Molded Case Circuit Breakers
Earth Leakage Circuit Breakers

B

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 FUJI ELECTRIC FA has a policy of continuous product improvement, and design changes may make this information out of date.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

Molded Case Circuit Breakers
G-TWIN series 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: UL489 Listed

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

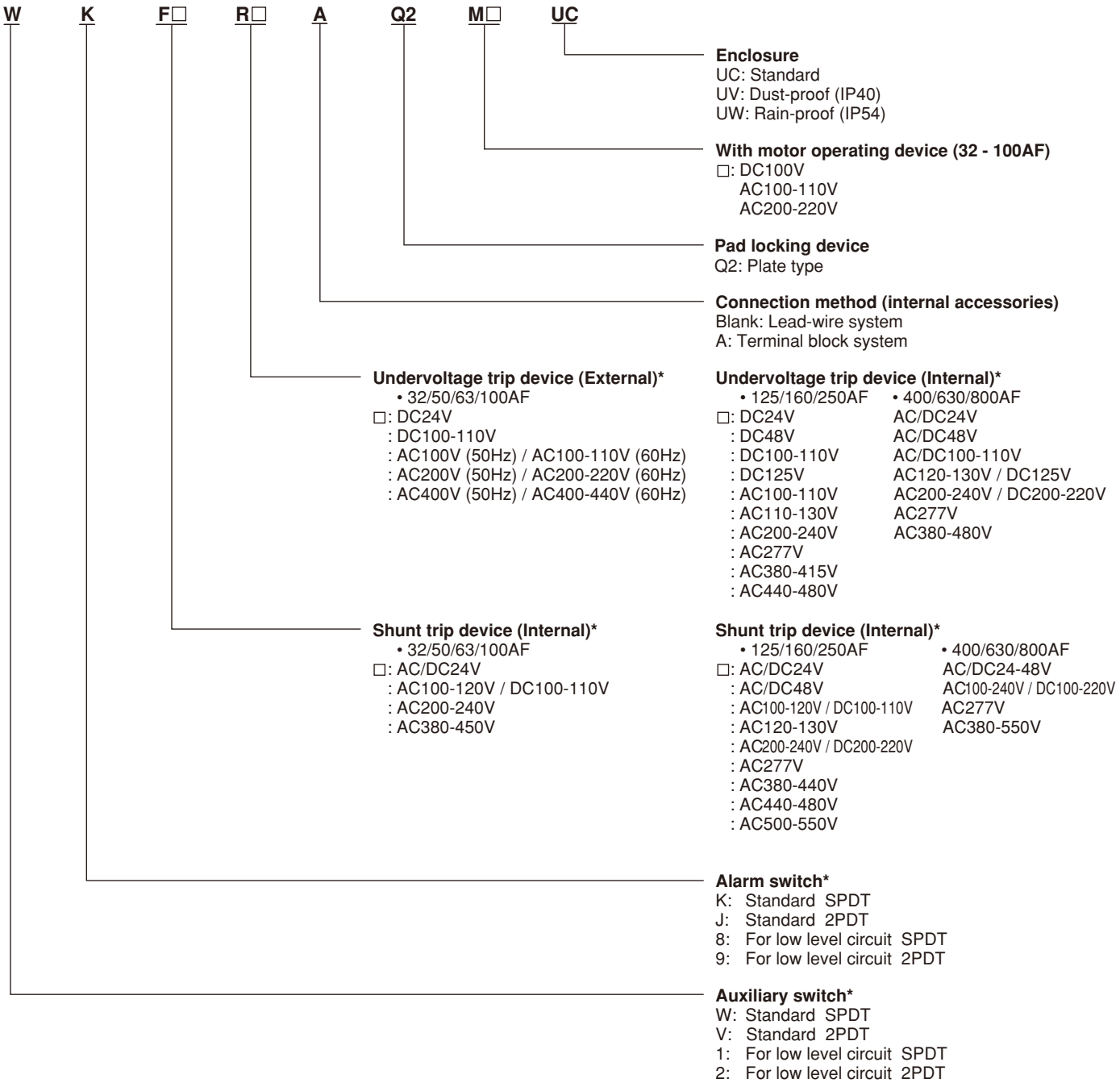
Rated current
See page B1-29.

Terminal combination (UL489 Listed type)

	Terminal position		Applicable breaker type		
Code	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 & bottom connection
P: Plug-in mounting

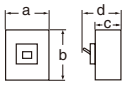
Molded Case Circuit Breakers
G-TWIN series Type number nomenclature



* For the available configuration of accessory, *see page B1-68.*

Molded Case Circuit Breakers
G-TWIN series Quick reference guide

■ G-TWIN Standard Series

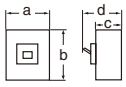
Ampere frame				32A			
Type				**BW32AAG**		**BW32SAG**	
Pole				2	3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		3, 5, 10, 15, 20, 30, 32			
Rated impulse withstand voltage		Uimp(kV)		6		6	
Isolation compliant				●		●	
Rated insulation voltage Ui (V)		AC		500		690	
		DC		–		250*1	
Rated breaking 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 B1-63				
Alarm switch			K	○	○	○	○
Auxiliary switch			W	○	○	○	○
Undervoltage trip			R	○	○	○	○
Shunt trip			F	○	○	○	○
External accessories			Page B1-66				
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	○	○	○	○
	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

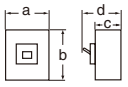
■ G-TWIN Standard Series

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 B1-63										
Alarm switch			K	○	○	○	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○	○	○	○
External accessories			Page B1-66										
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

Molded Case Circuit Breakers
G-TWIN series Quick reference guide

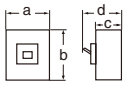
■ G-TWIN Standard Series

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 B1-63						
Alarm switch			K	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○
External accessories			Page B1-66						
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	○	○	○	○	○	○
	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 B1-63				
Alarm switch			K	○	○	○	○
Auxiliary switch			W	○	○	○	○
Undervoltage trip			R	○	○	○	○
Shunt trip			F	○	○	○	○
External accessories			Page B1-66				
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	○	○	○	○
	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.
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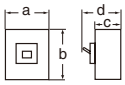
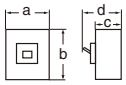
■ G-TWIN Standard Series

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 B1-64												
Alarm switch			K	○	○	○	○	○	○	○	○	○	○	○	
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○	○	
Undervoltage trip			R	–	○	○	○	○	○	○	○	○	○	○	
Shunt trip			F	○	○	○	○	○	○	○	○	○	○	○	
External accessories			Page B1-66												
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

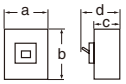
■ G-TWIN Standard Series

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 B1-64											
Alarm switch			K	○	○	○	○	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○	○	○	○	○
External accessories			Page B1-66											
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

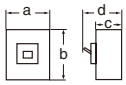
Molded Case Circuit Breakers
G-TWIN series Quick reference guide

■ 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 B1-64													
Alarm switch			K	○	○	○	○	○	○	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○	○	○	○	○	○	○
External accessories			Page B1-66													
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

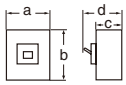
■ G-TWIN Standard Series

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 B1-65										
Alarm switch			K	○	○	○	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○	○	○	○
External accessories			Page B1-66										
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

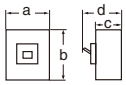
Molded Case Circuit Breakers
G-TWIN series Quick reference guide

■ 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 B1-65										
Alarm switch			K	○	○		○		○	○		○	
Auxiliary switch			W	○	○		○		○	○		○	
Undervoltage trip			R	○	○		○		○	○		○	
Shunt trip			F	○	○		○		○	○		○	
External accessories			Page B1-66										
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 B1-26								
Screw		S□		○		○		○		○
Flat				○		○		○		○
Block				–		–		○		○
Internal accessories		Page B1-63								
Alarm switch		K		○		○		○		○
Auxiliary switch		W		○		○		○		○
Undervoltage trip		R		○		○		○		○
Shunt trip		F		○		○		○		○
External accessories		Page B1-66								
Handle padlocking device Cap type		Q1		○		○		○		○
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

Molded Case Circuit Breakers
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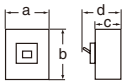
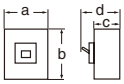
■ G-TWIN Global Series

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 B1-26						
Screw		S□		○	○		○	○
Flat				○	○		○	○
Block				○	○		○	○
Internal accessories		Page B1-64						
Alarm switch		K		○	○		○	○
Auxiliary switch		W		○	○		○	○
Undervoltage trip		R		–	○		○	○
Shunt trip		F		○	○		○	○
External accessories		Page B1-66						
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

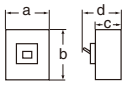
■ G-TWIN Global Series

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 B1-26									
Screw		S□		○	○			○	○	○	○
Flat				○	○			○	○	○	○
Block				○	○			○	○	○	○
Internal accessories		Page B1-64									
Alarm switch		K		○	○			○	○	○	○
Auxiliary switch		W		○	○			○	○	○	○
Undervoltage trip		R		○	○			○	○	○	○
Shunt trip		F		○	○			○	○	○	○
External accessories		Page B1-66									
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

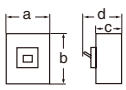
Molded Case Circuit Breakers
G-TWIN series Quick reference guide

■ 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 B1-26									
Flat				○	○	○	○	○	○	○	○
Block				○	○	○	○	○	○	○	○
Internal accessories		Page B1-65									
Alarm switch		K		○	○	○	○	○	○	○	○
Auxiliary switch		W		○	○	○	○	○	○	○	○
Undervoltage trip		R		○	○	○	○	○	○	○	○
Shunt trip		F		○	○	○	○	○	○	○	○
External accessories		Page B1-66									
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 B1-26				
Flat				○	○	○	○
Block				○	○	○	○
Internal accessories			Page B1-65				
Alarm switch			K	○	○	○	○
Auxiliary switch			W	○	○	○	○
Undervoltage trip			R	○	○	○	○
Shunt trip			F	○	○	○	○
External accessories			Page B1-66				
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

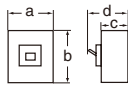
Note: *1 Breakers for 630A cannot be manufactured with block terminals.
*2 Block terminals are standard for Breakers for 800A.
*3 Electrical Appliance and Material Safety Law of Japan

Molded Case Circuit Breakers
G-TWIN series Quick reference guide

Motor protection breakers

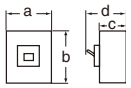
Motors are normally controlled by MCCBs and magnetic starters. In this case the MCCB carries out overcurrent or short-circuit current protection while the starter deals with ON-OFF switching of the motor and offers protection against sustained overload currents. These are the motor breakers which combine 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*2			●	●	●
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 & bottom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting				○	○	○
Internal accessories			Page B1-63			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
External accessories			Page B1-66			
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 ▲ : Factory-mounted accessory
Note: *1 Specify DC only when ordering circuit breakers for DC circuit.
*2 Electrical Appliance and Material Safety Law of Japan

■ G-TWIN Standard Series / Motor protection

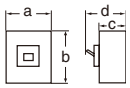
Ampere frame				50A		
Type				**BW50EAM**	**BW50SAM**	**BW50RAM**
Pole				3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		24, 32, 40, 45	0.7, 1.4, 2, 2.6, 4, 5, 8, 10, 12, 16, 24, 32, 40, 45	10, 12, 16, 24, 32, 40, 45
Rated impulse withstand voltage		Uimp(kV)		6	6	6
Isolation compliant				●	●	●
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*2			●	●	●
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 & bottom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting				○	○	○
Internal accessories			Page B1-63			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
External accessories			Page B1-66			
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 ▲: Factory-mounted accessory

Note: *1 Specify DC only when ordering circuit breakers for DC circuit.
*2 Electrical Appliance and Material Safety Law of Japan

Molded Case Circuit Breakers
G-TWIN series Quick reference guide

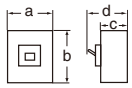
■ G-TWIN Standard Series / Motor protection

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*2			●	●	●
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 & bottom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting				○	○	○
Internal accessories			Page B1-63			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
External accessories			Page B1-66			
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 ▲: Factory-mounted accessory

Note: *1 Specify DC only when ordering circuit breakers for DC circuit.
*2 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*2			●	●	–	–	–
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 & bottom connection			Y	○	○	○	○	○
Plug-in mounting			P	○	○	○	○	○
IEC 35mm wide rail mounting				○	○	○	○	○
Internal accessories			Page B1-64					
Alarm switch			K	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○
Shunt trip			F	○	○	○	○	○
External accessories			Page B1-66					
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 Specify DC only when ordering circuit breakers for DC circuit.
*2 Electrical Appliance and Material Safety Law of Japan

Molded Case Circuit Breakers
G-TWIN series Mounting modifications

■ Mounting modifications

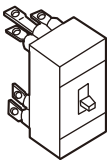
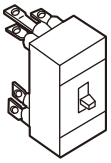
● Standard series

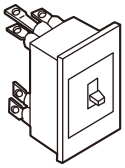
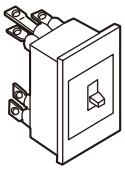
Standard type FUJI breakers are front mounting with front connections. The standard breaker can easily be modified to become front mounting rear connection type, flush mounting type and plug-in type. The additional parts such as insulation bases, barriers, covers and similar parts are added as required.

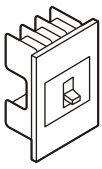
Front mounting
Front connection

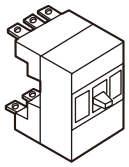
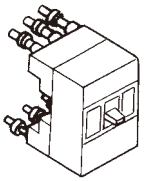
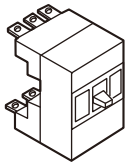
BASIC DESIGN

B1

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

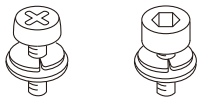
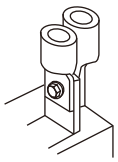
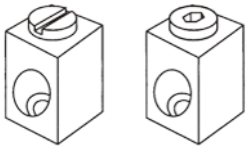
Additional main parts	Flush mounting Top and bottom connection (Y type)
Decorative flush plate 	BW32 BW50(A,E,S,R)AG BW63 BW100

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

● **UL489 Listed series**

Front mounting
Front connection

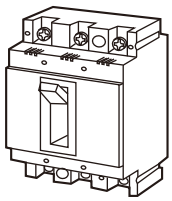
BASIC DESIGN

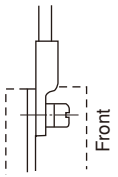
Screw	Flat terminal	Block terminal
		

Molded Case Circuit Breakers
G-TWIN series Terminal connection

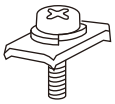
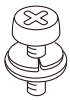
■ Terminal connection/Front mounting, front connection

● 32AF to 100AF



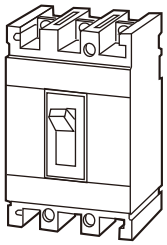


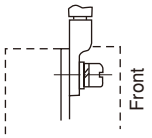
Flat terminal

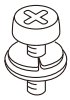
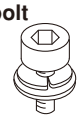
Self lifting screw	Breaker type	Tightening torque (N•m)	Size
	BW32 BW50(A,E,S,R)AG BW100*	2.3 to 2.8	M5 × 14
Pan-head screw 	BW63 BW100	5.5 to 7.5	M8 × 15

* Breaker of rated current : 50A

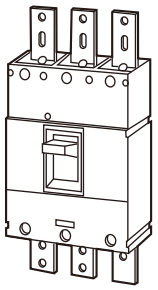
● 125AF to 250AF

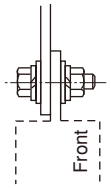




Pan-head screw	Breaker type	Tightening torque (N•m)	Size (mm)
	BW50HAG BW125	5.5 to 7.5	M8 × 16
Hexagonal socket head bolt 	BW160 BW250	8.0 to 13.0	M8 × 16

• 400AF to 800AF



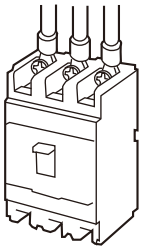


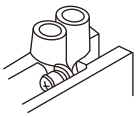
Flat terminal

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

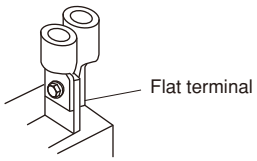
Type of connection/up to 250AF
Front mounting front connection

Direct connection





Flat terminal connection
Flat terminals are required.



Flat bar studs/1-hole type

Breaker type	Pole	Type of flat terminal
BW32 BW50(A,E,S,R)AG	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 crimp terminal

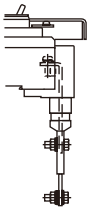
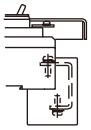
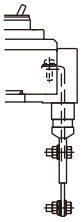
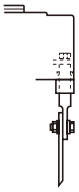
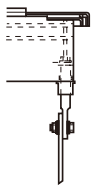
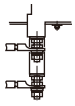
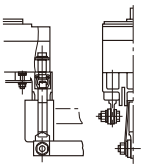
The following is the size recommendations for crimp terminals.

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,RAG	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(A,E,S,R)AG	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

Molded Case Circuit Breakers
G-TWIN series Wire size and terminal

■ Notes on wiring (UL489 Listed 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 [mm²]	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 mm².

* 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,	3.5-5, 5.5-S5,	12AWG		
	30		R5.5-5S, R5.5-5	5.5-5, 5.5-L5	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.

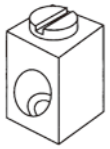
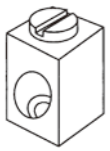
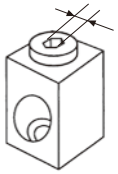
● Flat terminal connection

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	2-S5, 2-5	14AWG	3.5 to 4.5	2.3 to 2.8	Hexagon socket head bolt M5 x 16
	5		R2-5					
	10							
	15							
	20	R5.5-5	R3.5-5S, R3.5-5L, 5.5-6N.	3.5-5, 5.5-S5	12AWG			
	30		R5.5-5S, R5.5-5	5.5-5, 5.5-L5	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	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
BW250JAGU	150	60-S8, R60-8	R60-8, CB60-8, CB60-8S	60-8, CB60-8	1/0AWG			
BW250RAGU	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	250	150-12	R150-12		250MCM	45 (40 to 50)	43.5 (39.2 to 48)	Hexagon head bolt M12 x 35
BW400SAGU	300	180-12	R180-12		350MCM			
BW400RAGU	350	325-12	R325-12N		500MCM			
BW400HAGU	400	325-12	R325-12N		500MCM			
		R80-12	R80-12		3/0AWG(x2)			
BW630RAGU	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
BW630HAGU	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)

Molded Case Circuit Breakers
G-TWIN series 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, 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 bottom	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□	

Molded Case Circuit Breakers
G-TWIN series 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□	

● 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□	

** See page B1-29.*

● 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 B1-29.*

Molded Case Circuit Breakers
G-TWIN series 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 B1-29.*

● 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 B1-29.*

Molded Case Circuit Breakers
G-TWIN series 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 B1-34.*

Molded Case Circuit Breakers
G-TWIN series 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 bottom	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

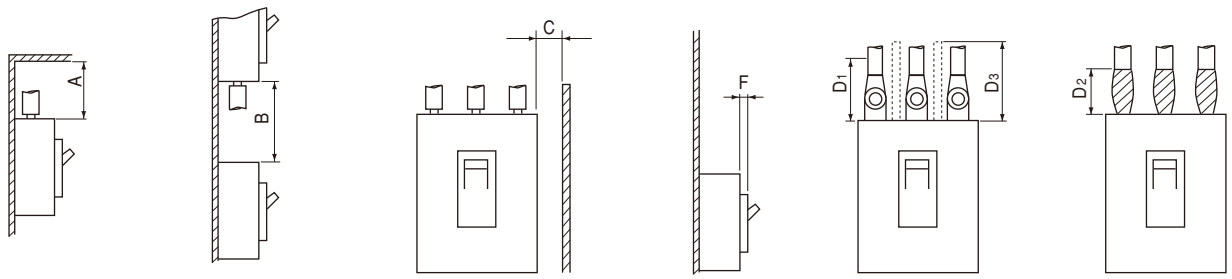
● **RAM series, 3-pole IEC/EN/GB/JIS conformed**

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 B1-36.*

Molded Case Circuit Breakers
G-TWIN series Arc space

■ Arc space, mm

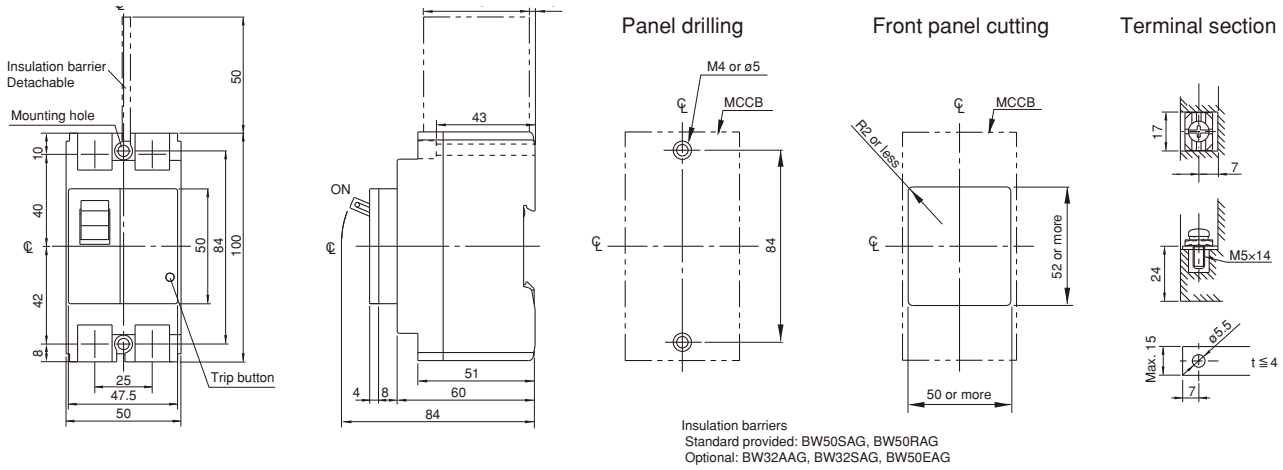


Frame size	MCCB basic type	Ceiling distance A		Vertical distance B		Side plate distance C		Front plate distance Painted F		Front plate distance No painted F		Taping Crimp type terminal lug D1	Taping Bus-bar D2	Barrier D3
		440V	230V	440V	230V	440V	230V	440V	230V	440V	230V			
32A	BW32A	–	10	–	10	–	10	–	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, mm

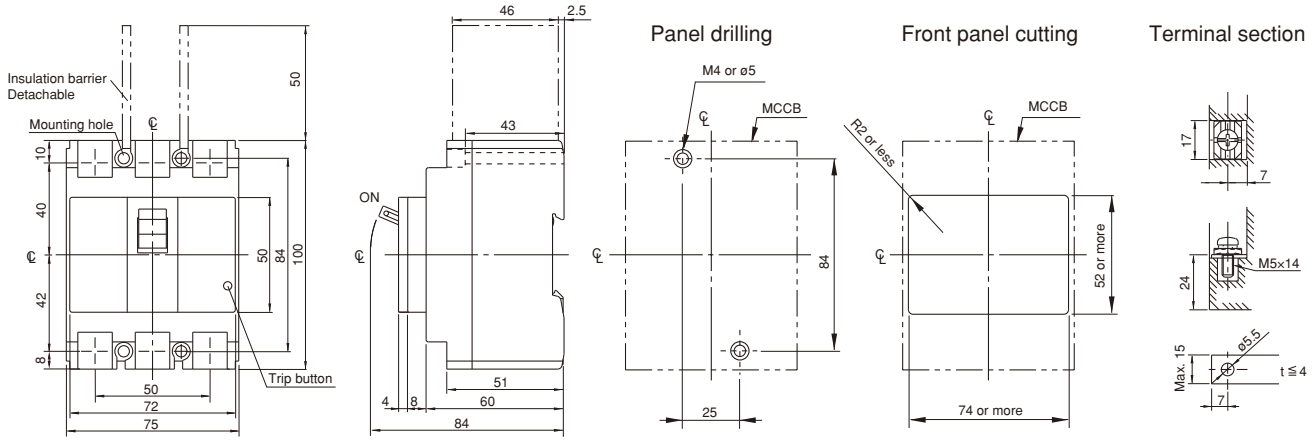
● Front mounting, front connection

BW32□-2P, BW50□-2P



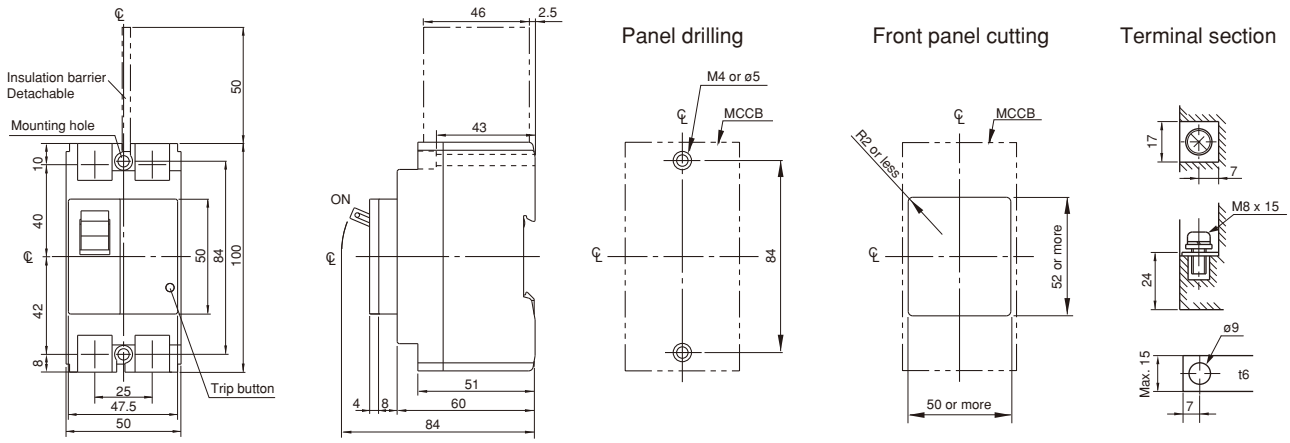
Insulation barriers
Standard provided: BW50SAG, BW50RAG
Optional: BW32AAG, BW32SAG, BW50EAG

BW32□-3P, BW50□-3P



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

BW63□-2P

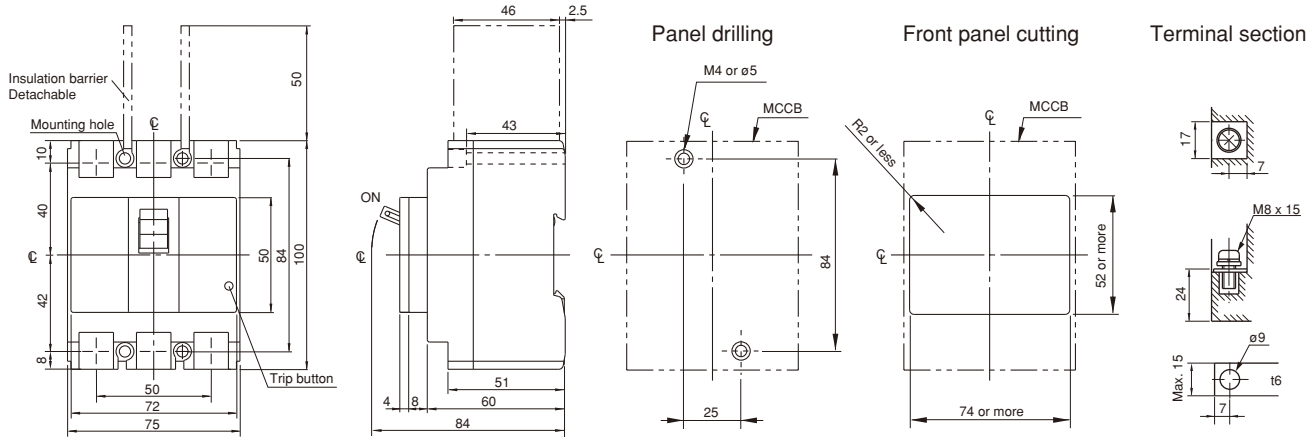


Molded Case Circuit Breakers
G-TWIN series Dimensions / Standard

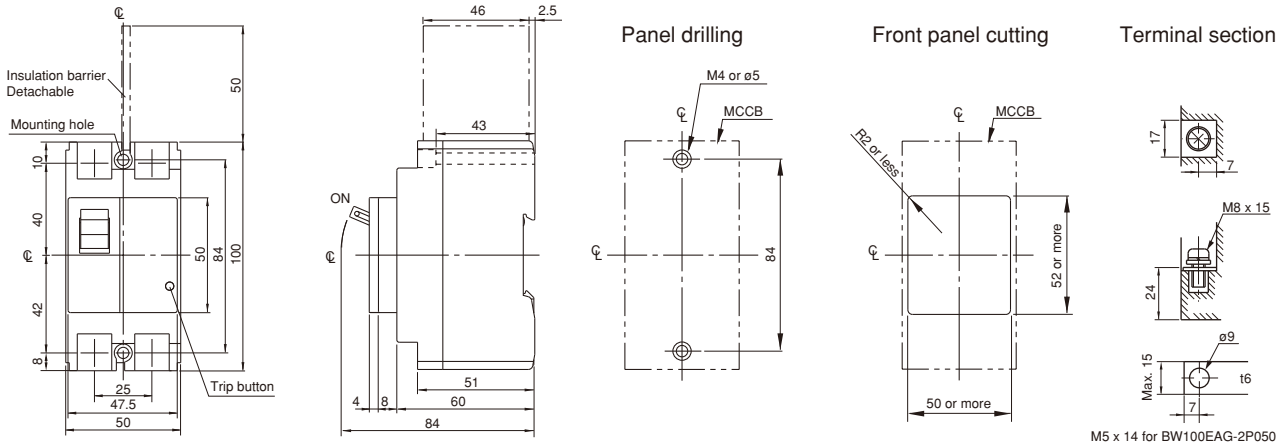
■ Dimensions, mm

● Front mounting, front connection

BW63□-3P

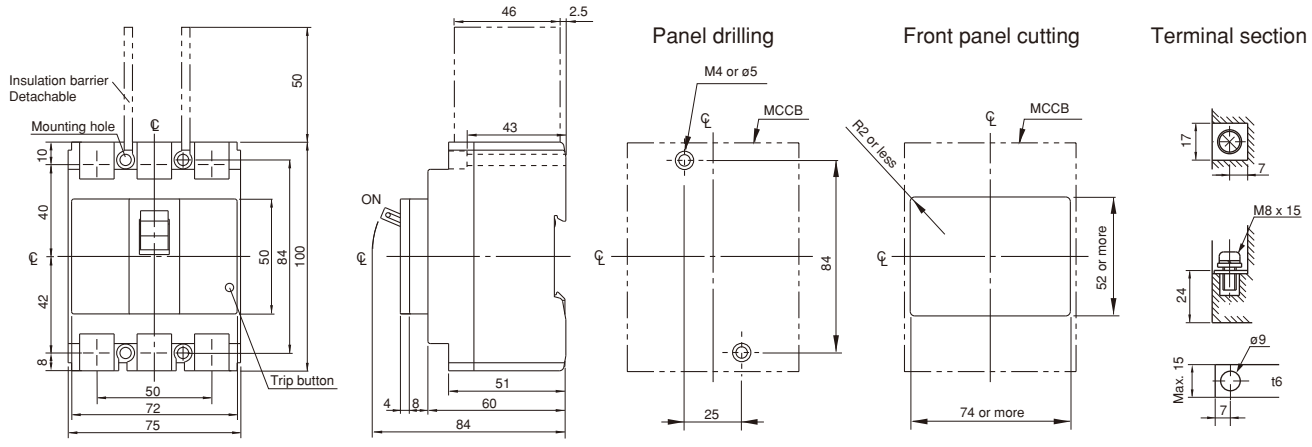


BW100□-2P



M5 x 14 for BW100EAG-2P050

BW100□-3P



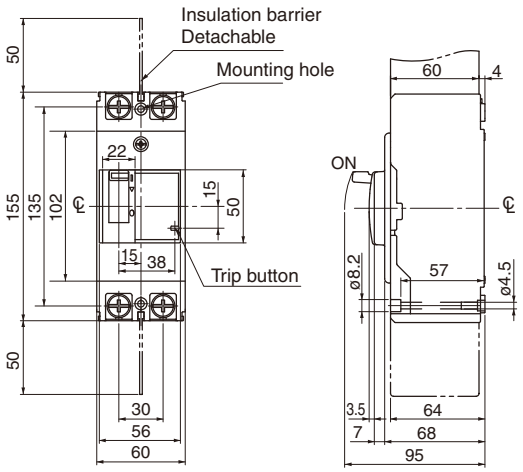
Insulation barriers
Standard provided: BW100EAG
Optional: BW100AAG

M5 x 14 for BW100EAG-3P050

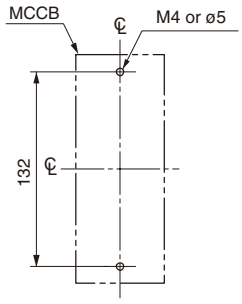
■ Dimensions, mm

● Front mounting, front connection

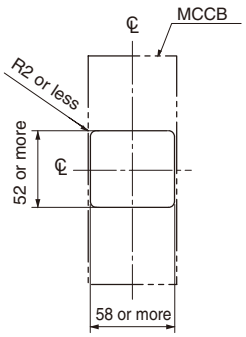
BW125JAG-2P



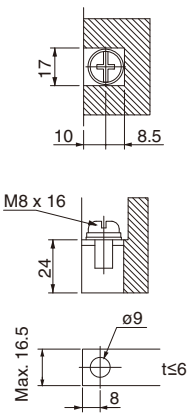
Panel drilling



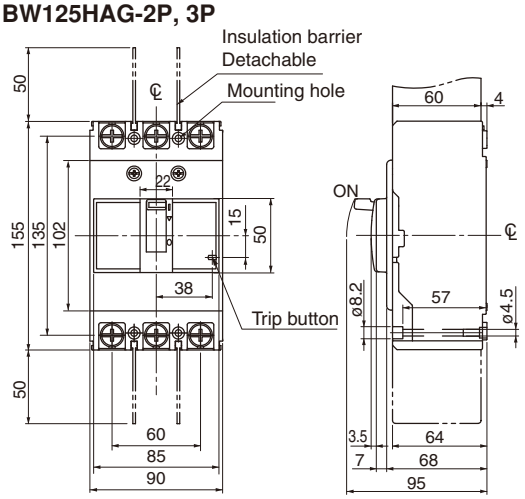
Front panel cutting



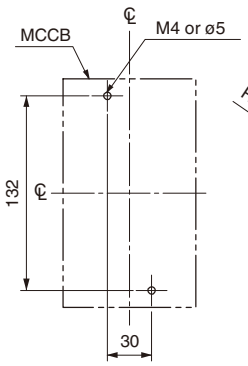
Terminal section



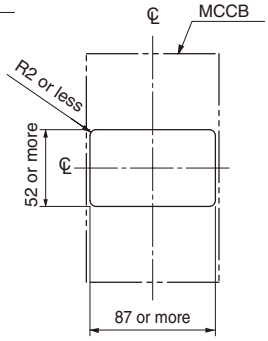
BW50HAG-2P, 3P, BW125JAG-3P,
BW125SAG-2P, 3P, BW125RAG-2P, 3P
BW125HAG-2P, 3P



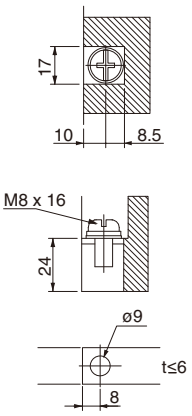
Panel drilling



Front panel cutting

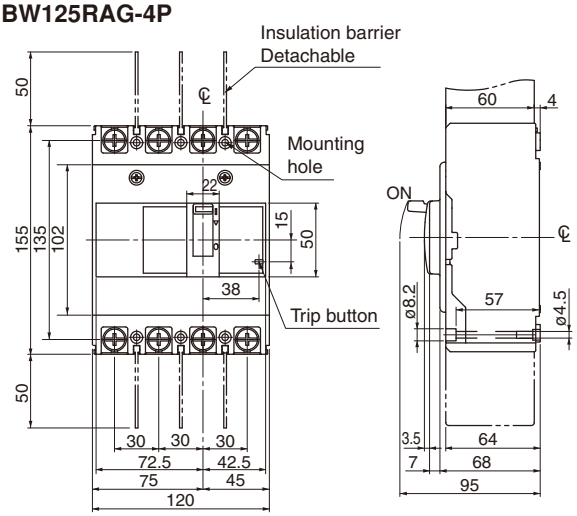


Terminal section

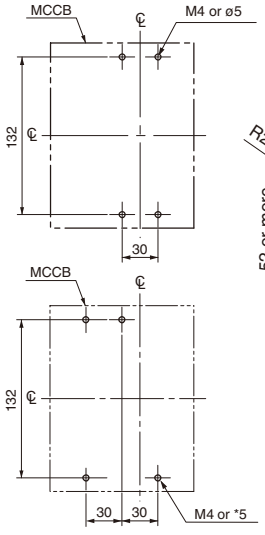


Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

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

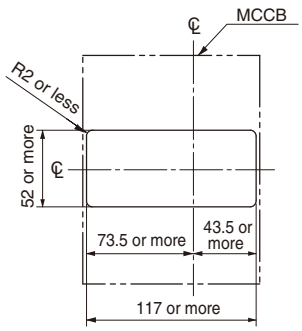


Panel drilling

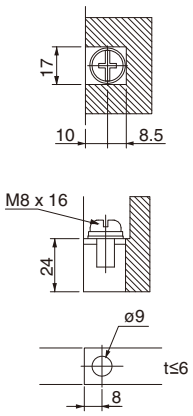


For V, N-type hadle

Front panel cutting



Terminal section

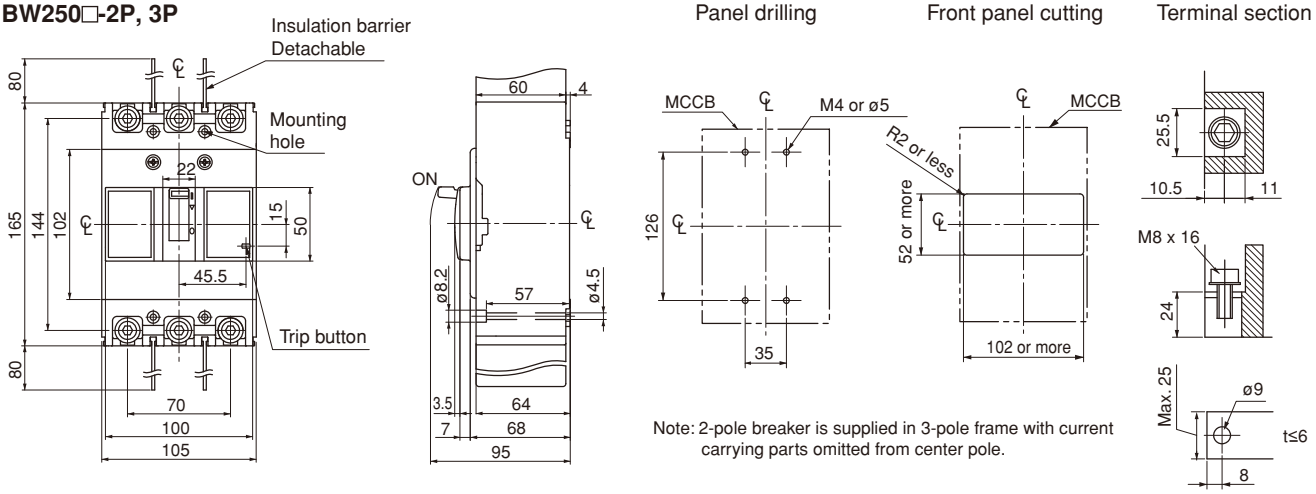


Molded Case Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

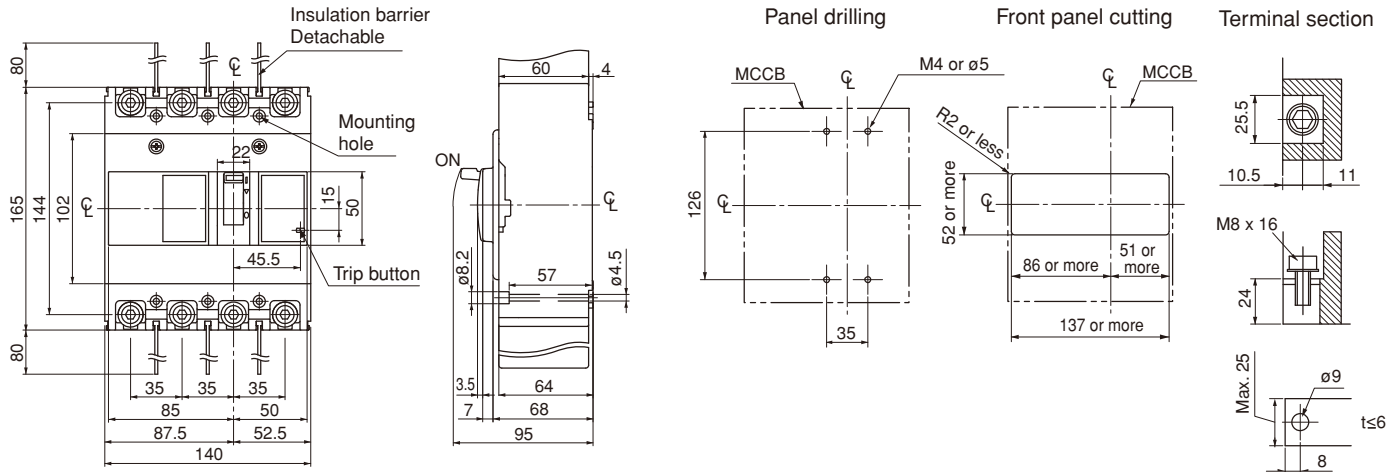
● Front mounting, front connection

BW160□-2P, 3P
BW250□-2P, 3P



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

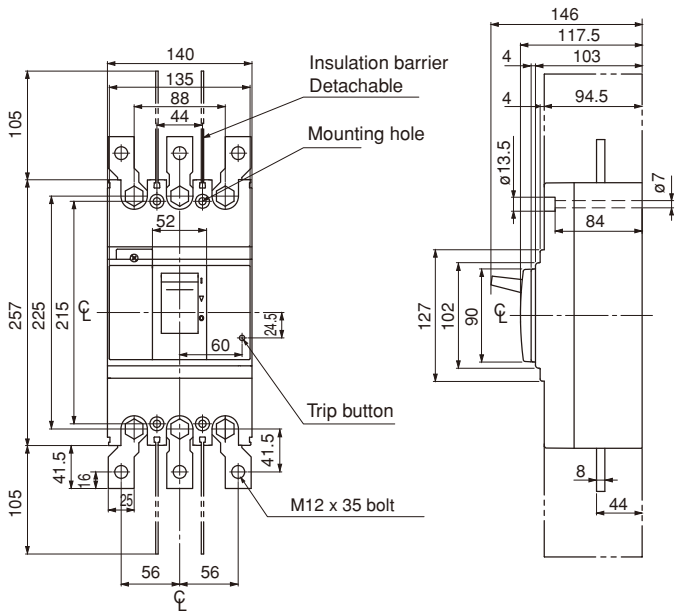
BW160□-4P
BW250□-4P

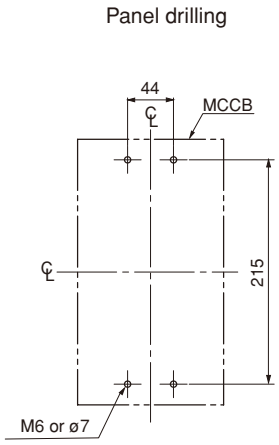


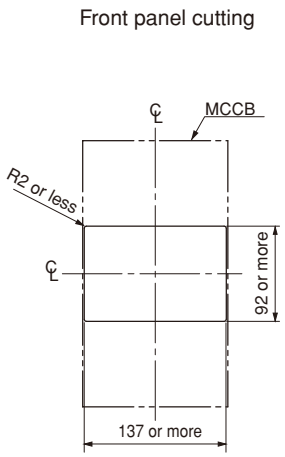
■ Dimensions, mm

● Front mounting, front connection

BW400□-2P, 3P

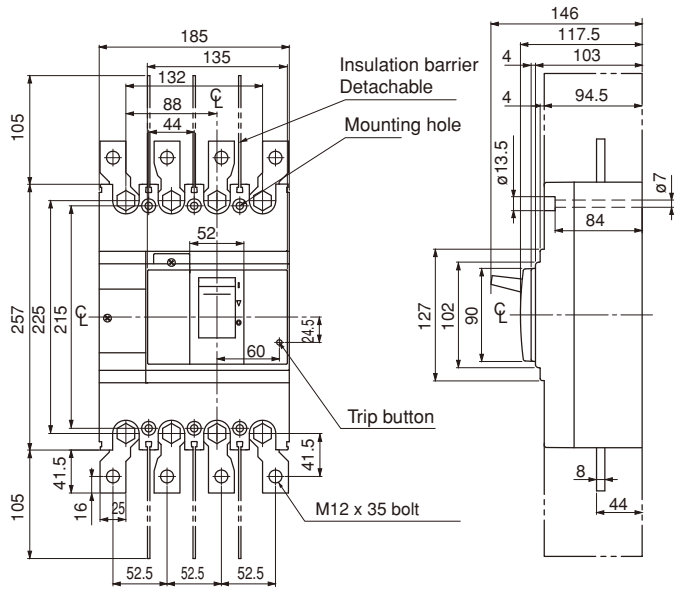


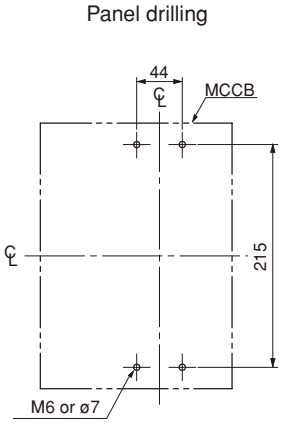


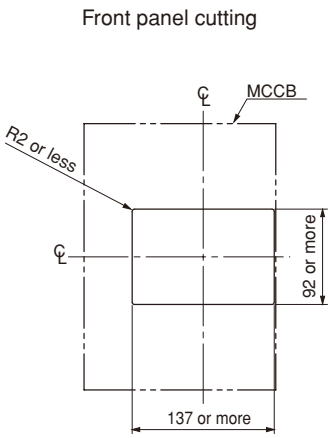


Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

BW400□-4P





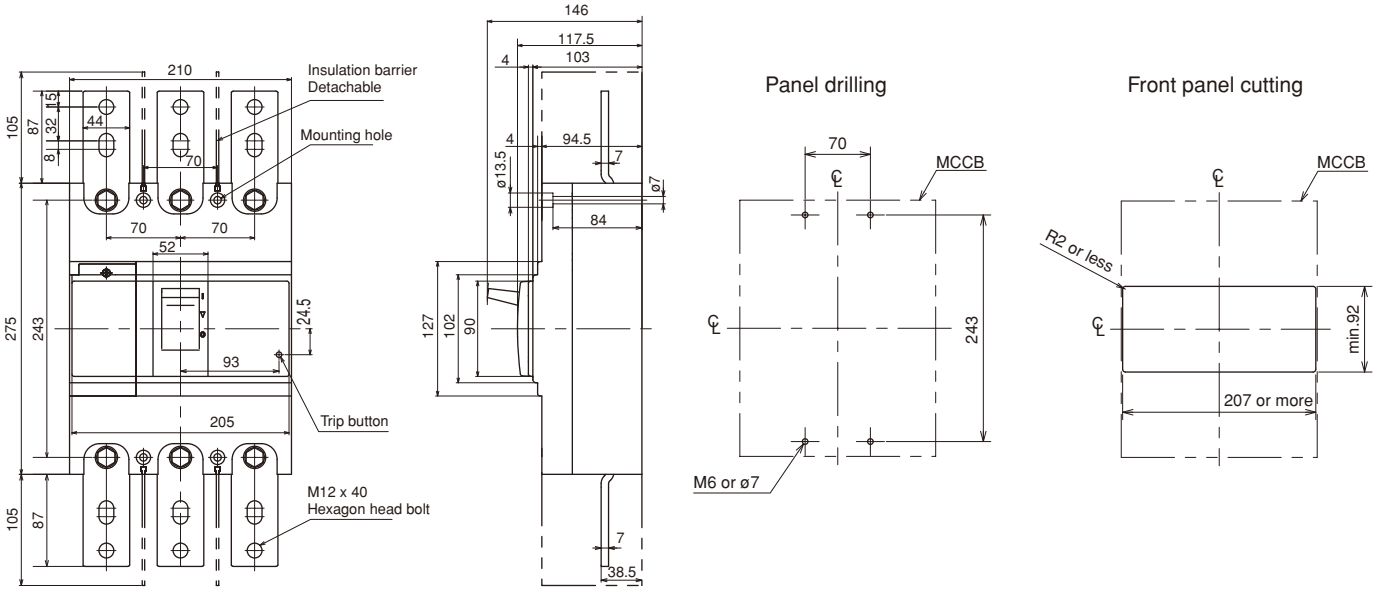


Molded Case Circuit Breakers
G-TWIN series Dimensions / Standard

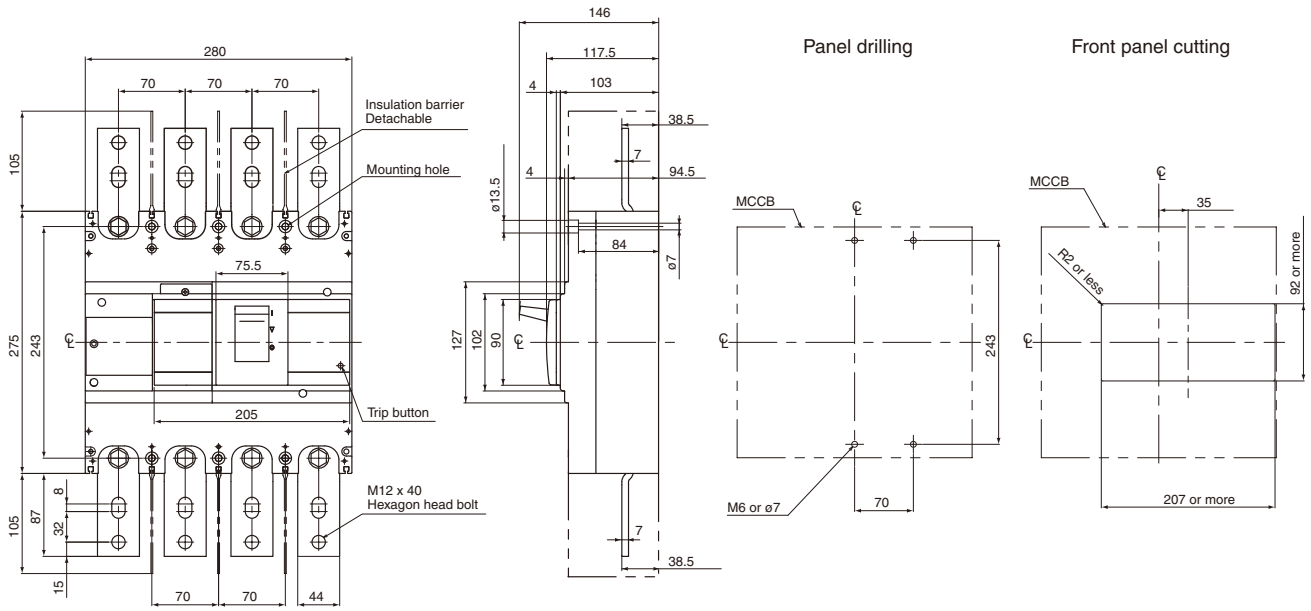
■ Dimensions, mm

● Front mounting, front connection

BW630□-3P



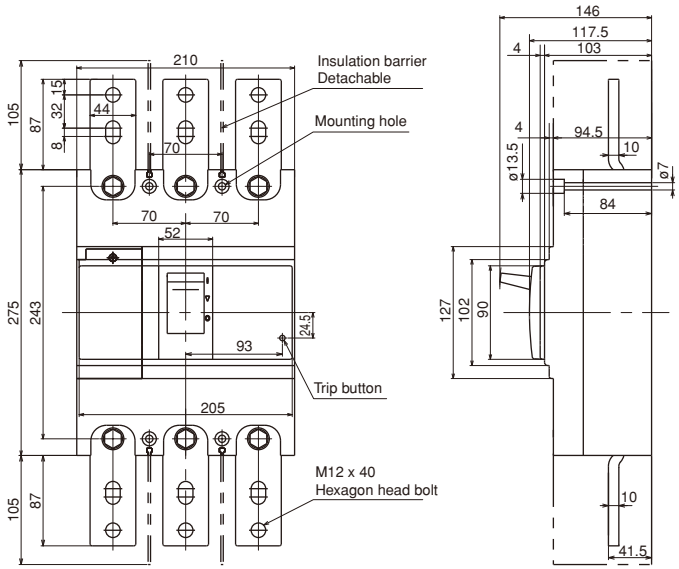
BW630□-4P

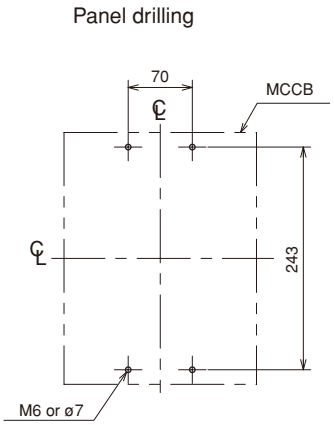


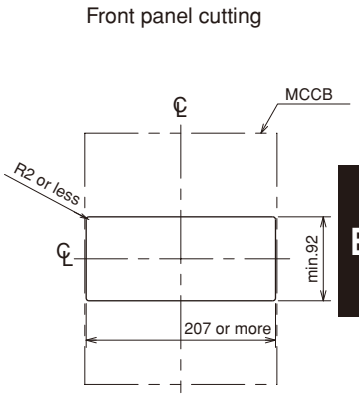
■ Dimensions, mm

● Front mounting, front connection

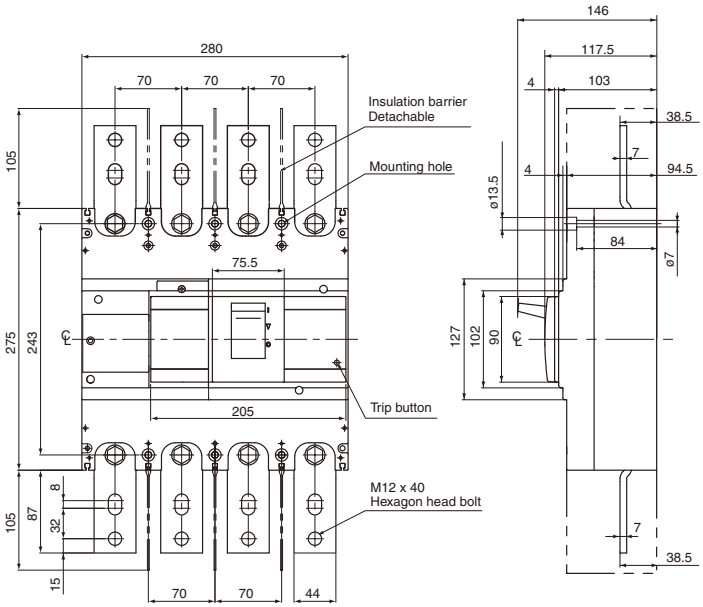
BW800□-3P

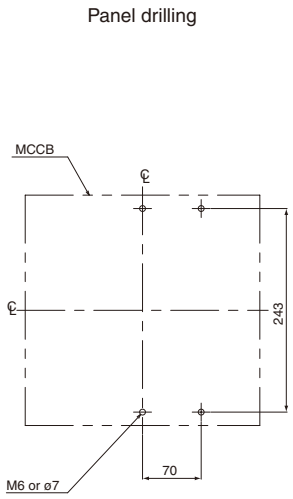


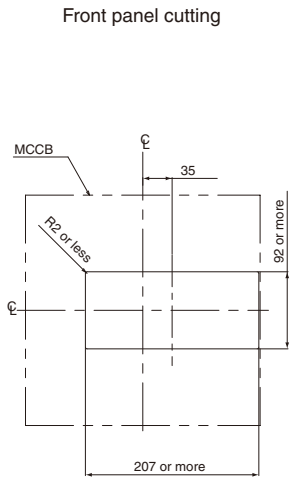




BW800□-4P





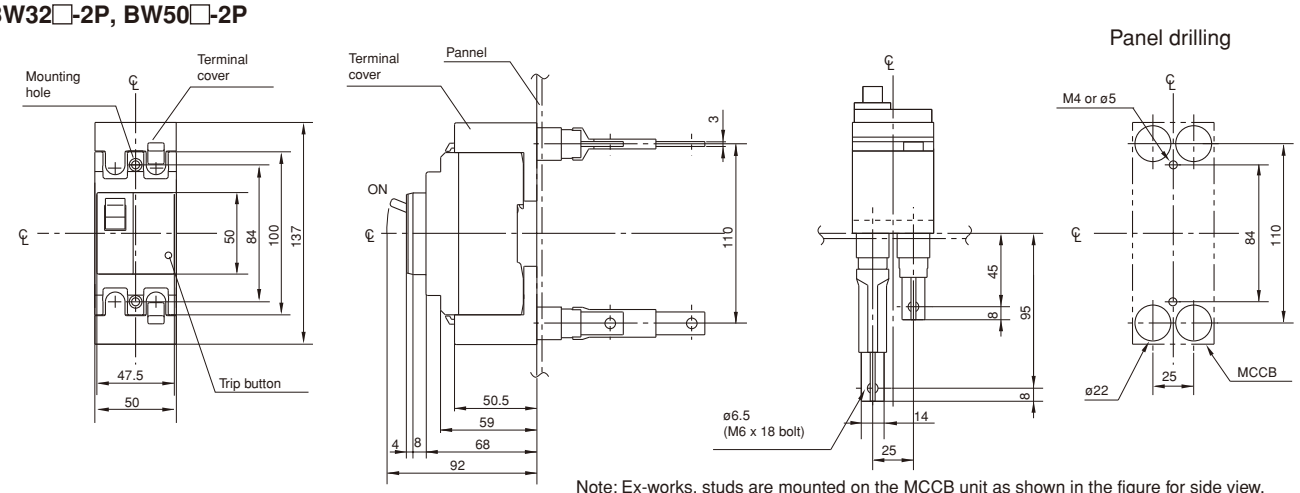


Molded Case Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

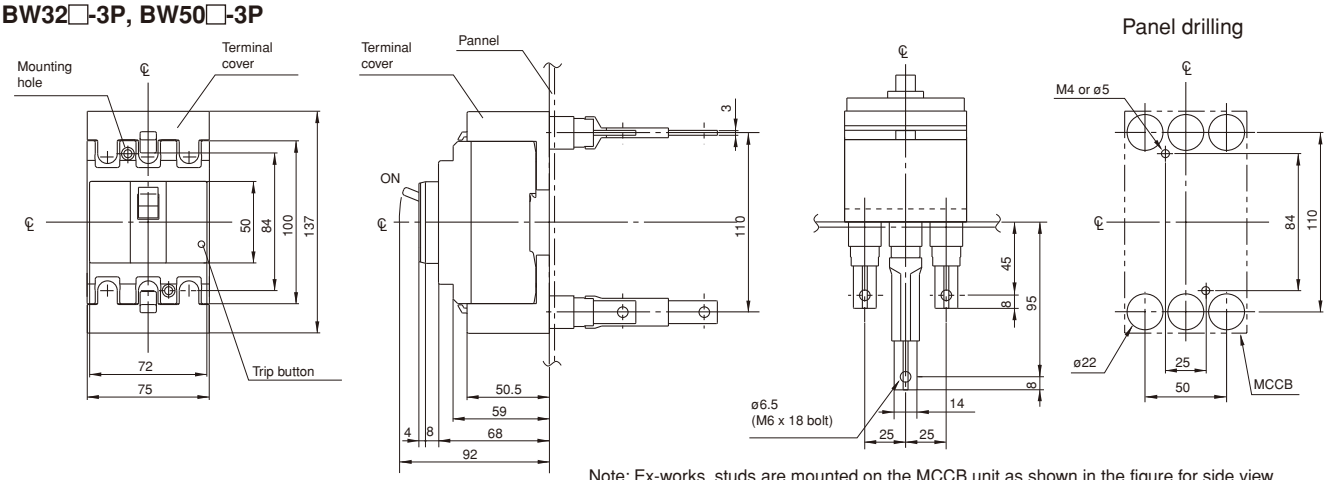
● Front mounting, rear connection (type X)

