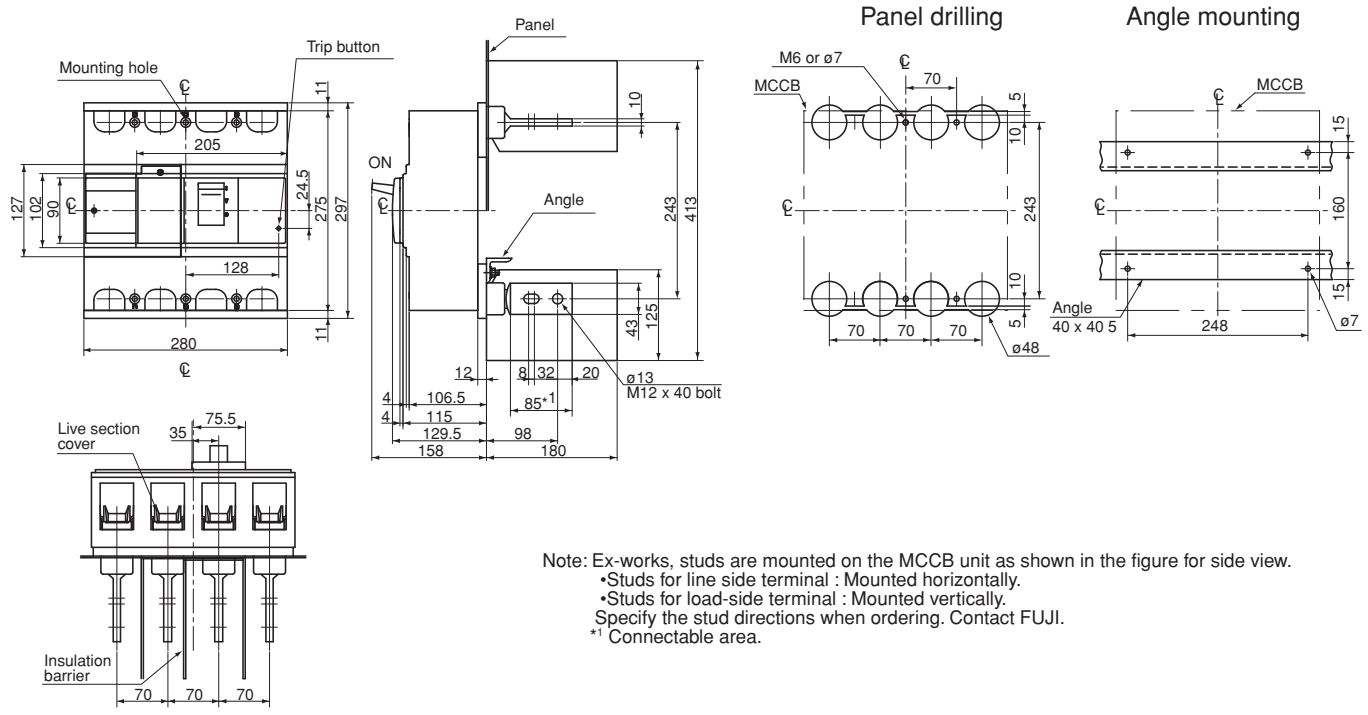
● **Front mounting, rear connection (type X)**

BW800□-3P



Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

BW800□-4P

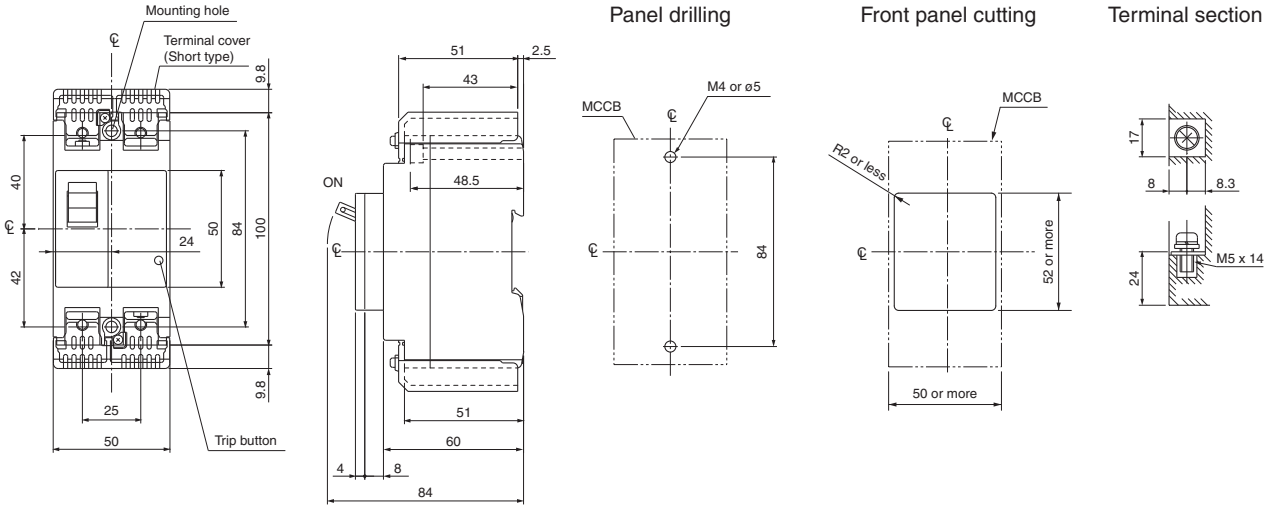


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

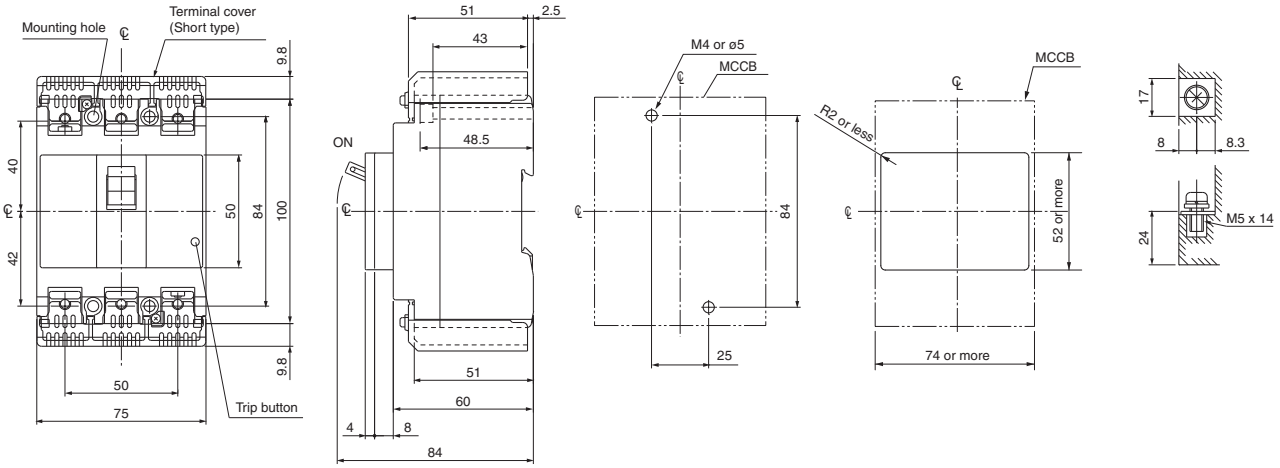
■ **Dimensions, mm**

● **Front mounting, front connection**

BW50RAGU-2P



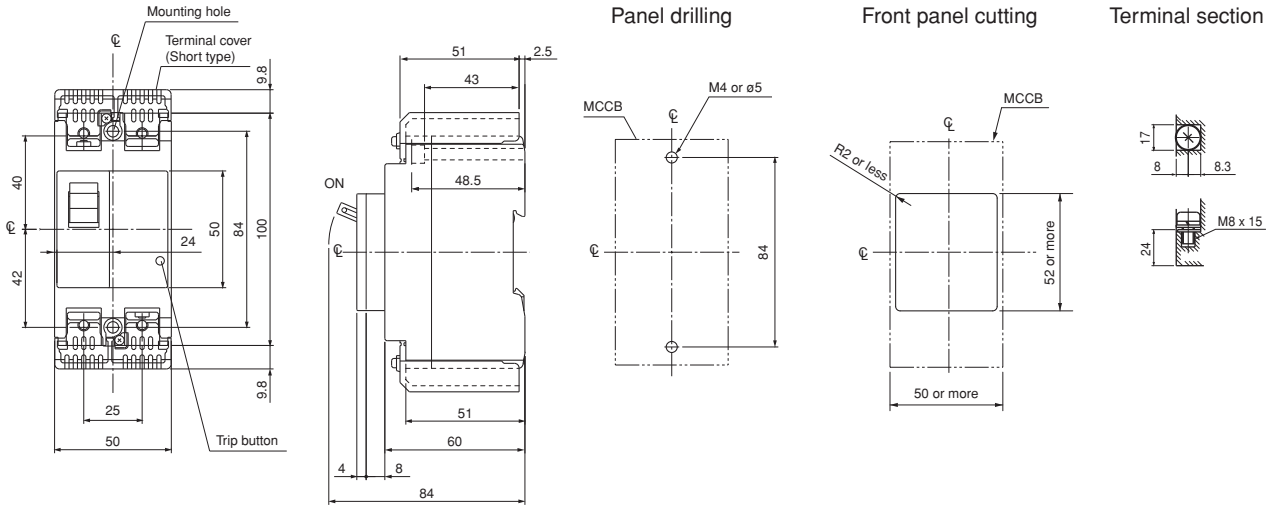
BW50RAGU-3P



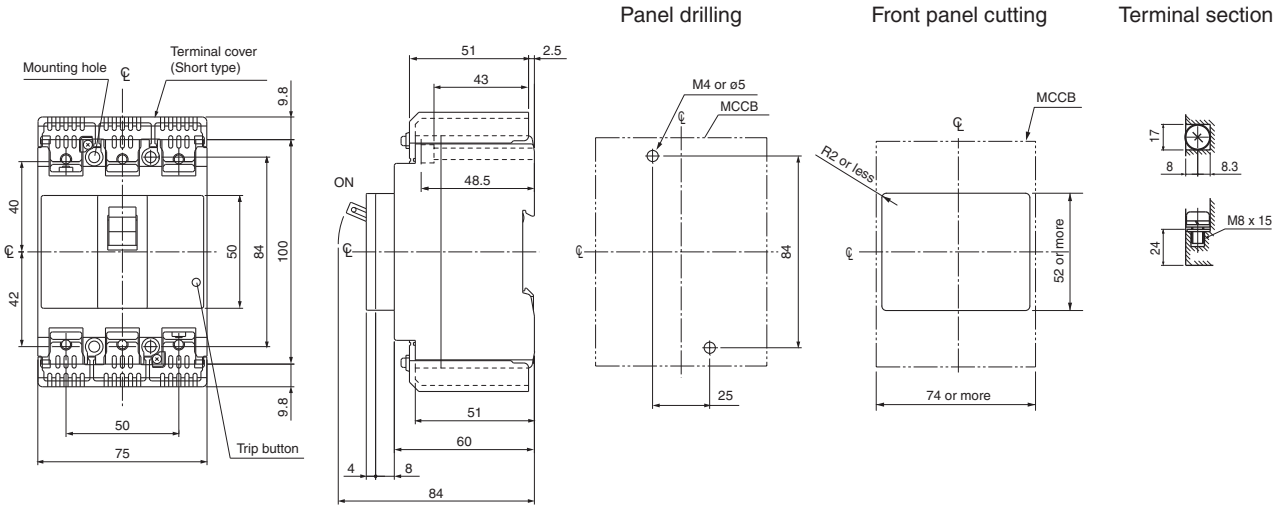
■ **Dimensions, mm**

● **Front mounting, front connection**

BW100EAGU-2P



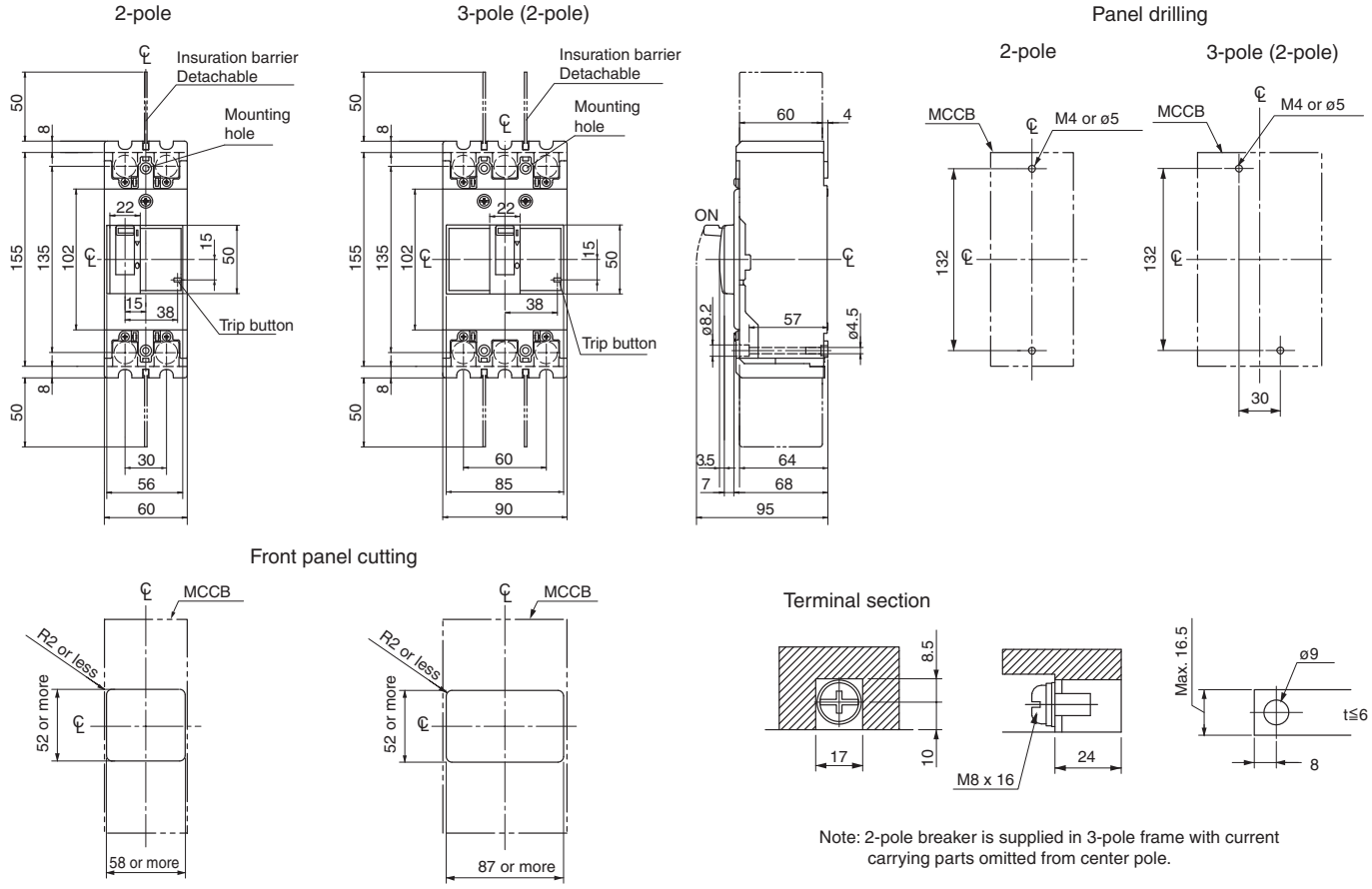
BW100EAGU-3P



■ Dimensions, mm

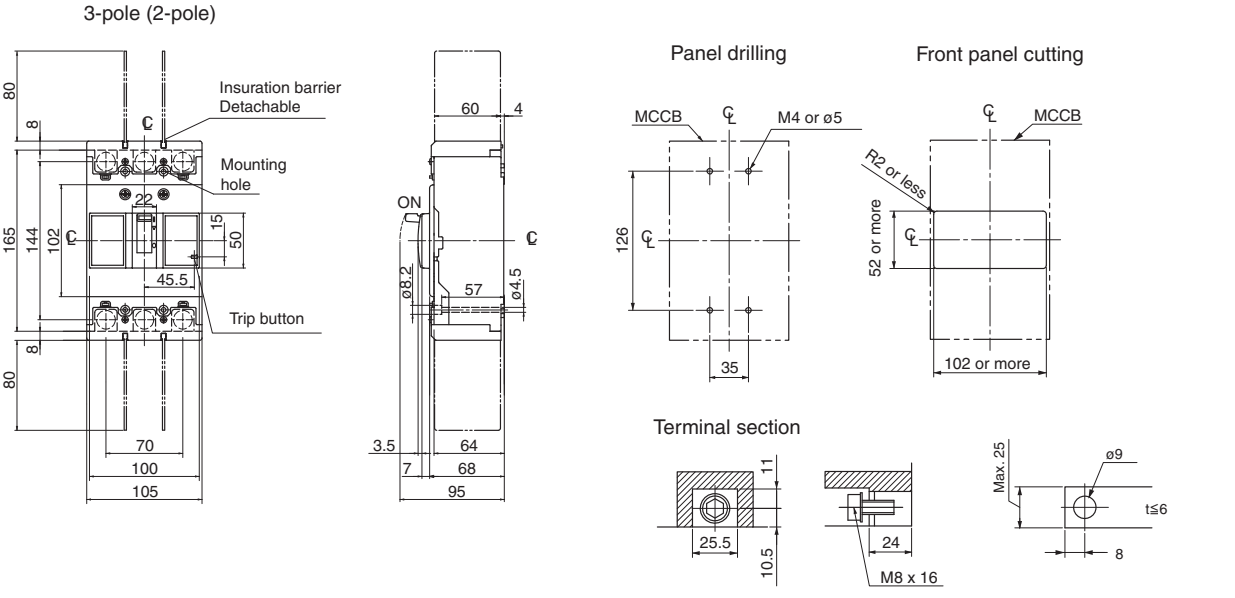
● Front mounting, front connection

BW125□U-2P, 3P



Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW250□U-2P, 3P

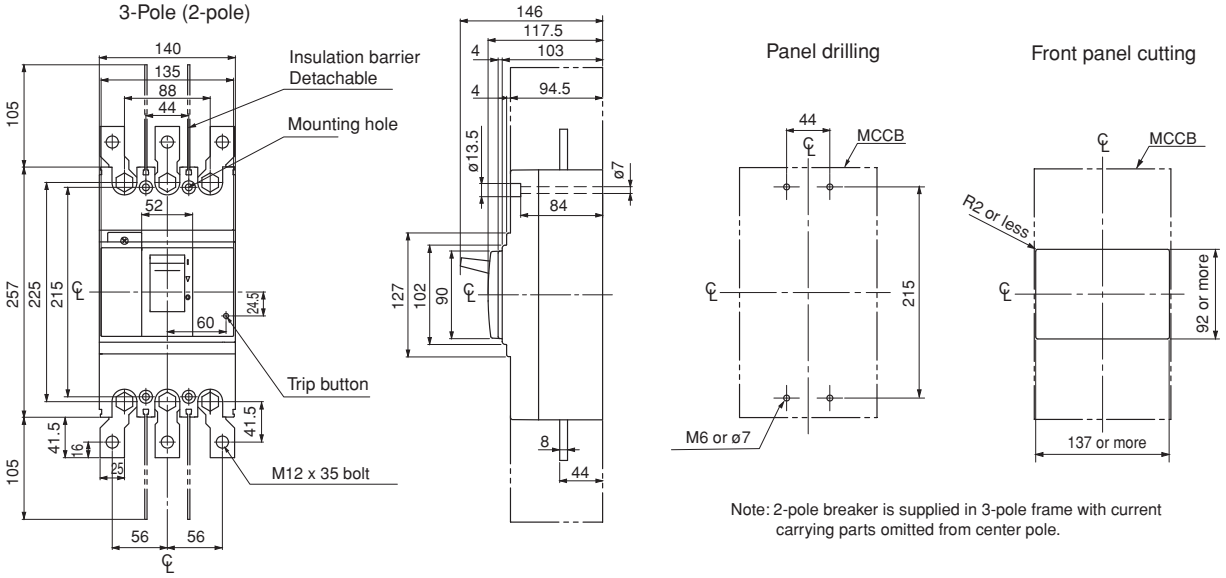


Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

■ **Dimensions, mm**

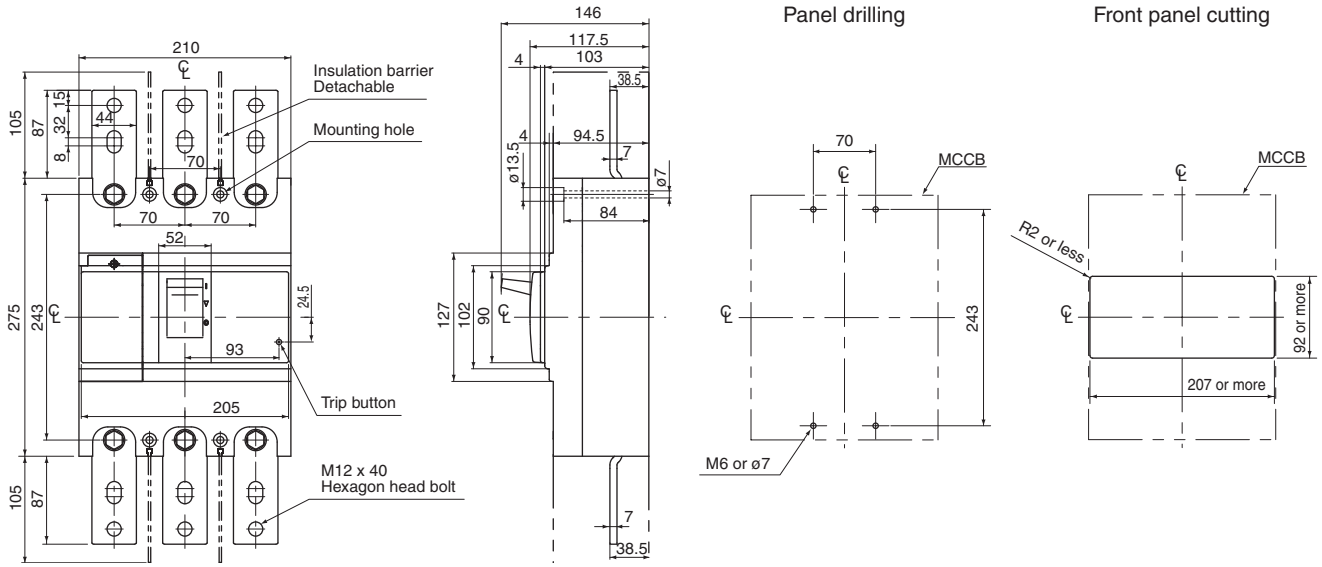
● **Front mounting, front connection**

BW400□U-2P, 3P



Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

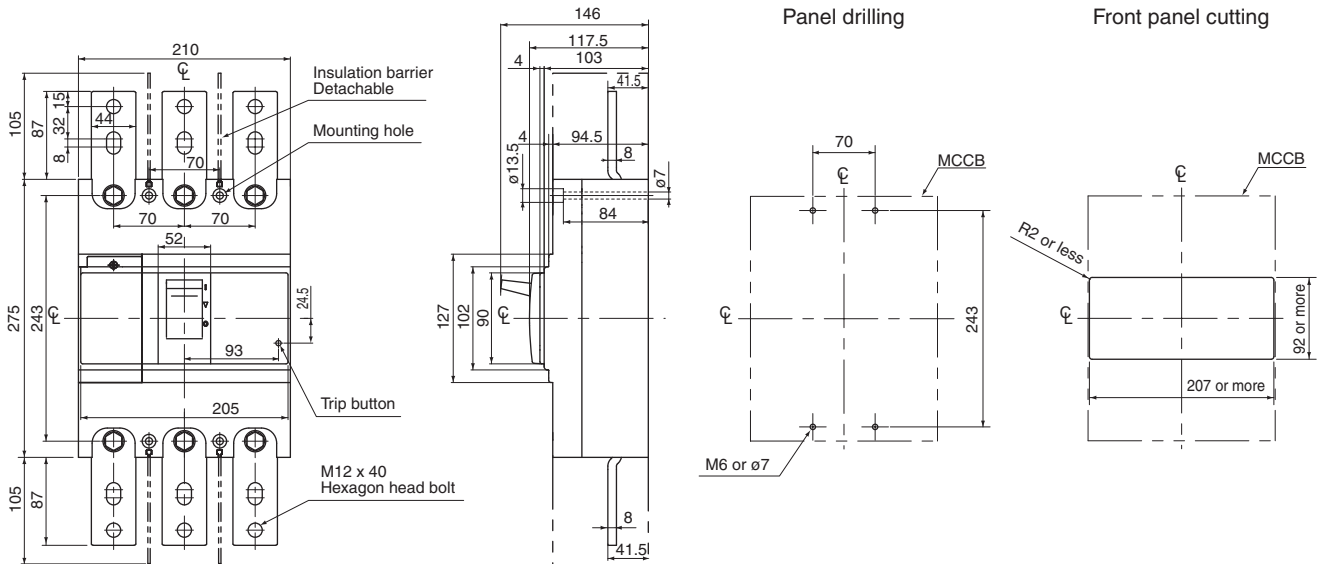
BW630□U-3P



■ **Dimensions, mm**

● **Front mounting, front connection**

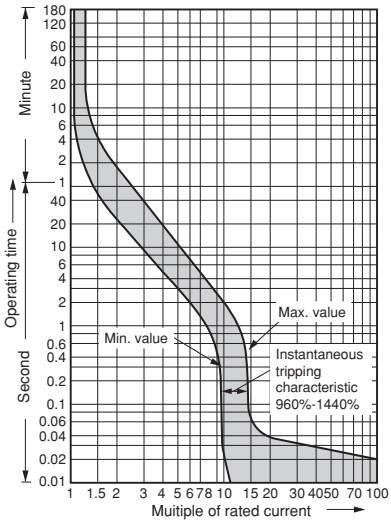
BW800□U-3P



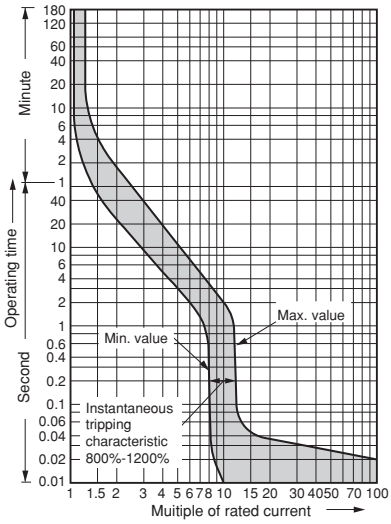
■ Characteristic curves / Line protection

BW32, 50, 63, 100

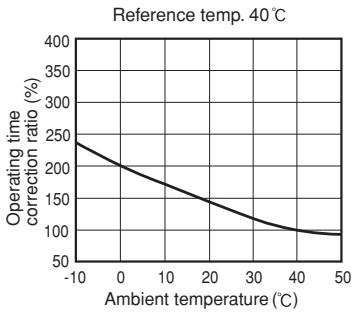
Rated current: 5, 10, 32, 40, 60, 63, 70, 75, 80, 90A



Rated current: 3, 15, 20, 30, 50,100A

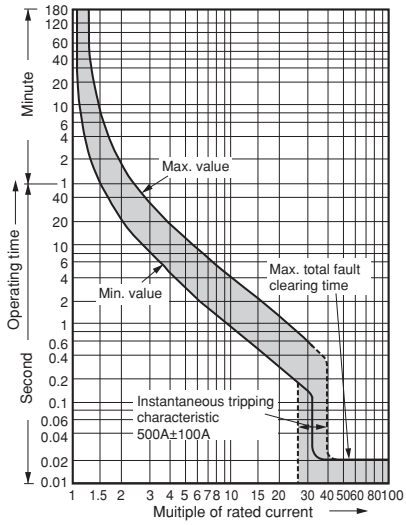


Temperature correction curve

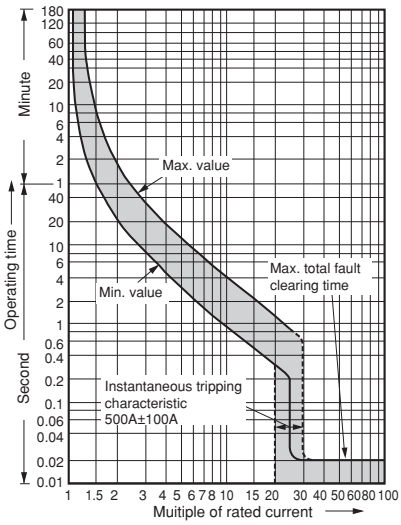


BW50HAG, BW125

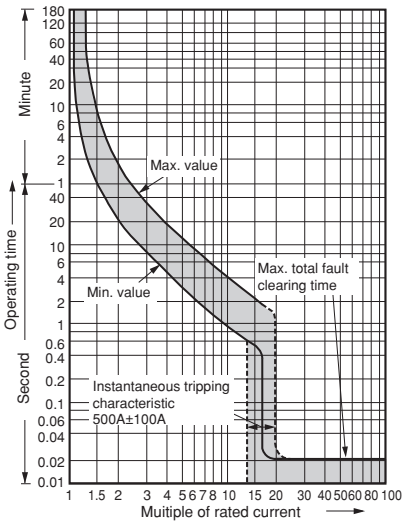
• 15A



• 20A

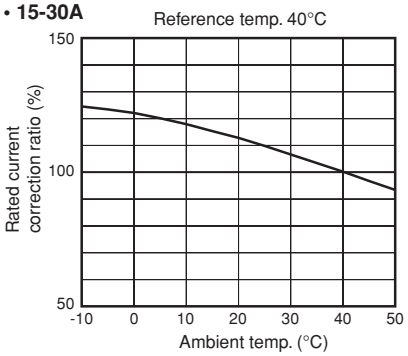


• 30A



Temperature correction curve

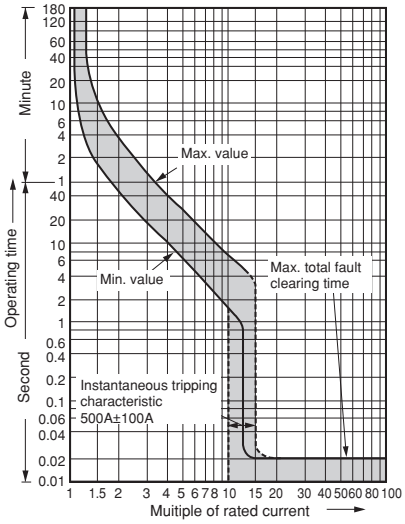
• 15-30A



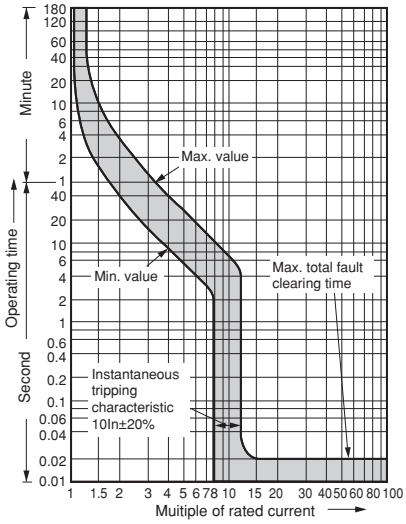
■ Characteristic curves / Line protection

BW50HAG, BW125

• **40A**

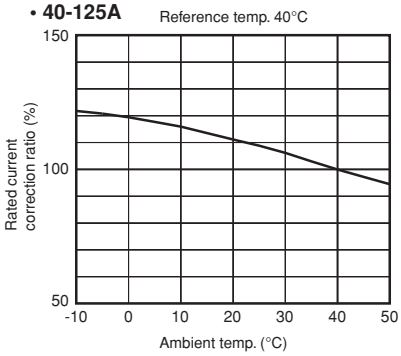


• **50-125A**

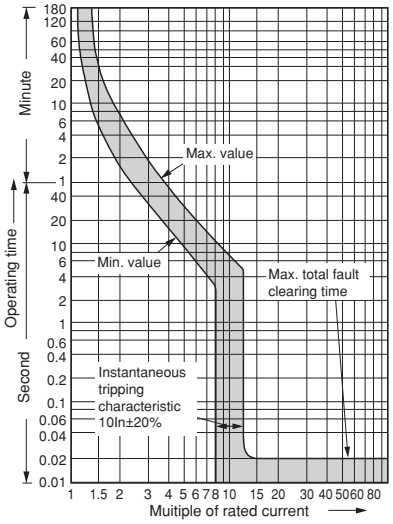


Temperature correction curve

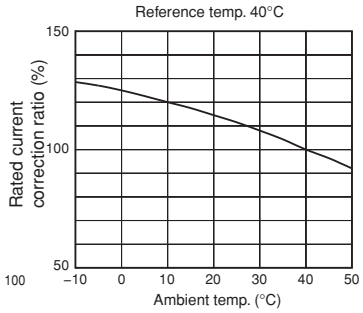
• **40-125A**



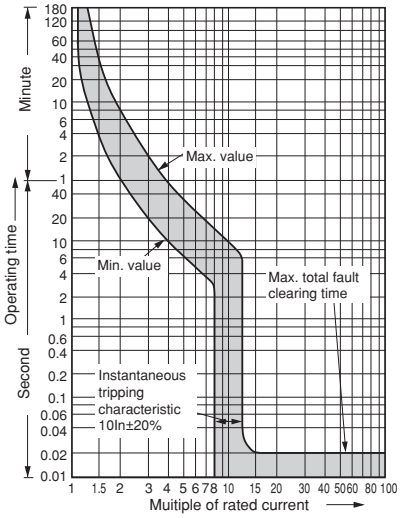
BW160, 250



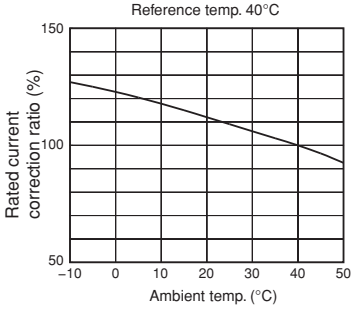
Temperature correction curve



BW400



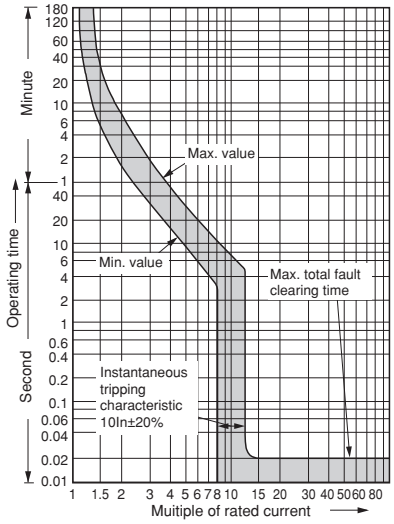
Temperature correction curve



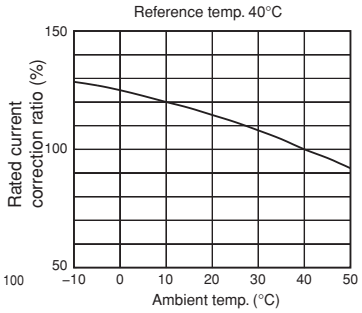
Characteristic curves

■ Characteristic curves / Line protection

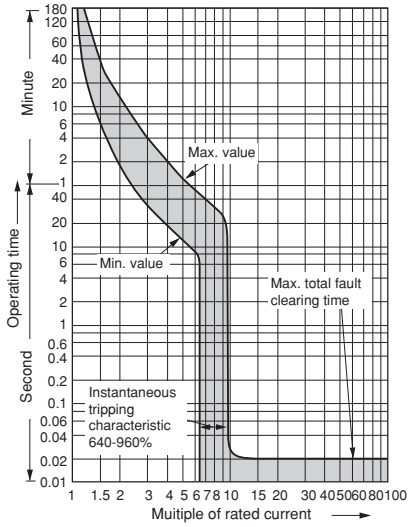
BW630



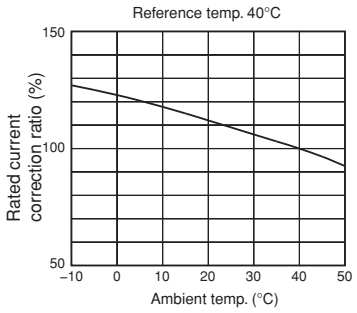
Temperature correction curve



BW800

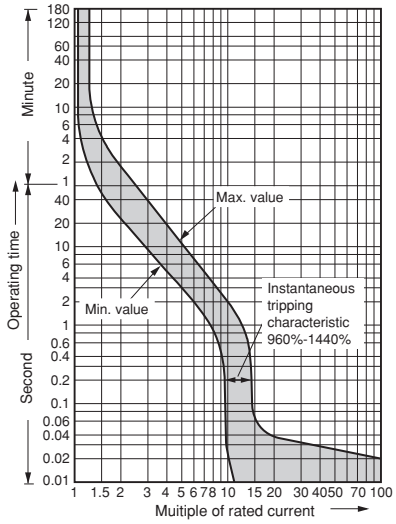


Temperature correction curve

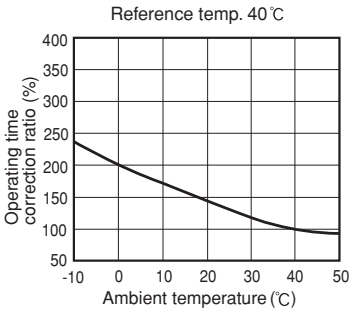


■ Characteristic curves / Motor protection

BW32, 50, 63, 100

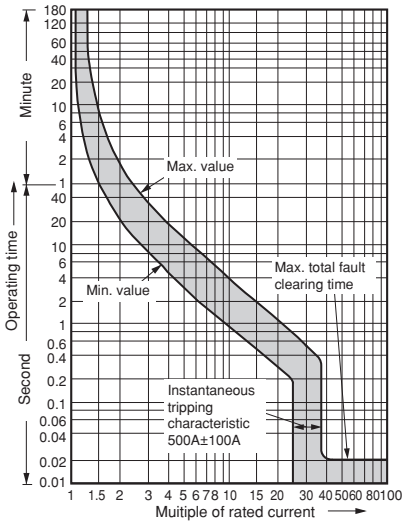


Temperature correction curve

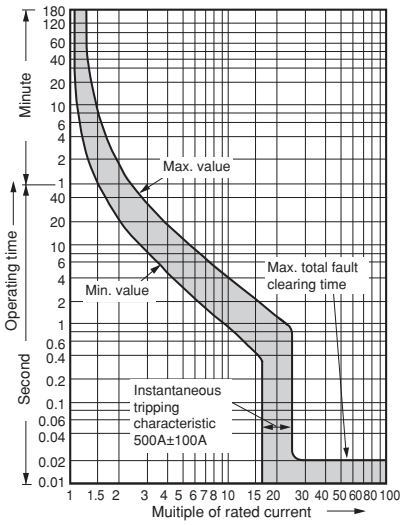


BW125

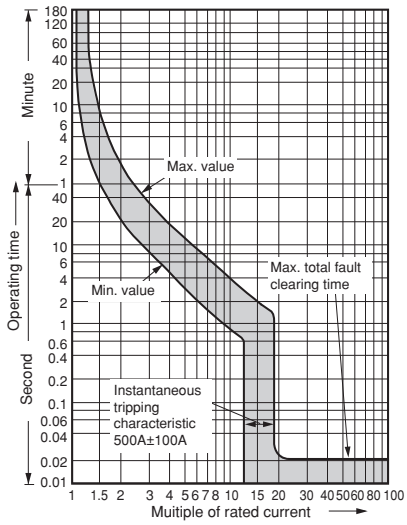
• 16A



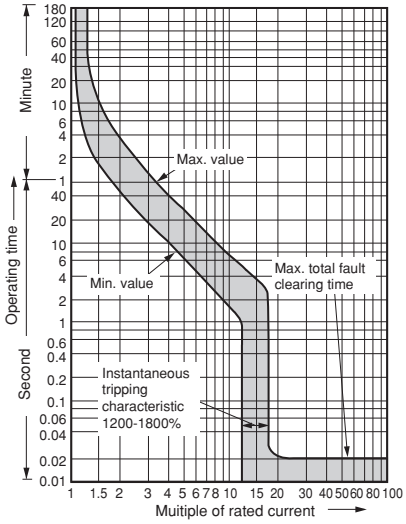
• 24A



• 32A

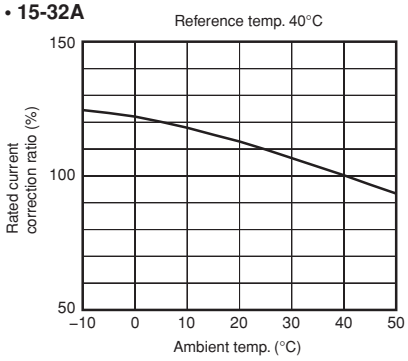


• 40-90A

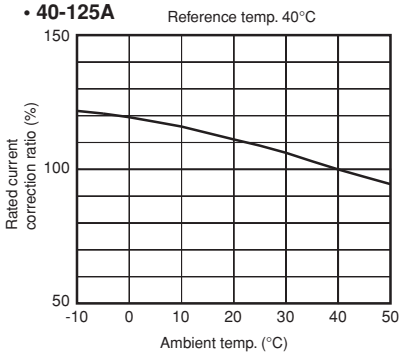


Temperature correction curve

• 15-32A

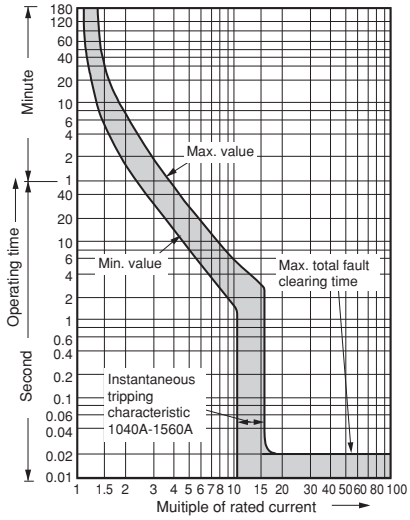


• 40-125A

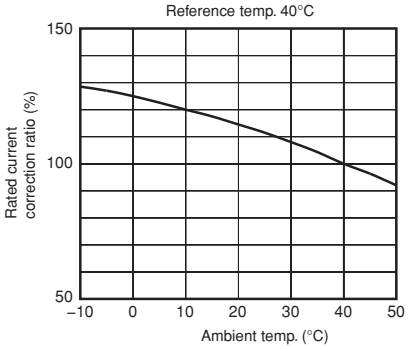


■ Characteristic curves / Motor protection

BW250



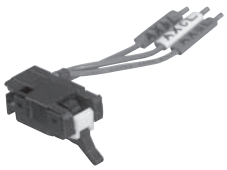
Temperature correction curve



■ Variation of internal accessory

• 32 to100AF

Auxiliary switch (Type W)



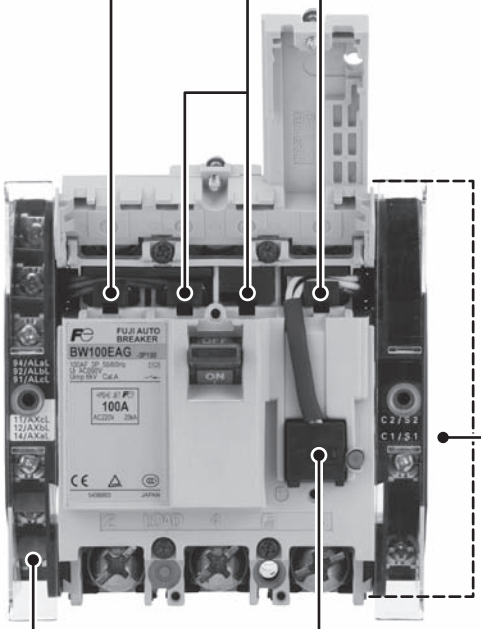
This switch is used for indicator lamp or control circuit.
See page 79.

Alarm switch (Type K)

This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped.
See page 79.

Shunt trip device (Type F)

The purpose of this accessory is to trip the breaker from a distance.
See page 80.



Undervoltage trip device (Type R)

The device is designed to protect circuits from harmful voltage drops.
It can also be used for remote control purposes. The trip operates when the voltage drops to less than 70% of nominal coil rating, and the breaker cannot be reset until the voltage recovers 85% of its normal rating.
See page 80.

Terminal block (Type A)

A wiring terminal for internal accessories (Order with W, K or F)
See page 81.

■ Variation of internal accessory

• 125 to 250AF

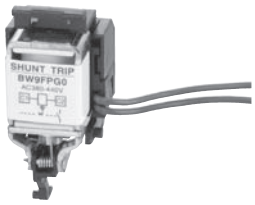
Auxiliary switch (Type W)

This switch is used for indicator lamp or control circuit.
See page 79.

Alarm switch (Type K)

This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped.
See page 79.

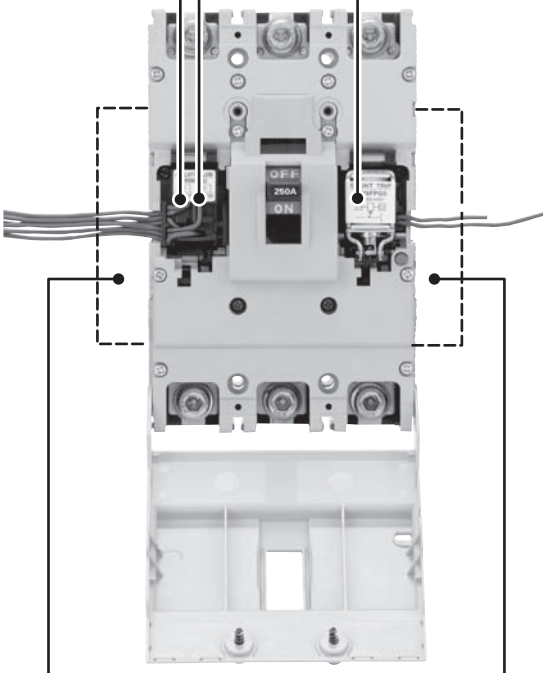
Shunt trip device (Type F)



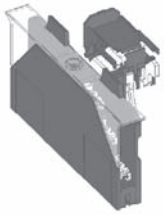
The purpose of this accessory is to trip the breaker from a distance.
See page 80.

Undervoltage trip device (Type R)

The device is designed to protect circuits from harmful voltage drops.
It can also be used for remote control purposes. The trip operates when the voltage drops to less than 70% of nominal coil rating, and the breaker cannot be reset until the voltage recovers 85% of its normal rating.
See page 80.



Terminal block (Type A)

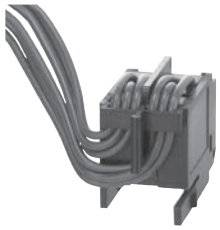


A wiring terminal for internal accessories (Factory-mounted)
See page 81.

■ **Variation of internal accessory**

• **400 to 800AF**

Alarm switch (Type K)



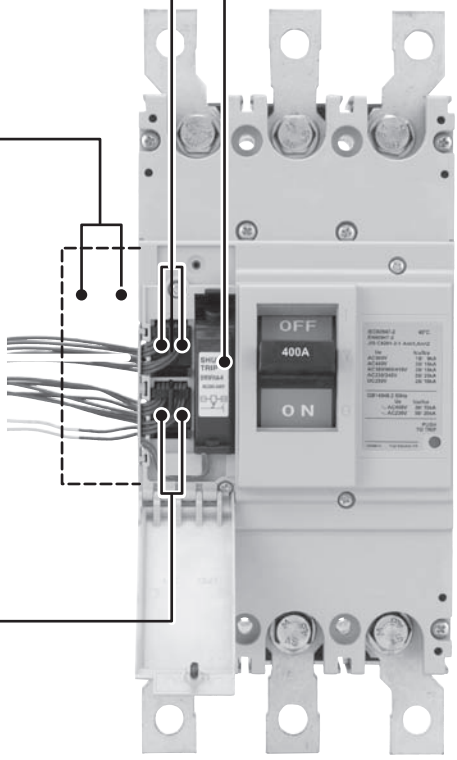
This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped.
See page 79.

Shunt trip device (Type F)

The purpose of this accessory is to trip the breaker from a distance.
See page 80.

Terminal block (Type A)

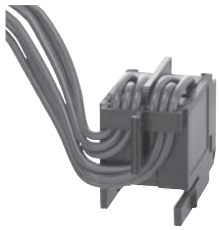
A wiring terminal for internal accessories (Factory-mounted)
See page 81.



Undervoltage trip device (Type R)

The device is designed to protect circuits from harmful voltage drops.
It can also be used for remote control purposes. The trip operates when the voltage drops to less than 70% of nominal coil rating, and the breaker cannot be reset until the voltage recovers 85% of its normal rating.
See page 80.

Auxiliary switch (Type W)

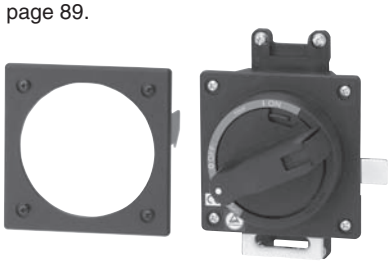


This switch is used for indicator lamp or control circuit.
See page 79.

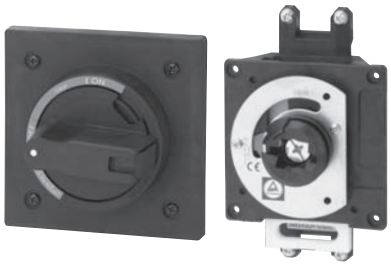
■ Variation of external accessory

External operating handles

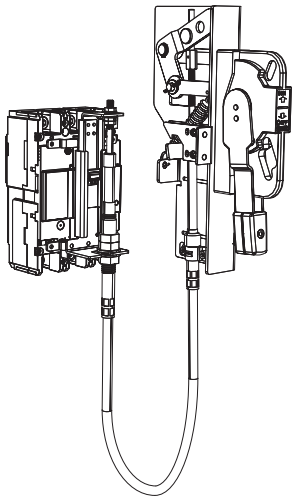
• N-type
See page 89.



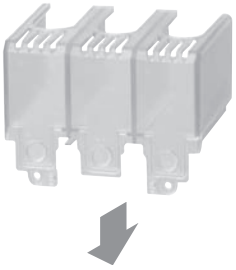
• V-type
See page 89.



• F-type
See page 89.



Terminal cover
Long type
See page 100.

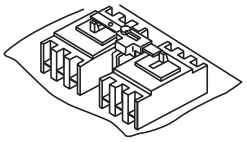


Interphase barrier
See page 102.

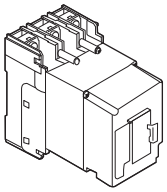
Terminal cover
Short type
See page 101.

Steel enclosures
See page 98.

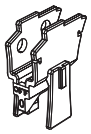
Mechanical interlock device
See page 85.



Motor-operating mechanism
See page 84.

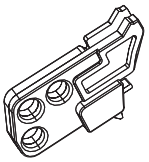


Handle locking cover (L1)
See page 103.

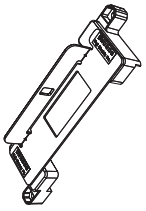


Padlocking device
See page 103.