BW32□-2P, BW50□-2P



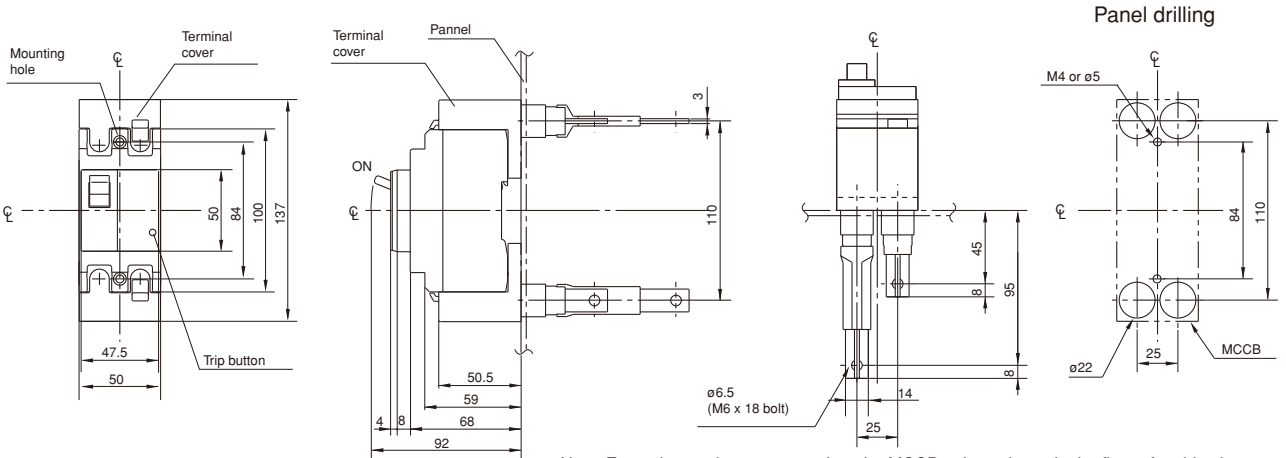
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

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

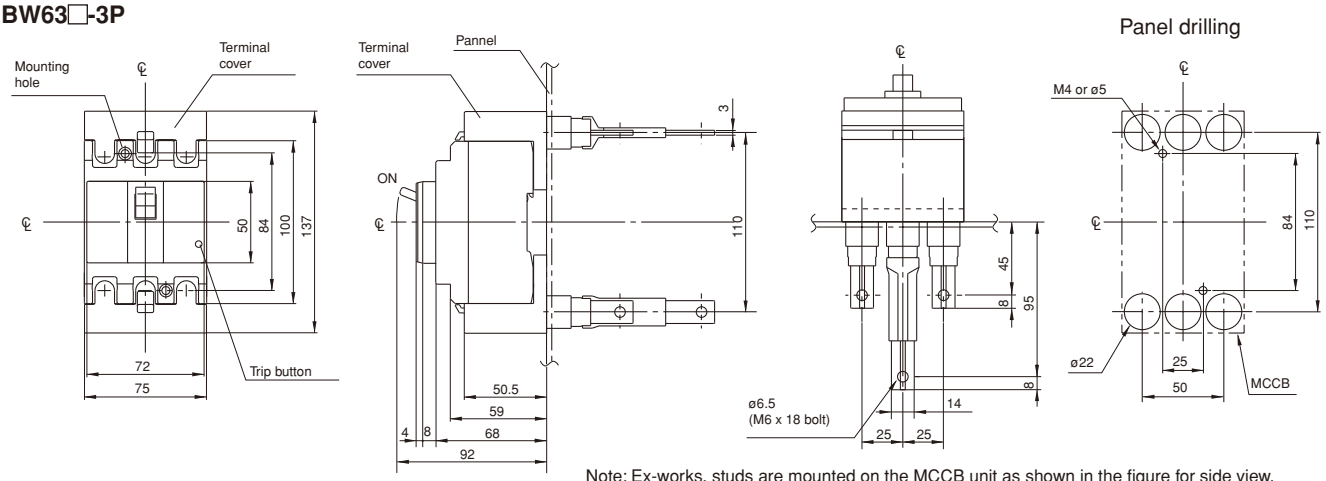


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

■ Dimensions, mm

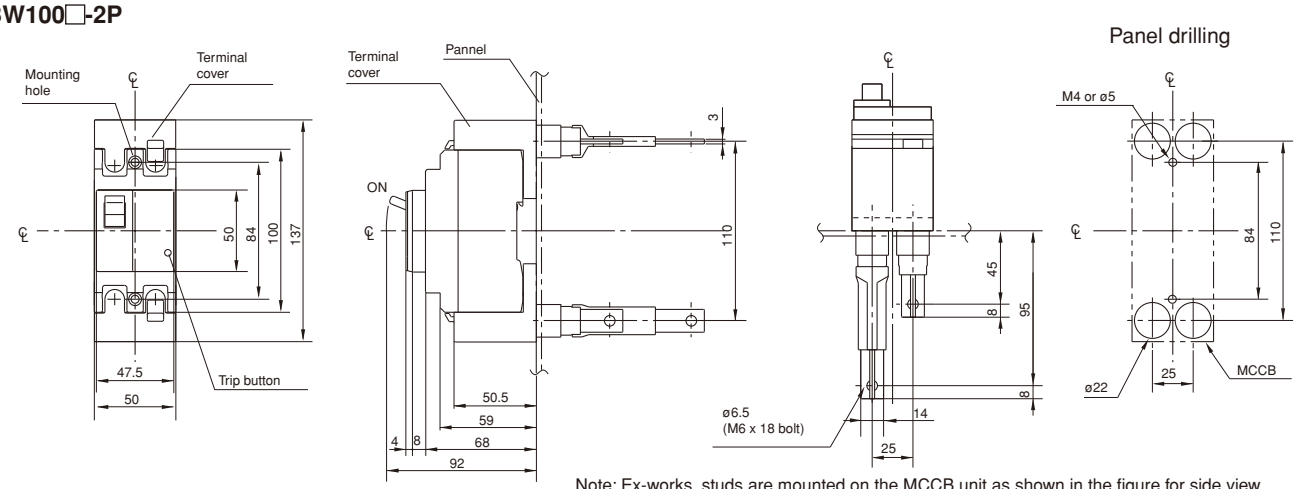
● Front mounting, rear connection (type X)

BW63□-3P



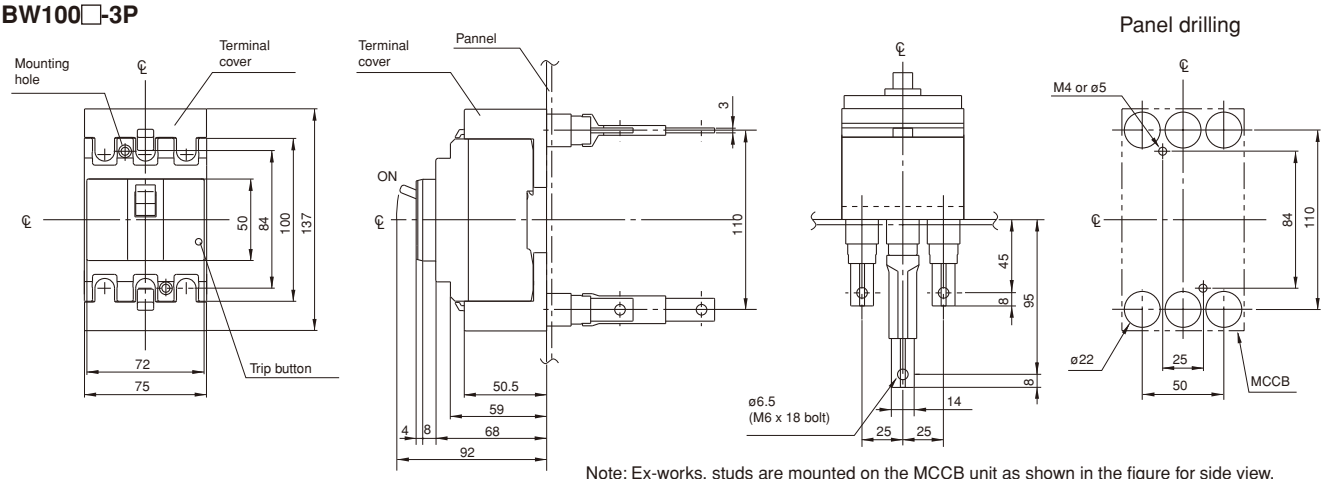
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted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



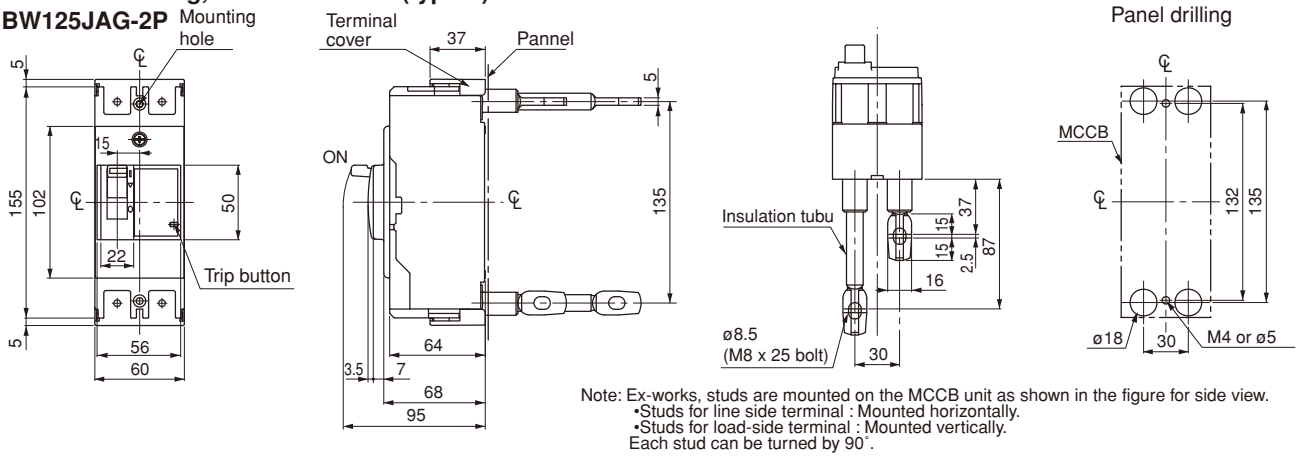
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted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

Molded Case Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

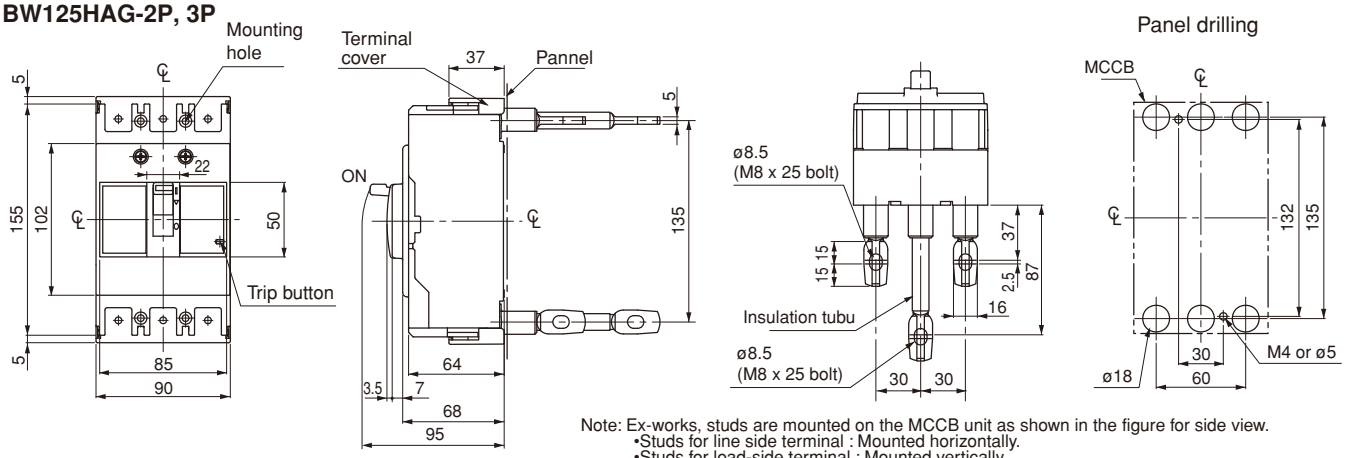
● Front mounting, rear connection (type X)

BW125JAG-2P



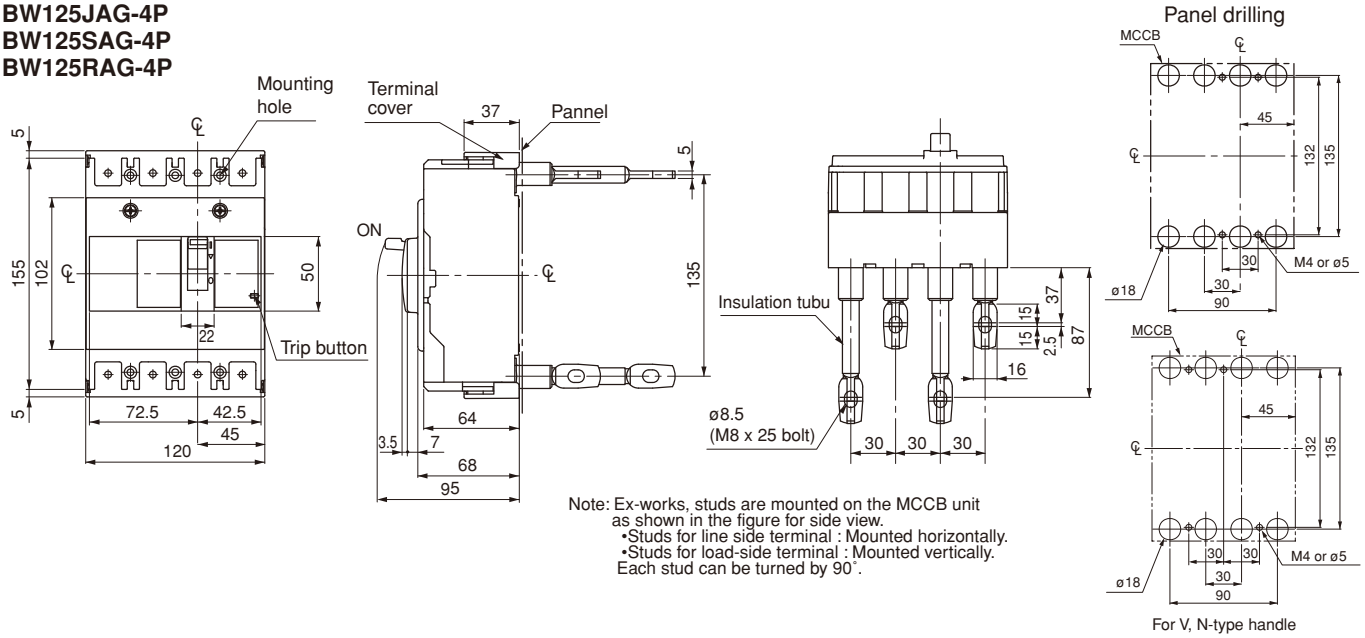
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

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



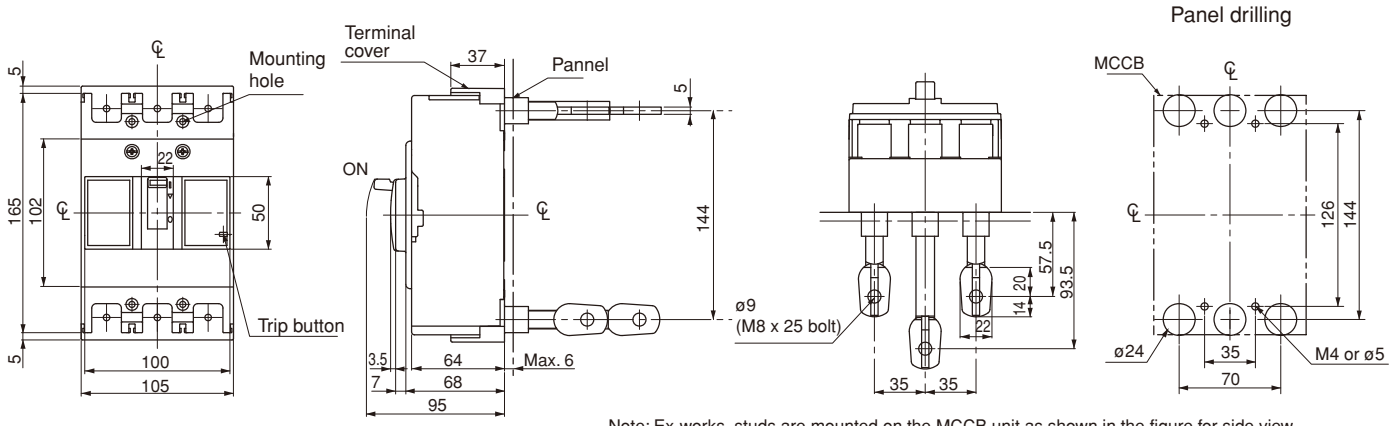
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

For V, N-type handle

■ Dimensions, mm

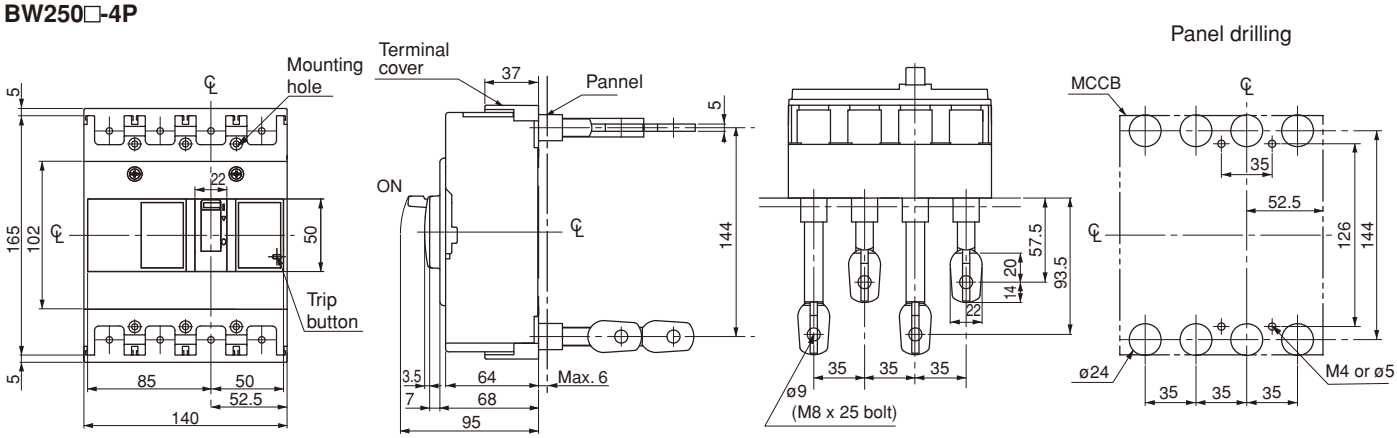
● Front mounting, rear connection (type X)

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



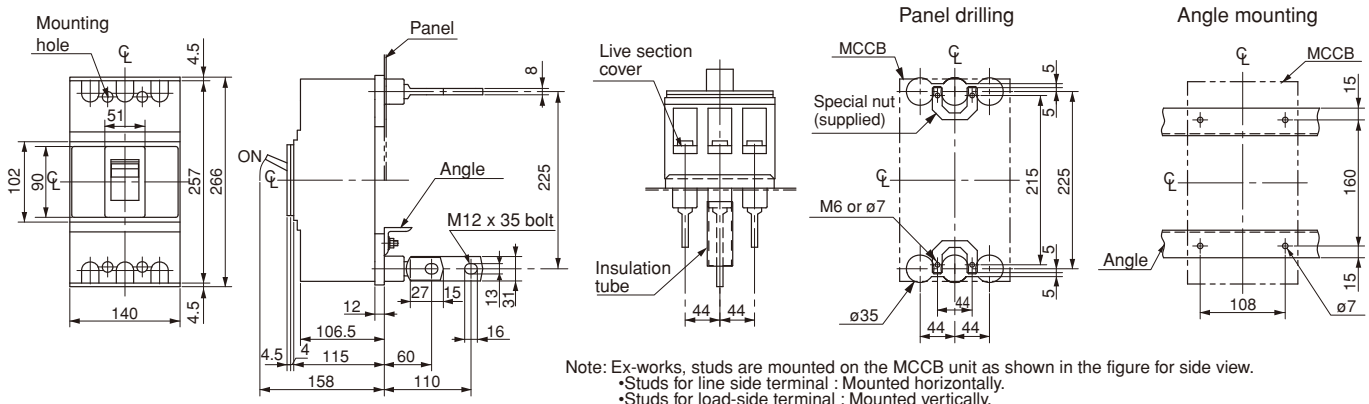
Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

Molded Case Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

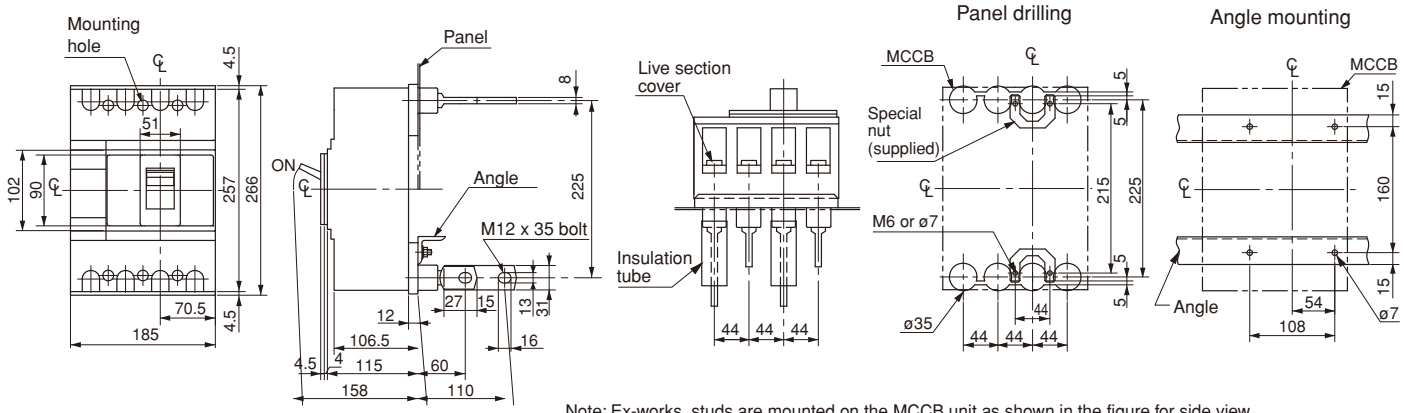
● Front mounting, rear connection (type X)

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

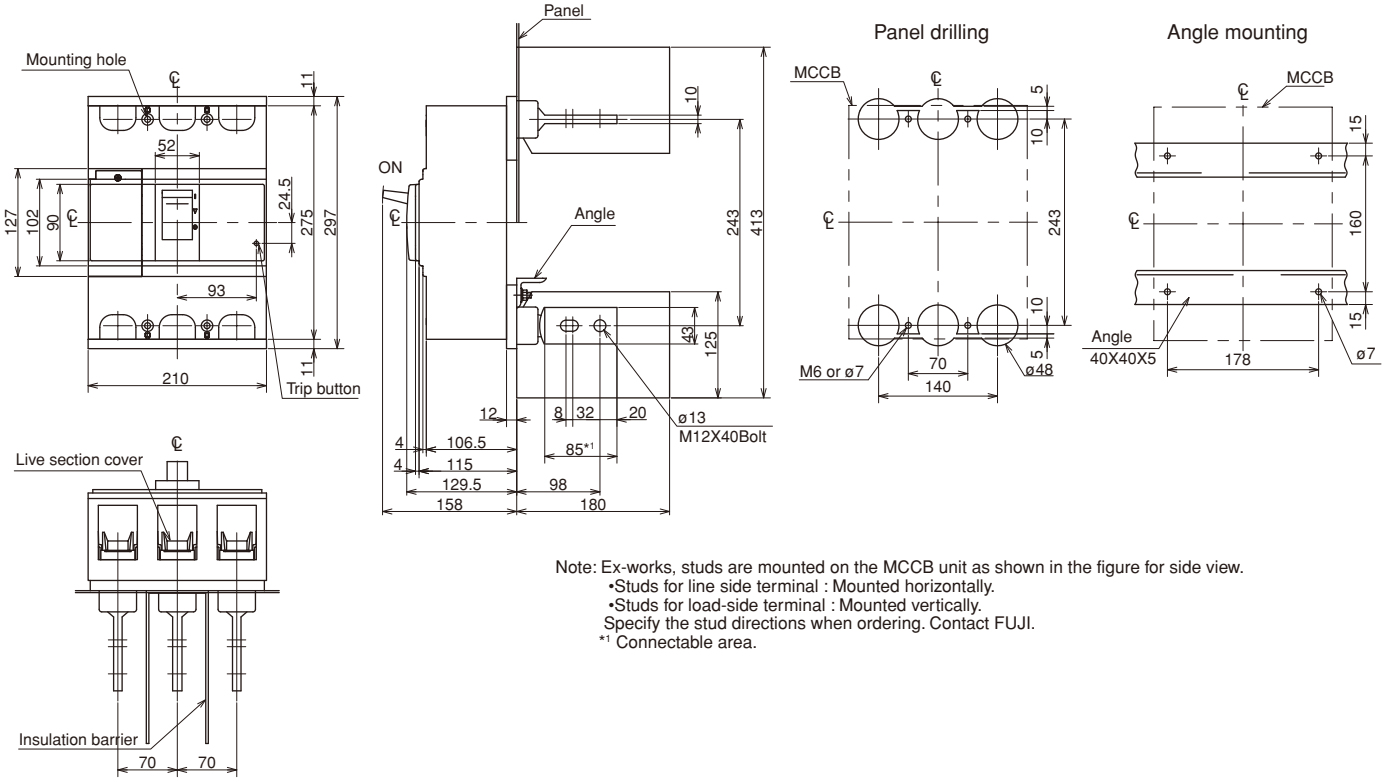


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

■ Dimensions, mm

● Front mounting, rear connection (type X)

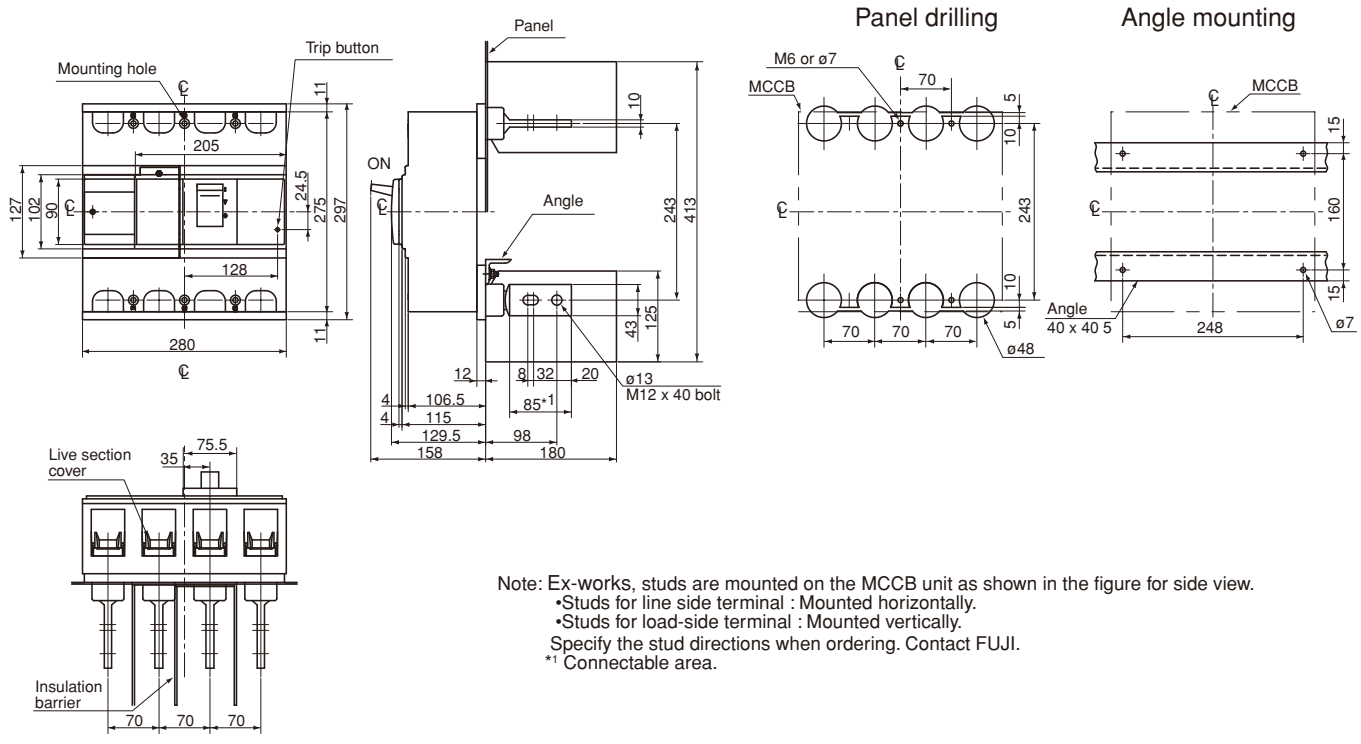
BW630□-3P



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.

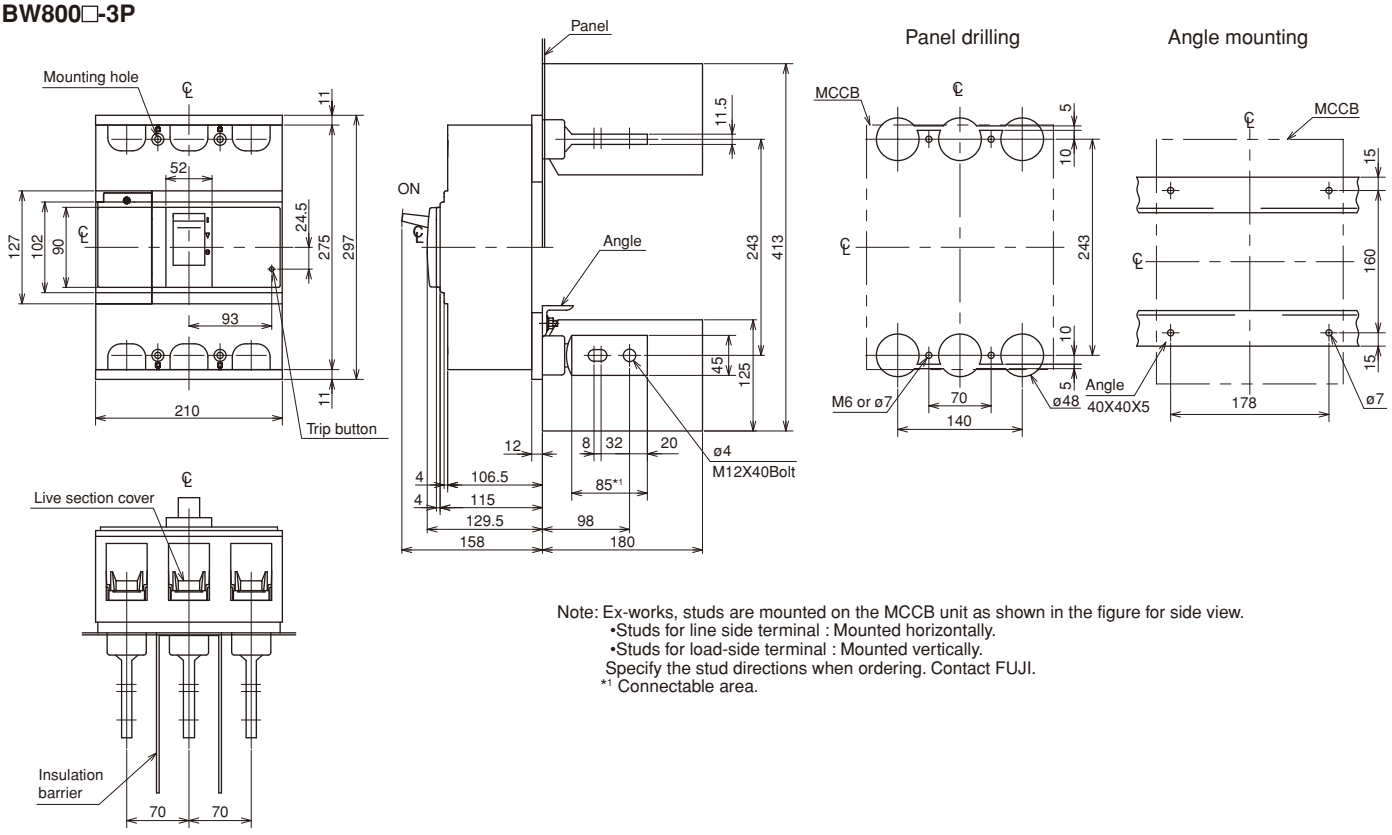
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

Molded Case Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

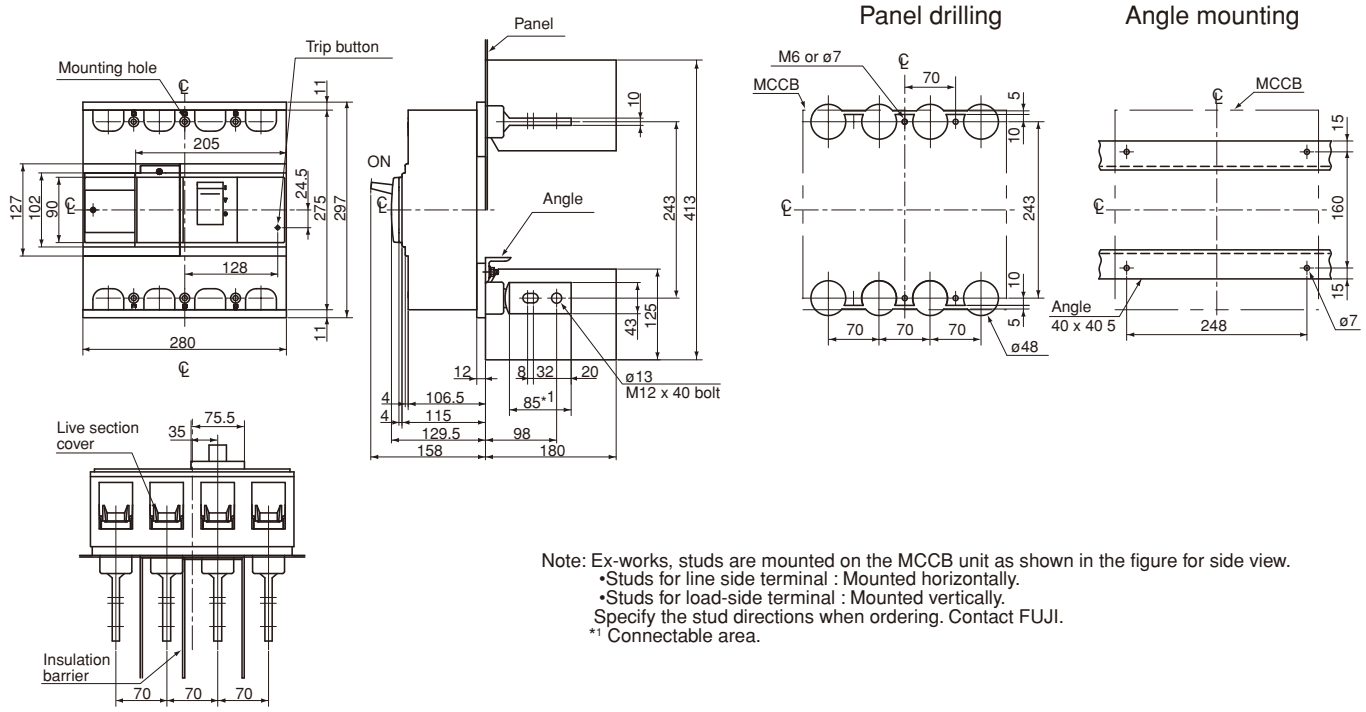
● Front mounting, rear connection (type X)

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

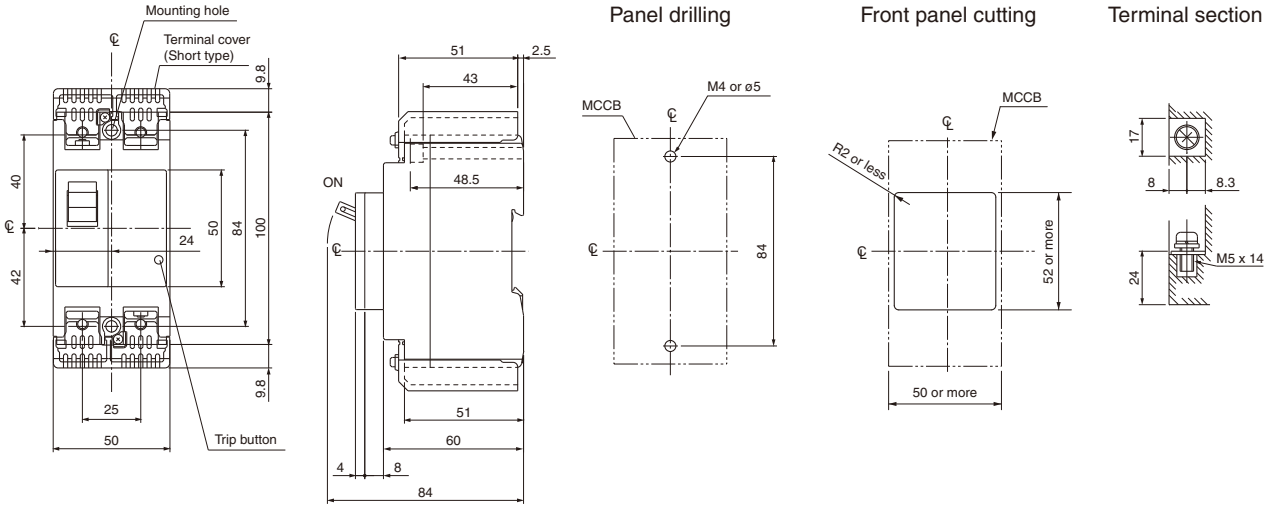


Note: Ex-works, studs are mounted on the MCCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

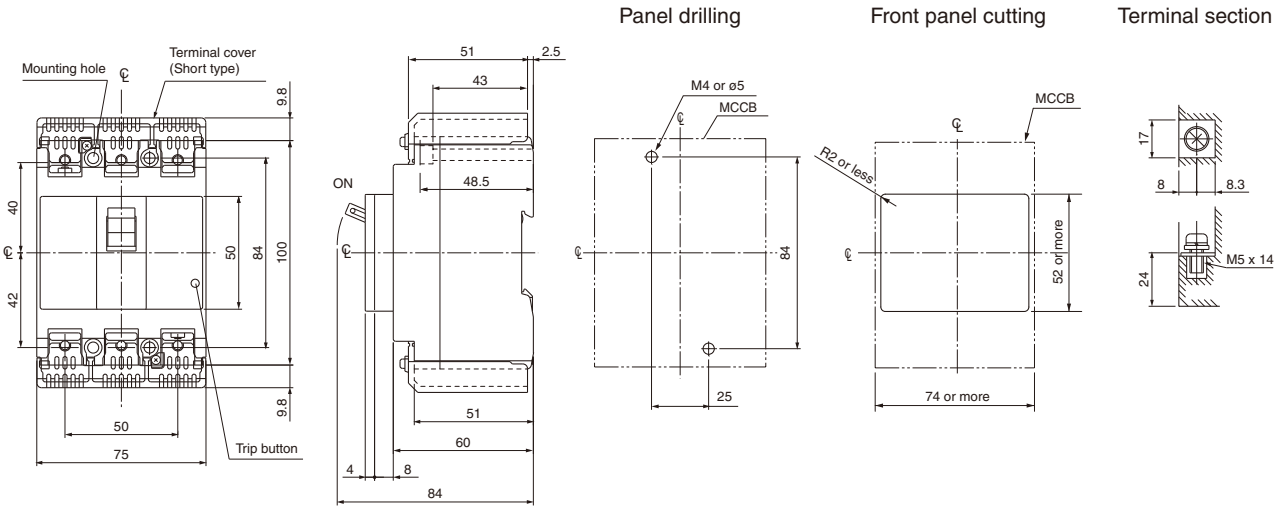
■ Dimensions, mm

● Front mounting, front connection

BW50RAGU-2P



BW50RAGU-3P

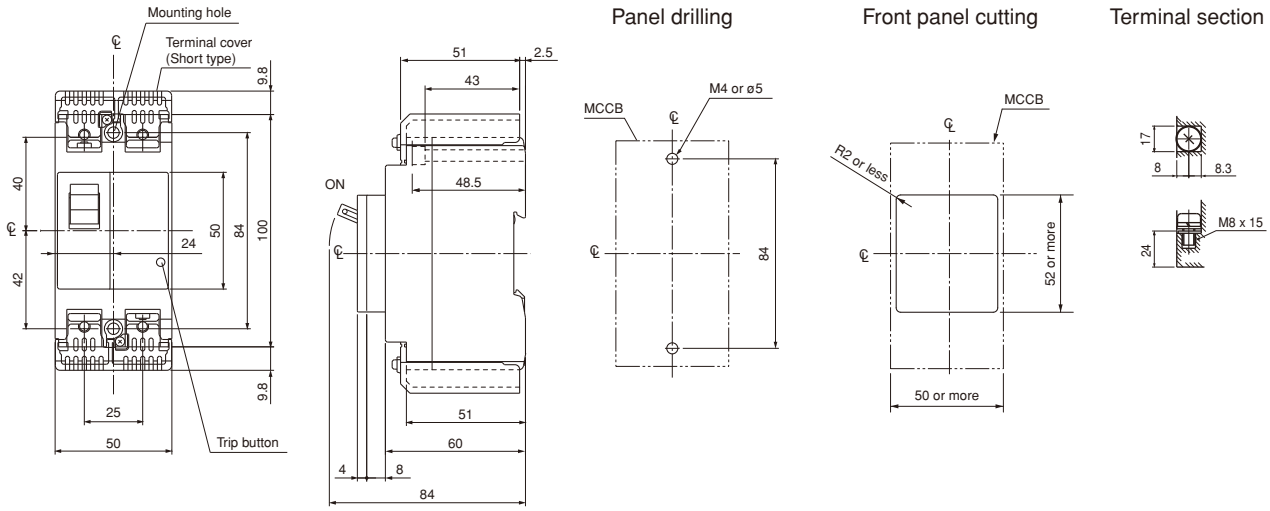


Molded Case Circuit Breakers
G-TWIN series Dimensions / Global

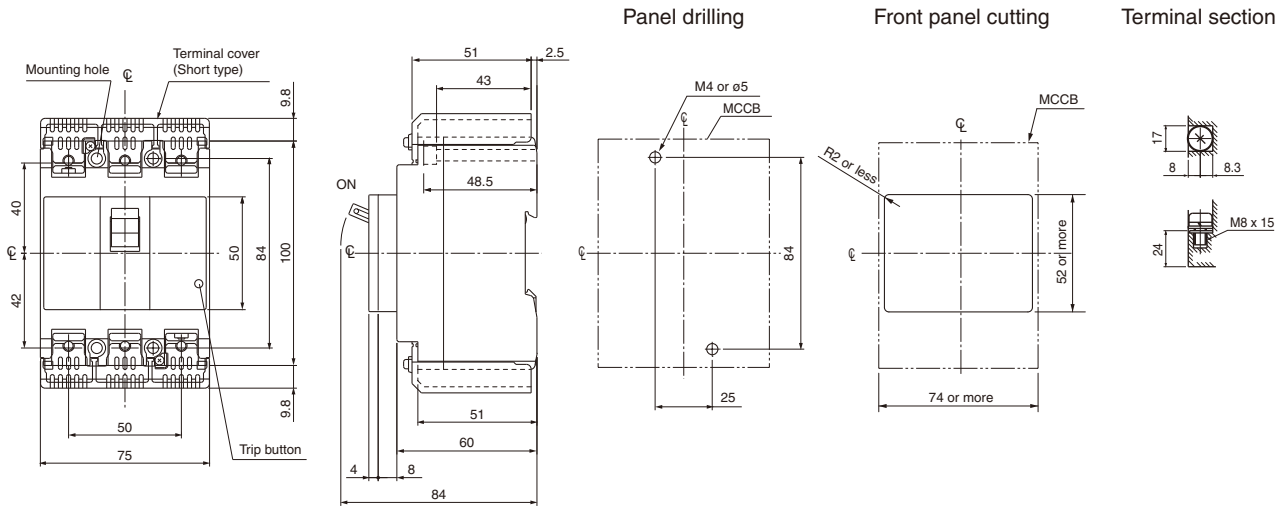
■ Dimensions, mm

● Front mounting, front connection

BW100EAGU-2P



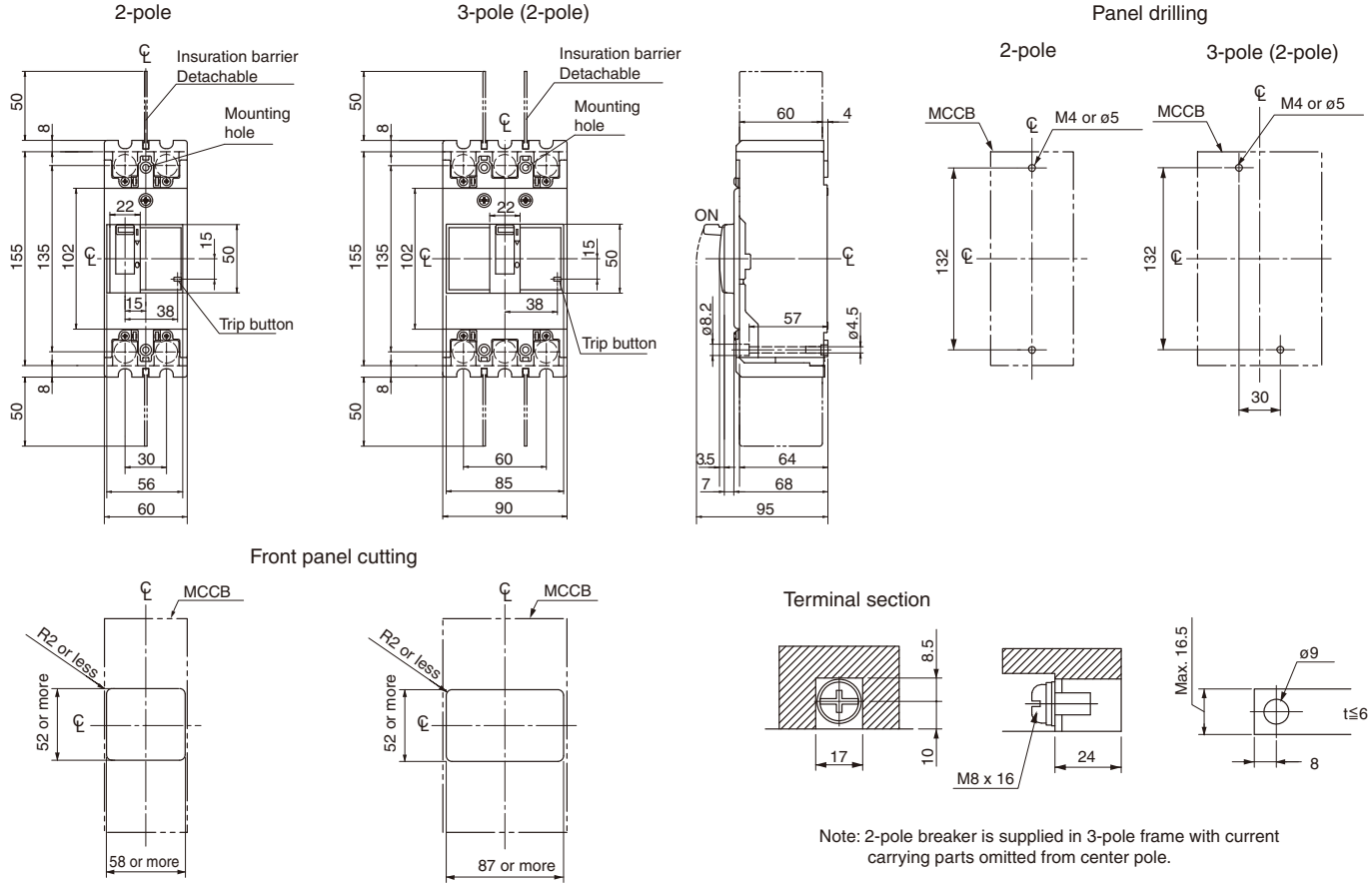
BW100EAGU-3P



■ Dimensions, mm

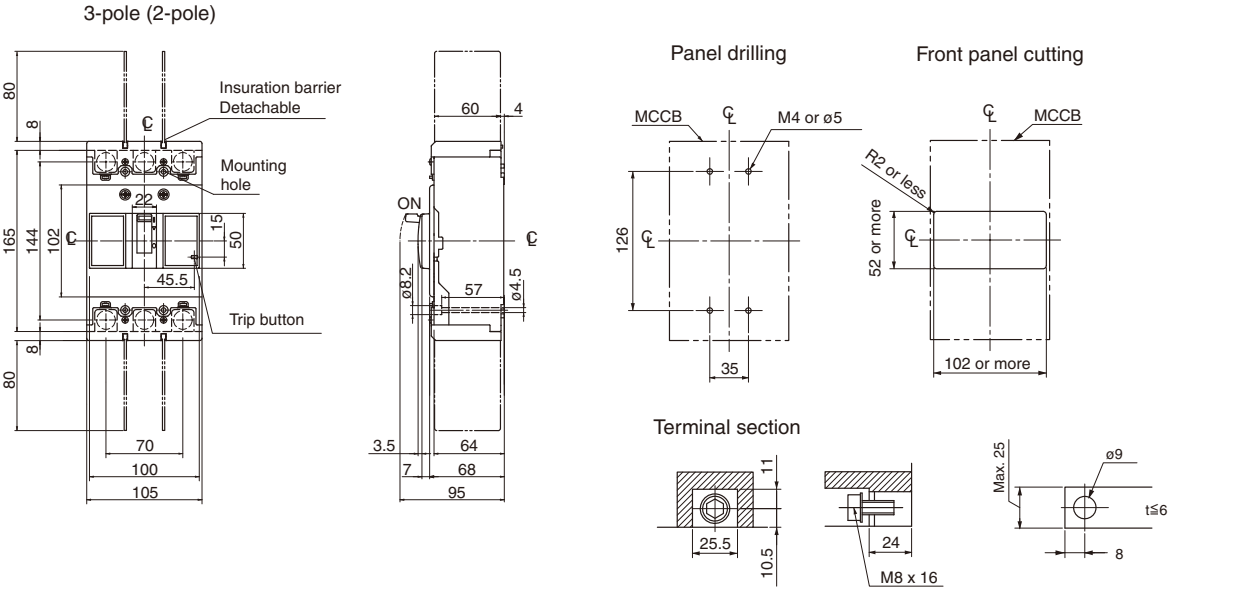
● Front mounting, front connection

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



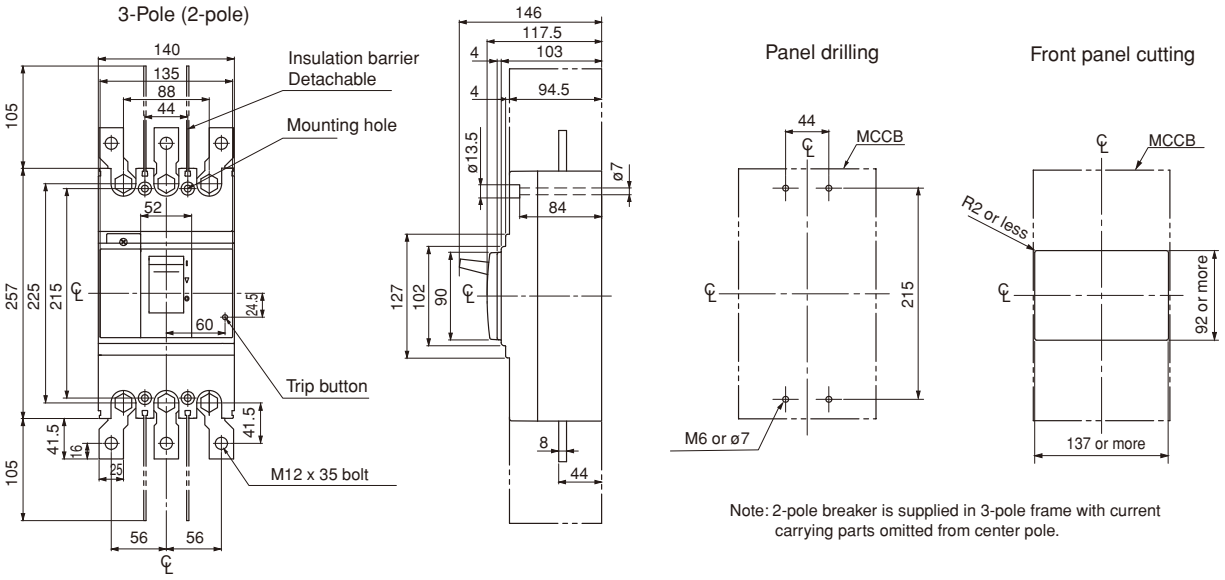
Note: 2-pole breaker is supplied in 3-pole frame with current carrying parts omitted from center pole.

Molded Case Circuit Breakers
G-TWIN series Dimensions / Global

■ Dimensions, mm

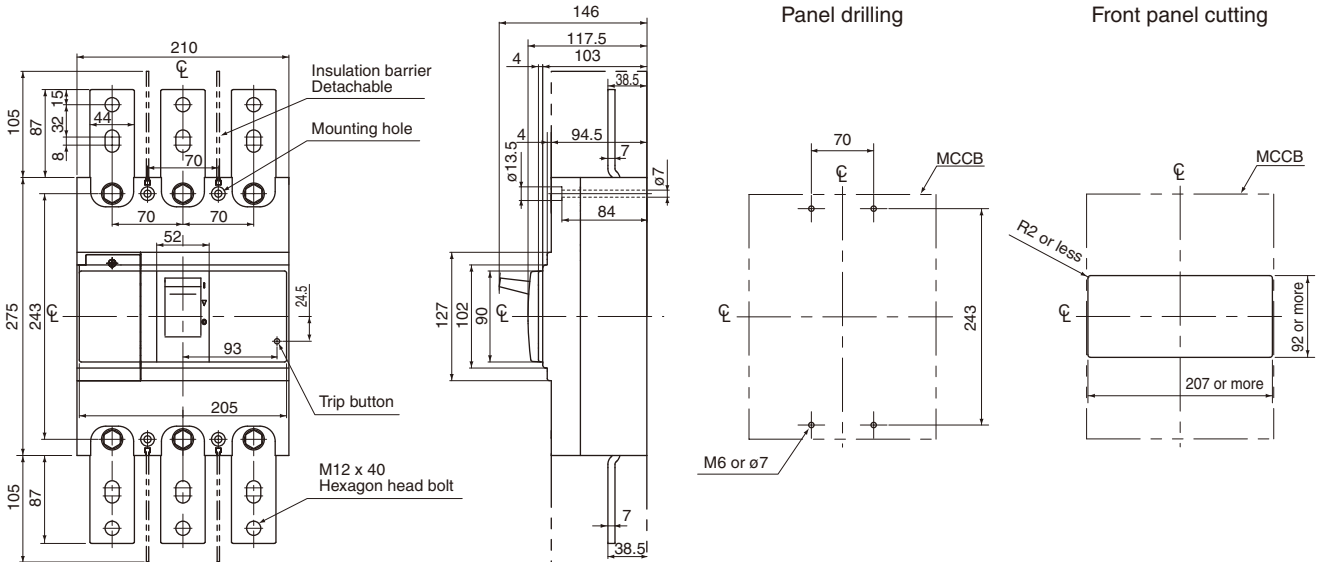
● Front mounting, front connection

BW400□U-2P, 3P



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

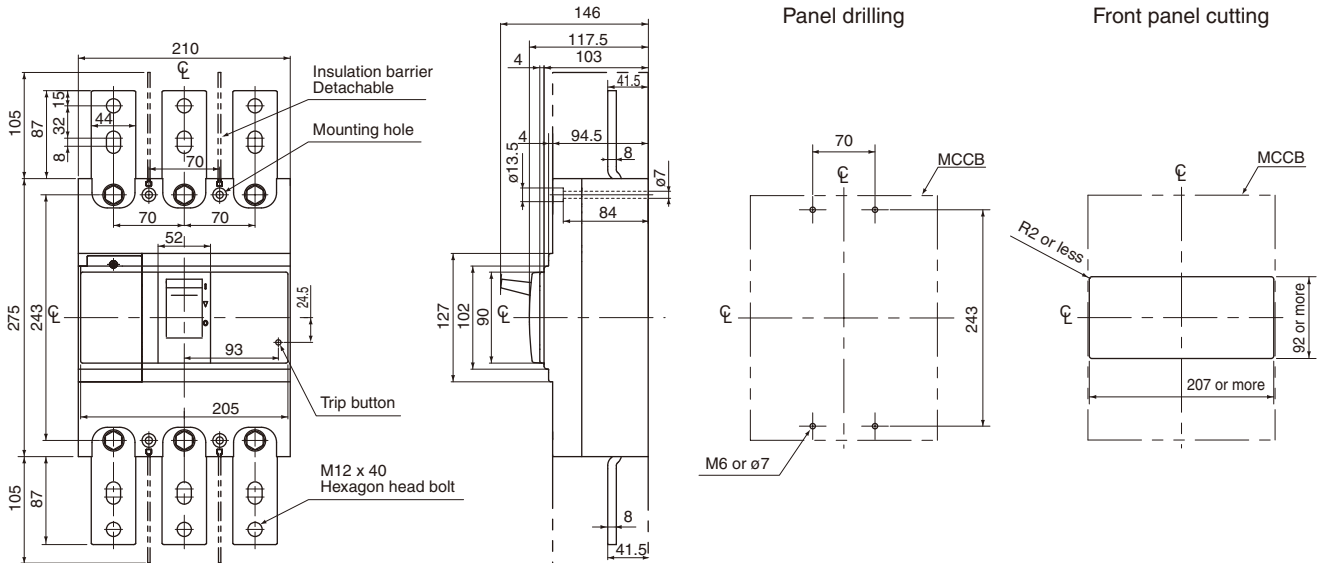
BW630□U-3P



■ Dimensions, mm

● Front mounting, front connection

BW800□U-3P

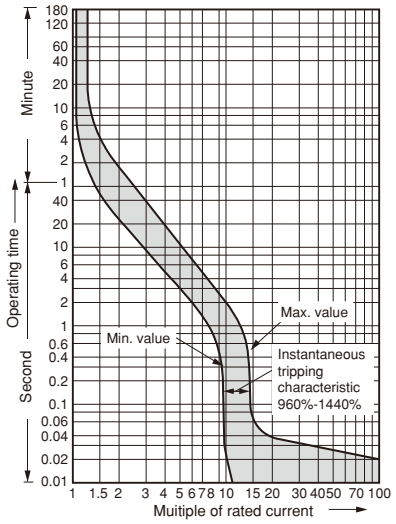


Molded Case Circuit Breakers
G-TWIN series Characteristic curves

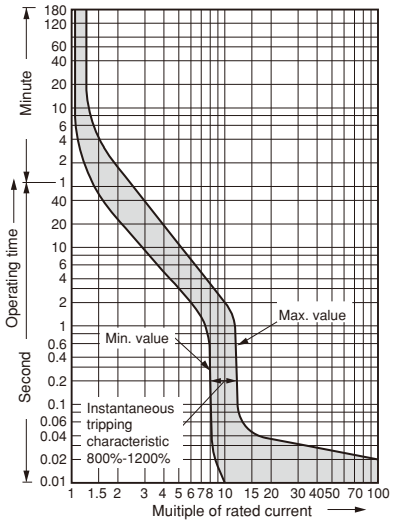
■ Characteristic curves / Line protection

BW32, 50(A,E,S,R), 63, 100

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

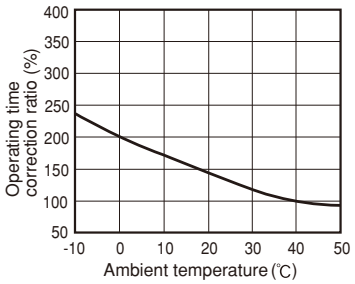


Rated current: 3, 15, 20, 30, 50,100A



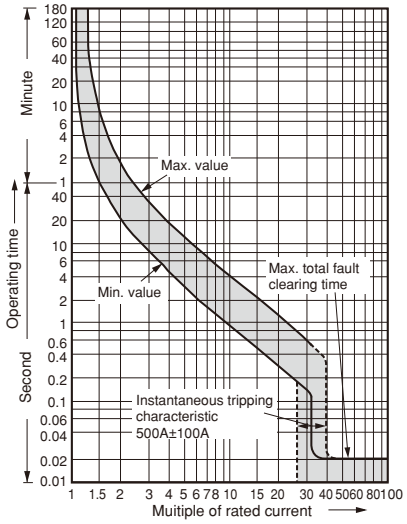
Temperature correction curve

Reference temp. 40℃

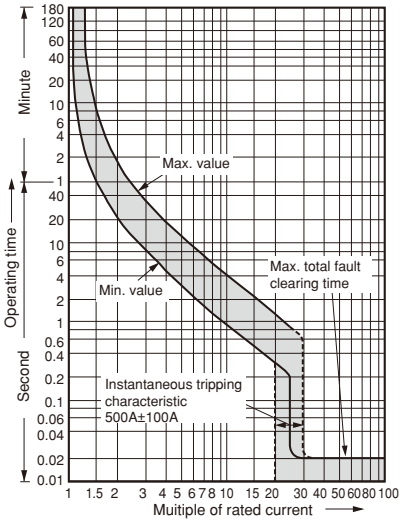


BW50HAG, BW125

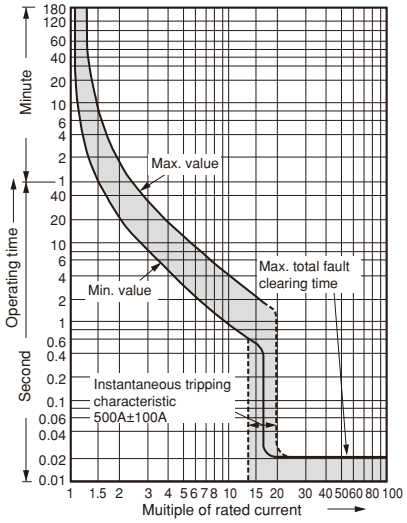
• 15A



• 20A



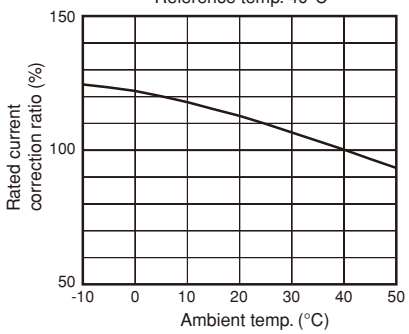
• 30A



Temperature correction curve

• 15-30A

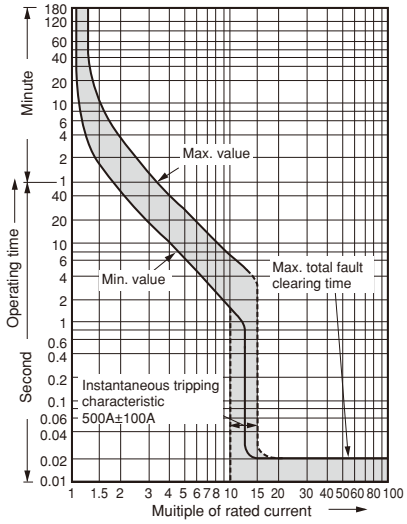
Reference temp. 40°C



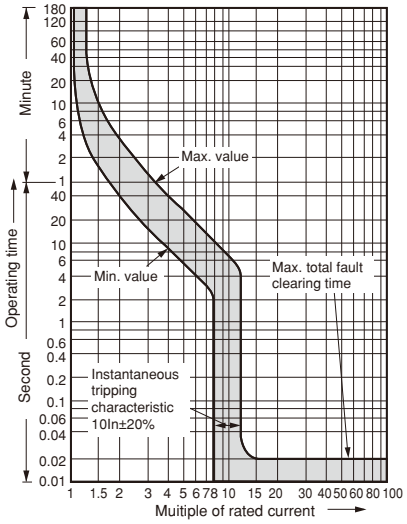
■ Characteristic curves / Line protection

BW50HAG, BW125

• **40A**

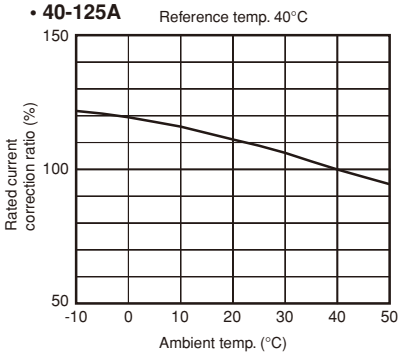


• **50-125A**

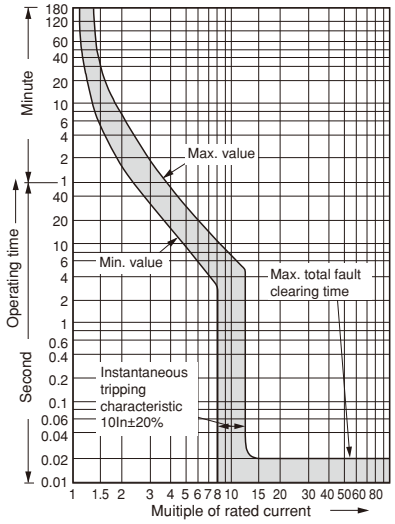


Temperature correction curve

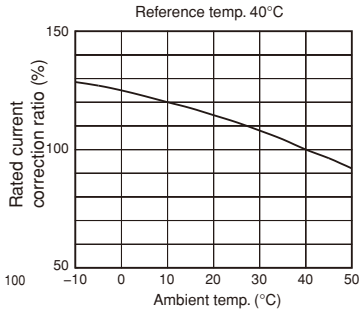
• **40-125A**



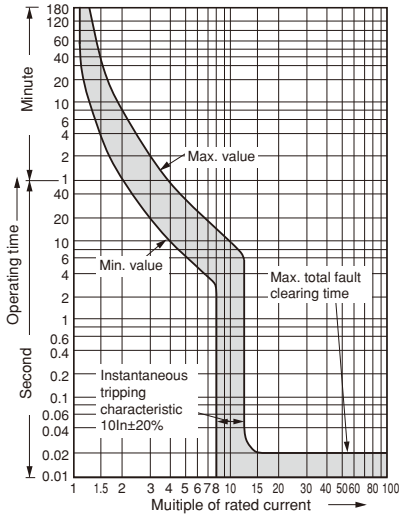
BW160, 250



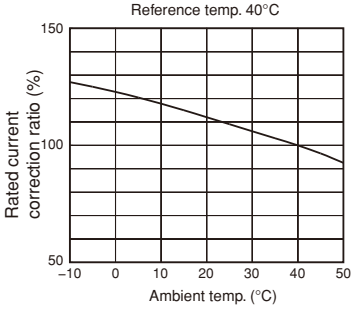
Temperature correction curve



BW400



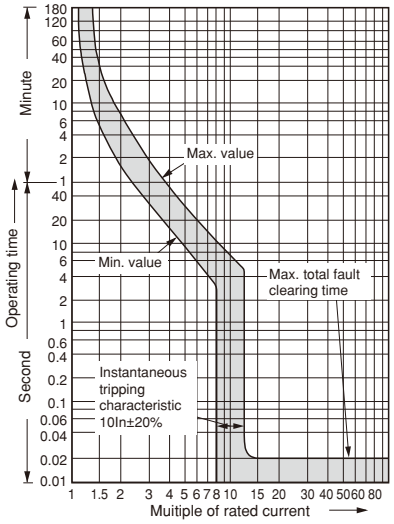
Temperature correction curve



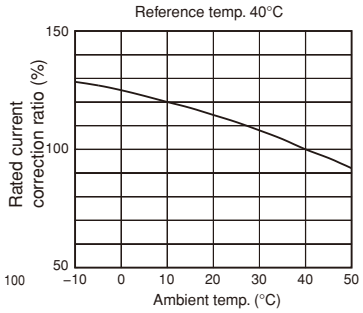
Molded Case Circuit Breakers
G-TWIN series Characteristic curves

■ Characteristic curves / Line protection

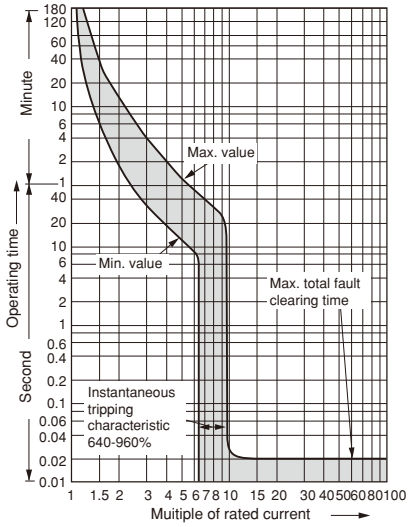
BW630



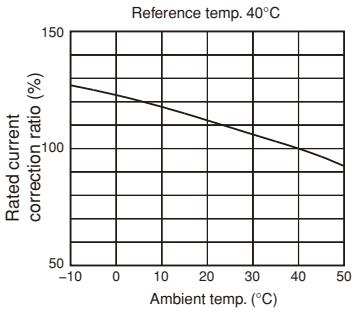
Temperature correction curve



BW800

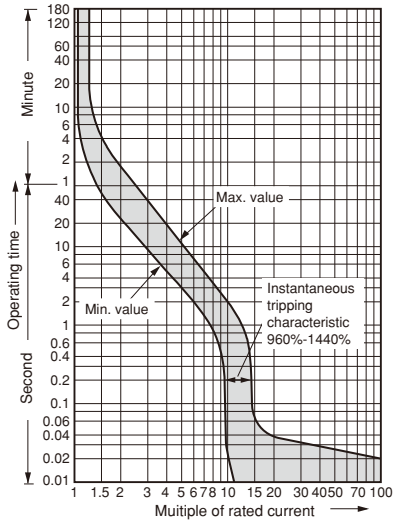


Temperature correction curve

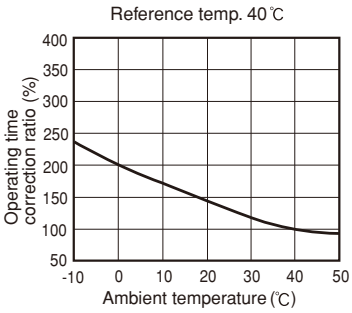


■ Characteristic curves / Motor protection

BW32, 50, 63, 100

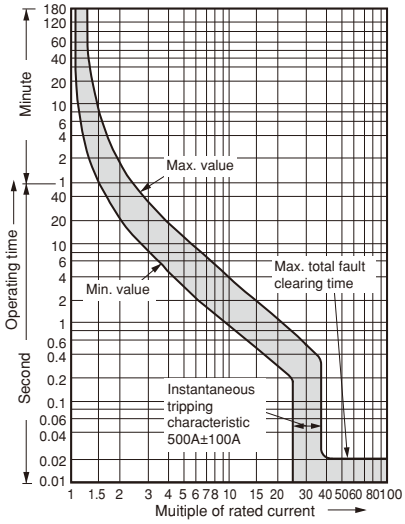


Temperature correction curve

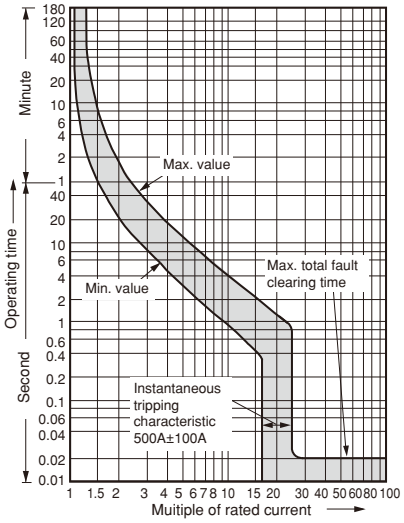


BW125

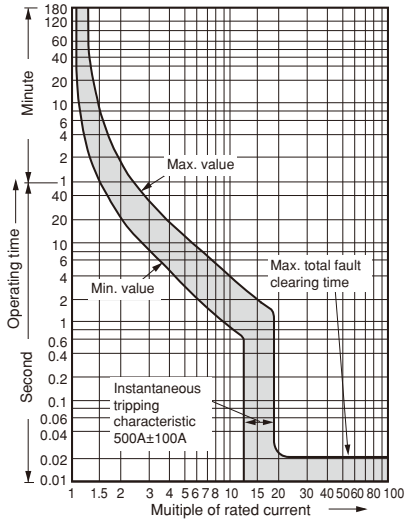
• 16A



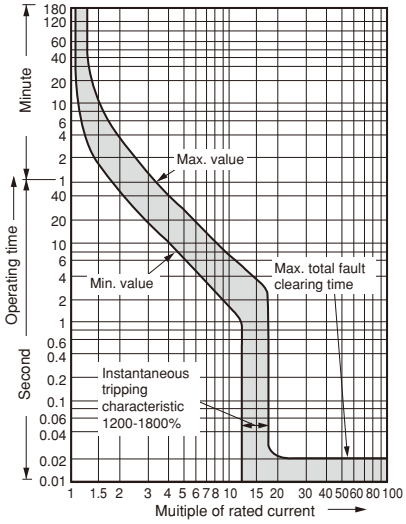
• 24A



• 32A

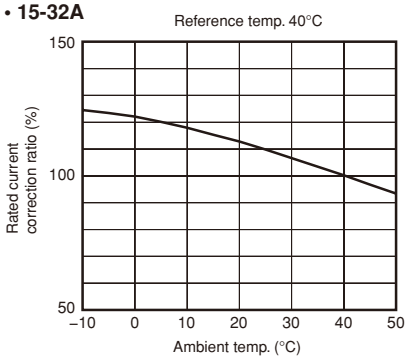


• 40-90A

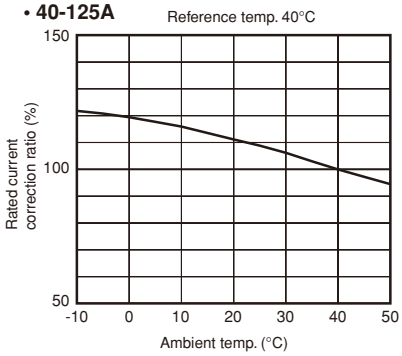


Temperature correction curve

• 15-32A



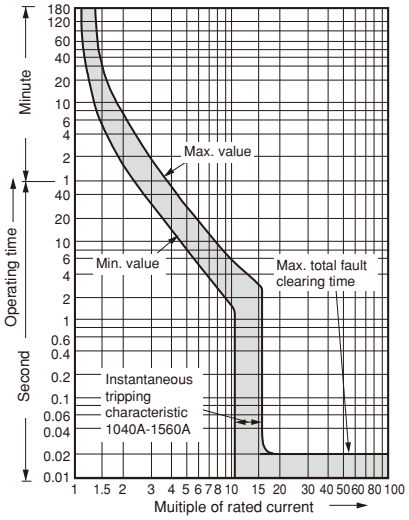
• 40-125A



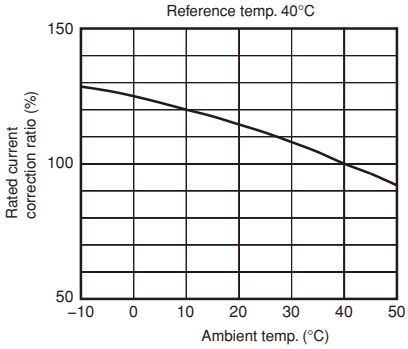
Molded Case Circuit Breakers
G-TWIN series Characteristic curves

■ Characteristic curves / Motor protection

BW250



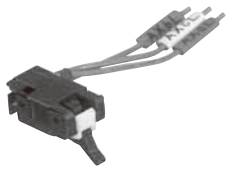
Temperature correction curve



■ Variation of internal accessory

● **32 to100AF**

Auxiliary switch (Type W)



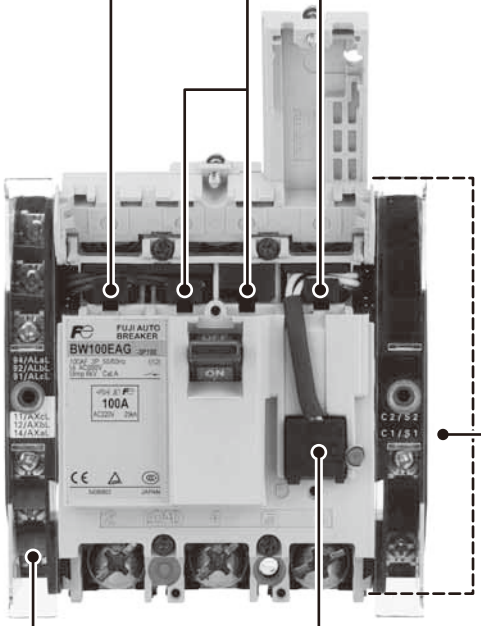
This switch is used for indicator lamp or control circuit.
See page B1-69.

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 B1-69.

Shunt trip device (Type F)

The purpose of this accessory is to trip the breaker from a distance.
See page B1-70.



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 B1-70.

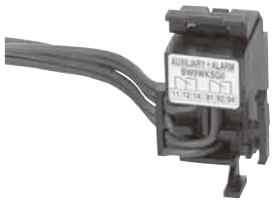
Terminal block (Type A)

A wiring terminal for internal accessories (Order with W, K or F)
See page B1-71.

■ Variation of internal accessory

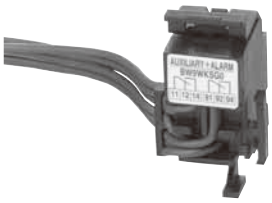
● **125 to 250AF**

Auxiliary switch (Type W)



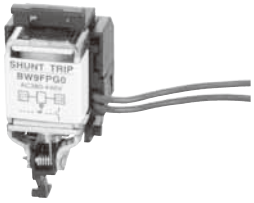
This switch is used for indicator lamp or control circuit.
See page B1-69.

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 B1-69.

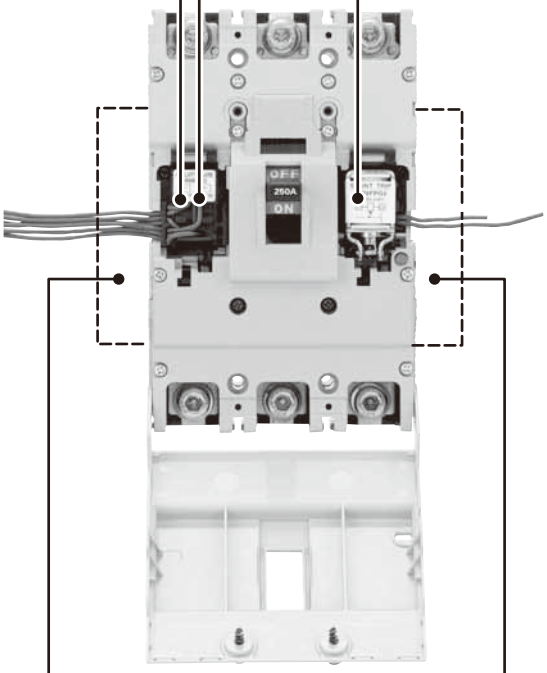
Shunt trip device (Type F)



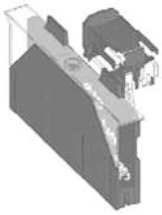
The purpose of this accessory is to trip the breaker from a distance.
See page B1-70.

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 B1-70.



Terminal block (Type A)

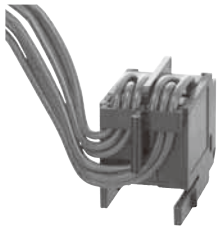


A wiring terminal for internal accessories (Factory-mounted)
See page B1-71.

■ Variation of internal accessory

● **400 to 800AF**

Alarm switch (Type K)



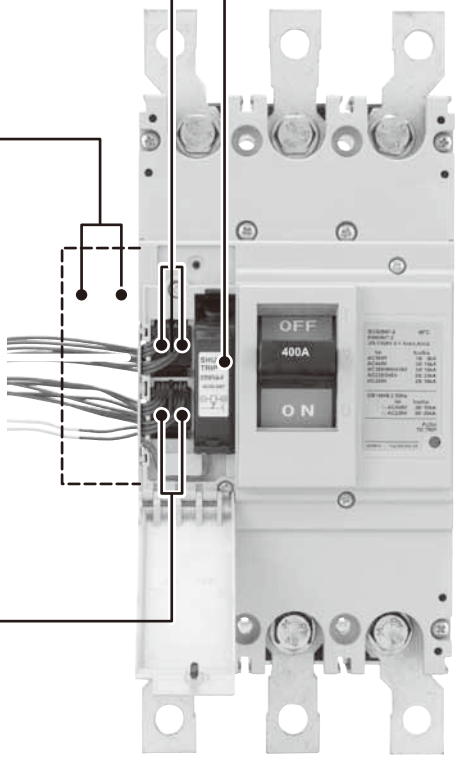
This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped.
See page B1-69.

Shunt trip device (Type F)

The purpose of this accessory is to trip the breaker from a distance.
See page B1-70.

Terminal block (Type A)

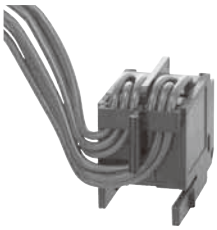
A wiring terminal for internal accessories (Factory-mounted)
See page B1-71.



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 B1-70.

Auxiliary switch (Type W)



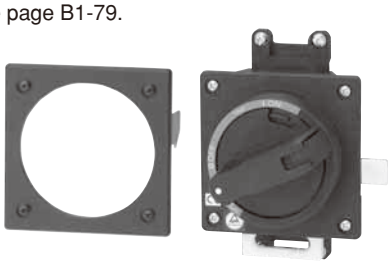
This switch is used for indicator lamp or control circuit.
See page B1-69.

Molded Case Circuit Breakers
G-TWIN series Accessories

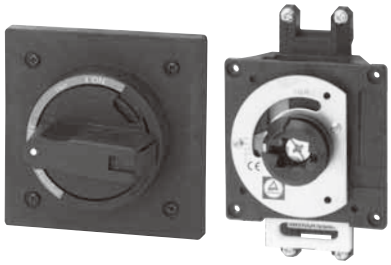
■ Variation of external accessory

External operating handles

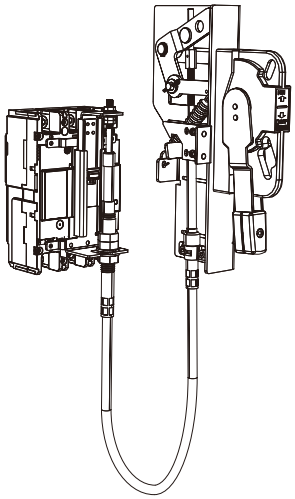
• **N-type**
See page B1-79.



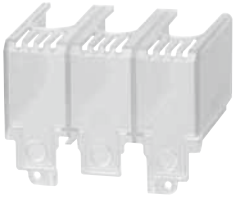
• **V-type**
See page B1-79.



• **F-type**
See page B1-79.



Terminal cover
Long type
See page B1-90.

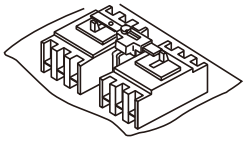


Interphase barrier
See page B1-91.

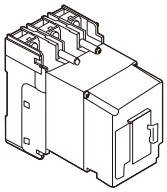
Terminal cover
Short type
See page B1-90.

Steel enclosures
See page B1-88.

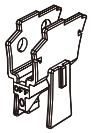
Mechanical interlock device
See page B1-75.



Motor-operating mechanism
See page B1-74.

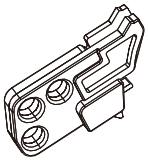


Handle locking cover (L1)
See page B1-92.

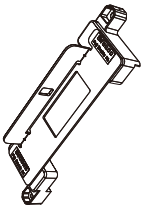


Padlocking device
See page B1-92.

• **Cap type (Q1, QN)**

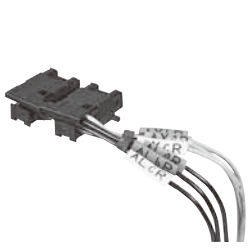


• **Plate type (Q2)**



■ 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 B1-68.*



Lead-wire wiring

With terminal block

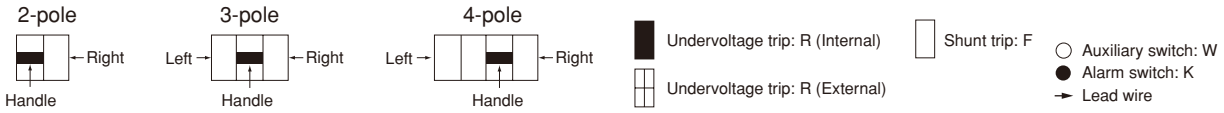
● Terminal number of internal accessory

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

Molded Case Circuit Breakers
G-TWIN series Internal accessories

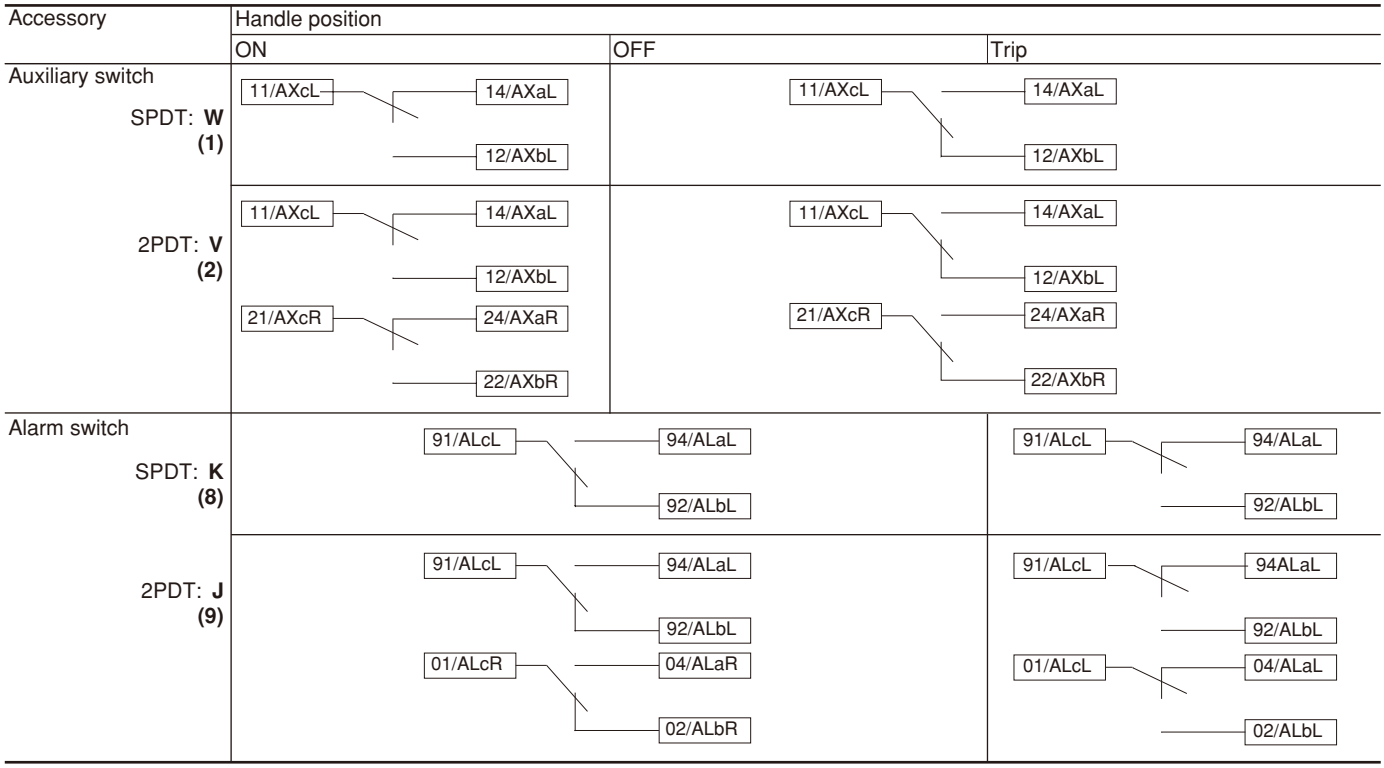
■ Available configurations



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 B1-2.
*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)



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
	250 AC	5	–	250 AC	3	30V DC 30mA
	–	–	–	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
		48	5	5	48	2.5	1	30V DC 30mA
		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

Molded Case Circuit Breakers
G-TWIN series Internal accessories

■ 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.

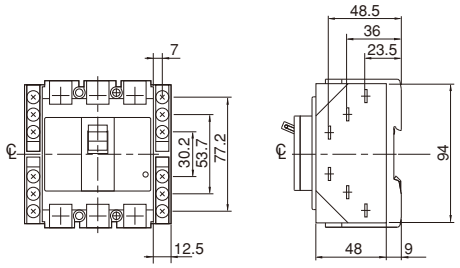
*2 Reset-prohibited type: When the R coil is not energized, reset operation cannot reset the tripped breaker to the OFF state.

■ Lead wire specification

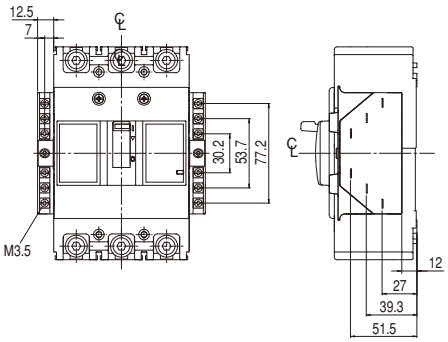
AF	Pole	wire size	Wire length
32 to 100AF	–	0.4mm^2 (AWG22)	Ca 500mm
125 to 250AF	2P, 3P	0.5mm^2 (AWG20)	
	4P		
400 to 800AF	2P, 3P	0.5mm^2	Ca 500mm
	4P		Ca 400 to 450mm

■ Terminal blocks

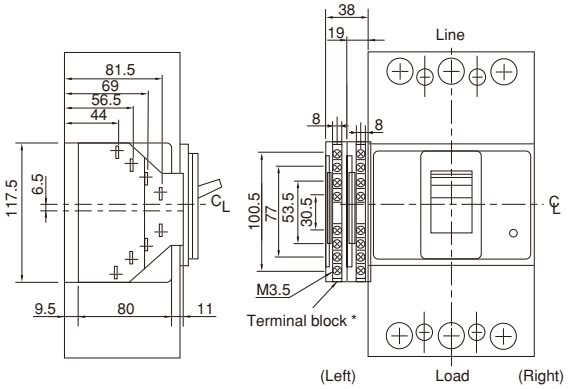
32AF, 50AF, 63AF, 100AF



125AF, 160AF, 250AF



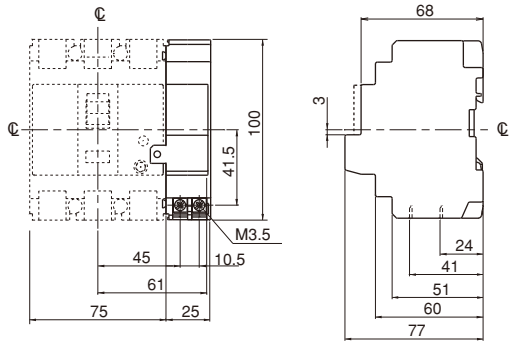
400AF, 630AF, 800AF



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 B1-68. 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

Molded Case Circuit Breakers
G-TWIN series 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

Molded Case Circuit Breakers
G-TWIN series External accessories

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

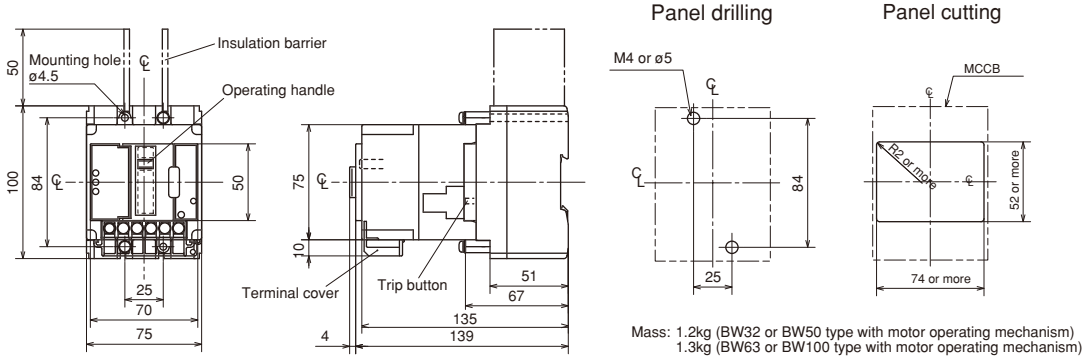
MCCB type	Motor rating			Power source capacity	Mass (kg)
	Operating voltage	Operating time	Time rating		
BW32□-3P□M, BW50□-3P□M, BW63□-3P□M, BW100□-3P□M	100V DC 100/110V AC 200/220V AC	0.1s	15s per on-off operation	500VA	1.2 1.3

■ 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,

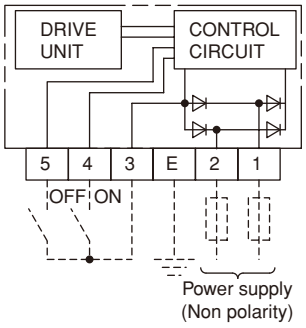


Mass: 1.2kg (BW32 or BW50 type with motor operating mechanism)
1.3kg (BW63 or BW100 type with motor operating mechanism)

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

■ Wiring diagrams

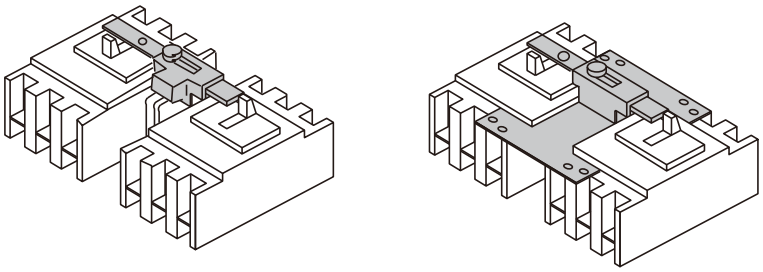
100/110V AC, 200/220V AC, 100V DC



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

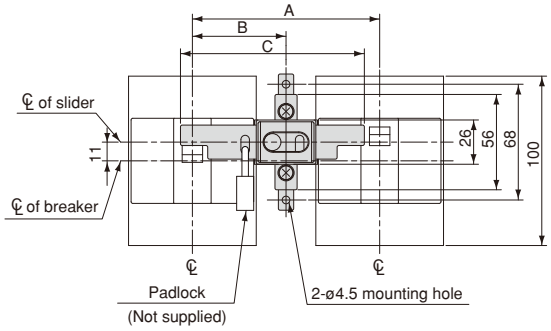
■ Type and applicable breakers

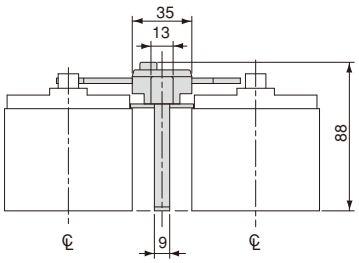
Type	Breaker type
BZ6M110C2	BW32AAG-2P, BW32SAG-2P BW50AAG-2P, BW50EAG-2P, BW50SAG-2P, BW50RAG-2P BW63EAG-2P, BW63SAG-2P, BW63RAG-2P BW100EAG-2P
BZ6M110C3	BW32AAG-3P, BW32SAG-3P BW50AAG-3P, BW50EAG-3P, BW50SAG-3P, BW50RAG-3P BW63EAG-3P, BW63SAG-3P, BW63RAG-3P BW100AAG-3P, BW100EAG-3P
BW9M1CA-2	BW125JAG-2P
BW9M1CA-3	BW125JAG-3P, BW125SAG-2P, BW125SAG-3P, BW125RAG-2P, BW125RAG-3P, BW50HAG-2P, BW50HAG-3P, BW125HAG-2P, BW125HAG-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, BW250HAG-2P, BW250HAG-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

Molded Case Circuit Breakers
G-TWIN series External accessories

■ Dimensions, mm

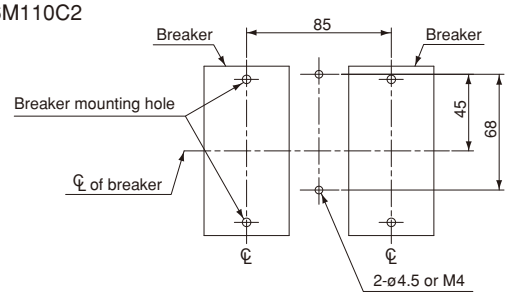
● **32AF to 100AF**



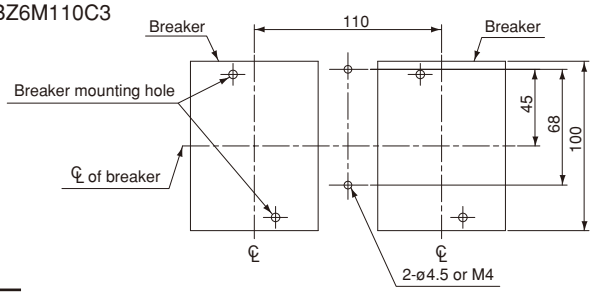


Panel drilling

BZ6M110C2

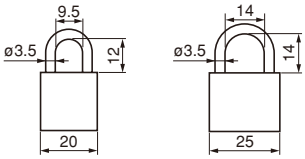


BZ6M110C3



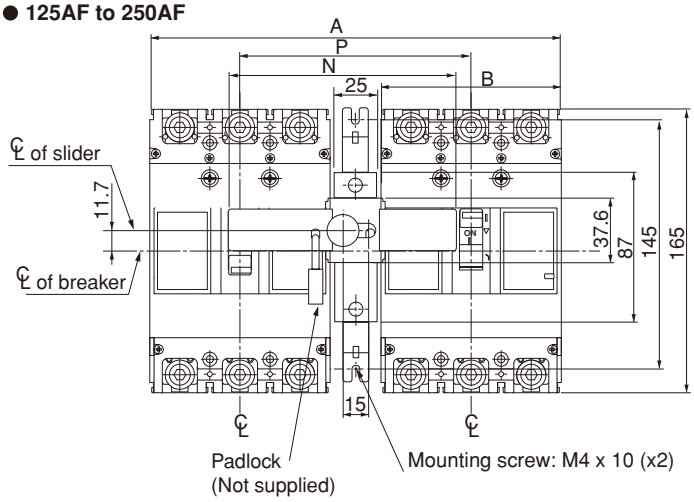
Type	Dimensions, mm A	B	C	Mass (kg)
BZ6M110C2	85	42.5	83	0.11
BZ6M110C3	110	55	108	0.12

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

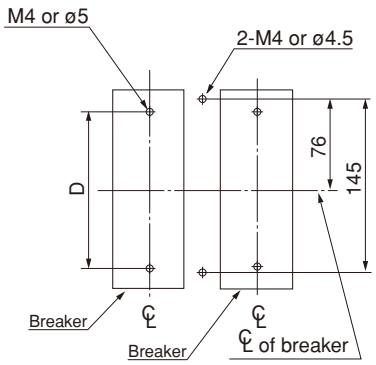
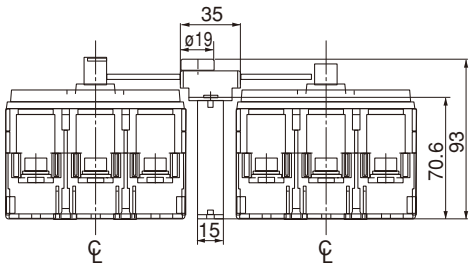


Fig.1



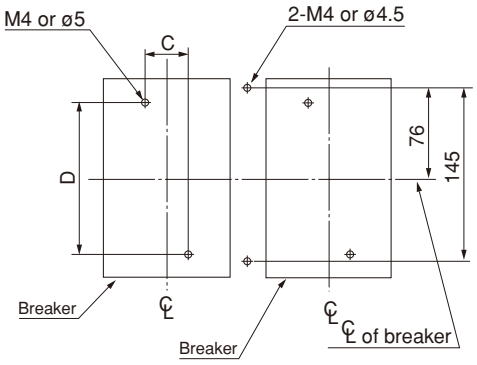


Fig.2

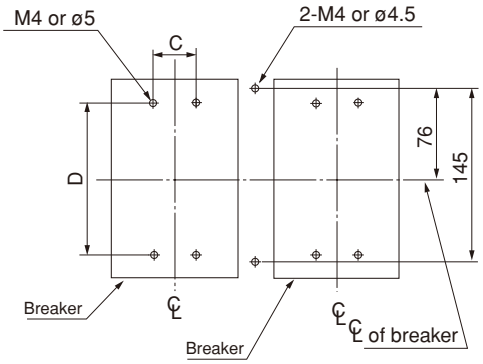


Fig.3

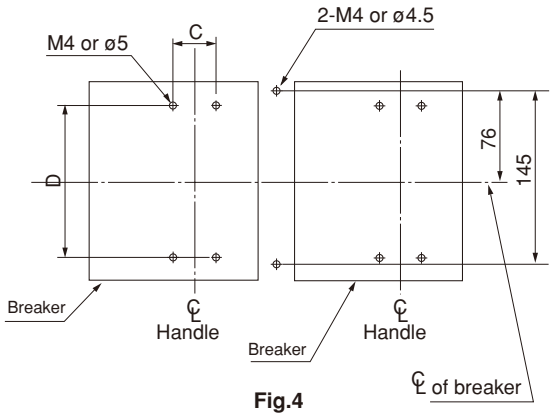
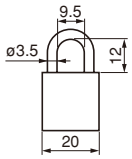


Fig.4

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	

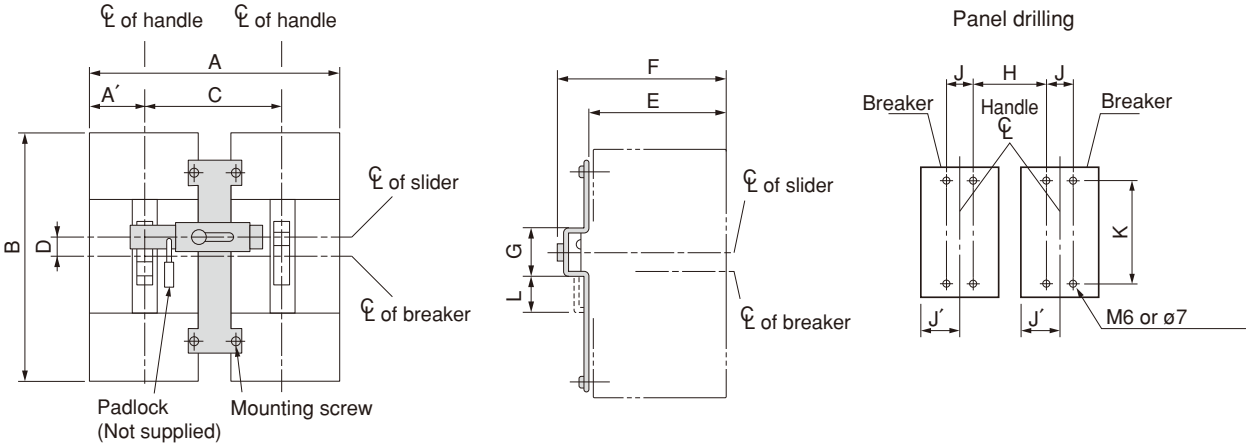
Notes: • The dimensions and Breaker mounting holes for back surface mounting are different from those given above. Inquire for details.
• If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
• External installation forms F and R are not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



Molded Case Circuit Breakers
G-TWIN series External accessories

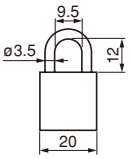
■ Dimensions, mm

● **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

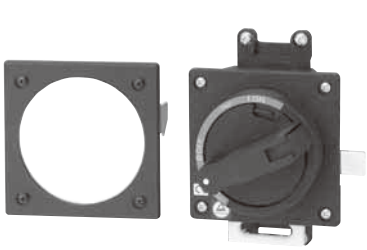
Molded case circuit breaker handles are generally directly manual-operated but when mounted in motor control centers or on control panels they are sometimes required to be operated externally. To meet such applications FUJI offers the following three types of handles.