• Cap type (Q1, QN)



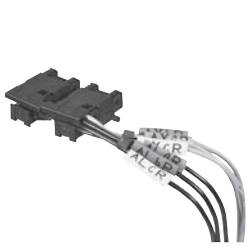
• Plate type (Q2)



Internal accessories

■ Terminal blocks for auxiliary circuit

- It indicates the terminal No. of internal accessory.The connection method of internal accessory is lead-wire system and terminal block system.
- For the available configuration of internal accessory, *see page 73.*



Lead-wire wiring

With terminal block

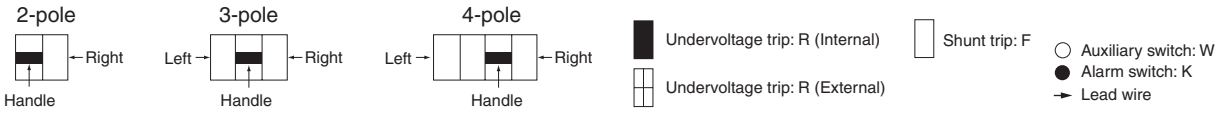
• Terminal number of internal accessory

Accessory		32 – 250AF		400 – 800AF
		Left side mounting	Right side mounting	Left side mounting
Auxiliary switch	SPDT: W (1)*	11 12 14 AXcL AXbL AXaL	21 22 24 AXcR AXbR AXaR	11 12 14 AXc AXb AXa
	2PDT: V (2)*	11 12 14 AXcL AXbL AXaL	21 22 24 AXcR AXbR AXaR	11 12 14 AXc AXb AXa 21 22 24 AXc AXb AXa
Alarm switch	SPDT: K (8)*	91 92 94 ALcL ALbL ALaL	01 02 04 ALcR ALbR ALaR	91 92 94 ALc ALb ALa
	2PDT: J (9)*	91 92 94 ALcL ALbL ALaL	01 02 04 ALcR ALbR ALaR	91 92 94 ALc ALb ALa 01 02 04 ALc ALb ALa
Shunt trip device : F	With 1NO contact to prevent coil burn-out	C2 C1 S2 S1		—
	Continuous rating	—		C2 C1 S2 S1
Undervoltage trip device : R		U< D2 D1 P2 P1		

Note: * ( ) Code of Low level circuit

Internal accessories

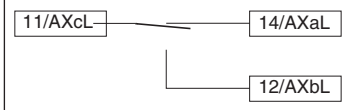
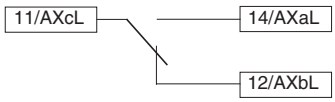
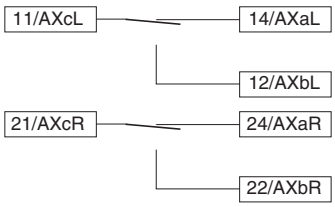
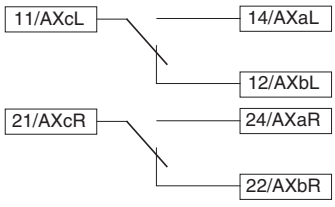
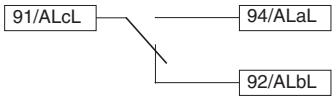
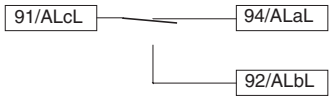
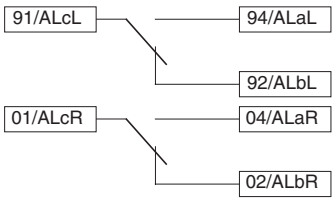
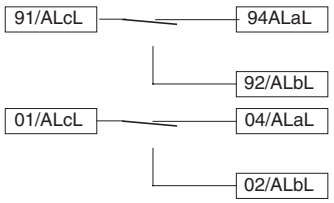
■ Available configurations



MCCB	BW32□-2P BW50□-2P BW63□-2P BW100□-2P	BW32□-3P BW50□-3P BW63□-3P BW100□-3P	BW125JAG-2P BW125JAGU-2P	BW125 BW160 BW250 (Except for BW125JAG-2P, BW125JAGU-2P)		BW400 BW630 BW800
Pole	2	3	2	2, 3	4	2, 3, 4
Auxliary switch SPDT: W (1)*						
Alarm switch SPDT: K (8)*						
Shunt trip: F						
Undervoltage trip: R	*2	*2				
W+K (1+8)						
Auxliary switch 2PDT: V (2)						
Alarm switch 2PDT: J (9)						
V+K (2+8)						
W+J (1+9)						
V+J (2+9)						
W+F (1+F)						
W+R (1+R)	*2 *1	*2				
K+F (8+F)						
K+R (8+R)	*2 *1	*2				
W+K+F (1+8+F)						
W+K+R (1+8+R)	*2 *1	*2				
V+F (2+F)						
V+R (2+R)		*2 *1				
J+F (9+F)						
J+R (9+R)		*2 *1				
V+K+F (2+8+F)						
V+K+R (2+8+R)		*2 *1				
W+J+F (1+9+F)						
W+J+R (1+9+R)		*2 *1				
V+J+F (2+9+F)					*1	
V+J+R (2+9+R)		*2 *1			*1	

Notes: •The above table is applied to front mounting type, rear mounting type, flush mounting type, and plug-in mounting type.
• Terminal block is attached on the same side of the accessory.
• ( ) Code of low level circuit □:See page 12.
*1 Configurations with terminal block are not available.
*2 Flush mounting, rear contection type breakers of 100AF or less are not available.

■ Operation of auxiliary switches(W) and alarm switches(K)

Accessory	Handle position		
	ON	OFF	Trip
Auxiliary switch SPDT: **W** **(1)**			
2PDT: **V** **(2)**			
Alarm switch SPDT: **K** **(8)**			
2PDT: **J** **(9)**			

Note: ▭ Ring mark indication
( ) Code of low level circuit

■ Ratings of auxiliary switches(W) and alarm switches(K)

• 32-100AF

	IEC60947-5-1			NECA C4505		Minimum load current
	Voltage (V)	Make/break current (A)		Voltage (V)	Make/break current (A)	
		AC 15	DC 13		Res. load	
Standard type	125 AC	5	–	125 AC	5	5V DC 160mA 30V DC 30mA
	250 AC	5	–	250 AC	3	
	–	–	–	30 DC	4	
	125 DC	–	0.6	125 DC	0.4	
	250 DC	–	0.3	250 DC	0.2	
Low level circuit	–	–	–	30 DC	0.1	5V DC 1mA

• 125-800AF

	Rated thermal current (A)	Rated operational current (A)						Minimum load current
		AC			DC			
		Rated operational Voltage (V)	Res. load	Ind. load	Rated operational Voltage (V)	Res. load	Ind. load	
Standard type	5	24	5	5	24	4	3	5V DC 160mA 30V DC 30mA
		48	5	5	48	2.5	1	
		125	5	3	125	0.4	0.4	
		250	3	2	250	0.2	0.2	
Low level circuit	0.1	30	0.1	–	30	0.1	–	5V DC 1mA

■ Rating of shunt trip (F)

MCCB type	AC		DC		Code	Time rating of coil	Opearting time (ms)
	V	VA	V	W			
BW32 **BW50** **BW63** **BW100**	100-120	150	100-110	150	FAC100-120V/ DC100-110V	Continuous (With 1NO contact to prevent coil burn-out)	7-13
	200-240	150	–	–	FAC200-240V		
	380-450	200	–	–	FAC380-450V		
	24	150	24	150	FAC/DC24V		
BW125 **BW160** **BW250**	24	50	24	50	FAC/DC24V		13-21
	48	50	48	50	FAC/DC48V		
	100-120	50	100-110	50	FAC100-120V/ DC100-110V		
	120-130	50	–	–	FAC120-130V		
	200-240	50	200-220	50	FAC200-240V/ DC200-220V		
	277	50	–	–	FAC277V		
	380-440	50	–	–	FAC380-440V		
	440-480	50	–	–	FAC440-480V		
	500-550	50	–	–	FAC500-550V		
BW400 **BW630** **BW800**	24-48	2	24-48	2	FAC/DC24-48V	Continuous	8-20
	100-240	3	100-220	3	FAC100-240V DC100-220V		
	277	3		–	FAC277V		
	380-550	4		–	FAC380-550V		

Note: The operating tripping voltage range for shunt trip devices is 70% to 110% of the rated operating voltage.

■ Rating of undervoltage trip (R)

MCCB type	Installation	AC		DC		Code
		V	VA	V	W	
BW32 *2 **BW50** *2 **BW63** *2 **BW100** *2	External	100 (50Hz)/ 100-110(60Hz)	2.8	–	–	RAC100(50Hz)/ 100-110V(60Hz)
		200 (50Hz)/ 200-220 (60Hz)	3.4	–	–	RAC200(50Hz)/ 200-220V(60Hz)
		400 (50Hz)/ 400-440 (60Hz)	4.4	–	–	RAC400(50Hz)/ 400-440V(60Hz)
		–	–	24	40	RDC24V
				100-110		RDC100-110V
BW125 *1 **BW160** *1 **BW250** *1	Internal	–	–	24	5	RDC24V
		–	–	48	5	RDC48V
		–	–	100-110	5	RDC100-110V
		–	–	125	5	RDC125V
		100-110	5	–	–	RAC100-110V
		110-130	5	–	–	RAC110V-130V
		200-240	5	–	–	RAC200-240V
		277	5	–	–	RAC277V
		380-415	5	–	–	RAC380-415V
		440-480	5	–	–	RAC440V-480V
BW400 *2 **BW630** *2 **BW800** *2	Internal	24	2	24	2	RAC/DC24V
		48	2	48	2	RAC/DC48V
		100-110	3	100-110	3	RAC/DC100-110V
		120-130	3	125	3	RAC120-130V/DC125V
		200-240	3	200-220	3	RAC200-240V/DC200-220V
		277	3	–	–	RAC277V
		380-480	4	–	–	RAC380-480V

Notes: • The operating voltages of undervoltage tripping devices are as follows:
Tripping voltage: 35% to 70% of rated voltage, closing voltage: 85% to 110% of rated voltage.

*1 Reset-allowed type: When the breaker handle is in the OFF or RESET state, tripping does not occur even if the R coil is not energized. Turning ON with the R coil not energized causes normal tripping.

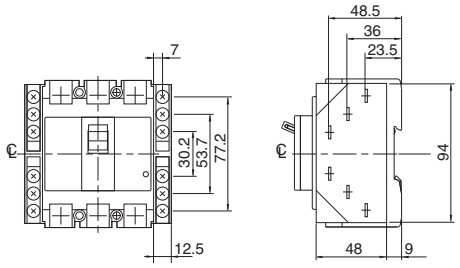
*2 Reset-prohibited type: When the R coil is not energized, reset operation cannot reset the tripped breaker to the OFF state.

■ Lead wire specification

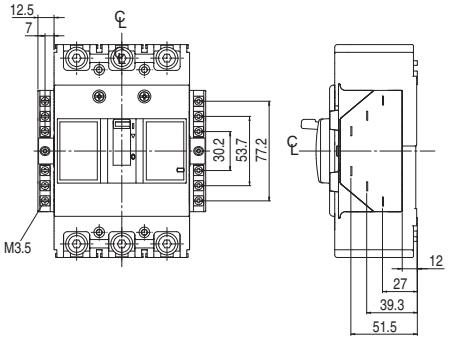
AF	Pole	wire size	Wire length
32 to 100AF	–	0.4mm^2 (AWG22)	Ca 500mm
125 to 250AF	2P, 3P	0.5mm^2 (AWG20)	
	4P		
400 to 800AF	2P, 3P	0.5mm^2	Ca 500mm
	4P		Ca 400 to 450mm

■ Terminal blocks

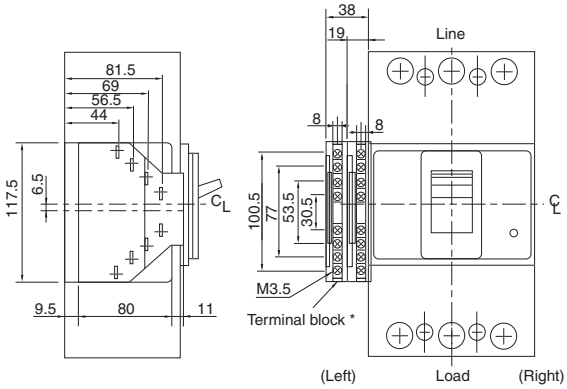
32AF, 50AF, 63AF, 100AF



125AF, 160AF, 250AF



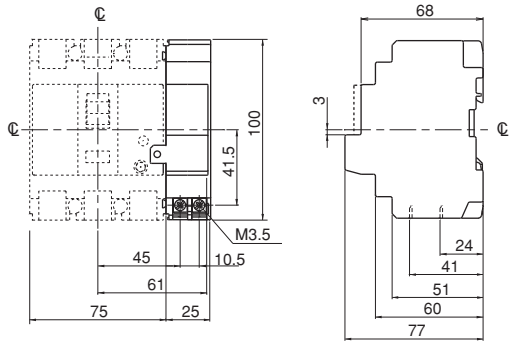
400AF, 630AF, 800AF



Notes:
* If the chosen combination has more than 8 terminals, 2 terminal blocks are mounted.
• Mount the terminal block on the surface on which the accessories are mounted. See the table of the combinations of internal accessories on pages 80. for information on the accessory mounting position.
• Available wire: Solid wire: 1.6ø Stranded wire: 2mm^2
• Terminal blocks are available as factory mounted only.

■ Undervoltage trip device

32AF, 50AF, 63AF, 100AF



Mass: 0.15kg

Internal accessories

■ Type number

Internal accessories (Sold separately)

• 32, 50, 63, 100AF IEC/EN/GB/JIS conformed

Accessory	Type				Operating voltge
	Lead wire system		Terminal block system		
	Left side	Right side	Left side	Right side	
Auxiliary switch	**BZ6WL10C**	**BZ6WR10C**	**BZ6WL10CA**	**BZ6WR10CA**	
Auxiliary switch (low level circuit)	**BZ6WDL10C**	**BZ6WDR10C**	**BZ6WDL10CA**	**BZ6WDR10CA**	
Alarm switch	**BZ6KL10C**	**BZ6KR10C**	**BZ6KL10CA**	**BZ6KR10CA**	
Alarm switch (low level circuit)	**BZ6KDL10C**	**BZ6KDR10C**	**BZ6KDL10CA**	**BZ6KDR10CA**	
Auxiliary switch + Alarm switch	**BZ6WKL10C**	**BZ6WKR10C**	**BZ6WKL10CA**	**BZ6WKR10CA**	
Auxiliary switch + Alarm switch (low level circuit)	**BZ6WDKDL10C**	**BZ6WDKDR10C**	**BZ6WDKDL10CA**	**BZ6WDKDR10CA**	
Shunt trip device	–	**BZ6FA10C**	–	**BZ6FA10CA**	100-120V AC/100-110V DC
	–	**BZ6FK10C**	–	**BZ6FK10CA**	200-240V AC
	–	**BZ6FP10C**	–	**BZ6FP10CA**	380-450V AC
	–	**BZ6FR10C**	–	**BZ6FR10CA**	24V AC/DC
Undervoltage trip device	–	–	–	**BZ6R210C**	100V AC 50Hz/100-110V AC 60Hz
	–	–	–	**BZ6R110C**	110V AC 50Hz/110-127V AC 60Hz
	–	–	–	**BZ6RW10C**	200V AC 50Hz/200-220V AC 60Hz
	–	–	–	**BZ6R410C**	220V AC 50Hz/220-240V AC 60Hz
	–	–	–	**BZ6R510C**	230V AC 50Hz/230-240V AC 60Hz
	–	–	–	**BZ6R810C**	240V AC 50Hz
	–	–	–	**BZ6R010C**	380V AC 50Hz 380-415V AC 60Hz
	–	–	–	**BZ6R910C**	400V AC 50Hz 400-440V AC 60Hz
	–	–	–	**BZ6RF10C**	24V DC
	–	–	–	**BZ6RT10C**	100-110V DC

• 50, 100AF IEC/EN/GB/JIS/UL/CSA conformed

Accessory	Type				Operating voltge
	Lead wire system		Terminal block system		
	Left side	Right side	Left side	Right side	
Auxiliary switch	**BZ6WL10CU**	**BZ6WR10CU**	**BZ6WL10CAU**	**BZ6WR10CAU**	
Auxiliary switch (low level circuit)	**BZ6WDL10CU**	**BZ6WDR10CU**	**BZ6WDL10CAU**	**BZ6WDR10CAU**	
Alarm switch	**BZ6KL10CU**	**BZ6KR10CU**	**BZ6KL10CAU**	**BZ6KR10CAU**	
Alarm switch (low level circuit)	**BZ6KDL10CU**	**BZ6KDR10CU**	**BZ6KDL10CAU**	**BZ6KDR10CAU**	
Auxiliary switch + Alarm switch	**BZ6WKL10CU**	**BZ6WKR10CU**	**BZ6WKL10CA**	**BZ6WKR10CAU**	
Auxiliary switch + Alarm switch (low level circuit)	**BZ6WDKDL10CU**	**BZ6WDKDR10CU**	**BZ6WDKDL10CAU**	**BZ6WDKDR10CAU**	
Shunt trip device	–	**BZ6FA10CU**	–	**BZ6FA10CAU**	100-120V AC/100-110V DC
	–	**BZ6FK10CU**	–	**BZ6FK10CAU**	200-240V AC
	–	**BZ6FP10CU**	–	**BZ6FP10CAU**	380-450V AC
Undervoltage trip device	–	–	–	**BZ6R210CAU**	100V AC 50Hz/100-110V AC 60Hz
	–	–	–	**BZ6RW10CAU**	110V AC 50Hz/110-127V AC 60Hz
	–	–	–	**BZ6R910CAU**	200V AC 50Hz/200-220V AC 60Hz

• 125, 160, 250AF IEC/EN/GB/JIS/UL/CSA conformed

Accessory	Type				Operating voltge
	Lead wire system		Terminal block system		
	Left side	Right side	Left side	Right side *	
Auxiliary switch	**BW9W1SG0**	**BW9W1SG0-R**	**BW9W1SG0-A**	–	–
Auxiliary switch (low level circuit)	**BW9W1DG0**	**BW9W1DG0-R**	**– ***		
Alarm switch	**BW9K1SG0**	**BW9K1SG0-R**	**BW9K1SG0-A**		
Alarm switch (low level circuit)	**BW9K1DG0**	**BW9K1DG0-R**	**– ***		
Auxiliary switch + Alarm switch	**BW9WKSG0**	**BW9WK1SG0-R**	**BW9WKSG0-A**		
Auxiliary switch + Alarm switch (low level circuit)	**BW9WKDG0**	**BW9WK1DG0-R**	**– ***		
Shunt trip device	**BW9FRG0**	**BW9FRG0**	**BW9FRG0-A**		24V AC/DC
	BW9FSG0	**BW9FSG0**	**BW9FSG0-A**		48V AC/DC
	BW9FAG0	**BW9FAG0**	**BW9FAG0-A**		100-120V AC/100-110V DC
	BW9F1G0	**BW9F1G0**	**BW9F1G0-A**		120-130V AC
	BW9FKG0	**BW9FKG0**	**BW9FKG0-A**		200-240V AC/200-220V DC
	BW9FBG0	**BW9FBG0**	**BW9FBG0-A**		277V AC
	BW9FPG0	**BW9FPG0**	**BW9FPG0-A**		380-440V AC
	BW9FHG0	**BW9FHG0**	**BW9FHG0-A**		440-480V AC
	BW9FJG0	**BW9FJG0**	**BW9FJG0-A**		500-550V AC
Undervoltage trip devics	**BW9RGAR**	–	**BW9RGAR-A**		24V DC
	BW9RGAS		**BW9RGAS-A**		48V DC
	BW9RGAL		**BW9RGAL-A**		100-110V DC
	BW9RGA5		**BW9RGA5-A**		125V DC
	BW9RGAA		**BW9RGAA-A**		100-110V AC
	BW9RGAT		**BW9RGAT-A**		110-130V AC
	BW9RGAK		**BW9RGAK-A**		200-240V AC
	BW9RGAB		**BW9RGAB-A**		277V AC
	BW9RGAP		**BW9RGAP-A**		380-415V AC
	BW9RGAH		**BW9RGAH-A**		440-480V AC

Note: * Factory-mounted

• 400, 630, 800AF IEC/EN/GB/JIS/UL/CSA conformed

Accessory	Type		Operating voltge
	Lead wire system	Terminal block system *	
	Left side		
Auxiliary switch x 1	**BW9W1SHA**	–	–
Auxiliary switch x 2	**BW9W2SHA**		
Auxiliary switch (low level circuit) x 1	**BW9W1DHA**		
Auxiliary switch (low level circuit) x 2	**BW9W2DHA**		
Alarm switch x 1	**BW9K1SHA**		
Alarm switch x 2	**BW9K2SHA**		
Alarm switch (low level circuit) x 1	**BW9K1DHA**		
Alarm switch (low level circuit) x 2	**BW9K2DHA**		
Shunt trip device	**BW9FHA-R**		24-48V AC/DC
	BW9FHA-A		100-240V AC/100-220V DC
	BW9FHA-B		277V AC
	BW9FHA-P		380-550V AC
Undervoltage trip devics	**BW9RHA-R**		24V AC/DC
	BW9RHA-S		48V AC/DC
	BW9RHA-A		100-110 AC/DC
	BW9RHA-1		120-130V AC/125V DC
	BW9RHA-K		200-240V AC/200-220V DC
	BW9RHA-B		277V AC
	BW9RHA-P		380-480V AC

Note: * Factory-mounted

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.

The breakers do not conform to IEC and EN standard.

■ Type and ratings

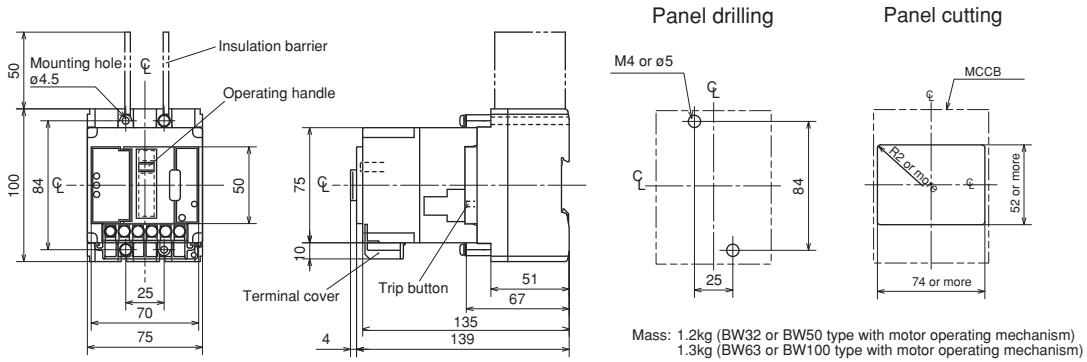
MCCB type	Motor rating			Power source capacity	Mass (kg)
	Operating voltage	Operating time	Time rating		
BW32□-3P□M, BW50□-3P□M, BW63□-3P□M, BW100□-3P□M	100V DC 100/110V AC 200/220V AC	0.1s	15s per on-off operation	500VA	1.2 1.3

■ Ordering information

Specify the following:
1. Type number
2. Motor operating voltage

■ Dimensions, mm / Front mounting, front connection

BW32□-3P, BW50□-3P, BW63□-3P, BW100□-3P,

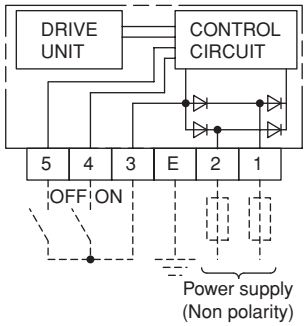


Mass: 1.2kg (BW32 or BW50 type with motor operating mechanism)
1.3kg (BW63 or BW100 type with motor operating mechanism)

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

■ Wiring diagrams

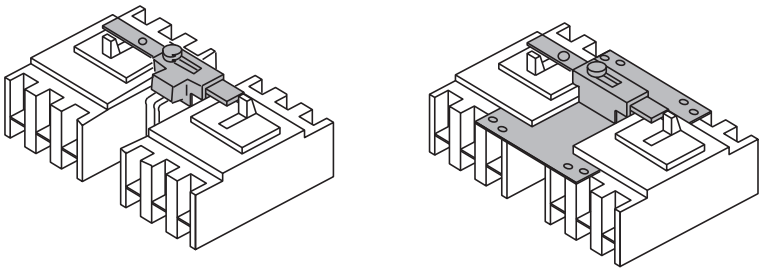
100/110V AC, 200/220V AC, 100V DC



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.
A sliding mechanism that can be locked with a padlock is used. (The padlock is not included.)
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.



M1 types

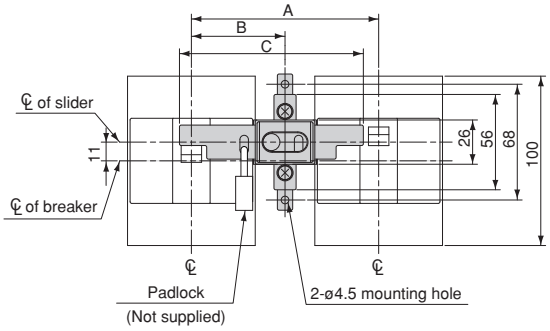
■ Type and applicable breakers

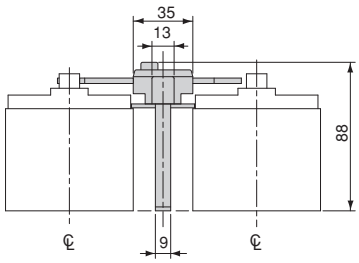
Type	Breaker type
BZ6M110C2	BW32AAG-2P, BW32SAG-2P BW50AAG-2P, BW50EAG-2P, BW50SAG-2P, BW50RAG-2P BW63EAG-2P, BW63SAG-2P, BW63RAG-2P BW100EAG-2P
BZ6M110C3	BW32AAG-3P, BW32SAG-3P BW50AAG-3P, BW50EAG-3P, BW50SAG-3P, BW50RAG-3P BW63EAG-3P, BW63SAG-3P, BW63RAG-3P BW100AAG-3P, BW100EAG-3P
BW9M1CA-2	BW125JAG-2P
BW9M1CA-3	BW125JAG-3P, BW125SAG-2P, BW125SAG-3P, BW125RAG-2P, BW125RAG-3P
BW9M1CA-4	BW125JAG-4P, BW125SAG-4P, BW125RAG-4P
BW9M1GA-3	BW160EAG-2P, BW160EAG-3P, BW160JAG-2P, BW160JAG-3P BW160SAG-2P, BW160SAG-3P, BW160RAG-2P, BW160RAG-3P BW250EAG-2P, BW250EAG-3P, BW250JAG-2P, BW250JAG-3P BW250SAG-2P, BW250SAG-3P, BW250RAG-2P, BW250RAG-3P
BW9M1GA-4	BW160JAG-4P, BW160SAG-4P, BW160RAG-4P BW250JAG-4P, BW250SAG-4P, BW250RAG-4P
BW9M1HA-3	BW400EAG-2P, BW400EAG-3P, BW400SAG-2P, BW400SAG-3P BW400RAG-2P, BW400RAG-3P, BW400HAG-2P, BW400HAG-3P
BW9M1HA-4	BW400RAG-4P, BW400HAG-4P
BW9M1JA-3	BW630EAG-3P, BW630RAG-3P, BW630HAG-3P BW800EAG-3P, BW800RAG-3P, BW800HAG-3P

External accessories

■ Dimensions, mm

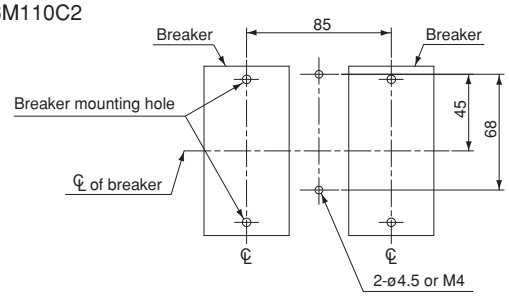
• 32AF to 100AF



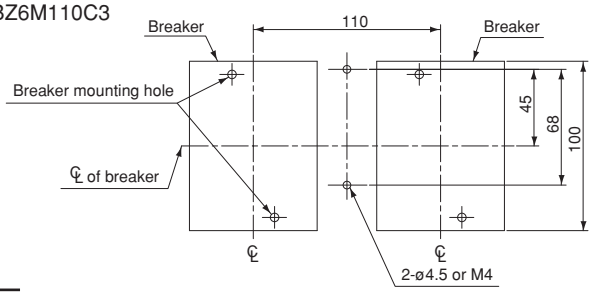


Panel drilling

BZ6M110C2

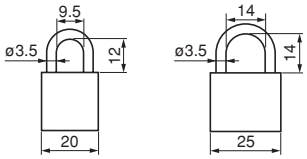


BZ6M110C3



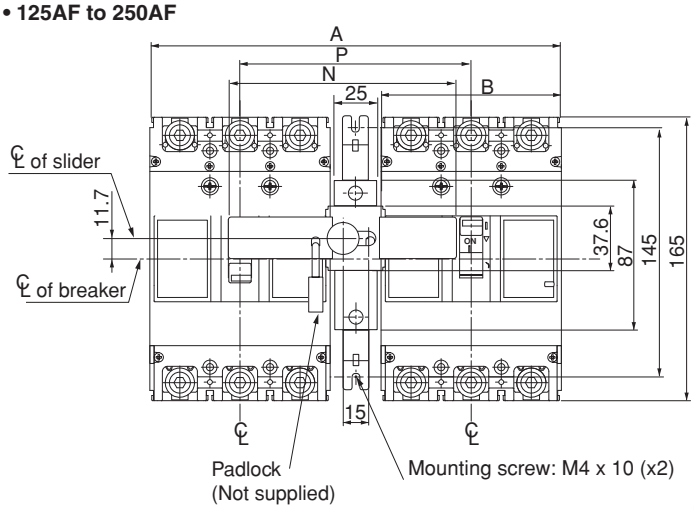
Type	Dimensions, mm A	B	C	Mass (kg)
BZ6M110C2	85	42.5	83	0.11
BZ6M110C3	110	55	108	0.12

Notes: • BZ6M110C2 is not available for padlock.
• Applicable padlock(ø3.5) dimensions, mm
• External installation forms F and R are not applicable to the MCCB on the left of the diagram.



■ Dimensions, mm

• 125AF to 250AF



Panel drilling

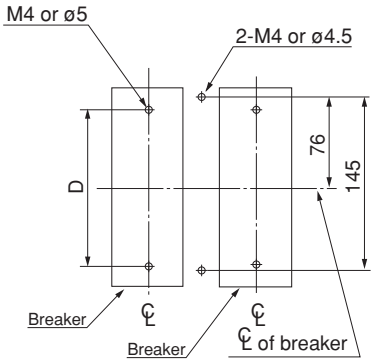
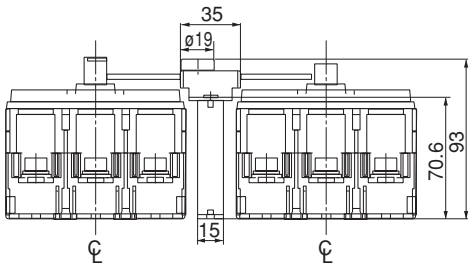


Fig.1



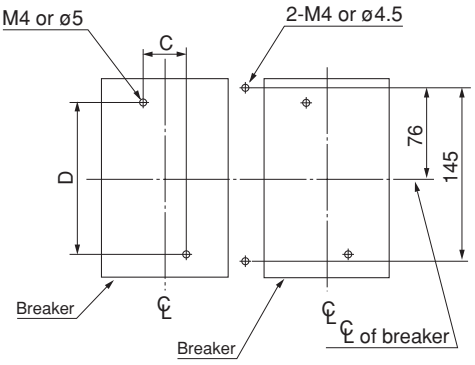


Fig.2

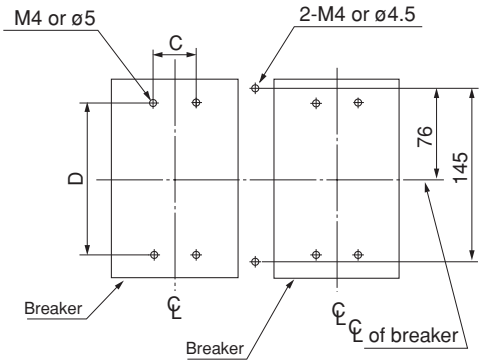


Fig.3

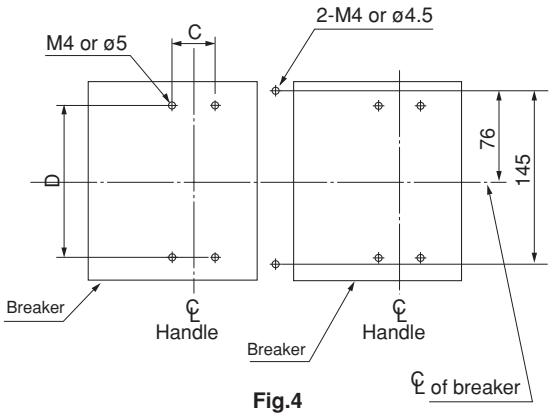
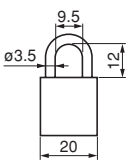


Fig.4

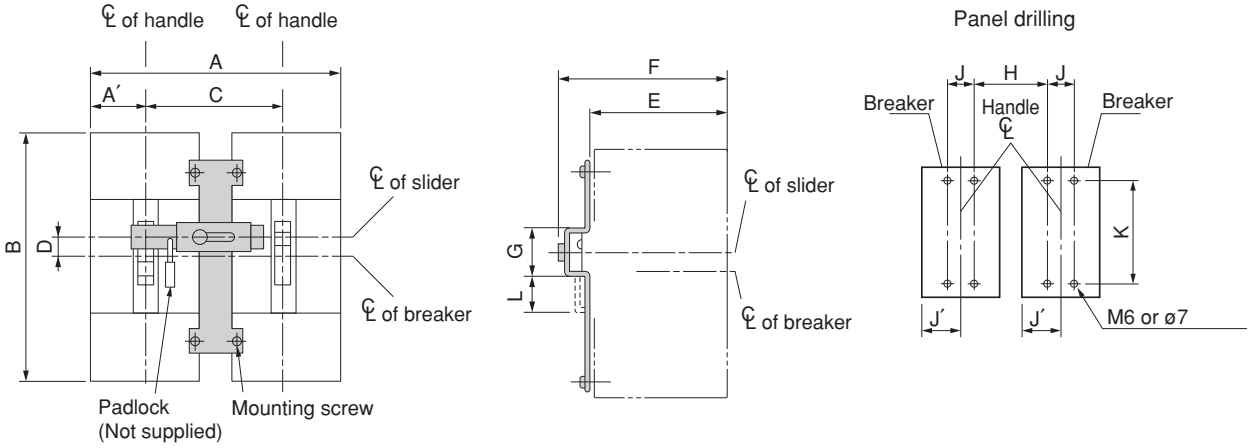
Type	Dimensions, mm						Panel Drilling	Mass(Kg)
	P	N	A	B	C	D		
BW9M1CA-2	90	88	150	60	–	132	Fig.1	
BW9M1CA-3	120	118	210	90	30	132	Fig.2	
BW9M1CA-4	150	148	270	102	30	132	Fig.4	
BW9M1GA-3	135	133	240	105	35	126	Fig.3	
BW9M1GA-4	170	168	310	140	35	126	Fig.4	

Notes: • The dimensions and Breaker mounting holes for back surface mounting are different from those given above. Inquire for details.
• If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
• External installation forms F and R are not applicable to the MCCB on the left of the diagram.



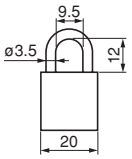
■ Dimensions, mm

• 400AF to 800AF



Type	Dimensions, mm											Mass(Kg)
	A (A')	B	C	D	E	F	G	H	J (J')	K	L	
BW9M1HA-3	355 (70)	257	215	20	94.5	132.5	54.5	171	44 (70)	215	38	
BW9M1HA-4	470 (140)	257	260	20	94.5	132.5	54.5	216	44 (140)	215	38	
BW9M1JA-3	500 (105)	275	290	20	94.5	132.5	54.5	220	70 (105)	243	38	

Notes: • The dimensions and Breaker mounting holes for back surface mounting are different from those given above. Inquire for details.
• If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
• External installation forms F and R are not applicable to the MCCB on the left of the diagram.



External operating handles

■ Description

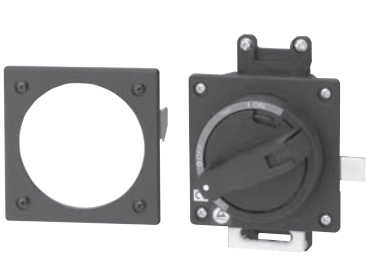
Molded case circuit breaker handles are generally directly manual-operated but when mounted in motor control centers or on control panels they are sometimes required to be operated externally. To meet such applications FUJI offers the following three types of handles.

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.
Conformed to EN60947-1 isolation function.
Available for EN60204-1 power breaking device.
Conformed to UL489 (File No.E93289)

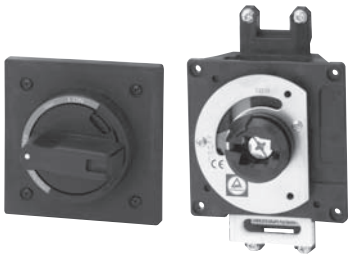
V type handle
The V type handle may be fitted to breakers of up to 800AF.
A separately sold extension shaft provides distance adjustment between the handle and breaker.
Conformed to EN60947-1 isolation function.
Available for EN60204-1 power breaking device.
Conformed to UL489 (File No.E93289)

F type handle
The F type handle may be fitted to breakers of 125 to 400AF.
It is a flange type handle, which is commonly used in the North American market.
The drive section of the breaker and the external operating handle are connected with an optional cable. Positioning between the breaker and the external operating handle is not required.

Conformed to UL489 (File No.E93289)

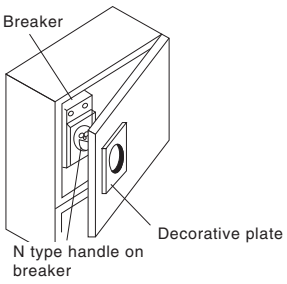


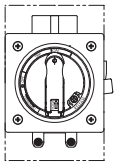
BW9N0CA
N type handles



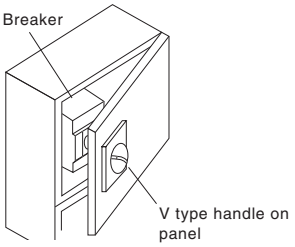
BW9V0CA
V type handle

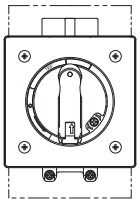
N type handles



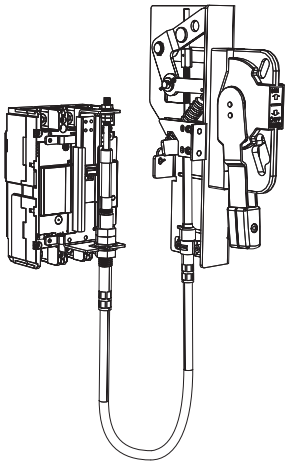


V type handles





F type handles



External accessories

N type handles

MCCB	N type handle
BW32	**BZ6N10D**
BW50	
BW63	
BW100	
BW125	**BW9N0CA**
BW160 BW250	**BW9N0GA**
BW400	**BW9N0HA**
BW630 BW800	**BW9N0JA**

V type handles

MCCB	V type handle
BW32	**BZ6V10D**
BW50	
BW63	
BW100	
BW125	**BW9V0CA**
BW160 BW250	**BW9V0GA**
BW400	**BW9V0HA**
BW630 BW800	**BW9V0JA**

F type handles

MCCB	N type handle
BW125	**BW9F0CA**
BW250	**BW9F0GA**
BW400	**BW9F0HA**

■ Type number nomenclature

• N type handle

BW9N0CA – □

- **Mounting** (For BZ6N10D, BW9N0HA, BW9N0JA)
  - Blank: Front mounting, front connection
  - X: Front mounting, rear connection
  - P: Plug-in mounting
- **Basic type**

• V type handle

BW9V0CA – □

- **Mounting** (For BZ6V10D, BW9V0HA, BW9V0JA)
  - Blank: Front mounting, front connection
  - X: Front mounting, rear connection
  - P: Plug-in mounting
- **Basic type**

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.

• F type handle

BW9F0 □ A

- **Breaker type**
  - C: BW125□U
  - G: BW250□U
  - H: BW400□U
- **Basic type**

Cable (For F type)

BW9FW □ A – □ A

- **Cable length**
  - 15: 1.5m
  - 20: 2.0m
  - 30: 3.0m
- **Breaker type**
  - C: BW125□U
  - G: BW250□U
  - H: BW400□U
- **Basic type**

Terminal cover (For F type)

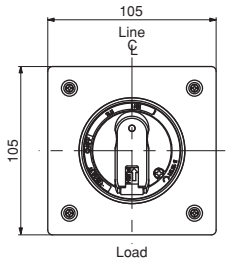
BW9FBT □ A – L3

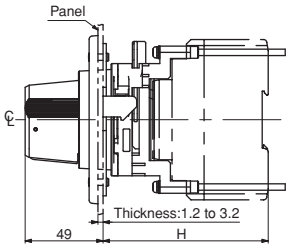
- **Breaker type**
  - C: BW125□U
  - G: BW250□U
  - H: BW400□U
- **Basic type**

■ Dimensions, mm

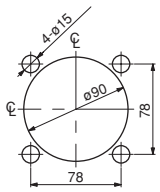
N type handle

• BZ6N10D

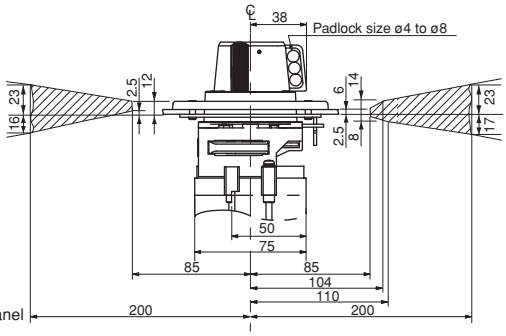




Door panel cutting



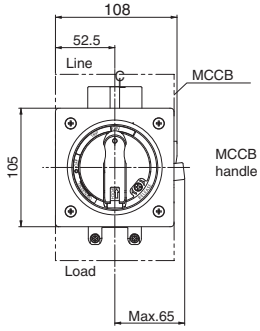
Note: Align the center of the hole cut in the panel with the center of the breaker handle.

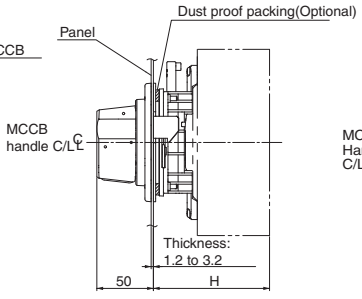


Install the hinge in the shaded area.

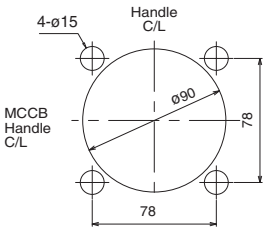
MCCB	Handle type	Dust proof packing	Mounting screw	H (mm)	Mass (kg)
BW32	**BZ6N10D**	Provided	M4 x 85	103	0.47
BW50	**BZ6N10D-X**	Provided	Contact FUJI.	111	
BW63	**BZ6N10D-P**			111	
BW100					

• BW9N0CA, BW9N0GA

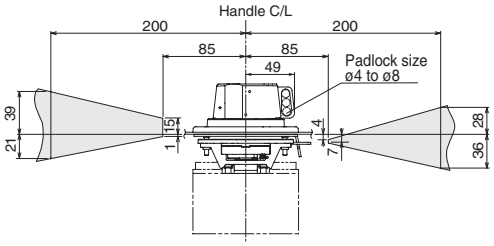




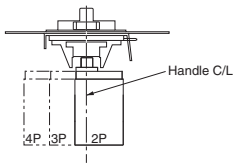
Door panel cutting



Note: Align the center of the hole cut in the panel with the center of the breaker handle.

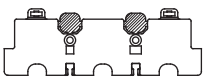


Install the hinge in the shaded area.



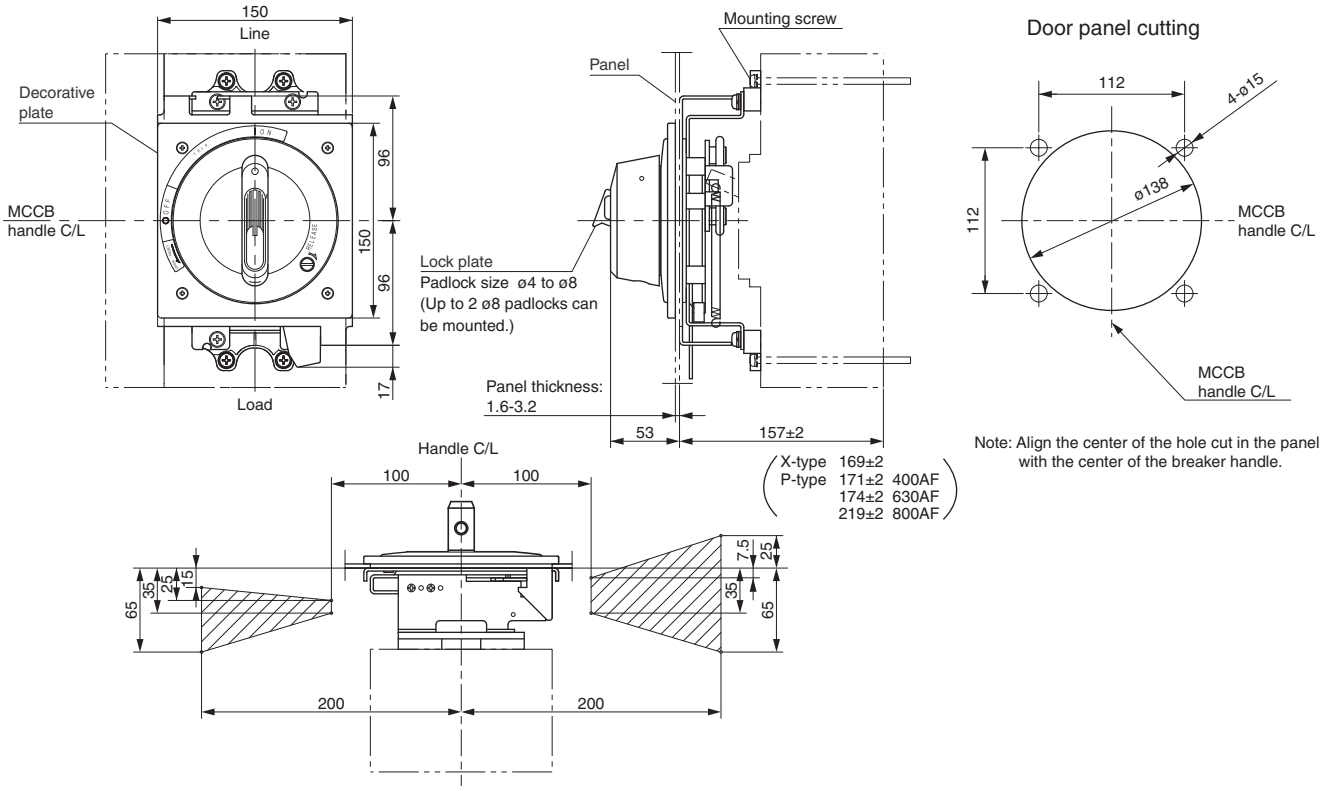
MCCB	Handle type	Dust proof packing	Mounting screw	H (mm)	Mass (kg)
BW125	**BW9N0CA***1	BZ-NP-1C	M4 x 85	103±2	0.56
BW160	**BW9N0GA***2	BZ-NP-1C	M4 x 85	103±2	0.56
BW250					

Notes: • The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
• Remove the handle lock bar before opening the door. (Turn the handle in the open direction.)
The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
• Engage the door interlock securely before turning ON the power.
*1 The Terminal Cover and Handle cannot be attached at the same time for the BW125JAG-2P or BW125RAGU-2P. Select the BW125JAG-3P or BW125RAGU-3P to use a Handle.
*2 The terminal cover will cover the mounting screws for the Breaker. When attaching the terminal cover, a portion of the terminal cover will need to be removed.
Remove portion A in the following diagram.



External accessories

• BW9N0HA, BW9N0JA



Install the door hinge in the shaded area.

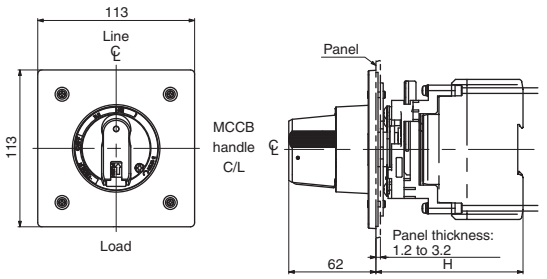
MCCB	Handle type	Dust proof packing	Mounting screw	Mass (kg)
BW400	**BW9N0HA** **BW9N0HA-X** **BW9N0HA-P**	BZ-NP-2	M6 x 110 M6 x 115 Contact FUJI.	1.9
BW630 BW800	**BW9N0JA** **BW9N0JA-X** **BW9N0JA-P**	BZ-NP-2	M6 x 110 M6 x 115 Contact FUJI.	1.9

Notes:
- The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
- Remove the handle lock bar before opening the door. (Turn the handle in the open direction.) The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
- Engage the door interlock securely before turning ON the power.
- Not available for side mounting.

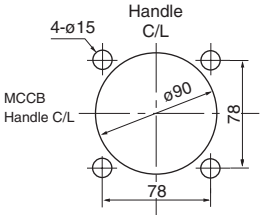
■ Dimensions, mm

V type handle

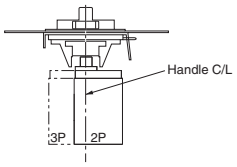
• BZ6V10D



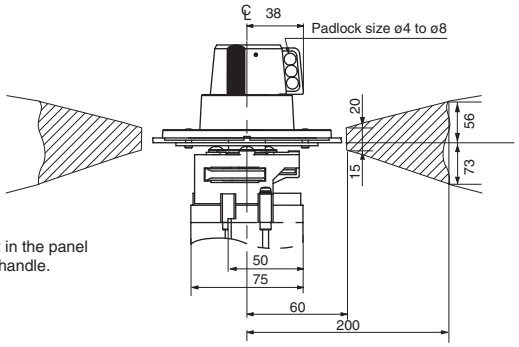
Door panel cutting



Note: Align the center of the hole cut in the panel with the center of the breaker handle.



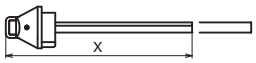
Door hinge installation area



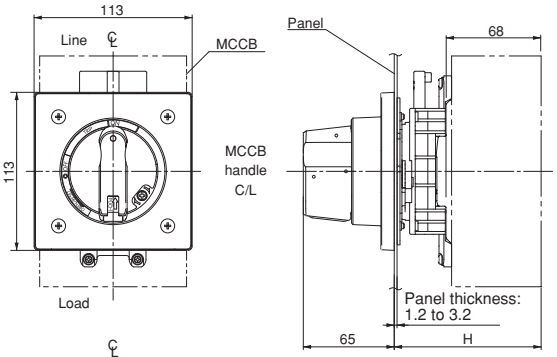
Install the door hinge in the shaded area.

Optional shaft BZ6VS1D

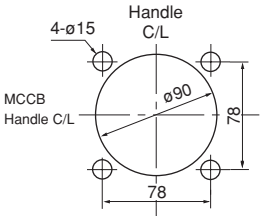
X = H - 105



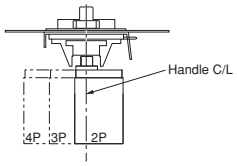
• BW9V0CA, BW9V0GA



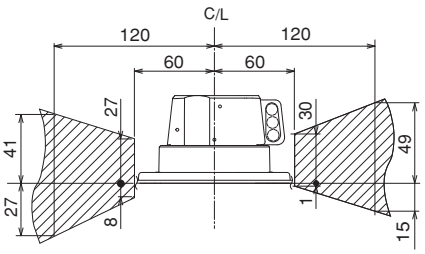
Door panel cutting



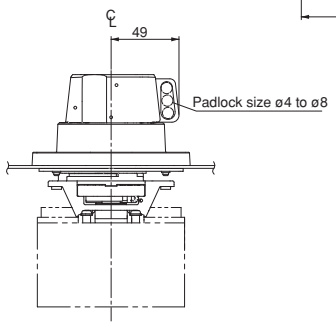
Note: Align the center of the hole cut in the panel with the center of the breaker handle.



Door hinge installation area

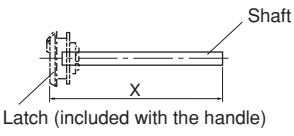


Install the door hinge in the shaded area.