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)

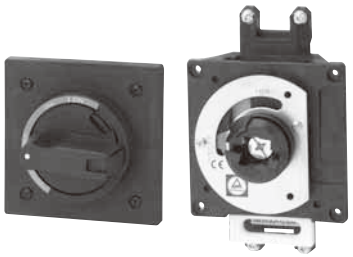
V type handle
The V type handle may be fitted to breakers of up to 800AF.
A separately sold extension shaft provides distance adjustment between the handle and breaker.
Conformed to EN60947-1 isolation function.
Available for EN60204-1 power breaking device.
Conformed to UL489 (File No.E93289)

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)

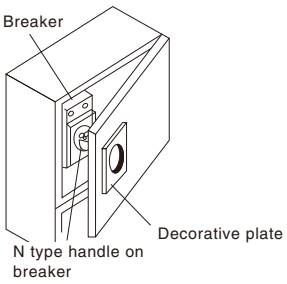


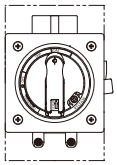
BW9N0CA
N type handles



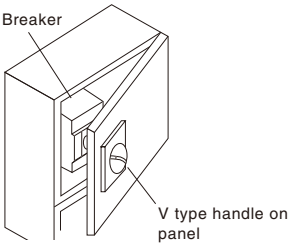
BW9V0CA
V type handle

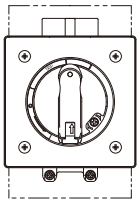
N type handles



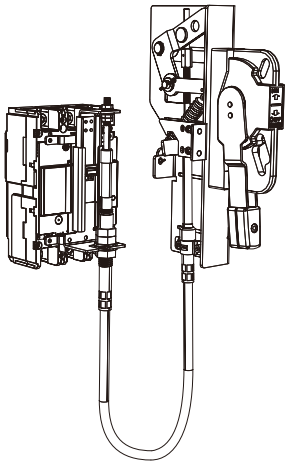


V type handles





F type handles



Molded Case Circuit Breakers
G-TWIN series External accessories

N type handles

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

V type handles

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

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

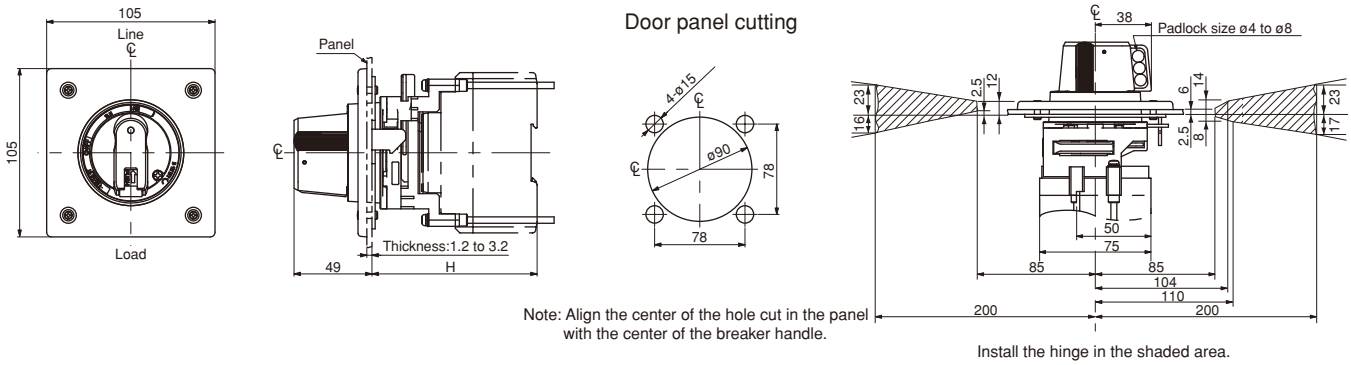
Breaker type
C: BW125□U
G: BW250□U
H: BW400□U

Basic type

■ Dimensions, mm

N type handle

● **BZ6N10D**

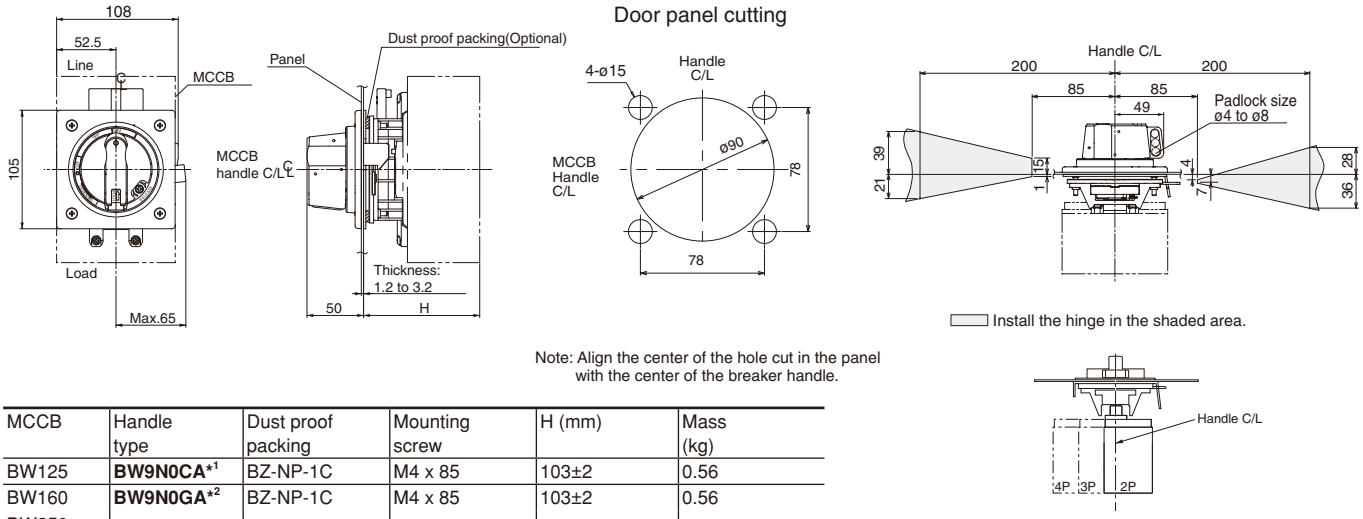


Note: Align the center of the hole cut in the panel with the center of the breaker handle.

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**

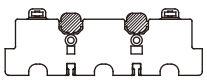


Install the hinge in the shaded area.

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

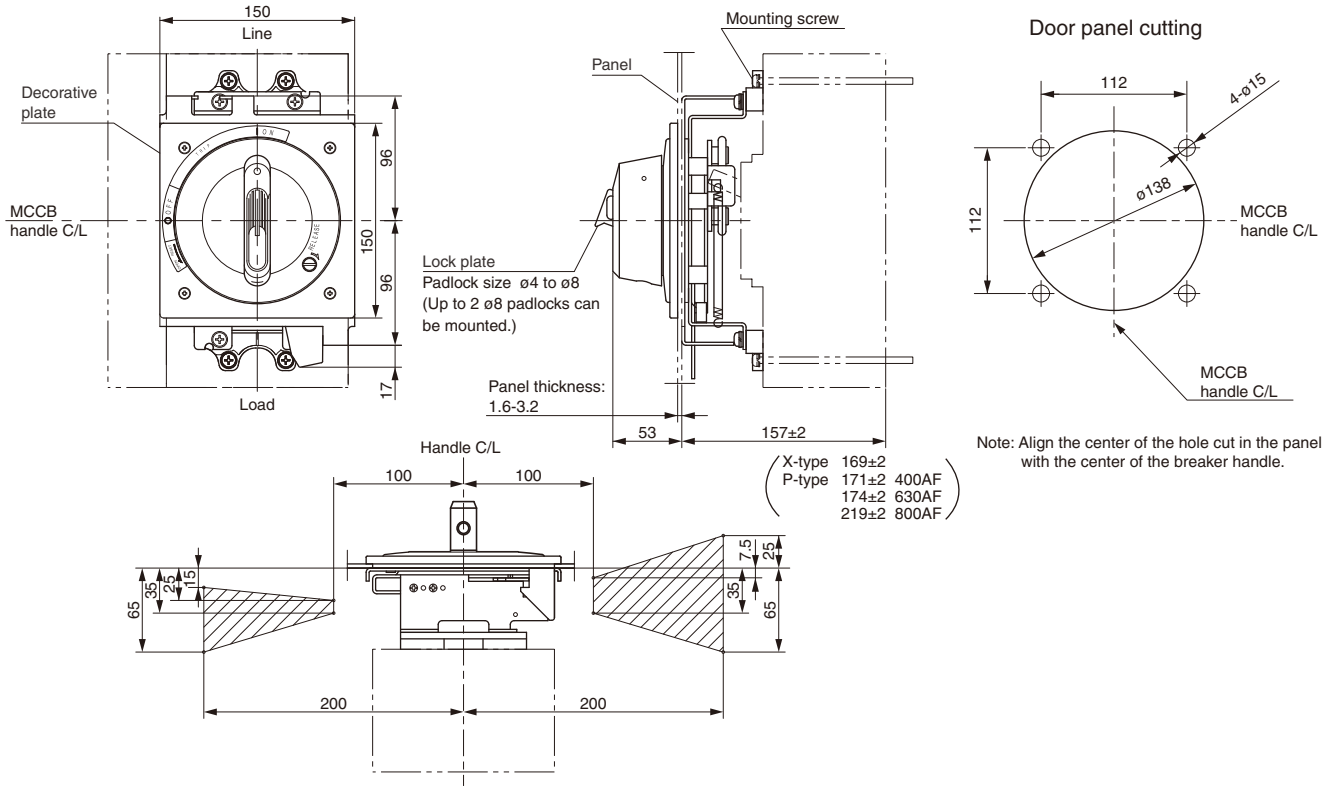
MCCB	Handle type	Dust proof packing	Mounting screw	H (mm)	Mass (kg)
BW125	**BW9N0CA***1	BZ-NP-1C	M4 x 85	103±2	0.56
BW160	**BW9N0GA***2	BZ-NP-1C	M4 x 85	103±2	0.56
BW250					

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.



Molded Case Circuit Breakers
G-TWIN series External accessories

● **BW9N0HA, BW9N0JA**



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.

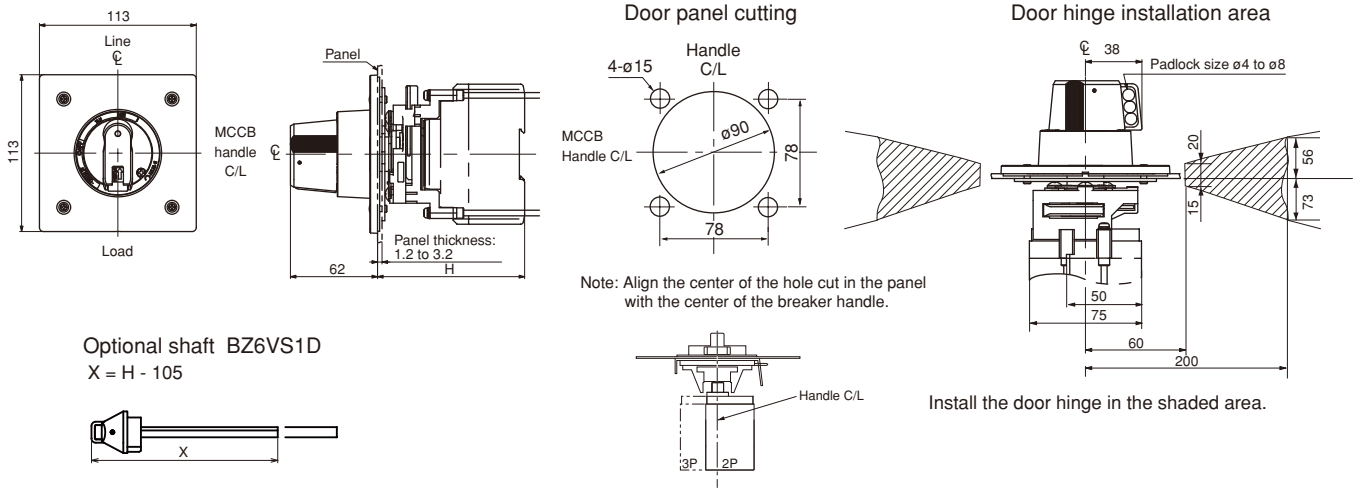
MCCB	Handle type	Dust proof packing	Mounting screw	Mass (kg)
BW400	**BW9N0HA** **BW9N0HA-X** **BW9N0HA-P**	BZ-NP-2	M6 x 110 M6 x 115 Contact FUJI.	1.9
BW630 BW800	**BW9N0JA** **BW9N0JA-X** **BW9N0JA-P**	BZ-NP-2	M6 x 110 M6 x 115 Contact FUJI.	1.9

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.

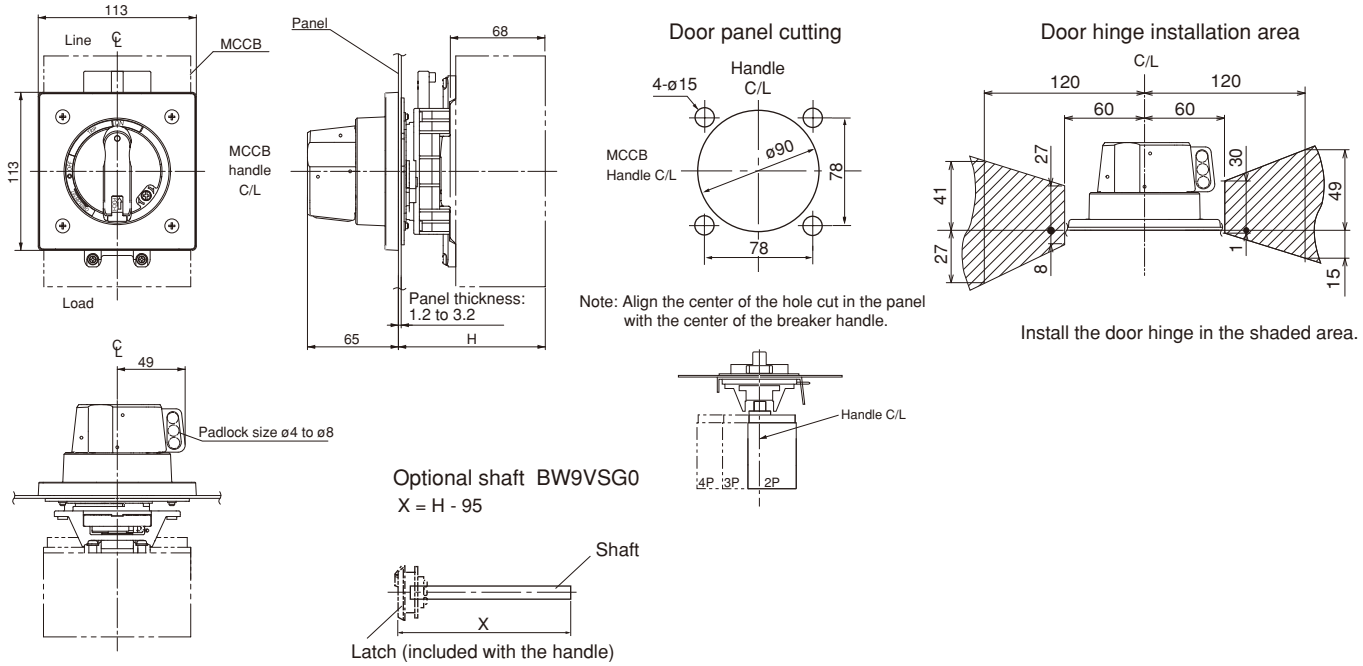
■ Dimensions, mm

V type handle

● **BZ6V10D**



● **BW9V0CA, BW9V0GA**

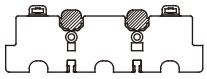


Molded Case Circuit Breakers
G-TWIN series External accessories

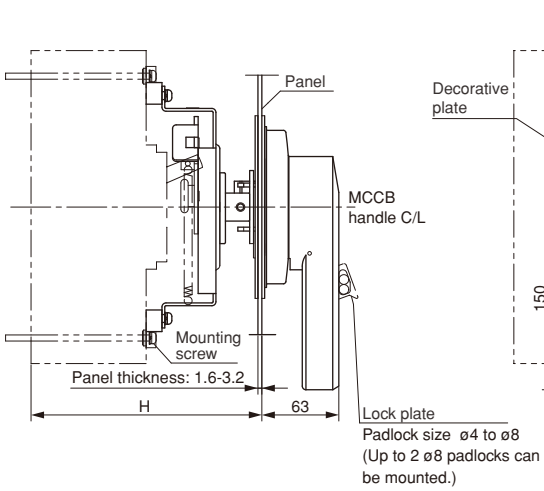
MCCB	Handle type	Optional shaft	Standard type H	With the optional shaft (X=154)		Mounting screw	Mass (kg)
				H	Area in which the hinge with H can be installed		
BW32 BW50 BW63 BW100	**BZ6V10D**	BZ6VS1D	105±2	250±2	140 to 250	M4 x 80	0.64
	BZ6V10D-X		113±2	258±2	150 to 258	Contact FUJI.	0.64
	BZ6V10D-P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

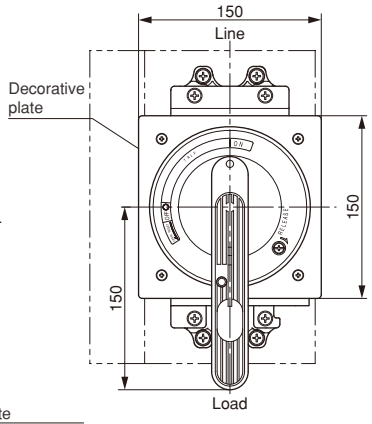
B1

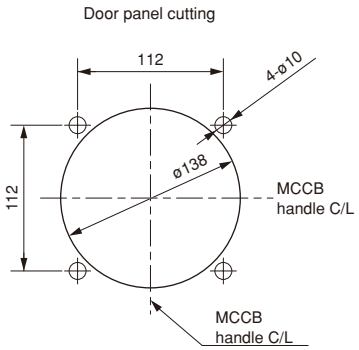
Notes: • The handle lock bars do not hold the entire door. Obtain a support bracket for the panel separately.
• Remove the handle lock bar before opening the door. (Turn the handle in the open direction.)
The lock bar will be damaged if the door is opened with force while the lock bar is engaged.
• Engage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



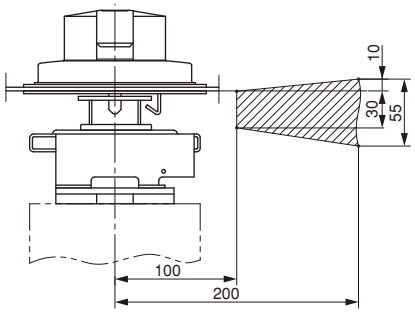
● **BW9V0HA, BW9V0JA**





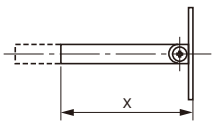


Note: Align the center of the hole cut in the panel with the center of the breaker handle.



Install the door hinge in the shaded area.

Optional shaft (BZ-VS2)



When using the BZ-VS2 extension shaft to adjust dimension H, cut it according to the equation below.
X=H−161.5

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.

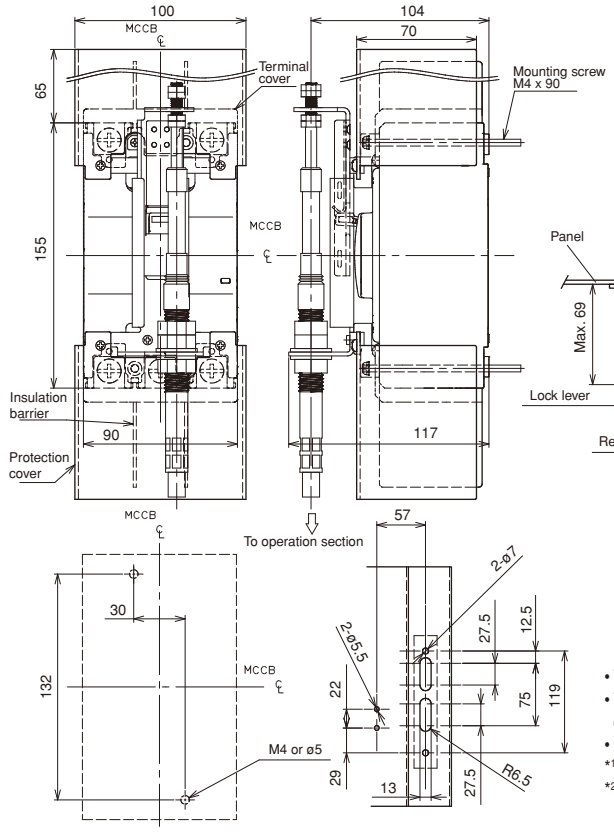
B1

■ Dimensions, mm

F type handle

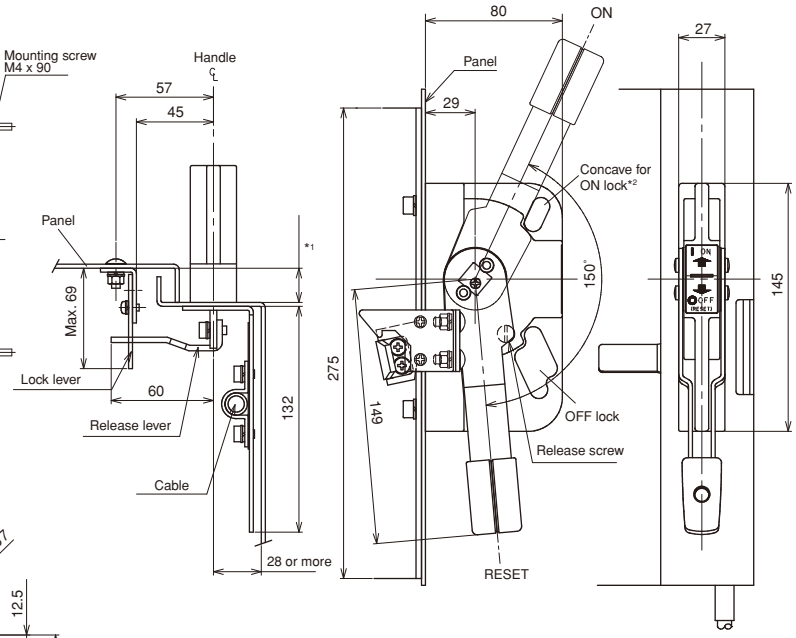
• BW9F0CA

Drive section



Panel drilling

Operation section



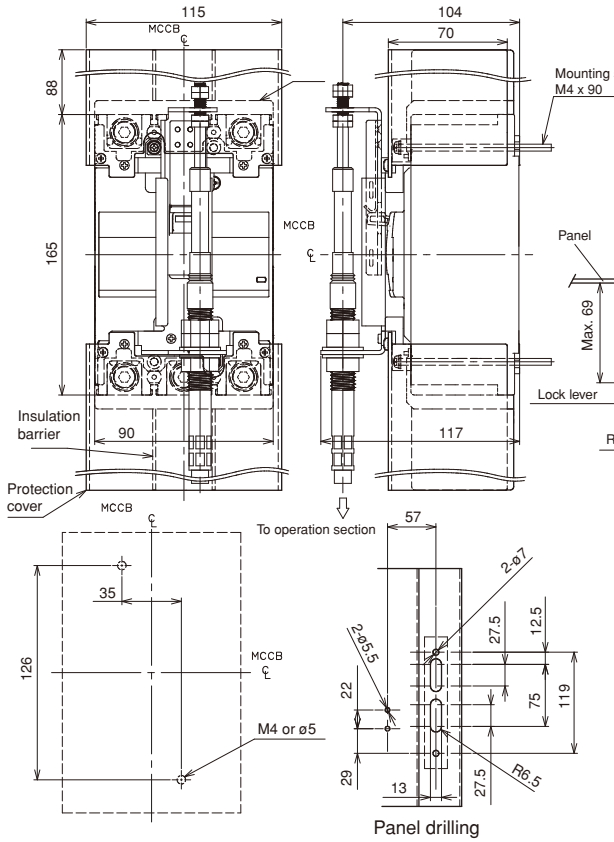
- This product consists of a drive section and an operation section.
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

*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.

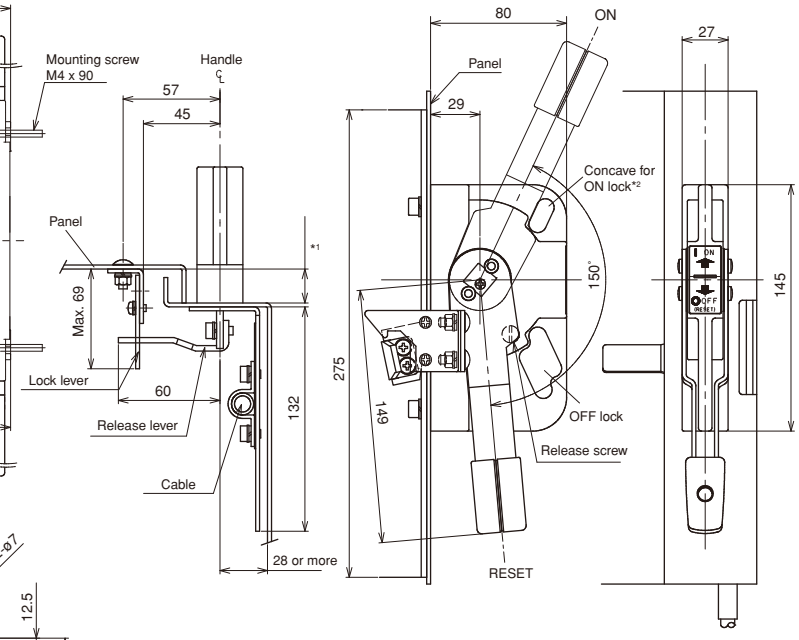
● BW9F0GA

Drive section



Panel drilling

Operation section



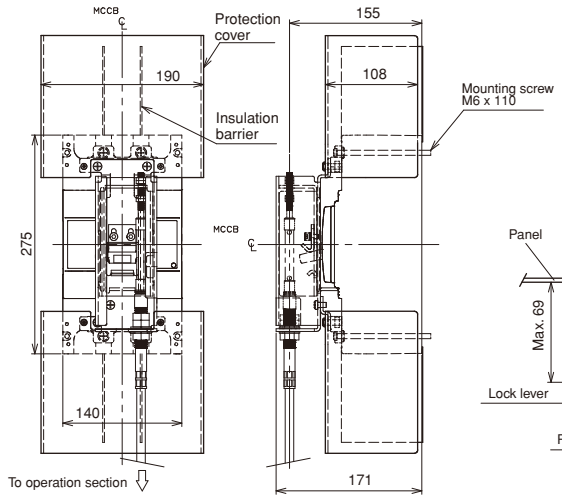
- This product consists of a drive section and an operation section.
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

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

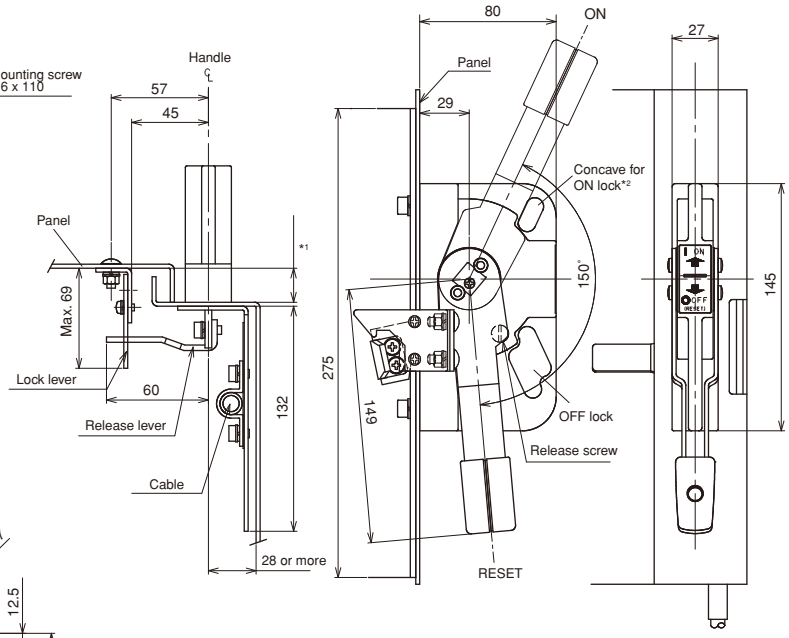
*2 The ON lock can be realized by additionally creating a concave for the ON lock.

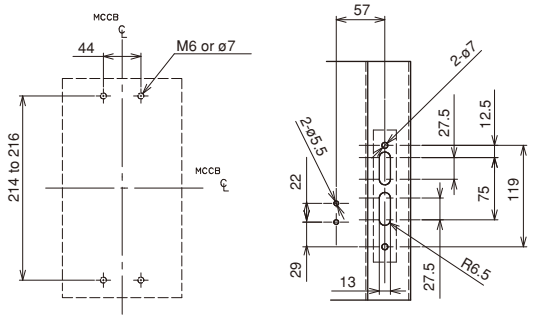
● **BW9F0HA**

Drive section



Operation section





Panel drilling

- 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	**BW9F0CA**	**BW9FWCA-15A**	1.5	**BW9FBTCA-L3**
BW125RAGU-2P		**BW9FWCA-20A**	2.0	
BW125RAGU-3P		**BW9FWCA-30A**	3.0	
BW250EAGU-2P	**BW9F0GA**	**BW9FWGA-15A**	1.5	**BW9FBTGA-L3**
BW250EAGU-3P		**BW9FWGA-20A**	2.0	
BW250JAGU-2P		**BW9FWGA-30A**	3.0	
BW250JAGU-3P				
BW250RAGU-2P				
BW250RAGU-3P				
BW400EAGU-2P	**BW9F0HA**	**BW9FWHA-15A**	1.5	**BW9FBTHA-L3**
BW400EAGU-3P		**BW9FWHA-20A**	2.0	
BW400SAGU-2P		**BW9FWHA-30A**	3.0	
BW400SAGU-3P				
BW400RAGU-2P				
BW400RAGU-3P				
BW400HAGU-2P				
BW400HAGU-3P				

Note: * Not available for BW125JAGU-2P

Molded Case Circuit Breakers
G-TWIN series External accessories

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

B1

■ 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

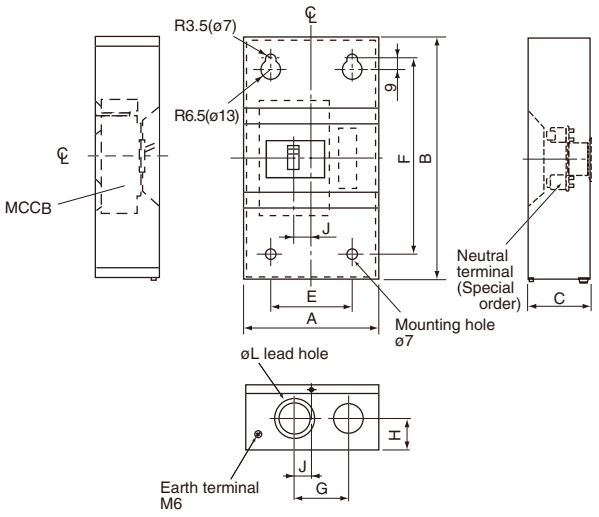


Fig.2 With V type handle
BW9UVBA-3A, BW9UVBA-3B
BW9UVCA-3, BW9UVGA-3

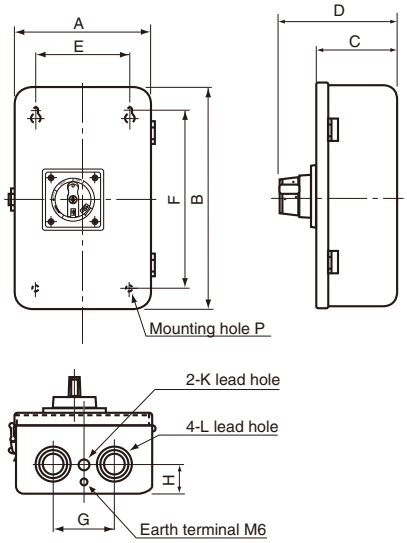
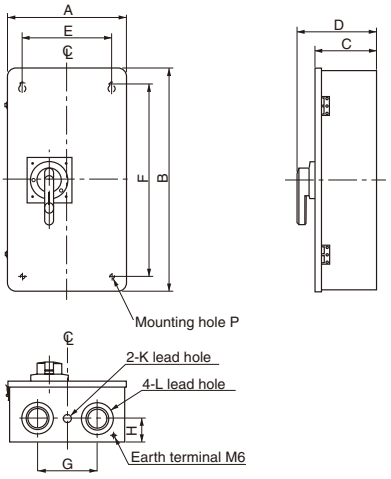
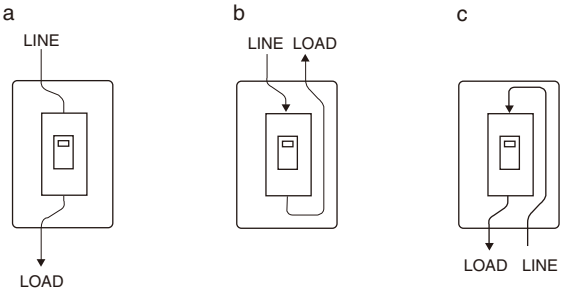


Fig3. With V type handle
BW9UVHA-3, BW9UVJA-3



■ 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														

Molded Case Circuit Breakers
G-TWIN series External accessories

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

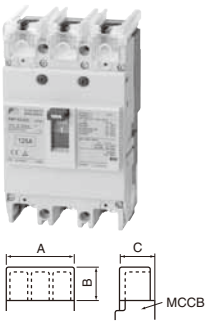
B1

Long type

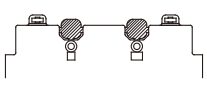
Type		No. of poles	MCCB	Dimensions (mm)			Packing quantity	Appearance
Transparent	Gray			A	B	C		
BW9BTAA-L2	**BW9BTAA-L2W**	2	BW32☐-2P, BW50☐-2P BW63☐-2P, BW100☐-2P	50	40	53	2	• Preventing exposure of live section when amplifier's terminals are connected • Snap-on mounting
BW9BTAA-L3	**BW9BTAA-L3W**	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	



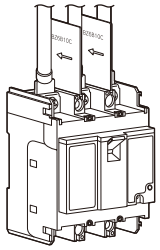
Notes: • A gray-white terminal cover comes standard with the Global Series 125AF and 250AF.
*1 When using the external operating handle, part of the terminal cover (▨) must be cut away.
*2 Crimp terminals for 325 mm^2 are not available.
*3 This type of cover can be mounted on the 400AF when flat terminals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



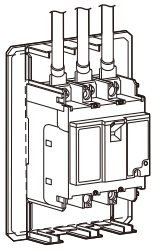
Insulation barriers

■ 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

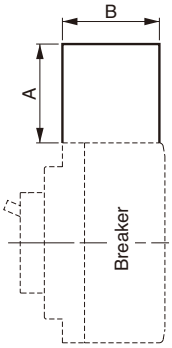


Earth barrier

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

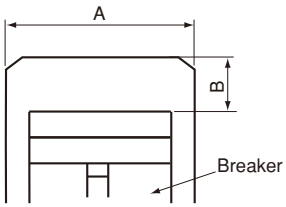


Earth barrier

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

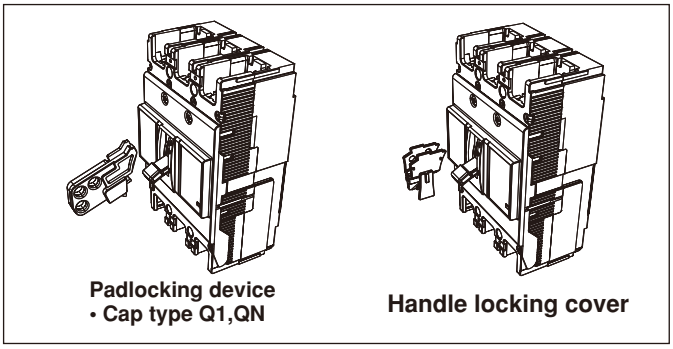
Note: *1 Can be cut to dimensions

Earth barrier



Molded Case Circuit Breakers
G-TWIN series External accessories

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).

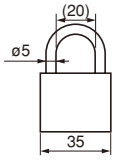
● Handle locking covers (Order Separately)

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

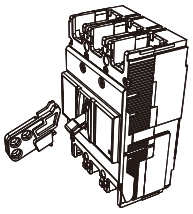
B1

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				

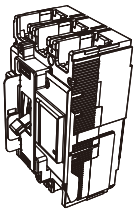
Notes:
*1 Specify Locks when ordering the Breaker. (▲: Factory-mounted)
*2 ON and OFF locking is possible.
*3 Not applicable to the BW125JA□-2P (models with a width of 60 mm).
*4 If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
*5 Three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



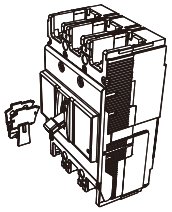
Padlocking device
• Cap type Q1



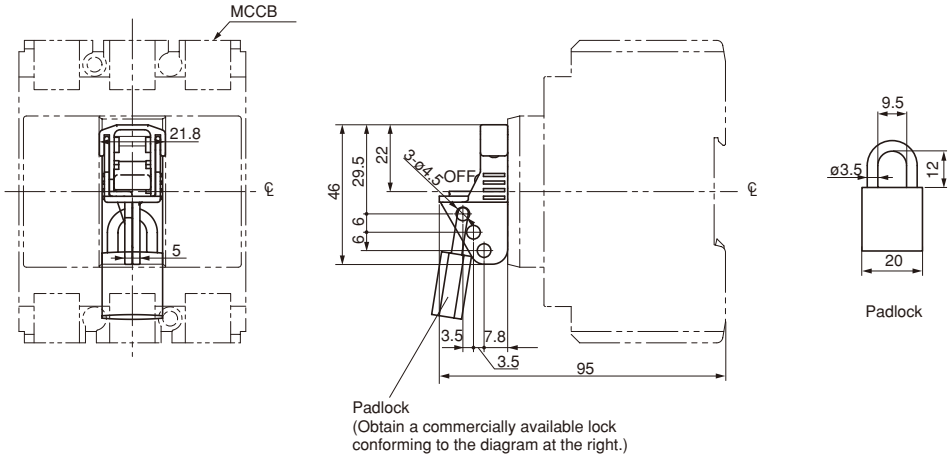
• Plate type Q2



Handle locking cover



Q1: BZ6L10CA (OFF-locking Padlocking device)



■ 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	

Earth Leakage Circuit Breakers
G-TWIN series 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 B1-121.

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)

Code	Terminal position		Applicable breaker type		
	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 & bottom connection
P: Plug-in mounting

Earth Leakage Circuit Breakers
G-TWIN series Type number nomenclature

W K F□ R□ A Q2 M□ UC

Enclosure
UC: Standard
UV: Dust-proof
UW: Rain-proof

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

Pad locking device
Q2: Plate type

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

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
□: DC24V
: DC48V
: DC100-110V
: DC125V / AC100-110V
: AC110-130V
: AC200-240V
: AC277V
: AC380-415V

• 400/630/800AF
: AC/DC24V
: AC/DC48V
: AC/DC100-110V
: AC120-130V / DC125V
: AC200-240V / DC200-220V
: AC277V
: AC380-480V

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

Shunt trip device (Internal)*
• 125/160/250AF
□: AC/DC24V
: AC/DC48V
: AC100-120V / DC100-110V
: AC120-130V
: AC200-240V / DC200-220V
: AC277V
: AC380-440V
: AC440-480V
: AC500-550V

• 400/630/800AF
: AC/DC24-48V
: AC100-240V / DC100-220V
: AC277V
: AC380-550V

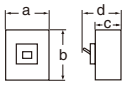
Alarm switch*
K: Standard SPDT
J: Standard 2PDT
8: For low level circuit SPDT
9: For low level circuit 2PDT

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 B1-154.

Earth Leakage Circuit Breakers
G-TWIN series Quick reference guide

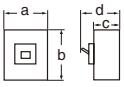
■ G-TWIN Standard Series

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 B1-149				
Alarm switch			K	○	○	○	○
Auxiliary switch			W	○	○	○	○
Undervoltage trip			R	○	○	○	○
Shunt trip			F	○	○	○	○
Earth alarm switch			L	–	–	–	–
External accessories			Page B1-152				
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	○	○	○	○
	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

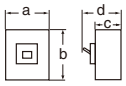
Ampere frame				50A				
Type				**EW50AAG**		**EW50EAG**	**EW50SAG**	**EW50RAG**
Pole				2	3	3	3	3
Rated current Reference amb. temp. (40°C)		In(A)		5, 10, 15, 20, 30, 32, 40, 50		5, 10, 15, 20, 30, 32, 40, 50	5, 10, 15, 20, 30, 32, 40, 50	10, 15, 20, 30, 32, 40, 50
Rated impulse withstand voltage		Uimp(kV)		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 B1-149					
Alarm switch			K	○		○	○	○
Auxiliary switch			W	○		○	○	○
Undervoltage trip			R	○		○	○	○
Shunt trip			F	○		○	○	○
Earth alarm switch			L	–		–	–	–
External accessories			Page B1-152					
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	○		○	○	○
	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

Earth Leakage Circuit Breakers
G-TWIN series Quick reference guide

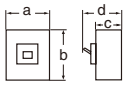
■ G-TWIN Standard Series

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 B1-149			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	–	–	–
External accessories			Page B1-152			
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	○	○	○
	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

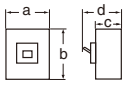
Ampere frame				100A		
Type				**EW100AAG**	**EW100EAG**	
Pole				3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		60, 63, 75, 100	50, 60, 63, 75, 100	50, 60, 63, 75, 100
Rated impulse withstand voltage		Uimp(kV)		4	4	6
Isolation compliant				●	●	●
Rated voltage Ue (AC V)				100-230	100-230	100-230-400
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 B1-149			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	–	–	–
External accessories			Page B1-152			
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	○	○	○
	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

Earth Leakage Circuit Breakers
G-TWIN series Quick reference guide

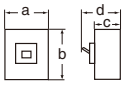
■ G-TWIN Standard Series

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) (2lΔn)			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 B1-150								
Alarm switch			K	○	○	○	○	○	○		
Auxiliary switch			W	○	○	○	○	○	○		
Undervoltage trip			R	○	○	○	○	○	○		
Shunt trip			F	○	○	○	○	○	○		
Earth alarm switch			L	○	○	○	○	○	○		
External accessories			Page B1-152								
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

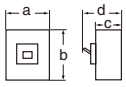
Ampere frame				160A						
Type				**EW160EAG**	**EW160JAG**		**EW160SAG**		**EW160RAG**	
Pole				3	3	4	3	4	3	4
Rated current Reference amb. temp. (40°C)		In(A)		125, 150, 160						
Rated impulse withstand voltage		Uimp(kV)		6	6		6		6	
Isolation compliant				●	●		●		●	
Rated voltage Ue (AC V)				100-230-440						
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 B1-150							
Alarm switch			K	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○
Earth alarm switch			L	○	○	○	○	○	○	○
External accessories			Page B1-152							
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

Earth Leakage Circuit Breakers
G-TWIN series Quick reference guide

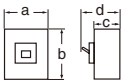
■ G-TWIN Standard Series

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 B1-150							
Alarm switch			K	○	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○	○
Earth alarm switch			L	○	○	○	○	○	○	○
External accessories			Page B1-152							
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 B1-151						
Alarm switch			K	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○
Earth alarm switch			L	▲	▲	▲	▲	▲	▲
External accessories			Page B1-152						
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

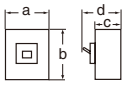
Note: *1 Electrical Appliance and Material Safety Law of Japan

*2 Standard provided

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

Earth Leakage Circuit Breakers
G-TWIN series Quick reference guide

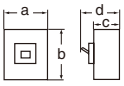
■ G-TWIN Standard Series

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 B1-151						
Alarm switch			K	○	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○	○
Shunt trip			F	○	○	○	○	○	○
Earth alarm switch			L	▲	▲	▲	▲	▲	▲
External accessories			Page B1-152						
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

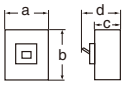
Ampere frame				50A	100A	
Type				**EW50RAGU**	**EW100EAGU**	
Pole				3	2	3
Rated current Reference amb. temp. (40°C)		In(A)		3, 5, 10, 15, 20, 30, 32, 40, 50	60, 63, 70, 75, 80, 90, 100	
Rated impulse withstand voltage		Uimp(kV)		6	4	6
Isolation compliant				●	●	●
Rated voltage Ue (AC V)		IEC		100-230-440	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 B1-118				
Screw		S□		○	○	○
Flat				○	○	○
Block				–	–	–
Internal accessories		Page B1-149				
Alarm switch		K		○	○	○
Auxiliary switch		W		○	○	○
Undervoltage trip		R		○	○	○
Shunt trip		F		○	○	○
Earth alarm switch		L		–	–	–
External accessories		Page B1-152				
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

Earth Leakage Circuit Breakers
G-TWIN series Quick reference guide

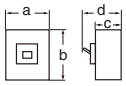
■ G-TWIN Global Series

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 B1-118			
Screw		S□		○	○
Flat				○	○
Block				○	○
Internal accessories		Page B1-150			
Alarm switch		K		○	○
Auxiliary switch		W		○	○
Undervoltage trip		R		○	○
Shunt trip		F		○	○
Earth alarm switch		L		○	○
External accessories		Page B1-152			
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 B1-118			
Screw		S□		○	○
Flat				○	○
Block				○	○
Internal accessories		Page B1-150			
Alarm switch		K		○	○
Auxiliary switch		W		○	○
Undervoltage trip		R		○	○
Shunt trip		F		○	○
Earth alarm switch		L		○	○
External accessories		Page B1-152			
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

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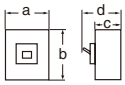
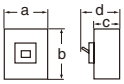
■ G-TWIN Global Series

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 B1-118			
Screw			S□	–	–	–
Flat				○	○	○
Block				○	○	○
Internal accessories			Page B1-150			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	▲	▲	▲
External accessories			Page B1-152			
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

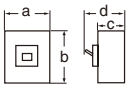
Ampere frame				630A
Type				**EW630RAGU**
Pole				3
Rated current Reference amb. temp. (40°C)		In(A)		500, 600, 630*1
Rated impulse withstand voltage		Uimp(kV)		6
Isolation compliant				●
Rated voltage Ue (AC V)		IEC		100-230-440
		UL		240-480
Instantaneous/time-delay trip type	Rated sensitive current (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 B1-118		
Screw		S□		–
Flat				○
Block				○
Internal accessories		Page B1-151		
Alarm switch		K		○*2
Auxiliary switch		W		○*2
Undervoltage trip		R		○*2
Shunt trip		F		○*2
Earth alarm switch		L		▲
External accessories		Page B1-152		
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

Earth Leakage Circuit Breakers
G-TWIN series Quick reference guide

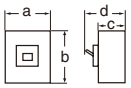
■ G-TWIN Standard Series / Motor protection

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 & bottom connection			Y	○	○
Plug-in mounting			P	○	○
IEC 35mm wide rail mounting			No-mark	○	○
Internal accessories			Page B1-149		
Alarm switch			K	○	○
Auxiliary switch			W	○	○
Undervoltage trip			R	○	○
Shunt trip			F	○	○
Earth alarm switch			L	–	–
External accessories			Page B1-152		
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 ▲: 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 & bottom connection			Y	○	○
Plug-in mounting			P	○	○
IEC 35mm wide rail mounting			No-mark	○	○
Internal accessories			Page B1-149		
Alarm switch			K	○	○
Auxiliary switch			W	○	○
Undervoltage trip			R	○	○
Shunt trip			F	○	○
Earth alarm switch			L	–	–
External accessories			Page B1-152		
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	–	–

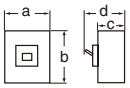
●: Approved ○: Available –: Not available ▲: Factory-mounted accessory

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

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

Earth Leakage Circuit Breakers
G-TWIN series Quick reference guide

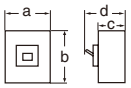
■ G-TWIN Standard Series / Motor protection

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 & bottom connection			Y	○	○	○
Plug-in mounting			P	○	○	○
IEC 35mm wide rail mounting			No-mark	○	○	○
Internal accessories			Page B1-149			
Alarm switch			K	○	○	○
Auxiliary switch			W	○	○	○
Undervoltage trip			R	○	○	○
Shunt trip			F	○	○	○
Earth alarm switch			L	–	–	–
External accessories			Page B1-152			
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 ▲: 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 & bottom connection			Y	○	○	○	○	○
Plug-in mounting			P	○	○	○	○	○
Internal accessories			Page B1-150					
Alarm switch			K	○	○	○	○	○
Auxiliary switch			W	○	○	○	○	○
Undervoltage trip			R	○	○	○	○	○
Shunt trip			F	○	○	○	○	○
Earth alarm switch			L	○	○	○	○	○
External accessories			Page B1-152					
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

Earth Leakage Circuit Breakers
G-TWIN series Mounting modifications

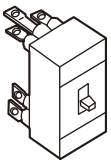
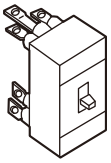
■ Mounting modifications

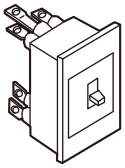
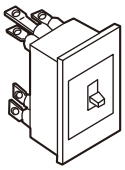
• Standard series

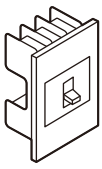
Standard type FUJI breakers are front mounting with front connections. The standard breaker can easily be modified to become front mounting rear connection type, flush mounting type and plug-in type. The additional parts such as insulation bases, barriers, covers and similar parts are added as required.

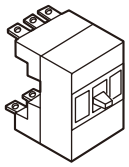
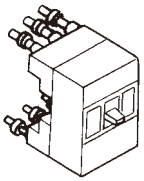
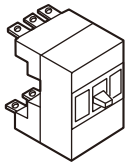
Front mounting
Front connection

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°

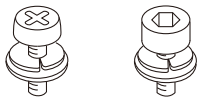
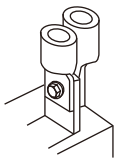
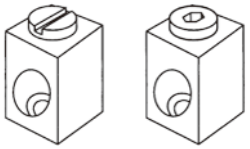
Additional main parts	Flush mounting Top and bottom connection (Y type)
Decorative flush plate 	EW32 EW50 EW63 EW100

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

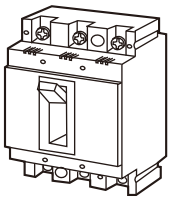
BASIC DESIGN

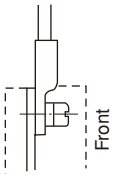
Screw	Flat terminal	Block terminal
		

Earth Leakage Circuit Breakers
G-TWIN series Terminal connection

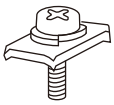
■ Terminal connection/Front mounting, front connection

• 32AF to 100AF



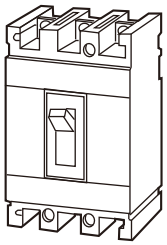


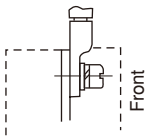
Flat terminal

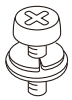
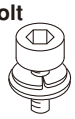
Self lifting screw 	Breaker type	Tightening torque (N•m)	Size
	EW32 EW50 EW100*	2.3 to 2.8	M5 × 14
Pan-head screw 	EW63 EW100	5.5 to 7.5	M8 × 15

* Breaker of rated current : 50A

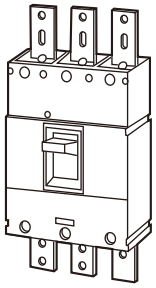
• 125AF to 250AF

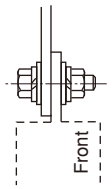




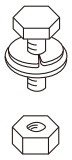
Pan-head screw 	Breaker type	Tightening torque (N•m)	Size (mm)
	EW125	5.5 to 7.5	M8 × 16
Hexagonal socket head bolt 	EW160 EW250	8.0 to 13.0	M8 × 16

• 400AF to 800AF



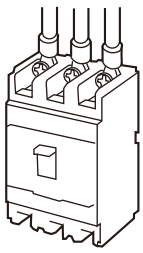


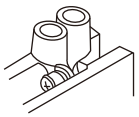
Flat terminal

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

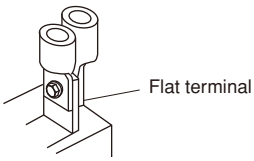
Type of connection/up to 250AF
Front mounting front connection

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.

Earth Leakage Circuit Breakers
G-TWIN series Wire size and terminal

■ Wire size and crimp terminal

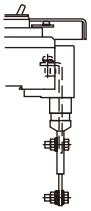
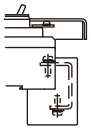
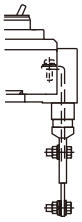
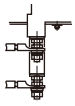
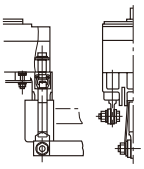
The following is the size recommendations for crimp terminals.

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	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		90˚ rotational stud	90˚ rotational stud	—	
EW160 EW250	Flat terminal				
EW400 EW630 EW800	Flat terminal				90˚ rotational stud

Earth Leakage Circuit Breakers
G-TWIN series 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.

Earth Leakage Circuit Breakers
G-TWIN series Wire size and terminal

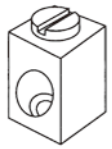
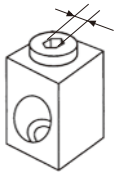
• Flat terminal connection

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)

Earth Leakage Circuit Breakers
G-TWIN series 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, 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 bottom	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

Earth Leakage Circuit Breakers
G-TWIN series 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 B1-121.

● 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■□		

● 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■□		

* See page B1-121.

Earth Leakage Circuit Breakers
G-TWIN series 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 B1-121.

■ 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■□		

● 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	–	●	●

* See page B1-121.

Earth Leakage Circuit Breakers
G-TWIN series 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

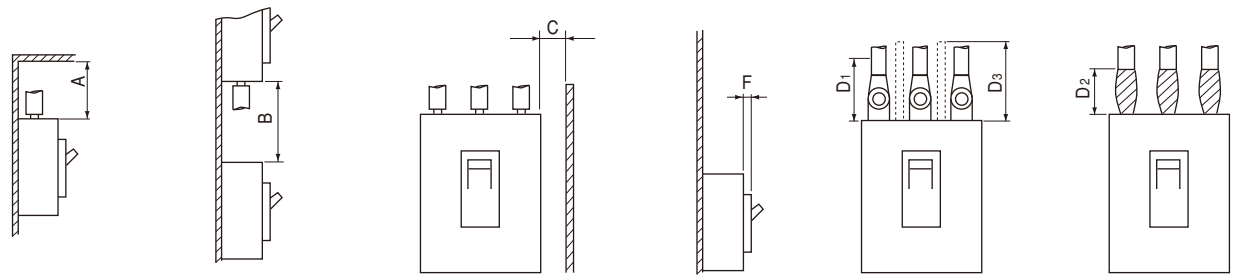
Breaker ampere frame	Rated current (A)	Type	■: Rated sensitive current	□: Available mounting and connection
32	0.7	EW32SAM-3P0P7■□	B,K	Blank, X, E, Y, P
	1.4	EW32SAM-3P1P4■□		
	2	EW32SAM-3P002■□		
	2.6	EW32SAM-3P2P6■□		
	4	EW32SAM-3P004■□		
	5	EW32SAM-3P005■□		
	8	EW32SAM-3P008■□		
	10	EW32SAM-3P010■□		
	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■□		

* See page B1-121.

■ Arc space, mm



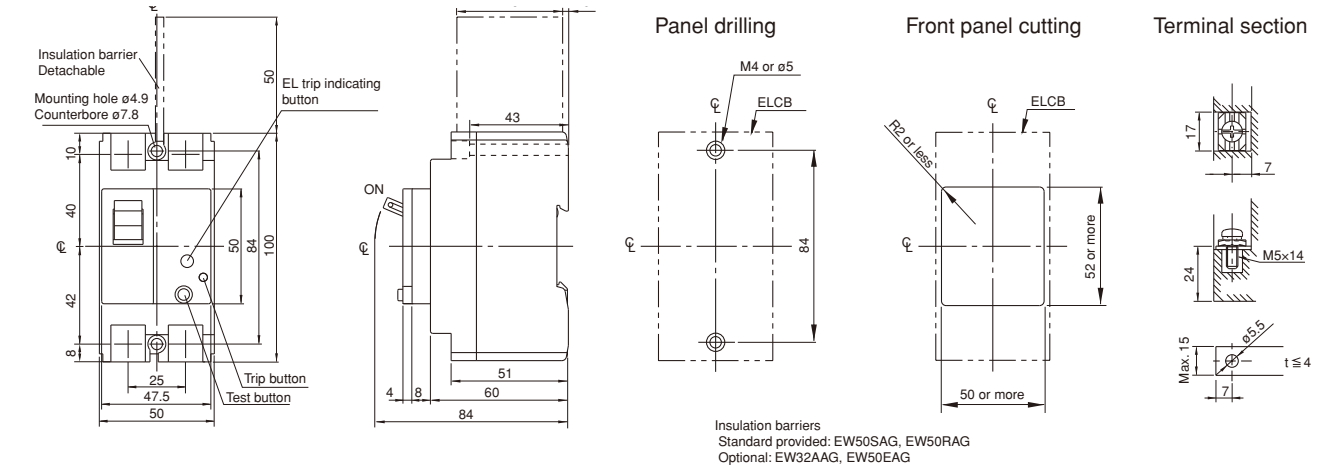
Frame size	ELCB basic type	Ceiling distance A		Vertical distance B		Side plate distance C		Front plate distance				Taping		Barrier
								Painted F		No painted F		Crimp type terminal lug	Bus-bar	
		440V	230V	440V	230V	440V	230V	440V	230V	440V	230V	D1	D2	D3
32A	EW32A	–	10	–	10	–	10	–	0	–	0	Exposed live 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

Earth Leakage Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

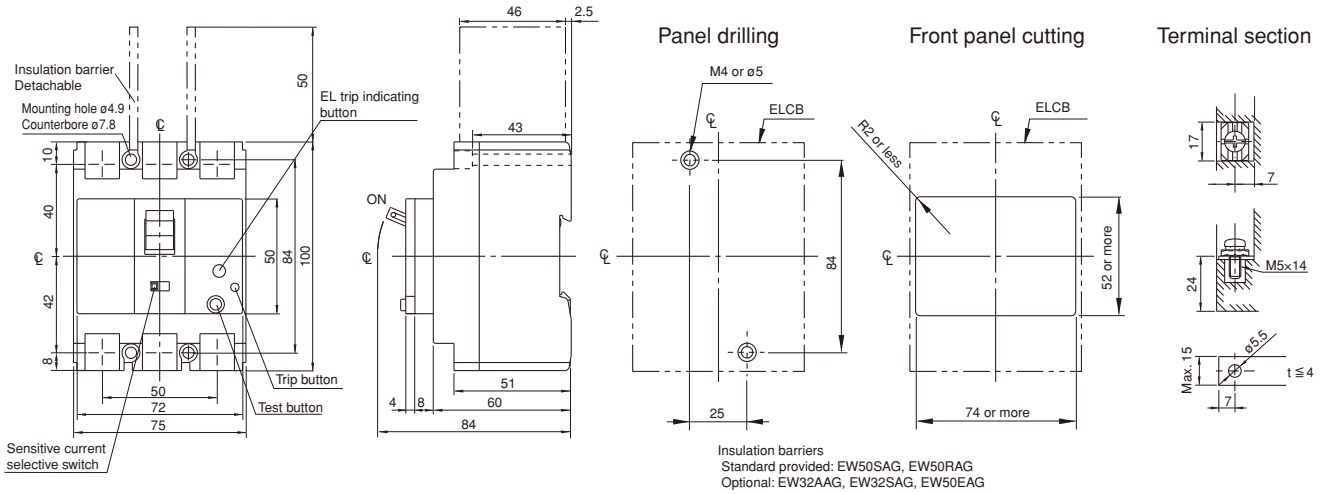
● Front mounting, front connection

EW32□-2P, EW50□-2P



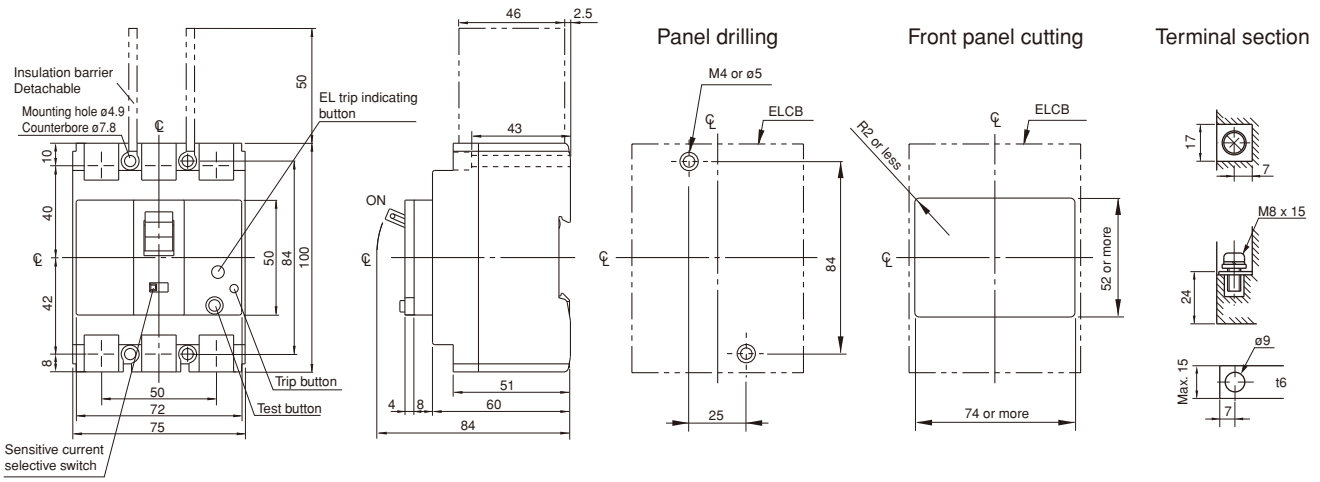
Insulation barriers
Standard provided: EW50SAG, EW50RAG
Optional: EW32AAG, EW50EAG

EW32□-3P, EW50□-3P



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

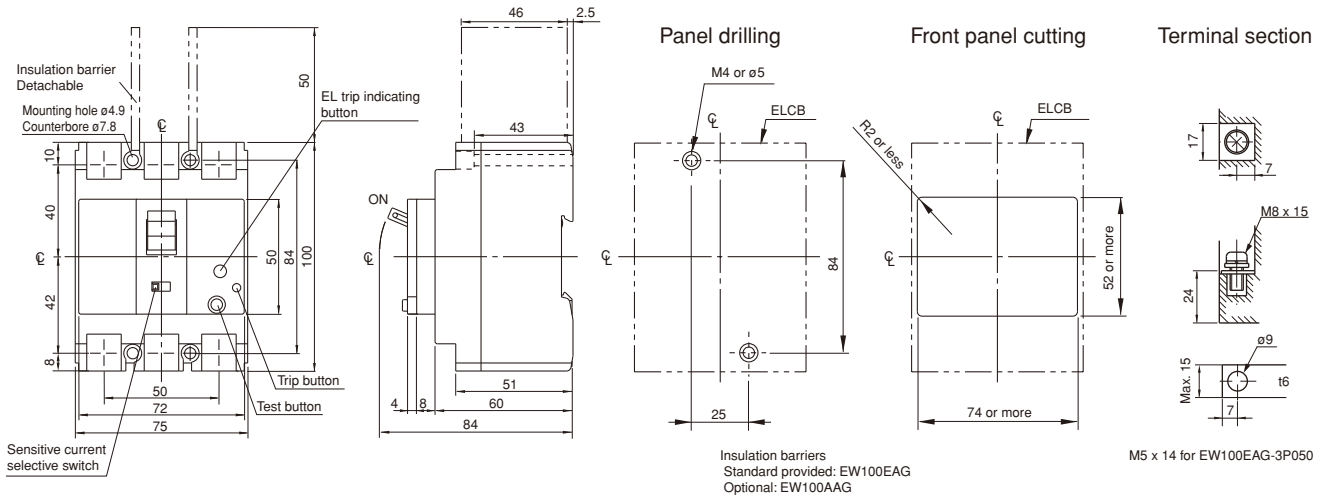
EW63□-3P



■ Dimensions, mm

● Front mounting, front connection

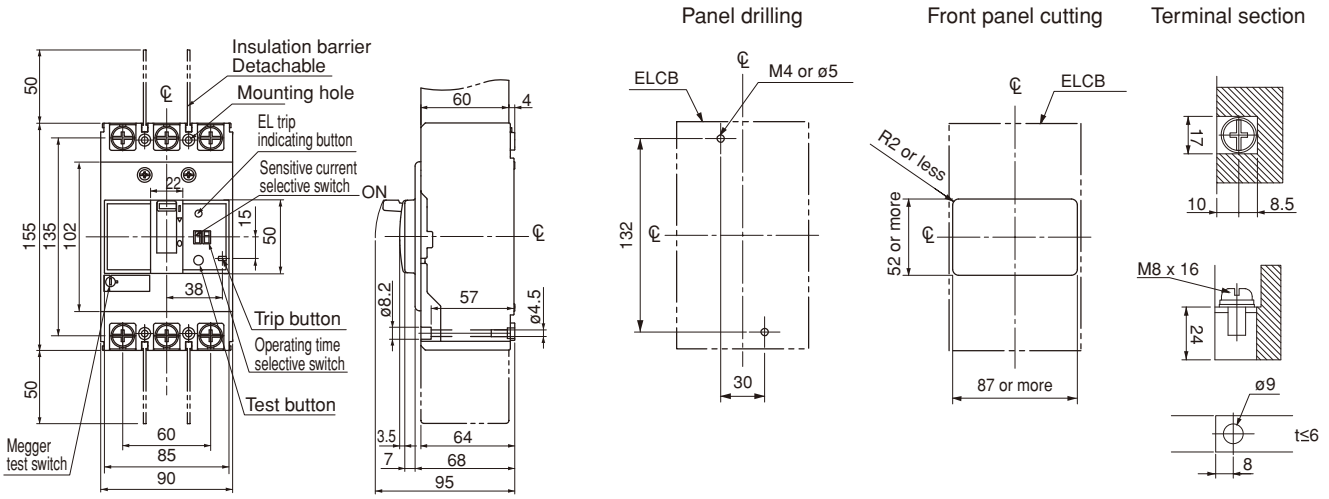
EW100□-2P, 3P



Insulation barriers
Standard provided: EW100EAG
Optional: EW100AAG

M5 x 14 for EW100EAG-3P050

EW125□-3P

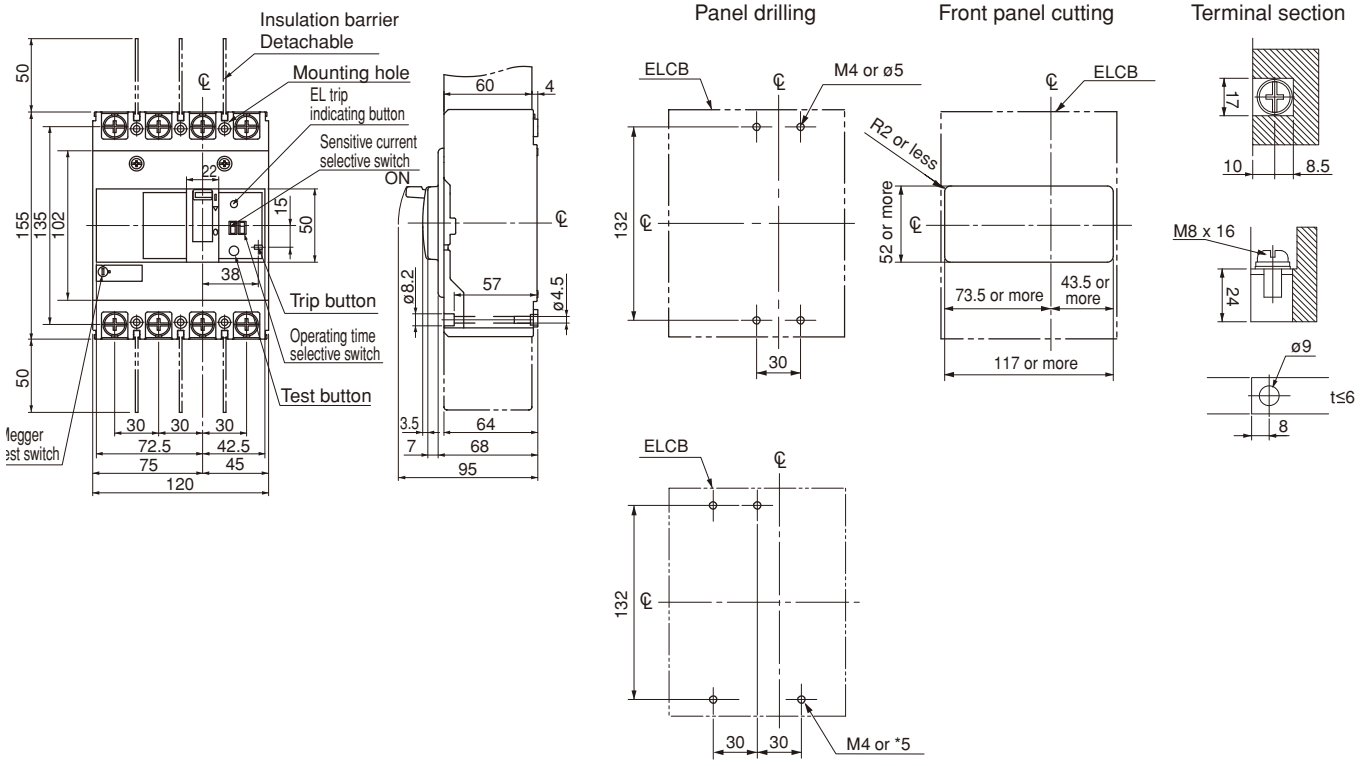


Earth Leakage Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

● Front mounting, front connection

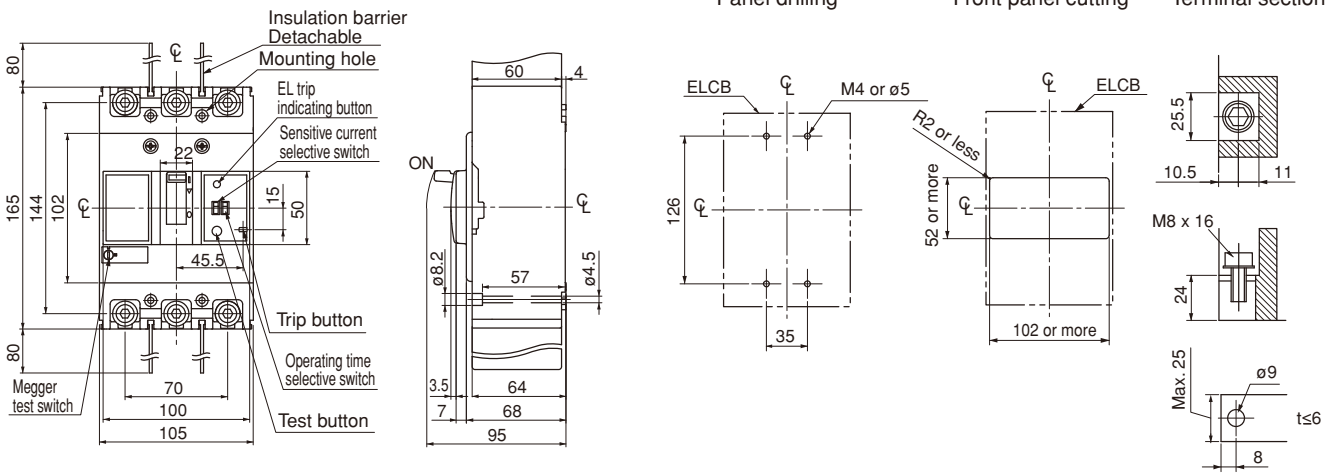
EW125□-4P



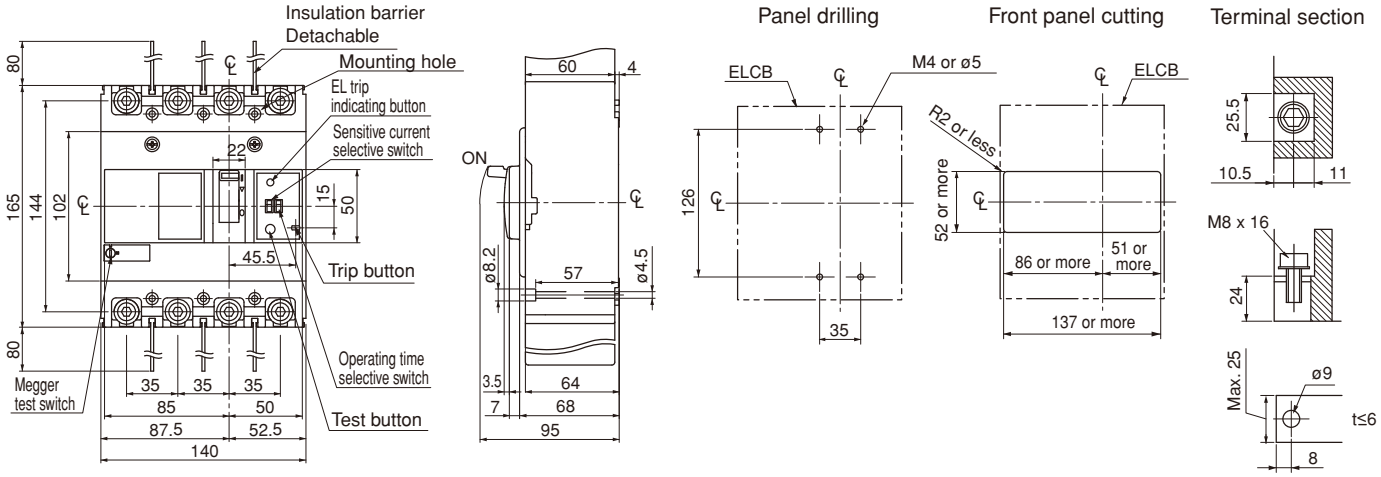
■ Dimensions, mm

● Front mounting, front connection

EW160□-3P
EW250□-3P



EW160□-4P
EW250□-4P

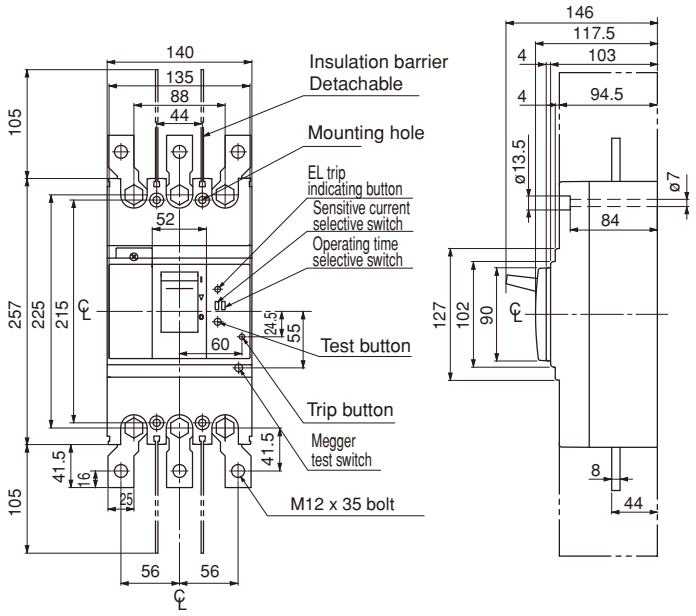


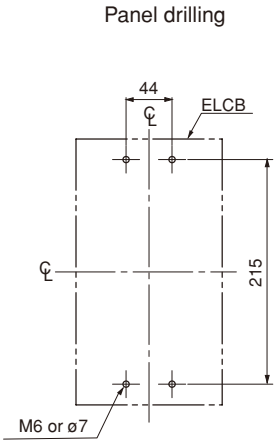
Earth Leakage Circuit Breakers
G-TWIN series Dimensions / Standard

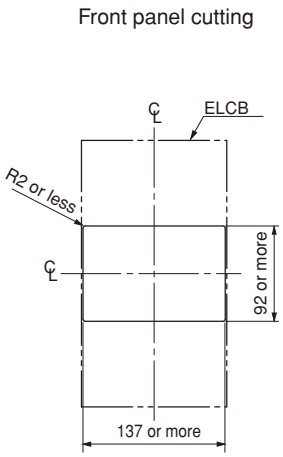
■ Dimensions, mm

● Front mounting, front connection

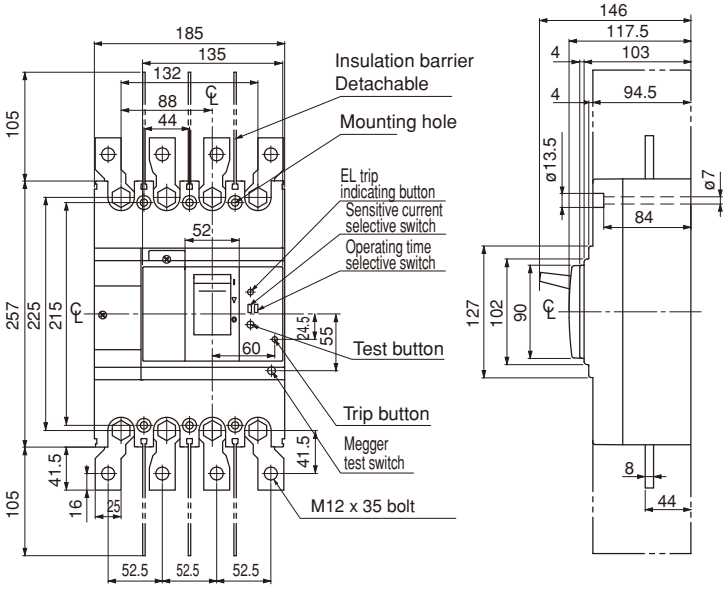
EW400□-3P

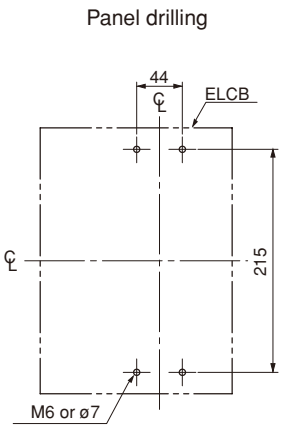


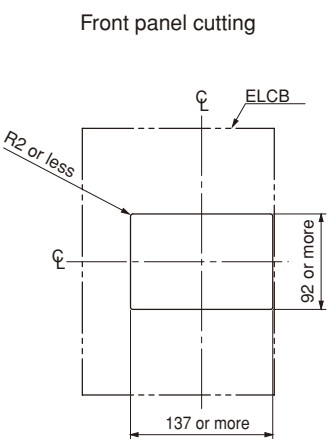




EW400□-4P



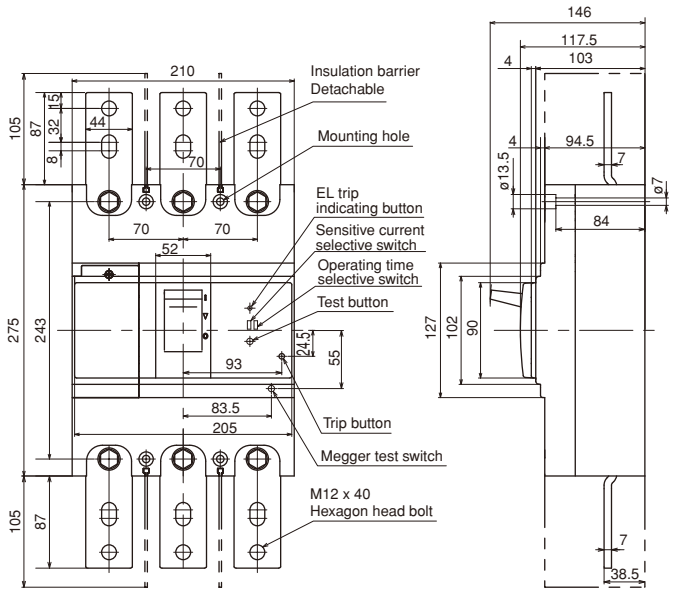




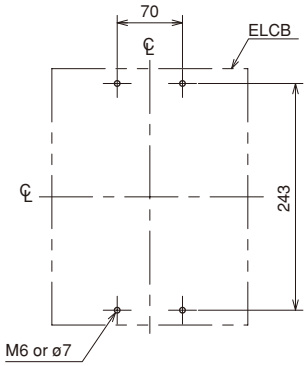
■ Dimensions, mm

● Front mounting, front connection

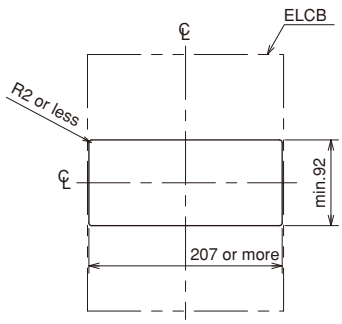
EW630□-3P



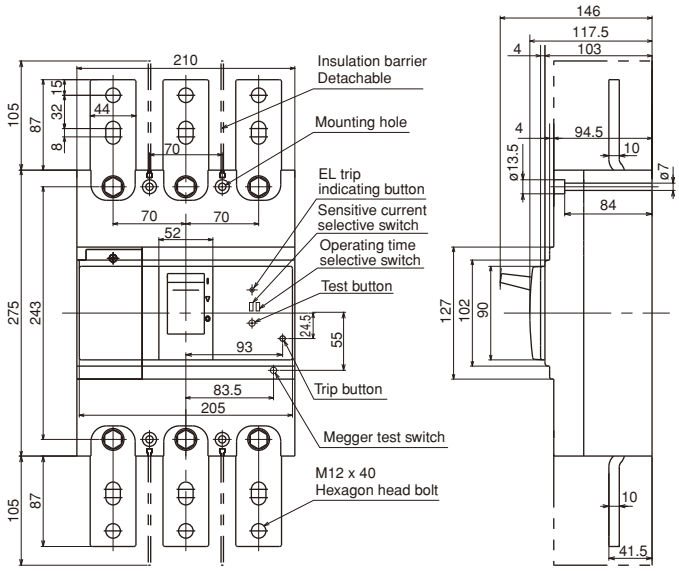
Panel drilling



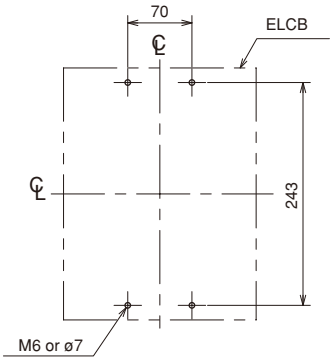
Front panel cutting



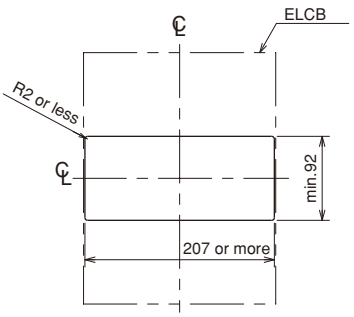
EW800□-3P



Panel drilling



Front panel cutting

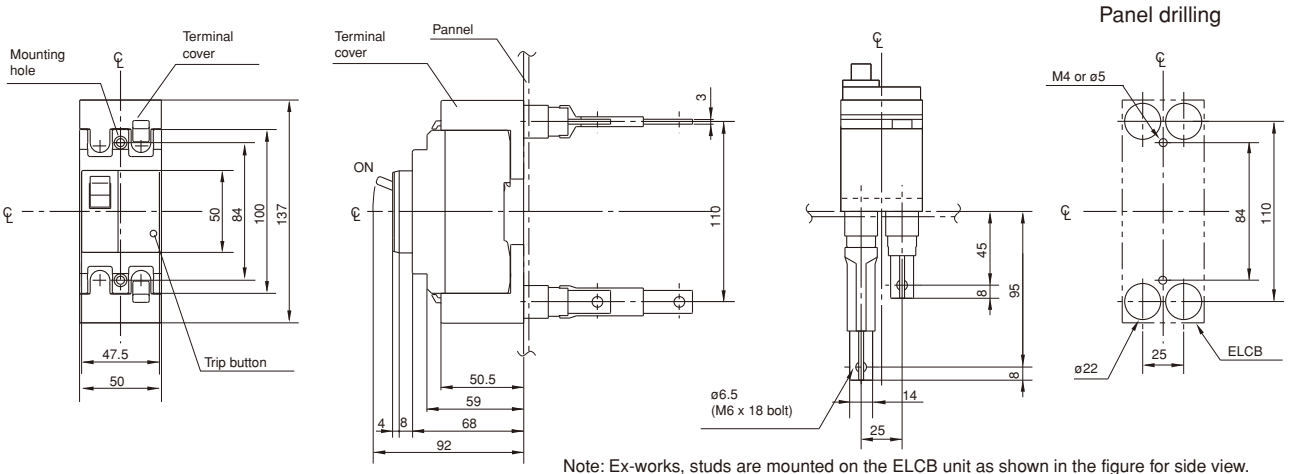


Earth Leakage Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

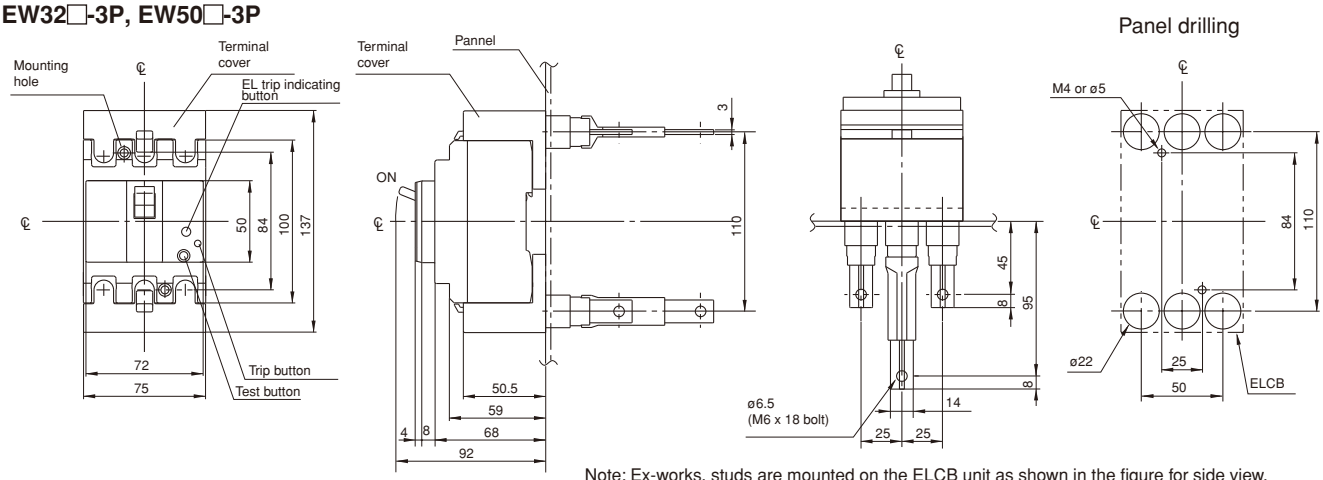
● Front mounting, rear connection (type X)

EW32□-2P, EW50□-2P



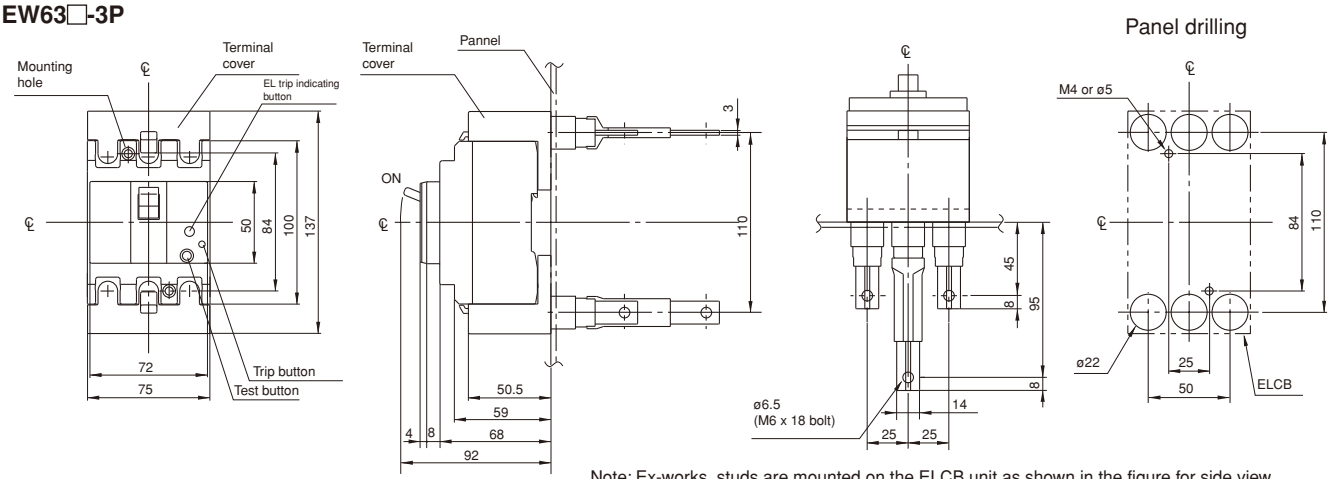
Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

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

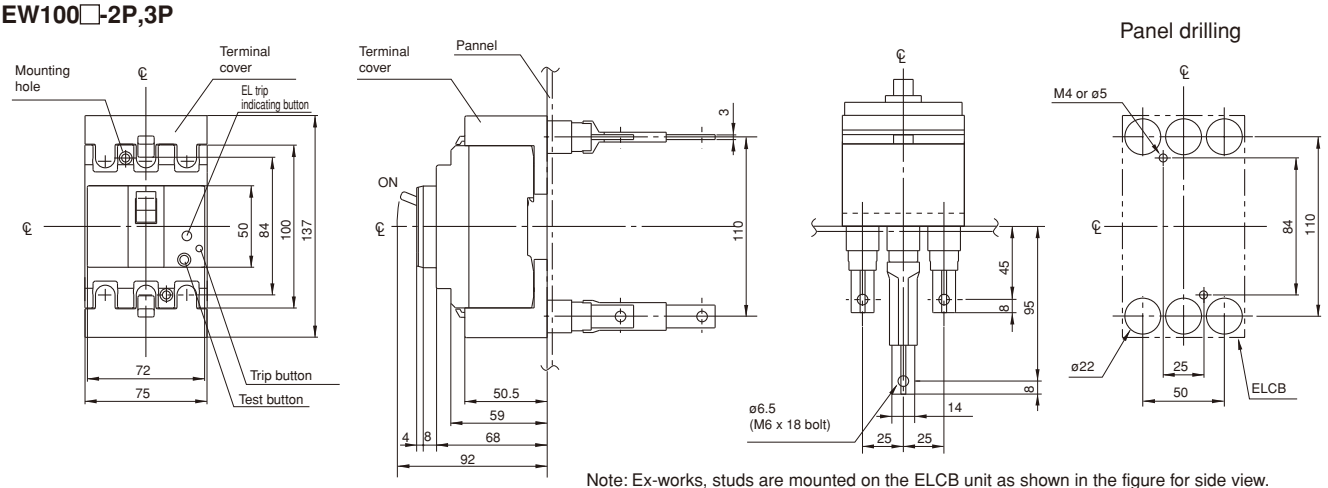


Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.
2-pole breaker is supplied in 3-pole frame with current carrying parts omitted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

■ Dimensions, mm

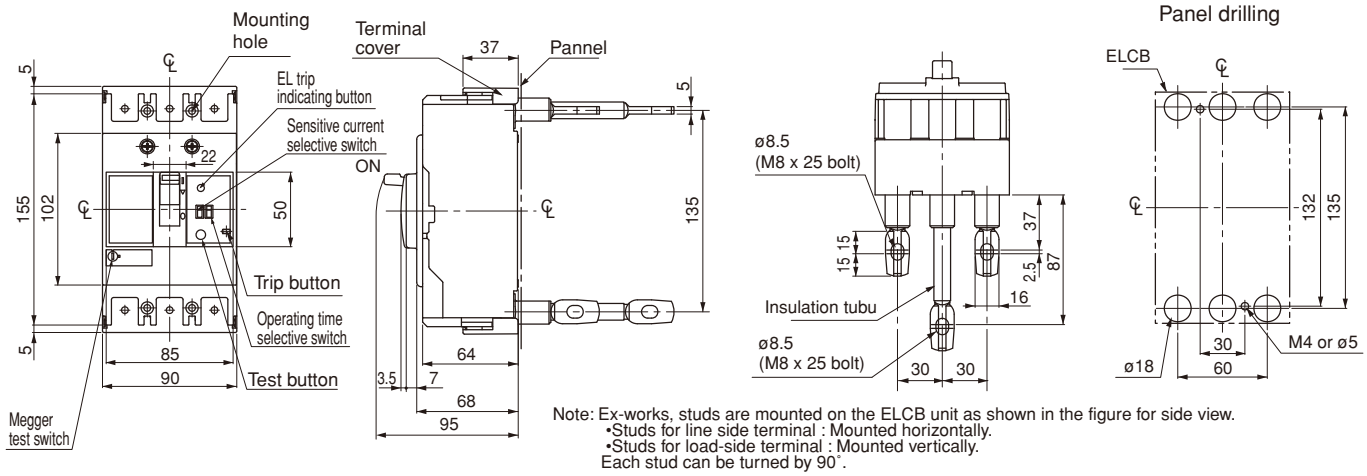
● Front mounting, rear connection (type X)

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



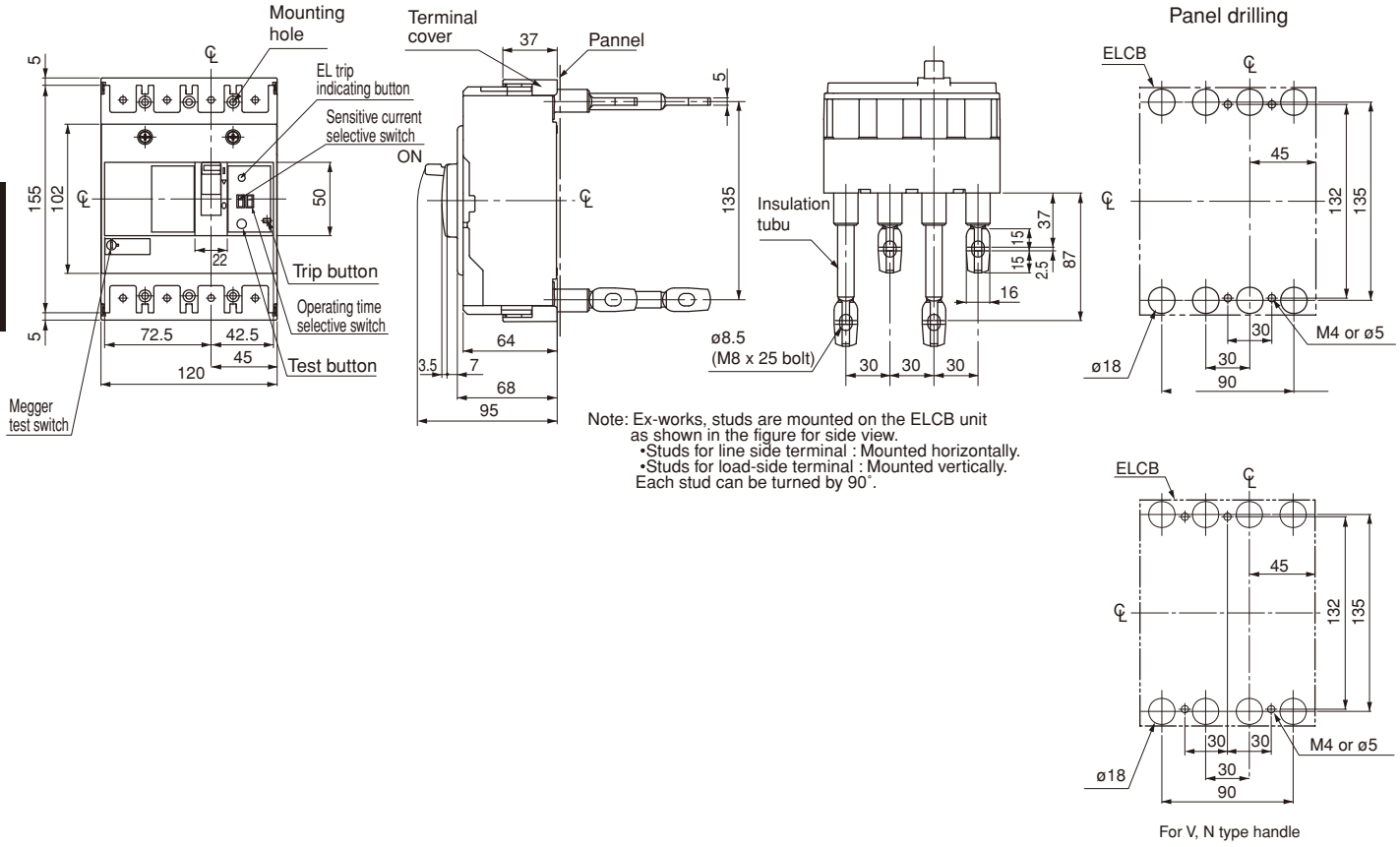
Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

Earth Leakage Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

● Front mounting, rear connection (type X)