Optional shaft BW9VSG0

X = H - 95

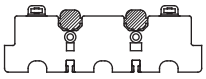


Latch (included with the handle)

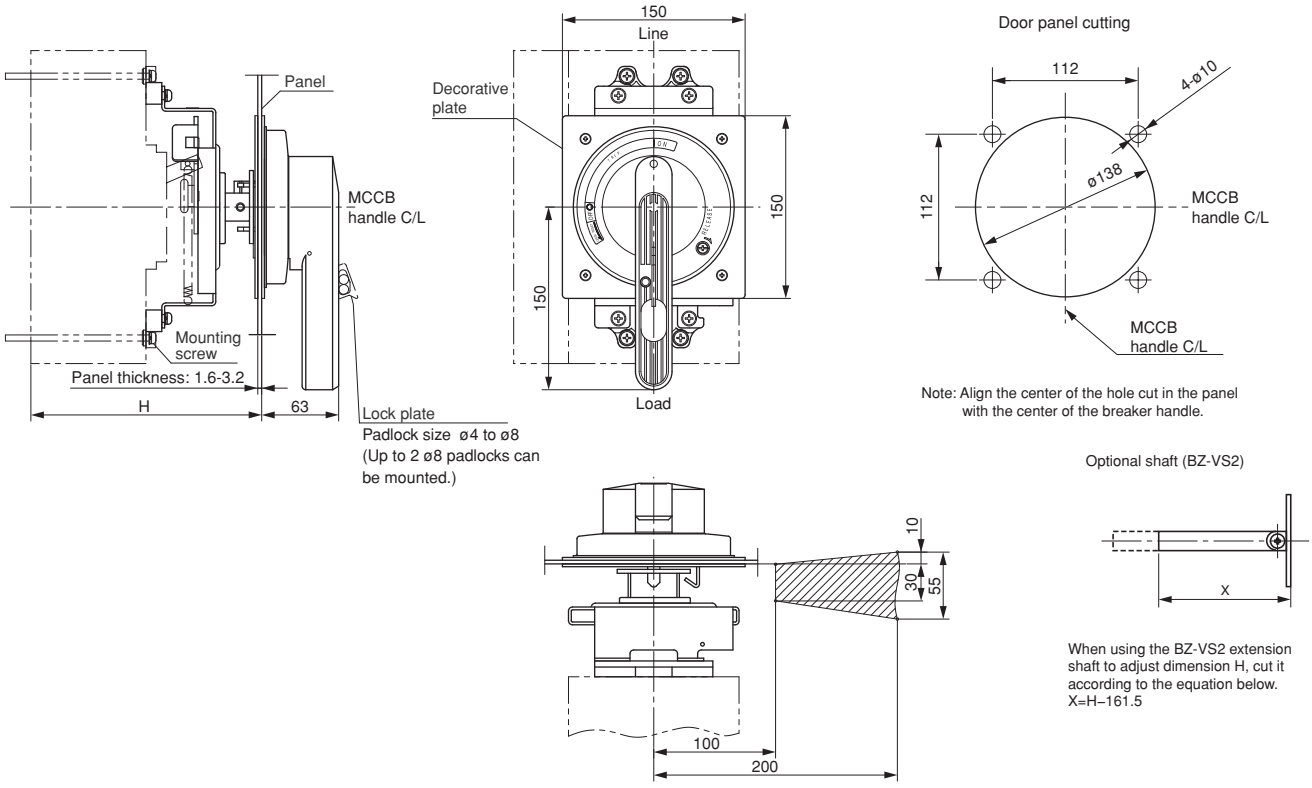
External accessories

MCCB	Handle type	Optional shaft	Standard type H	With the optional shaft (X=154)		Mounting screw	Mass (kg)
				H	Area in which the hinge with H can be installed		
BW32 BW50 BW63 BW100	**BZ6V10D**	BZ6VS1D	105±2	250±2	140 to 250	M4 x 80	0.64
	BZ6V10D-X		113±2	258±2	150 to 258	Contact FUJI.	0.64
	BZ6V10D-P		113±2	258±2	150 to 258	Contact FUJI.	0.64
BW125	**BW9V0CA**	BW9VSG0	105±2	250±2	140 to 250	M4 x 85	0.67
BW160*2 BW250*2	**BW9V0GA**		105±2	250±2	140 to 250	M4 x 85	0.67

Notes: • The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
• Remove the handle lock bar before opening the door. (Turn the handle in the open direction.)
The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
• Engage the door interlock securely before turning ON the power.
• Not available for side mounting.
*1 The Terminal Cover and Handle cannot be attached at the same time for the BW125JAG-2P or BW125RAGU-2P. Select the BW125JAG-3P or BW125RAGU-3P to use a Handle.
*2 The terminal cover will cover the mounting screws for the Breaker. When attaching the terminal cover, a portion of the terminal cover will need to be removed. Remove portion A in the following diagram.



• BW9V0HA, BW9V0JA



Install the door hinge in the shaded area.

MCCB	Handle type	Optional shaft	Standard type H	With the optional shaft (X=154)		Mass (kg)
				H	Area in which the hinge with H can be installed	
BW400	**BW9V0HA**	BZ-VS2	190±2	250±2	202 to 250	2.2
	BW9V0HA-X		202±2	262±2	214 to 262	
	BW9V0HA-P		204±2	264±2	216 to 264	
BW630	**BW9V0JA**		190±2	250±2	202 to 250	
	BW9V0JA-X		202±2	262±2	214 to 262	
	BW9V0JA-P		207±2	267±2	219 to 269	
BW800	**BW9V0JA**		190±2	250±2	202 to 250	
	BW9V0JA-X		202±2	262±2	214 to 262	
	BW9V0JA-P		252±2	312±2	264 to 312	

Notes: • The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
• Remove the handle lock bar before opening the door. (Turn the handle in the open direction.)
The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
• Engage the door interlock securely before turning ON the power.
• Not available for side mounting.

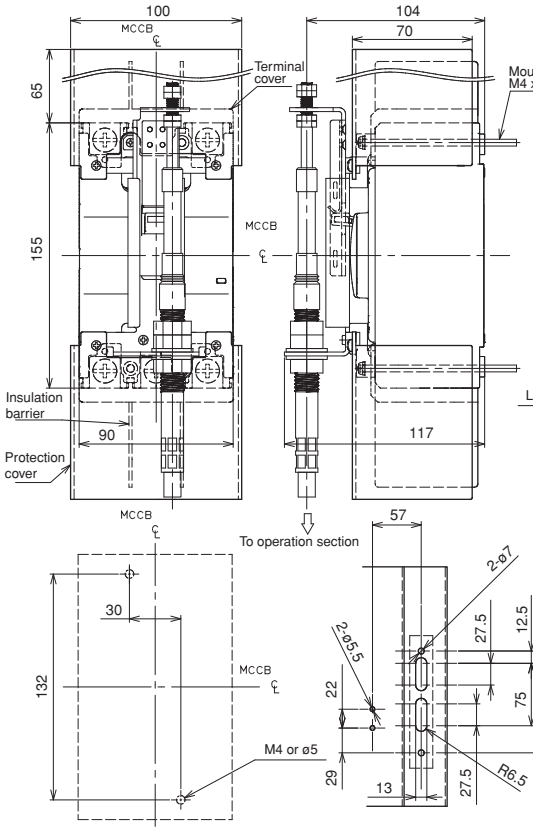
External accessories

■ Dimensions, mm

F type handle

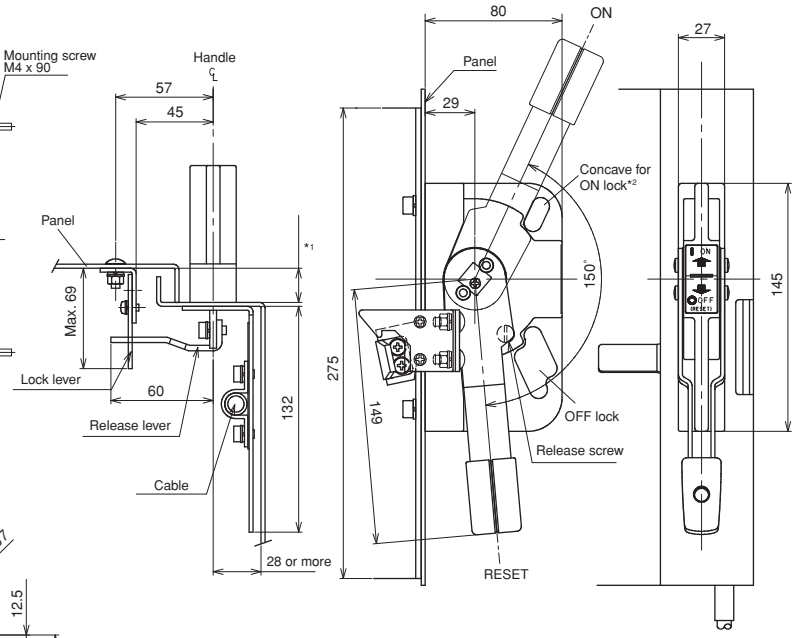
• BW9F0CA

Drive section



Panel drilling

Operation section



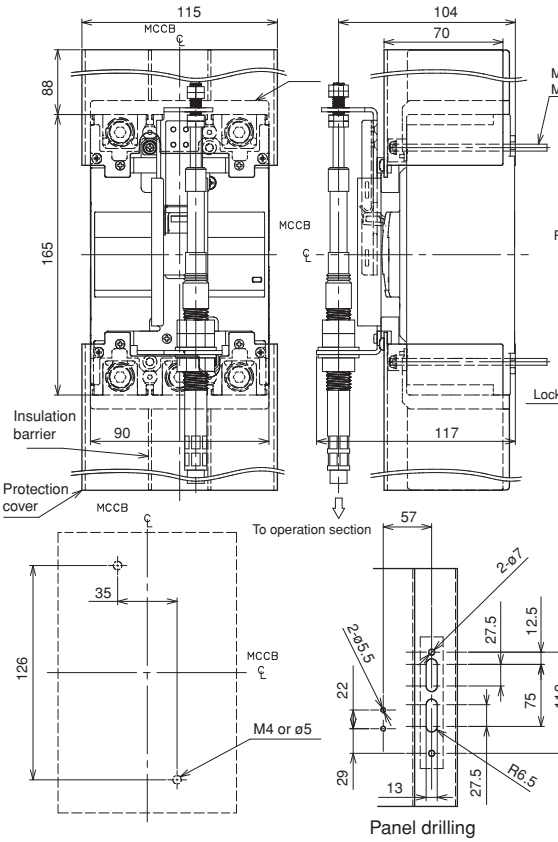
- This product consists of a drive section and an operation section.
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

*1 Set the height to 20 or 30. Adjust the lock lever depending on the setting.

*2 The ON lock can be realized by additionally creating a concave for the ON lock.

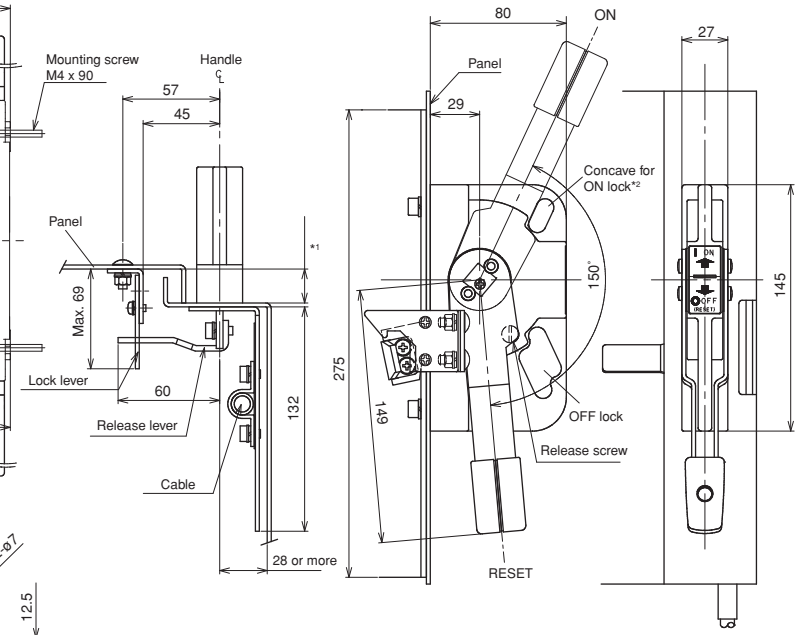
• BW9F0GA

Drive section



Panel drilling

Operation section



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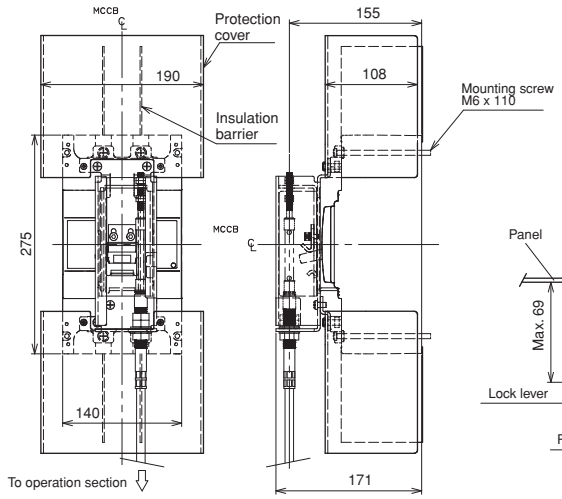
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

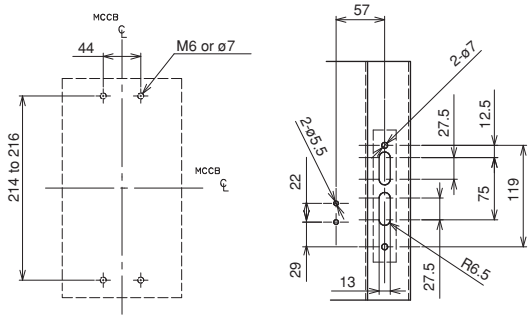
*1 Set the height to 20 or 30. Adjust the lock lever depending on the setting.

*2 The ON lock can be realized by additionally creating a concave for the ON lock.

• BW9F0HA

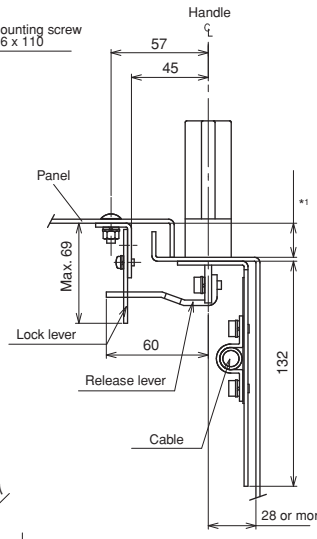
Drive section

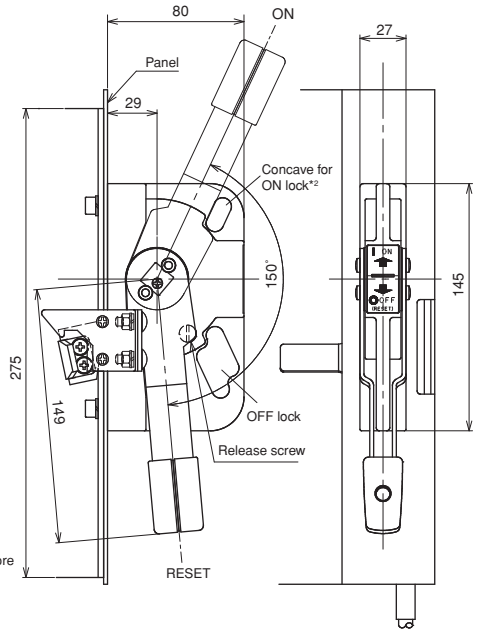




Panel drilling

Operation section





- This product consists of a drive section and an operation section.
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

*1 Set the height to 20 or 30. Adjust the lock lever depending on the setting.

*2 The ON lock can be realized by additionally creating a concave for the ON lock.

MCCB *	Handle type	Cable		Terminal cover
		Type	Length (m)	
BW125JAGU-3P BW125RAGU-2P BW125RAGU-3P	**BW9F0CA**	**BW9FWCA-15A** **BW9FWCA-20A** **BW9FWCA-30A**	1.5 2.0 3.0	**BW9FBTCA-L3**
BW250EAGU-2P BW250EAGU-3P BW250JAGU-2P BW250JAGU-3P BW250RAGU-2P BW250RAGU-3P	**BW9F0GA**	**BW9FWGA-15A** **BW9FWGA-20A** **BW9FWGA-30A**	1.5 2.0 3.0	**BW9FBTGA-L3**
BW400EAGU-2P BW400EAGU-3P BW400SAGU-2P BW400SAGU-3P BW400RAGU-2P BW400RAGU-3P BW400HAGU-2P BW400HAGU-3P	**BW9F0HA**	**BW9FWHA-15A** **BW9FWHA-20A** **BW9FWHA-30A**	1.5 2.0 3.0	**BW9FBTHA-L3**

Note: * Not available for BW125JAGU-2P

Steel enclosures

■ Description

Steel enclosures are available in three types — two with V-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-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.

Standard

Dustproof
AF96-175

Rainproof
CP97-2636

■ Type of enclosures

MCCB	Enclosure		
	Standard *1	With V-type handle Dustproof *1*2	Rainproof *1*2
BW32 BW50 BW63	**BZ6C10C2** *3 **BZ6C10C3**	**BW9UVBA-3A** *3	**BW9UWBA-3A** *3
BW100	**BZ6C25C2** *3 **BZ6C25C3** *3	**BW9UVBA-3B** *3	**BW9UWBA-3B** *3
BW125	**BW9UCCA-2** **BW9UCCA-3**	**BW9UVCA-3**	**BW9UWCA-3**
BW250	**BW9UCGA-3**	**BW9UVGA-3**	**BW9UWGA-3**
BW400	**BZ-C60B**	**BW9UVHA-3**	**BW9UWHA-3**
BW630 BW800	**BZ-C70B**	**BW9UVJA-3**	–

*1 No models are available for four-pole products.
*2 The appearance of dust-proof and rain-proof models differs from the photograph (400A frames and higher).
*3 Combination with external accessories(R) is not possible.

■ Ordering information

Specify the following:
1. Type number of enclosures

■ Dimensions, mm

Fig.1 Standard

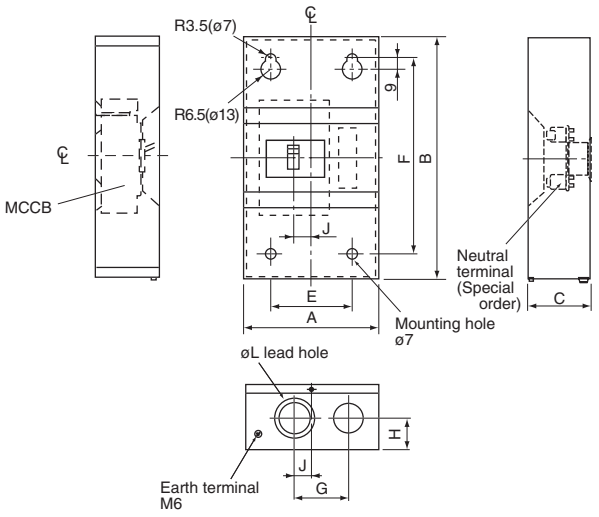


Fig.2 With V type handle
BW9UVBA-3A, BW9UVBA-3B
BW9UVCA-3, BW9UVGA-3

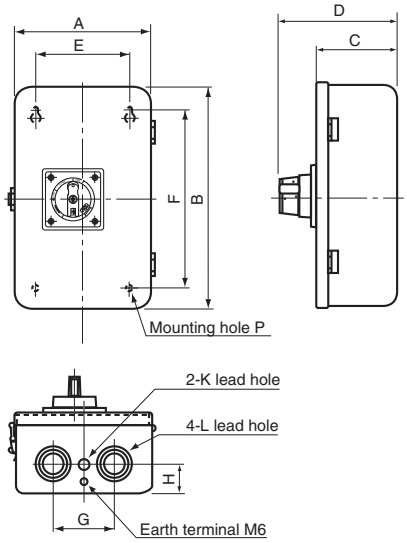
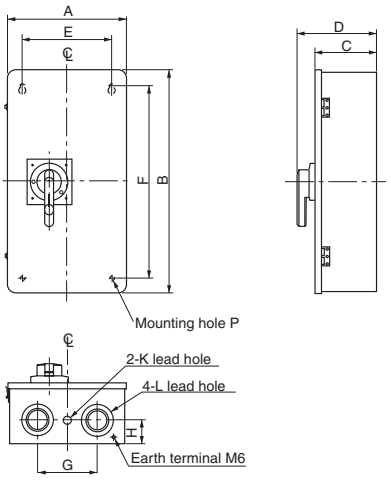
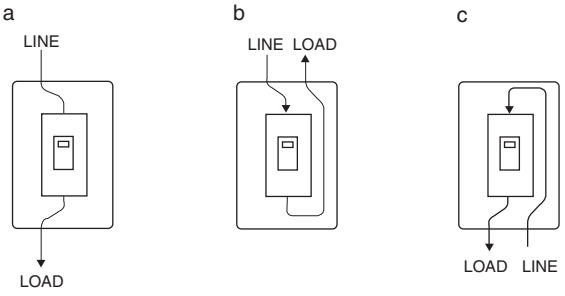


Fig3. With V type handle
BW9UVHA-3, BW9UVJA-3



■ Connection method diagrams



Type	Connection	Fig.	A	B	C	D	E	F	G	H	J	K	L	P
BZ6C10C2	a, b, c	1	135	225	95	–	90	170	65	40	25	–	ø35, ø22	–
BZ6C10C3														
BZ6C25C2			200	320	95	–	120	240	80	40	25	–	ø45, ø30	–
BZ6C25C3														
BW9UCCA-2			200	320	103	–	120	240	80	40	25	–	ø45, ø30	–
BW9UCCA-3														
BW9UCGA-3				360				280		45			ø55, ø40	
BZ-C60B			400	750	175	–	300	650	200	80	100	–	ø106, ø78, ø63	–
BZ-C70B														
BW9UVBA-3A		2	180	300	114	178.5	100	220	70	40	–	–	ø28, ø35, ø43	ø7
BW9UVBA-3B			250	400	142	206.5	170	320	110	50	–	ø23	ø35, ø52, ø63	ø9
BW9UVCA-3						207								
BW9UVGA-3														
BW9UVHA-3		3	400	750	206	269	300	650	200	80	–	ø28	ø63, ø78, ø106	ø12
BW9UVJA-3														

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 400AF**
Short type: BW9BT ☐ A-S ☐
• Snap-on fitting
Long type: BW9BT ☐ A-L ☐
• Crimp connection use

● **630, 800AF**
Long type: BW9BTJA-L ☐
• Transparent

Short type

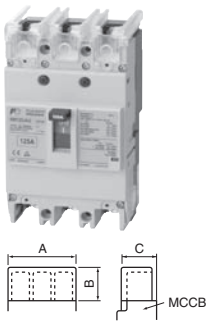
Long type

Long type

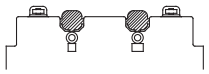
Type		No. of poles	MCCB	Dimensions (mm)			Packing quantity	Appearance
Transparent	Gray			A	B	C		
BW9BTAA-L2	**BW9BTAA-L2W**	2	BW32☐-2P BW50☐-2P BW63☐-2P BW100☐-2P	50	40	53	2	• Preventing exposure of live section when amplifier's terminals are connected • Snap-on mounting
BW9BTAA-L3	**BW9BTAA-L3W**	2, 3	BW32☐-3P BW50☐-3P BW63☐-3P BW100☐-3P	75	40	53	2	
BW9BTCA-L2	**BW9BTCA-L2W**	2	BW125JAG-2P	60	40	66.5	2	
BW9BTCA-L3	**BW9BTCA-L3W**	2, 3	BW50HAG-2P BW50HAG-3P BW125RAG-2P BW125HAG-2P BW125☐-3P	90	40	66.5	2	
BW9BTCA-C3	–	2, 3	BW125RAG-2P BW125☐-3P	90	60	66.5	2	
BW9BTCA-L4	**BW9BTCA-L4W**	4	BW125JAG-4P BW125RAG-4P	120	40	66.5	2	
BW9BTGA-L3 *1	**BW9BTGA-L3W** *1	2, 3	BW160☐-2P BW160☐-3P	105	50	66.5	2	
BW9BTGA-L4 *1	**BW9BTGA-L4W** *1	4	BW160☐-4P	140	50	66.5	2	
BW9BTGA-C3	–	2, 3	BW250☐-2P BW250☐-3P	105	75	66.5	2	
BW9BTGA-L3 *1	**BW9BTGA-L3W** *1	2, 3	BW250☐-2P BW250☐-3P	105	50	66.5	2	
BW9BTGA-L4 *1	**BW9BTGA-L4W** *1	4	BW250☐-4P	140	50	66.5	2	
BW9BTHA-L3 *2	**BW9BTHA-L3W** *1	2, 3	BW400☐-2P BW400☐-3P	172	110	98	2	
BW9BTHA-L4 *2	–	4	BW400☐-4P	220	110	98	2	
BW9BTJA-L3	**BW9BTJA-L3W**	3	BW630☐-3P BW800☐-3P	230	135	97.5	2	
BW9BTJA-L4	**BW9BTJA-L4W**	4	BW630☐-4P BW800☐-4P	280	155	98	2	

Short type

Type		No. of poles	MCCB	Dimensions (mm)			Packing quantity	Appearance
Transparent	Gray			A	B	C		
BW9BTAA-S2	**BW9BTAA-S2W**	2	BW32□-2P BW50□-2P BW63□-2P BW100□-2P	50	10	53	2	• Preventing exposure of live section when amplifier's terminals are connected • Snap-on mounting
BW9BTAA-S3	**BW9BTAA-S3W**	2, 3	BW32□-3P BW50□-3P BW63□-3P BW100□-3P	75	10	53	2	
BW9BTCA-S2	**BW9BTCA-S2W**	2	BW125JAG-2P	60	8	66.5	2	
BW9BTCA-S3	**BW9BTCA-S3W**	2, 3	BW50HAG-2P BW50HAG-3P BW125RAG-2P BW125HAG-2P BW125□-3P	90	8	66.5	2	
BW9BTCA-S4	**BW9BTCA-S4W**	4	BW125JAG-4P BW125RAG-4P	120	8	66.5	2	
BW9BTGA-S3 *1	**BW9BTGA-S3W** *1	2, 3	BW160□-2P BW160□-3P BW250□-2P BW250□-3P	105	8	66.5	2	
BW9BTGA-S4 *1	**BW9BTGA-S4W** *1	4	BW160□-4P BW250□-4P	140	8	66.5	2	
BW9BTHA-S3 *3	**BW9BTHA-S3W** *2	2, 3	BW400□-2P BW400□-3P	140	65	98	2	
BW9BTHA-S4 *3	**BW9BTHA-S4W** *2	4	BW400□-4P	185	65	98	2	



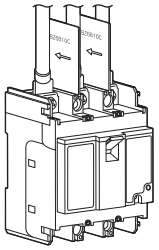
Notes: • A gray-white terminal cover comes standard with the Global Series 125AF and 250AF.
*1 When using the external operating handle, part of the terminal cover (▨) must be cut away.
*2 Crimp terminals for 325 mm^2 are not available.
*3 This type of cover can be mounted on the 400AF when flat terminals are not used.



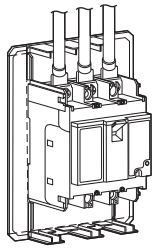
Insulation barriers

■ Description

The interphase barriers are provided on frame size of 32AF to 800AF 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

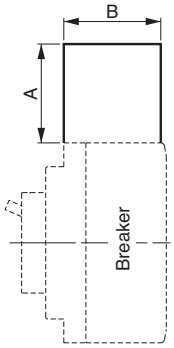


Earth barrier

Interphase barrier

MCCB	Interphase barrier				
	Type	Dimensions (mm)		Packing quantity	Mass (g)
		A	B		
BW32 BW50AAG, EAG BW50SAG, RAG BW63 BW100	**BZ6B10C**	50	49	4	23
BW50HAG, BW125	**BW9BPCA**	50	60	2	15
BW160 BW250	**BW9BPGA**	80	60	2	25
BW400 BW630 BW800	**B-43A**	105	95	4	130

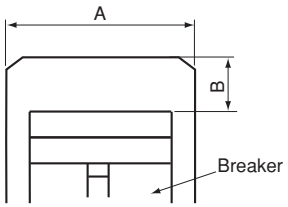
Interphase barrier



Earth barrier

MCCB	Earth barrier				
	Type	Dimensions (mm)		Packing quantity	Mass (g)
		A	B		
BW32□-2P BW50□-2P BW63□-2P BW100□-2P	**BZ6BL10C2**	100 (50, 75)*1	43 (30)*1	1	33
BW32□-3P BW50□-3P BW63□-3P BW100□-3P	**BZ6BL10C3**	125 (75, 100)*1	43 (30)*1	1	41

Earth barrier



Note: *1 Can be cut to dimensions

Padlocking device and handle locking cover

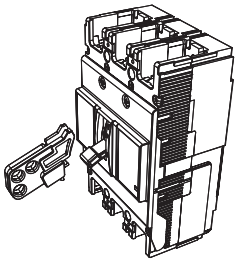
■ Description

• Padlocking device

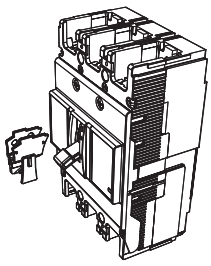
These padlocking device lock the Breaker handle in the OFF position. Use a commercially available padlock with a shackle diameter of 3.5 to 5mm (5mm for the BZ6L10CA).

• Handle locking covers (Order Separately)

These simple handle locking covers can be easily installed by the user. Tripping is possible while the Breaker is locked ON.



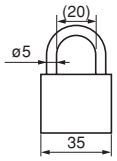
Padlocking device
• Cap type Q1,QN



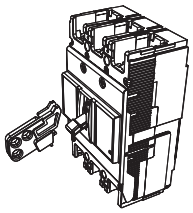
Handle locking cover

MCCB	Padlocking device			Handle locking cover
	Q1: Cap type	QN: Scissors type	Q2: Plate type	
BW32	**BZ6L10CA**	**–**	▲ *1*4	**BZ6L10C**
BW50AAG, EAG, SAG, RAG				
BW63				
BW100				
BW50HAG, BW125	**BW9Q1CA** *5		**BW9Q2CA** *3	**BW9L1CA**
BW160			**BW9Q2GA**	
BW250				
BW400	▲ *1	**BW9QNHA** *2	**BW9Q2HA**	**BW9L1HA**
BW630			**BW9Q2JA**	
BW800				

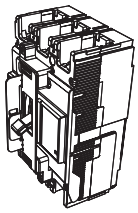
Notes:
*1 Specify Locks when ordering the Breaker. (▲: Factory-mounted)
*2 ON and OFF locking is possible.
*3 Not applicable to the BW125JA□-2P (models with a width of 60 mm).
*4 If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
*5 Three padlocks with shackles from 3.5 to 8 mm in diameter can be attached.



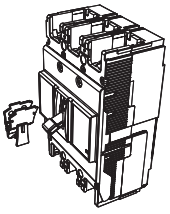
Padlocking device
• Cap type Q1



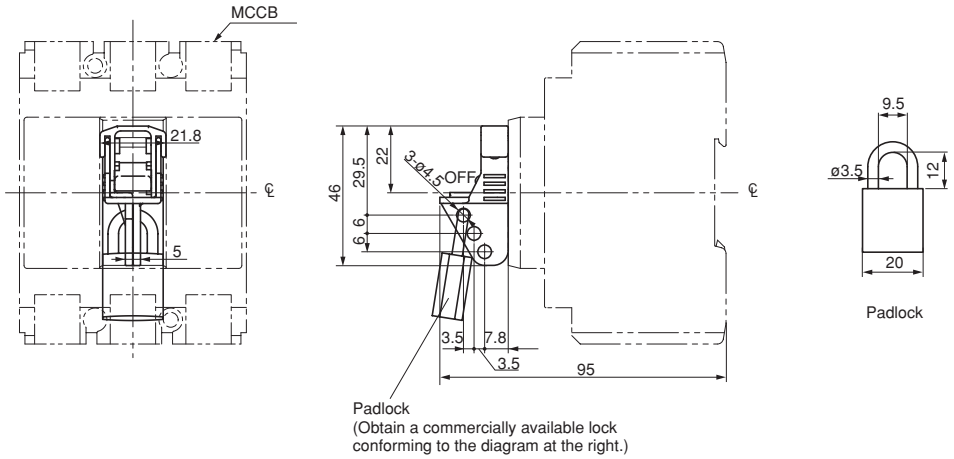
• Plate type Q2



Handle locking cover



Q1: BZ6L10CA (OFF-locking Padlocking device)



Padlock

Memo

List of products

■ G-TWIN Standard Series (IEC/EN/GB/JIS conformed)

Line protection

• 2-pole

AC230V (Icu)	EW32	EW50	EW100
2.5kA	AAG-2P	AAG-2P	
10kA			EAG-2P

• 3-pole

AC415V (Icu)	EW32	EW50	EW63	EW100	EW125	EW160	EW250	EW400	EW630	EW800
1.5kA	EAG-3P									
2.5kA	SAG-3P	EAG-3P	EAG-3P							
7.5kA		SAG-3P	SAG-3P							
10kA		RAG-3P	RAG-3P	EAG-3P						
18kA						EAG-3P	EAG-3P			
30kA					JAG-3P	JAG-3P	JAG-3P	EAG-3P		
36kA					SAG-3P	SAG-3P	SAG-3P	SAG-3P	EAG-3P	EAG-3P
50kA					RAG-3P	RAG-3P	RAG-3P	RAG-3P	RAG-3P	RAG-3P
70kA								HAG-3P	HAG-3P	HAG-3P

• 4-pole

AC415V (Icu)	EW125	EW160	EW250	EW400
30kA	JAG-4P	JAG-4P	JAG-4P	
36kA	SAG-4P	SAG-4P	SAG-4P	
50kA	RAG-4P	RAG-4P	RAG-4P	RAG-4P
70kA				HAG-4P

Motor protection

• 3-pole

AC415V (Icu)	EW32	EW50	EW63	EW100	EW125	EW250
1.5kA	EAM-3P					
2.5kA	SAM-3P	EAM-3P	EAM-3P			
7.5kA		SAM-3P	SAM-3P			
10kA				EAM-3P		
18kA						EAM-3P
30kA					JAM-3P	JAM-3P
50kA					RAM-3P	RAM-3P

■ G-TWIN Global Series (IEC/EN/GB/JIS/UL/CSA conformed)

Line protection

• 2-pole

AC230V (Icu)	EW100
10kA	EAGU-2P

• 3-pole

AC415V (Icu)	EW50	EW100	EW125	EW250	EW400	EW630
10kA	RAGU-3P	EAGU-3P				
30kA			JAGU-3P	JAGU-3P		
36kA					SAGU-3P	
50kA			RAGU-3P	RAGU-3P	RAGU-3P	RAGU-3P
70kA					HAGU-3P	

Type number nomenclature

■ Type number nomenclature

EW 250 EA G □ - 3P 225 B X

Series
EW: G-TWIN series ELCB

Frame size

32: 32AF	63: 63AF	125: 125AF	250: 250AF	630: 630AF
50: 50AF	100: 100AF	160: 160AF	400: 400AF	800: 800AF

Breaking capacity

	Rated breaking capacity Icu (440V AC) *(at 230V AC)									
	32AF	50AF	63AF	100AF	125AF	160AF	250AF	400AF	630AF	800AF
AA	2.5kA*	2.5kA*	–	5kA*	–	–	–	–	–	–
EA	1.5kA	2.5kA	2.5kA	10kA	–	18kA	18kA	30kA	36kA	36kA
JA	–	–	–	–	30kA	30kA	30kA	–	–	–
SA	2.5kA	7.5kA	7.5kA	–	36kA	36kA	36kA	36kA	–	–
RA	–	10kA	10kA	–	50kA	50kA	50kA	50kA	50kA	50kA
HA	–	–	–	–	–	–	–	70kA	70kA	70kA

Model
G: Line protection M: Motor protection

G-TWIN series
Blank: Standard U: Global

No. of poles
2P: 2-pole 3P: 3-pole 4P: 4-pole

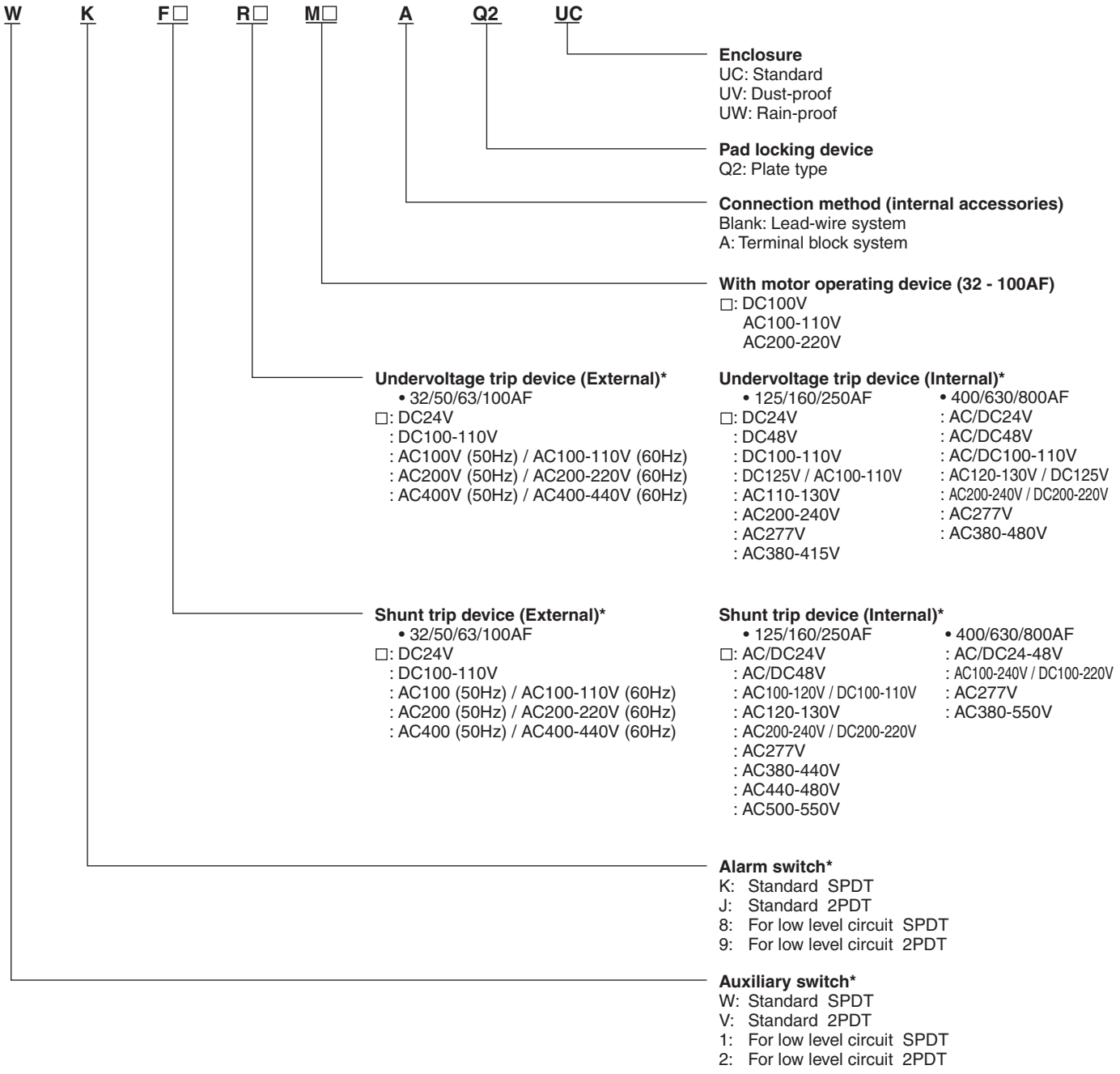
Rated current
See page 133.

Rated sensitive current
A: 15mA J: 100/300/500/1000mA
B: 30mA K: 100/200mA
C: 100mA 100/200/500mA
D: 50mA 100/200/500/1000mA

Terminal combination (Global type)

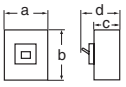
	Terminal position		Applicable breaker type		
Code	Line	Load	EW50, 100	EW125, 250	EW400, 630
Blank	Screw	Screw	●	●	–
Blank	Flat teminal	Flat teminal	–	–	●
SB	Block terminal	Block terminal	–	●	●
SF	Flat teminal	Flat teminal	●	●	–
S3	Screw	Flat terminal	●	●	–
S4	Flat teminal	Screw	●	●	–
S5	Screw	Block terminal	–	●	–
S6	Block terminal	Screw	–	●	–
S7	Flat teminal	Block terminal	–	●	●
S8	Block terminal	Flat terminal	–	●	●

Mounting and connection
• Standard type
Blank: Front mounting, front connection
X: Front mounting, rear connection
E: Flush mounting, rear connection
Y: Flush mounting, top & buttom connection
P: Plug-in mounting



* For the available configuration of accessory, see page 166.

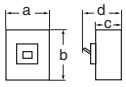
■ G-TWIN Standard Series

Ampere frame				32A			
Type				**EW32AAG**		**EW32EAG**	**EW32SAG**
Pole				2	3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		5, 10, 15, 20, 30, 32	5, 10, 15, 20, 30, 32	5, 10, 15, 20, 30, 32	3, 5, 10, 15, 20, 30, 32
Rated impulse withstand voltage		Uimp(kV)		2.5	4	4	4
Isolation compliant				●	●	●	●
Rated voltage Ue (AC V)				100-230	100-230	100-230-440	100-230-440
Rated sensitive current (mA)				15, 30, 100	15, 30, 100	15, 30, 100	30, 100/200/500 changeover
Tripping time (s)				0.1 or less	0.1 or less	0.1 or less	0.1 or less
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-2	AC	440V	–	–	1.5/1	2.5/2
			415V	–	–	1.5/1	2.5/2
			400V	–	–	1.5/1	2.5/2
			380V	–	–	1.5/1	2.5/2
			230V	2.5/2	2.5/2	2.5/2	5/3
			200V	2.5/2	2.5/2	2.5/2	5/3
			100V	2.5/2	5/3	5/3	5/3
	GB14048.2	AC	400V	–	–	1.5/1	2.5/2
			230V	2.5/2	2.5/2	2.5/2	5/3
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)	● (TÜV)	● (TÜV)
	CCC certificate			●	●	●	●
	Electrical Appliance and Material Safety Law *1			●	●	●	●
Dimensions (mm) 			a	50	75	75	75
			b	100		100	100
			c	60		60	60
			d	84		84	84
Mass (kg)				0.4	0.5	0.5	0.6
Tripping device				Hydraulic-magnetic			
Front mounting, front connection			No-mark	○	○	○	○
Front mounting, rear connection			X	○	○	○	○
Flush mounting, front connection			E	○	○	○	○
Flush mounting, top & bottom connection			Y	○	○	○	○
Plug-in mounting			P	○	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○	○
Internal accessories			Page 161				
Alarm switch			K	○	○	○	○
Auxiliary switch			W	○	○	○	○
Undervoltage trip			R	○	○	○	○
Shunt trip			F	○	○	○	○
Earth alarm switch			L	–	–	–	–
External accessories			Page 164				
Handle padlocking device	Cap type		QN	○	○	○	○
Handle padlocking device	Plate type		Q2	▲	▲	▲	▲
Operating handle	N-type		N	○	○	○	○
Operating handle	V-type		V	○	○	○	○
Terminal cover	Short		BT□S	○	○	○	○
Terminal cover	Long		BT□L	○	○	○	○
Insulation barrier	Interphase		BP	○	○	○	○
	Earth		BL	○	○	○	○
Handle locking cover			L1	○	○	○	○
Flat terminal			SS	○	○	○	○
Block terminal			SL	–	–	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230	80–264
100–230–440	80–484

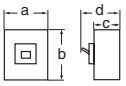
■ G-TWIN Standard Series

Ampere frame				50A				
Type				**EW50AAG**		**EW50EAG**	**EW50SAG**	**EW50RAG**
Pole				2	3	3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		5, 10, 15, 20, 30, 32, 40, 50		5, 10, 15, 20, 30, 32, 40, 50	5, 10, 15, 20, 30, 32, 40, 50	10, 15, 20, 30, 32, 40, 50
Rated impulse withstand voltage		Uimp(kV)		2.5	4	6	6	6
Isolation compliant				●		●	●	●
Rated voltage Ue (AC V)				100-230		100-230-440	100-230-440	100-230-440
Rated sensitive current (mA)				15, 30, 100		15, 30, 100/200 changeover	30, 100/200/500 changeover	30, 100/200/500 changeover
Tripping time (s)				0.1 or less		0.1 or less	0.1 or less	0.1 or less
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-2	AC	440V	–		2.5/2	7.5/4	10/5
			415V	–		2.5/2	7.5/4	10/5
			400V	–		2.5/2	7.5/4	10/5
			380V	–		2.5/2	7.5/4	10/5
			230V	2.5/2		5/3	10/5	25/13
			200V	2.5/2		5/3	10/5	25/13
			100V	2.5/2	5/3	5/3	10/5	25/13
	GB14048.2	AC	400V	–		2.5/2	7.5/4	10/5
			230V	2.5/2		5/3	10/5	25/13
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)	● (TÜV)	● (TÜV)
	CCC certificate			●		●	●	●
	Electrical Appliance and Material Safety Law *1			●		●	●	●
Dimensions (mm) 			a	50	75	75	75	75
			b	100		100	100	100
			c	60		60	60	60
			d	84		84	84	84
Mass (kg)				0.4	0.6	0.6	0.6	0.6
Tripping device				Hydraulic-magnetic				
Front mounting, front connection			No-mark	○		○	○	○
Front mounting, rear connection			X	○		○	○	○
Flush mounting, front connection			E	○		○	○	○
Flush mounting, top & bottom connection			Y	○		○	○	○
Plug-in mounting			P	○		○	○	○
IEC 35mm wide rail mounting			No-mark	○		○	○	○
Internal accessories			Page 161					
Alarm switch			K	○		○	○	○
Auxiliary switch			W	○		○	○	○
Undervoltage trip			R	○		○	○	○
Shunt trip			F	○		○	○	○
Earth alarm switch			L	–		–	–	–
External accessories			Page 164					
Handle padlocking device Cap type			QN	○		○	○	○
Handle padlocking device Plate type			Q2	▲		▲	▲	▲
Operating handle N-type			N	○		○	○	○
Operating handle V-type			V	○		○	○	○
Terminal cover Short			BT□S	○		○	○	○
Terminal cover Long			BT□L	○		○	○	○
Insulation barrier Interphase			BP	○		○	○	○
Earth			BL	○		○	○	○
Handle locking cover			L1	○		○	○	○
Flat terminal			SS	○		○	○	○
Block terminal			SL	–		–	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230	80–264
100–230–440	80–484

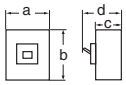
■ G-TWIN Standard Series

Ampere frame				63A		
Type				**EW63EAG**	**EW63SAG**	**EW63RAG**
Pole				3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		60, 63	60, 63	60, 63
Rated impulse withstand voltage		Uimp(kV)		6	6	6
Isolation compliant				●	●	●
Rated voltage Ue (AC V)				100-230-440	100-230-440	100-230-440
Rated sensitive current (mA)				15, 30, 100/200 changeover	30, 100/200/500 changeover	30, 100/200/500 changeover
Tripping time (s)				0.1 or less	0.1 or less	0.1 or less
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-2	AC	440V	2.5/2	7.5/4	10/5
			415V	2.5/2	7.5/4	10/5
			400V	2.5/2	7.5/4	10/5
			380V	2.5/2	7.5/4	10/5
			230V	5/3	10/5	25/13
			200V	5/3	10/5	25/13
			100V	5/3	10/5	25/13
	GB14048.2	AC	400V	2.5/2	7.5/4	10/5
			230V	5/3	10/5	25/13
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)	● (TÜV)
	CCC certificate			●	●	●
	Electrical Appliance and Material Safety Law *1			●	●	●
Dimensions (mm) 			a	75	75	75
			b	100	100	100
			c	60	60	60
			d	84	84	84
Mass (kg)				0.6	0.6	0.6
Tripping device				Hydraulic-magnetic		
Front mounting, front connection			No-mark	○	○	○
Front mounting, rear connection			X	○	○	○
Flush mounting, front connection			E	○	○	○
Flush mounting, top & bottom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○
Internal accessories			Page 161			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	–	–	–
External accessories			Page 164			
Handle padlocking device	Cap type		QN	○	○	○
Handle padlocking device	Plate type		Q2	▲	▲	▲
Operating handle	N-type		N	○	○	○
Operating handle	V-type		V	○	○	○
Terminal cover	Short		BT□S	○	○	○
Terminal cover	Long		BT□L	○	○	○
Insulation barrier	Interphase		BP	○	○	○
	Earth		BL	○	○	○
Handle locking cover			L1	○	○	○
Flat terminal			SS	○	○	○
Block terminal			SL	–	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230	80–264
100–230–440	80–484

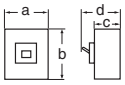
■ G-TWIN Standard Series

Ampere frame				100A		
Type				**EW100AAG**	**EW100EAG**	
Pole				3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		60, 63, 75, 100	50, 60, 63, 75, 100	50, 60, 63, 75, 100
Rated impulse withstand voltage		Uimp(kV)		4	4	6
Isolation compliant				●	●	●
Rated voltage Ue (AC V)				100-230	100-230	100-230-400
Rated sensitive current (mA)				30, 100/200/500 changeover	30, 100/200 changeover	30, 100/200/500 changeover
Tripping time (s)				0.1 or less	0.1 or less	0.1 or less
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-2	AC	440V	–	–	10/5
			415V	–	–	10/5
			400V	–	–	10/5
			380V	–	–	10/5
			230V	5/3	10/5	25/13
			200V	5/3	10/5	25/13
			100V	5/3	10/5	25/13
	GB14048.2	AC	400V	–	–	10/5
			230V	5/3	10/5	25/13
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)	● (TÜV)
	CCC certificate			●	●	●
	Electrical Appliance and Material Safety Law *1			●	●	●
Dimensions (mm) 			a	75	75	75
			b	100	100	100
			c	60	60	60
			d	84	84	84
Mass (kg)				0.6	0.6	0.6
Tripping device				Thermal -magnetic		
Front mounting, front connection			No-mark	○	○	○
Front mounting, rear connection			X	○	○	○
Flush mounting, front connection			E	○	○	○
Flush mounting, top & bottom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○
Internal accessories			Page 161			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	–	–	–
External accessories			Page 164			
Handle padlocking device Cap type			QN	○	○	○
Handle padlocking device Plate type			Q2	▲	▲	▲
Operating handle N-type			N	○	○	○
Operating handle V-type			V	○	○	○
Terminal cover Short			BT□S	○	○	○
Terminal cover Long			BT□L	○	○	○
Insulation barrier Interphase			BP	○	○	○
Earth			BL	○	○	○
Handle locking cover			L1	○	○	○
Flat terminal			SS	○	○	○
Block terminal			SL	–	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230	80–264
100–230–440	80–484

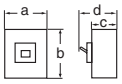
■ G-TWIN Standard Series

Ampere frame				125A					
Type				**EW125JAG**		**EW125SAG**		**EW125RAG**	
Pole				3	4	3	4	3	4
Rated current Reference amb. temp. (40°C)		In(A)		15, 20, 30, 40, 50, 60, 75, 100, 125					
Rated impulse withstand voltage		Uimp(kV)		6		6		6	
Isolation compliant				●		●		●	
Rated voltage Ue (AC V)				100-230-440					
Type of earth leakage trip action				AC type					
Instantaneous trip type	Rated sensitive current (mA)			30					
	Tripping time (s)			0.1 or less					
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/300/500/1000 changeover					
	Tripping time (s)			0.1/0.4/1/2 changeover					
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1					
Rated breaking capacity Icu/Ics (kA)	IEC60947-2 EN60947-2 JISC8201-2-2	AC	440V	30/15		36/18		50/25	
			415V	30/15		36/18		50/25	
			400V	30/15		36/18		50/25	
			380V	30/15		36/18		50/25	
			230V	50/25		85/43		100/50	
			200V	50/25		85/43		100/50	
			100V	50/25		85/43		100/50	
	GB14048.2	AC	400V	30/15		36/18		50/25	
			230V	50/25		85/43		100/50	
Conforming to standards	CE Marking			● (TÜV)		● (TÜV)		● (TÜV)	
	CCC certificate			●		●		●	
	Electrical Appliance and Material Safety Law *1			● (except for 125A)		● (except for 125A)		● (except for 125A)	
Dimensions (mm) 			a	90	120	90	120	90	120
			b	155		155		155	
			c	68		68		68	
			d	95		95		95	
Mass (kg)				1.3	1.7	1.2	1.6	1.3	1.7
Tripping device				Thermal-magnetic					
Front mounting, front connection			No-mark	○	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○	○
Plug-in mounting			P	○	–	○	–	○	–
Internal accessories			Page 162						
Alarm switch			K	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○
Earth alarm switch			L	○	○	○	○	○	○
External accessories			Page 164						
Handle padlocking device Cap type			Q1	○	○	○	○	○	○
Handle padlocking device Plate type			Q2	○	○	○	○	○	○
Operating handle N-type			N	○	○	○	○	○	○
Operating handle V-type			V	○	○	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○	○
Flat terminal			SS	○	○	○	○	○	○
Block terminal			SL	○	○	○	○	○	○