EW125□-4P



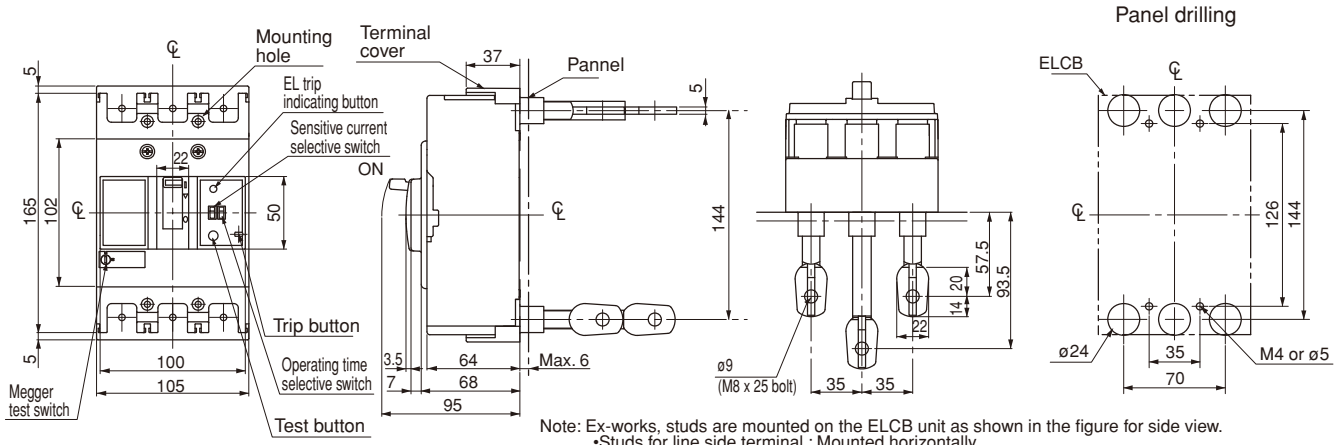
Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

For V, N type handle

■ Dimensions, mm

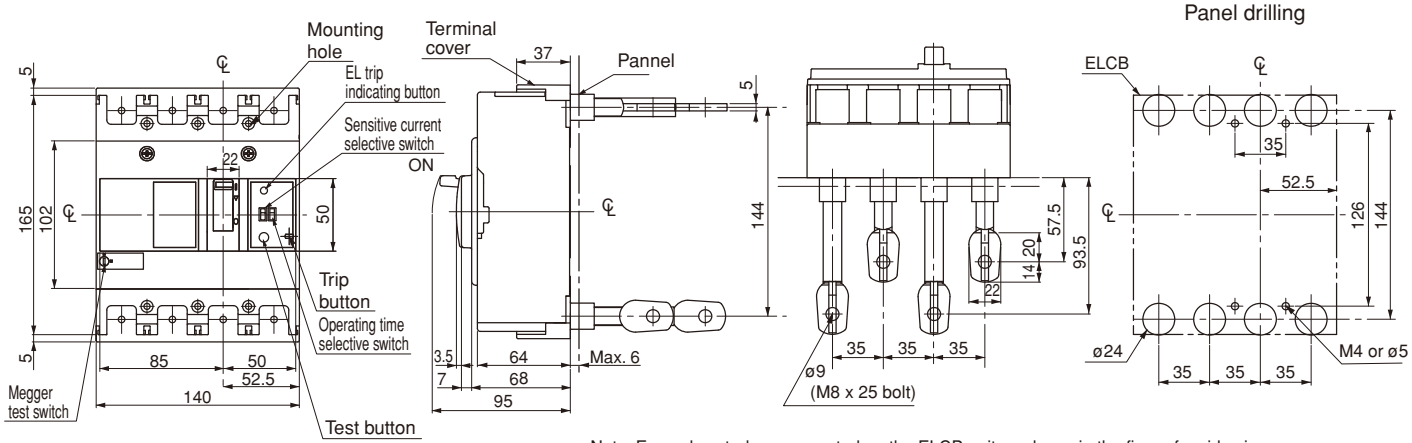
● Front mounting, rear connection (type X)

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



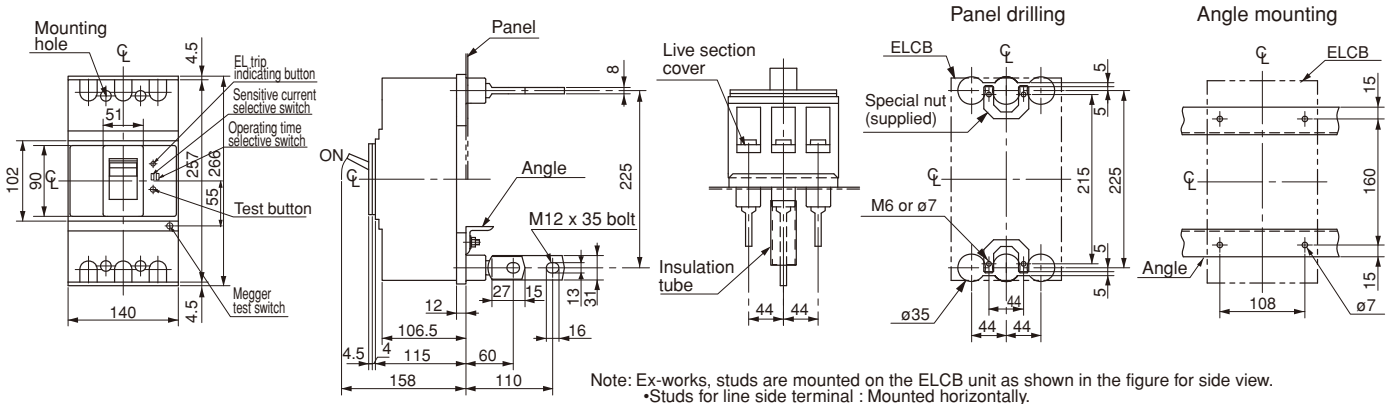
Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

Earth Leakage Circuit Breakers
G-TWIN series Dimensions / Standard

■ Dimensions, mm

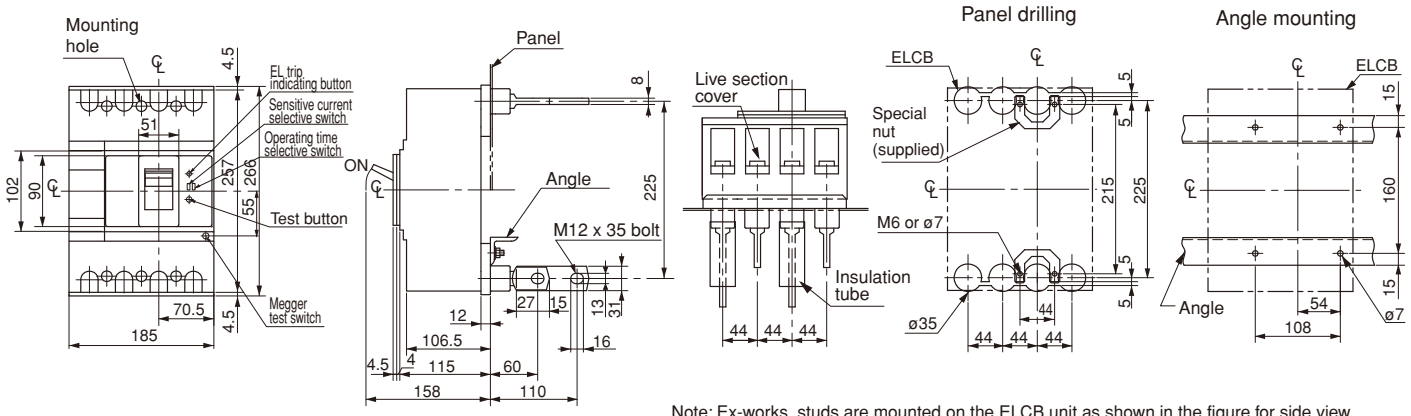
● Front mounting, rear connection (type X)

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

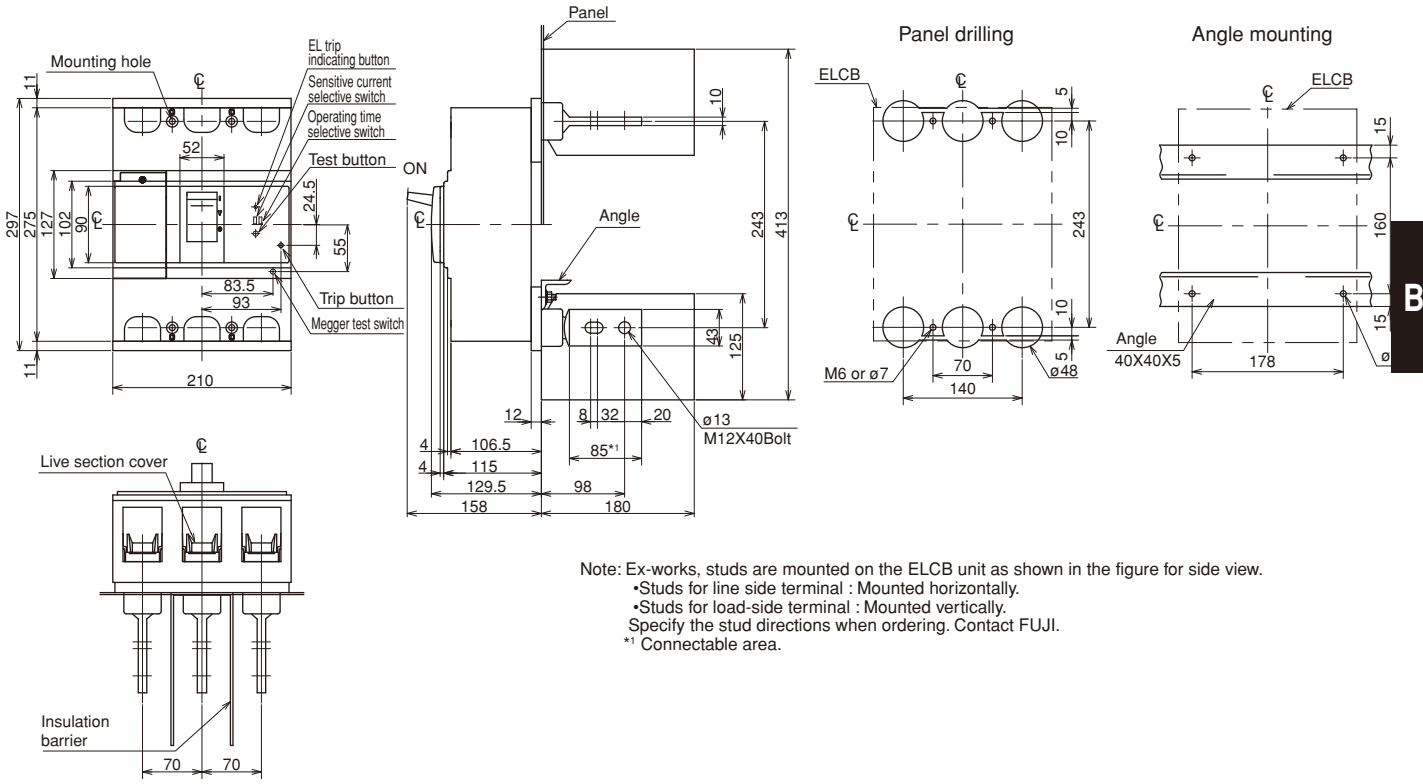


Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Each stud can be turned by 90˚.

■ Dimensions, mm

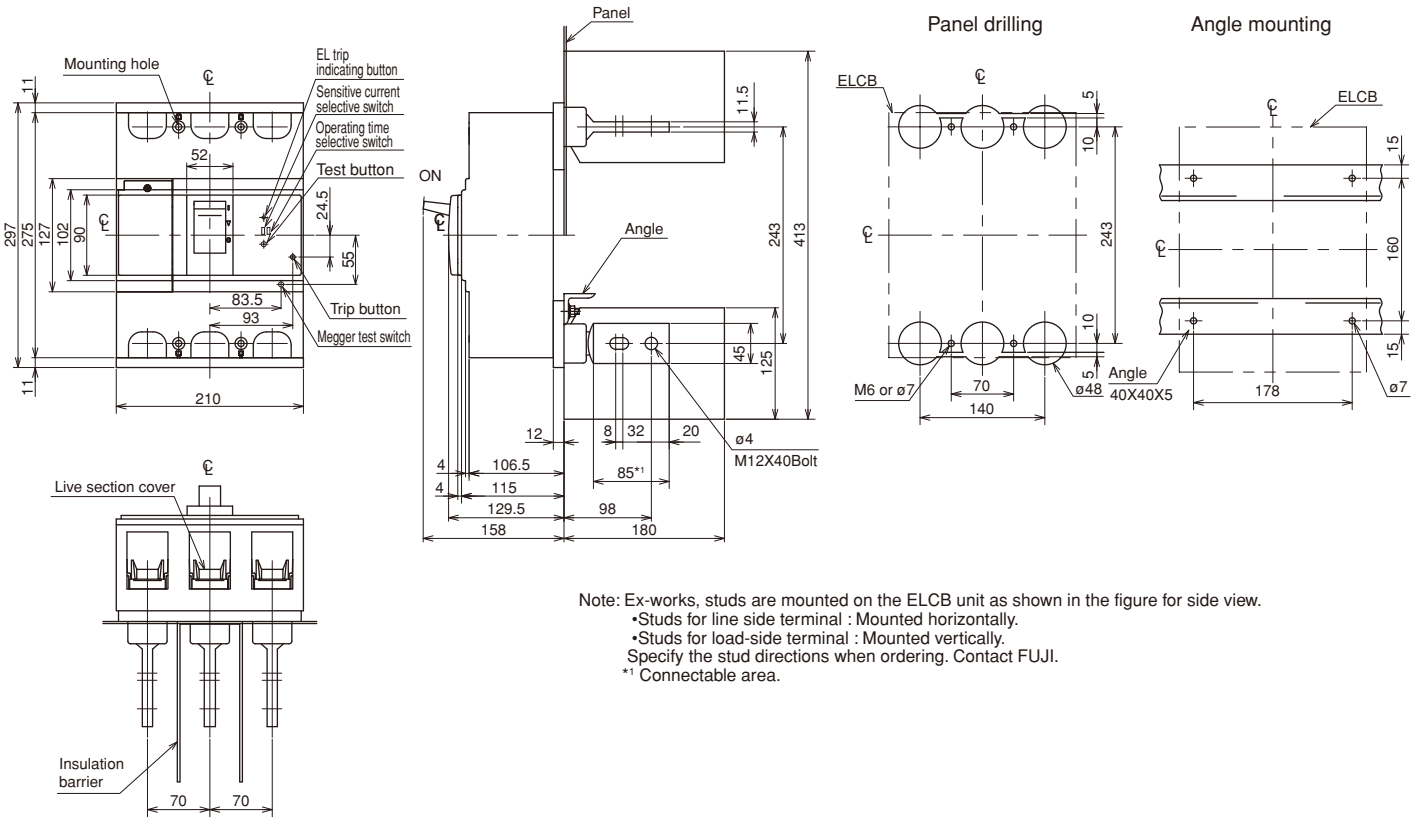
● Front mounting, rear connection (type X)

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



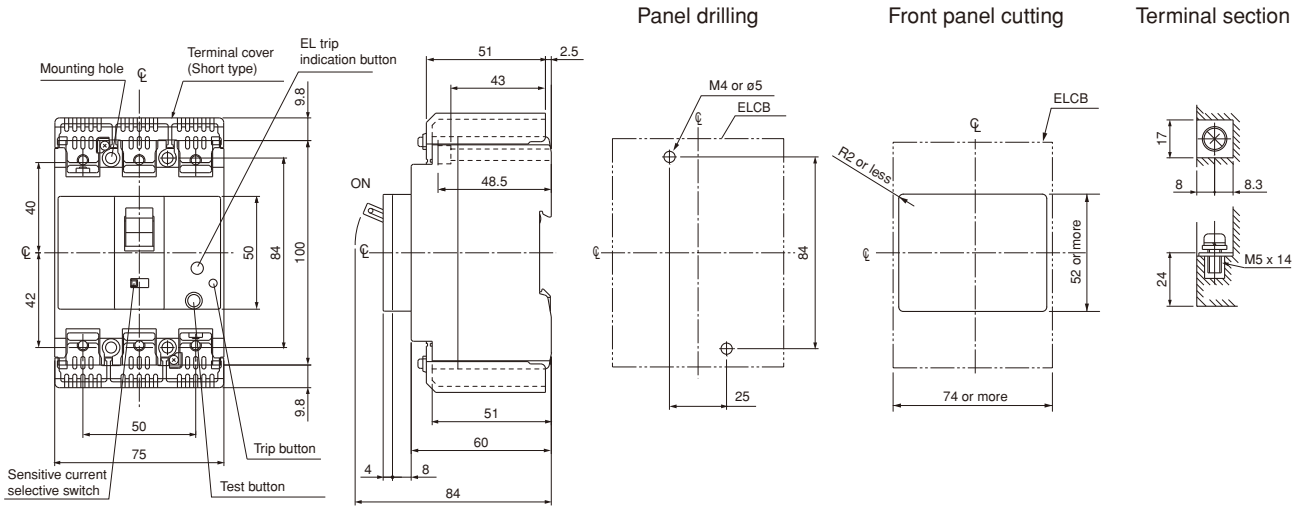
Note: Ex-works, studs are mounted on the ELCB unit as shown in the figure for side view.
•Studs for line side terminal : Mounted horizontally.
•Studs for load-side terminal : Mounted vertically.
Specify the stud directions when ordering. Contact FUJI.
*1 Connectable area.

Earth Leakage Circuit Breakers
G-TWIN series Dimensions / Global

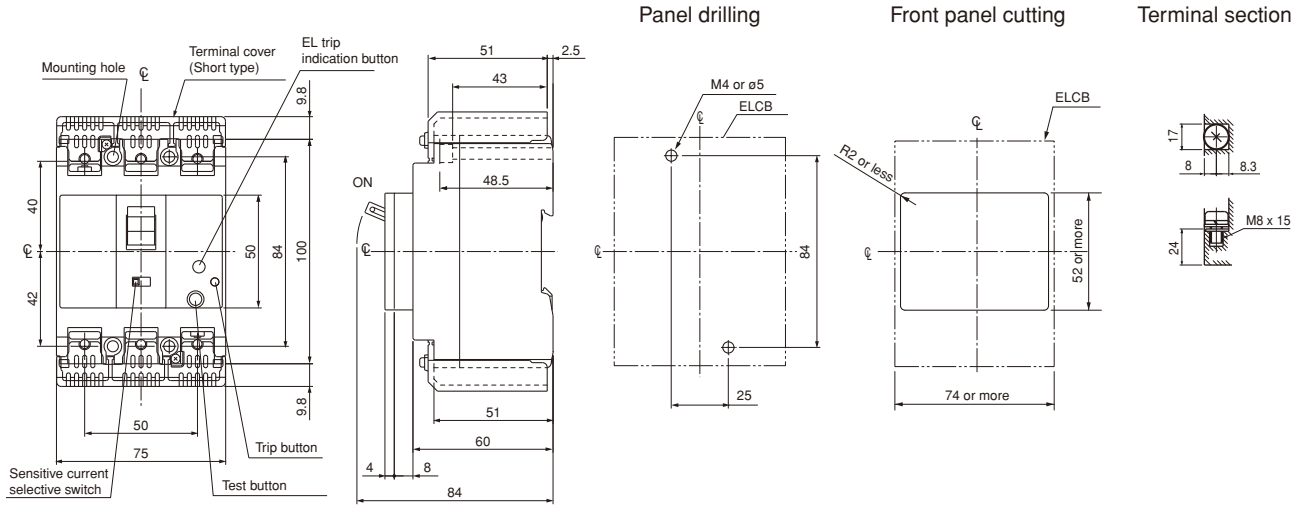
■ Dimensions, mm

● Front mounting, front connection

EW50RAGU-3P



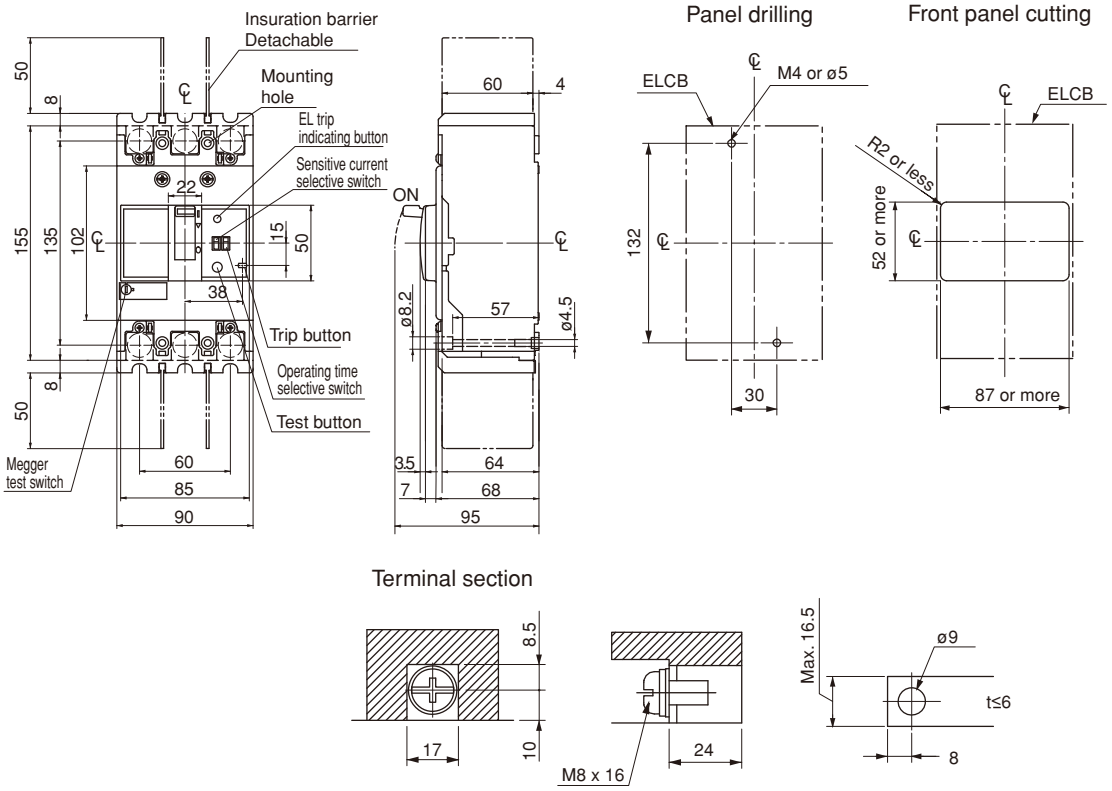
EW100EAGU-2P, -3P



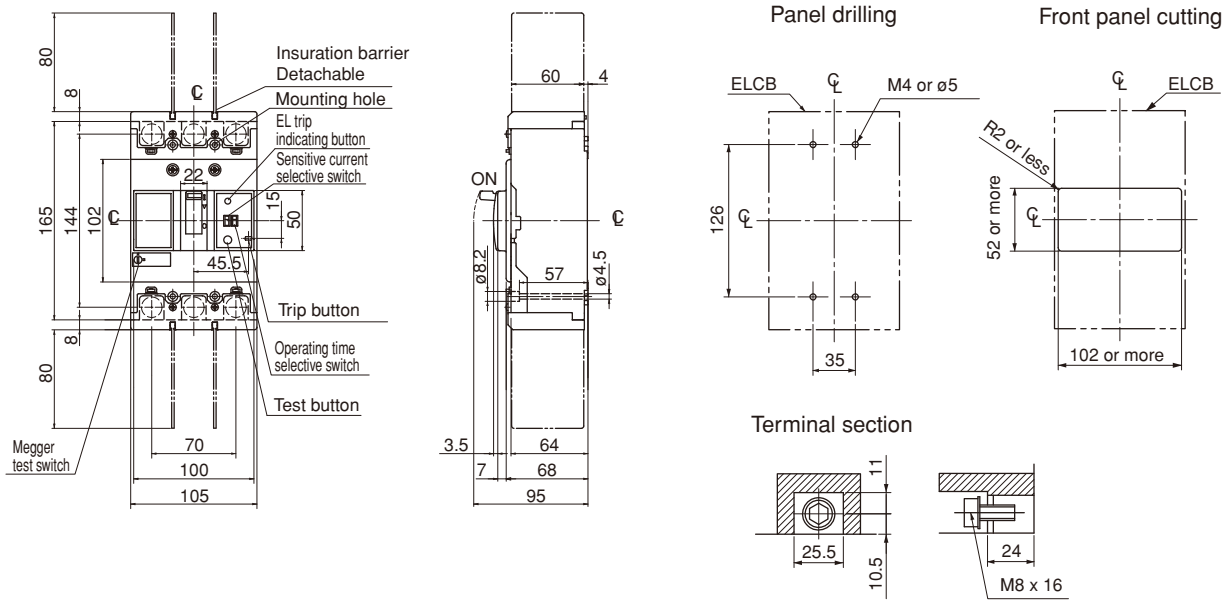
■ Dimensions, mm

● Front mounting, front connection

EW125□U-3P



EW250□U-3P

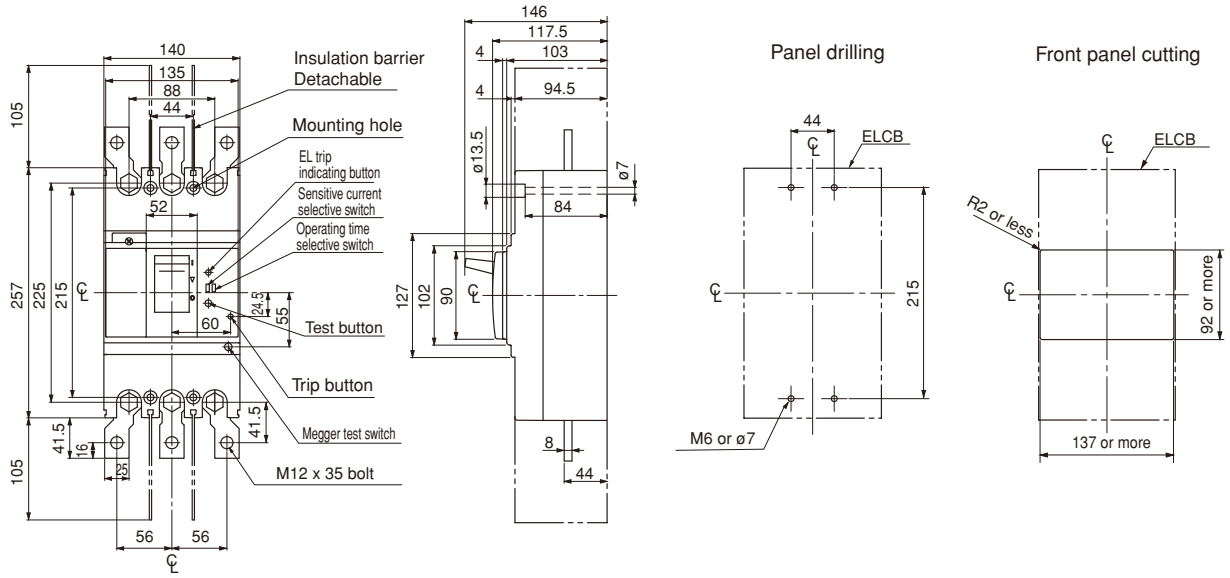


Earth Leakage Circuit Breakers
G-TWIN series Dimensions / Global

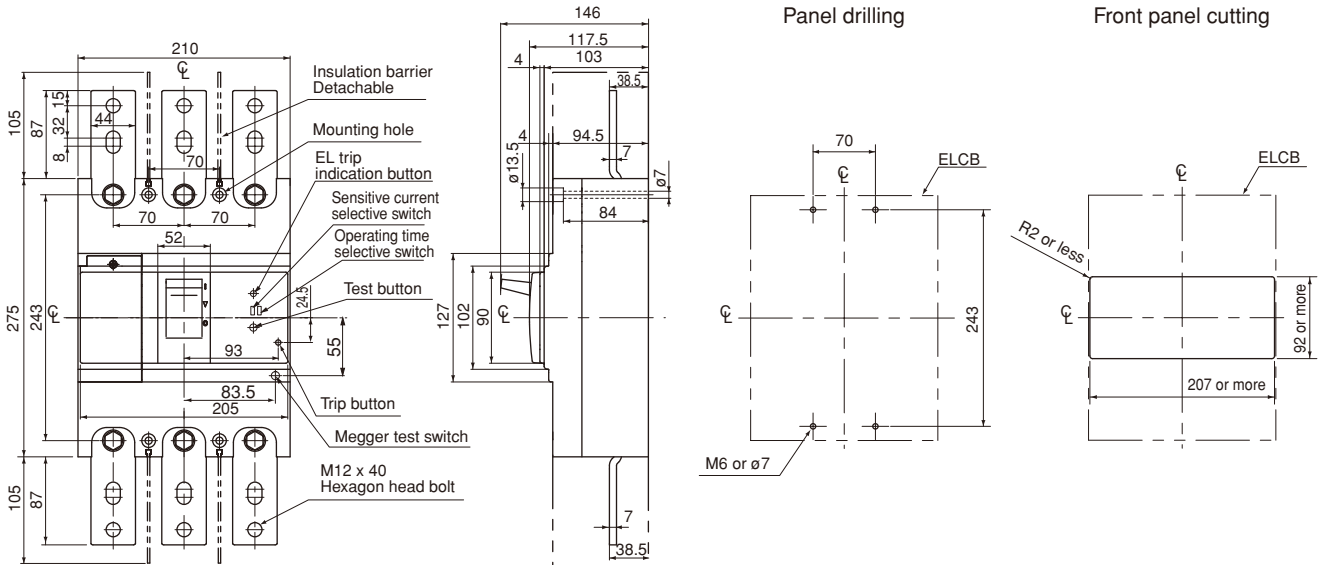
■ Dimensions, mm

● Front mounting, front connection

EW400□U-3P



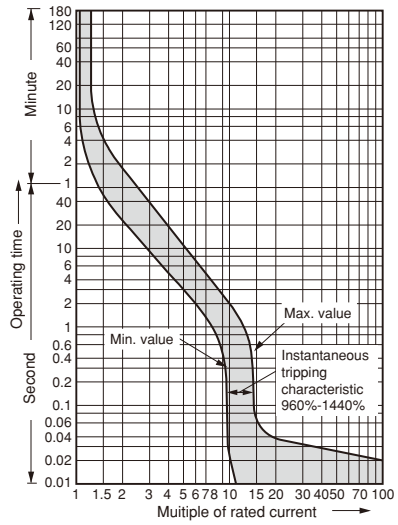
EW630□U-3P



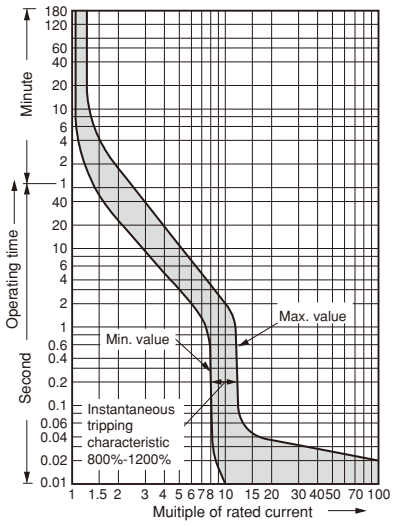
■ Characteristic curves / Line protection

EW32/50/63/100

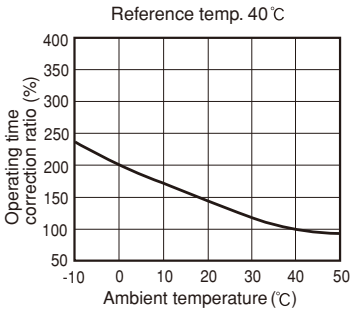
Rated current: 5, 10, 32, 40, 60, 63, 70, 75, 80, 90A



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

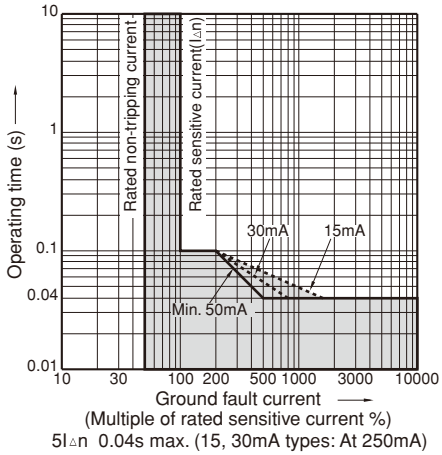


Temperature correction curve



Earth leakage tripping

EW32/50/63/100



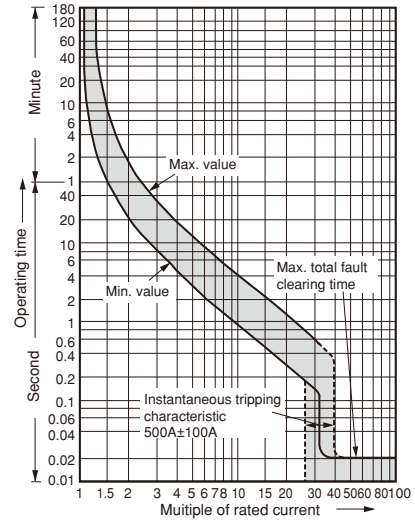
5I△n 0.04s max. (15, 30mA types: At 250mA)

Earth Leakage Circuit Breakers
G-TWIN series Characteristic curves

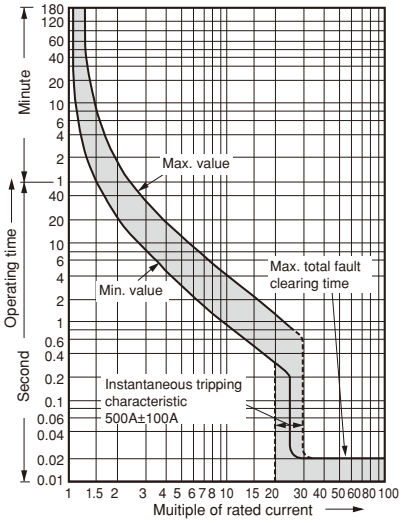
■ Characteristic curves / Line protection

EW125

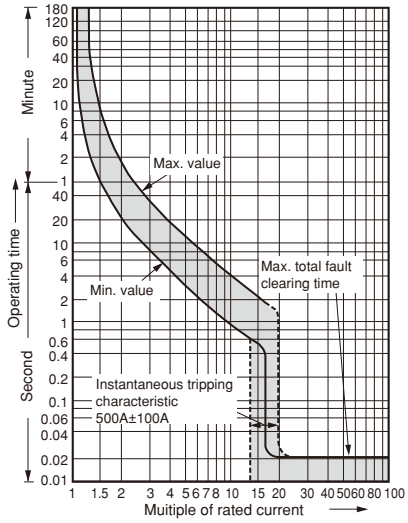
• 15A



• 20A

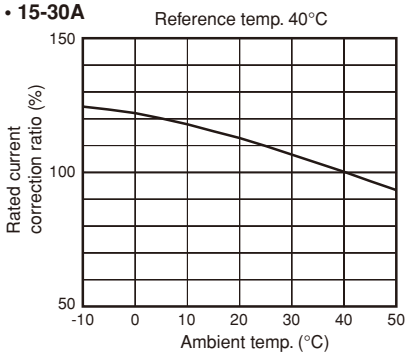


• 30A

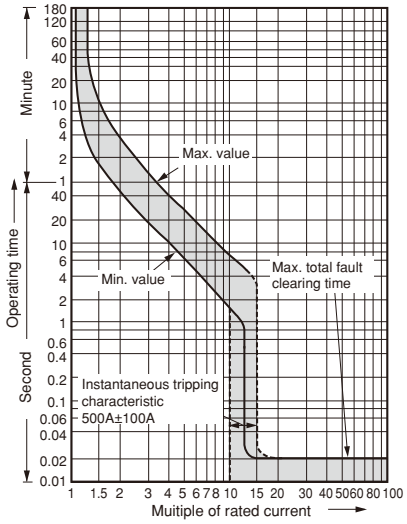


Temperature correction curve

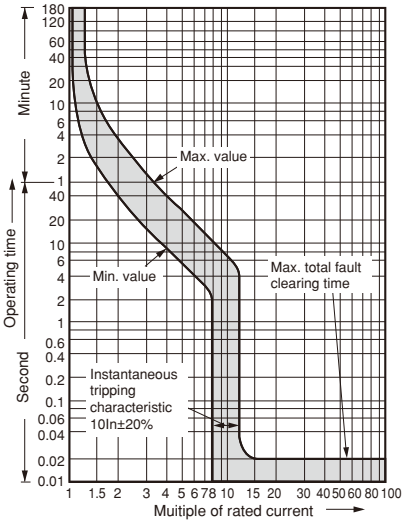
• 15-30A



• 40A

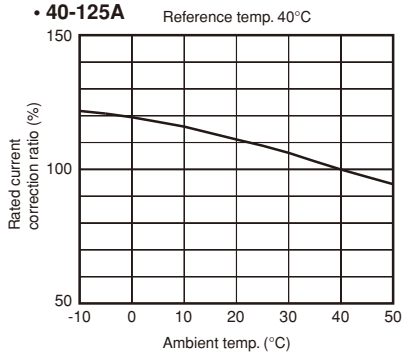


• 50-125A



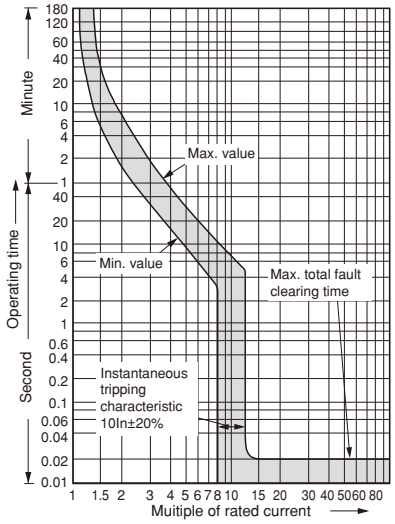
Temperature correction curve

• 40-125A

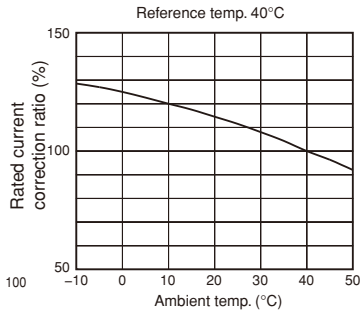


■ Characteristic curves / Line protection

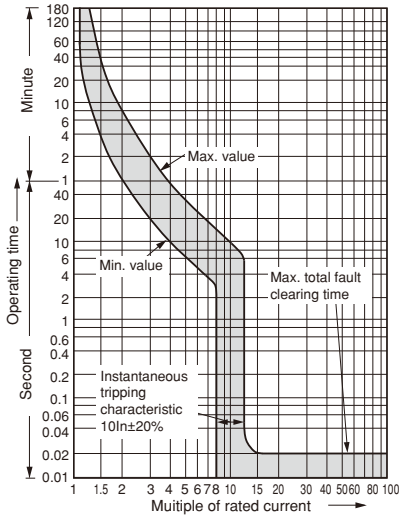
EW160/250



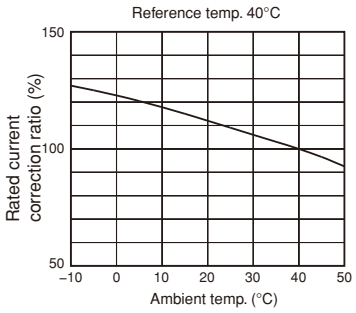
Temperature correction curve



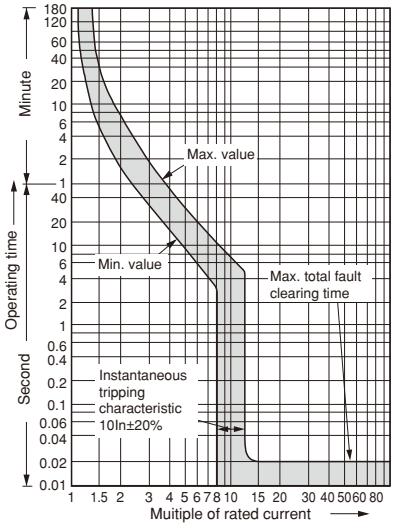
EW400



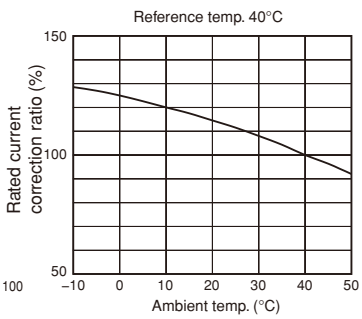
Temperature correction curve



EW630



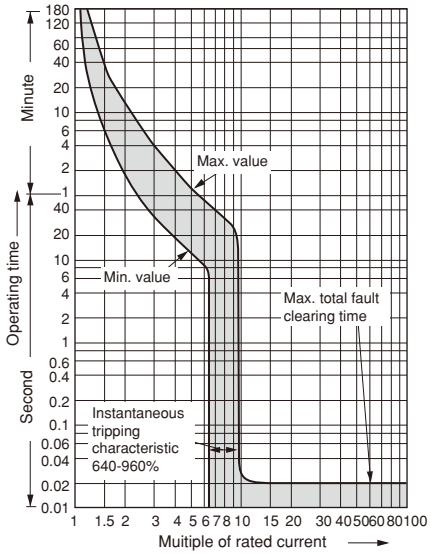
Temperature correction curve



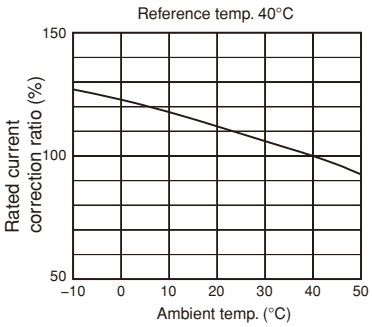
Earth Leakage Circuit Breakers
G-TWIN series Characteristic curves

■ Characteristic curves / Line protection

EW800



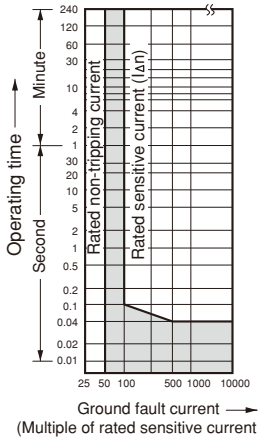
Temperature correction curve



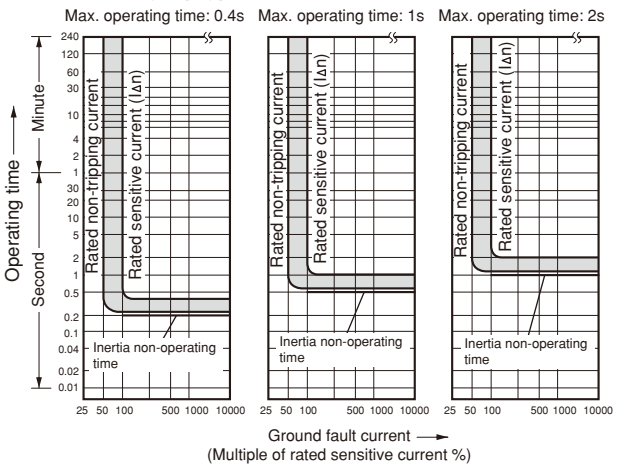
Earth leakage tripping

EW125/160/250/400/630/800

Instantaneous trip type

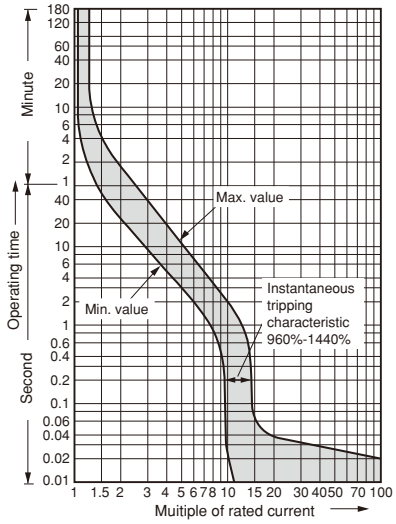


Time-delay trip type

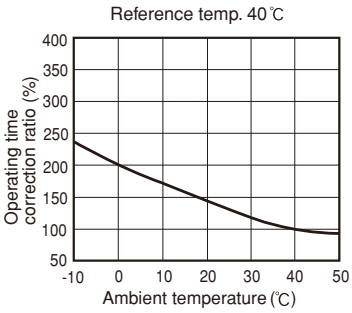


■ Characteristic curves / Motor protection

EW32/50/63/100

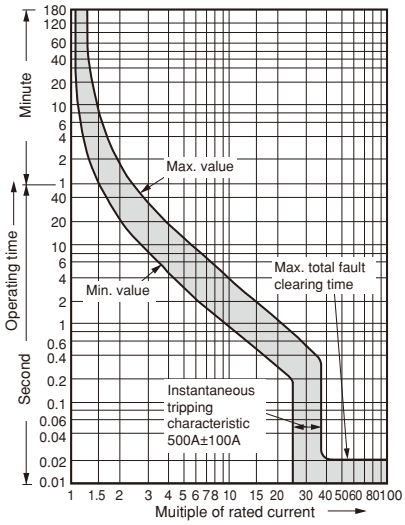


Temperature correction curve

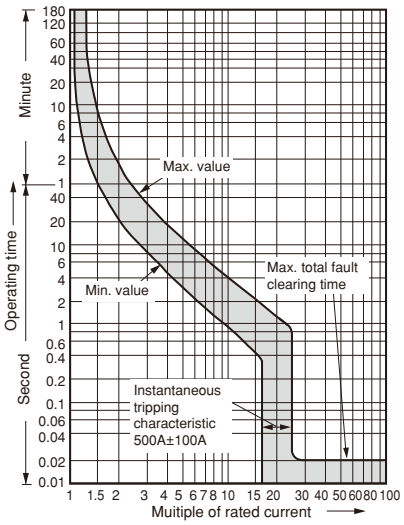


EW125

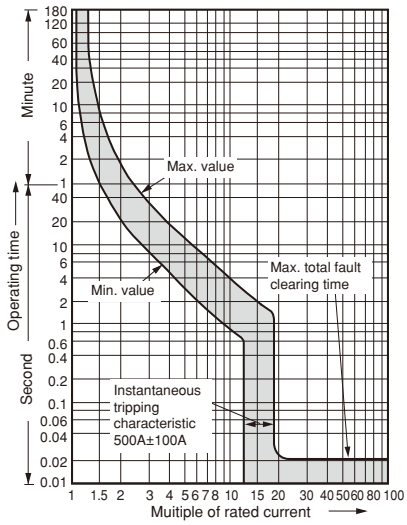
• 16A



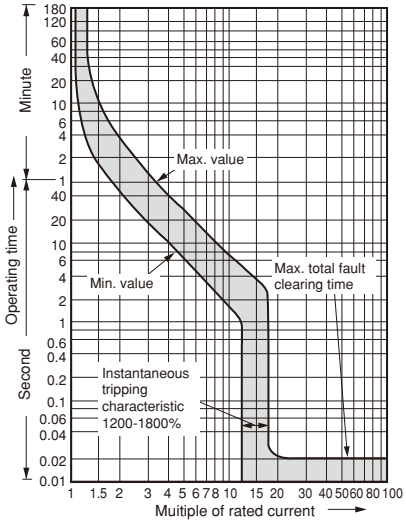
• 24A



• 32A

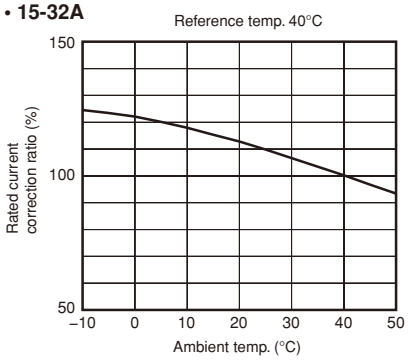


• 40-90A

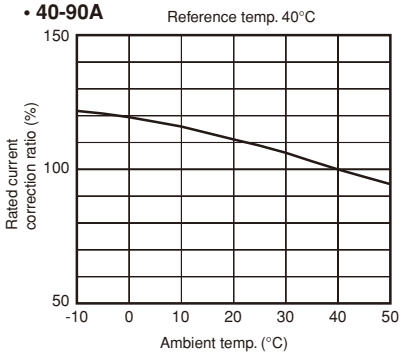


Temperature correction curve

• 15-32A



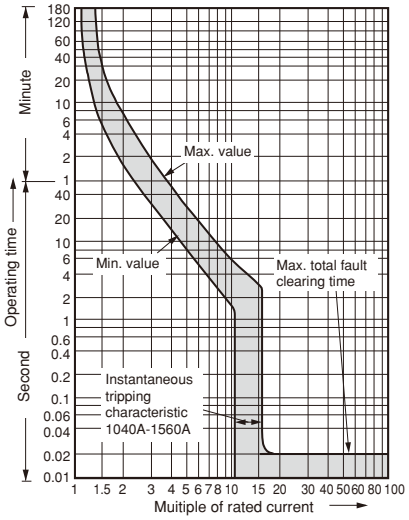
• 40-90A



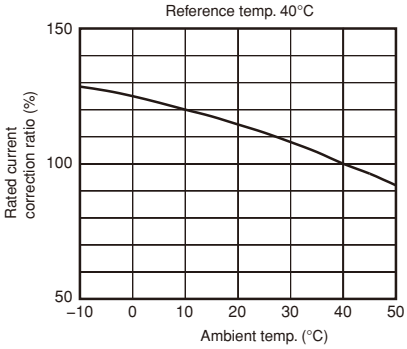
Earth Leakage Circuit Breakers
G-TWIN series Characteristic curves

■ Characteristic curves / Motor protection

EW250

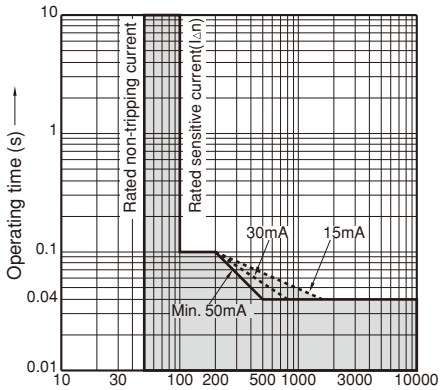


Temperature correction curve



Earth leakage tripping

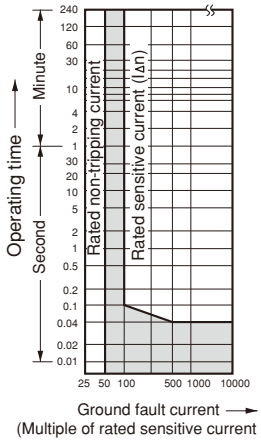
EW32/50/63/100



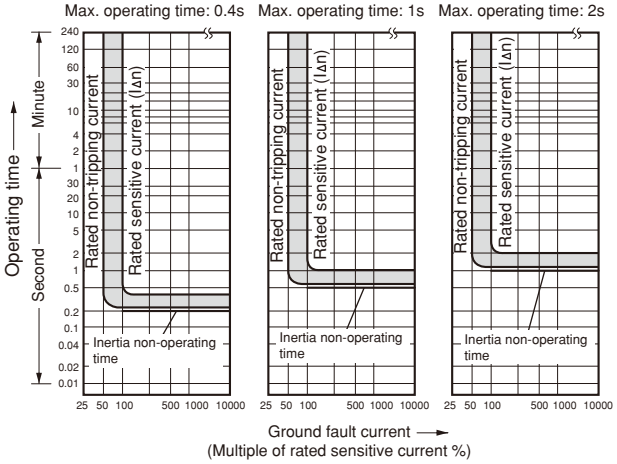
5I△n 0.04s max. (15, 30mA types: At 250mA)

EW125/160/250

Instantaneous trip type



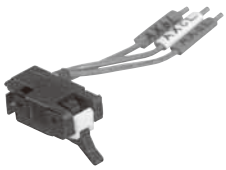
Time-delay trip type



■ Variation of internal accessory

• 32 to100AF

Auxiliary switch (Type W)



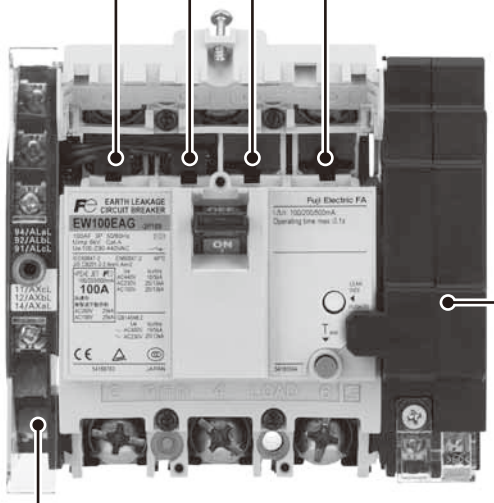
This switch is used for indicator lamp or control circuit.
See page B1-155.

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 B1-155.

Shunt trip device (Type F)

The purpose of this accessory is to trip the breaker from a distance.
See page B1-156.



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 B1-157.

Terminal block (Type A)

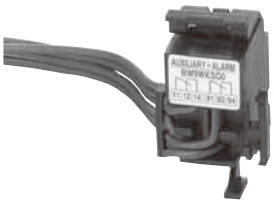
A wiring terminal for internal accessories (Order with W, K or F)
See page B1-158.

Earth Leakage Circuit Breakers
G-TWIN series Accessories

■ Variation of internal accessory

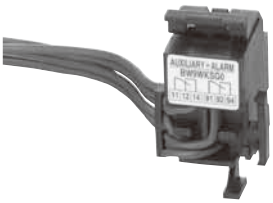
• 125 to 250AF

Auxiliary switch (Type W)



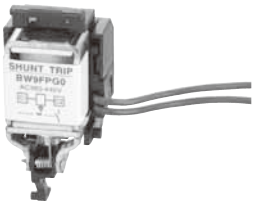
This switch is used for indicator lamp or control circuit.
See page B1-155.

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 B1-155.

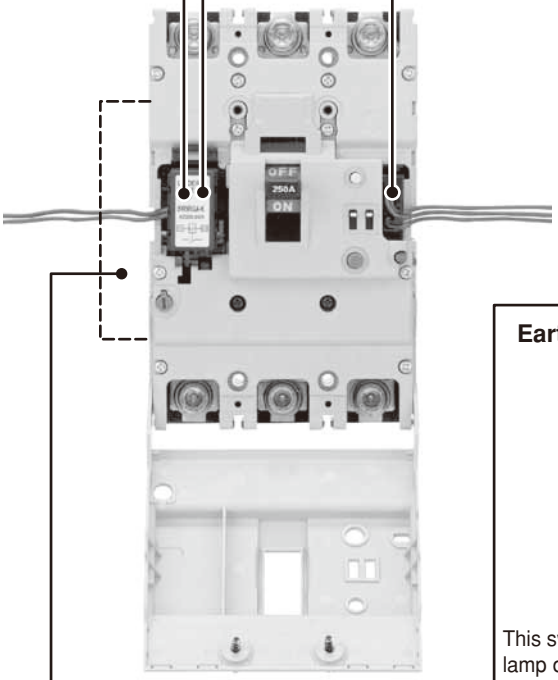
Shunt trip device (Type F)



The purpose of this accessory is to trip the breaker from a distance.
See page B1-156.

Undervoltage trip device (Type R)

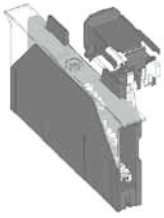
The device is designed to protect circuits from harmful voltage drops.
It can also be used for remote control purposes. The trip operates when the voltage drops to less than 70% of nominal coil rating, and the breaker cannot be reset until the voltage recovers 85% of its normal rating.
See page B1-157.



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 B1-155.

Terminal block (Type A)

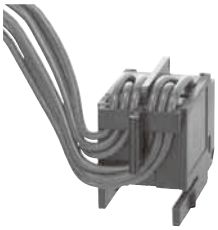


A wiring terminal for internal accessories (Factory-mounted)
See page B1-158.

■ Variation of internal accessory

• 400 to 800AF

Alarm switch (Type K)



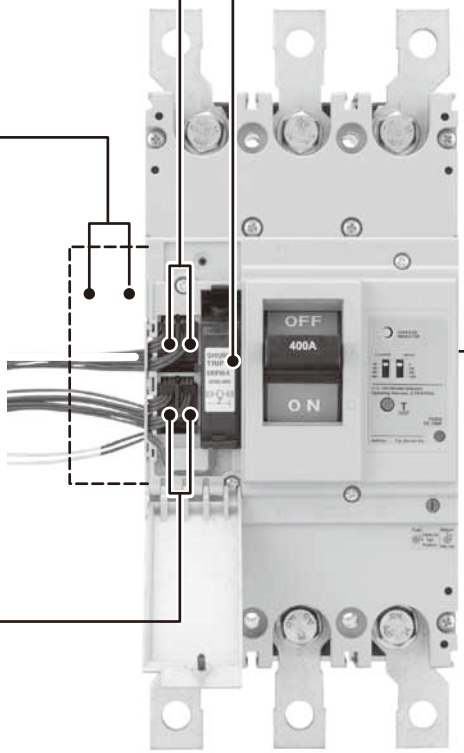
This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped.
See page B1-155.

Shunt trip device (Type F)

The purpose of this accessory is to trip the breaker from a distance.
See page B1-156.

Terminal block (Type A)

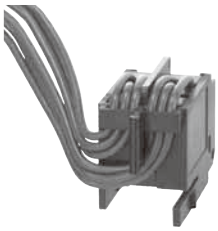
A wiring terminal for internal accessories (Factory-mounted)
See page B1-158.



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 B1-157.

Auxiliary switch (Type W)



This switch is used for indicator lamp or control circuit.
See page B1-155.

Earth alarm switch (Type L)

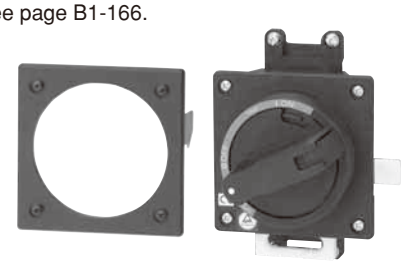
This switch can be connected to a warning lamp or buzzer to indicate when the breaker has been tripped by leakage current.
See page B1-155. (Factory-mounted)

Earth Leakage Circuit Breakers
G-TWIN series Accessories

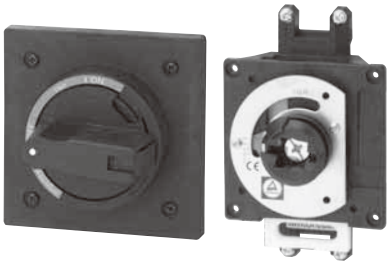
■ Variation of external accessory

External operating handles

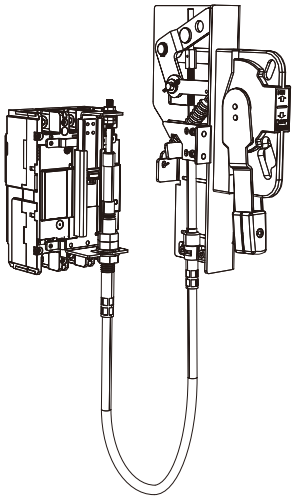
• **N-type**
See page B1-166.



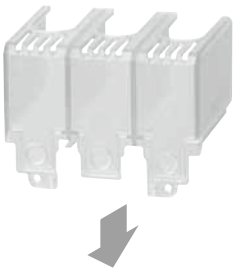
• **V-type**
See page B1-166.



• **F-type**
See page B1-166.



Terminal cover
Long type
See page B1-177.

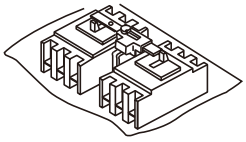


Interphase barrier
See page B1-178.

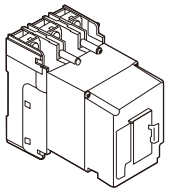
Terminal cover
Short type
See page B1-177.

Steel enclosures
See page B1-175.

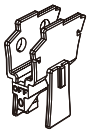
Mechanical interlock device
See page B1-162.



Motor-operating mechanism
See page B1-161.

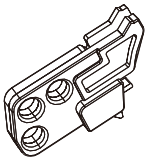


Handle locking cover (L1)
See page B1-179.

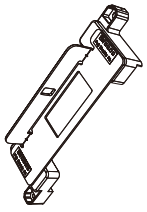


Padlocking device
See page B1-179.

• **Cap type (Q1, QN)**

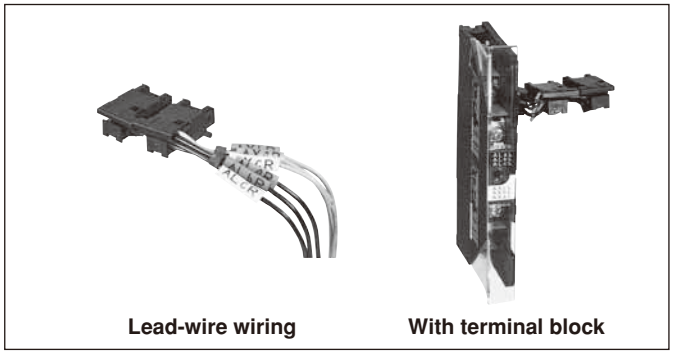


• **Plate type (Q2)**



■ 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 B1-154.*



Lead-wire wiring **With terminal block**

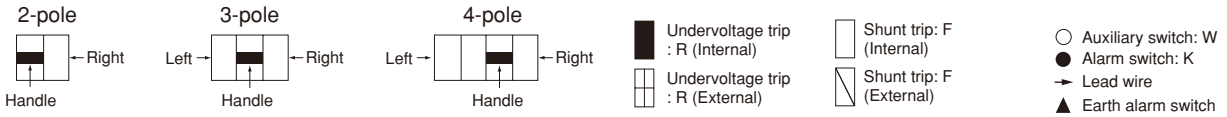
• Terminal number of internal accessory

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

Earth Leakage Circuit Breakers
G-TWIN series Internal accessories

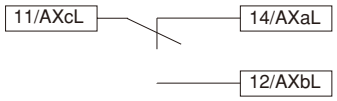
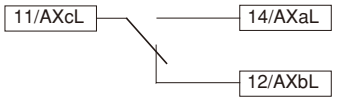
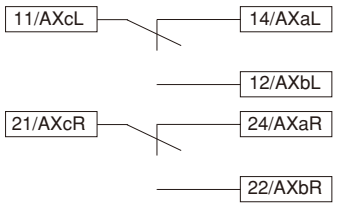
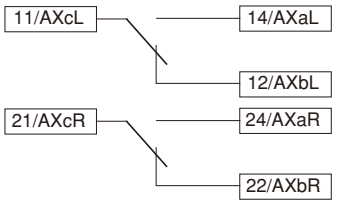
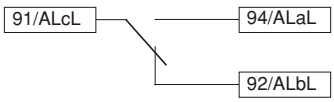
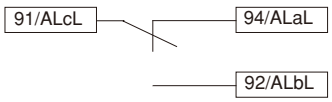
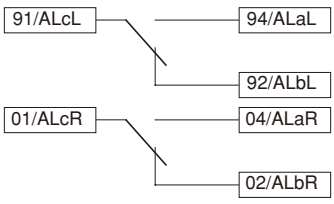
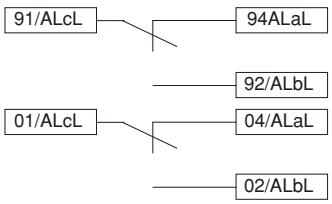
■ Available configurations



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					

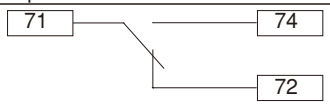
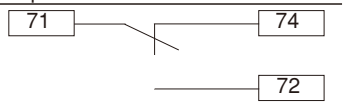
Notes: •The above table is applied to front mounting type, rear mounting type, flush mounting type, and plug-in mounting type.
• Terminal block is attached on the same side of the accessory.
• ( ) Code of low level circuit □:See page B1-94.

■ 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

Earth Leakage Circuit Breakers
G-TWIN series Internal accessories

■ 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.

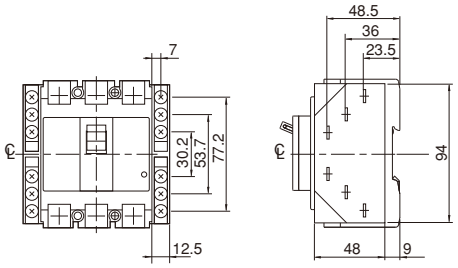
Earth Leakage Circuit Breakers
G-TWIN series Internal accessories

■ Lead wire specification

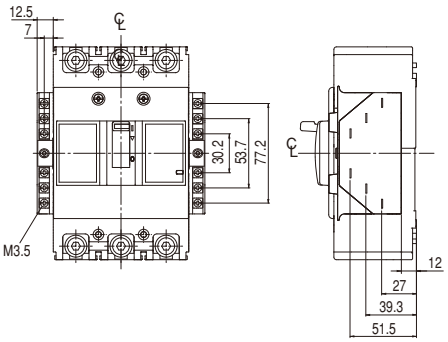
AF		Pole	wire size	Wire length
32 to 100AF	Standard	2P, 3P	0.4mm^2 (AWG22)	Ca 500mm
	Global		0.5mm^2 (AWG20)	
125 to 250AF		2P, 3P	0.5mm^2 (AWG20)	
		4P		
400 to 800AF		2P, 3P	0.5mm^2 (AWG20)	Ca 500mm
		4P		Ca 400 to 450mm

■ Terminal blocks

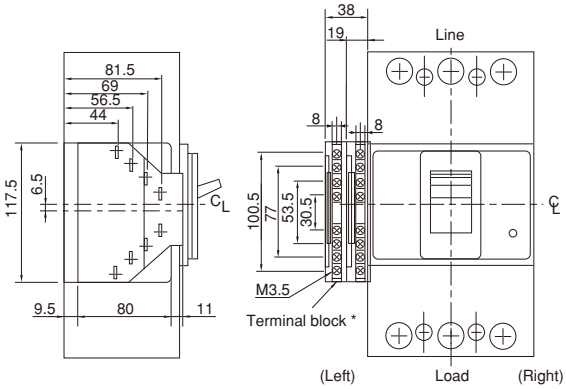
32AF, 50AF, 63AF, 100AF



125AF, 160AF, 250AF



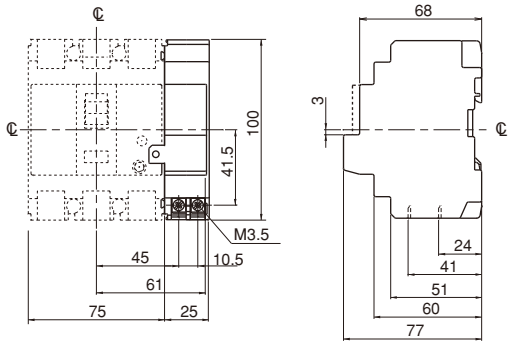
400AF, 630AF, 800AF



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 B1-154. 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

Earth Leakage Circuit Breakers
G-TWIN series 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

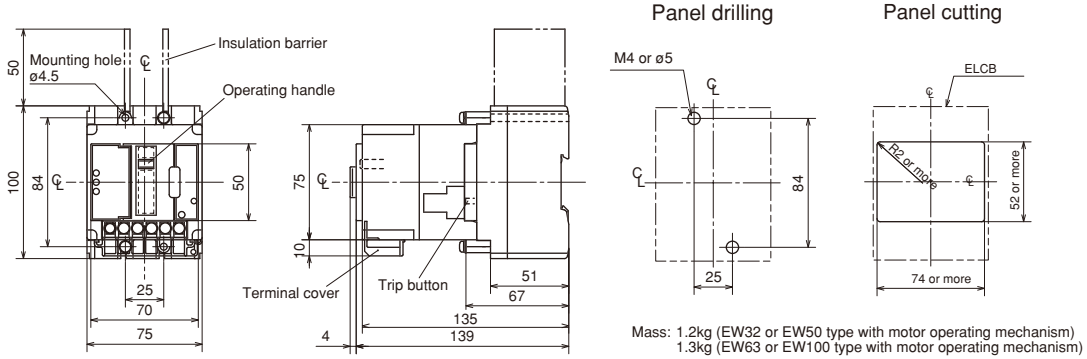
ELCB type	Motor rating			Power source capacity	Mass (kg)
	Operating voltage	Operating time	Time rating		
EW32□-3P□M, EW50□-3P□M, EW63□-3P□M, EW100□-2P□M, EW100□-3P□M	100V DC 100/110V AC 200/220V AC	0.1s	15s per on-off operation	500VA	1.2 1.3

■ 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

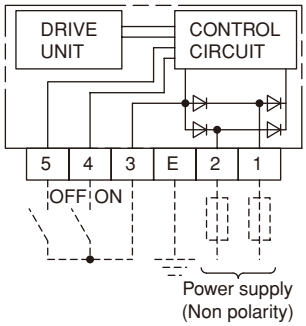


Mass: 1.2kg (EW32 or EW50 type with motor operating mechanism)
1.3kg (EW63 or EW100 type with motor operating mechanism)

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

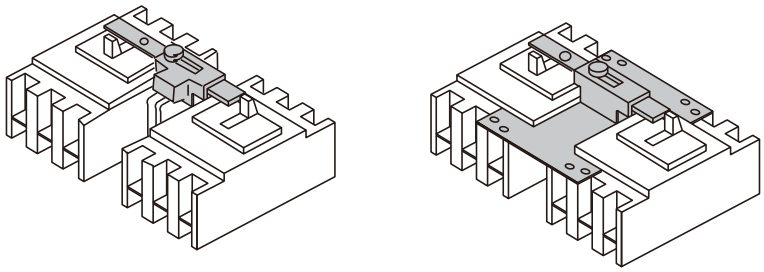


Earth leakage Circuit Breakers
G-TWIN series External accessories

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

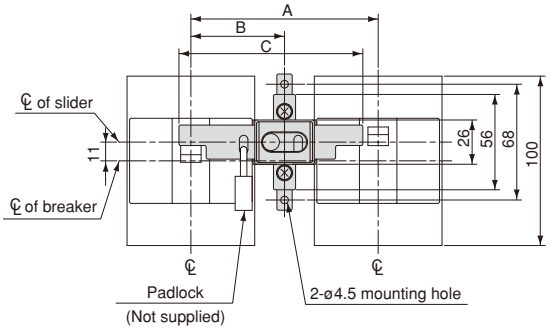
B1

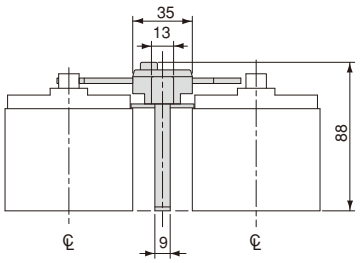
■ Type and applicable breakers

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

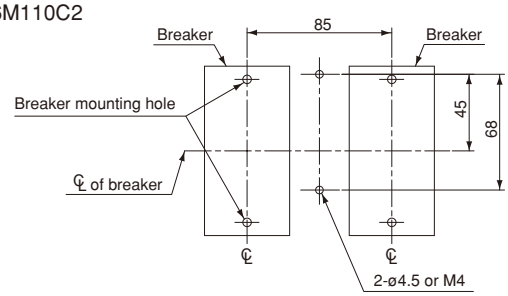
• 32AF to 100AF



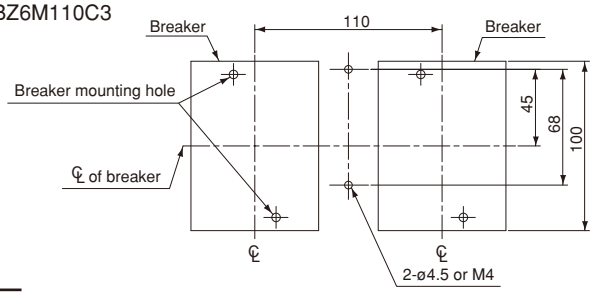


Panel drilling

BZ6M110C2

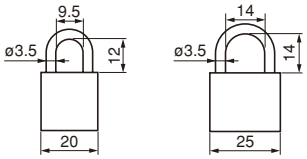


BZ6M110C3



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.



Earth leakage Circuit Breakers
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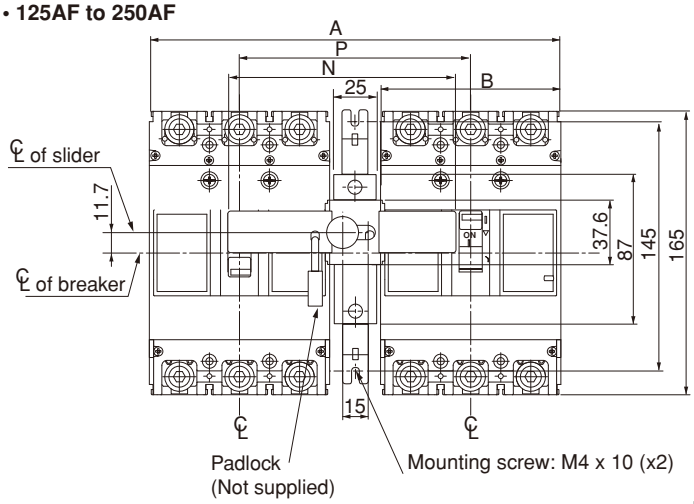
■ Dimensions, mm

• 125AF to 250AF



Panel drilling

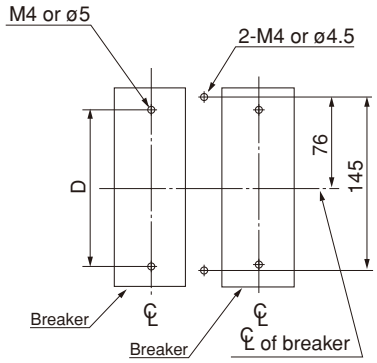
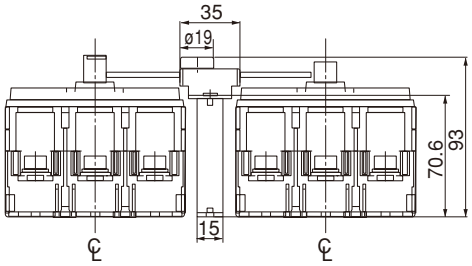


Fig.1



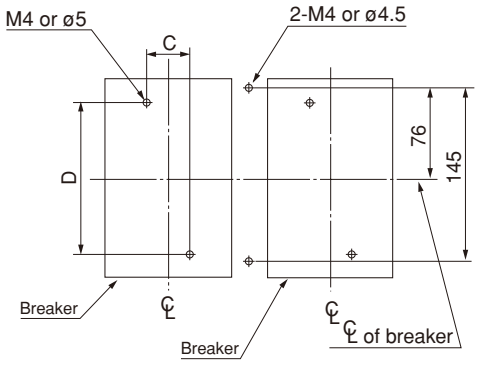


Fig.2

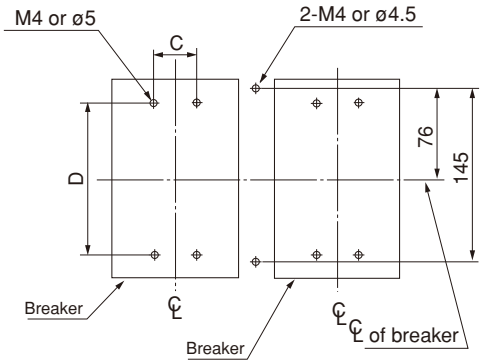


Fig.3

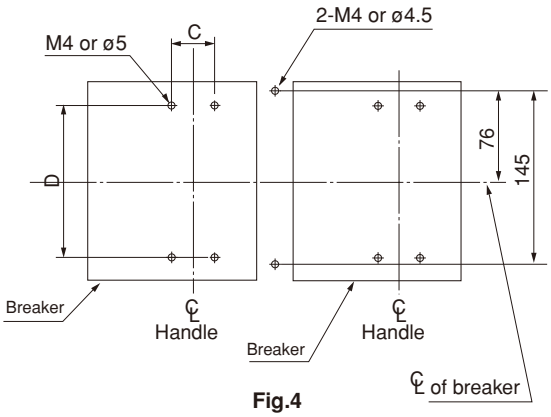
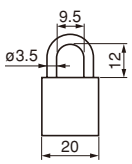


Fig.4

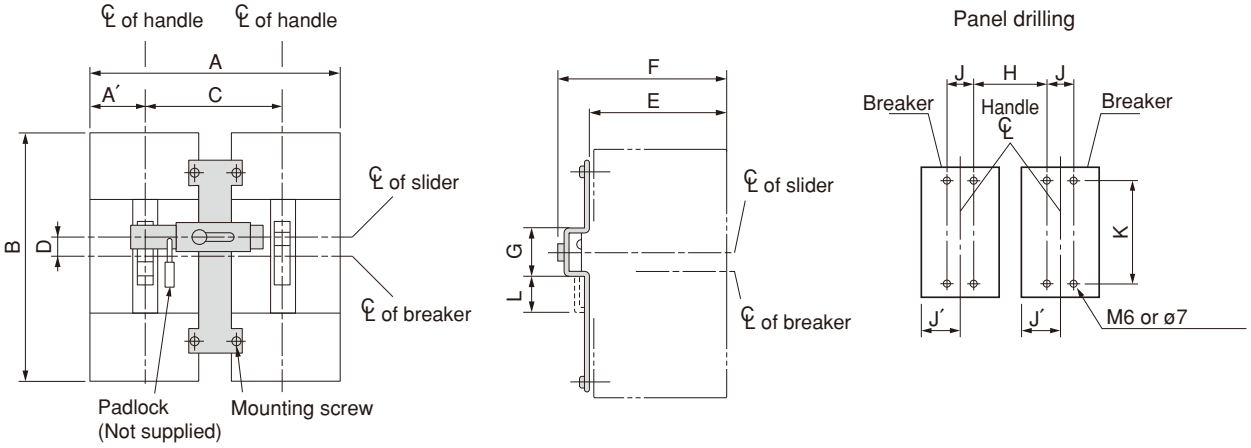
Type	Dimensions, mm						Panel Drilling	Mass(Kg)
	P	N	A	B	C	D		
BW9M1CA-2	90	88	150	60	–	132	Fig.1	
BW9M1CA-3	120	118	210	90	30	132	Fig.2	
BW9M1CA-4	150	148	270	102	30	132	Fig.4	
BW9M1GA-3	135	133	240	105	35	126	Fig.3	
BW9M1GA-4	170	168	310	140	35	126	Fig.4	

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.



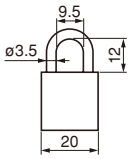
■ Dimensions, mm

• 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.



Earth leakage Circuit Breakers
G-TWIN series External accessories

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)

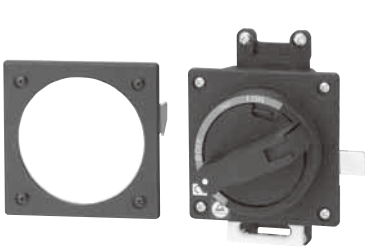
V type handle

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)

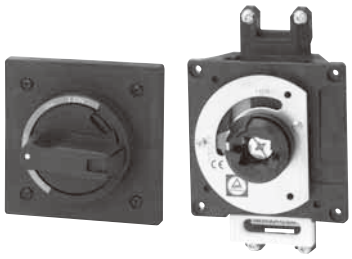
F type handle

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)

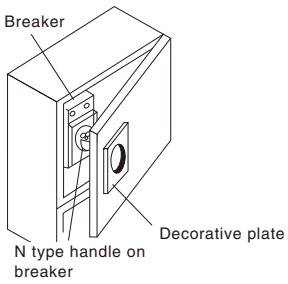


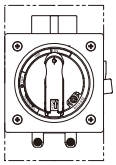
BW9N0CA
N type handles



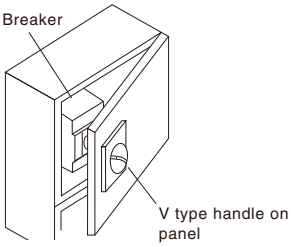
BW9V0CA
V type handle

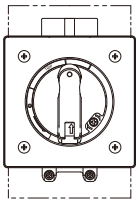
N type handles



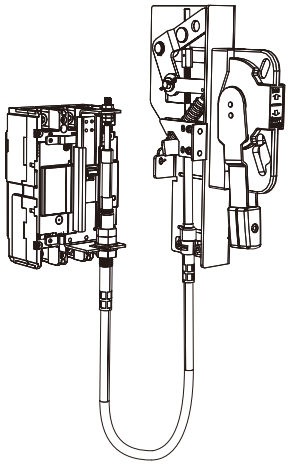


V type handles





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**

Earth leakage Circuit Breakers
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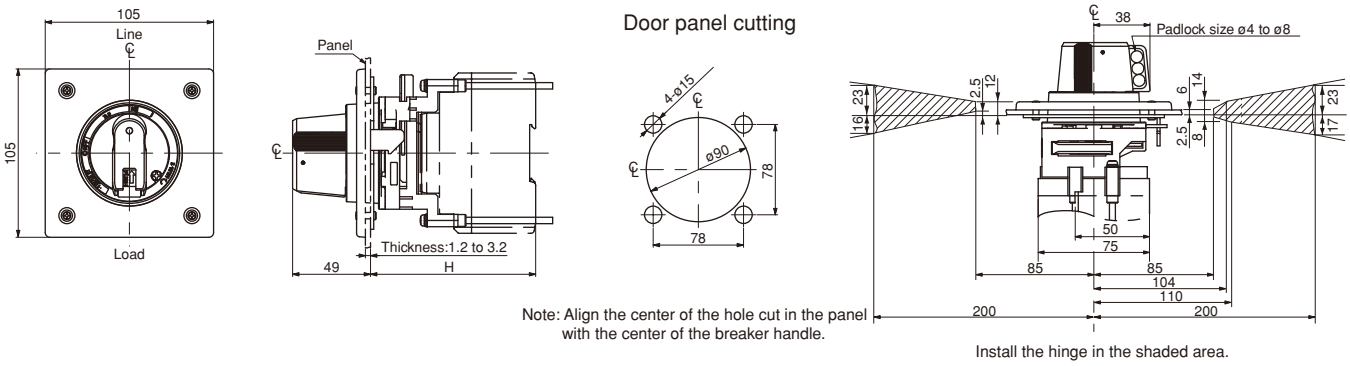
■ Dimensions, mm

N type handle

• BZ6N10D

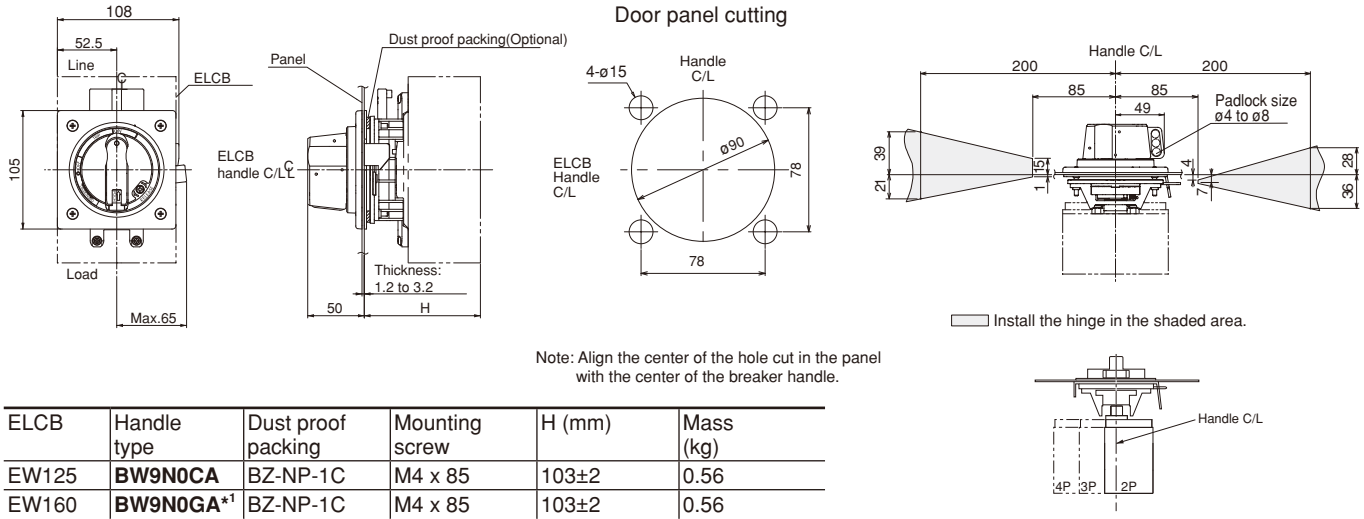


Note: Align the center of the hole cut in the panel with the center of the breaker handle.

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					

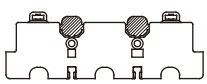
• BW9N0CA, BW9N0GA



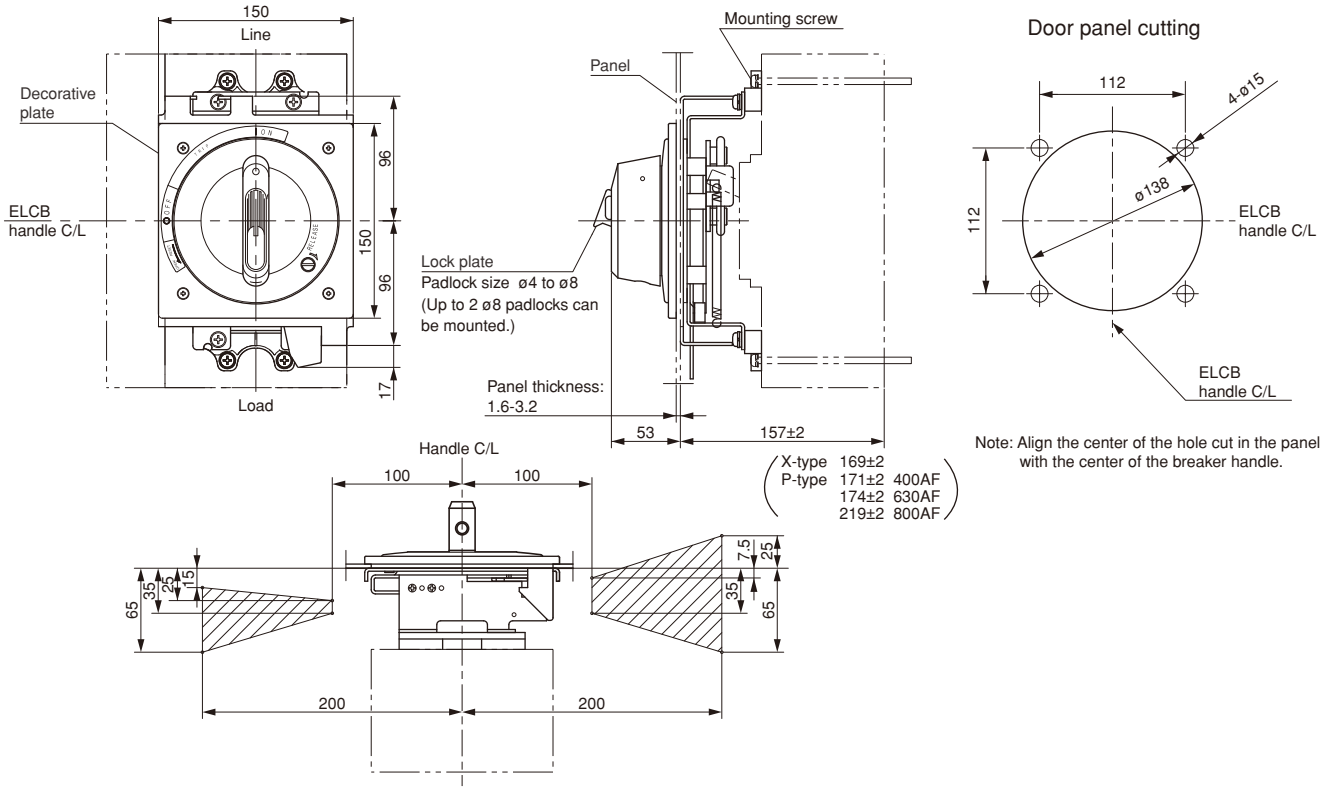
Note: Align the center of the hole cut in the panel with the center of the breaker handle.

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.

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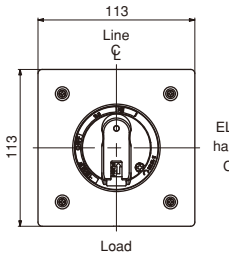
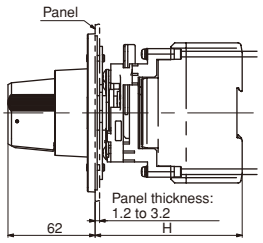
■ Dimensions, mm

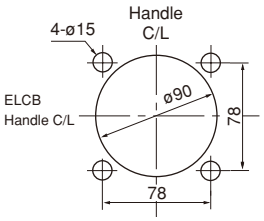
V type handle

• BZ6V10D



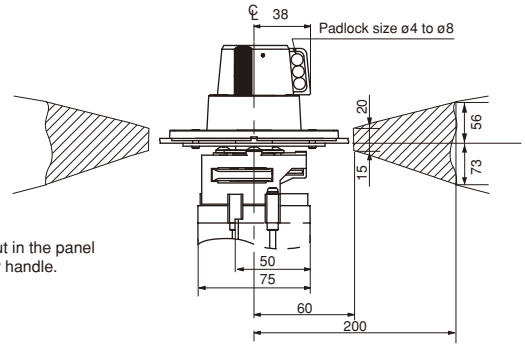


Door panel cutting



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

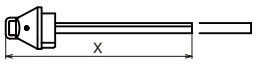
Door hinge installation area

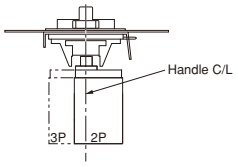


Install the door hinge in the shaded area.

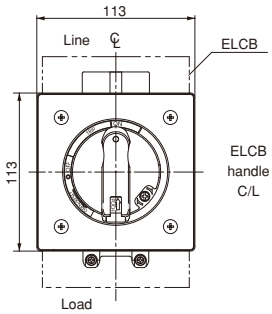
Optional shaft BZ6VS1D

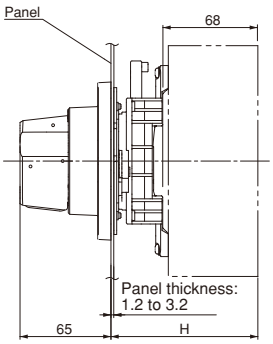
X = H - 105



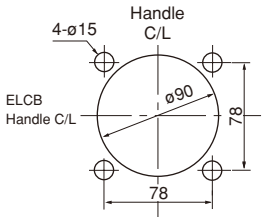


• BW9V0CA, BW9V0GA



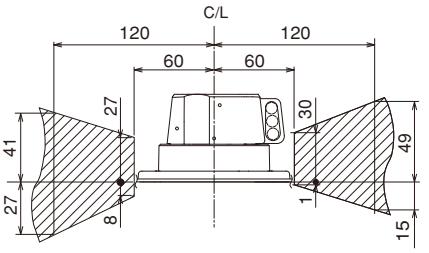


Door panel cutting

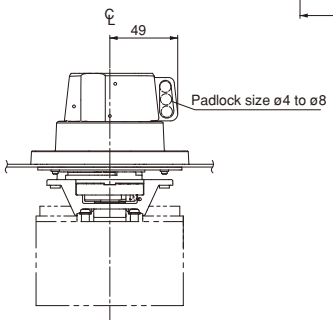


Note: Align the center of the hole cut in the panel with the center of the breaker handle.

Door hinge installation area

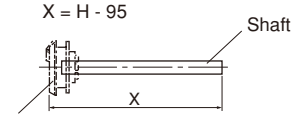


Install the door hinge in the shaded area.

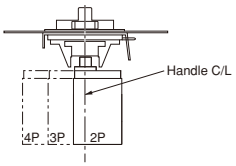


Optional shaft BW9VSG0

X = H - 95

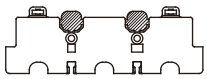


Latch (included with the handle)



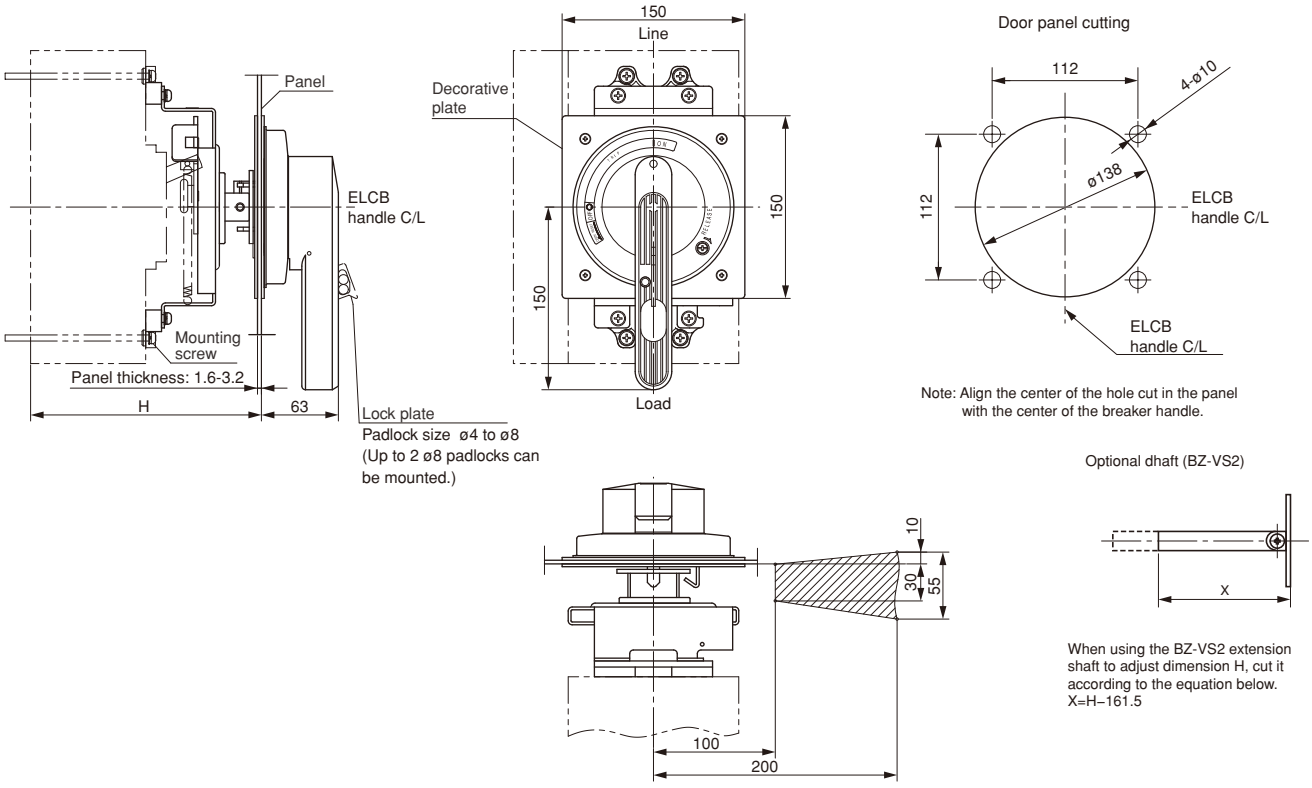
ELCB	Handle type	Optional shaft	Standard type H	With the optional shaft (X=154)		Mounting screw	Mass (kg)
				H	Area in which the hinge with H can be installed		
EW32 EW50 EW63 EW100	**BZ6V10D**	**BZ6VS1D**	105±2	250±2	140 to 250	M4 x 80	0.64
	BZ6V10D-X		113±2	258±2	150 to 258	Contact FUJI.	0.64
	BZ6V10D-P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



Earth leakage Circuit Breakers
G-TWIN series External accessories

• BW9V0HA, BW9V0JA



Install the door hinge in the shaded area.

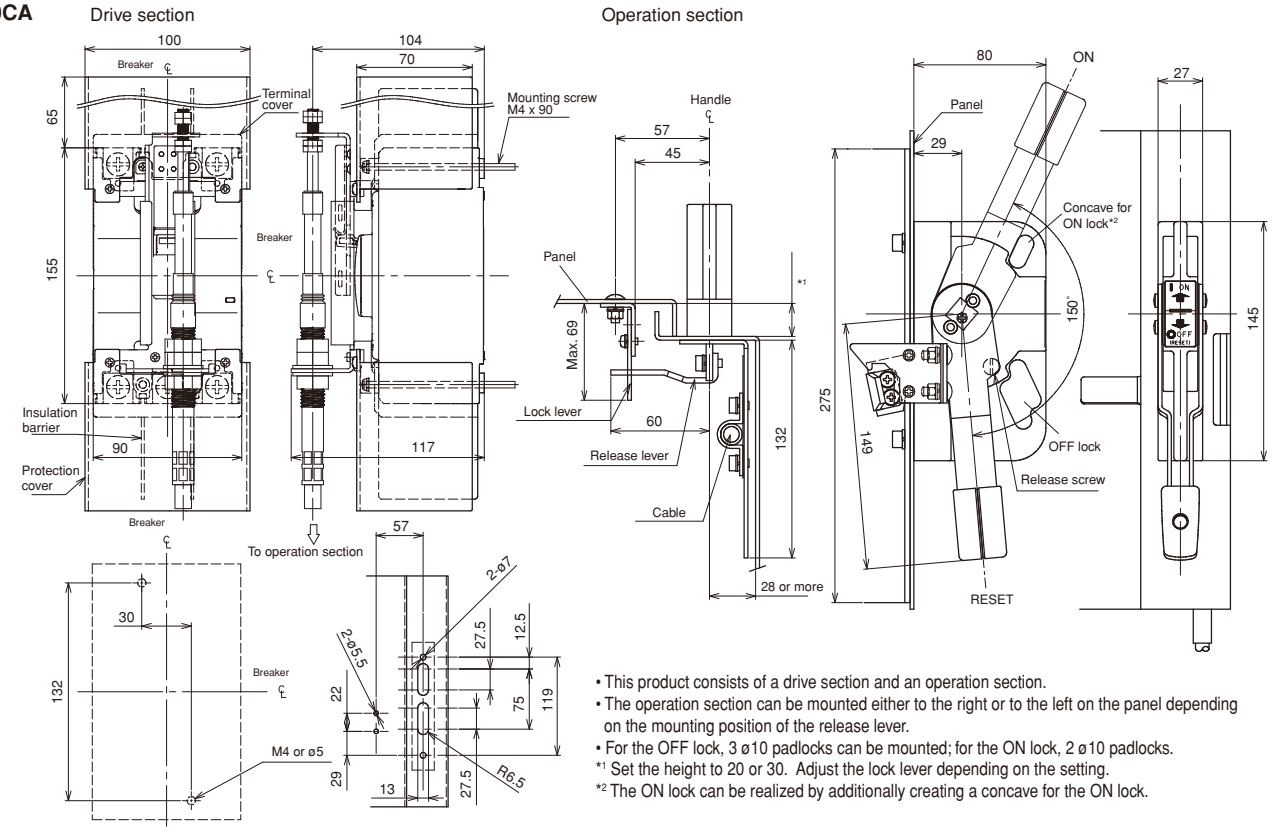
ELCB	Handle type	Optional shaft	Standard type H	With the optional shaft (X=154)		Mass (kg)
				H	Area in which the hinge with H can be installed	
EW400	**BW9V0HA**	**BZ-VS2**	190±2	250±2	202 to 250	2.2
	BW9V0HA-X		202±2	262±2	214 to 262	
	BW9V0HA-P		204±2	264±2	216 to 264	
EW630	**BW9V0JA**		190±2	250±2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

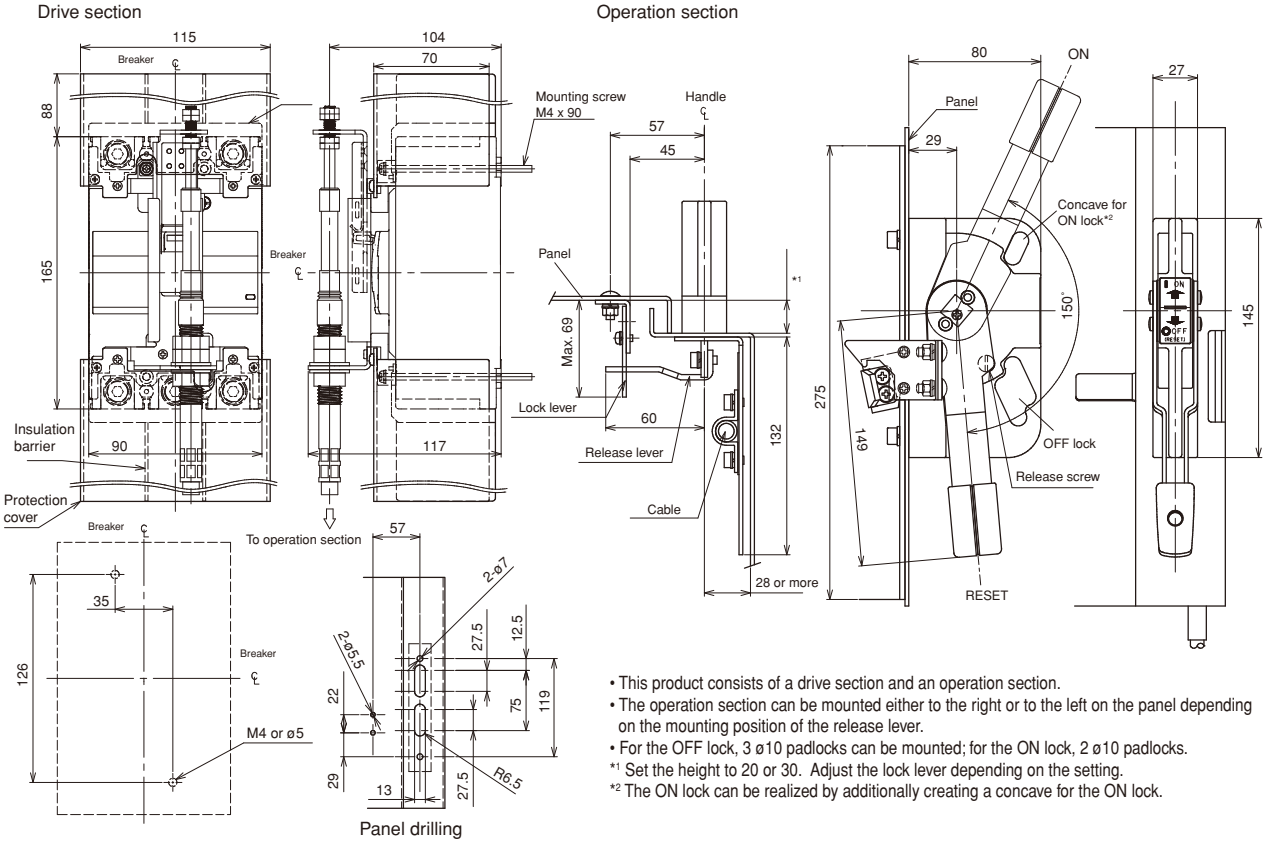


Panel drilling

- 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**



Panel drilling

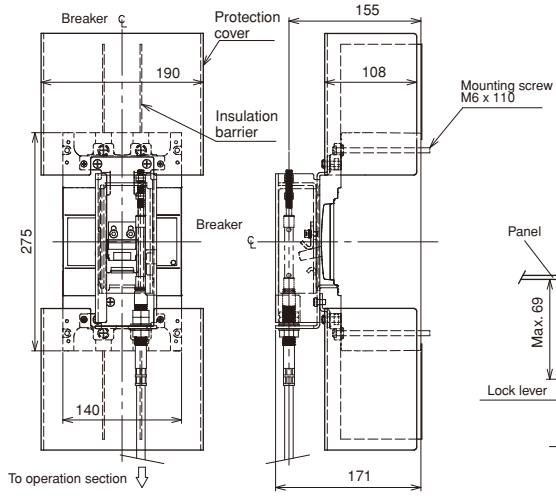
- This product consists of a drive section and an operation section.
- The operation section can be mounted either to the right or to the left on the panel depending on the mounting position of the release lever.
- For the OFF lock, 3 ø10 padlocks can be mounted; for the ON lock, 2 ø10 padlocks.

*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.