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

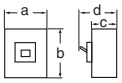
■ G-TWIN Standard Series

Ampere frame				160A						
Type				**EW160EAG**	**EW160JAG**		**EW160SAG**		**EW160RAG**	
Pole				3	3	4	3	4	3	4
Rated current Reference amb. temp. (40°C)		In(A)		125, 150, 160						
Rated impulse withstand voltage		Uimp(kV)		6	6		6		6	
Isolation compliant				●	●		●		●	
Rated voltage Ue (AC V)				100-230-440						
Type of earth leakage trip action				AC type						
Instantaneous trip type	Rated sensitive current (mA)			30						
	Tripping time (s)			0.1 or less						
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/300/500/1000 changeover						
	Tripping time (s)			0.1/0.4/1/2 changeover						
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1						
Rated breaking capacity Icu/Ics (kA)	IEC60947-2 EN60947-2 JISC8201-2-2	AC	440V	18/9	30/15		36/18		50/25	
			415V	18/9	30/15		36/18		50/25	
			400V	18/9	30/15		36/18		50/25	
			380V	18/9	30/15		36/18		50/25	
			230V	36/18	50/25		85/43		100/50	
			200V	36/18	50/25		85/43		100/50	
			100V	36/18	50/25		85/43		100/50	
	GB14048.2	AC	400V	18/9	30/15		36/18		50/25	
			230V	36/18	50/25		85/43		100/50	
Conforming to standards	CE Marking certified (TÜV)			● (TÜV)	● (TÜV)		● (TÜV)		● (TÜV)	
	CCC certificate			●	●		●		●	
Dimensions (mm) 			a	105	105	140	105	140	105	140
			b	165	165		165		165	
			c	68	68		68		68	
			d	95	95		95		95	
Mass (kg)				1.8	1.8	2.3	1.8	2.3	1.8	2.3
Tripping device				Thermal-magnetic						
Front mounting, front connection			No-mark	○	○	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○	○	○
Plug-in mounting			P	○	○	–	○	–	○	–
Internal accessories			Page 162							
Alarm switch			K	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○
Earth alarm switch			L	○	○	○	○	○	○	○
External accessories			Page 164							
Handle padlocking device Cap type			Q1	○	○	○	○	○	○	○
Handle padlocking device Plate type			Q2	○	○	○	○	○	○	○
Operating handle N-type			N	○	○	○	○	○	○	○
Operating handle V-type			V	○	○	○	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○	○	○
Flat terminal			SS	○	○	○	○	○	○	○
Block terminal			SL	○	○	○	○	○	○	○

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

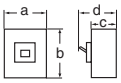
■ G-TWIN Standard Series

Ampere frame				250A						
Type				**EW250EAG**	**EW250JAG**		**EW250SAG**		**EW250RAG**	
Pole				3	3	4	3	4	3	4
Rated current Reference amb. temp. (40°C)		In(A)		175, 200, 225, 250		175,200,225	175,200,225,250	175,200,225	175,200,225,250	175,200,225
Rated impulse withstand voltage		Uimp(kV)		6	6		6		6	
Isolation compliant				●	●		●		●	
Rated voltage Ue (AC V)				100-230-440						
Type of earth leakage trip action				AC type						
Instantaneous trip type	Rated sensitive current (mA)			30						
	Tripping time (s)			0.1 or less						
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/300/500/1000 changeover						
	Tripping time (s)			0.1/0.4/1/2 changeover						
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1						
Rated breaking capacity Icu/Ics (kA)	IEC60947-2 EN60947-2 JISC8201-2-2	AC	440V	18/9	30/15		36/18		50/25	
			415V	18/9	30/15		36/18		50/25	
			400V	18/9	30/15		36/18		50/25	
			380V	18/9	30/15		36/18		50/25	
			230V	36/18	50/25		85/43		100/50	
			200V	36/18	50/25		85/43		100/50	
			100V	36/18	50/25		85/43		100/50	
	GB14048.2	AC	400V	18/9	30/15		36/18		50/25	
			230V	36/18	50/25		85/43		100/50	
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)		● (TÜV)		● (TÜV)	
	CCC certificate			●	●		●		●	
Dimensions (mm) 			a	105	105	140	105	140	105	140
			b	165	165		165		165	
			c	68	68		68		68	
			d	95	95		95		95	
Mass (kg)				1.8	1.8	2.3	1.8	2.3	1.8	2.3
Tripping device				Thermal-magnetic						
Front mounting, front connection			No-mark	○	○	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○	○	○
Plug-in mounting			P	○	○	–	○	–	○	–
Internal accessories			Page 162							
Alarm switch			K	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○
Earth alarm switch			L	○	○	○	○	○	○	○
External accessories			Page 164							
Handle padlocking device Cap type			Q1	○	○	○	○	○	○	○
Handle padlocking device Plate type			Q2	○	○	○	○	○	○	○
Operating handle N-type			N	○	○	○	○	○	○	○
Operating handle V-type			V	○	○	○	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○	○	○
Flat terminal			SS	○	○	○	○	○	○	○
Block terminal			SL	○	○	○	○	○	○	○

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

■ G-TWIN Standard Series

Ampere frame				400A						
Type				**EW400EAG**	**EW400SAG**	**EW400RAG**		**EW400HAG**		
Pole				3	3	3	4	3	4	
Rated current Reference amb. temp. (40°C)		In(A)		250, 300, 350, 400						
Rated impulse withstand voltage		Uimp(kV)		6	6	6		6		
Isolation compliant				●	●	●		●		
Rated voltage Ue (AC V)		IEC		100-230-440						
Type of earth leakage trip action				AC type						
Instantaneous trip type	Rated sensitive current (mA)			30						
	Tripping time (s)			0.1 or less						
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/300/500/1000 changeover						
	Tripping time (s)			0.1/0.4/1/2 changeover						
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1						
Rated breaking capacity Icu/Ics (kA)	IEC60947-2 EN60947-2 JISC8201-2-2	AC	440V	30/15	36/18	50/25		70/35		
			415V	30/15	36/18	50/25		70/35		
			400V	30/15	36/18	50/25		70/35		
			380V	30/15	36/18	50/25		70/35		
			230V	50/25	85/43	100/50		125/63		
			200V	50/25	85/43	100/50		125/63		
			100V	50/25	85/43	100/50		125/63		
	GB14048.2	AC	400V	30/15	36/18	50/25		70/35		
			230V	50/25	85/43	100/50		125/63		
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)	● (TÜV)		● (TÜV)		
	CCC certificate			●	●	●		●		
Dimensions (mm) 			a	140	140	140	185	140	185	
			b	257	257	257		257		
			c	103	103	103		103		
			d	146	146	146		146		
Mass (kg)				5.8	5.8	5.8	7.8	5.8	7.8	
Tripping device				Thermal-magnetic						
Front mounting, front connection			No-mark	○	○	○	○	○	○	
Front mounting, rear connection			X	○	○	○	○	○	○	
Flush mounting, front connection			E	○	○	○	○	○	○	
Plug-in mounting			P	○	○	○	–	○	–	
Internal accessories			Page 163							
Alarm switch			K	○	○	○	○	○	○	
Auxiliary switch			W	○	○	○	○	○	○	
Undervoltage trip			R	○	○	○	○	○	○	
Shunt trip			F	○	○	○	○	○	○	
Earth alarm switch			L	▲	▲	▲	▲	▲	▲	
External accessories			Page 164							
Handle padlocking device Cap type			QN	○	○	○	○	○	○	
Handle padlocking device Plate type			Q2	○	○	○	○	○	○	
Operating handle N-type			N	○	○	○	○	○	○	
Operating handle V-type			V	○	○	○	○	○	○	
Terminal cover Short			BT□S	○	○	○	○	○	○	
Terminal cover Long			BT□L	○	○	○	○	○	○	
Insulation barrier Interphase			BP	○	○	○	○	○	○	
Handle locking cover			L1	○	○	○	○	○	○	
Flat terminal			SS	○*2	○*2	○*2	○*2	○*2	○*2	
Block terminal			SL	○	○	○	○	○	○	

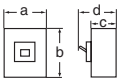
●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

Note: *1 Electrical Appliance and Material Safety Law of Japan

*2 Standard provided

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

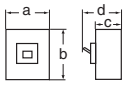
■ G-TWIN Standard Series

Ampere frame				630A			800A		
Type				**EW630EAG**	**EW630RAG**	**EW630HAG**	**EW800EAG**	**EW800RAG**	**EW800HAG**
Pole				3	3	3	3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		500, 600, 630			700, 800		
Rated impulse withstand voltage		Uimp(kV)		6	6	6	6	6	6
Isolation compliant				●	●	●	●	●	●
Rated voltage Ue (AC V)				100-230-440					
Type of earth leakage trip action				AC type					
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/300/500/1000 changeover					
	Tripping time (s)			0.1/0.4/1/2 changeover					
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1					
Rated breaking capacity Icu/Ics (kA)	IEC60947-2 EN60947-2 JISC8201-2-2	AC	440V	36/18	50/25	70/35	36/18	50/25	70/35
			415V	36/18	50/25	70/35	36/18	50/25	70/35
			400V	36/18	50/25	70/35	36/18	50/25	70/35
			380V	36/18	50/25	70/35	36/18	50/25	70/35
			230V	50/25	100/50	125/63	50/25	100/50	125/63
			200V	50/25	100/50	125/63	50/25	100/50	125/63
			100V	50/25	100/50	125/63	50/25	100/50	125/63
	GB14048.2	AC	400V	36/18	50/25	70/35	36/18	50/25	70/35
			230V	50/25	100/50	125/63	50/25	100/50	125/63
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)	● (TÜV)	● (TÜV)	● (TÜV)	● (TÜV)
	CCC certificate			●	●	●	●	●	●
Dimensions (mm) 			a	210	210	210	210	210	210
			b	275	275	275	275	275	275
			c	103	103	103	103	103	103
			d	146	146	146	146	146	146
Mass (kg)				9.1	9.1	9.1	9.6	9.6	9.6
Tripping device				Thermal-magnetic					
Front mounting, front connection			No-mark	○	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○	○
Plug-in mounting			P	○	○	○	○	○	○
Internal accessories			Page 163						
Alarm switch			K	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○
Earth alarm switch			L	▲	▲	▲	▲	▲	▲
External accessories			Page 164						
Handle padlocking device Cap type			QN	○	○	○	○	○	○
Handle padlocking device Plate type			Q2	○	○	○	○	○	○
Operating handle N-type			N	○	○	○	○	○	○
Operating handle V-type			V	○	○	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○	○
Flat terminal			SS	○*2	○*2	○*2	○*2	○*2	○*2
Block terminal			SL	○	○	○	○	○	○

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan
*2 Standard provided

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

■ G-TWIN Global Series

Ampere frame				50A	100A	
Type				**EW50RAGU**	**EW100EAGU**	
Pole				3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		3, 5, 10, 15, 20, 30, 32, 40, 50	60, 63, 70, 75, 80, 90, 100	
Rated impulse withstand voltage		Uimp(kV)		6	4	6
Isolation compliant				●	●	●
Rated voltage Ue (AC V)		IEC		100-230-440	100-230	100-230-440
		UL		240	240	240
Rated sensitive current (mA)				30, 50, 100/200/500 changeover	30, 100/200 changeover	30, 50, 100/200/500 changeover
Tripping time (s)				0.1 or less	0.1 or less	0.1 or less
Rated breaking capacity	IEC 60947-2 EN 60947-2 JIS C 8201-2-2 Icu/Ics (kA)	AC	440V	10/5	7.5/4	10/5
			415V	10/5	7.5/4	10/5
			400V	10/5	7.5/4	10/5
			380V	10/5	7.5/4	10/5
			230V	25/13	7.5/4	25/13
			200V	25/13	7.5/4	25/13
			100V	25/13	10/5	25/13
	GB14048.2 Icu/Ics(kA)	AC	400V	10/5	7.5/4	10/5
			230V	25/13	10/5	25/13
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	480V/Δ	–	–	–
			480V/Y	–	–	–
			240V	14	14	14
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)	● (TÜV)
	CCC certificate			●	●	●
	UL Listed (NEMA AB1)			●	●	●
	Electrical Appliance and Material Safety Law *1			●	●	●
Dimensions (inch(mm)) 			a	2.953 (75)	2.953 (75)	2.953 (75)
			b	4.724 (120)	4.724 (120)	4.724 (120)
			c	2.362 (60)	2.362 (60)	2.362 (60)
			d	3.307 (84)	3.307 (84)	3.307 (84)
Mass (kg)				0.6	0.6	0.6
Tripping device				Hydraulic-magnetic		
Connecting terminal			Page 130			
Screw			S□	○	○	○
Flat				○	○	○
Block				–	–	–
Internal accessories			Page 161			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	–	–	–
External accessories			Page 164			
Operating handle N-type			N	○	○	○
Operating handle V-type			V	○	○	○
Terminal cover Short			BT□S	○*2	○	○
Terminal cover Long			BT□L	○	○	○
Insulation barrier Interphase			BP	○	○	○

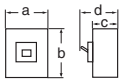
●: Approved ○: Available –: Not available

Note: *1 Electrical Appliance and Material Safety Law of Japan

*2 Standard provided

Rated voltage (V)	Operational voltage range (V)
100–230	80–264
240	80–264
100–230–440	80-484

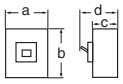
■ G-TWIN Global Series

Ampere frame				125A	
Type				**EW125JAGU**	**EW125RAGU**
Pole				3	3
Rated current Reference amb. temp. (40°C)		In(A)		15, 20, 30, 40, 50, 60, 75, 100, 125	
Rated impulse withstand voltage		Uimp(kV)		6	6
Isolation compliant				●	●
Rated voltage Ue (AC V)		IEC		100-230-440	
		UL		240-480	
Type of earth leakage trip action				AC type	
Instantaneous trip type	Rated sensitive current (mA)			30	
	Tripping time (s)			0.1 or less	
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/200/500/1000 changeover	
	Tripping time (s)			0.1/0.4/1/2 changeover	
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1	
Rated breaking capacity	IEC60947-2 EN60947-2 JISC8201-2-2 Icu/Ics (kA)	AC	440V	30/15	50/25
			415V	30/15	50/25
			400V	30/15	50/25
			380V	30/15	50/25
			230V	50/25	100/50
			200V	50/25	100/50
			100V	50/25	100/50
	GB14048.2 Icu/Ics (kA)	AC	400V	30/15	50/25
			230V	50/25	100/50
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	480V/Δ	30	50
			480V/Y	30	50
			240V	50	100
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)
	CCC certificate			●	●
	UL Listed (NEMA AB1)			●	●
	Electrical Appliance and Material Safety Law *1			● (except for 125A)	● (except for 125A)
Dimensions (inch(mm)) 			a	3.543 (90)	3.543 (90)
			b	6.732 (171)	6.732 (171)
			c	2.677 (68)	2.677 (68)
			d	3.740 (95)	3.740 (95)
Mass (kg)				1.3	1.3
Tripping device				Thermal-magnetic	
Connecting terminal		Page 130			
Screw		S□		○	○
Flat				○	○
Block				○	○
Internal accessories		Page 162			
Alarm switch		K		○	○
Auxiliary switch		W		○	○
Undervoltage trip		R		○	○
Shunt trip		F		○	○
Earth alarm switch		L		○	○
External accessories		Page 164			
Operating handle N-type		N		○	○
Operating handle V-type		V		○	○
Operating handle F-type		F		○	○
Terminal cover Short		BT□S		○ *2	○ *2
Terminal cover Long		BT□L		○	○
Insulation barrier Interphase		BP		○	○

●: Approved ○: Available –: Not available
Note: *1 Electrical Appliance and Material Safety Law of Japan
*2 Standard provided

Rated voltage (V)	Operational voltage range (V)
240–480	80–504
100–230–440	80-484

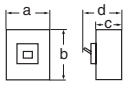
■ G-TWIN Global Series

Ampere frame				250A	
Type				**EW250JAGU**	**EW250RAGU**
Pole				3	3
Rated current Reference amb. temp. (40°C)		In(A)		125, 150, 160, 175, 200, 225, 250	
Rated impulse withstand voltage		Uimp(kV)		6	6
Isolation compliant				●	●
Rated voltage Ue (AC V)		IEC		100-230-440	
		UL		240-480	
Type of earth leakage trip action				AC type	
Instantaneous trip type	Rated sensitive current (mA)			30	
	Tripping time (s)			0.1 or less	
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/200/500/1000 changeover	
	Tripping time (s)			0.1/0.4/1/2 changeover	
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1	
Rated breaking capacity	IEC60947-2 EN60947-2 JISC8201-2-2 Icu/Ics (kA)	AC	440V	30/15	50/25
			415V	30/15	50/25
			400V	30/15	50/25
			380V	30/15	50/25
			230V	50/25	100/50
			200V	50/25	100/50
			100V	50/25	100/50
	GB14048.2 Icu/Ics (kA)	AC	400V	30/15	50/25
			230V	50/25	100/50
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	480V/Δ	30	50
			480V/Y	30	50
			240V	50	100
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)
	CCC certificate			●	●
	UL Listed (NEMA AB1)			●	●
Dimensions (inch(mm)) 			a	4.134 (105)	4.134 (105)
			b	7.126 (181)	7.126 (181)
			c	2.677 (68)	2.677 (68)
			d	3.740 (95)	3.740 (95)
Mass (kg)				1.8	1.8
Tripping device				Thermal-magnetic	
Connecting terminal		Page 130			
Screw		S□		○	○
Flat				○	○
Block				○	○
Internal accessories		Page 162			
Alarm switch		K		○	○
Auxiliary switch		W		○	○
Undervoltage trip		R		○	○
Shunt trip		F		○	○
Earth alarm switch		L		○	○
External accessories		Page 164			
Operating handle N-type		N		○	○
Operating handle V-type		V		○	○
Operating handle F-type		F		○	○
Terminal cover Short		BT□S		○ *1	○ *1
Terminal cover Long		BT□L		○	○
Insulation barrier Interphase		BP		○	○

●: Approved ○: Available –: Not available
Note: *1 Standard provided

Rated voltage (V)	Operational voltage range (V)
240–480	80–504
100–230–440	80-484

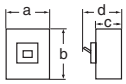
■ G-TWIN Global Series

Ampere frame				400A		
Type				**EW400SAGU**	**EW400RAGU**	**EW400HAGU**
Pole				3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		250, 300, 350, 400		
Rated impulse withstand voltage		Uimp(kV)		6	6	6
Isolation compliant				●	●	●
Rated voltage Ue (AC V)		IEC		100-230-440		
		UL		240-480		
Type of earth leakage trip action				AC type		
Instantaneous trip type	Rated sensitive current (mA)			30		
	Tripping time (s)			0.1 or less		
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/200/500/1000 changeover		
	Tripping time (s)			0.1/0.4/1/2 changeover		
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1		
Rated breaking capacity	IEC60947-2 EN60947-2 JISC8201-2-2 Icu/Ics (kA)	AC	440V	36/18	50/25	70/35
			415V	36/18	50/25	70/35
			400V	36/18	50/25	70/35
			380V	36/18	50/25	70/35
			230V	85/43	100/50	125/63
			200V	85/43	100/50	125/63
			100V	85/43	100/50	125/63
	GB14048.2 Icu/Ics (kA)	AC	400V	36/18	50/25	70/35
			230V	85/43	100/50	125/63
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	480V/Δ	35	50	65 (with block terminal: 50)
			480V/Y	35	50	65 (with block terminal: 50)
			240V	50	100	100
Conforming to standards	CE Marking			● (TÜV)	● (TÜV)	● (TÜV)
	CCC certificate			●	●	●
	UL Listed (NEMA AB1)			●	●	●
Dimensions (inch(mm)) 			a	5.512 (140)	5.512 (140)	5.512 (140)
			b	10.12 (257)	10.12 (257)	10.12 (257)
			c	4.055 (103)	4.055 (103)	4.055 (103)
			d	5.748 (146)	5.748 (146)	5.748 (146)
Mass (kg)				6.3	6.3	6.3
Tripping device				Thermal-magnetic		
Connecting terminal			Page 130			
Screw			S□	–	–	–
Flat				○	○	○
Block				○	○	○
Internal accessories			Page 162			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	▲	▲	▲
External accessories			Page 164			
Operating handle N-type			N	○	○	○
Operating handle V-type			V	○	○	○
Operating handle F-type			F	○	○	○
Terminal cover Short			BT□S	○	○	○
Terminal cover Long			BT□L	○	○	○
Insulation barrier Interphase			BP	○	○	○

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

Rated voltage (V)	Operational voltage range (V)
240–480	80–504
100–230–440	80-484

■ G-TWIN Global Series

Ampere frame				630A
Type				**EW630RAGU**
Pole				3
Rated current Reference amb. temp. (40°C)		In(A)		500, 600, 630*1
Rated impulse withstand voltage		Uimp(kV)		6
Isolation compliant				●
Rated voltage Ue (AC V)		IEC		100-230-440
		UL		240-480
Instantaneous/time-delay trip type	Rated sensitive current (mA)			100/200/500/1000 changeover
	Tripping time (s)			0.1/0.4/1/2 changeover
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1
Rated breaking capacity	IEC60947-2 EN60947-2 JISC8201-2-2 Icu/Ics (kA)	AC	440V	50/25
			415V	50/25
			400V	50/25
			380V	50/25
			230V	100/50
			200V	100/50
			100V	100/50
	GB14048.2 Icu/Ics (kA)	AC	400V	50/25
			230V	100/50
	UL489 CAN/CSA C22.2 NO.5 (kA)	AC	480V/Δ	50
			480V/Y	50
			240V	100
Conforming to standards	CE Marking			● (TÜV)
	CCC certificate			●
	UL Listed (NEMA AB1)			●
Dimensions (inch(mm)) 			a	8.268 (210)
			b	10.83 (275)
			c	4.055 (103)
			d	5.748 (146)
Mass (kg)				10.2
Tripping device				Thermal-magnetic
Connecting terminal		Page 131		
Screw		S□		–
Flat				○
Block				○
Internal accessories		Page 163		
Alarm switch		K		○*2
Auxiliary switch		W		○*2
Undervoltage trip		R		○*2
Shunt trip		F		○*2
Earth alarm switch		L		▲
External accessories		Page 164		
Operating handle N-type		N		○
Operating handle V-type		V		○
Terminal cover Short		BT□S		○
Terminal cover Long		BT□L		○
Insulation barrier Interphase		BP		○

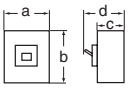
●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

Note: *1 Breakers for 630A cannot be manufactured with block terminals.

*2 Block terminals are not available.

Rated voltage (V)	Operational voltage range (V)
240–480	80–504
100–230–440	80-484

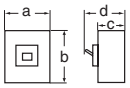
■ G-TWIN Standard Series / Motor protection

Ampere frame				32A	
Type				**EW32EAM**	**EW32SAM**
Pole				3	3
Rated current Reference amb. temp. (40°C)		In(A)		1.4, 2.6, 4, 5, 8, 10, 16, 24, 32	0.7, 1.4, 2, 2.6, 4, 5, 8, 10, 12, 16, 24, 32
Rated impulse withstand voltage		Uimp(kV)		4	4
Isolation compliant				●	●
Rated voltage Ue(AC V)				100-230-440	100-230-440
Rated sensitive current (mA)				30, 100	30, 100/200/500 changeover
Tripping time (s)				0.1 or less	0.1 or less
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-2	AC	440V	1.5/1	2.5/2
			415V	1.5/1	2.5/2
			400V	1.5/1	2.5/2
			380V	1.5/1	2.5/2
			230V	2.5/2	5/3
			200V	2.5/2	5/3
			100V	5/3	5/3
	GB14048.2	AC	400V	1.5/1	2.5/2
			230V	2.5/2	5/3
Conforming to standards	CE Marking			●	●
	CCC certificate			●	●
	Electrical Appliance and Material Safety Law*1			●	●
Dimensions (mm) 			a	75	75
			b	100	100
			c	60	60
			d	84	84
Mass (kg)				0.5	0.5
Tripping device				Hydraulic-magnetic	Hydraulic-magnetic
Front mounting, front connection			No-mark	○	○
Front mounting, rear connection			X	○	○
Flush mounting, front connection			E	○	○
Flush mounting, top & buttom connection			Y	○	○
Plug-in mounting			P	○	○
IEC 35mm wide rail mounting			No-mark	○	○
Internal accessories			Page 161		
Alarm switch			K	○	○
Auxiliary switch			W	○	○
Undervoltage trip			R	○	○
Shunt trip			F	○	○
Earth alarm switch			L	–	–
External accessories			Page 164		
Handle padlocking device Cap type			QN	○	○
Handle padlocking device Plate type			Q2	▲	▲
Operating handle N-type			N	○	○
Operating handle V-type			V	○	○
Terminal cover Short			BT□S	○	○
Terminal cover Long			BT□L	○	○
Insulation barrier Interphase			BP	○	○
Insulation barrier Earth			BL	○	○
Handle locking cover			L1	○	○
Flat terminal			SS	○	○
Block terminal			SL	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

■ G-TWIN Standard Series / Motor protection

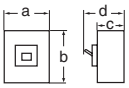
Ampere frame				50A	
Type				**EW50EAM**	**EW50SAM**
Pole				3	3
Rated current Reference amb. temp. (40°C)		In(A)		45	0.7, 1.4, 2, 2.6, 4, 5, 8, 10, 12, 16, 24, 32, 40, 45
Rated impulse withstand voltage		Uimp(kV)		4	6
Isolation compliant				●	●
Rated voltage Ue (AC V)				100-230-440	100-230-440
Rated sensitive current (mA)				30, 100/200 changeover	30, 100/200/500 changeover
Tripping time (s)				0.1 or less	0.1 or less
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-2	AC	440V	2.5/2	7.5/4
			415V	2.5/2	7.5/4
			400V	2.5/2	7.5/4
			380V	2.5/2	7.5/4
			230V	5/3	10/5
			200V	5/3	10/5
			100V	5/3	10/5
	GB14048.2	AC	400V	2.5/2	7.5/4
			230V	5/3	10/5
Conforming to standards	CE Marking			●	●
	CCC certificate			●	●
	Electrical Appliance and Material Safety Law*1			●	●
Dimensions (mm) 			a	75	75
			b	100	100
			c	60	60
			d	84	84
Mass (kg)				0.6	0.6
Tripping device				Hydraulic-magnetic	Hydraulic-magnetic
Front mounting, front connection			No-mark	○	○
Front mounting, rear connection			X	○	○
Flush mounting, front connection			E	○	○
Flush mounting, top & buttom connection			Y	○	○
Plug-in mounting			P	○	○
IEC 35mm wide rail mounting			No-mark	○	○
Internal accessories			Page 161		
Alarm switch			K	○	○
Auxiliary switch			W	○	○
Undervoltage trip			R	○	○
Shunt trip			F	○	○
Earth alarm switch			L	–	–
External accessories			Page 164		
Handle padlocking device Cap type			QN	○	○
Handle padlocking device Plate type			Q2	▲	▲
Operating handle N-type			N	○	○
Operating handle V-type			V	○	○
Terminal cover Short			BT□S	○	○
Terminal cover Long			BT□L	○	○
Insulation barrier Interphase			BP	○	○
Insulation barrier Earth			BL	○	○
Handle locking cover			L1	○	○
Flat terminal			SS	○	○
Block terminal			SL	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

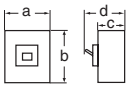
■ G-TWIN Standard Series / Motor protection

Ampere frame				63A		100A
Type				**EW63EAM**	**EW63SAM**	**EW100EAM**
Pole				3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		63	63	63, 75, 90
Rated impulse withstand voltage		Uimp(kV)		6	6	6
Isolation compliant				●	●	●
Rated voltage Ue (AC V)				100-230-440	100-230-440	100-230-440
Rated sensitive current (mA)				30, 100/200 changeover	30, 100/200/500 changeover	30, 100/200/500 changeover
Tripping time (s)				0.1 or less	0.1 or less	0.1 or less
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-2	AC	440V	2.5/2	7.5/4	10/5
			415V	2.5/2	7.5/4	10/5
			400V	2.5/2	7.5/4	10/5
			380V	2.5/2	7.5/4	10/5
			230V	5/3	10/5	25/13
			200V	5/3	10/5	25/13
			100V	5/3	10/5	25/13
	GB14048.2	AC	400V	2.5/2	7.5/4	10/5
			230V	5/3	10/5	25/13
Conforming to standards	CE Marking			●	●	●
	CCC certificate			●	●	●
	Electrical Appliance and Material Safety Law*1			●	●	●
Dimensions (mm) 			a	75	75	75
			b	100	100	100
			c	60	60	60
			d	84	84	84
Mass (kg)				0.6	0.6	0.6
Tripping device				Hydraulic-magnetic	Hydraulic-magnetic	Hydraulic-magnetic
Front mounting, front connection			No-mark	○	○	○
Front mounting, rear connection			X	○	○	○
Flush mounting, front connection			E	○	○	○
Flush mounting, top & buttom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○
Internal accessories			Page 161			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	–	–	–
External accessories			Page 164			
Handle padlocking device Cap type			QN	○	○	○
Handle padlocking device Plate type			Q2	▲	▲	▲
Operating handle N-type			N	○	○	○
Operating handle V-type			V	○	○	○
Terminal cover Short			BT□S	○	○	○
Terminal cover Long			BT□L	○	○	○
Insulation barrier Interphase			BP	○	○	○
Insulation barrier Earth			BL	○	○	○
Handle locking cover			L1	○	○	○
Flat terminal			SS	○	○	○
Block terminal			SL	–	–	–

●: Approved ○: Available –: Not available ▲: Factory-mounted accessory
Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

■ G-TWIN Standard Series / Motor protection

Ampere frame				125A		250A		
Type				**EW125JAM**	**EW125RAM**	**EW250EAM**	**EW250JAM**	**EW250RAM**
Pole				3	3	3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		16, 24, 32, 40, 45, 60, 75, 90		125, 150, 175, 225		
Rated impulse withstand voltage		Uimp(kV)		6	6	6	6	6
Isolation compliant				●	●	●	●	●
Rated voltage Ue (AC V)				100-230-440	100-230-440	100-230-440	100-230-440	100-230-440
Type of earth leakage trip action				AC type		AC type		
Instantaneous trip type	Rated sensitive current (mA)			30		30		
	Tripping time (s)			0.1 or less		0.1 or less		
Instantaneous/ time-delay trip type	Rated sensitive current (mA)			100/200/500/1000 changeover		100/200/500/1000 changeover		
	Tripping time (s)			0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		
	Inertia non-tripping time (s) (2IΔn)			0/0.2/0.5/1		0/0.2/0.5/1		
Rated breaking capacity Icu/Ics (kA)	IEC 60947-2 EN 60947-2 JIS C 8201-2-2	AC	440V	30/15	50/25	18/9	30/15	50/25
			415V	30/15	50/25	18/9	30/15	50/25
			400V	30/15	50/25	18/9	30/15	50/25
			380V	30/15	50/25	18/9	30/15	50/25
			230V	50/25	100/50	36/18	50/25	100/50
			200V	50/25	100/50	36/18	50/25	100/50
			100V	50/25	100/50	36/18	50/25	100/50
	GB14048.2	AC	400V	30/15	50/25	18/9	30/15	50/25
			230V	50/25	100/50	36/18	50/25	100/50
Conforming to standards	CE Marking			●	●	●	●	●
	CCC certificate			●	●	●	●	●
	Electrical Appliance and Material Safety Law*1			●	●	–	–	–
Dimensions (mm) 			a	90	90	105	105	105
			b	155	155	165	165	165
			c	68	68	68	68	68
			d	95	95	95	95	95
Mass (kg)				1.3	1.3	1.8	1.8	1.8
Tripping device				Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic
Front mounting, front connection			No-mark	○	○	○	○	○
Front mounting, rear connection			X	○	○	○	○	○
Flush mounting, front connection			E	○	○	○	○	○
Flush mounting, top & buttom connection			Y	○	○	○	○	○
Plug-in mounting			P	○	○	○	○	○
Internal accessories			Page 162					
Alarm switch			K	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○
Shunt trip			F	○	○	○	○	○
Earth alarm switch			L	○	○	○	○	○
External accessories			Page 164					
Handle padlocking device Cap type			Q1	○	○	○	○	○
Handle padlocking device Plate type			Q2	○	○	○	○	○
Operating handle N-type			N	○	○	○	○	○
Operating handle V-type			V	○	○	○	○	○
Terminal cover Short			BT□S	○	○	○	○	○
Terminal cover Long			BT□L	○	○	○	○	○
Insulation barrier Interphase			BP	○	○	○	○	○
Insulation barrier Earth			BL	○	○	○	○	○
Handle locking cover			L1	○	○	○	○	○
Flat terminal			SS	○	○	○	○	○
Block terminal			SL	–	–	–	–	–

●: Approved ○: Available –: Not available

Note: *1 Electrical Appliance and Material Safety Law of Japan

Rated voltage (V)	Operational voltage range (V)
100–230–440	80–484

Mounting modifications

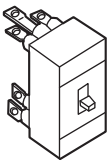
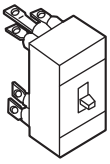
■ Mounting modifications

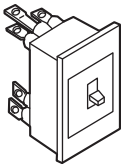
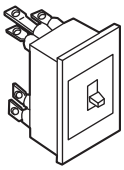
• Standard series

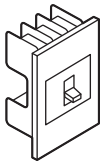
Standard type FUJI breakers are front mounting with front connections. The standard breaker can easily be modified to become front mounting rear connection type, flush mounting type and plug-in type. The additional parts such as insulation bases, barriers, covers and similar parts are added as required.

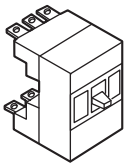
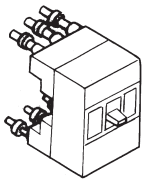
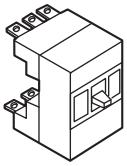
Front mounting
Front connection

BASIC DESIGN

Additional main parts	Front mounting Rear connection (X type)
Bar stud terminal 	EW32 EW50 EW63 EW100
Bar stud terminal 	EW125 EW160 EW250 EW400 EW630 EW800 Each stud can be turned by 90°

Additional main parts	Flush mounting Rear connection (E type)
Bar stud terminal 	EW32 EW50 EW63 EW100
Bar stud terminal 	EW125 EW160 EW250 EW400 EW630 EW800 Each stud can be turned by 90°

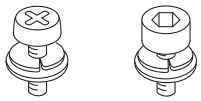
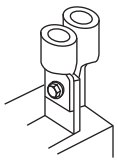
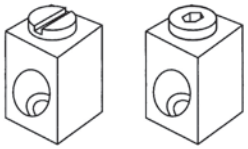
Additional main parts	Flush mounting Top and bottom connection (Y type)
Decorative flush plate 	EW32 EW50 EW63 EW100

Additional main parts	Plug-in mounting (P type)
Bar stud terminal 	EW32 EW50 EW63 EW100
Round stud terminal 	EW125
Bar stud terminal 	EW160 EW250 EW400 EW630 EW800 Each stud can be turned by 90°

• **Global series**

Front mounting
Front connection

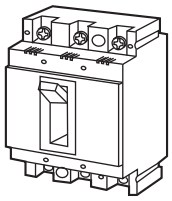
BASIC DESIGN

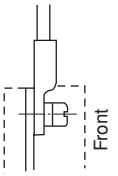
Screw	Flat terminal	Block terminal
		

Terminal connection

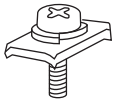
■ Terminal connection/Front mounting, front connection

• 32AF to 100AF



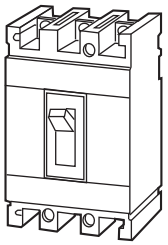


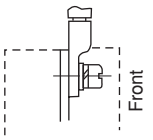
Flat terminal

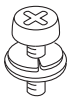
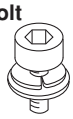
Self lifting screw 	Breaker type	Tightening torque (N•m)	Size
	EW32 EW50 EW100*	2.3 to 2.8	M5 × 14
Pan-head screw 	EW63 EW100	5.5 to 7.5	M8 × 15

* Breaker of rated current : 50A

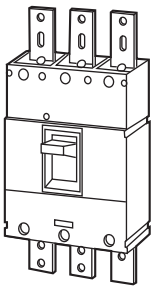
• 125AF to 250AF

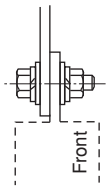




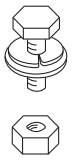
Pan-head screw 	Breaker type	Tightening torque (N•m)	Size (mm)
	EW125	5.5 to 7.5	M8 × 16
Hexagonal socket head bolt 	EW160 EW250	8.0 to 13.0	M8 × 16

• 400AF to 800AF



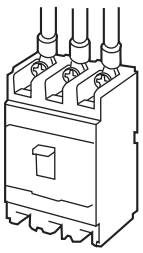


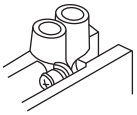
Flat terminal

Hexagonal head bolt 	Breaker type	Tightening torque (N•m)	Size (mm)
	EW400	40 to 50	M12 × 35
	EW630 EW800	40 to 50	M12 × 40

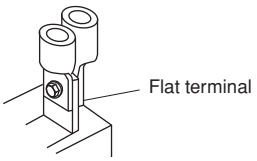
Type of connection/up to 250AF
Front mounting front connection

Direct connection





Flat terminal connection
Flat terminals are required.



Flat bar studs/1-hole type

Breaker type	Pole	Type of flat terminal
EW32 EW50	2 3	**BZ6S10C502** **BZ6S10C503**
EW63 EW100*	2 3	**BZ6S10C1002** **BZ6S10C1003**
EW125	3 4	**BW9SS0CA-3** **BW9SS0CA-4**
EW160 EW250	3 4	**BW9SS0GA-3** **BW9SS0GA-4**

* EW100 breaker of rated current 50A: BZ6S10C502 or 503.

Wire size and terminal

■ Wire size and crimp terminal

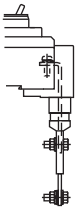
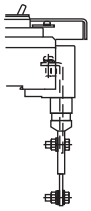
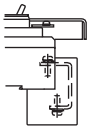
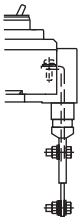
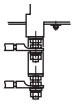
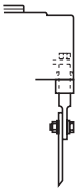
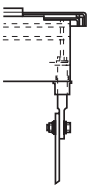
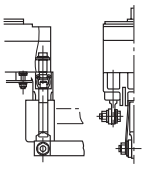
The following is the size recommendations for crimp terminals.

Crimp terminal R : JIS C2805
CB : JEM-1399
JST : Product of Japan Crimp Terminal Co., Ltd.

Ampere frame	Breaker	Wire size(mm²)										
		1.04 | 2.63	2.63 | 6.64	6.64 | 10.52	10.52 | 16.78	16.78 | 26.66	26.66 | 42.42	42.42 | 60.57	96.3 | 117.2	117.2 | 152.05	192.6 | 242.27	242.27 | 325
32	EW32	R2-5	R5.5-5	R8-5	R14-5							
50	EW50	R2-5	R5.5-5	R8-5	R14-5							
63	EW63	R2-8	R5.5-8	R8-8	R14-8	JST22-S8						
100	EW100	R2-8	R5.5-8	R8-8	R14-8	JST22-S8	JST38-S8					
125	EW125	R2-8	R5.5-8	R8-8	R14-8	R22-8	JST38-S8	CB60-8				
160 250	EW160 EW250					R22-8	R38-8	R60-8	CB100-8			
400	EW400						R38-12	R60-12	R100-12	R150-12	R200-12	JST325-12
630	EW630								R100-12	R150-12	R200-12	JST325-12
800	EW800								R100-12	R150-12	R200-12	JST325-12

■ Breaker termination

• Standard

ELCB type	Front connection	Rear connection **X**	Flush mounting **E**	**Y**	Plug-in mounting **P**
EW32 EW50	Self-lifiting terminal				
EW63 EW100	Flat terminal				
EW125					
EW160 EW250	Flat terminal			—	
EW400 EW630 EW800	Flat terminal	90˚ rotational stud	90˚ rotational stud		90˚ rotational stud

Wire size and terminal

■ Notes on wiring (global series)

Notes on connecting wires (conductors)

- Connect wires to the UL breaker according to NEC (National Electric Code) or CEC (Canadian Electrical Code) Part 1.
- Use 75°C copper wires for wiring. UL-certified or CSA-certified wires are recommended.
- If a large current (for example, a short-circuit current) flows, it causes a huge electromagnetic force between wires. Therefore, be sure to secure the wires sufficiently.
- Re-tighten terminal screws periodically.

Code	Terminal position		Applicable breaker type		
	Line	Load	EW50, 100	EW125, 250	EW400, 630, 800
Blank	Screw	Screw	●	●	–
Blank	Flat teminal	Flat teminal	–	–	●
SB	Block terminal	Block terminal	–	●	●
SF	Flat teminal	Flat teminal	●	●	–
S3	Screw	Flat terminal	●	●	–
S4	Flat teminal	Screw	●	●	–
S5	Screw	Block terminal	–	●	–
S6	Block terminal	Screw	–	●	–
S7	Flat teminal	Block terminal	–	●	●
S8	Block terminal	Flat terminal	–	●	●

Block terminal connection

- Choose from the stranded wires shown in Table.

Wire size: AWG or MCM [mm^2]	No. of wires stranded
14 to 2 [2.1 to 33.6]	7
1 to 4/0 [42.4 to 107.2]	19
250 to 500 [127 to 250]	37

Values in [ ] are those converted from AWG or MCM sizes to mm^2.

* See the instruction manual that comes with the breaker for more details.

Precautions

- Two wires of different sizes cannot be connected to the same block terminal.
- Be sure to use stranded wires according to Table "Number of wires stranded."
- Multi-conductor wires cannot be connected.
- Do not solder wires together.

Wire size and crimp terminal

• Crimp terminal connection

ELCB	Rated current (A)	Applicable crimp terminal 75˚C wire			Connectable wire size (AWG)	Tightening torque (N•m)	Type of screw head and size (mm)
		J.S.T Mfg. Co., Ltd.	Nichifu Co., Ltd.	Daido Solderless Terminal Mfg. Co., Ltd.	75˚C wire		
EW50RAGU	3	R2-5	R2-5M R2-5	2-S5, 2-5	14AWG	2.3-2.8	Cross/straight slotted pan-head screw M5 x 14
	5						
	10						
	15						
	20	R5.5-5	R3.5-5S, R3.5-5L, 5.5-6N, R5.5-5S, R5.5-5	3.5-5, 5.5-S5, 5.5-5, 5.5-L5	12AWG		
	30				10AWG		
	40	R8-5	R8-5S, R8-5	8-S5, 8-5	8AWG		
	50						
EW100EAGU	60	R14-8	R14-8S, R14-8	R14-S8, R14-8	6AWG	5.5-7.5	Cross/straight slotted pan-head screw M8 x 15
	75	22-S8	R22-8S, R22-8	R22-S8, 22-8	4AWG		
	100	38-S8	R38-8S	38-S8	3AWG		
EW125JAGU EW125RAGU	15	R2-8	R2-8	2-8, 2-B8	14AWG	5.8 (5.3-6.4)	Cross/straight slotted pan-head screw M8 x 16
	20	5.5-S8, R5.5-8	R3.5-8, R5.5-8	3.5-8, 5.5-8	12AWG		
	30		R5.5-8	5.5-8	10AWG		
	40	8-8NS, R8-8	R8-8	8-8	8AWG		
	50						
	60	14-8NS, 14-S8, R14-8	R14-8S, R14-8	14-S8, 14-8	6AWG		
	70	22-S8, R22-8, CB22-S8	R22-8S, R22-8, CB22-8S	22-S8, 22-8, CB22-8	4AWG		
	75						
	80						
	90	38-S8	R38-8S	38-S8	3AWG		
	100						
	125				1AWG		
EW250JAGU EW250RAGU	125	38-S8, R38-8	R38-8S, R38-8	38-S8, 38-8	1AWG	10.5 (8-13)	Hexagon socket head bolt M8 x 16
	150	60-S8, R60-8	R60-8, CB60-8, CB60-8S	60-8, CB60-8	1/0AWG		
	175	70-8	R70-8	70-8	2/0AWG		
	200	CB80-S8		CB80-8	3/0AWG		
	225	CB100-S8		CB100-8	4/0AWG		
	250	CB150-S8	CB150-8	CB150-8	250MCM		

Notes: • AWG/MCM is the UL approved wire unit.
• The allowable temperature of wire is 75˚C. (UL CSA approved)
• Be sure to use UL-certified or CSA-certified crimp tools commercially available.

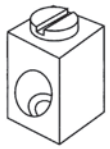
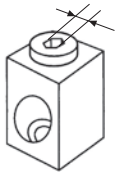
• Flat terminal connection

ELCB	Rated current (A)	Applicable crimp terminal 75˚C wire			Connectable wire size (AWG)	Tightening torque (N•m)		Type of screw head and size (mm)
		J.S.T Mfg. Co., Ltd.	Nichifu Co., Ltd.	Daido Solderless Terminal Mfg. Co., Ltd.	75˚C wire	Wire side	MCCB side	
EW50RAGU	3	R2-5	R2-5M R2-5	2-S5, 2-5	14AWG	3.5 to 4.5	2.3 to 2.8	Hexagon socket head bolt M5 x 16
	5							
	10							
	15							
	20	R5.5-5	R3.5-5S, R3.5-5L, 5.5-6N. R5.5-5S, R5.5-5	3.5-5, 5.5-S5 5.5-5, 5.5-L5	12AWG			
	30				10AWG			
	40	R8-5	R8-5S, R8-5	8-S5, 8-5	8AWG			
	50							
EW100EAGU	60	R14-8	R14-8S, R14-8	R14-S8, R14-8	6AWG	8 to 10	5.5 to 7.5	Hexagon socket head bolt M8 x 22
	75	22-S8	R22-8S, R22-8	R22-S8, 22-8	4AWG			
	100	38-S8	R38-8S	38-S8	3AWG			
EW125JAGU EW125RAGU	15	R2-8	R2-8	2-8, 2-B8	14AWG	9 (8 to 10)	5.8 (5.3 to 6.4)	Cross/straight slotted pan-head screw M8 x 16
	20	5.5-S8, R5.5-8	R3.5-8, R5.5-8	3.5-8, 5.5-8	12AWG			
	30		R5.5-8	5.5-8	10AWG			
	40	8-8NS, R8-8	R8-8	8-8	8AWG			
	50							
	60	14-8NS, 14-S8, R14-8	R14-8S, R14-8	14-S8, 14-8	6AWG			
	75	22-S8, R22-8, CB22-S8	R22-8S, R22-8, CB22-8S	22-S8, 22-8, CB22-8	4AWG			
	100	38-S8	R38-8S	38-S8	3AWG			
	125				1AWG			
EW250JAGU EW250RAGU	125	38-S8, R38-8	R38-8S, R38-8	38-S8, 38-8	1AWG	9 (8 to 10)	10.5 (8 to 13)	Hexagon socket head bolt M8 x 16
	150	60-S8, R60-8	R60-8, CB60-8, CB60-8S	60-8, CB60-8	1/0AWG			
	175	70-8	R70-8	70-8	2/0AWG			
	200	CB80-S8		CB80-8	3/0AWG			
	225	CB100-S8		CB100-8	4/0AWG			
	250	CB150-S8	CB150-8	CB150-8	250MCM			
EW400SAGU EW400RAGU EW400HAGU	250	150-12	R150-12		250MCM	45 (40 to 50)	43.5 (39.2 to 48)	Hexagon head bolt M12 x 35
	300	180-12	R180-12		350MCM			
	350	325-12	R325-12N		500MCM			
	400	325-12	R325-12N		500MCM			
		R80-12	R80-12		3/0AWG(x2)			
EW630RAGU	500	R150-12		R150-12	250MCM(x2)	47.04 (42.4 to 51.7)	47.04 (42.4 to 51.7)	Hexagon head bolt M12 x 40
	600	180-12		R180-12	350MCM(x2)			
	630	325-12	R325-12N	R325-12 □	500MCM(x2)			

Notes: • AWG/MCM is the UL approved wire unit.
• The allowable temperature of wire is 75˚C. (UL CSA approved)

Wire size and terminal

• Block terminal connection

ELCB	Rated current (A)	Connectable wire size (AWG)	Tightening torque (N•m)	Type of screw head and size (mm)	Figure
EW125JAGU EW125RAGU	15	14AWG	5.8 (5.8 to 6.4)	Slotted set screw	
	20	12AWG			
	30	10AWG			
	40	8AWG			
	50				
	60	6AWG			
	75	4AWG			
	100	3AWG			
	125	1AWG			
EW250JAGU EW250RAGU	125	1AWG	23 (23 to 25.3)	Hexagon socket head setscrew: 8 mm (5/16 inch)	Screw head size 
	150	1/0AWG			
	175	2/0AWG			
	200	3/0AWG			
	225	4/0AWG			
	250	250MCM			
EW400SAGU EW400RAGU EW400HAGU	250	250MCM	43.5 (43.5 to 48)	Hexagon socket head setscrew: 9.53 mm (3/8 inch)	
	300	350MCM			
	350	500MCM			
	400	3/0AWG(x2)	31.9 (31.9 to 35.1)	Hexagon socket head setscrew: 8 mm (5/16 inch)	
EW630RAGU	500	250MCM(x2)	31.1 (31.1 to 34.2)	Hexagon socket head setscrew: 8 mm (5/16 inch)	
	600	350MCM(x2)			

Notes: • AWG/MCM is the UL approved wire unit.
• The allowable temperature of wire is 75˚C. (UL CSA approved)

Type number/Line protection

■ Type number, Standard series (Line protection)

● AAG series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
32	5	EW32AAG-2P005■□	A, B, C	Blank, X, E, Y, P
	10	EW32AAG-2P010■□		
	15	EW32AAG-2P015■□		
	20	EW32AAG-2P020■□		
	30	EW32AAG-2P030■□		
	32	EW32AAG-2P032■□		
50	5	EW50AAG-2P005■□	A, B, C	Blank, X, E, Y, P
	10	EW50AAG-2P010■□		
	15	EW50AAG-2P015■□		
	20	EW50AAG-2P020■□		
	30	EW50AAG-2P030■□		
	32	EW50AAG-2P032■□		
	40	EW50AAG-2P040■□		
	50	EW50AAG-2P050■□		

● EAG series, 2-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
100	50	EW100EAG-2P050■□	B, K	Blank, X, E, Y, P
	60	EW100EAG-2P060■□		
	63	EW100EAG-2P063■□		
	75	EW100EAG-2P075■□		
	100	EW100EAG-2P100■□		

● AAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
32	5	EW32AAG-3P005■□	A, B, C	Blank, X, E, Y, P
	10	EW32AAG-3P010■□		
	15	EW32AAG-3P015■□		
	20	EW32AAG-3P020■□		
	30	EW32AAG-3P030■□		
	32	EW32AAG-3P032■□		
50	5	EW50AAG-3P005■□	A, B, C	Blank, X, E, Y, P
	10	EW50AAG-3P010■□		
	15	EW50AAG-3P015■□		
	20	EW50AAG-3P020■□		
	30	EW50AAG-3P030■□		
	32	EW50AAG-3P032■□		
	40	EW50AAG-3P040■□		
	50	EW50AAG-3P050■□		
100	60	EW100AAG-3P060■□	B, K	Blank, X, E, Y, P
	63	EW100AAG-3P063■□		
	75	EW100AAG-3P075■□		
	100	EW100AAG-3P100■□		

● JAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
125	15	EW125JAG-3P015■□	B, J	Blank, X, E, P
	20	EW125JAG-3P020■□		
	30	EW125JAG-3P030■□		
	40	EW125JAG-3P040■□		
	50	EW125JAG-3P050■□		
	60	EW125JAG-3P060■□		
	75	EW125JAG-3P075■□		
	100	EW125JAG-3P100■□		
	125	EW125JAG-3P125■□		
160	125	EW160JAG-3P125■□	B, J	Blank, X, E, P
	150	EW160JAG-3P150■□		
	160	EW160JAG-3P160■□		
250	175	EW250JAG-3P175■□	B, J	Blank, X, E, P
	200	EW250JAG-3P200■□		
	225	EW250JAG-3P225■□		
	250	EW250JAG-3P250■□		

Mounting	Connection	□
Front	Front	Blank
Front	Rear	X
Flush	Rear	E
Flush	Top and buttom	Y
Plug-in		P

Rated sensitive current	■
15mA	A
30mA	B
100mA	C
50mA	D
100/300/500/1000mA changeover	J
100/200mA, 100/200/500mA changeover	K
100/200/500/1000mA changeover	K

Type number/Line protection

● EAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection *
32	5	EW32EAG-3P005■□	A, B, C	Blank, X, E, Y, P
	10	EW32EAG-3P010■□		
	15	EW32EAG-3P015■□		
	20	EW32EAG-3P020■□		
	30	EW32EAG-3P030■□		
	32	EW32EAG-3P032■□		
50	5	EW50EAG-3P005■□	A, B, K	Blank, X, E, Y, P
	10	EW50EAG-3P010■□		
	15	EW50EAG-3P015■□		
	20	EW50EAG-3P020■□		
	30	EW50EAG-3P030■□		
	32	EW50EAG-3P032■□		
	40	EW50EAG-3P040■□		
	50	EW50EAG-3P050■□		
63	60	EW63EAG-3P060■□	A, B, K	Blank, X, E, Y, P
	63	EW63EAG-3P063■□		
100	50	EW100EAG-3P050■□	B, K	Blank, X, E, Y, P
	60	EW100EAG-3P060■□		
	63	EW100EAG-3P063■□		
	75	EW100EAG-3P075■□		
	100	EW100EAG-3P100■□		
160	125	EW160EAG-3P125■□	B, J	Blank, X, E, P
	150	EW160EAG-3P150■□		
	160	EW160EAG-3P160■□		
250	175	EW250EAG-3P175■□	B, J	Blank, X, E, P
	200	EW250EAG-3P200■□		
	225	EW250EAG-3P225■□		
	250	EW250EAG-3P250■□		
400	250	EW400EAG-3P250■□	B, J	Blank, X, E, P
	300	EW400EAG-3P300■□		
	350	EW400EAG-3P350■□		
	400	EW400EAG-3P400■□		
630	500	EW630EAG-3P500■□	J	Blank, X, E, P
	600	EW630EAG-3P600■□		
	630	EW630EAG-3P630■□		
800	700	EW800EAG-3P700■□	J	Blank, X, E, P
	800	EW800EAG-3P800■□		

● SAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection *
32	3	EW32SAG-3P003■□	B, K	Blank, X, E, Y, P
	5	EW32SAG-3P005■□		
	10	EW32SAG-3P010■□		
	15	EW32SAG-3P015■□		
	20	EW32SAG-3P020■□		
	30	EW32SAG-3P030■□		
	32	EW32SAG-3P032■□		
50	5	EW50SAG-3P005■□	B, K	Blank, X, E, Y, P
	10	EW50SAG-3P010■□		
	15	EW50SAG-3P015■□		
	20	EW50SAG-3P020■□		
	30	EW50SAG-3P030■□		
	32	EW50SAG-3P032■□		
	40	EW50SAG-3P040■□		
	50	EW50SAG-3P050■□		
63	60	EW63SAG-3P060■□	B, K	Blank, X, E, Y, P
	63	EW63SAG-3P063■□		
125	15	EW125SAG-3P015■□	B, J	Blank, X, E, P
	20	EW125SAG-3P020■□		
	30	EW125SAG-3P030■□		
	40	EW125SAG-3P040■□		
	50	EW125SAG-3P050■□		
	60	EW125SAG-3P060■□		
	75	EW125SAG-3P075■□		
	100	EW125SAG-3P100■□		
	125	EW125SAG-3P125■□		
160	125	EW160SAG-3P125■□	B, J	Blank, X, E, P
	150	EW160SAG-3P150■□		
	160	EW160SAG-3P160■□		
250	175	EW250SAG-3P175■□	B, J	Blank, X, E, P
	200	EW250SAG-3P200■□		
	225	EW250SAG-3P225■□		
	250	EW250SAG-3P250■□		
400	250	EW400SAG-3P250■□	B, J	Blank, X, E, P
	300	EW400SAG-3P300■□		
	350	EW400SAG-3P350■□		
	400	EW400SAG-3P400■□		

* See page 133.

● RAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection *
50	10	EW50RAG-3P010■□	B, K	Blank, X, E, Y, P
	15	EW50RAG-3P015■□		
	20	EW50RAG-3P020■□		
	30	EW50RAG-3P030■□		
	32	EW50RAG-3P032■□		
	40	EW50RAG-3P040■□		
	50	EW50RAG-3P050■□		
63	60	EW63RAG-3P060■□	B, K	Blank, X, E, Y, P
	63	EW63RAG-3P063■□		
125	15	EW125RAG-3P015■□	B, J	Blank, X, E, P
	20	EW125RAG-3P020■□		
	30	EW125RAG-3P030■□		
	40	EW125RAG-3P040■□		
	50	EW125RAG-3P050■□		
	60	EW125RAG-3P060■□		
	75	EW125RAG-3P075■□		
	100	EW125RAG-3P100■□		
	125	EW125RAG-3P125■□		
160	125	EW160RAG-3P125■□	B, J	Blank, X, E, P
	150	EW160RAG-3P150■□		
	160	EW160RAG-3P160■□		
250	175	EW250RAG-3P175■□	B, J	Blank, X, E, P
	200	EW250RAG-3P200■□		
	225	EW250RAG-3P225■□		
	250	EW250RAG-3P250■□		
400	250	EW400RAG-3P250■□	B, J	Blank, X, E, P
	300	EW400RAG-3P300■□		
	350	EW400RAG-3P350■□		
	400	EW400RAG-3P400■□		
630	500	EW630RAG-3P500■□	J	Blank, X, E, P
	600	EW630RAG-3P600■□		
	630	EW630RAG-3P630■□		
800	700	EW800RAG-3P700■□	J	Blank, X, E, P
	800	EW800RAG-3P800■□		

● HAG series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection *
400	250	EW400HAG-3P250■□	B, J	Blank, X, E, P
	300	EW400HAG-3P300■□		
	350	EW400HAG-3P350■□		
	400	EW400HAG-3P400■□		
630	500	EW630HAG-3P500■□	J	Blank, X, E, P
	600	EW630HAG-3P600■□		
	630	EW630HAG-3P630■□		
800	700	EW800HAG-3P700■□	J	Blank, X, E, P
	800	EW800HAG-3P800■□		

* See page 133.

● JAG series, 4-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection *
125	15	EW125JAG-4P015■□	B, J	Blank, X, E
	20	EW125JAG-4P020■□		
	30	EW125JAG-4P030■□		
	40	EW125JAG-4P040■□		
	50	EW125JAG-4P050■□		
	60	EW125JAG-4P060■□		
	75	EW125JAG-4P075■□		
	100	EW125JAG-4P100■□		
	125	EW125JAG-4P125■□		
160	125	EW160JAG-4P125■□	B, J	Blank, X, E
	150	EW160JAG-4P150■□		
	160	EW160JAG-4P160■□		
250	175	EW250JAG-4P175■□	B, J	Blank, X, E
	200	EW250JAG-4P200■□		
	225	EW250JAG-4P225■□		
	250	EW250JAG-4P250■□		

● SAG series, 4-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection *
125	15	EW125SAG-4P015■□	B, J	Blank, X, E
	20	EW125SAG-4P020■□		
	30	EW125SAG-4P030■□		
	40	EW125SAG-4P040■□		
	50	EW125SAG-4P050■□		
	60	EW125SAG-4P060■□		
	75	EW125SAG-4P075■□		
	100	EW125SAG-4P100■□		
	125	EW125SAG-4P125■□		
160	125	EW160SAG-4P125■□	B, J	Blank, X, E
	150	EW160SAG-4P150■□		
	160	EW160SAG-4P160■□		
250	175	EW250SAG-4P175■□	B, J	Blank, X, E
	200	EW250SAG-4P200■□		
	225	EW250SAG-4P225■□		

Type number/Line protection

● RAG series, 4-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection *
125	15	EW125RAG-4P015■□	B, J	Blank, X, E
	20	EW125RAG-4P020■□		
	30	EW125RAG-4P030■□		
	40	EW125RAG-4P040■□		
	50	EW125RAG-4P050■□		
	60	EW125RAG-4P060■□		
	75	EW125RAG-4P075■□		
	100	EW125RAG-4P100■□		
	125	EW125RAG-4P125■□		
160	125	EW160RAG-4P125■□	B, J	Blank, X, E
	150	EW160RAG-4P150■□		
	160	EW160RAG-4P160■□		
250	175	EW250RAG-4P175■□	B, J	Blank, X, E
	200	EW250RAG-4P200■□		
	225	EW250RAG-4P225■□		
400	250	EW400RAG-4P250■□	B, J	Blank, X, E
	300	EW400RAG-4P300■□		
	350	EW400RAG-4P350■□		
	400	EW400RAG-4P400■□		

● HAG series, 4-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection*
400	250	EW400HAG-4P250■□	B, J	Blank, X, E
	300	EW400HAG-4P300■□		
	350	EW400HAG-4P350■□		
	400	EW400HAG-4P400■□		

* See page 133.

■ Type number, Global series (Line protection)

● EAGU series, 2-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection
100	60	EW100EAGU-2P060■□	B, K	Blank, SF, S3, S4
	63	EW100EAGU-2P063■□		
	70	EW100EAGU-2P070■□		
	75	EW100EAGU-2P075■□		
	80	EW100EAGU-2P080■□		
	90	EW100EAGU-2P090■□		
	100	EW100EAGU-2P100■□		

● EAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection
100	60	EW100EAGU-3P060■□	B,D, K	Blank, SF, S3, S4
	63	EW100EAGU-3P063■□		
	70	EW100EAGU-3P070■□		
	75	EW100EAGU-3P075■□		
	80	EW100EAGU-3P080■□		
	90	EW100EAGU-3P090■□		
	100	EW100EAGU-3P100■□		

● JAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection
125	15	EW125JAGU-3P015■□	B, K	Blank, SB, SF, S3
	20	EW125JAGU-3P020■□		S4, S5, S6, S7, S8
	30	EW125JAGU-3P030■□		
	40	EW125JAGU-3P040■□		
	50	EW125JAGU-3P050■□		
	60	EW125JAGU-3P060■□		
	75	EW125JAGU-3P075■□		
	100	EW125JAGU-3P100■□		
	125	EW125JAGU-3P125■□		
250	125	EW250JAGU-3P125■□	B, K	Blank, SB, SF, S3
	150	EW250JAGU-3P150■□		S4, S5, S6, S7, S8
	160	EW250JAGU-3P160■□		
	175	EW250JAGU-3P175■□		
	200	EW250JAGU-3P200■□		
	225	EW250JAGU-3P225■□		
	250	EW250JAGU-3P250■□		

● SAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection
400	250	EW400SAGU-3P250■□	B, K	Blank, SB, S7, S8
	300	EW400SAGU-3P300■□		
	350	EW400SAGU-3P350■□		
	400	EW400SAGU-3P400■□		

* See page 133.

● RAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection
50	3	EW50RAGU-3P003■□	B, D, K	Blank, SF, S3, S4
	5	EW50RAGU-3P005■□		
	10	EW50RAGU-3P010■□		
	15	EW50RAGU-3P015■□		
	20	EW50RAGU-3P020■□		
	30	EW50RAGU-3P030■□		
	32	EW50RAGU-3P032■□		
	40	EW50RAGU-3P040■□		
	50	EW50RAGU-3P050■□		
125	15	EW125RAGU-3P015■□	B, K	Blank, SB, SF, S3
	20	EW125RAGU-3P020■□		S4, S5, S6, S7, S8
	30	EW125RAGU-3P030■□		
	40	EW125RAGU-3P040■□		
	50	EW125RAGU-3P050■□		
	60	EW125RAGU-3P060■□		
	75	EW125RAGU-3P075■□		
	100	EW125RAGU-3P100■□		
	125	EW125RAGU-3P125■□		
250	125	EW250RAGU-3P125■□	B, K	Blank, SB, SF, S3
	150	EW250RAGU-3P150■□		S4, S5, S6, S7, S8
	160	EW250RAGU-3P160■□		
	175	EW250RAGU-3P175■□		
	200	EW250RAGU-3P200■□		
	225	EW250RAGU-3P225■□		
	250	EW250RAGU-3P250■□		
400	250	EW400RAGU-3P250■□	B, K	Blank, SB, S7, S8
	300	EW400RAGU-3P300■□		
	350	EW400RAGU-3P350■□		
	400	EW400RAGU-3P400■□		
630	500	EW630RAGU-3P500■□	K	Blank, SB, S7, S8
	600	EW630RAGU-3P600■□		
	630	EW630RAGU-3P630■□		

● HAGU series, 3-pole UL489 Listed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current *	□: Available mounting and connection
400	250	EW400HAGU-3P250■□	B, K	Blank, SB, S7, S8
	300	EW400HAGU-3P300■□		
	350	EW400HAGU-3P350■□		
	400	EW400HAGU-3P400■□		

Terminal combination

□:	Terminal position		Breaker type		
Code	Line	Load	EW50, 100	EW125,250	EW400,630
Blank	Screw	Screw	●	●	-
Blank	Flat terminal	Flat terminal	-	-	●
SB	Block terminal	Block terminal	-	●	●
SF	Flat terminal	Flat terminal	●	●	-
S3	Screw	Flat terminal	●	●	-
S4	Flat terminal	Screw	●	●	-
S5	Screw	Block terminal	-	●	-
S6	Block terminal	Screw	-	●	-
S7	Flat terminal	Block terminal	-	●	●
S8	Block terminal	Flat terminal	-	●	●

Type number/Motor protection

■ Type number, Standard series (Motor protection)

● EAM series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
32	1.4	EW32EAM-3P1P4■□	B, C	Blank, X, E, Y, P
	2.6	EW32EAM-3P2P6■□		
	4	EW32EAM-3P004■□		
	5	EW32EAM-3P005■□		
	8	EW32EAM-3P008■□		
	10	EW32EAM-3P010■□		
	16	EW32EAM-3P016■□		
	24	EW32EAM-3P024■□		
	32	EW32EAM-3P032■□		
50	45	EW50EAM-3P045■□	B,K	Blank, X, E, Y, P
63	63	EW63EAM-3P063■□	B,K	Blank, X, E, Y, P
100	63	EW100EAM-3P063■□	B,K	Blank, X, E, Y, P
	75	EW100EAM-3P075■□		
	90	EW100EAM-3P090■□		
	100	EW100EAM-3P100■□		
250	125	EW250EAM-3P125■□	B,K	Blank, X, E, P
	150	EW250EAM-3P150■□		
	175	EW250EAM-3P175■□		
	225	EW250EAM-3P225■□		

● JAM series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
125	75	EW125JAM-3P075■□	B,K	Blank, X, E, P
	90	EW125JAM-3P090■□		
250	125	EW250JAM-3P125■□	B,K	Blank, X, E, P
	150	EW250JAM-3P150■□		
	175	EW250JAM-3P175■□		
	225	EW250JAM-3P225■□		

● SAM series, 3-pole IEC/EN/GB/JIS conformed

Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
32	0.7	EW32SAM-3P0P7■□	B,K	Blank, X, E, Y, P
	1.4	EW32SAM-3P1P4■□		
	2	EW32SAM-3P002■□		
	2.6	EW32SAM-3P2P6■□		
	4	EW32SAM-3P004■□		
	5	EW32SAM-3P005■□		
	8	EW32SAM-3P008■□		
	10	EW32SAM-3P010■□		
	12	EW32SAM-3P012■□		
	16	EW32SAM-3P016■□		
	24	EW32SAM-3P024■□		
	32	EW32SAM-3P032■□		
50	0.7	EW50SAM-3P0P7■□	B,K	Blank, X, E, Y, P
	1.4	EW50SAM-3P1P4■□		
	2	EW50SAM-3P002■□		
	2.6	EW50SAM-3P2P6■□		
	4	EW50SAM-3P004■□		
	5	EW50SAM-3P005■□		
	8	EW50SAM-3P008■□		
	10	EW50SAM-3P010■□		
	12	EW50SAM-3P012■□		
	16	EW50SAM-3P016■□		
	24	EW50SAM-3P024■□		
	32	EW50SAM-3P032■□		
	40	EW50SAM-3P040■□		
	45	EW50SAM-3P045■□		
63	63	EW63SAM-3P063■□	B,K	Blank, X, E, Y, P

● RAM series, 3-pole IEC/EN/GB/JIS conformed

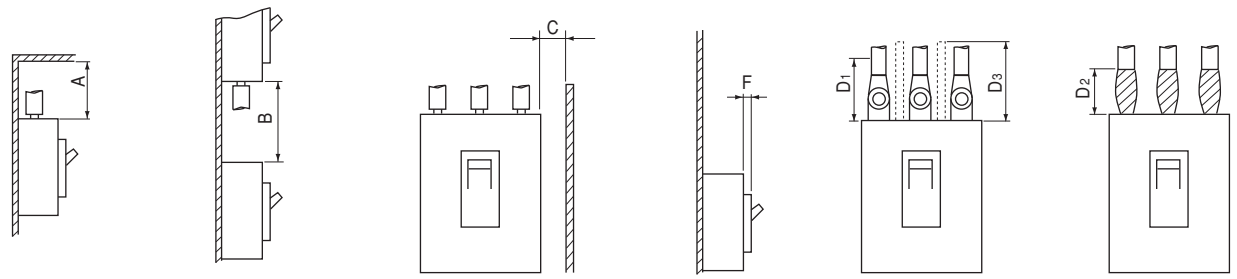
Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
125	45	EW125RAM-3P045■□	B,K	Blank, X, E, P
	60	EW125RAM-3P060■□		
	75	EW125RAM-3P075■□		
	90	EW125RAM-3P090■□		
250	125	EW250RAM-3P125■□	B,K	Blank, X, E, P
	150	EW250RAM-3P150■□		
	175	EW250RAM-3P175■□		
	225	EW250RAM-3P225■□		

Mounting	Connection	□
Front	Front	Blank
Front	Rear	X
Flush	Rear	E
Flush	Top and buttom	Y
Plug-in		P

Rated sensitive current	■
30mA	B
100mA	C
100/200mA changeover	K
100/200/500mA changeover	K
100/200/500/1000mA changeover	K

Arc space

■ Arc space, mm



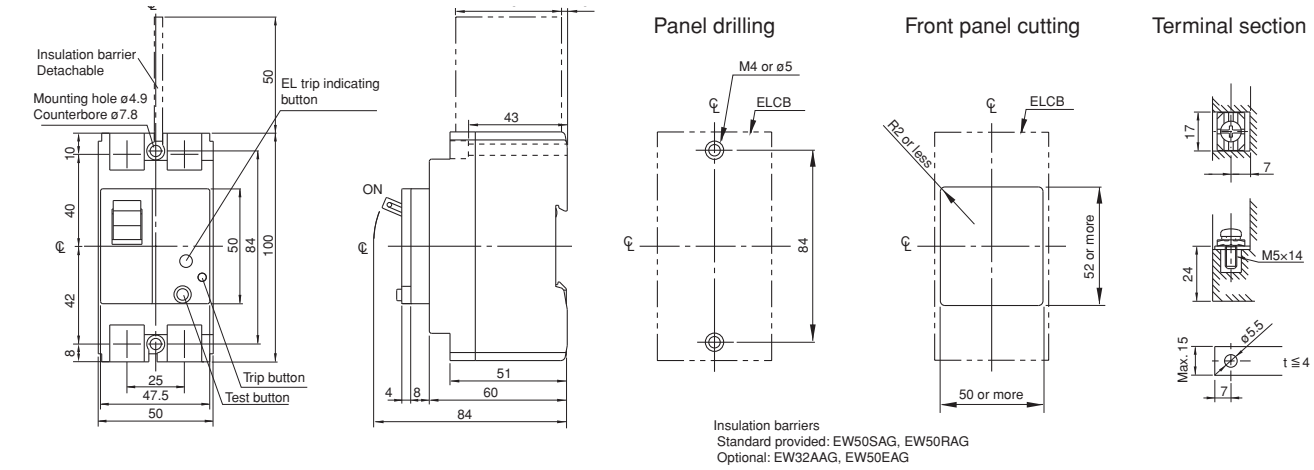
Frame size	ELCB basic type	Ceiling distance A		Vertical distance B		Side plate distance C		Front plate distance				Taping		Barrier
								Painted F		No painted F		Crimp type terminal lug	Bus-bar	
		440V	230V	440V	230V	440V	230V	440V	230V	440V	230V	D1	D2	D3
32A	EW32A	–	10	–	10	–	10	–	0	–	0	Exposed live part dimension +20	10	10
	EW32E	10	10	30	10	20	15	0	0	0	0		30	30
	EW32S	10	10	30	30	20	15	0	0	0	0		30	30
50A	EW50A	–	10	–	10	–	10	–	0	–	0		10	10
	EW50E	10	10	30	30	25	15	0	0	0	0		30	30
	EW50S	30	10	40	40	25	15	0	0	0	0		30	30
	EW50R	50	25	50	50	25	15	0	0	10	5		50	50
63A	EW63E	10	10	30	30	25	15	0	0	0	0		30	30
	EW63S	30	10	40	40	25	15	0	0	0	0		30	30
	EW63R	50	25	50	50	25	15	0	0	10	5		50	50
100A	EW100A	–	10	–	20	–	15	–	0	–	0		50	50
	EW100E	50	25	50	50	25	15	0	0	10	5		50	50
125A	EW125J	40	40	50	50	25	20	0	0	10	5		50	50
	EW125S	40	40	60	60	25	20	5	0	10	5		50	50
	EW125R	40	40	60	60	25	20	5	0	10	5		50	50
160A	EW160E	40	40	50	50	50	15	0	0	10	5		80	80
	EW160J	40	40	60	60	50	20	0	0	10	5		80	80
	EW160S	40	40	80	80	50	20	5	0	10	10		80	80
	EW160R	40	40	80	80	50	20	5	0	10	10		80	80
250A	EW250E	40	40	50	50	50	15	0	0	10	5		80	80
	EW250J	40	40	60	60	50	20	0	0	10	5		80	80
	EW250S	40	40	80	80	50	20	5	0	10	10		80	80
	EW250R	40	40	80	80	50	20	5	0	10	10		80	80
400A	EW400E	100	80	100	80	50	20	0	0	10	5		100	100
	EW400S	100	80	100	80	50	20	0	0	10	5		100	100
	EW400R	100	80	100	80	80	40	5	0	20	10		100	100
	EW400H	100	80	100	80	80	40	5	0	20	10		100	100
630A	EW630E	100	80	100	80	80	40	0	0	10	5		100	100
	EW630R	100	80	100	80	80	40	5	0	20	10		100	100
	EW630H	120	100	120	100	80	40	5	0	20	10		120	120
800A	EW800E	100	80	100	80	80	40	0	0	10	5		100	100
	EW800R	100	80	100	80	80	40	5	0	20	10		100	100
	EW800H	120	100	120	100	80	40	5	0	20	20		120	120

Dimensions / Standard

■ **Dimensions, mm**

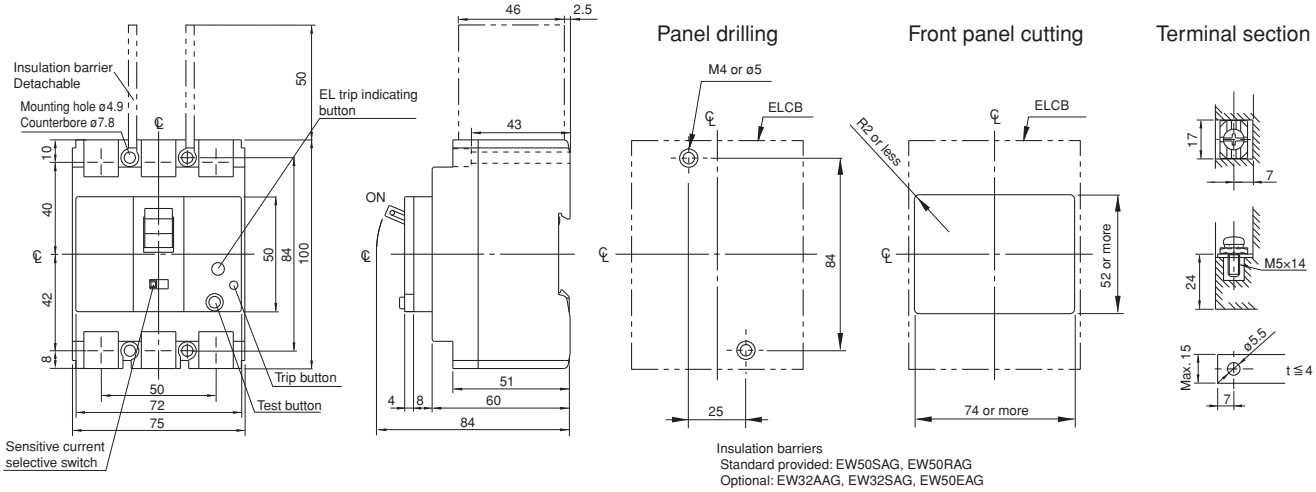
● **Front mounting, front connection**

EW32□-2P, EW50□-2P



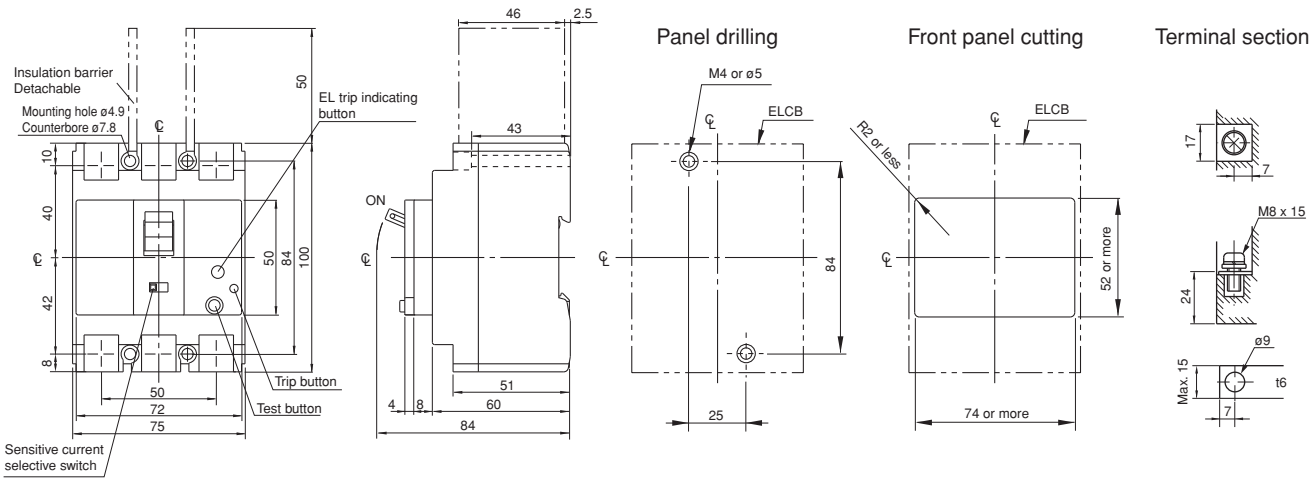
Insulation barriers
Standard provided: EW50SAG, EW50RAG
Optional: EW32AAG, EW50EAG

EW32□-3P, EW50□-3P



Insulation barriers
Standard provided: EW50SAG, EW50RAG
Optional: EW32AAG, EW32SAG, EW50EAG

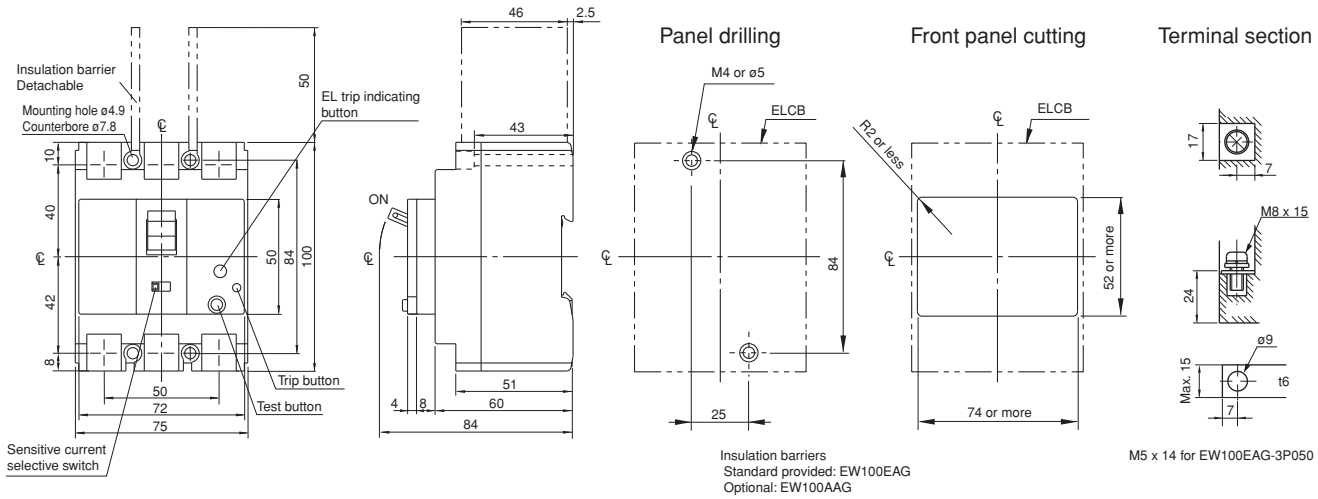
EW63□-3P



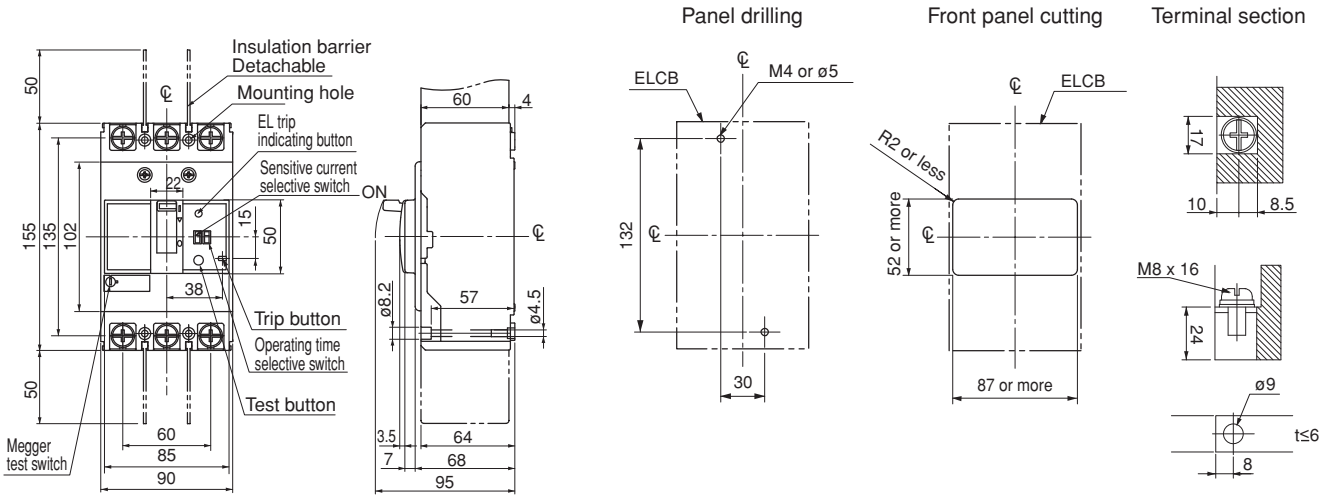
■ Dimensions, mm

● Front mounting, front connection

EW100□-2P, 3P



EW125□-3P

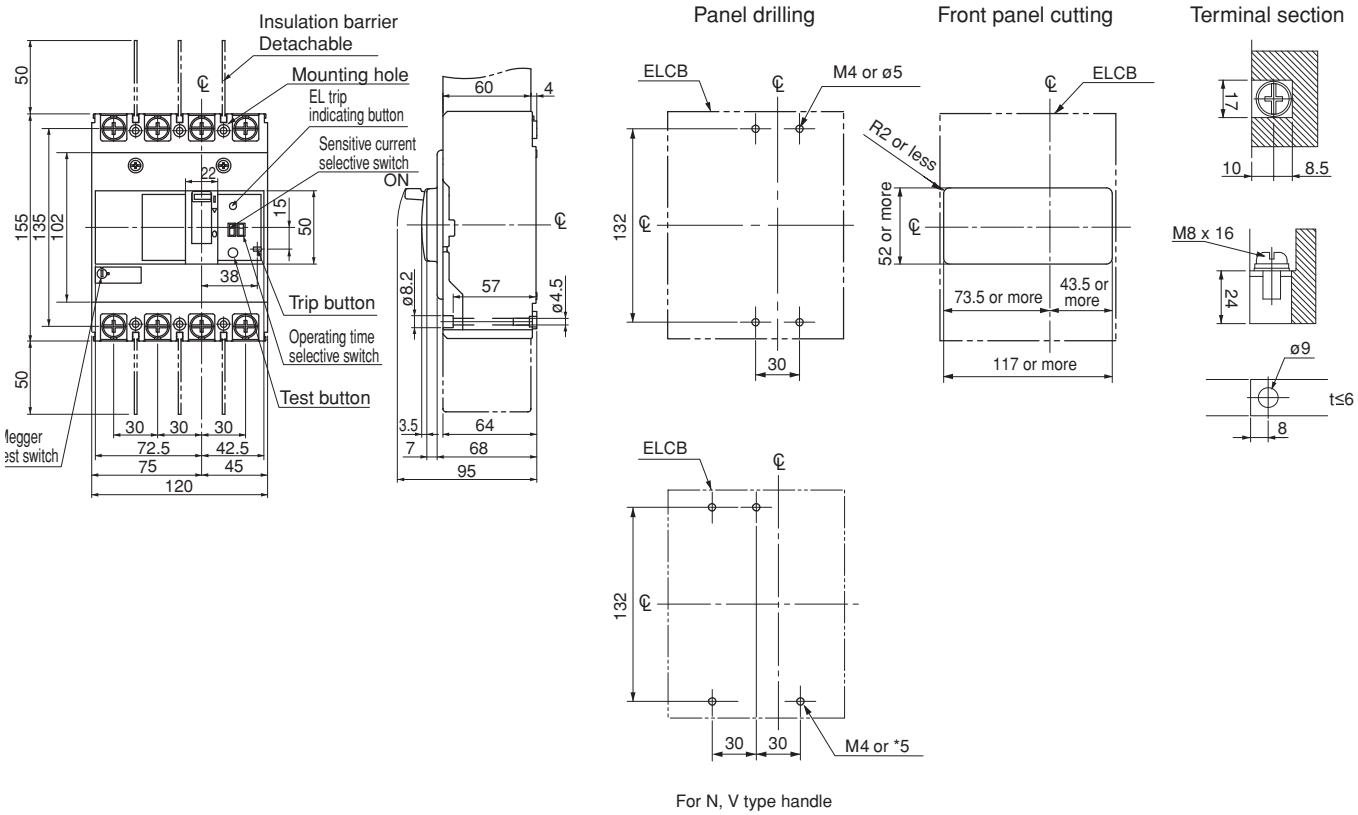


Dimensions / Standard

■ **Dimensions, mm**

● **Front mounting, front connection**

EW125□-4P

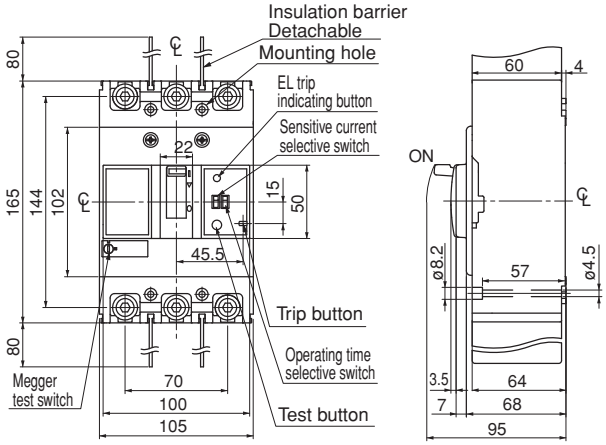


For N, V type handle

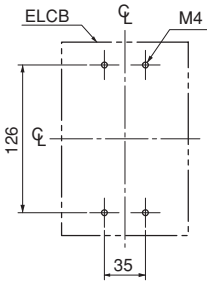
■ Dimensions, mm

● Front mounting, front connection

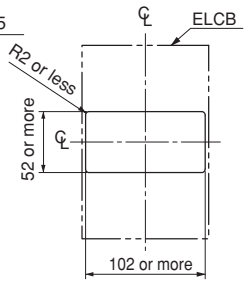
EW160□-3P
EW250□-3P



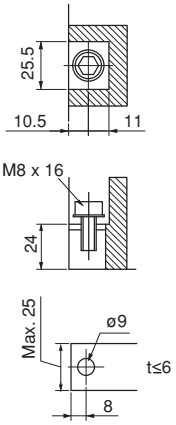
Panel drilling



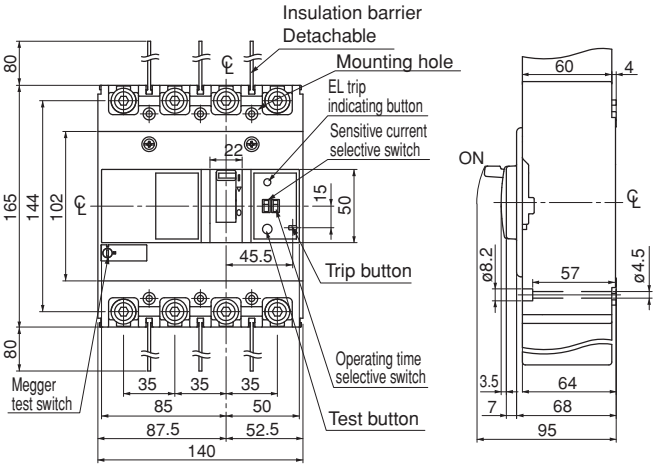
Front panel cutting



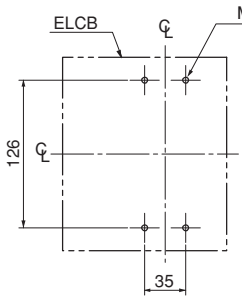
Terminal section



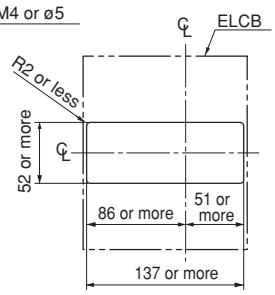
EW160□-4P
EW250□-4P



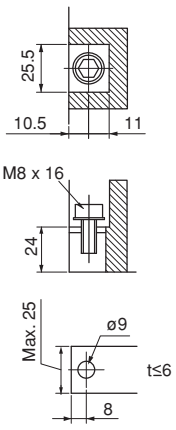
Panel drilling



Front panel cutting



Terminal section

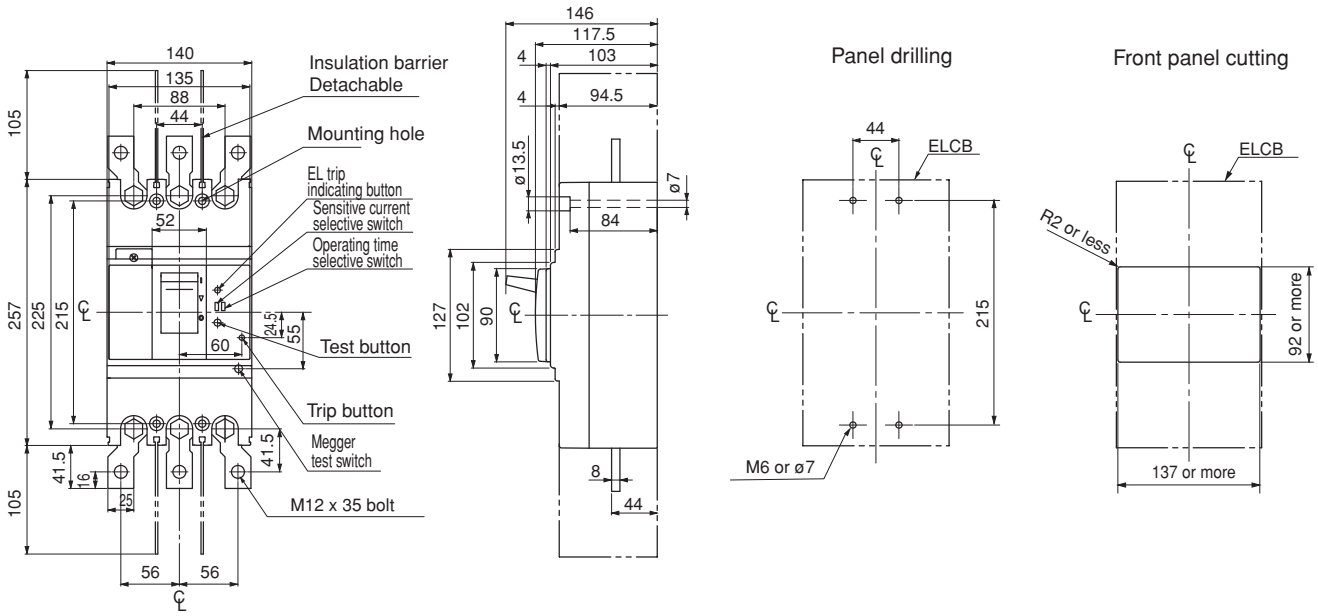


Dimensions / Standard

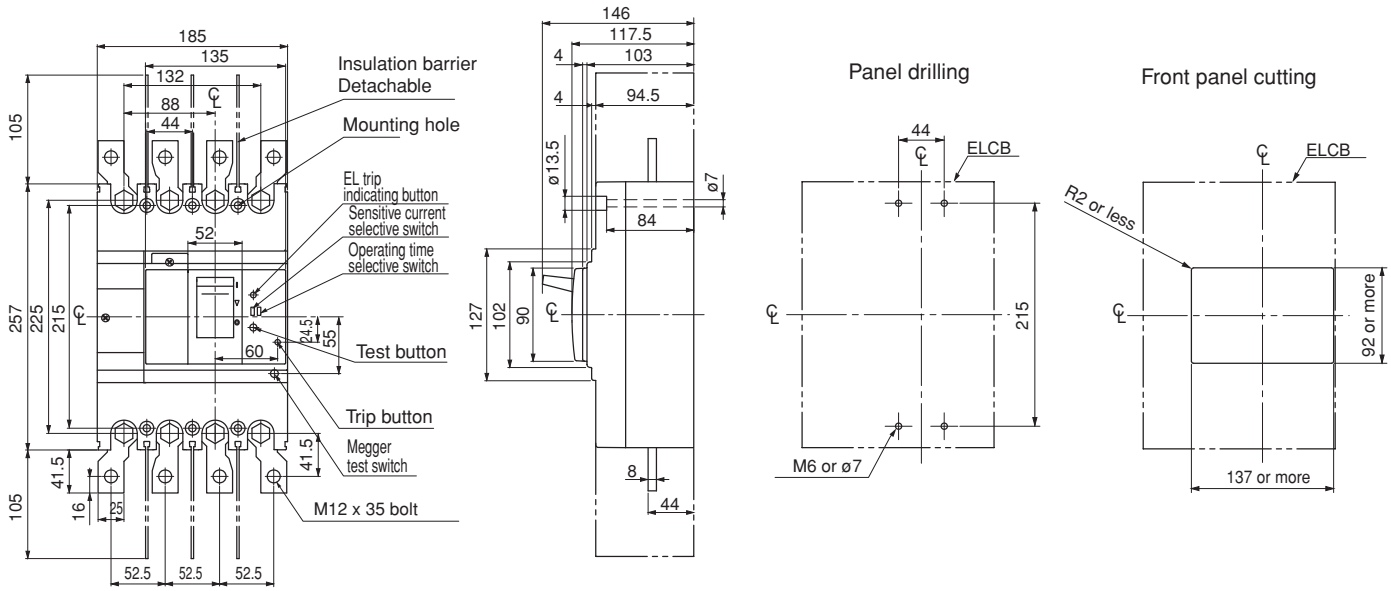
■ **Dimensions, mm**

● **Front mounting, front connection**

EW400□-3P



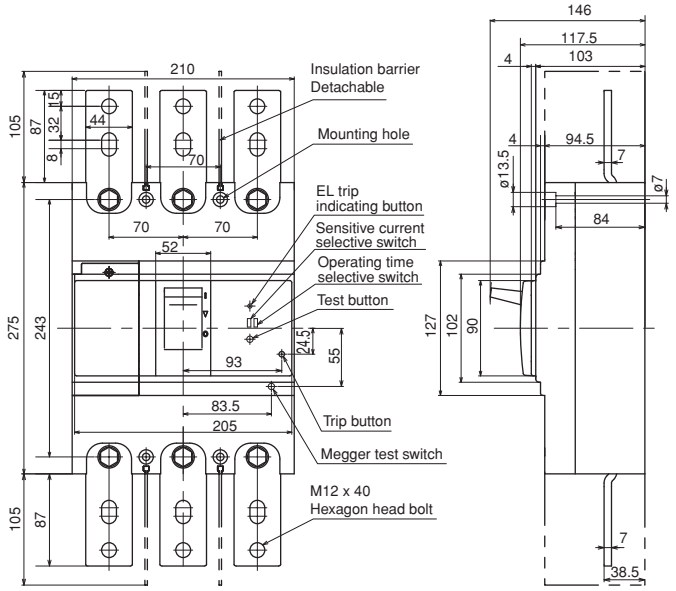
EW400□-4P



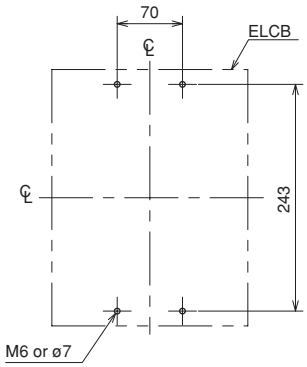
■ **Dimensions, mm**

● **Front mounting, front connection**

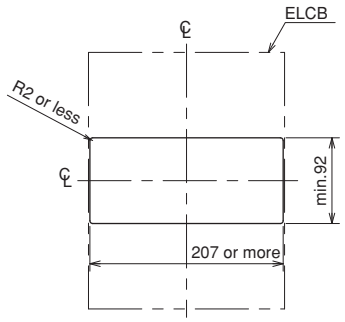
EW630□-3P



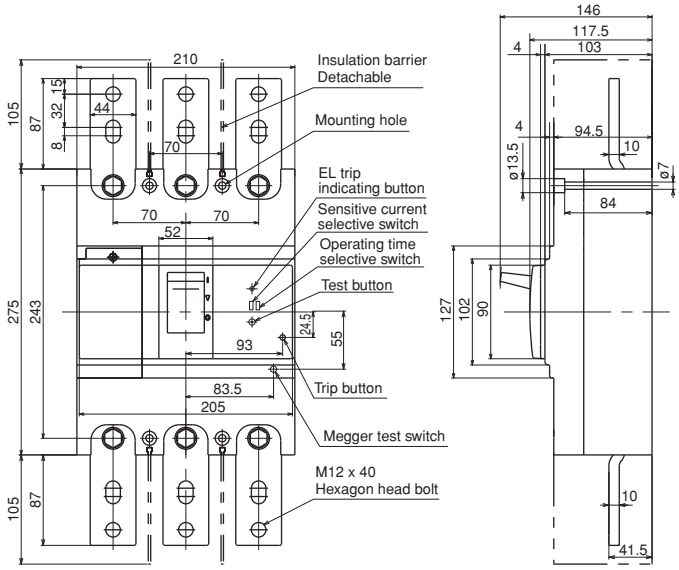
Panel drilling



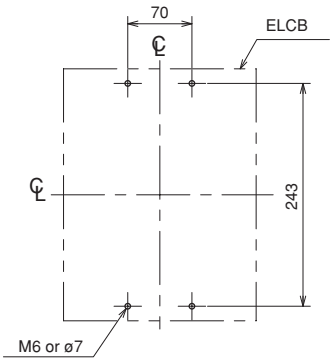
Front panel cutting



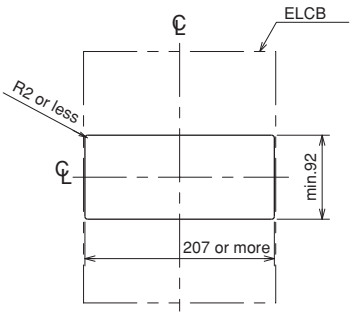
EW800□-3P



Panel drilling



Front panel cutting

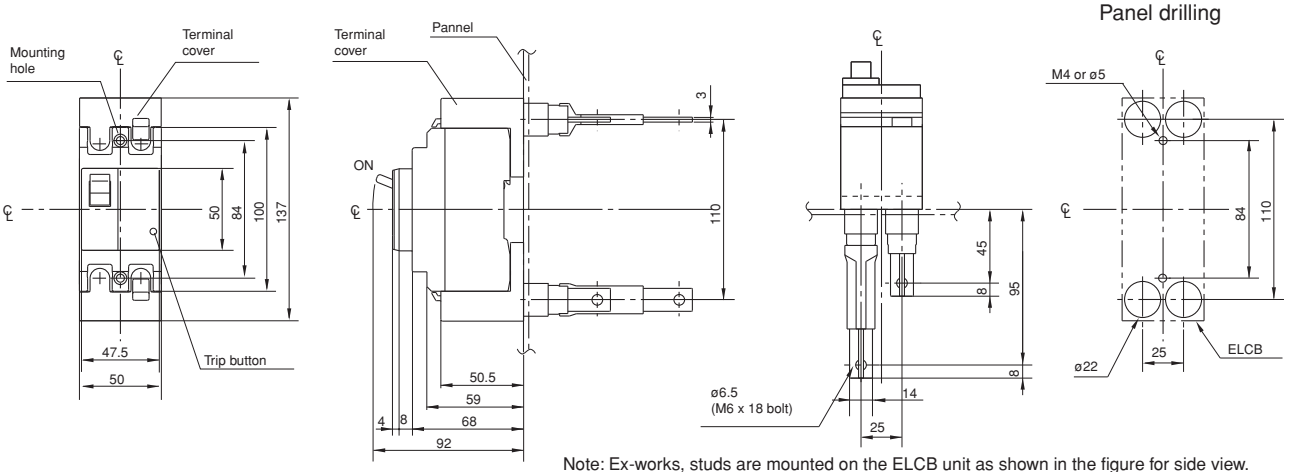


Dimensions / Standard

■ Dimensions, mm

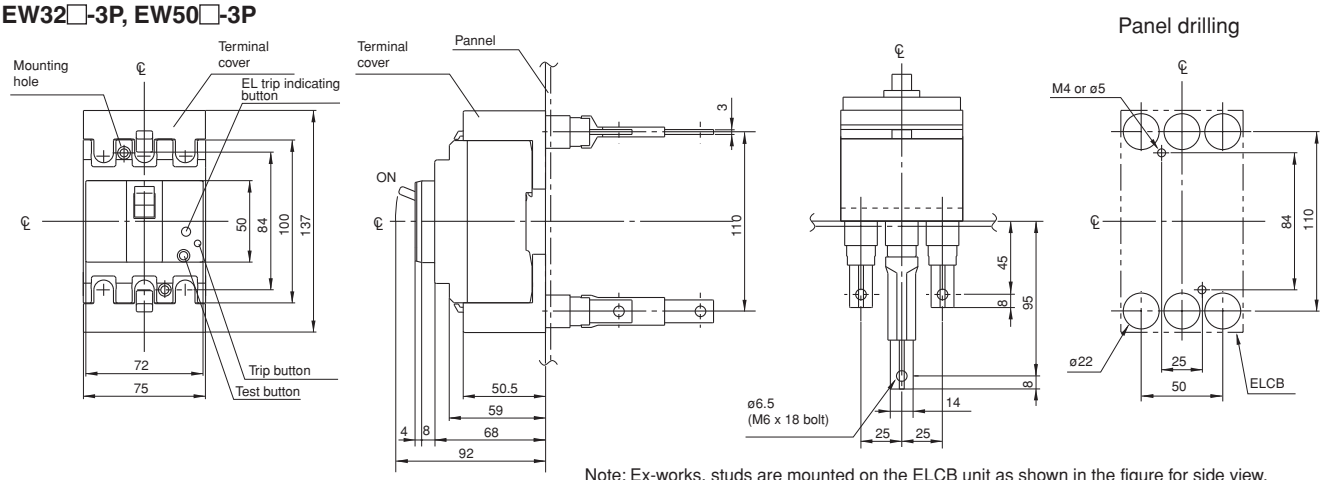
● Front mounting, rear connection (type X)

EW32□-2P, EW50□-2P



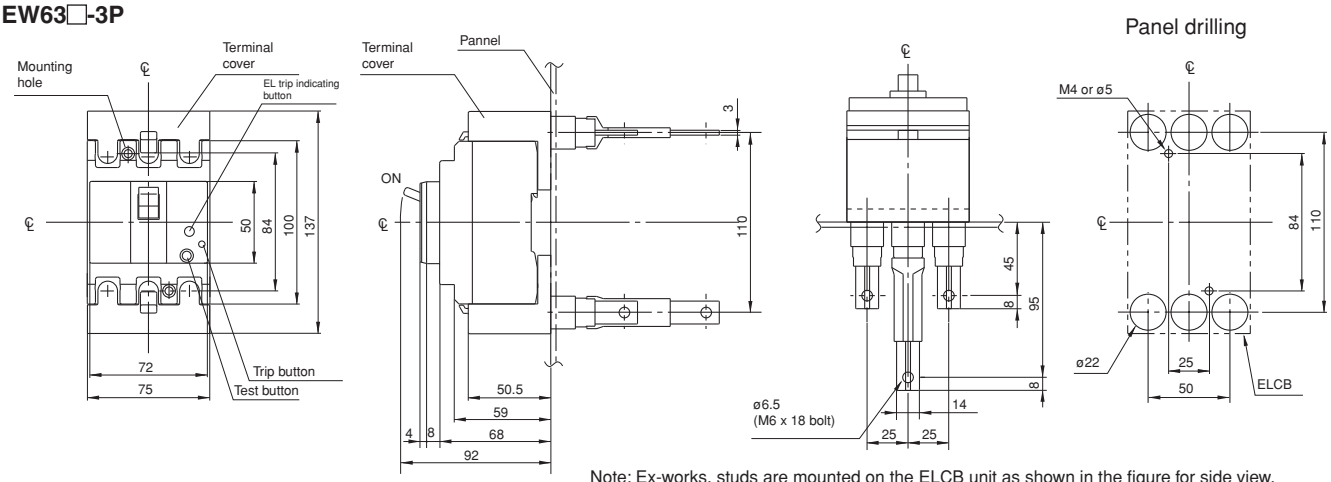
Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

EW32□-3P, EW50□-3P



Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

EW63□-3P

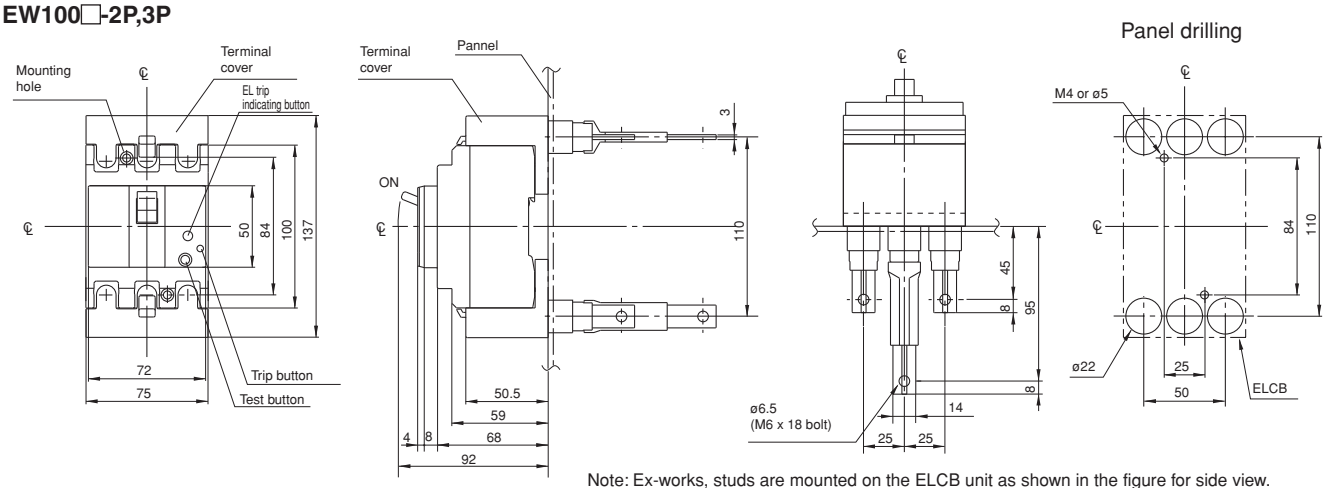


Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

■ Dimensions, mm

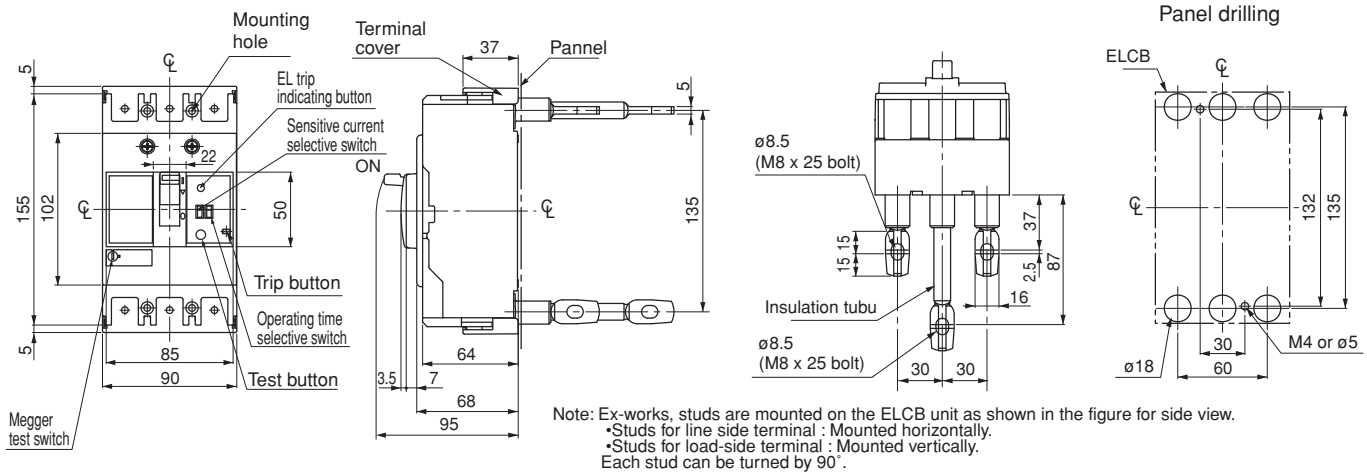
● Front mounting, rear connection (type X)

EW100□-2P,3P



Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

EW125□-3P



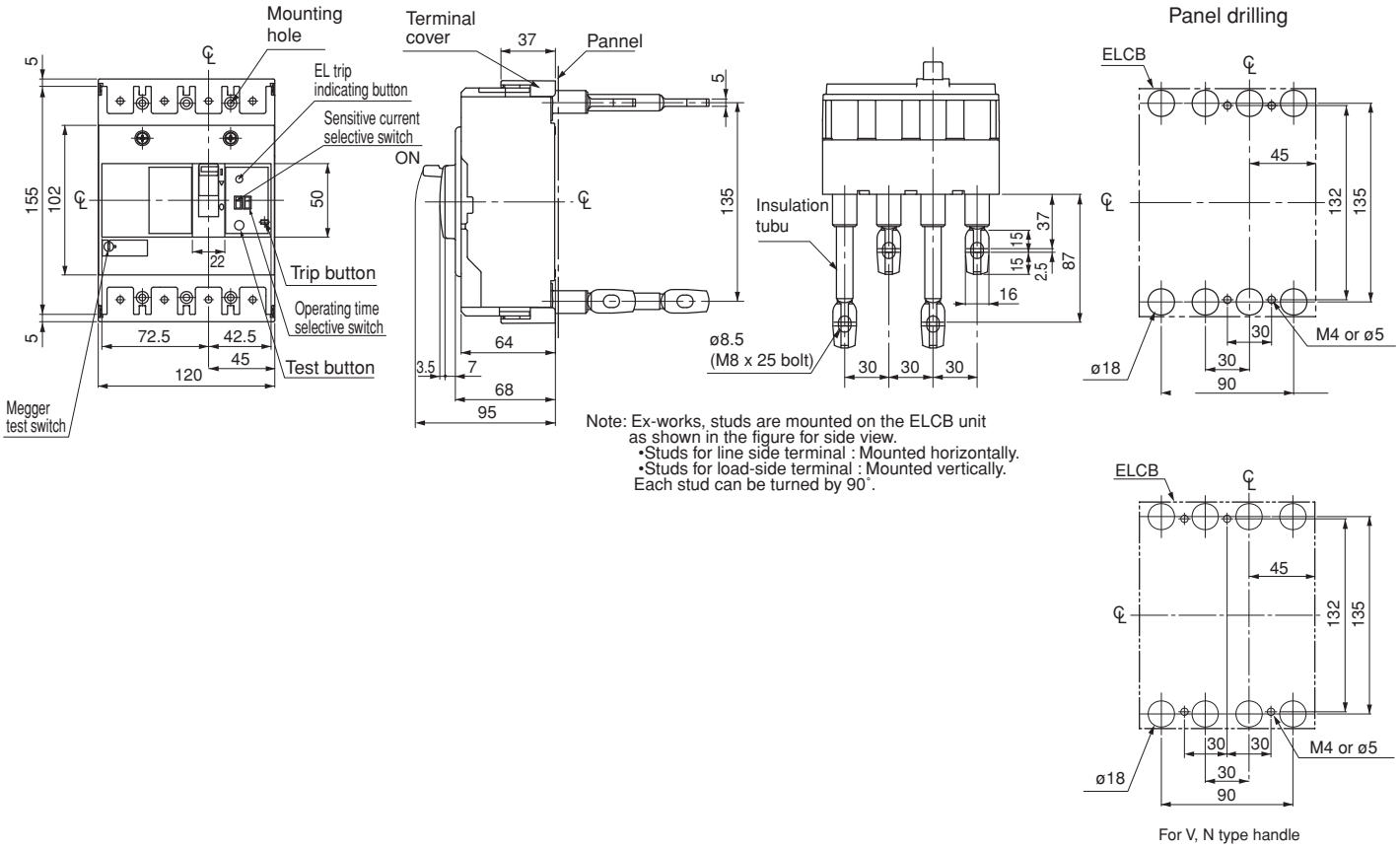
Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

Dimensions / Standard

■ **Dimensions, mm**

● **Front mounting, rear connection (type X)**

EW125□-4P

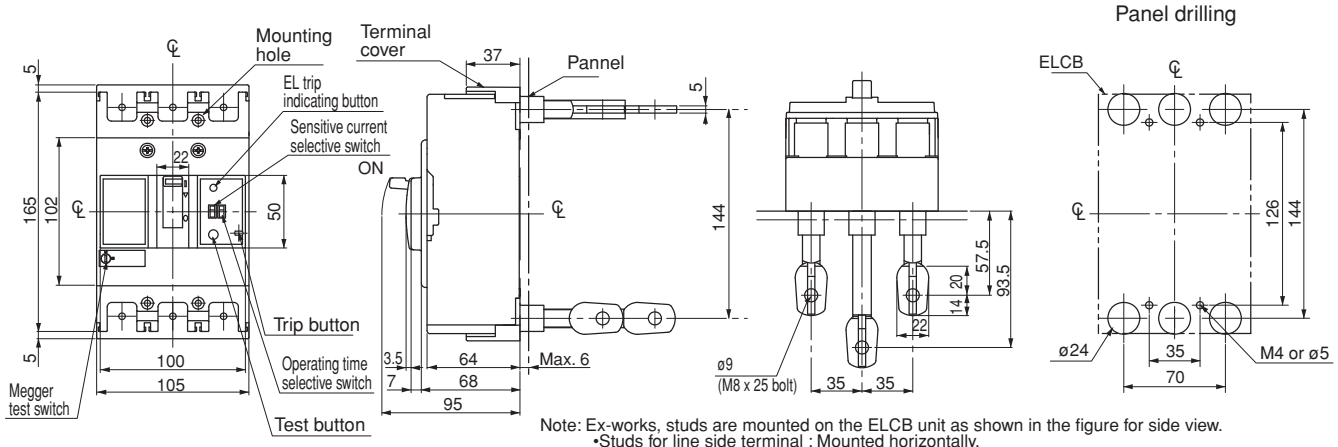


Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

■ Dimensions, mm

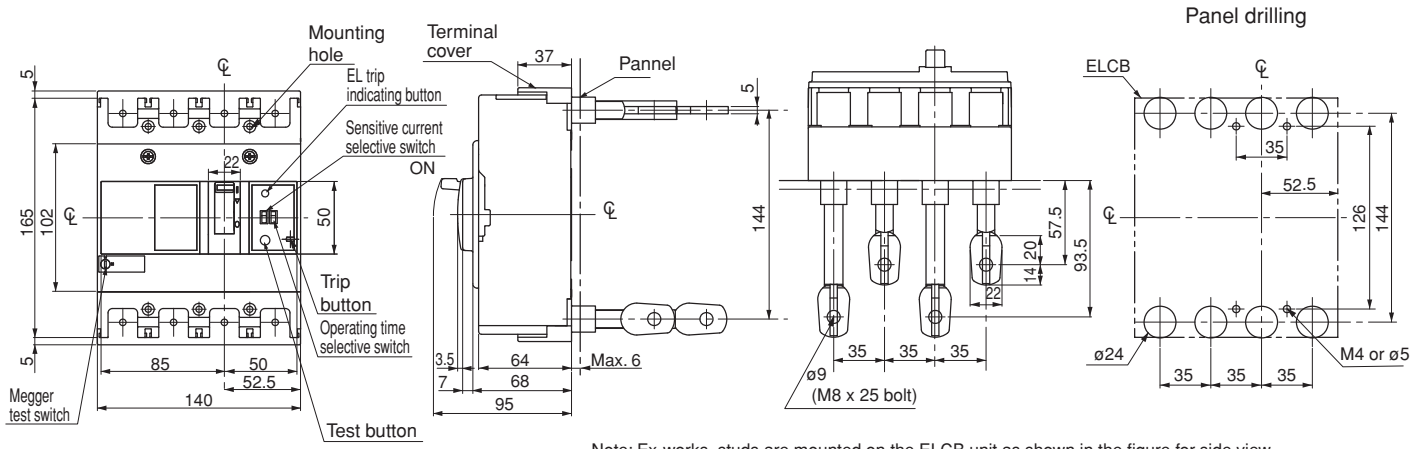
● Front mounting, rear connection (type X)

EW160□-3P
EW250□-3P



Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

EW160□-4P
EW250□-4P



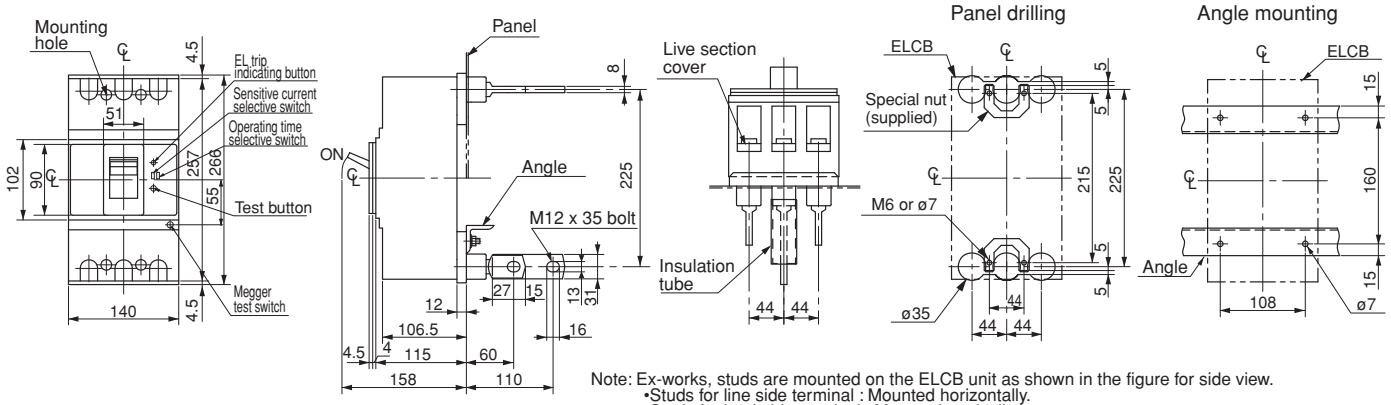
Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

Dimensions / Standard

■ **Dimensions, mm**

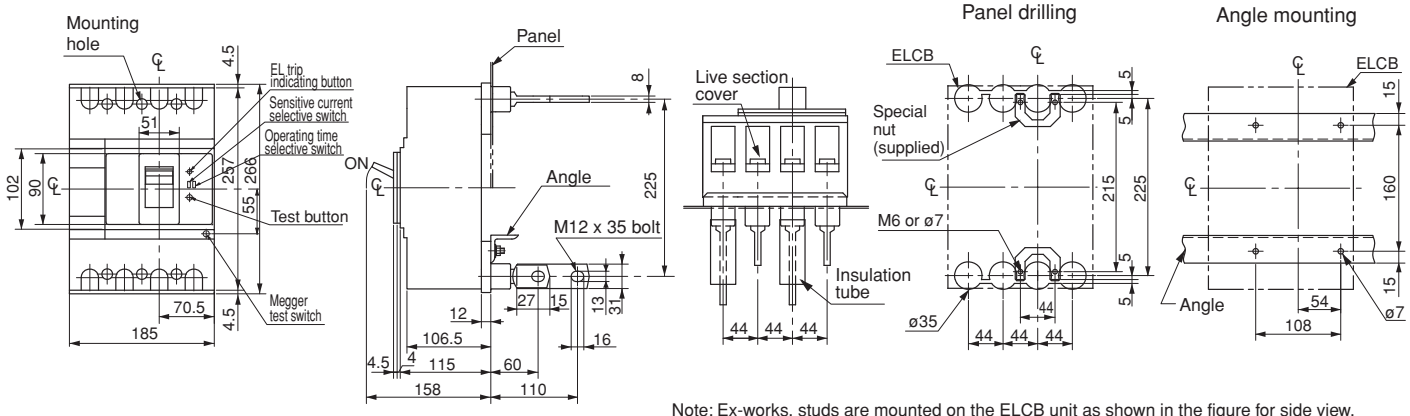
● **Front mounting, rear connection (type X)**

EW400□-3P



Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

EW400□-4P

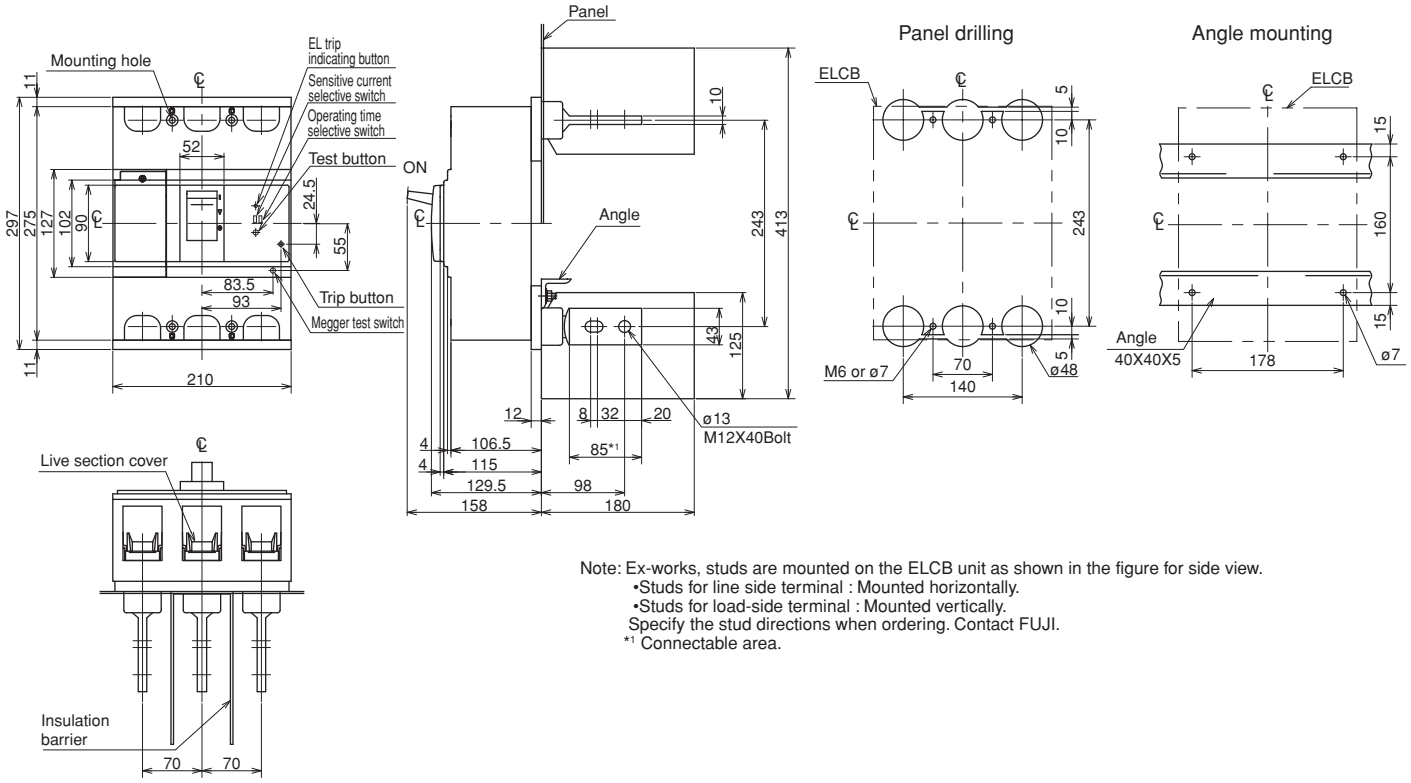


Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

■ Dimensions, mm

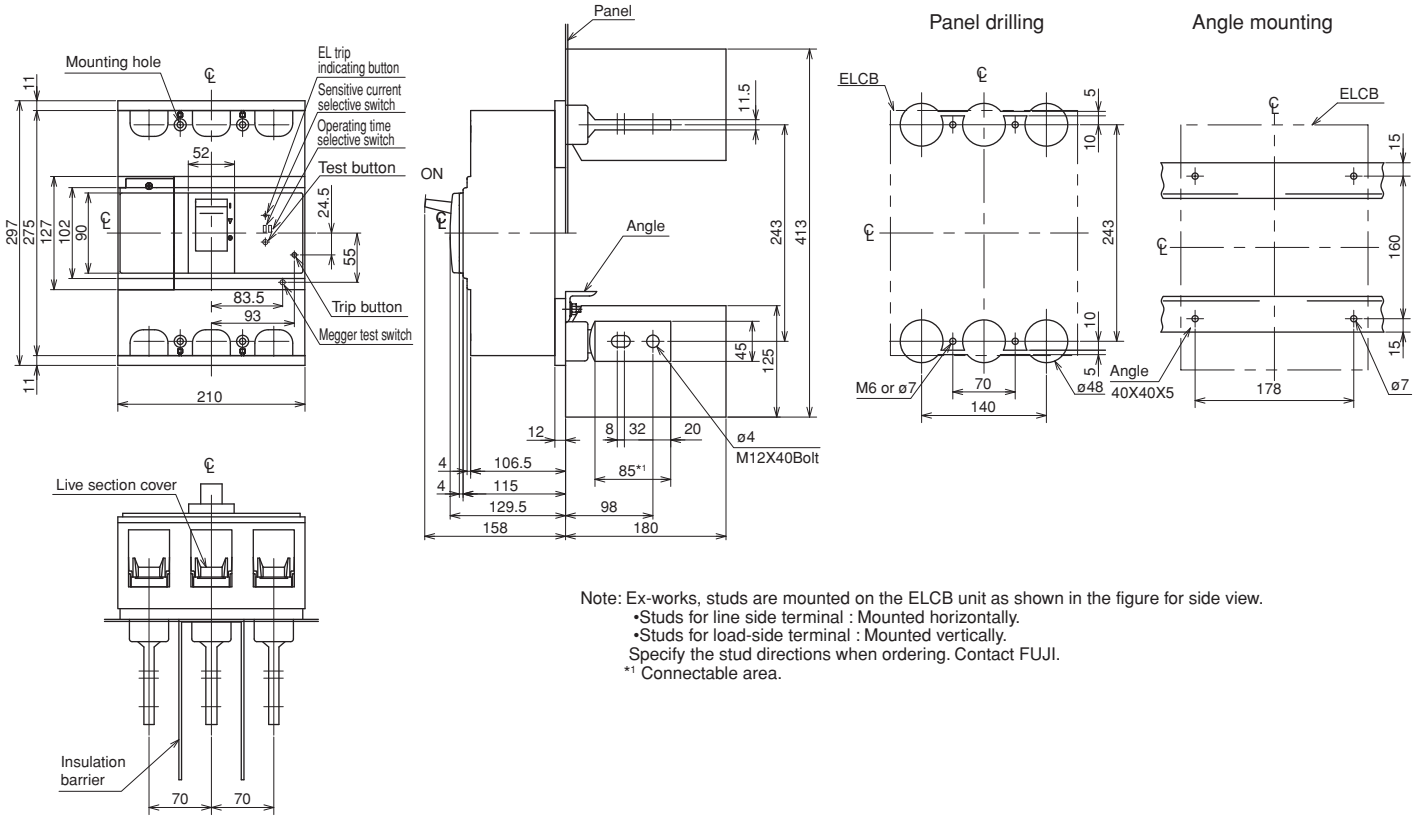
● Front mounting, rear connection (type X)

EW630□-3P



Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

EW800□-3P

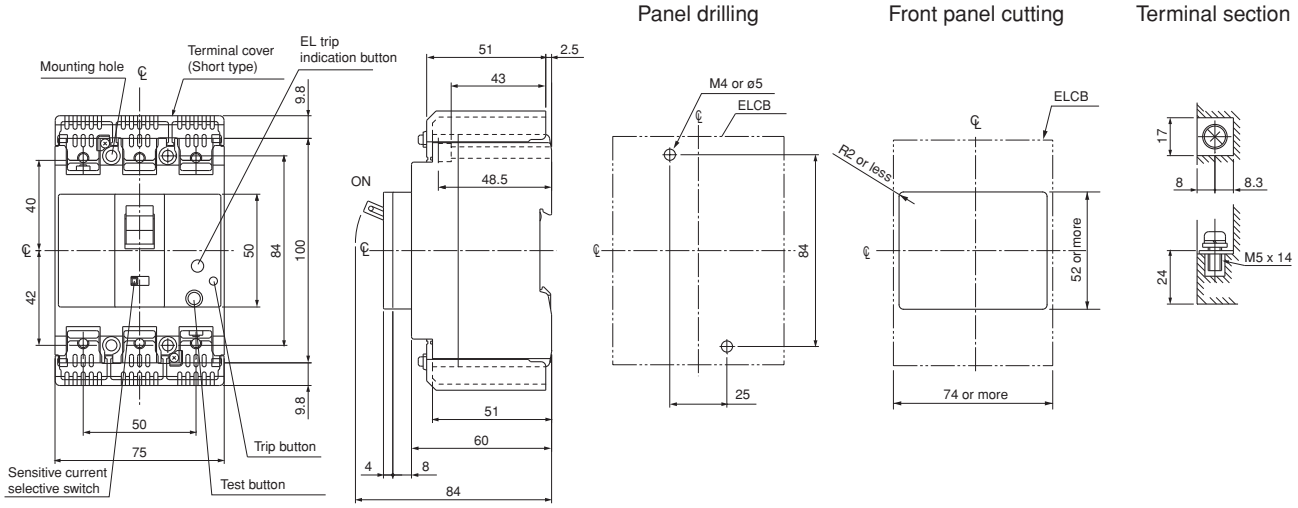


Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

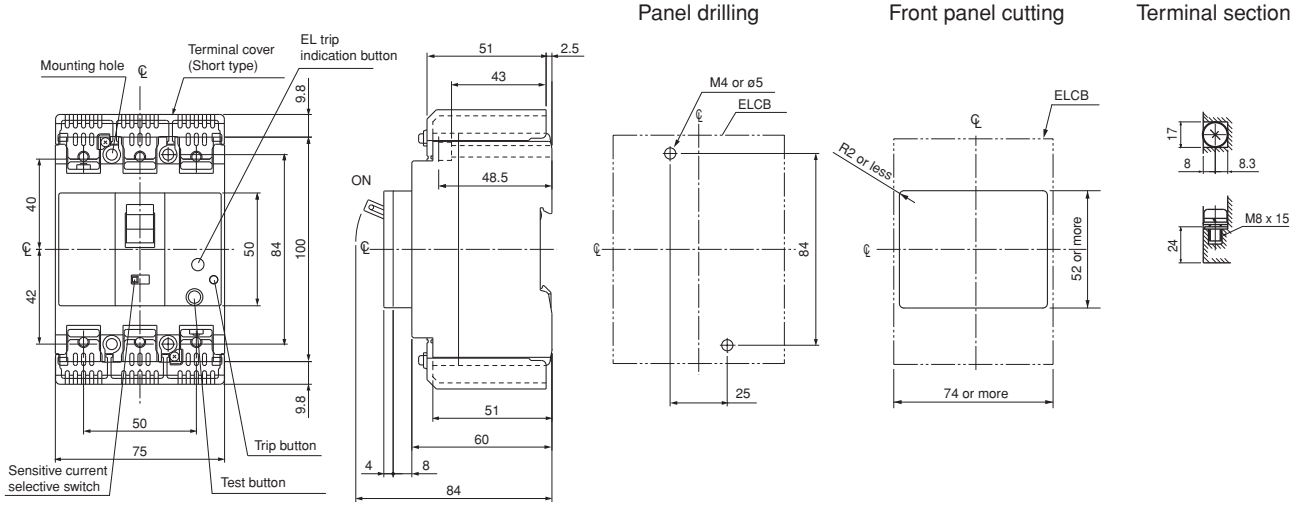
■ **Dimensions, mm**

● **Front mounting, front connection**

EW50RAGU-3P



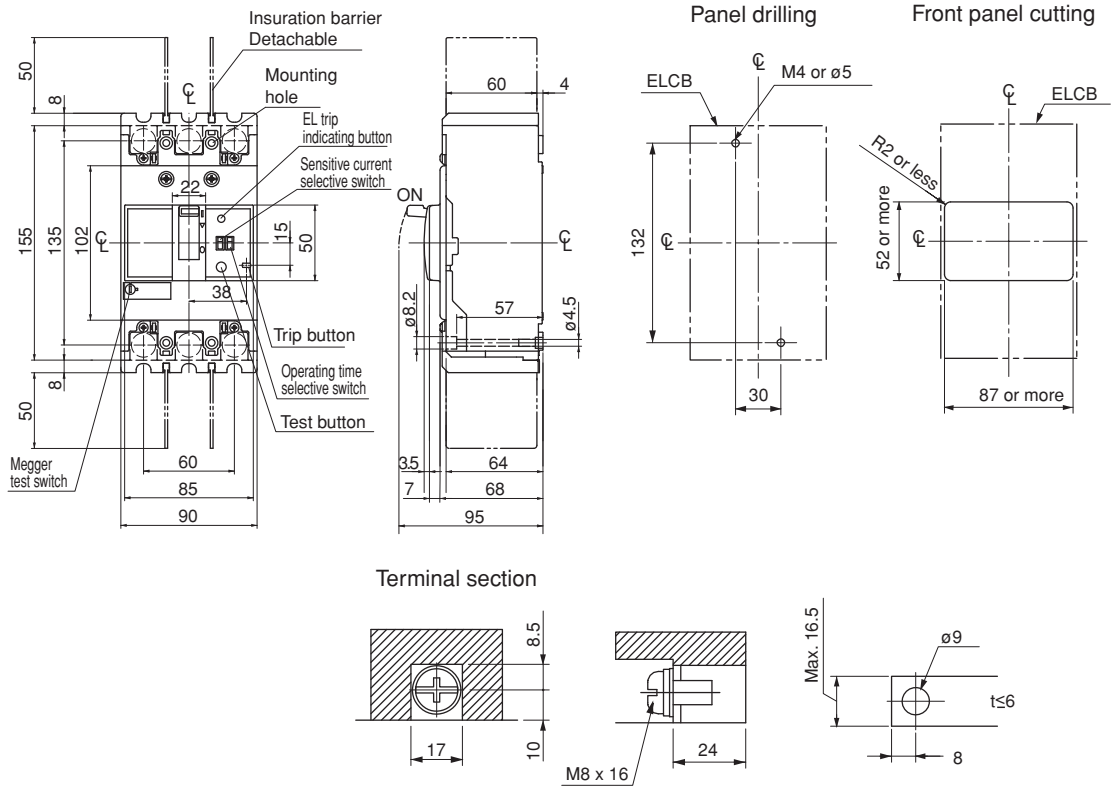
EW100EAGU-2P, -3P



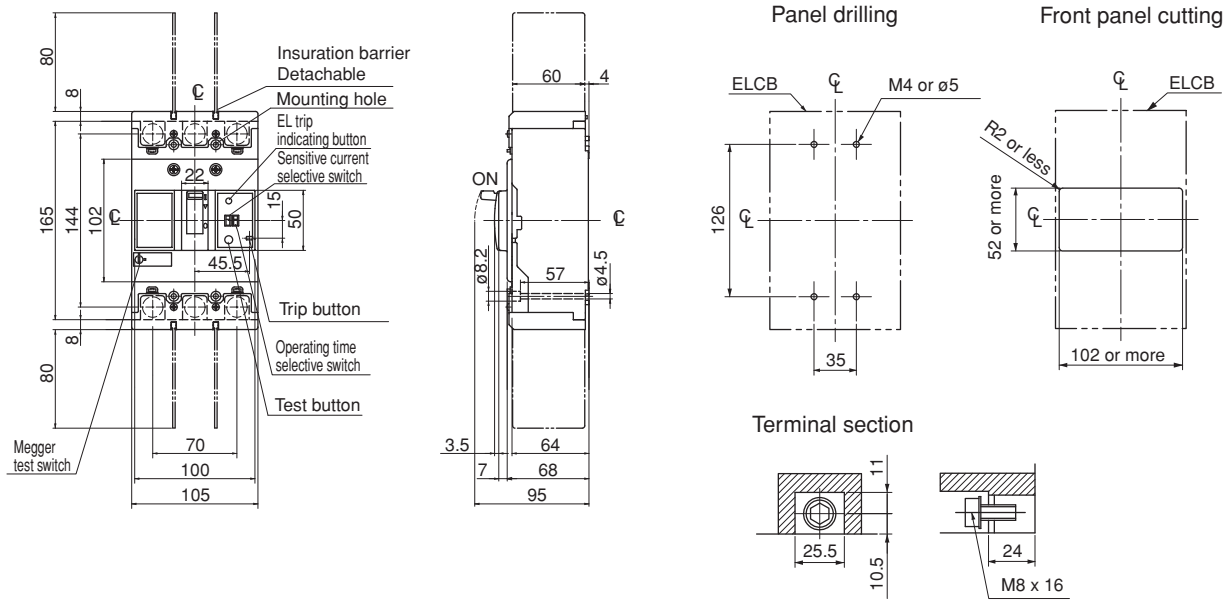
■ **Dimensions, mm**

● **Front mounting, front connection**

EW125□U-3P



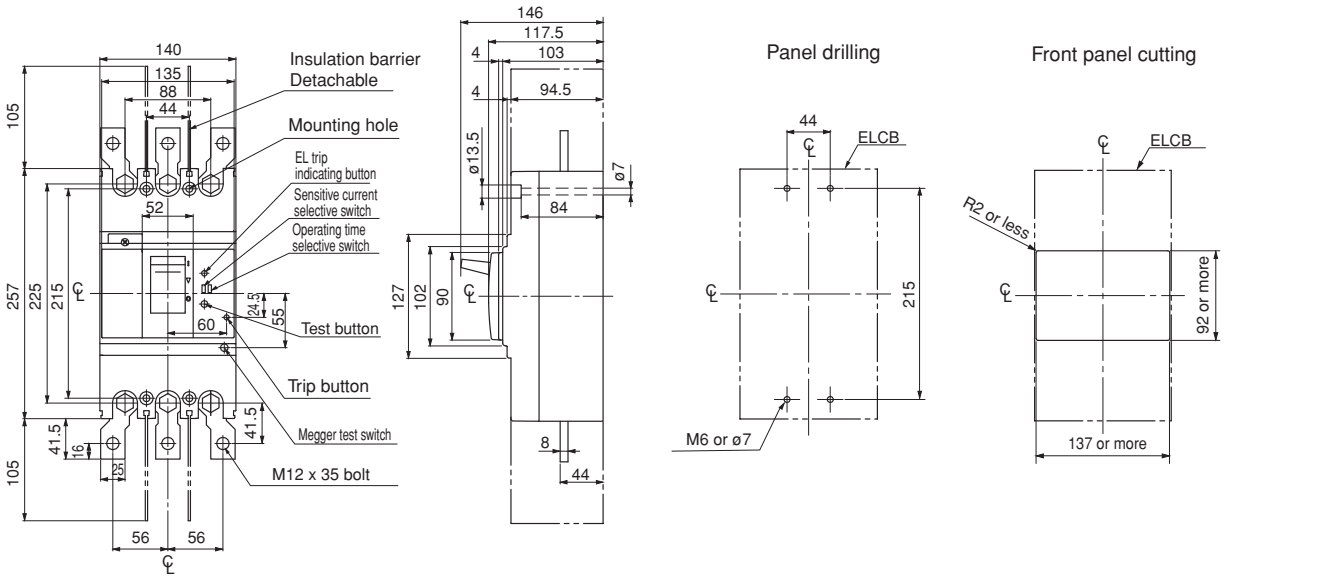
EW250□U-3P



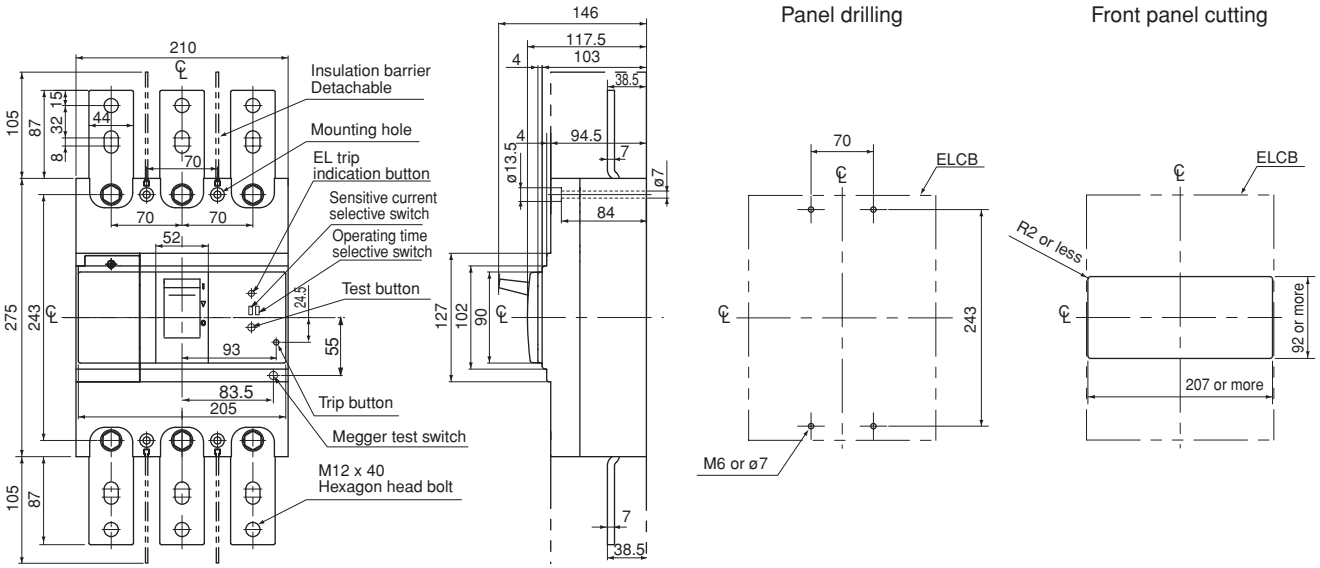
■ **Dimensions, mm**

● **Front mounting, front connection**

EW400□U-3P



EW630□U-3P

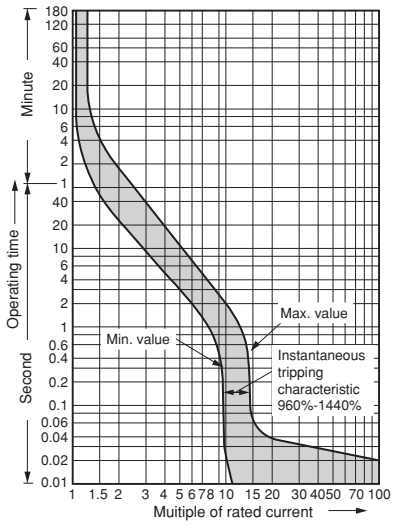


Characteristic curves

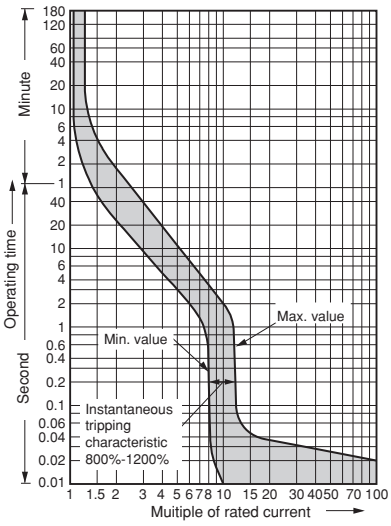
■ Characteristic curves / Line protection

EW32/50/63/100

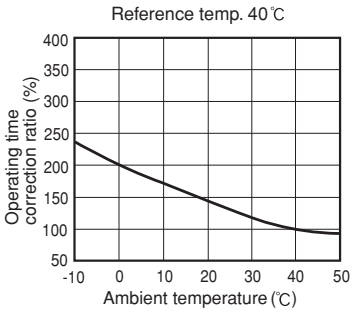
Rated current: 5, 10, 32, 40, 60, 63, 70, 75, 80, 90A



Rated current: 3, 15, 20, 30, 50,100A

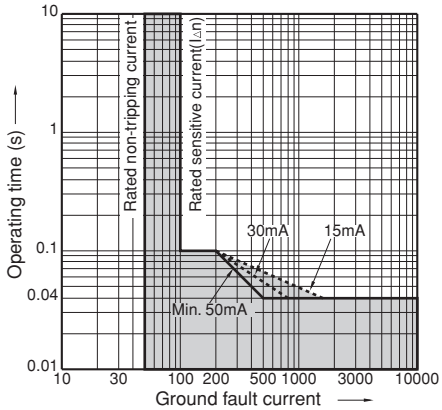


Temperature correction curve



Earth leakage tripping

EW32/50/63/100A



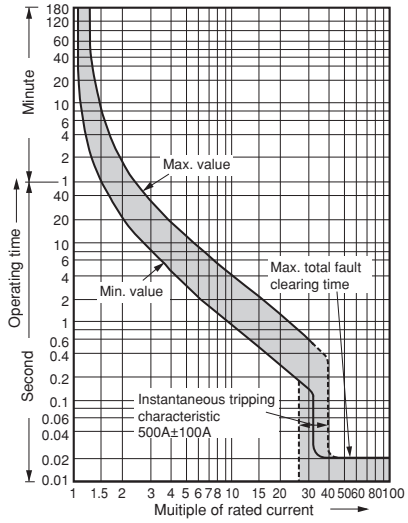
5I△n 0.04s max. (15, 30mA types: At 250mA)

Characteristic curves

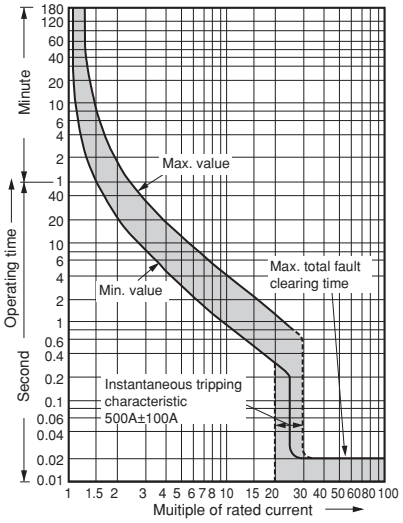
■ Characteristic curves / Line protection

EW125

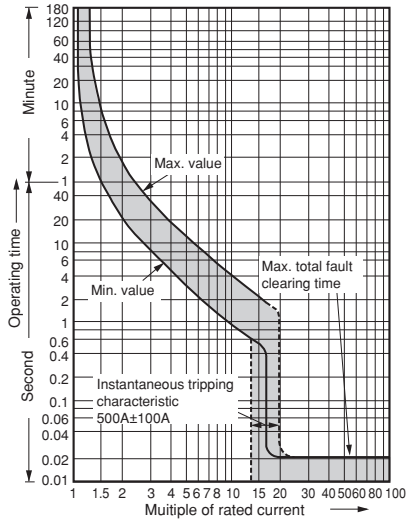
• 15A



• 20A

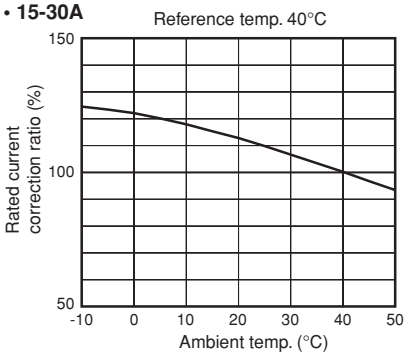


• 30A

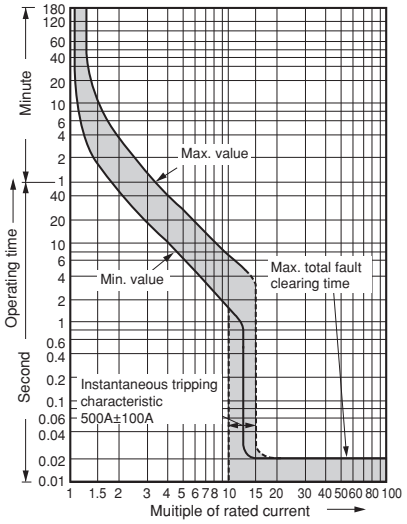


Temperature correction curve

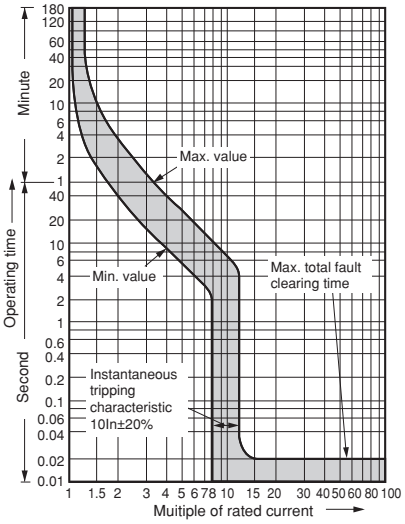
• 15-30A



• 40A

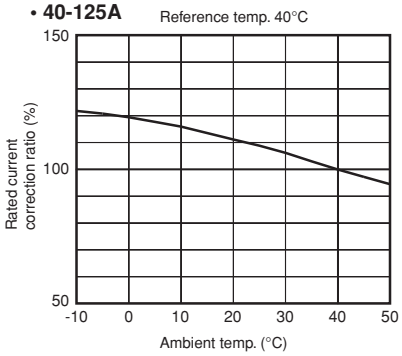


• 50-125A



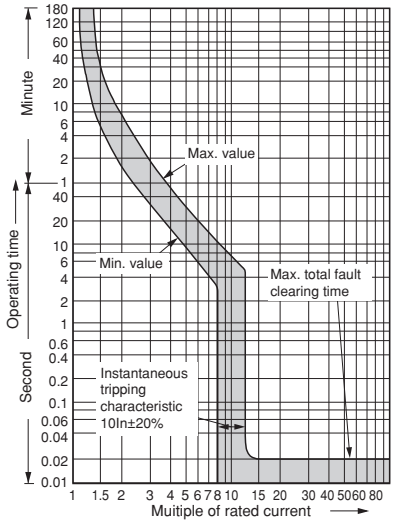
Temperature correction curve

• 40-125A

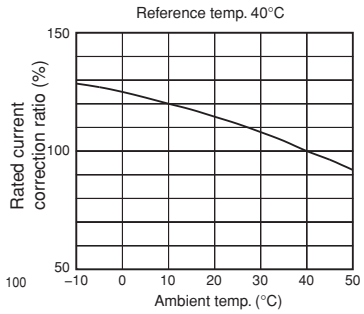


■ Characteristic curves / Line protection

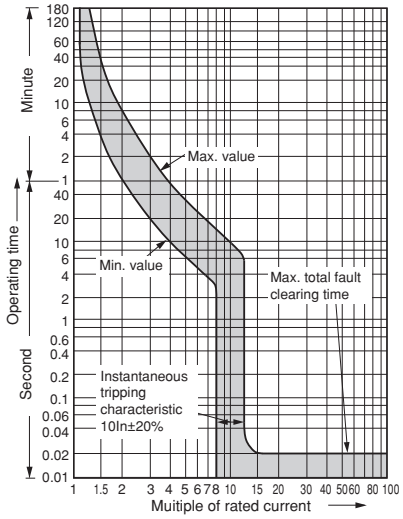
EW160/250



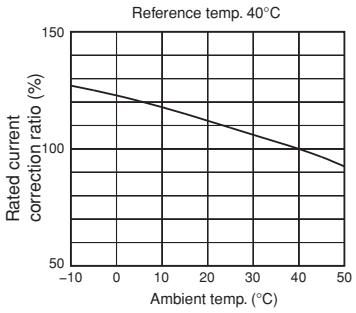
Temperature correction curve



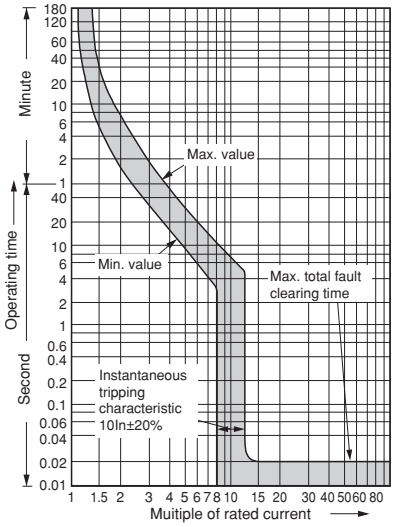
EW400



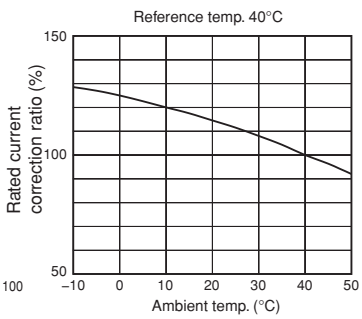
Temperature correction curve



EW630

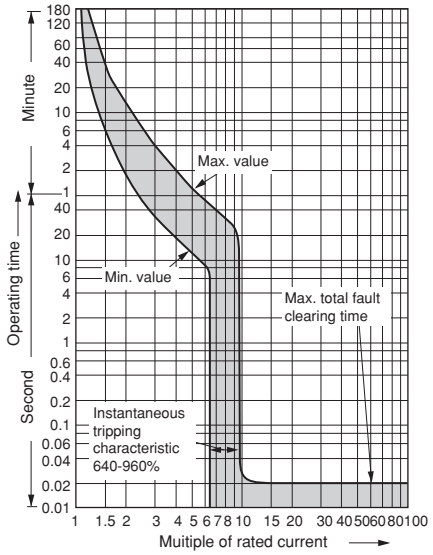


Temperature correction curve

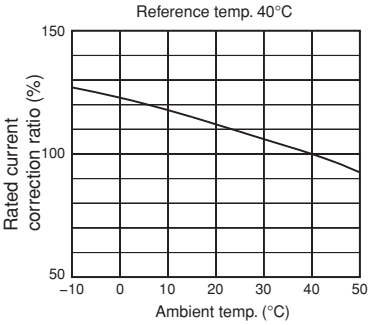


■ Characteristic curves / Line protection

EW800



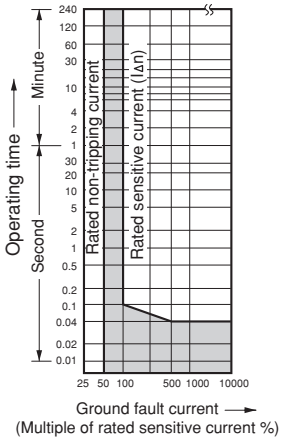
Temperature correction curve



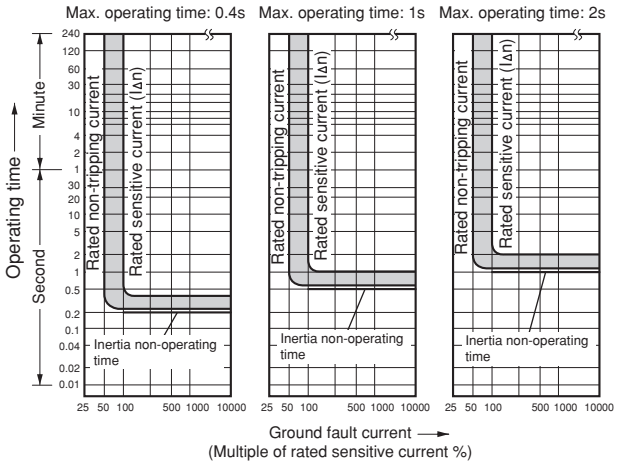
Earth leakage tripping

EW125/160/250/400/630/800

Instantaneous trip type

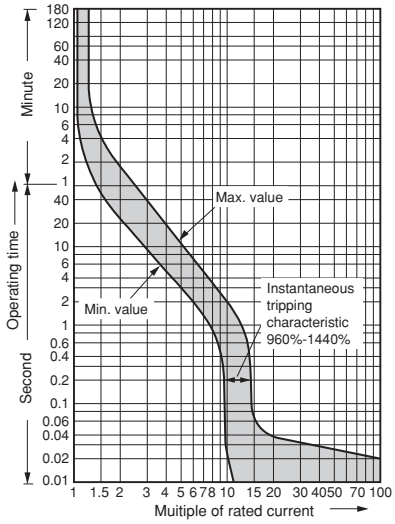


Time-delay trip type

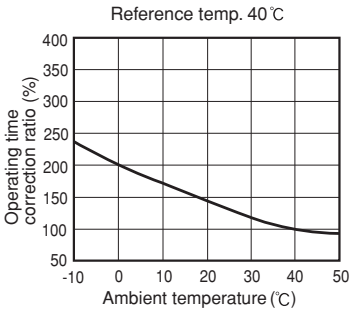


■ Characteristic curves / Motor protection

EW32/50/63/100

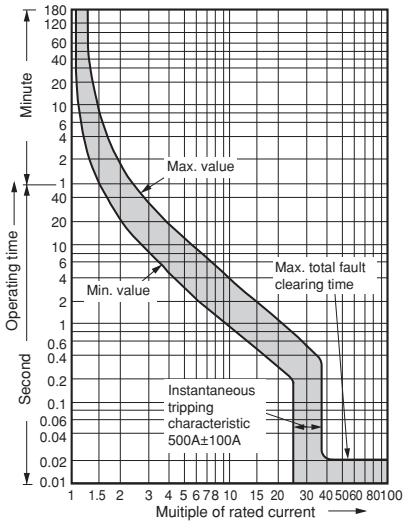


Temperature correction curve

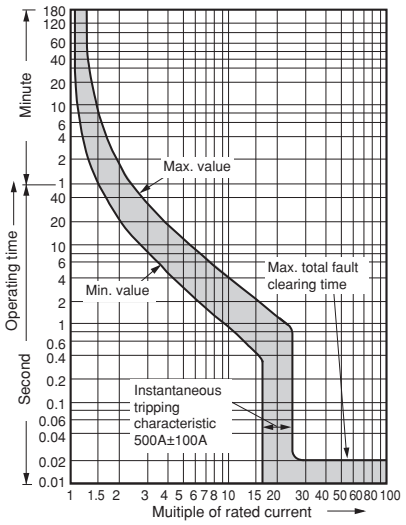


EW125

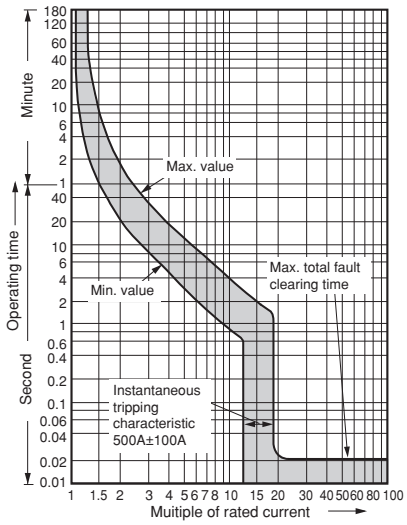
• 16A



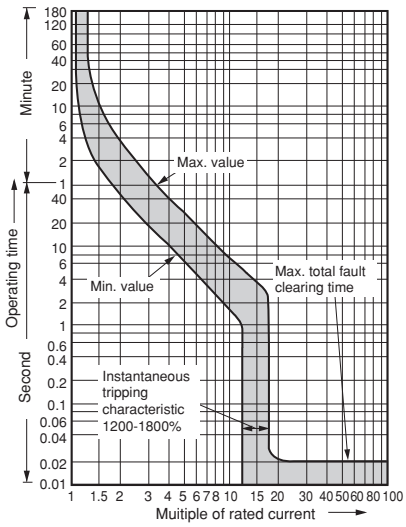
• 24A



• 32A

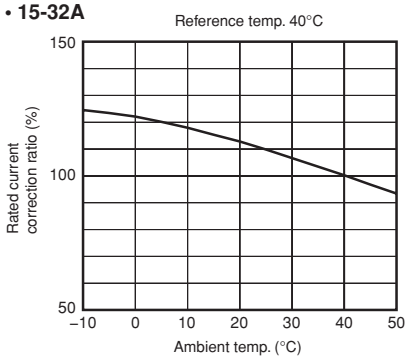


• 40-90A

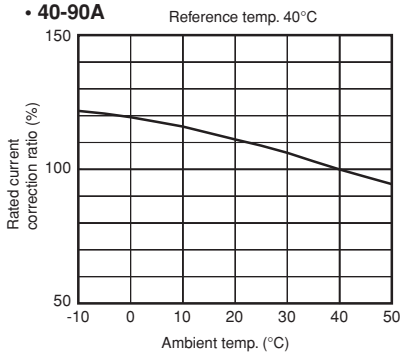


Temperature correction curve

• 15-32A



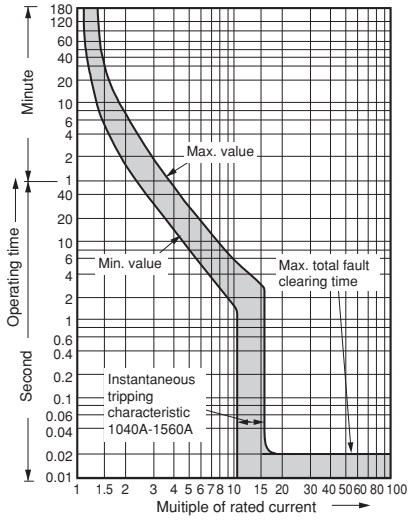
• 40-90A



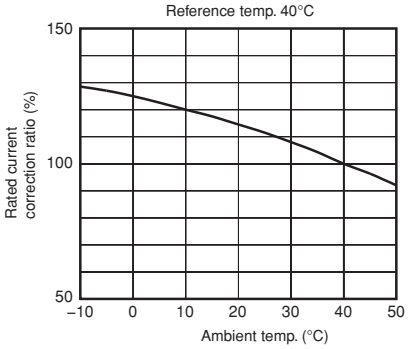
Characteristic curves

■ Characteristic curves / Motor protection

EW250

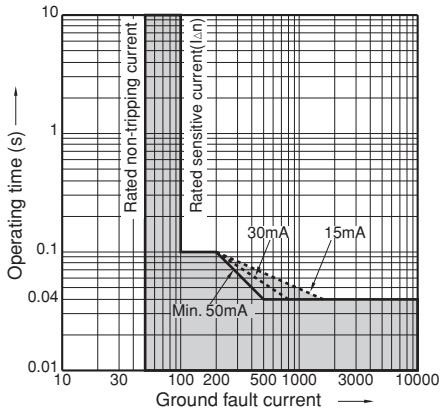


Temperature correction curve



Earth leakage tripping

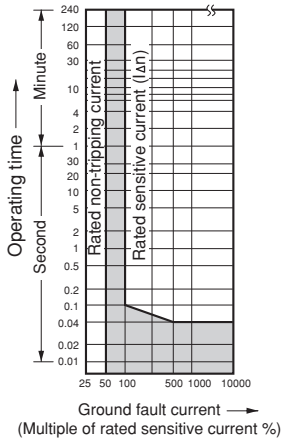
EW32/50/63



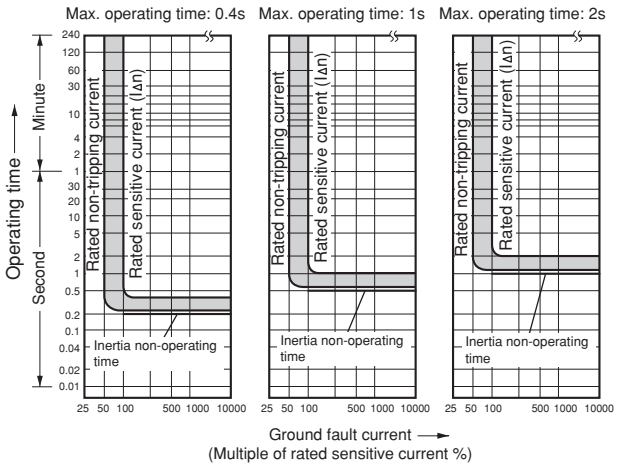
5I△n 0.04s max. (15, 30mA types: At 250mA)

EW125/250

Instantaneous trip type



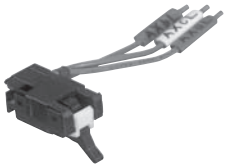
Time-delay trip type



■ **Variation of internal accessory**

• **32 to100AF**

Auxiliary switch (Type W)



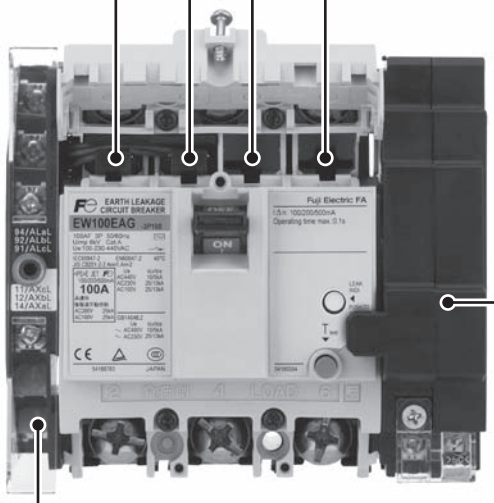
This switch is used for indicator lamp or control circuit.
See page 167.

Alarm switch (Type K)

This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped.
See page 167.

Shunt trip device (Type F)

The purpose of this accessory is to trip the breaker from a distance.
See page 168.



Undervoltage trip device (Type R)

The device is designed to protect circuits from harmful voltage drops.
It can also be used for remote control purposes. The trip operates when the voltage drops to less than 70% of nominal coil rating, and the breaker cannot be reset until the voltage recovers 85% of its normal rating.
See page 169.

Terminal block (Type A)

A wiring terminal for internal accessories (Order with W, K or F)
See page 170.

■ **Variation of internal accessory**

• **125 to 250AF**

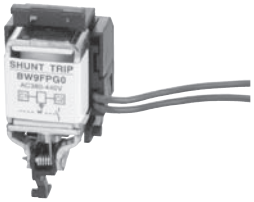
Auxiliary switch (Type W)

This switch is used for indicator lamp or control circuit.
See page 167.

Alarm switch (Type K)

This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped.
See page 167.

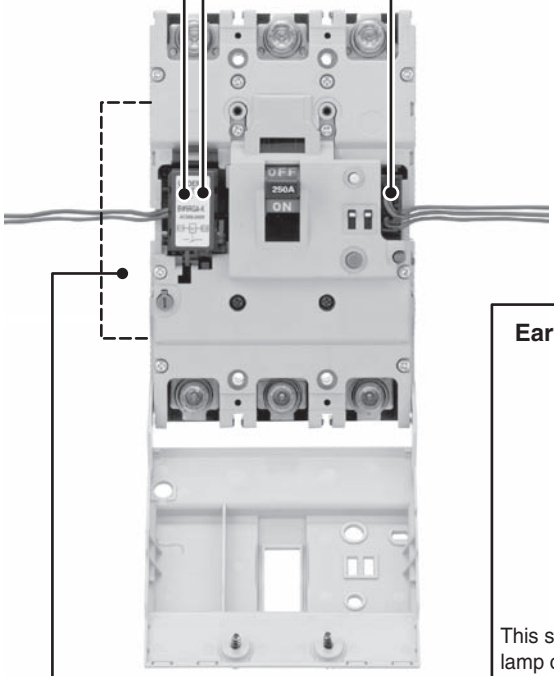
Shunt trip device (Type F)



The purpose of this accessory is to trip the breaker from a distance.
See page 168.

Undervoltage trip device (Type R)

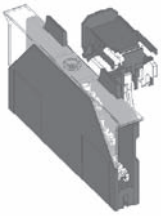
The device is designed to protect circuits from harmful voltage drops.
It can also be used for remote control purposes. The trip operates when the voltage drops to less than 70% of nominal coil rating, and the breaker cannot be reset until the voltage recovers 85% of its normal rating.
See page 169.



Earth alarm switch (Type L)

This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped by leakage current.
See page 167.

Terminal block (Type A)

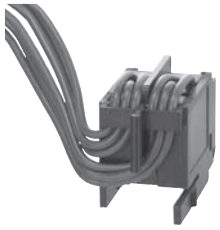


A wiring terminal for internal accessories (Factory-mounted)
See page 170.

■ **Variation of internal accessory**

• **400 to 800AF**

Alarm switch (Type K)



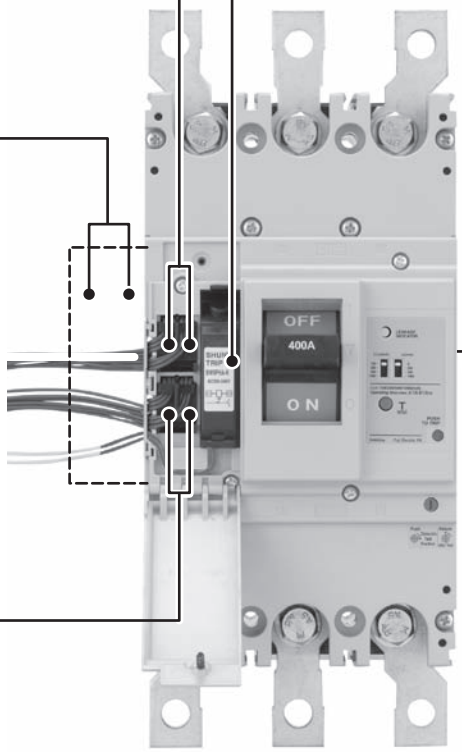
This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped.
See page 167.

Shunt trip device (Type F)

The purpose of this accessory is to trip the breaker from a distance.
See page 168.

Terminal block (Type A)

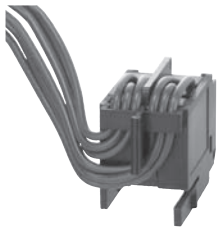
A wiring terminal for internal accessories (Factory-mounted)
See page 172.



Undervoltage trip device (Type R)

The device is designed to protect circuits from harmful voltage drops.
It can also be used for remote control purposes. The trip operates when the voltage drops to less than 70% of nominal coil rating, and the breaker cannot be reset until the voltage recovers 85% of its normal rating.
See page 169.

Auxiliary switch (Type W)



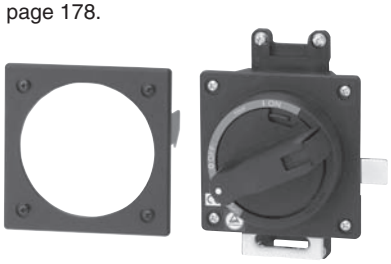
This switch is used for indicator lamp or control circuit.
See page 167.

Earth alarm switch (Type L)

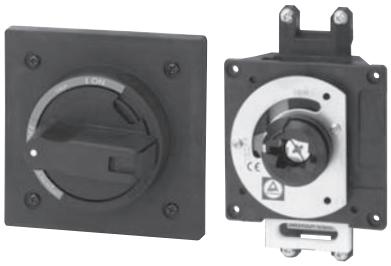
This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped by leakage current.
See page 167. (Factory-mounted)

■ Variation of external accessory

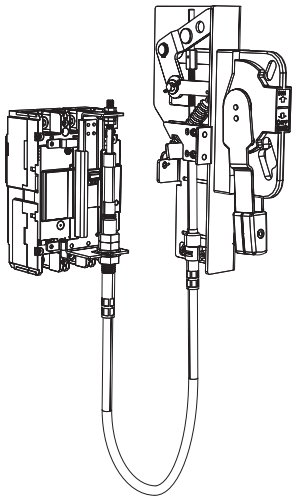
External operating handles
• N-type
See page 178.



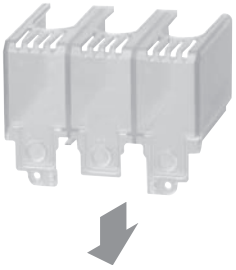
• V-type
See page 178.



• F-type
See page 179.



Terminal cover
Long type
See page 189.

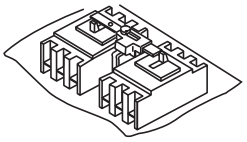


Interphase barrier
See page 190.

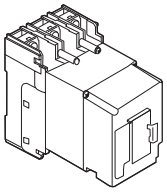
Terminal cover
Short type
See page 189.

Steel enclosures
See page 189.

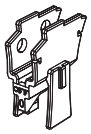
Mechanical interlock device
See page 174.



Motor-operating mechanism
See page 178.

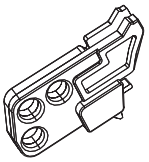


Handle locking cover (L1)
See page 191.

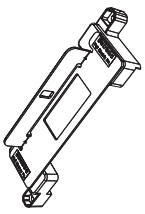


Padlocking device
See page 191.

• Cap type (Q1, QN)



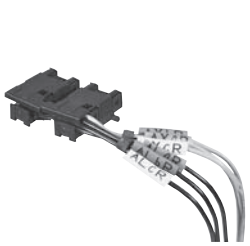
• Plate type (Q2)



Internal accessories

■ Terminal blocks for auxiliary circuit

- It indicates the terminal No. of internal accessory.The connection method of internal accessory is lead-wire system and terminal block system.
- For the available configuration of internal accessory, *see page 166.*



Lead-wire wiring

With terminal block

• Terminal number of internal accessory

Accessory		32 – 250AF		400 – 800AF
		Left side mounting	Right side mounting	Left side mounting
Auxiliary switch	SPDT: W (1)*	11 12 14 AXcL AXbL AXaL	21 22 24 AXcR AXbR AXaR	11 12 14 AXc AXb AXa
	2PDT: V (2)*	11 12 14 AXcL AXbL AXaL	21 22 24 AXcR AXbR AXaR	11 12 14 AXc AXb AXa 21 22 24 AXc AXb AXa
Alarm switch	SPDT: K (8)*	91 92 94 ALcL ALbL ALaL	01 02 04 ALcR ALbR ALaR	91 92 94 ALc ALb ALa
	2PDT: J (9)*	91 92 94 ALcL ALbL ALaL	01 02 04 ALcR ALbR ALaR	91 92 94 ALc ALb ALa 01 02 04 ALc ALb ALa
Shunt trip device : F	With 1NO contact to prevent coil burn-out	C2 C1 S2 S1		—
	Continuous rating	—		C2 C1 S2 S1
Undervoltage trip device : R		U< D2 D1 P2 P1		
Earth alarm switch (125 to 800AF)		71 72 74		

Note: * ( ) Code of Low level circuit

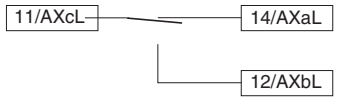
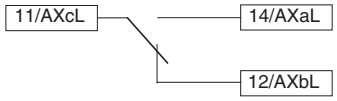
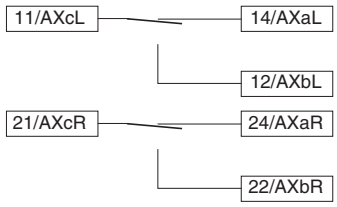
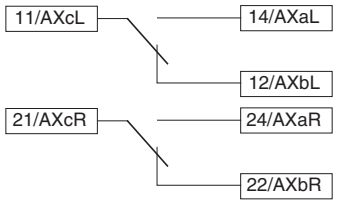
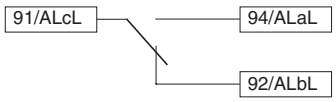
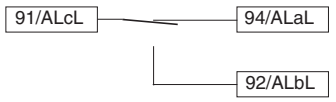
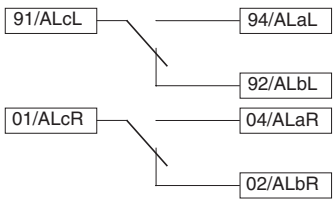
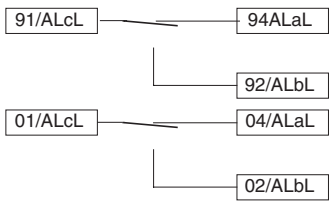
Internal accessories

■ Available configurations

ECCB	**EW32AAG-2P** **EW50AAG-2P**	**EW32□-3P** **EW50□-3P** **EW63□-3P** **EW100□-2P** **EW100□-3P**	**EW125** **EW160** **EW250**		**EW400** **EW630** **EW800**
Pole	2	2, 3	3	4	3, 4
Auxliary switch SPDT: W (1)*					
Alarm switch SPDT: K (8)*					
Shunt trip: F					
Undervoltage trip: R					
W+K (1+8)					
Auxliary switch 2PDT: V (2)					
Alarm switch 2PDT: J (9)					
V+K (2+8)					
W+J (1+9)					
V+J (2+9)					
W+F (1+F)					
W+R (1+R)		*2			
K+F (8+F)					
K+R (8+R)		*2			
W+K+F (1+8+F)					
W+K+R (1+8+R)		*2			
V+F (2+F)					
V+R (2+R)		*2 *1			
J+F (9+F)					
J+R (9+R)		*2 *1			
V+K+F (2+8+F)					
V+K+R (2+8+R)		*2 *1			
W+J+F (1+9+F)					
W+J+R (1+9+R)		*2 *1			
V+J+F (2+9+F)					
V+J+R (2+9+R)		*2 *1			
L					

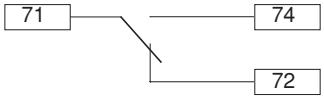
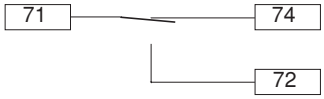
Notes: •The above table is applied to front mounting type, rear mounting type, flush mounting type, and plug-in mounting type.
• Terminal block is attached on the same side of the accessory.
• ( ) Code of low level circuit □:See page 168.

■ Operation of auxiliary switches(W) and alarm switches(K)

Accessory	Handle position		
	ON	OFF	Trip
Auxiliary switch SPDT: **W** **(1)**			
2PDT: **V** **(2)**			
Alarm switch SPDT: **K** **(8)**			
2PDT: **J** **(9)**			

Note: ▭ Ring mark indication
( ) Code of low level circuit

■ Operation of earth alarm switch (L)

Accessory	Handle position	
	ON/OFF/Overcurrent trip	EL trip
Earth alarm switch L		

■ Ratings of auxiliary switches(W) and alarm switches(K)

• 32-100AF

	IEC60947-5-1			NECA C4505		Minimum load current
	Voltage (V)	Make/break current (A)		Voltage (V)	Make/break current (A)	
		AC 15	DC 13		Res. load	
Standard type	125 AC	5	–	125 AC	5	5V DC 160mA 30V DC 30mA
	250 AC	5	–	250 AC	3	
	–	–	–	30 DC	4	
	125 DC	–	0.6	125 DC	0.4	
	250 DC	–	0.3	250 DC	0.2	
Low level circuit	–	–	–	30 DC	0.1	5V DC 1mA

• 125-800AF

	Rated thermal current (A)	Rated operational current (A)						Minimum load current
		AC			DC			
		Rated operational Voltage (V)	Res. load	Ind. load	Rated operational Voltage (V)	Res. load	Ind. load	
Standard type	5	24	5	5	24	4	3	5V DC 160mA 30V DC 30mA
		48	5	5	48	2.5	1	
		125	5	3	125	0.4	0.4	
		250	3	2	250	0.2	0.2	
Low level circuit	0.1	30	0.1	–	30	0.1	–	5V DC 1mA

■ Rating of shunt trip (F)

ELCB type	Installation	AC		DC		Code	Time rating of coil	Opearting time (ms)
		V	VA	V	W			
EW32 **EW50** **EW63** **EW100**	External	100(50Hz)/ 100-110(60Hz)	16	–	–	FAC100V(50Hz)/ 100-110V(60Hz)	Continuous	7-13
		200(50Hz)/ 200-220(60Hz)	16	–	–	FAC200V(50Hz)/ 200-220V(60Hz)		
		400(50Hz)/ 400-440(60Hz)	22	–	–	FAC400V(50Hz)/ 400-440V(60Hz)		
		–	–	24	36	FDC24V		
		–	–	100-110	23	FDC100-110V	Continuous (With 1NO contact to prevent coil burn-out)	
EW125 **EW160** **EW250**	Internal	24	50	24	50	FAC/DC24V	Continuous (With 1NO contact to prevent coil burn-out)	13-21
		48	50	48	50	FAC/DC48V		
		100-120	50	100-110	50	FAC100-120V/ DC100-110V		
		120-130	50	–	–	FAC120-130V		
		200-240	50	200-220	50	FAC200-240V/ DC200-220V		
		277	50	–	–	FAC277V		
		380-440	50	–	–	FAC380-440V		
		440-480	50	–	–	FAC440-480V		
		500-550	50	–	–	FAC500-550V		
EW400 **EW630** **EW800**	Internal	24-48	2	24-48	2	FAC/DC24-48V	Continuous	8-20
		100-240	3	100-220	3	FAC100-240V/ DC100-220V		
		277	3	–	–	FAC277V		
		380-550	4	–	–	FAC380-550V		

Note: The operating tripping voltage range for shunt trip devices is 70% to 110% of the rated operating voltage.

■ Rating of undervoltage trip (R)

ELCB type	Installation	AC		DC		Code
		V	VA	V	W	
EW32 *2 **EW50** *2 **EW63** *2 **EW100** *2	External	100 (50Hz)/ 100-110(60Hz)	2.8	–	–	RAC100V(50Hz)/ 100-110V(60Hz)
		200 (50Hz)/ 200-220 (60Hz)	3.4	–	–	RAC200V(50Hz)/ 200-220V(60Hz)
		400 (50Hz)/ 400-440 (60Hz)	4.4	–	–	RAC400V(50Hz)/ 400-440V(60Hz)
		–	–	24	40	RDC24V
				100-110		RDC100-110V
EW125 *1 **EW160** *1 **EW250** *1	Internal	–	–	24	5	RDC24V
		–	–	48	5	RDC48V
		–	–	100-110	5	RDC100-110V
		–	–	125	5	RDC125V
		100-110	5	–	–	RAC100-110V
		110-130	5	–	–	RAC110V-130V
		200-240	5	–	–	RAC200-240V
		277	5	–	–	RAC277V
		380-415	5	–	–	RAC380-415V
		440-480	5	–	–	RAC440V-480V
EW400 *2 **EW630** *2 **EW800** *2	Internal	24	2	24	2	RAC/DC24V
		48	2	48	2	RAC/DC48V
		100-110	3	100-110	3	RAC/DC100-110V
		120-130	3	125	3	RAC120-130V/DC125V
		200-240	3	200-220	3	RAC200-240V/DC200-220V
		277	3	–	–	RAC277V
		380-480	4	–	–	RAC380-480V

Notes: • The operating voltages of undervoltage tripping devices are as follows:
Tripping voltage: 35% to 70% of rated voltage, closing voltage: 85% to 110% of rated voltage.

*1 Reset-allowed type: When the breaker handle is in the OFF or RESET state, tripping does not occur even if the R coil is not energized. Turning ON with the R coil not energized causes normal tripping.

*2 Reset-prohibited type: When the R coil is not energized, reset operation cannot reset the tripped breaker to the OFF state.

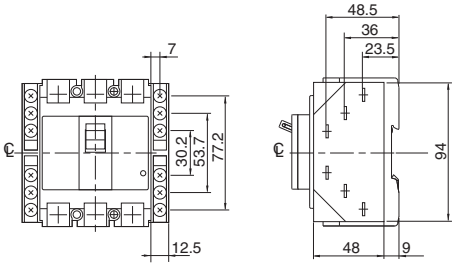
Internal accessories

■ Lead wire specification

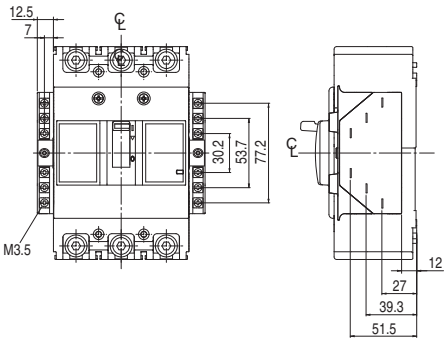
AF		Pole	wire size	Wire length
32 to 100AF	Standard	2P, 3P	0.4mm^2 (AWG22)	Ca 500mm
	Global		0.5mm^2 (AWG20)	
125 to 250AF		2P, 3P	0.5mm^2 (AWG20)	
		4P		
400 to 800AF		2P, 3P	0.5mm^2 (AWG20)	Ca 500mm
		4P		Ca 400 to 450mm

■ Terminal blocks

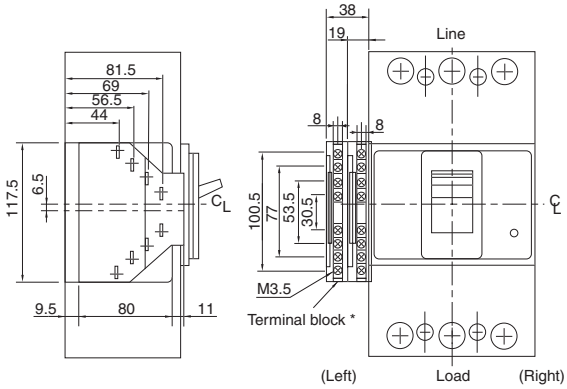
32AF, 50AF, 63AF, 100AF



125AF, 160AF, 250AF



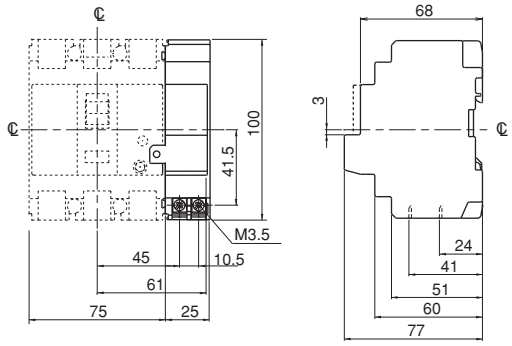
400AF, 630AF, 800AF



Notes:
* If the chosen combination has more than 8 terminals, 2 terminal blocks are mounted.
• Mount the terminal block on the surface on which the accessories are mounted. See the table of the combinations of internal accessories on pages 166. for information on the accessory mounting position.
• Available wire: Solid wire: 1.6ø Stranded wire: 2mm^2
• Terminal blocks are available as factory mounted only.

■ Undervoltage trip device, Shunt trip device

32AF, 50AF, 63AF, 100AF



Mass: 0.15kg

■ Type number

Internal accessories (Sold separately)

• 32, 50, 63, 100AF IEC/EN/GB/JIS conformed

Accessory	Type				Operating voltge
	Lead wire system		Terminal block system		
	Left side	Right side	Left side	Right side	
Auxiliary switch	**BZ6WL10C**	**BZ6WR10C**	**BZ6WL10CA**	**BZ6WR10CA**	
Auxiliary switch (low level circuit)	**BZ6WDL10C**	**BZ6WDR10C**	**BZ6WDL10CA**	**BZ6WDR10CA**	
Alarm switch	**BZ6KL10C**	**BZ6KR10C**	**BZ6KL10CA**	**BZ6KR10CA**	
Alarm switch (low level circuit)	**BZ6KDL10C**	**BZ6KDR10C**	**BZ6KDL10CA**	**BZ6KDR10CA**	
Auxiliary switch + Alarm switch	**BZ6WKL10C**	**BZ6WKR10C**	**BZ6WKL10CA**	**BZ6WKR10CA**	
Auxiliary switch + Alarm switch (low level circuit)	**BZ6WDKDL10C**	**BZ6WDKDR10C**	**BZ6WDKDL10CA**	**BZ6WDKDR10CA**	
Shunt trip device				**BZ6F210C**	100V AC 50Hz/100-110V AC 60Hz
				BZ6F110C	110V AC 50Hz/100-127V AC 60Hz
				BZ6F710C	200V AC 50Hz/200-220V AC 60Hz
				BZ6F410C	220V AC 50Hz/220-240V AC 60Hz
				BZ6F510C	230V AC 50Hz/230-240V AC 60Hz
				BZ6FB10C	240V AC 50Hz
				BZ6F010C	380V AC 50Hz 380-415V AC 60Hz
				BZ6F810C	400V AC 50Hz 400-440V AC 60Hz
Undervoltage trip device				**BZ6R210C**	100V AC 50Hz/100-110V AC 60Hz
				BZ6R110C	110V AC 50Hz/110-127V AC 60Hz
				BZ6RW10C	200V AC 50Hz/200-220V AC 60Hz
				BZ6R410C	220V AC 50Hz/220-240V AC 60Hz
				BZ6R510C	230V AC 50Hz/230-240V AC 60Hz
				BZ6R810C	240V AC 50Hz
				BZ6R010C	380V AC 50Hz 380-415V AC 60Hz
				BZ6R910C	400V AC 50Hz 400-440V AC 60Hz
				BZ6RF10C	24V DC
				BZ6RT10C	100-110V DC

• 32, 50, 63, 100AF IEC/EN/GB/JIS/UL/CSA conformed

Accessory	Type				Operating voltge
	Lead wire system		Terminal block system		
	Left side	Right side	Left side	Right side	
Auxiliary switch	**BZ6WL10CU**	**BZ6WR10CU**	**BZ6WL10CAU**	**BZ6WR10CAU**	
Auxiliary switch (low level circuit)	**BZ6WDL10CU**	**BZ6WDR10CU**	**BZ6WDL10CAU**	**BZ6WDR10CAU**	
Alarm switch	**BZ6KL10CU**	**BZ6KR10CU**	**BZ6KL10CAU**	**BZ6KR10CAU**	
Alarm switch (low level circuit)	**BZ6KDL10CU**	**BZ6KDR10CU**	**BZ6KDL10CAU**	**BZ6KDR10CAU**	
Auxiliary switch + Alarm switch	**BZ6WKL10CU**	**BZ6WKR10CU**	**BZ6WKL10CA**	**BZ6WKR10CAU**	
Auxiliary switch + Alarm switch (low level circuit)	**BZ6WDKDL10CU**	**BZ6WDKDR10CU**	**BZ6WDKDL10CAU**	**BZ6WDKDR10CAU**	
Shunt trip device	–	–	–	**BZ6F210CAU**	100V AC 50Hz/100-110V AC 60Hz
	–	–	–	**BZ6F710CAU**	200V AC 50Hz/200-220V AC 60Hz
	–	–	–	**BZ6F810CAU**	400V AC 50Hz/400-440V AC 60Hz
Undervoltage trip device	–	–	–	**BZ6R210CAU**	100V AC 50Hz/100-110V AC 60Hz
	–	–	–	**BZ6RW10CAU**	110V AC 50Hz/110-127V AC 60Hz
	–	–	–	**BZ6R910CAU**	200V AC 50Hz/200-220V AC 60Hz

Internal accessories

• 125, 160, 250AF IEC/EN/GB/JIS/UL/CSA conformed

Accessory	Type				Operating voltge
	Lead wire system		Terminal block system		
	Left side	Right side	Left side	Right side *	
Auxiliary switch	**BW9W1SG0**	**BW9W1SG0-R**	**BW9W1SG0-A**	–	–
Auxiliary switch (low level circuit)	**BW9W1DG0**	**BW9W1DG0-R**	**– ***		
Alarm switch	**BW9K1SG0**	**BW9K1SG0-R**	**BW9K1SG0-A**		
Alarm switch (low level circuit)	**BW9K1DG0**	**BW9K1DG0-R**	**– ***		
Auxiliary switch + Alarm switch	**BW9WKSG0**	**BW9WK1SG0-R**	**BW9WKSG0-A**		
Auxiliary switch + Alarm switch (low level circuit)	**BW9WKDG0**	**BW9WK1DG0-R**	**– ***		
Earth alarm switch	–	**BW9L1SGA**	–		
Shunt trip device	**BW9FRG0**	**BW9FRG0**	**BW9FRG0-A**		24V AC/DC
	BW9FSG0	**BW9FSG0**	**BW9FSG0-A**		48V AC/DC
	BW9FAG0	**BW9FAG0**	**BW9FAG0-A**		100-120V AC/100-110V DC
	BW9F1G0	**BW9F1G0**	**BW9F1G0-A**		120-130V AC
	BW9FKG0	**BW9FKG0**	**BW9FKG0-A**		200-240V AC/200-220V DC
	BW9FBG0	**BW9FBG0**	**BW9FBG0-A**		277V AC
	BW9FPG0	**BW9FPG0**	**BW9FPG0-A**		380-440V AC
	BW9FHG0	**BW9FHG0**	**BW9FHG0-A**		440-480V AC
	BW9FJG0	**BW9FJG0**	**BW9FJG0-A**		500-550V AC
Undervoltage trip devics	**BW9RGAR**	–	**BW9RGAR-A**		24V DC
	BW9RGAS		**BW9RGAS-A**		48V DC
	BW9RGAL		**BW9RGAL-A**		100-110V DC
	BW9RGA5		**BW9RGA5-A**		125V DC
	BW9RGAA		**BW9RGAA-A**		100-110V AC
	BW9RGAT		**BW9RGAT-A**		110-130V AC
	BW9RGAK		**BW9RGAK-A**		200-240V AC
	BW9RGAB		**BW9RGAB-A**		277V AC
	BW9RGAP		**BW9RGAP-A**		380-415V AC
	BW9RGAH		**BW9RGAH-A**		440-480V AC

Note: * Factory-mounted

• 400, 630, 800AF IEC/EN/GB/JIS/UL/CSA conformed

Accessory	Type		Operating voltge
	Lead wire system	Terminal block system *	
	Left side		
Auxiliary switch x 1	**BW9W1SHA**	–	–
Auxiliary switch x 2	**BW9W2SHA**		
Auxiliary switch (low level circuit) x 1	**BW9W1DHA**		
Auxiliary switch (low level circuit) x 2	**BW9W2DHA**		
Alarm switch x 1	**BW9K1SHA**		
Alarm switch x 2	**BW9K2SHA**		
Alarm switch (low level circuit) x 1	**BW9K1DHA**		
Alarm switch (low level circuit) x 2	**BW9K2DHA**		
Shunt trip device	**BW9FHA-R**		24-48V AC/DC
	BW9FHA-A		100-240V AC/100-220V DC
	BW9FHA-B		277V AC
	BW9FHA-P		380-550V AC
Undervoltage trip devics	**BW9RHA-R**		24V AC/DC
	BW9RHA-S		48V AC/DC
	BW9RHA-A		100-110 AC/DC
	BW9RHA-1		120-130V AC/125V DC
	BW9RHA-K		200-240V AC/200-220V DC
	BW9RHA-B		277V AC
	BW9RHA-P		380-480V AC

Note: * Factory-mounted

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.

The breakers do not conform to IEC and EN standard.

■ Type and ratings

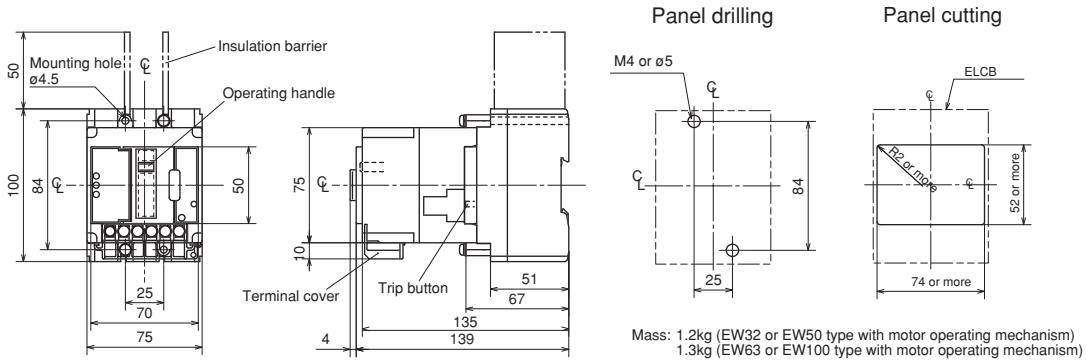
ELCB type	Motor rating			Power source capacity	Mass (kg)
	Operating voltage	Operating time	Time rating		
EW32□-3P□M, EW50□-3P□M, EW63□-3P□M, EW100□-2P□M, EW100□-3P□M	100V DC 100/110V AC 200/220V AC	0.1s	15s per on-off operation	500VA	1.2 1.3

■ Ordering information

Specify the following:
1. Type number
2. Motor operating voltage

■ Dimensions, mm / Front mounting, front connection

EW32□-3P, EW50□-3P, EW63□-3P, EW100□-2P, EW100□-3P

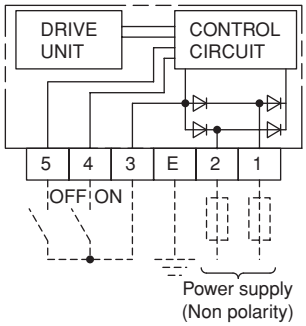


Mass: 1.2kg (EW32 or EW50 type with motor operating mechanism)
1.3kg (EW63 or EW100 type with motor operating mechanism)

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

■ Wiring diagrams

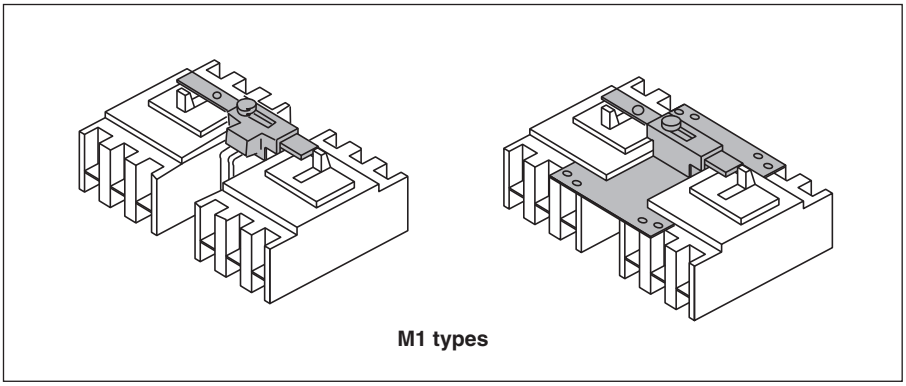
100/110V AC, 200/220V AC, 100V DC



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.
A sliding mechanism that can be locked with a padlock is used. (The padlock is not included.)
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.



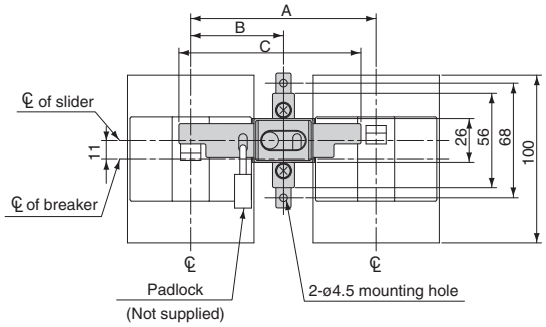
M1 types

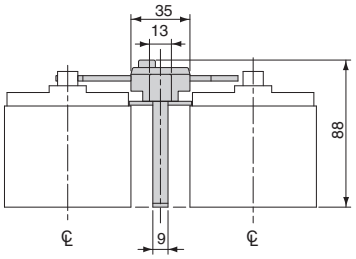
■ Type and applicable breakers

Type	Breaker type
BZ6M110C2	EW32AAG-2P, EW50AAG-2P
BZ6M110C3	EW32□-3P, EW50□-3P, EW63□-3P, EW100□-2P, EW100□-3P
BW9M1CA-3	EW125□-3P
BW9M1CA-4	EW125□-4P
BW9M1GA-3	EW250□-3P
BW9M1GA-4	EW250□-4P
BW9M1HA-3	EW400□-3P
BW9M1HA-4	EW400□-4P
BW9M1JA-3	EW630□-3P, EW800□-3P

■ Dimensions, mm

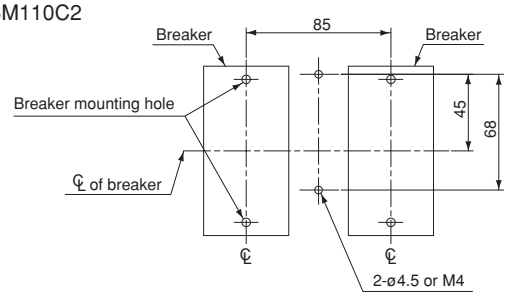
• 32AF to 100AF



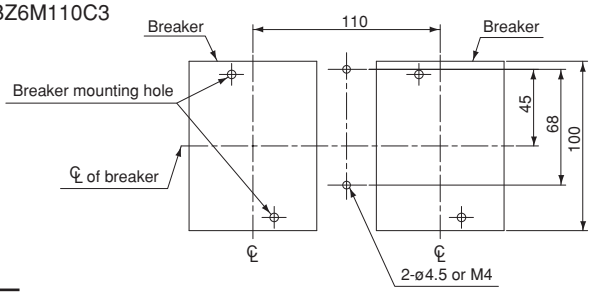


Panel drilling

BZ6M110C2

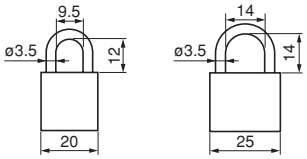


BZ6M110C3



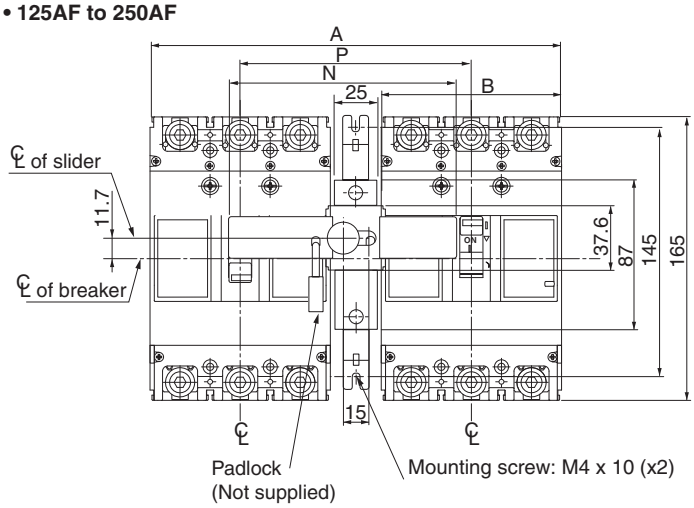
Type	Dimensions, mm A	B	C	Mass (kg)
BZ6M110C2	85	42.5	83	0.11
BZ6M110C3	110	55	108	0.12

Notes: • BZ6M110C2 is not available for padlock.
• Applicable padlock(ø3.5) dimensions, mm
• External installation forms F and R are not applicable to the ELCB on the left of the diagram.



■ Dimensions, mm

• 125AF to 250AF



Panel drilling

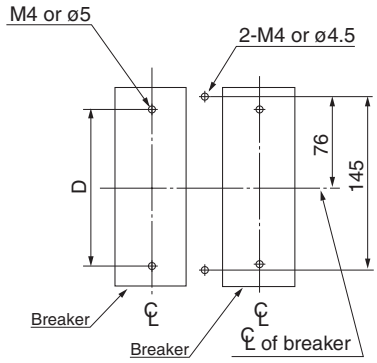
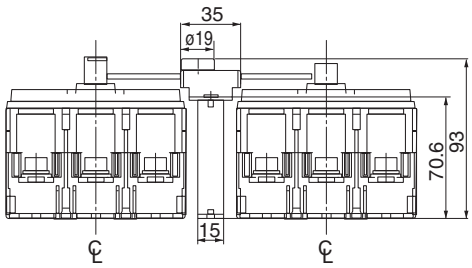


Fig.1



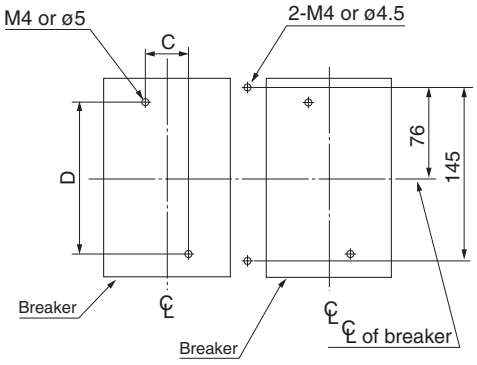


Fig.2

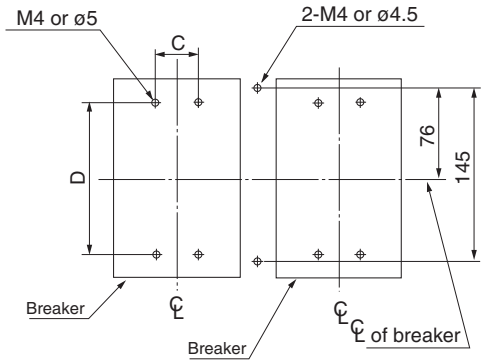


Fig.3

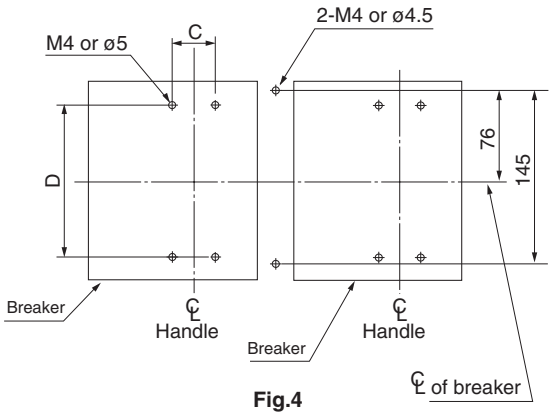
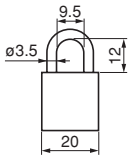


Fig.4

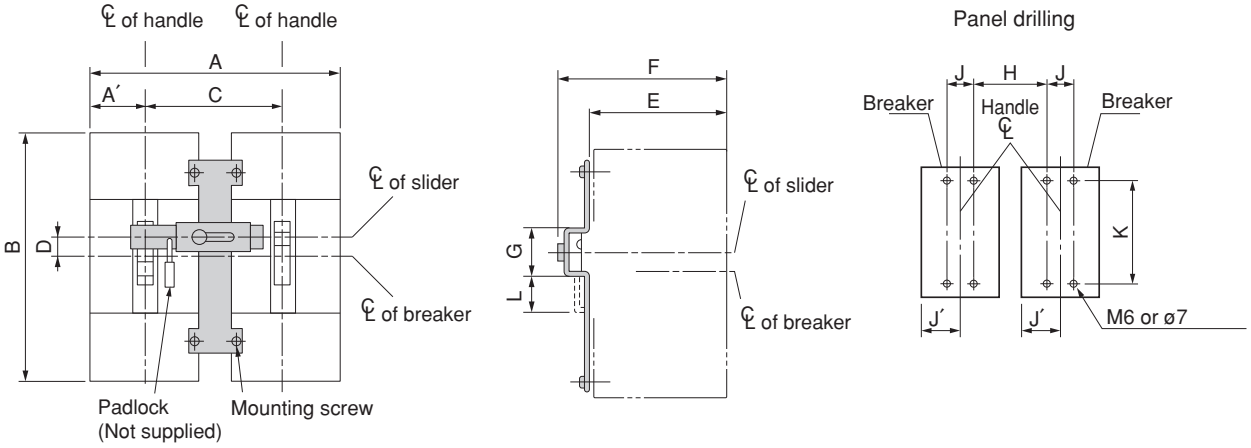
Type	Dimensions, mm						Panel Drilling	Mass(Kg)
	P	N	A	B	C	D		
BW9M1CA-2	90	88	150	60	–	132	Fig.1	
BW9M1CA-3	120	118	210	90	30	132	Fig.2	
BW9M1CA-4	150	148	270	102	30	132	Fig.4	
BW9M1GA-3	135	133	240	105	35	126	Fig.3	
BW9M1GA-4	170	168	310	140	35	126	Fig.4	

Notes: • The dimensions and Breaker mounting holes for back surface mounting are different from those given above. Inquire for details.
• If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
• External installation forms F and R are not applicable to the ELCB on the left of the diagram.



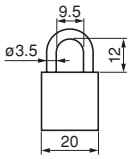
■ Dimensions, mm

• 400AF to 800AF



Type	Dimensions, mm											Mass(Kg)
	A (A')	B	C	D	E	F	G	H	J (J')	K	L	
BW9M1HA-3	355 (70)	257	215	20	94.5	132.5	54.5	171	44 (70)	215	38	
BW9M1HA-4	470 (140)	257	260	20	94.5	132.5	54.5	216	44 (140)	215	38	
BW9M1JA-3	500 (105)	275	290	20	94.5	132.5	54.5	220	70 (105)	243	38	

Notes: • The dimensions and Breaker mounting holes for back surface mounting are different from those given above. Inquire for details.
• If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
• External installation forms F and R are not applicable to the ELCB on the left of the diagram.



External operating handles

■ Description

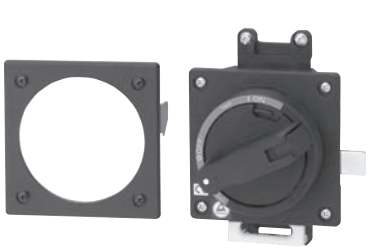
Molded case circuit breaker handles are generally directly manual-operated but when mounted in motor control centers or on control panels they are sometimes required to be operated externally. To meet such applications FUJI offers the following three types of handles.

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.
Conformed to EN60947-1 isolation function.
Available for EN60204-1 power breaking device.
Conformed to UL489 (File No.E93289)

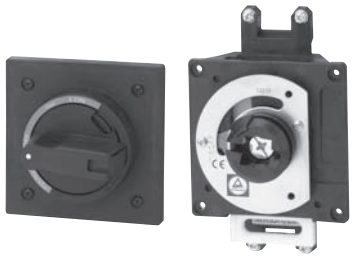
V type handle
The V type handle may be fitted to breakers of up to 800AF.
A separately sold extension shaft provides distance adjustment between the handle and breaker.
Conformed to EN60947-1 isolation function.
Available for EN60204-1 power breaking device.
Conformed to UL489 (File No.E93289)

F type handle
The F type handle may be fitted to breakers of 125 to 400AF.
It is a flange type handle, which is commonly used in the North American market.
The drive section of the breaker and the external operating handle are connected with an optional cable. Positioning between the breaker and the external operating handle is not required.

Conformed to UL489 (File No.E93289)

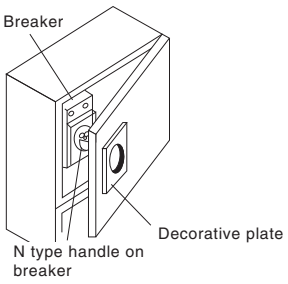


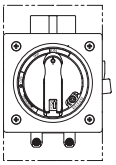
BW9N0CA
N type handles



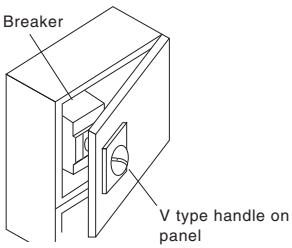
BW9V0CA
V type handle

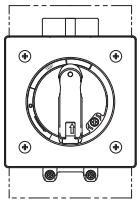
N type handles



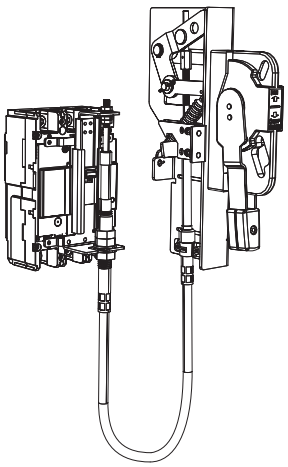


V type handles





F type handles



N type handles

ELCB	N type handle
EW32 EW50 EW63 EW100	**BZ6N10D**
EW125	**BW9N0CA**
EW160 EW250	**BW9N0GA**
EW400	**BW9N0HA**
EW630 EW800	**BW9N0JA**

V type handles

ELCB	V type handle
EW32 EW50 EW63 EW100	**BZ6V10D**
EW125	**BW9V0CA**
EW160 EW250	**BW9V0GA**
EW400	**BW9V0HA**
EW630 EW800	**BW9V0JA**

F type handles

ELCB	F type handle
EW125	**BW9F0CA**
EW250	**BW9F0GA**
EW400	**BW9F0HA**

■ Type number nomenclature

• N type handle

BW9N0CA – □

- **Mounting** (For BZ6N10D, BW9N0HA, BW9N0JA)
  - Blank: Front mounting, front connection
  - X: Front mounting, rear connection
  - P: Plug-in mounting
- **Basic type**

• V type handle

BW9V0CA – □

- **Mounting** (For BZ6V10D, BW9V0HA, BW9V0JA)
  - Blank: Front mounting, front connection
  - X: Front mounting, rear connection
  - P: Plug-in mounting
- **Basic type**

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.

• F type handle

BW9F0 □ A

- **Breaker type**
  - C: EW125□U
  - G: EW250□U
  - H: EW400□U
- **Basic type**

Cable (For F type)

BW9FW □ A – □ A

- **Cable length**
  - 15: 1.5m
  - 20: 2.0m
  - 30: 3.0m
- **Breaker type**
  - C: EW125□U
  - G: EW250□U
  - H: EW400□U
- **Basic type**

Terminal cover (For F type)

BW9FBT □ A – L3

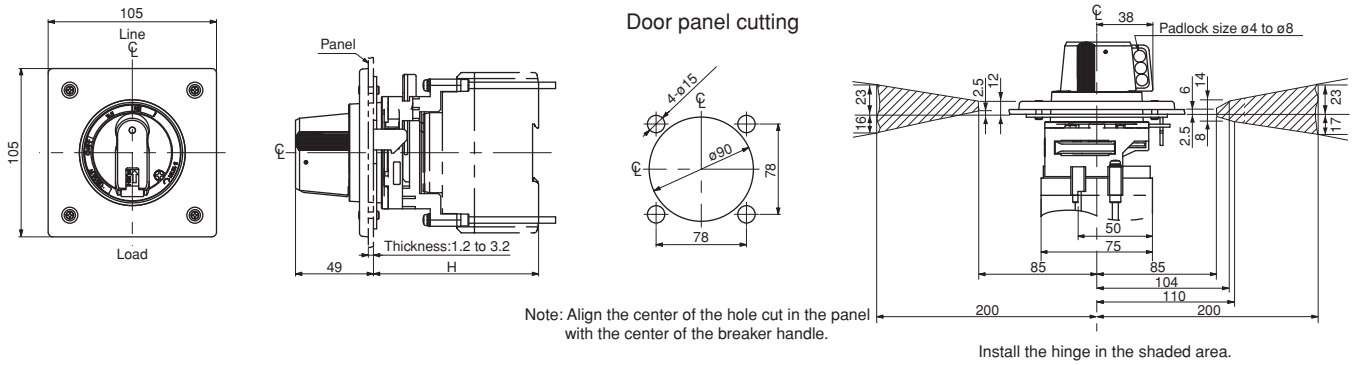
- **Breaker type**
  - C: EW125□U
  - G: EW250□U
  - H: EW400□U
- **Basic type**

External accessories

■ Dimensions, mm

N type handle

• BZ6N10D

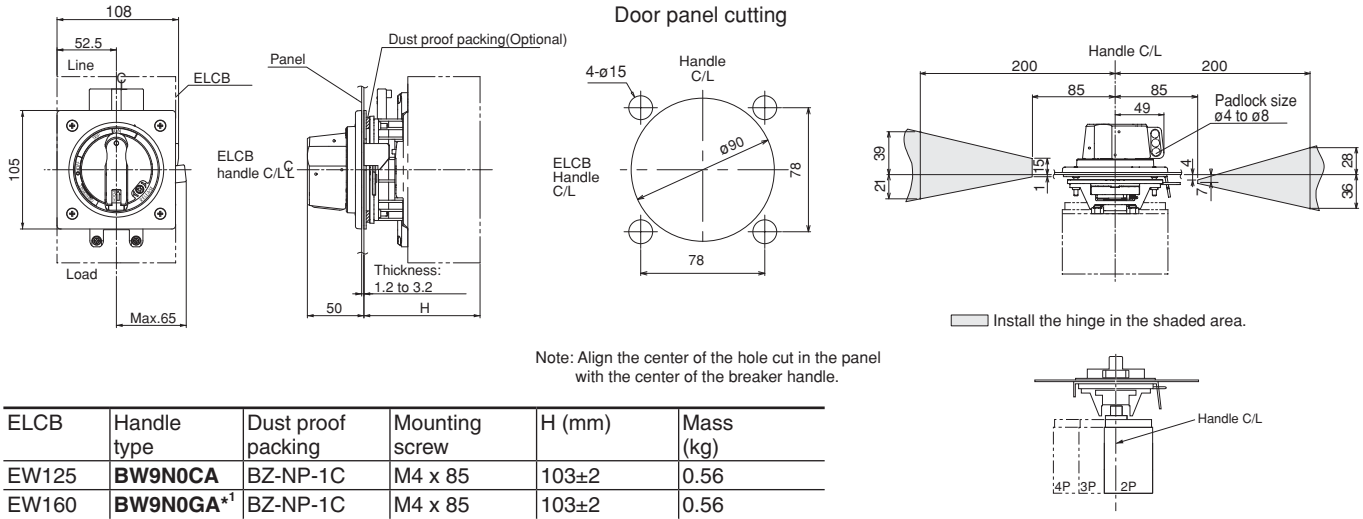


Note: Align the center of the hole cut in the panel with the center of the breaker handle.

Install the hinge in the shaded area.

ELCB	Handle type	Dust proof packing	Mounting screw	H (mm)	Mass (kg)
EW32	**BZ6N10D**	Provided	M4 x 85	103±2	0.47
EW50	**BZ6N10D-X**	Provided	Contact FUJI.	111±2	
EW63	**BZ6N10D-P**			111±2	
EW100					

• BW9N0CA, BW9N0GA

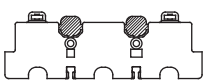


Install the hinge in the shaded area.

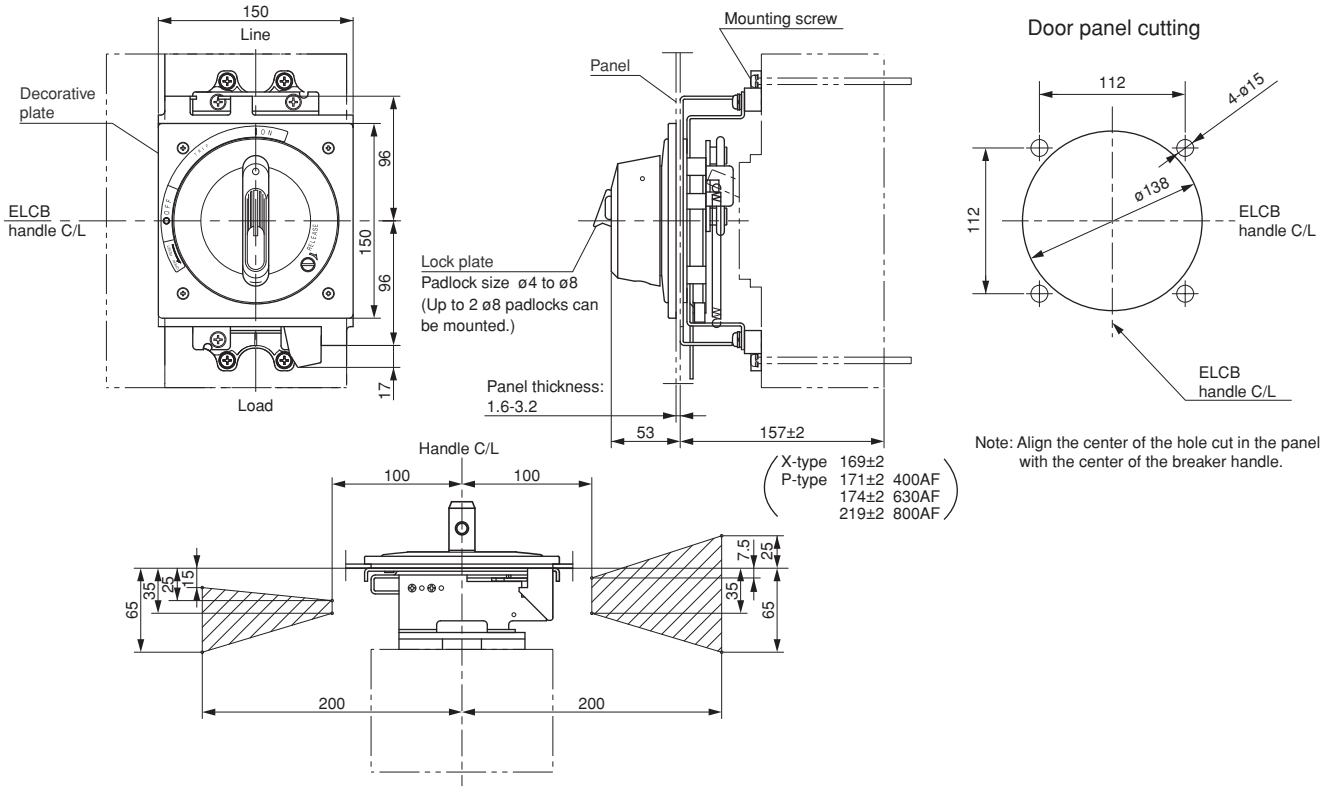
Note: Align the center of the hole cut in the panel with the center of the breaker handle.

ELCB	Handle type	Dust proof packing	Mounting screw	H (mm)	Mass (kg)
EW125	**BW9N0CA**	BZ-NP-1C	M4 x 85	103±2	0.56
EW160	**BW9N0GA***1	BZ-NP-1C	M4 x 85	103±2	0.56
EW250					

Notes: • The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
• Remove the handle lock bar before opening the door. (Turn the handle in the open direction.)
The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
• Engage the door interlock securely before turning ON the power.
*1 The terminal cover will cover the mounting screws for the Breaker. When attaching the terminal cover, a portion of the terminal cover will need to be removed.
Remove portion ▨ in the following diagram.



• BW9N0HA, BW9N0JA



Install the door hinge in the shaded area.

ELCB	Handle type	Dust proof packing	Mounting screw	Mass (kg)
EW400	**BW9N0HA** **BW9N0HA-X** **BW9N0HA-P**	BZ-NP-2	M6 x 110 M6 x 115 Contact FUJI.	1.9
EW630 EW800	**BW9N0JA** **BW9N0JA-X** **BW9N0JA-P**	BZ-NP-2	M6 x 110 M6 x 115 Contact FUJI.	1.9

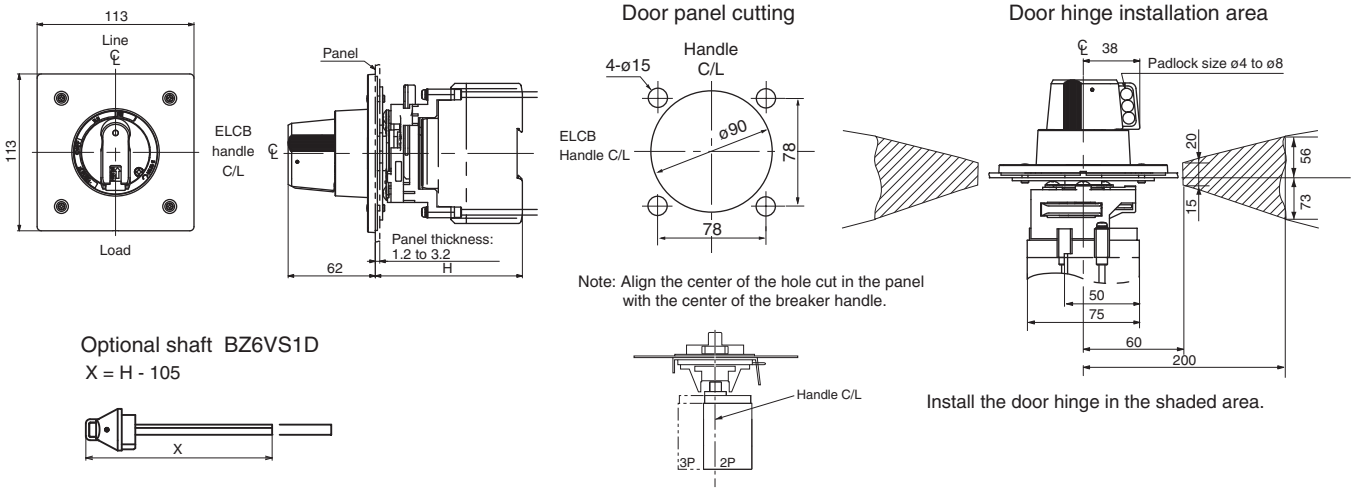
Notes: • The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
• Remove the handle lock bar before opening the door. (Turn the handle in the open direction.)
The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
• Engage the door interlock securely before turning ON the power.
• Not available for side mounting.

External accessories

■ Dimensions, mm

V type handle

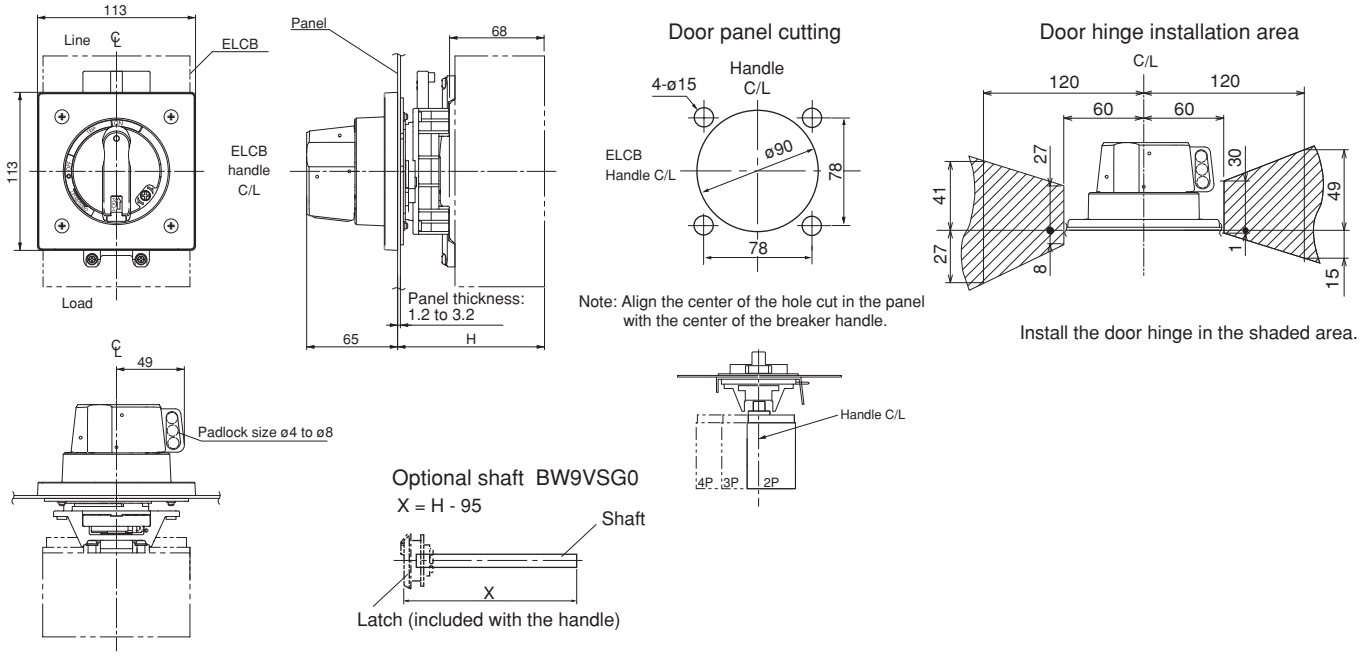
• BW6V10D



Note: Align the center of the hole cut in the panel with the center of the breaker handle.

Install the door hinge in the shaded area.

• BW9V0CA, BW9V0GA

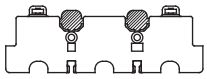


Note: Align the center of the hole cut in the panel with the center of the breaker handle.

Install the door hinge in the shaded area.

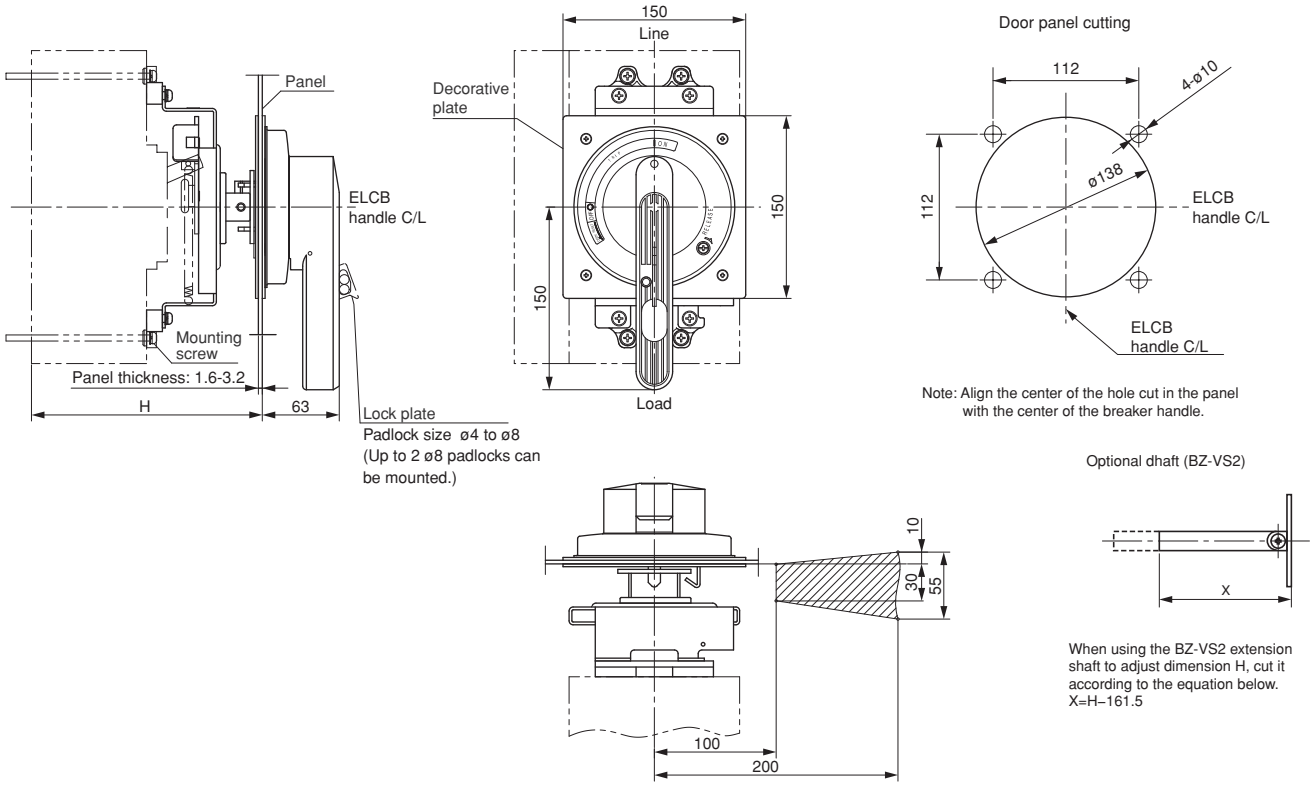
ELCB	Handle type	Optional shaft	Standard type H	With the optional shaft (X=154)		Mounting screw	Mass (kg)
				H	Area in which the hinge with H can be installed		
EW32 EW50 EW63 EW100	**BZ6V10D**	**BZ6VS1D**	105±2	250±2	140 to 250	M4 x 80	0.64
	BZ6V10D-X		113±2	258±2	150 to 258	Contact FUJI.	0.64
	BZ6V10D-P		113±2	258±2	150 to 258	Contact FUJI.	0.64
EW125	**BW9V0CA**	**BW9VSG0**	105±2	250±2	140 to 250	M4 x 85	0.67
EW160 EW250	**BW9V0GA***1		105±2	250±2	140 to 250	M4 x 85	0.67

Notes: • The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
• Remove the handle lock bar before opening the door. (Turn the handle in the open direction.)
The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
• Engage the door interlock securely before turning ON the power.
• Not available for side mounting.
*1 The terminal cover will cover the mounting screws for the Breaker. When attaching the terminal cover, a portion of the terminal cover will need to be removed.
Remove portion A in the following diagram.



External accessories

• BW9V0HA, BW9V0JA



Install the door hinge in the shaded area.

ELCB	Handle type	Optional shaft	Standard type H	With the optional shaft (X=154)		Mass (kg)
				H	Area in which the hinge with H can be installed	
EW400	**BW9V0HA**	**BZ-VS2**	190±2	250±2	202 to 250	2.2
	BW9V0HA-X		202±2	262±2	214 to 262	
	BW9V0HA-P		204±2	264±2	216 to 264	
EW630	**BW9V0JA**		190±2	250±2	202 to 250	
	BW9V0JA-X		202±2	262±2	214 to 262	
	BW9V0JA-P		207±2	267±2	219 to 269	
EW800	**BW9V0JA**		190±2	250±2	202 to 250	
	BW9V0JA-X		202±2	262±2	214 to 262	
	BW9V0JA-P		252±2	312±2	264 to 312	

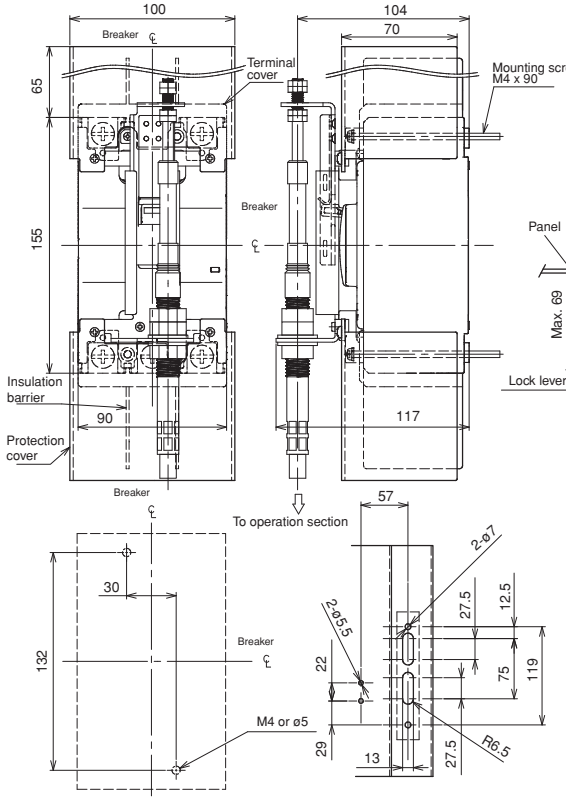
Notes: • The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
• Remove the handle lock bar before opening the door. (Turn the handle in the open direction.)
The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
• Engage the door interlock securely before turning ON the power.
• Not available for side mounting.

■ Dimensions, mm

F type handle

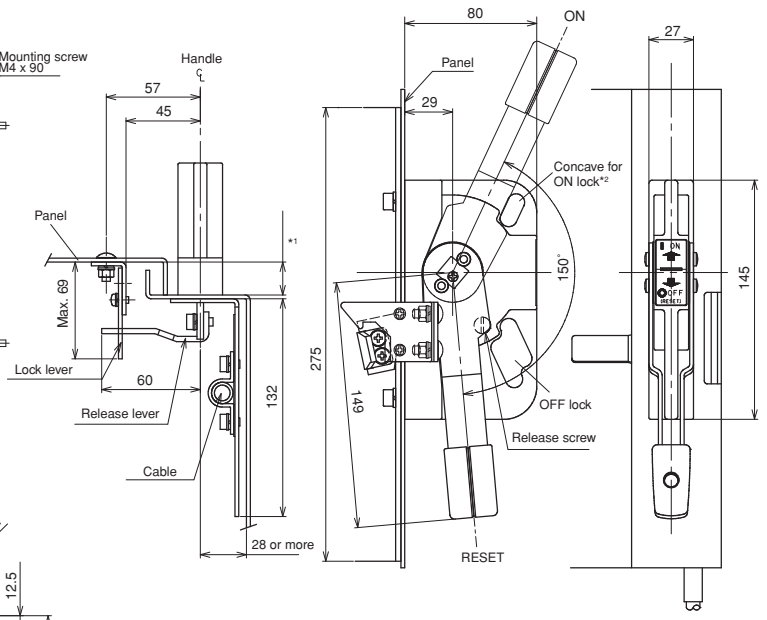
• BW9F0CA

Drive section



Panel drilling

Operation section



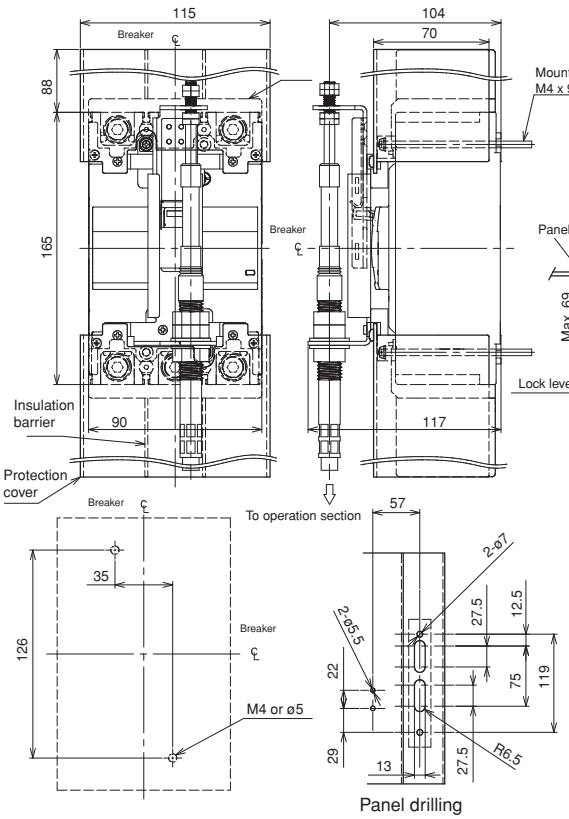
- This product consists of a drive section and an operation section.
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

*1 Set the height to 20 or 30. Adjust the lock lever depending on the setting.

*2 The ON lock can be realized by additionally creating a concave for the ON lock.

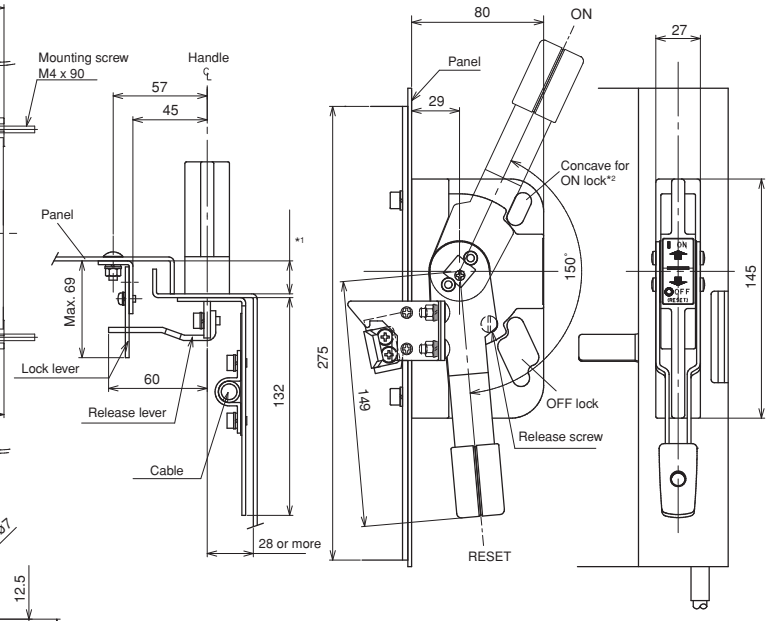
• BW9F0GA

Drive section



Panel drilling

Operation section



- This product consists of a drive section and an operation section.
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

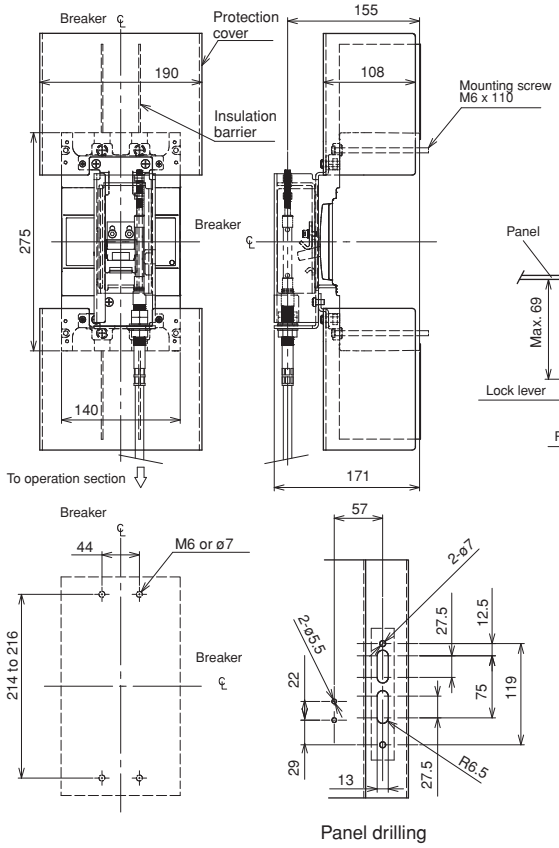
*1 Set the height to 20 or 30. Adjust the lock lever depending on the setting.

*2 The ON lock can be realized by additionally creating a concave for the ON lock.

External accessories

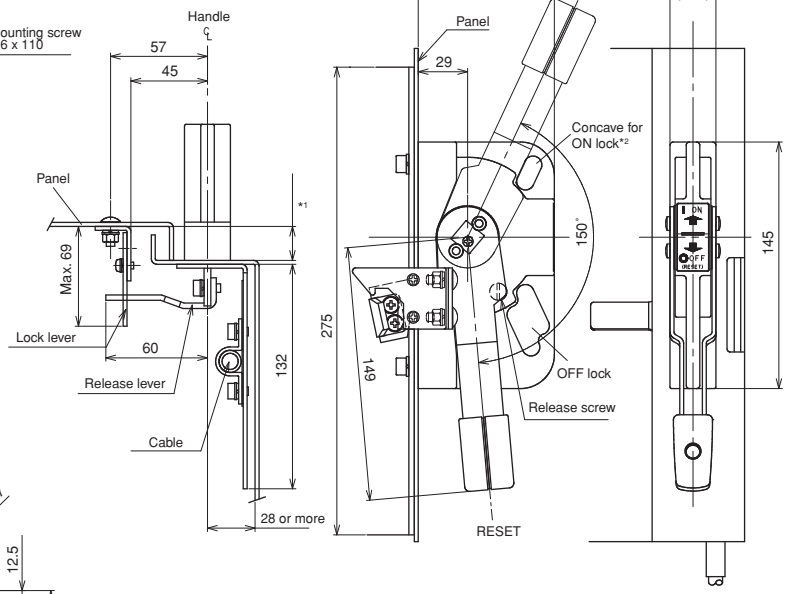
• BW9F0HA

Drive section



Panel drilling

Operation section



- This product consists of a drive section and an operation section.
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

*1 Set the height to 20 or 30. Adjust the lock lever depending on the setting.

*2 The ON lock can be realized by additionally creating a concave for the ON lock.

ELCB	Handle type	Cable		Terminal cover
		Type	Length (m)	
EW125JAGU-3P EW125RAGU-3P	**BW9F0CA**	**BW9FWCA-15A** **BW9FWCA-20A** **BW9FWCA-30A**	1.5 2.0 3.0	**BW9FBTCA-L3**
EW250JAGU-3P EW250RAGU-3P	**BW9F0GA**	**BW9FWGA-15A** **BW9FWGA-20A** **BW9FWGA-30A**	1.5 2.0 3.0	**BW9FBTGA-L3**
EW400SAGU-3P EW400RAGU-3P EW400HAGU-3P	**BW9F0HA**	**BW9FWHA-15A** **BW9FWHA-20A** **BW9FWHA-30A**	1.5 2.0 3.0	**BW9FBTHA-L3**

Steel enclosures

■ Description

Steel enclosures are available in three types — two with V-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-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.

Standard

Dustproof
AF96-175

Rainproof
CP97-2636

■ Type of enclosures

ELCB	Enclosure		
	Standard *1	With V-type handle Dust-proof *1*2	Rain-proof *1*2
EW32 EW50 EW63	**BZ6C10C2** *3 **BZ6C10C3**	**BW9UVBA-3A** *3	**BW9UWBA-3A** *3
EW100	**BZ6C25C2** *3 **BZ6C25C3** *3	**BW9UVBA-3B** *3	**BW9UWBA-3B** *3
EW125	**BW9UCCA-2** **BW9UCCA-3**	**BW9UVCA-3**	**BW9UWCA-3**
EW250	**BW9UCGA-3**	**BW9UVGA-3**	**BW9UWGA-3**
EW400	**BZ-C60B**	**BW9UVHA-3**	**BW9UWHA-3**
EW630 EW800	**BZ-C70B**	**BW9UVJA-3**	–

*1 No models are available for four-pole products.
*2 The appearance of dust-proof and rain-proof models differs from the photograph (400A frames and higher).
*3 Combination with external accessories(R) is not possible.

■ Ordering information

Specify the following:
1. Type number of enclosures

■ Dimensions, mm

Fig.1 Standard

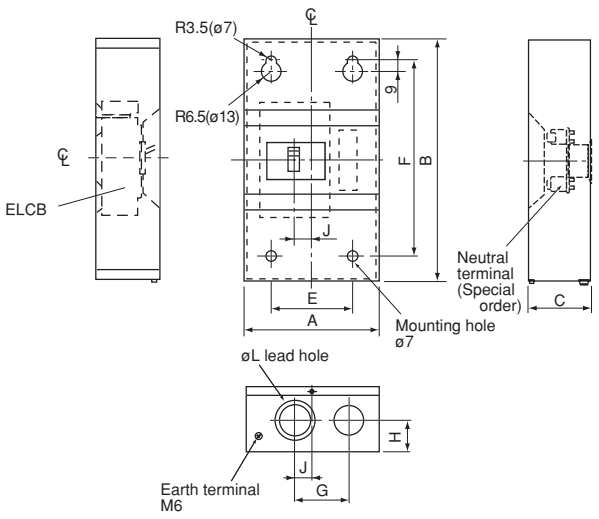


Fig.2 With V type handle
BW9UVBA-3A, BW9UVBA-3B
BW9UVCA-3, BW9UVGA-3

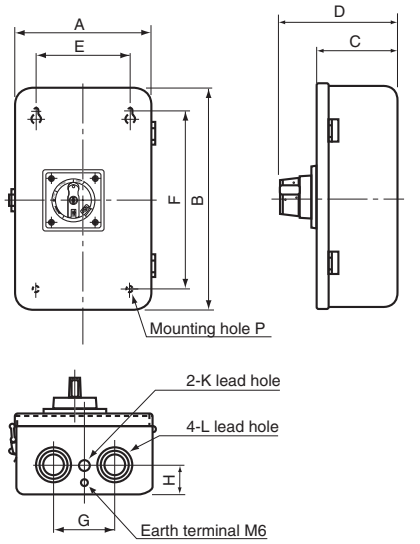
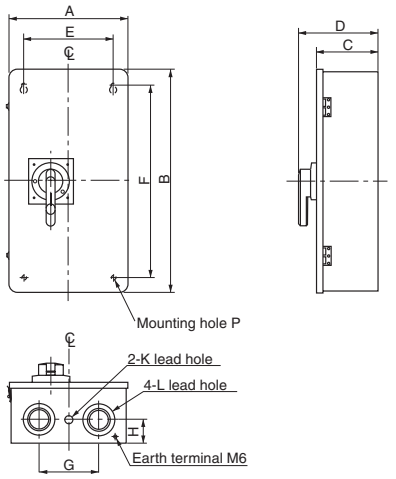
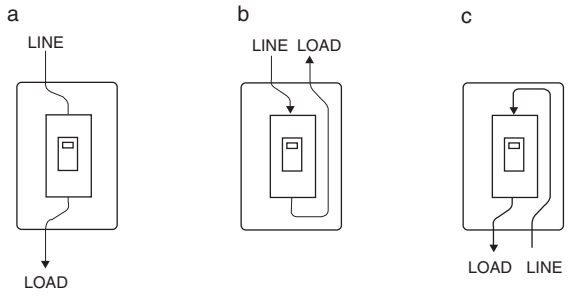


Fig3. With V type handle
BW9UVHA-3, BW9UVJA-3



■ Connection method diagrams



Type	Connection	Fig.	A	B	C	D	E	F	G	H	J	K	L	P
BZ6C10C2	a, b, c	1	135	225	95	–	90	170	65	40	25	–	ø35, ø22	–
BZ6C10C3														
BZ6C25C3			200	320	95	–	120	240	80	40	25	–	ø45, ø30	–
BW9UCCA-3			200	320	103	–	120	240	80	40	25	–	ø45, ø30	–
BW9UCGA-3				360				280		45			ø55, ø40	
BZ-C60B			400	750	175	–	300	650	200	80	100	–	ø106, ø78, ø63	–
BZ-C70B														
BW9UVBA-3A		2	180	300	114	178.5	100	220	70	40	–	–	ø28, ø35, ø43	ø7
BW9UVBA-3B			250	400	142	206.5	170	320	110	50	–	ø23	ø35, ø52, ø63	ø9
BW9UVCA-3						207								
BW9UVGA-3														
BW9UVHA-3		3	400	750	206	269	300	650	200	80	–	ø28	ø63, ø78, ø106	ø12
BW9UVJA-3														

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 400AF
Short type: BW9BT ☐ A-S ☐
• Snap-on fitting
Long type: BW9BT ☐ A-L ☐
• Crimp connection use

● 630, 800AF
Long type: BW9BTJA-L ☐
• Transparent

Short type

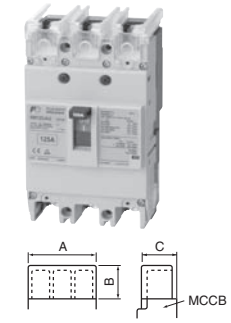
Long type

Long type

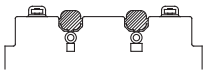
Type		No. of poles	ELCB	Dimensions (mm)			Packing quantity	Appearance
Transparent	Gray			A	B	C		
BW9BTAA-L2	**BW9BTAA-L2W**	2	EW32☐-2P EW50☐-2P	50	40	53	2	• Preventing exposure of live section when amplifier's terminals are connected • Snap-on mounting
BW9BTAA-L3	**BW9BTAA-L3W**	2, 3	EW32☐-3P EW50☐-3P EW63☐-3P EW100☐-2P EW100☐-3P	75	40	53	2	
BW9BTCA-L3	**BW9BTCA-L3W**	3	EW125☐-3P	90	40	66.5	2	
BW9BTCA-C3 (For Flat terminal)	**–**	3	EW125☐-3P	90	60	66.5	2	
BW9BTCA-L4	**BW9BTCA-L4W**	4	EW125☐-4P	120	40	66.5	2	
BW9BTGA-L3 *1	**BW9BTGA-L3W** *1	3	EW160☐-3P EW250☐-3P	105	50	66.5	2	
BW9BTGA-L4 *1	**BW9BTGA-L4W** *1	4	EW160☐-4P EW250☐-4P	140	50	66.5	2	
BW9BTGA-C3 (For Flat terminal)	**–**	3	BW250☐-3P	105	75	66.5	2	
BW9BTHA-L3 *2	**BW9BTHA-L3W** *1	3	EW400☐-3P	172	110	98	2	
BW9BTHA-L4 *2	**–**	4	EW400☐-4P	220	110	98	2	
BW9BTJA-L3	**BW9BTJA-L3W**	3	EW630☐-3P EW800☐-3P	230	135	97.5	2	

Short type

Type		No. of poles	ELCB	Dimensions (mm)			Packing quantity	Appearance
Transparent	Gray			A	B	C		
BW9BTAA-S2	**BW9BTAA-S2W**	2	EW32☐-2P EW50☐-2P	50	10	53	2	• Preventing exposure of live section when amplifier's terminals are connected • Snap-on mounting
BW9BTAA-S3	**BW9BTAA-S3W**	2, 3	EW32☐-3P EW50☐-3P EW63☐-3P EW100☐-2P EW100☐-3P	75	10	53	2	
BW9BTCA-S3	**BW9BTCA-S3W**	3	EW125☐-3P	90	8	66.5	2	
BW9BTCA-S4	**BW9BTCA-S4W**	4	EW125☐-4P	120	8	66.5	2	
BW9BTGA-S3 *1	**BW9BTGA-S3W** *1	3	EW160☐-3P EW250☐-3P	105	8	66.5	2	
BW9BTGA-S4 *1	**BW9BTGA-S4W** *1	4	EW160☐-4P EW250☐-4P	140	8	66.5	2	
BW9BTHA-S3 *3	**BW9BTHA-S3W** *2	2, 3	EW400☐-2P EW400☐-3P	140	65	98	2	
BW9BTHA-S4 *3	**BW9BTHA-S4W** *2	4	EW400☐-4P	185	65	98	2	



Notes: • A gray-white terminal cover comes standard with the Global Series 125AF and 250AF.
*1 When using the external operating handle, part of the terminal cover (▨) must be cut away.
*2 Crimp terminals for 325 mm^2 are not available.
*3 This type of cover can be mounted on the 400AF when flat terminals are not used.

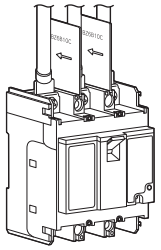


External accessories

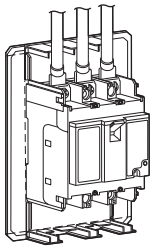
Insulation barriers

■ Description

The interphase barriers are provided on frame size of 32AF to 800AF 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

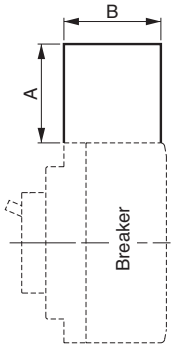


Earth barrier

Interphase barrier

ELCB	Interphase barrier				
	Type	Dimensions (mm)		Packing quantity	Mass (g)
		A	B		
EW32 EW50 EW63 EW100	**BZ6B10C**	50	49	4	23
EW125	**BW9BPCA**	50	60	2	15
EW160 EW250	**BW9BPGA**	80	60	2	25
EW400 EW630 EW800	**B-43A**	105	95	4	130

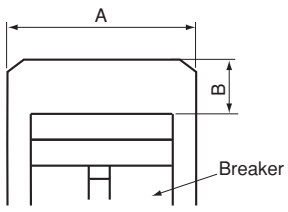
Interphase barrier



Earth barrier

ELCB	Earth barrier				
	Type	Dimensions (mm)		Packing quantity	Mass (g)
		A	B		
EW32□-2P EW50□-2P	**BZ6BL10C2**	100 (50, 75)*1	43 (30)*1	1	33
EW32□-3P EW50□-3P EW63□-3P EW100□-2P EW100□-3P	**BZ6BL10C3**	125 (75, 100)*1	43 (30)*1	1	41

Earth barrier



Note: *1 Can be cut to dimensions

Padlocking device and handle locking cover

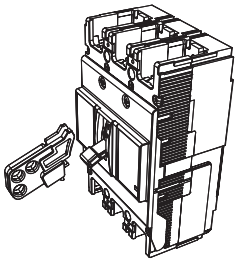
■ Description

• Padlocking device

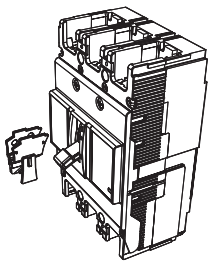
These padlocking device lock the Breaker handle in the OFF position. Use a commercially available padlock with a shackle diameter of 3.5 to 5mm (5mm for the BZ6L10CA).

• Handle locking covers (Order Separately)

These simple handle locking covers can be easily installed by the user. Tripping is possible while the Breaker is locked ON.



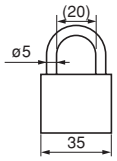
Padlocking device
• Cap type Q1,QN



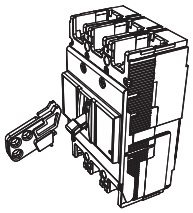
Handle locking cover

ELCB	Padlocking device			Handle locking cover
	Q1: Cap type	QN: Scissors type	Q2: Plate type	
EW32 EW50 EW63 EW100	**BZ6L10CA**	**–**	▲ *1*3	**BZ6L10C**
EW125 EW160 EW250	**BW9Q1CA** *4		**BW9Q2CA** **BW9Q2GA**	**BW9L1CA**
EW400 EW630 EW800	▲ *1	**BW9QNHA** *2	**BW9Q2HA** **BW9Q2JA**	**BW9L1HA**

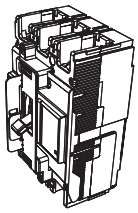
Notes:
*1 Specify Locks when ordering the Breaker. (▲: Factory-mounted)
*2 ON and OFF locking is possible.
*3 If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
*4 Three padlocks with shackles from 3.5 to 8 mm in diameter can be attached.



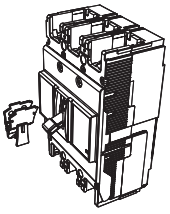
Padlocking device
• Cap type Q1



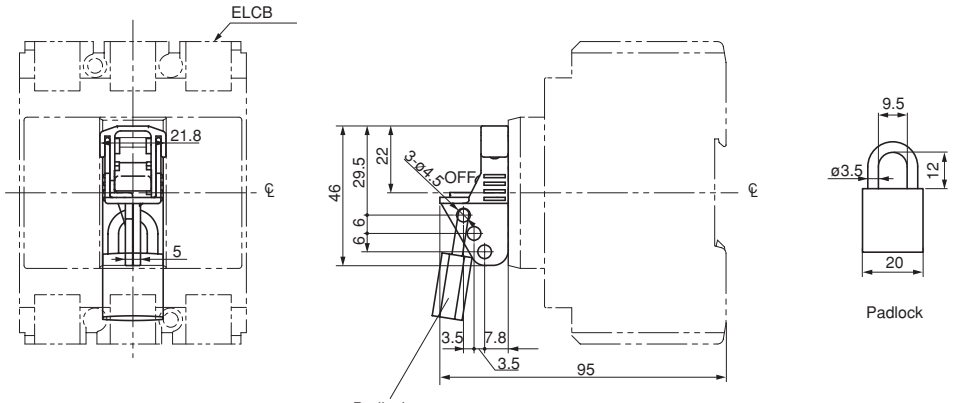
• Plate type Q2



Handle locking cover



Q1: BZ6L10CA (OFF-locking Padlocking device)



Padlock
(Obtain a commercially available lock conforming to the diagram at the right.)

⚠ Safety Considerations

- Operate (keep) in the environment specified in the operating instructions and manual. High temperature, high humidity, condensation, dust, corrosive gases, oil, organic solvents, excessive vibration or shock might cause electric shock, fire, erratic operation or failure.
- For safe operation, before using the product read the instruction manual or user manual that comes with the product carefully or consult the Fuji sales representative from which you purchased the product.
- Products introduced in this catalog have not been designed or manufactured for such applications in a system or equipment that will affect human bodies or lives.
- Customers, who want to use the products introduced in this catalog for special systems or devices such as for atomic-energy control, aerospace use, medical use, passenger vehicle, and traffic control, are requested to consult with Fuji Electric FA.
- Customers are requested to prepare safety measures when they apply the products introduced in this catalog to such systems or facilities that will affect human lives or cause severe damage to property if the products become faulty.
- For safe operation, wiring should be conducted only by qualified engineers who have sufficient technical knowledge about electrical work or wiring.
- Follow the regulations of industrial wastes when the product is to be discarded.
- For further questions, please contact your Fuji sales representative or Fuji Electric FA.

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