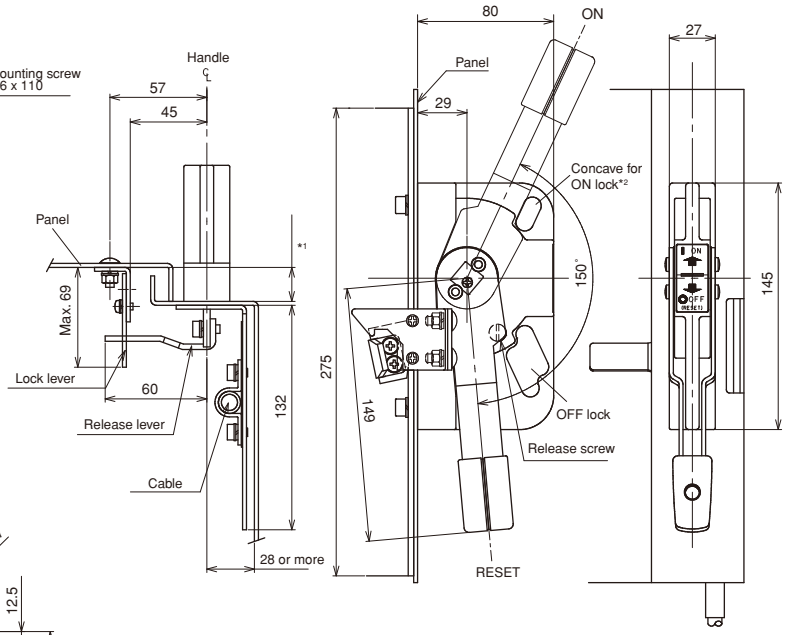
Earth leakage Circuit Breakers
G-TWIN series External accessories

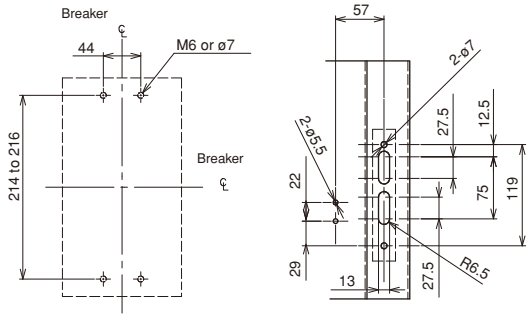
• **BW9F0HA**

Drive section



Operation section





Panel drilling

- 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**

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


Rainproof

■ 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

Earth leakage Circuit Breakers
G-TWIN series External accessories

■ Dimensions, mm

Fig.1 Standard

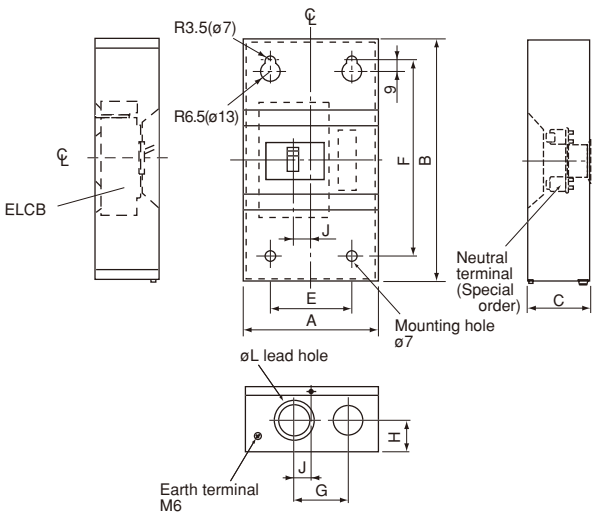


Fig.2 With V type handle
BW9UVBA-3A, BW9UVBA-3B
BW9UVCA-3, BW9UVGA-3

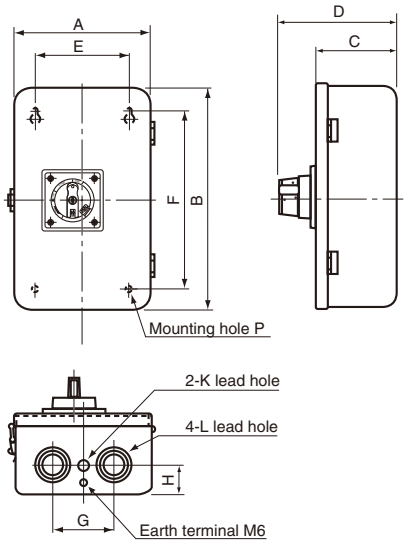
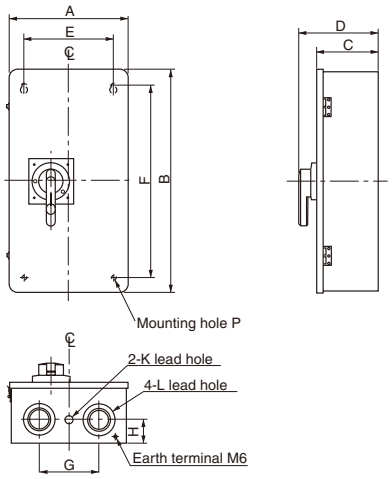
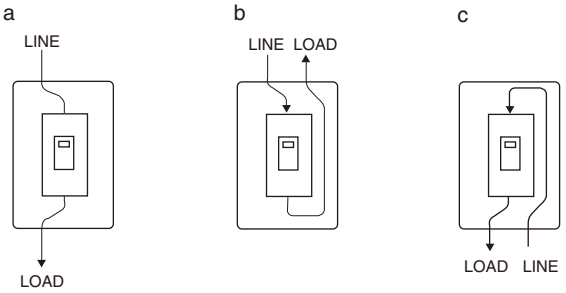


Fig3. With V type handle
BW9UVHA-3, BW9UVJA-3



■ 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

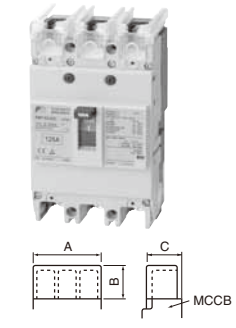

Long type

Long type

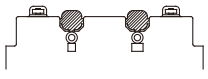
Type		No. of poles	ELCB	Dimensions (mm)			Packing quantity	Appearance
Transparent	Gray			A	B	C		
BW9BTAA-L2	**BW9BTAA-L2W**	2	EW32☐-2P EW50☐-2P	50	40	53	2	• Preventing exposure of live section when amplifier's terminals are connected • Snap-on mounting
BW9BTAA-L3	**BW9BTAA-L3W**	2, 3	EW32☐-3P EW50☐-3P 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.

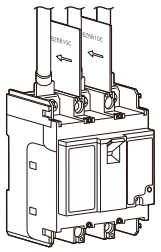


Earth leakage Circuit Breakers
G-TWIN series External accessories

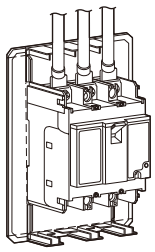
Insulation barriers

■ 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

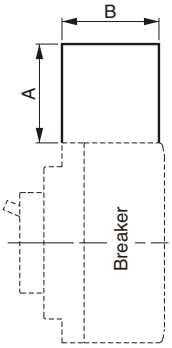


Earth barrier

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

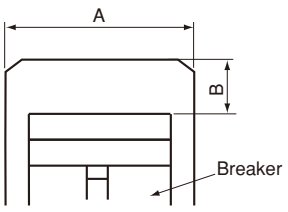
Interphase barrier



Earth barrier

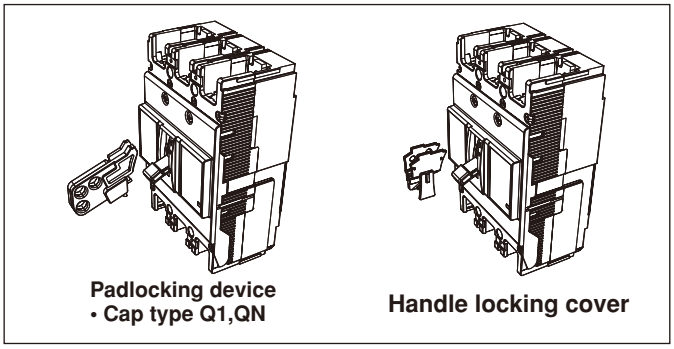
ELCB	Earth barrier				
	Type	Dimensions (mm)		Packing quantity	Mass (g)
		A	B		
EW32□-2P EW50□-2P	**BZ6BL10C2**	100 (50, 75)*1	43 (30)*1	1	33
EW32□-3P EW50□-3P EW63□-3P EW100□-2P EW100□-3P	**BZ6BL10C3**	125 (75, 100)*1	43 (30)*1	1	41

Earth barrier



Note: *1 Can be cut to dimensions

Padlocking device and handle locking cover



■ Description

• Padlocking device

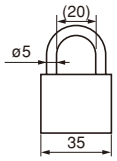
These padlocking device lock the Breaker handle in the OFF position. Use a commercially available padlock with a shackle diameter of 3.5 to 5mm (5mm for the BZ6L10CA).

• Handle locking covers (Order Separately)

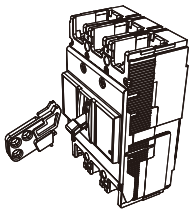
These simple handle locking covers can be easily installed by the user.
Tripping is possible while the Breaker is locked ON.

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**

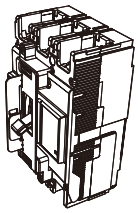
Notes:
*1 Specify Locks when ordering the Breaker. (▲: Factory-mounted)
*2 ON and OFF locking is possible.
*3 If a padlock is required, use a commercially available padlock with the dimensions shown in the diagram at the right.
*4 Three padlocks with shackles from 3.5 to 8 mm in diameter can be attached.



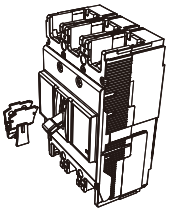
Padlocking device
• Cap type Q1



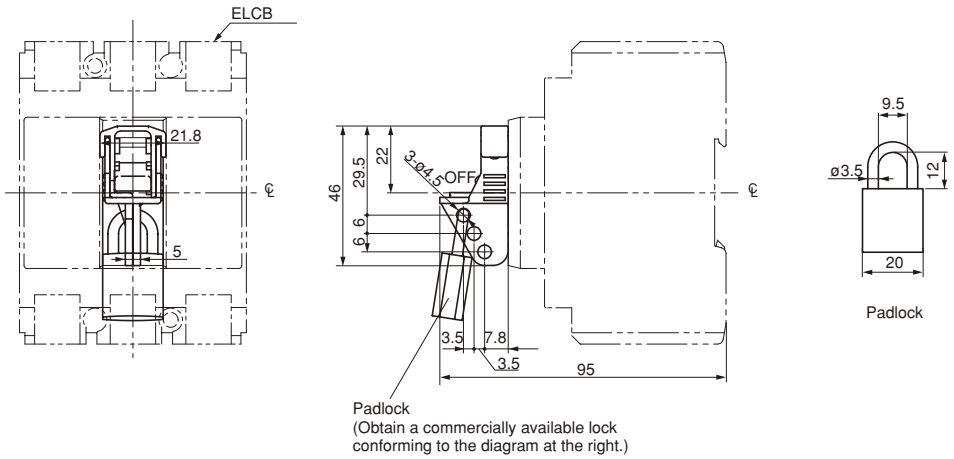
• Plate type Q2



Handle locking cover



Q1: BZ6L10CA (OFF-locking Padlocking device)



Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Type number nomenclature

■ Type Number Nomenclature

● Main unit

EW 50 R B G U - 3P 050 B

Basic type

Symbol	Category
BW	G-TWIN molded case circuit breaker (MCCB)
EW	G-TWIN earth leakage circuit breaker (ELCB)

Frame

Symbol	Frame
32	32AF
50	50AF
63	63AF

Breaking capacity category

Standard product

Symbol	Breaking capacity Icu (JIS/IEC/EN/GB 230 V AC)		
	32AF	50AF	63AF
E	–	7.5kA	7.5kA
S	7.5kA	15kA	15kA

Global product

Symbol	Breaking capacity (UL489 240V AC)
	50AF
R	18kA

Series name

Symbol	Series name
B	G-TWIN Λ (Lambda) Series

Product category

Symbol	Application
G	MCCB/ELCB for line protection use

G-TWIN series

Symbol	Application
Blank	Standard
U	UL489 Listed

Number of poles

Symbol	MCCB
2P	2-pole
3P	3-pole

Rated current
Line protection use

Symbol	Rated current	MCCB	ELCB
003	3A	○	–
005	5A	○	○
010	10A	○	○
015	15A	○	○
020	20A	○	○
030	30A	○	○
032	32A	○	○
040	40A	○	○
050	50A	○	○
060	60A	○	○
063	63A	○	○

Rated sensitive current (specified for ELCB only)

Symbol	Rated sensitive current	Remarks
B	30mA	
D	50mA	Global product only
C	100mA	
E	200mA	
H	500mA	

● Accessory

EW63SBG-3P063B - W K F□ R□ A T

Main unit type

Auxiliary switch

Symbol	Accessory type
W	Standard SPDT
V	Standard 2PDT
1	For low level circuit SPDT
2	For low level circuit 2PDT

Alarm switch

Symbol	Accessory type
K	Standard SPDT
8	For low level circuit SPDT

Shunt trip device
F□ (Specify voltage rating symbol for □)

Symbol	Voltage rating
FR	AC/DC24V
F6	AC100-130V/DC100-110V
FK	AC200-240V/DC200-220V
FP	AC380-440V

Accessory exclusive for ELCB

Symbol	Accessory type
T	Trip lead

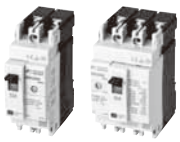
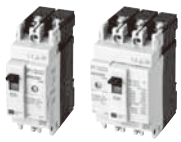
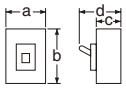
Accessory connecting method

Symbol	Accessory type
Blank	Lead wire system
A	Terminal block system

Undervoltage trip device
R□ (Specify voltage rating symbol for □)

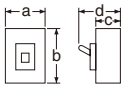
Symbol	Accessory type
RR	DC24V
RL	DC100-110V
RZ	AC24V
R6	AC100-130V
R4	AC200-240V
RP	AC380-415V
RO	AC400-440V

■ Molded Case Circuit Breakers for Line Protection Use (Standard Products)

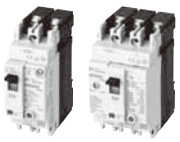
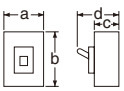
Ampere frame				32		50				63					
Type				**BW32SBG**		**BW50EBG**		**BW50SBG**		**BW63EBG**		**BW63SBG**			
Appearance															
Numbers of poles and elements				2P2E	3P3E	2P2E	3P3E	2P2E	3P3E	2P2E	3P3E	2P2E	3P3E		
Rated insulation voltage Ui[V]			AC	440		440		440		440		440			
			DC	125		–		125		–		125			
Rated impulse withstand voltage Uimp[kV]				6		6		6		6		6			
Rated current Reference temperature 40°C In[A]				3,5,10,15,20,30,32		3,5,10,15,20,30,32,40,50				60,63					
Rated frequency [Hz]				50-60		50-60		50-60		50-60		50-60			
Rated breaking capacity Icu/Ics [kA]	IEC60947-2 EN60947-2 JISC8201-2-1	AC	440V	2.5/2.5		2.5/2.5		7.5/4		2.5/2.5		7.5/4			
			415V	5/5		5/5		10/5		5/5		10/5			
			400V	5/5		5/5		10/5		5/5		10/5			
			380V	5/5		5/5		10/5		5/5		10/5			
			240V	7.5/7.5		7.5/7.5		15/15		7.5/7.5		15/15			
			230V	7.5/7.5		7.5/7.5		15/15		7.5/7.5		15/15			
		DC	125V	10/10		–/–		10/10		–/–		10/10			
	GB14048.2	AC	400V	5/5		5/5		10/5		5/5		10/5			
			230V	7.5/7.5		7.5/7.5		15/15		7.5/7.5		15/15			
		DC	125V	10/10		–/–		10/10		–/–		10/10			
Isolation compliance				Compliant		Compliant		Compliant		Compliant		Compliant			
Reverse connection				Possible		Possible		Possible		Possible		Possible			
Utilization category				A		A		A		A		A			
Use environment condition				Pollution degree 3		Pollution degree 3		Pollution degree 3		Pollution degree 3		Pollution degree 3			
Outline dimensions [mm] 			a	36	54	36	54	36	54	36	54	36	54		
			b	100		100		100		100		100			
			c	68		68		68		68		68			
			d	90		90		90		90		90			
Front mounting type product mass [kg]			Page	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.5		
Mounting and connection	Front mounting type (screw mounting, IEC 35 mm rail mounting)		B1-186 to 188	○		○		○		○		○			
Accessories	Auxiliary switch	W	B1-199	○		○		○		○		○			
	Alarm switch	K	B1-199	○		○		○		○		○			
	Shunt trip device	F□	B1-199	○		○		○		○		○			
	Undervoltage trip device	R□	B1-199	–	○	–	○	–	○	–	○	–	○		
	Lead wire terminal block	A	B1-204	○		○		○		○		○			
Separately sold parts	Auxiliary switch	W	B1-192	○		○		○		○		○			
	Alarm switch	K	B1-192	○		○		○		○		○			
	Shunt trip device	F□	B1-192	○		○		○		○		○			
	External operating handle — Panel mounting	V	B1-201	○		○		○		○		○			
	External operating handle — Main unit mounting	N	B1-201	○		○		○		○		○			
	Terminal cover — Short type	TS	B1-201	○		○		○		○		○			
	Terminal cover — Long type	TL	B1-201	○		○		○		○		○			
	Insulation barrier — Interphase barrier	B	B1-201	○		○		○		○		○			
	Handle locking cover	L1	B1-201	○		○		○		○		○			
	Handle key lock	Q2	B1-201	○		○		○		○		○			
Conformance to standards	IEC60947-2 (TÜV certificate)			△											
	EN60947-2 (CE marking)			CE											
	GB14048.2 (CCC certificate)			CCC											
	JISC8201-2-1			Self-declaration of conformity											
	Electrical Appliances and Materials Safety Act			Specified Electrical Appliances and Materials PS E											
Tripping device				Thermal-electromagnetic method											
Trip button				Provided											
Characteristics curves and dimensions on pages				B1-203, 204											

Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Specifications

■ Molded Case Circuit Breakers for Line Protection Use (Global Products)

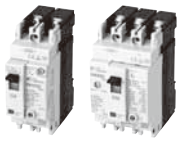
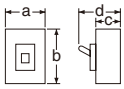
Ampere frame					50	
Type					**BW50RBGU**	
Appearance						
Numbers of poles and elements					2P2E	3P3E
Rated insulation voltage Ui[V]			AC		440	
			DC		125	
Rated impulse withstand voltage Uimp[kV]					6	
Rated current Reference temperature 40°C In[A]					3,5,10,15,20,30,40,50	
Rated frequency [Hz]					50-60	
Rated breaking capacity Icu/Ics [kA]	UL489, CAN/CSA22.2 No.5(cUL)		AC	240V	18	
	IEC60947-2 EN60947-2 JISC8201-2-1		AC	440V	7.5/4	
				415V	10/5	
				400V	10/5	
				380V	10/5	
				240V	15/15	
				230V	15/15	
			DC	125V	10/10	
	GB14048.2		AC	400V	10/5	
				230V	15/15	
			DC	125V	10/10	
Isolation compliance					Compliant	
Reverse connection					Possible	
Utilization category					A	
Use environment condition					Pollution degree 3	
Outline dimensions [mm]				a	36	54
				b	120 (including the terminal cover)	
				c	68	
				d	90	
Front mounting type product mass [kg]				Page	0.5	0.6
Mounting and connection	Front mounting type (screw mounting, IEC 35 mm rail mounting)			B1-186 to 188	○	
Accessories	Auxiliary switch		W	B1-199	○	
	Alarm switch		K	B1-199	○	
	Shunt trip device		F □	B1-199	○	
	Undervoltage trip device		R □	B1-199	–	○
	Lead wire terminal block		A	B1-207	○	
Separately sold parts	Auxiliary switch		W	B1-192	○	
	Alarm switch		K	B1-192	○	
	Shunt trip device		F □	B1-192	○	
	External operating handle	Panel mounting	V	B1-201	○	
		Main unit mounting	N	B1-201	○	
	Terminal cover	Short type	TS	B1-201	○ (Included)	
		Long type	TL	B1-201	○	
	Insulation barrier	Interphase barrier	B	B1-201	○	
	Handle locking cover		L1	B1-201	○	
	Handle key lock		Q2	B1-201	○	
Conformance to standards	UL489, CAN/CSA22.2 No.5(cUL)				c UL us LISTED (File No.E90584)	
	IEC60947-2 (TÜV certificate)					
	EN60947-2 (CE marking)				CE	
	GB14048.2 (CCC certificate)					
	JISC8201-2-1				Self-declaration of conformity	
	Electrical Appliances and Materials Safety Act				Specified Electrical Appliances and Materials PS E	
Tripping device					Thermal-electromagnetic method	
Trip button					Provided	
Characteristics curves and dimensions on pages					B1-206, 207	

■ Earth Leakage Circuit Breakers for Line Protection Use (Standard Products)

Ampere frame				32		50				
Type				**EW32SBG**		**EW50EBG**		**EW50SBG**		
Appearance										
Numbers of poles and elements				2P2E	3P3E	2P2E	3P3E	2P2E	3P3E	
Applied circuit				1ø2W	1ø2W,1ø3W,3ø2W	1ø2W	1ø2W,1ø3W,3ø2W	1ø2W	1ø2W,1ø3W,3ø2W	
Rated operational voltage Ue[V]				100-240V AC	100-440V AC	100-240V AC	100-440V AC	100-240V AC	100-440V AC	
Rated impulse withstand voltage Uimp[kV]				4	6	4	6	4	6	
Rated current Reference temperature 40°C In[A]				5,10,15,20,30,32		5,10,15,20,30,32,40,50				
Rated frequency [Hz]				50-60		50-60		50-60		
Rated sensitive current IΔn[mA]				30	30,100,200,500	30	30,100,200,500	30	30,100,200,500	
Maximum operating time [sec]			IΔn	0.1		0.1		0.1		
			5IΔn	0.04		0.04		0.04		
Rated breaking capacity Icu/Ics [kA]	IEC60947-2 EN60947-2 JISC8201-2-2	AC	440V	–/–	2.5/2.5	–/–	2.5/2.5	–/–	7.5/4	
			415V	–/–	5/5	–/–	5/5	–/–	10/5	
			400V	–/–	5/5	–/–	5/5	–/–	10/5	
			380V	–/–	5/5	–/–	5/5	–/–	10/5	
			240V	7.5/7.5	7.5/7.5	7.5/7.5	7.5/7.5	15/15	15/15	
			230V	7.5/7.5	7.5/7.5	7.5/7.5	7.5/7.5	15/15	15/15	
			100V	7.5/7.5	7.5/7.5	7.5/7.5	7.5/7.5	15/15	15/15	
	GB14048.2	AC	400V	–/–	5/5	–/–	5/5	–/–	10/5	
			230V	7.5/7.5	7.5/7.5	7.5/7.5	7.5/7.5	15/15	15/15	
Isolation compliance				Compliant		Compliant		Compliant		
Reverse connection				Not possible		Not possible		Not possible		
Utilization category				A		A		A		
Use environment condition				Pollution degree 3		Pollution degree 3		Pollution degree 3		
Outline dimensions [mm]			a	36	54	36	54	36	54	
			b	100		100		100		
			c	68		68		68		
			d	90		90		90		
Front mounting type product mass [kg]			Page	0.4	0.6	0.4	0.6	0.4	0.6	
Mounting and connection	Front mounting type (screw mounting, IEC 35 mm rail mounting)		B1-186 to 188	○		○		○		
Accessories	Auxiliary switch	W	B1-199	○		○		○		
	Alarm switch	K	B1-199	○		○		○		
	Shunt trip device	F□	B1-199	–	○	–	○	–	○	
	Undervoltage trip device	R□	B1-199	–	○	–	○	–	○	
	Trip lead	T	B1-191	○		○		○		
	Lead wire terminal block	A	B1-210	○		○		○		
Separately sold parts	Auxiliary switch	W	B1-192	○		○		○		
	Alarm switch	K	B1-192	○		○		○		
	Shunt trip device	F□	B1-192	–	○	–	○	–	○	
	External operating handle (Panel mounting)	V	B1-201	○		○		○		
	External operating handle (Main unit mounting)	N	B1-201	○		○		○		
	Terminal cover (Short type)	TS	B1-201	○		○		○		
	Terminal cover (Long type)	TL	B1-201	○		○		○		
	Insulation barrier (Interphase barrier)	B	B1-201	○		○		○		
	Handle locking cover	L1	B1-201	○		○		○		
	Handle key lock	Q2	B1-201	○		○		○		
Conformance to standards	IEC60947-2 (TÜV certificate)									
	EN60947-2 (CE marking)									
	GB14048.2 (CCC certificate)									
	JISC8201-2-1			Self-declaration of conformity						
	Electrical Appliances and Materials Safety Act			Specified Electrical Appliances and Materials						
Tripping device				Thermal-electromagnetic method						
Trip button				Provided						
Earth leakage indication				Mechanical button						
Characteristics curves and dimensions on pages				B1-209, 210						

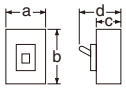
Rated voltage (V)	Operational voltage range (V)
100-240V AC	80 to 264V AC
100-440V AC	80 to 484V AC

Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Specifications

Ampere frame				63			
Type				**EW63EBG**		**EW63SBG**	
Appearance							
Numbers of poles and elements				2P2E	3P3E	2P2E	3P3E
Applied circuit				1ø2W	1ø2W,1ø3W,3ø2W	1ø2W	1ø2W,1ø3W,3ø2W
Rated operational voltage Ue[V]				100-240V AC	100-440V AC	100-240V AC	100-440V AC
Rated impulse withstand voltage Uimp[kV]				4	6	4	6
Rated current Reference temperature 40°C In[A]				60,63			
Rated frequency [Hz]				50-60			
Rated sensitive current IΔn[mA]				30	30,100,200,500	30	30,100,200,500
Maximum operating time [sec]			IΔn	0.1		0.1	
			5IΔn	0.04		0.04	
Rated breaking capacity Icu/Ics [kA]	IEC60947-2 EN60947-2 JISC8201-2-2	AC	440V	–/–	2.5/2.5	–/–	7.5/4
			415V	–/–	5/5	–/–	10/5
			400V	–/–	5/5	–/–	10/5
			380V	–/–	5/5	–/–	10/5
			240V	7.5/7.5	7.5/7.5	15/15	15/15
			230V	7.5/7.5	7.5/7.5	15/15	15/15
			100V	7.5/7.5	7.5/7.5	15/15	15/15
	GB14048.2	AC	400V	–/–	5/5	–/–	10/5
			230V	7.5/7.5	7.5/7.5	15/15	15/15
Isolation compliance				Compliant		Compliant	
Reverse connection				Not possible		Not possible	
Utilization category				A		A	
Use environment condition				Pollution degree 3		Pollution degree 3	
Outline dimensions [mm] 			a	36	54	36	54
			b	100		100	
			c	68		68	
			d	90		90	
Front mounting type product mass [kg]			Page	0.4	0.6	0.4	0.6
Mounting and connection	Front mounting type (screw mounting, IEC 35 mm rail mounting)		B1-186 to 188	○		○	
Accessories	Auxiliary switch	W	B1-199	○		○	
	Alarm switch	K	B1-199	○		○	
	Shunt trip device	F □	B1-199	–	○	–	○
	Undervoltage trip device	R □	B1-199	–	○	–	○
	Trip lead	T	B1-191	○		○	
	Lead wire terminal block	A	B1-210	○		○	
Separately sold parts	Auxiliary switch	W	B1-192	○		○	
	Alarm switch	K	B1-192	○		○	
	Shunt trip device	F □	B1-192	–	○	–	○
	External operating handle (Panel mounting)	V	B1-201	○		○	
	External operating handle (Main unit mounting)	N	B1-201	○		○	
	Terminal cover (Short type)	TS	B1-201	○		○	
	Terminal cover (Long type)	TL	B1-201	○		○	
	Insulation barrier (Interphase barrier)	B	B1-201	○		○	
	Handle locking cover	L1	B1-201	○		○	
	Handle key lock	Q2	B1-201	○		○	
Conformance to standards	IEC60947-2 (TÜV certificate)			△			
	EN60947-2 (CE marking)			CE			
	GB14048.2 (CCC certificate)			CCC			
	JISC8201-2-1			Self-declaration of conformity			
	Electrical Appliances and Materials Safety Act			Specified Electrical Appliances and Materials PS E			
Tripping device				Thermal-electromagnetic method			
Trip button				Provided			
Earth leakage indication				Mechanical button			
Characteristics curves and dimensions on pages				B1-209, 210			

Rated voltage (V)	Operational voltage range (V)
100-240V AC	80 to 264V AC
100-440V AC	80 to 484V AC

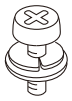
■ Earth Leakage Circuit Breakers for Line Protection Use (Global Products)

Ampere frame					50	
Type					**EW50RBGU**	
Appearance						
Numbers of poles and elements					2P2E	3P3E
Applied circuit					1ø2W	1ø2W,3ø3W
Rated operational voltage Ue[V]				IEC	100-240V AC	100-440V AC
				UL	240V AC	240V AC
Rated impulse withstand voltage Uimp[kV]					4	6
Rated current Reference temperature 40°C In[A]					5,10,15,20,30,40,50	
Rated frequency [Hz]					50-60	
Rated sensitive current IΔn [mA]					30	30,50,100,200,500
Maximum operating time [sec]				IΔn	0.1	
				5IΔn	0.04	
Rated breaking capacity Icu/Ics [kA]	UL489, CAN/CSA22.2 No.5(cUL)	AC		240V	18	18
	IEC60947-2 EN60947-2 JISC8201-2-2	AC		440V	–/–	7.5/4
				415V	–/–	10/5
				400V	–/–	10/5
				380V	–/–	10/5
				240V	15/15	15/15
				230V	15/15	15/15
				100V	15/15	15/15
	GB14048.2	AC		400V	–/–	10/5
				230V	15/15	15/15
Isolation compliance					Compliant	
Reverse connection					Not possible	
Utilization category					A	
Use environment condition					Pollution degree 3	
Outline dimensions [mm]				a	36	54
				b	120 (including the terminal cover)	
				c	68	
				d	90	
Front mounting type product mass [kg]				Page	0.5	0.6
Mounting and connection	Front mounting type (screw mounting, IEC 35 mm rail mounting)			B1-186 to 188	○	
Accessories	Auxiliary switch		W	B1-199	○	
	Alarm switch		K	B1-199	○	
	Shunt trip device		F□	B1-199	–	○
	Undervoltage trip device		R□	B1-199	–	○
	Lead wire terminal block		A	B1-213	○	
Separately sold parts	Auxiliary switch		W	B1-192	○	
	Alarm switch		K	B1-192	○	
	Shunt trip device		F□	B1-192	–	○
	External operating handle	Panel mounting	V	B1-201	○	
		Main unit mounting	N	B1-201	○	
	Terminal cover	Short type	TS	B1-201	○ (Included)	
		Long type	TL	B1-201	○	
	Handle locking cover		L1	B1-201	○	
	Handle key lock		Q2	B1-201	○	
Conformance to standards	UL489, CAN/CSA22.2 No.5(cUL)				c UL us LISTED (File No.E90584)	
	IEC60947-2 (TÜV certificate)					
	EN60947-2 (CE marking)				CE	
	GB14048.2 (CCC certificate)					
	JISC8201-2-1				Self-declaration of conformity	
	Electrical Appliances and Materials Safety Act				Specified Electrical Appliances and Materials PS E	
Tripping device					Thermal-electromagnetic method	
Trip button					Provided	
Earth leakage indication					Mechanical button	
Characteristics curves and dimensions on pages					B1-212, 213	

Standards	Rated voltage (V)	Operational voltage range (V)
UL	240V AC	80 to 264V AC
IEC	100-240V AC	80 to 264V AC
	100-440V AC	80 to 484V AC

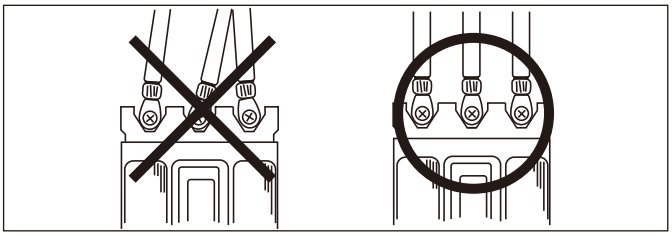
Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Mounting and connection

■ Front Mounting Type

Appearance		Screw		Tightening torque [N•m]	MCCB main unit applicable type (basic designation)	ELCB main unit applicable type (basic designation)
		Shape	Screw size			
For crimp/stick terminals (front connection)		 Cross-recessed pan-head screw with washer	M5 x 14	2.0 to 3.0	**BW32** **BW50**	**EW32** **EW50**
			M6 x 14	4.0 to 5.0	**BW63**	**EW63**

B1

Mount the crimp terminals to ensure that the wires for the respective poles are in parallel as shown in the figure below.



(1) List of applicable crimp terminals

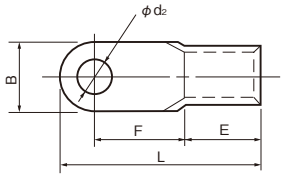
	Cross section area of electric wire used [mm²]		2	5.5	8	14	22
	Allowable current [A] (600V IV electric wire 30°C Insulator wiring)		27	49	61	88	115
	Range of electric wire used [mm²]		1.04 to 2.63	2.63 to 6.64	6.64 to 10.52	10.52 to 16.78	16.78 to 26.66
Frame [A]	MCCB main unit applicable type (basic designation)	ELCB main unit applicable type (basic designation)					
32	**BW32**	**EW32**	R2-5	R5.5-5	R8-5	R14-5	
50	**BW50**	**EW50**					
63	**BW63**	**EW63**	R2-6	R5.5-6	R8-6	R14-6	JST 22-S6

(Explanation) R: JIS C2805, JST: provided by JST Mfg. Co., Ltd.

● Crimp terminal size

Model number	Shape	Diameter of screw used	Outline dimensions [mm]						Applicable electric wire [mm²]
			ød₂	B	L	F	E	Plate thickness	
R2-5	A	M5	5.3	9.5	16.8	7.3	4.8	0.8	1.04 to 2.63
R2-6		M6	6.4	12.0	21.8	11.0			
R5.5-5		M5	5.3	9.5	19.8	8.3	6.8	1.0	2.63 to 6.64
R5.5-6		M6	6.4	12.0	25.8	13.0			
R8-5		M5	5.3		29.8	9.3	8.5	1.2	6.64 to 10.52
R8-6		M6	6.4						
R14-5		M5	5.3			13.3	10.5	1.5	10.52 to 16.78
R14-6		M6	6.4						
22-S5		M5	5.3		30.0	12.0	12.0	1.8	16.78 to 26.66
L330T459-23		M5	5.3						
22-S6		M6	6.4						

Shape A



Note: Excerpt from JST's catalog

● Wire connecting method (global products)

(1) Notes on wire (conductor) connection

- Connect wires to UL breakers according to the National Electrical Code (NEC) or Canadian Electrical Code (CEC) Part 1.
- For connection, use 75°C copper wires. Use of UL- or CSA-approved wires is recommended.
- A large current flow including a short-circuit current flow may generate a very large electromagnetic force between wires. Ensure that wires are securely supported.
- Regularly retighten the tightening screws of the terminals.
- Do not cover the arc gas outlet.

● Connectable wire and tightening torque

Crimp terminal connection

MCCB main unit type	ELCB main unit type	Rated current [A]	Applicable crimp terminal (Provided by JST Mfg.)	Applicable crimp terminal (Provided by Nichifu)	Applicable crimp terminal (Provided by Daido Solderless Terminal Mfg.)	Connectable wire size 75°C wire	Tightening torque [N•m]	Screw head type and size [mm]
BW50RBGU	**EW50RBGU**	3	2-M5, R2-5	R2-5, R2-5M	R2-5, R2-S5	14AWG	2.0 to 3.0	Cross-recessed pan-head screw with washer
		5						
		10						
		15						
		20	3.5-5, 3.5-R5, 5-S5, 5.5-5NS, R5.5-5	R3.5-5S, R3.5-5L, R5.5-5, R5.5-5N, R5.5-5S	R3.5-5, R5.5-5, R5.5-L5, R5.5-S5	12AWG		
		30	5-S5, 5.5-5NS, R5.5-5	R5.5-5, R5.5-5N, R5.5-5	R5.5-5, R5.5-L5, R5.5-S5	10AWG		
		40	8-5NS,8-NK5, 8-5L5NS	R8-5, R8-5S	R8-5, R8-S5	8AWG		
		50						

Note 1: AWG/MCM is a system to indicate UL wire sizes.
Note 2: Use 75°C wires for connection. (UL- or CSA-approved wires)
Note 3: For the crimping tool, be sure to use UL- or CSA-approved products from manufacturers.

■ Arc Space

Figure 1

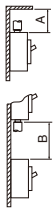


Figure 4

Electric wire direct connection

Figure 2

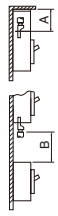


Figure 5

Figure 3

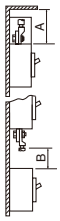


Figure 6

Crimp terminal connection

Figure 7

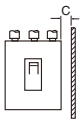
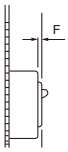


Figure 18



Ensure the values in the table below for the insulation space according to the conditions given in the respective drawings. For wiring, take into consideration various situations that may arise in actual use conditions and provide bare conductors with taping or insulation barriers for the ranges of dimensions shown in the table below.
Insulation outside the arc space may need reinforcement depending on the use conditions.

[Unit: mm]

Basic designation		Ceiling distance	Vertical distance	Side plate distance	Front plate distance
MCCB	ELCB	A	B	C	F
BW32	**EW32**	10	20	10	0
BW50	**EW50**				
BW63	**EW63**				
		Figure 1, 2, 3	Figure 4, 5, 6	Figure 7	Figure 8

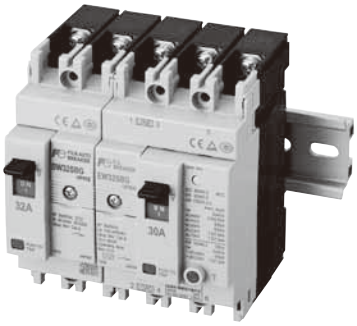
Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Mounting and connection

■ IEC 35 mm Rail Mounting

Mounting on IEC 35 mm rails is possible as standard.

Main unit applicable type (basic designation)	
MCCB	ELCB
BW32 **BW50** **BW63**	**EW32** **EW50** **EW63**

Note 1: Mounting pitch for rail fixing screws of within 250 mm is recommended.
Note 2: Applicable rails: TH35-7.5, TH35-7.5AL and TH35-15AL. (Types of Fuji Electric FA Components & Systems products)
* Main unit mounting screws are not included. When necessary, use commercially-available screws (recommended size: M4 x 60).



Note: For vertical mounting, use holding brackets (type LT9E-T1 provided by Fuji Electric Technica Co., Ltd.).

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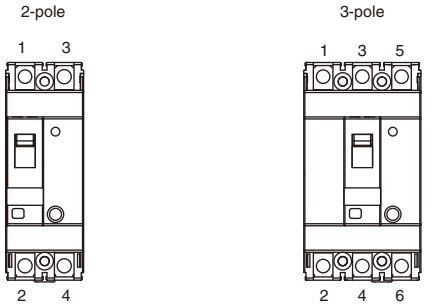
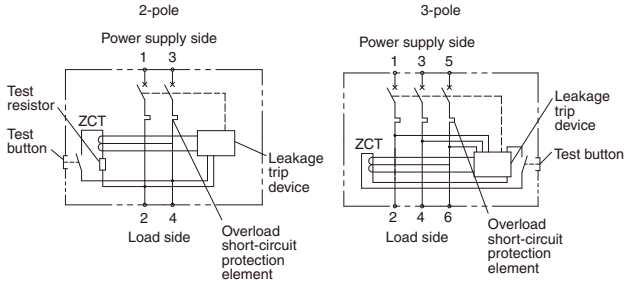
■ Terminal Number

● ELCB terminal number



■ Internal Wiring Diagram

● ELCB internal wiring diagram



■ Internal Resistance and Power Consumption

● MCCB

AF	Type	Rated current [A]	Internal resistance (mΩ) (for one phase)	Power consumption (W) (for three phases)
32AF 50AF	**BW32SBG** **BW50EBG** **BW50SBG** **BW50RBGU**	3	116.0	3.1
		5	50.5	3.8
		10	13.8	4.1
		15	6.5	4.4
		20	4.1	5.2
		30	2.8	7.6
		32	2.8	8.6
50AF	**BW50EBG** **BW50SBG** **BW50RBGU**	40	1.7	8.2
		50	1.5	11.3
63AF	**BW63EBG** **BW63SBG**	60	1.1	11.9
		63	1.1	13.1

● ELCB

AF	Type	Rated current [A]	Internal resistance (mΩ) (for one phase)	Power consumption (W) (for three phases)
32AF 50AF	**EW32SBG** **EW50EBG** **EW50SBG** **EW50RBGU**	5	50.5	3.8
		10	13.8	4.1
		15	6.5	4.4
		20	4.1	5.2
		30	2.8	7.6
		32	2.8	8.6
50AF	**EW50EBG** **EW50SBG** **EW50RBGU**	40	1.9	9.1
		50	1.7	12.8
63AF	**EW63EBG** **EW63SBG**	60	1.3	14.0
		63	1.3	15.5

■ Internal Accessories

(1)-1 Variation of internal accessories (MCCB)

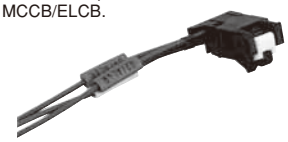
Auxiliary switch

Switch that electrically indicates the ON/OFF state of MCCB/ELCB.

Type symbol : W	See page: B1-199

Alarm switch

Switch that electrically indicates the trip state of MCCB/ELCB.



Type symbol : K	See page : B1-199

Shunt trip device

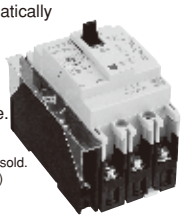
Device that electrically trips MCCB/ELCB from a remote place.

Type symbol : F	See page : B1-199

Undervoltage trip device

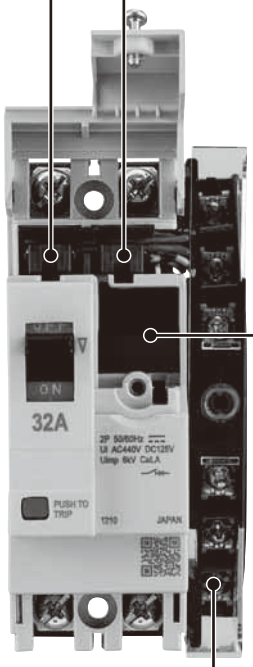
Device that automatically trips MCCB/ELCB when the circuit voltage has decreased below the specified value.
(Externally mounted)

Note 1. Not separately sold. (Factory mounting only)

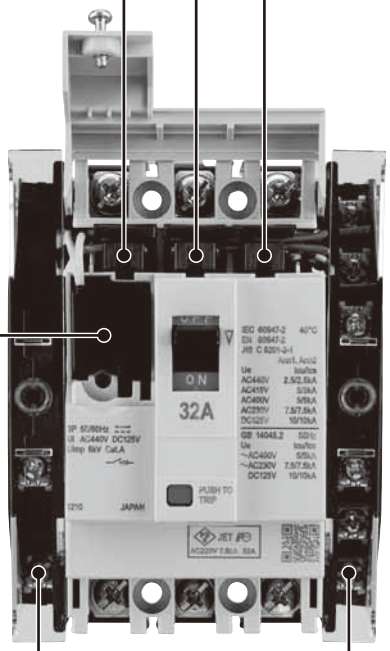


Type symbol : R	See page : B1-199

2-pole product



3-pole product



Lead wire terminal block

Provides wiring terminals for connection with internal accessories.

Type symbol : A	See page : B1-204, 207

B1

(1)-2 Variation of internal accessories (ELCB)

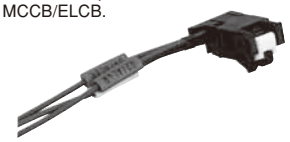
Auxiliary switch

Switch that electrically indicates the ON/OFF state of MCCB/ELCB.

Type symbol : W | See page : B1-199

Alarm switch

Switch that electrically indicates the trip state of MCCB/ELCB.



Type symbol : K | See page : B1-199

Shunt trip device

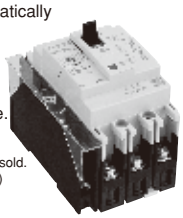
Device that electrically trips MCCB/ELCB from a remote place.

Type symbol : F | See page : B1-199

Undervoltage trip device

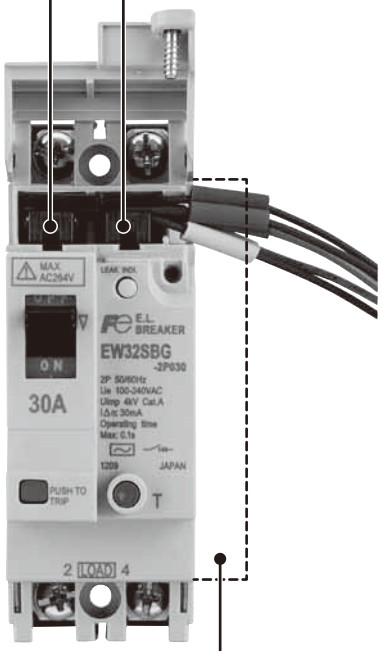
Device that automatically trips MCCB/ELCB when the circuit voltage has decreased below the specified value.
(Externally mounted)

Note 1. Not separately sold. (Factory mounting only)

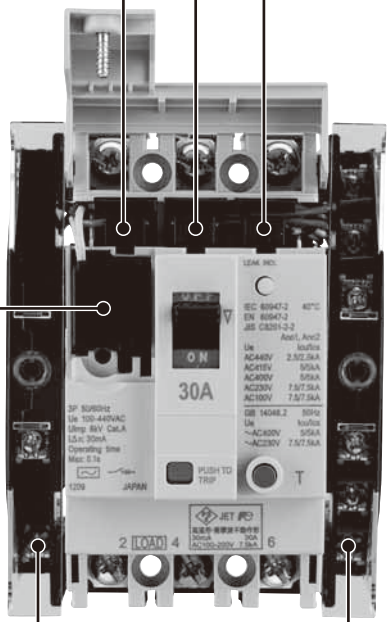


Type symbol : R | See page : B1-199

2-pole product



3-pole product



Lead wire terminal block

Provides wiring terminals for connection with internal accessories.

Type symbol : A | See page : B1-210, 213

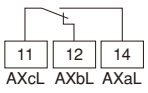
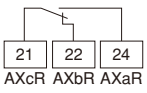
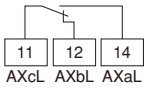
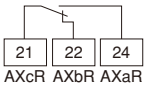
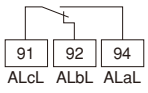
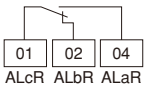
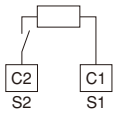
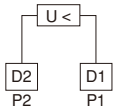
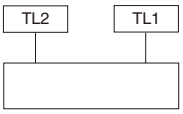
Trip lead

Device that remotely trips ELCB with a contact signal.

Type symbol : T | See page : B1-191

(2) Types and terminal numbers of internal accessories

The following describes the types and terminal numbers of internal accessories.

Type		Terminal number		Remarks
		Left side mounting	Right side mounting	
Auxiliary switch Standard: W, V Low level circuit: 1, 2	For one switch (W) (1)			For the rated operational voltage and current, see page B-199. For details of mounting positions, see the List of internal accessory combinations on pages B1-193 to 198.
	For two switches (V) (2)			
Alarm switch Standard: K Low level circuit: 8	For one switch (K) (8)			
Shunt trip device: F	With burn-out preventive contact (standard)			For the operating voltage, see page B1-199.
Undervoltage trip device				For the operating voltage, see page B1-199.
Trip lead: T (For ELCB only) Note: Cannot be specified for global products.				Do not apply voltage on the terminal block because the main circuit voltage is output. Select a switch to be connected that is capable of switching the main circuit voltage of the ELCB without any problem and withstands a current of up to 1 A. Do not share the switch of the trip lead with other ELCB. It may cause a fire due to a short circuit. When extending the trip lead, ensure that the length is within 3 m. Failure to observe this instruction may lead to unwanted operation.

(3) Combinations of internal accessories

● List of internal accessory combinations

Type			MCCB				ELCB							
Main unit applicable type			**BW32SBG BW50EBG BW50SBG BW63EBG BW63SBG BW50RBGU**				**EW32SBG EW50EBG EW50SBG EW63EBG EW63SBG**				**EW50RBGU**			
Number of poles			2P		3P		2P		3P		2P		3P	
Terminal connection			Lead wire	Terminal block	Lead wire	Terminal block	Lead wire	Terminal block	Lead wire	Terminal block	Lead wire	Terminal block	Lead wire	Terminal block
Accessory type	Auxiliary switch x1	W (1)	○	○	○	○	○	○	○	○	○	○	○	○
	Auxiliary switches x2	V (2)	—	—	○	○	—	—	○	○	—	—	○	○
	Alarm switch x1	K (8)	○	○	○	○	○	○	○	○	○	○	○	○
	Shunt trip device	F	○ *1	○ *1	○	○	—	—	○	○	—	—	○	○
	Undervoltage trip device	R	—	—	—	○ *1	—	—	—	○ *1	—	—	—	○ *1
	Trip lead	T	—	—	—	—	—	○ *1	—	○ *1	—	—	—	—
	Combination	W+K	○	○	○	○	○	○	○	○	○	○	○	○
		W+F	—	—	○	○	—	—	○	○	—	—	○	○
		W+R	—	—	○ *2	○ *1	—	—	○ *2	○ *1	—	—	○ *2	○ *1
		W+T	—	—	—	—	—	—	○ *2	○ *1	—	—	—	—
		V+K	—	—	○	○	—	—	○	○	—	—	○	○
		K+F	—	—	○	○	—	—	○	○	—	—	○	○
		K+R	—	—	○ *2	○ *1	—	—	○ *2	○ *1	—	—	○ *2	○ *1
		K+T	—	—	—	—	—	—	○ *2	○ *1	—	—	—	—
		W+K+F	—	—	○	○	—	—	○	○	—	—	○	○
		W+K+R	—	—	○ *2	○ *1	—	—	○ *2	○ *1	—	—	○ *2	○ *1
		W+K+T	—	—	—	—	—	—	○ *2	○ *1	—	—	—	—

Note *1: Factory mounting only (to be specified in the order).
Note *2: Factory mounting only; W/K for lead wire connection and R/T for terminal block connection (to be specified in the order).

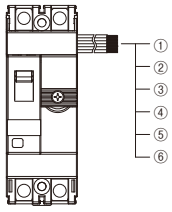
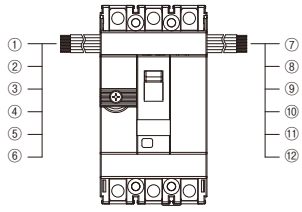
B1

● **One-touch mounting internal accessories (separately sold)**

Type	Terminal connection	Lead wire pull-out direction	Type	Voltage rating	Mountability			
					MCCB		ELCB	
					2P	3P	2P	3P
Auxiliary switch (standard type)	Lead wire type	Left side	**BW9W1SB1**		–	○	–	○
		Right side	**BW9W1SB1-R**		○	○	○	○
Auxiliary switch (low level circuit)		Left side	**BW9W1DB1**		–	○	–	○
		Right side	**BW9W1DB1-R**		○	○	○	○
Alarm switch (standard type)		Left side	**BW9K1SB1**		–	○	–	○
		Right side	**BW9K1SB1-R**		○	○	○	○
Alarm switch (low level circuit)		Left side	**BW9K1DB1**		–	○	–	○
		Right side	**BW9K1DB1-R**		○	○	○	○
Auxiliary/alarm switch (standard type)		Left side	**BW9WKSB1**		–	○	–	○
		Right side	**BW9WKSB1-R**		○	○	○	○
Auxiliary/alarm switch (low level circuit)		Left side	**BW9WKDB1**		–	○	–	○
		Right side	**BW9WKDB1-R**		○	○	○	○
Shunt trip device		Left side	**BW9FRB1**	AC/DC24V	–	○	–	○
			BW9F6B1	AC100-130V/DC100-110V				
			BW9FKB1	AC200-240V/DC200-220V				
			BW9FPB1	AC380-440V				
Auxiliary switch (standard type)	Terminal block type	Left side	**BW9W1SB1-A**		○	○	○	○
		Right side	**BW9W1SB1-RA**		–	○	–	○
Auxiliary switch (low level circuit)		Left side	**BW9W1DB1-A**		○	○	○	○
		Right side	**BW9W1DB1-RA**		–	○	–	○
Alarm switch (standard type)		Left side	**BW9K1SB1-A**		○	○	○	○
		Right side	**BW9K1SB1-RA**		–	○	–	○
Alarm switch (low level circuit)		Left side	**BW9K1DB1-A**		○	○	○	○
		Right side	**BW9K1DB1-RA**		–	○	–	○
Auxiliary/alarm switch (standard type)		Left side	**BW9WKSB1-A**		○	○	○	○
		Right side	**BW9WKSB1-RA**		–	○	–	○
Auxiliary/alarm switch (low level circuit)		Left side	**BW9WKDB1-A**		○	○	○	○
		Right side	**BW9WKDB1-RA**		–	○	–	○
Shunt trip device		Left side	**BW9FRB1-A**	AC/DC24V	–	○	–	○
			BW9F6B1-A	AC100-130V/DC100-110V				
			BW9FKB1-A	AC200-240V/DC200-220V				
			BW9FPB1-A	AC380-440V				

● **Details of combinations of internal accessories**

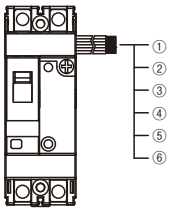
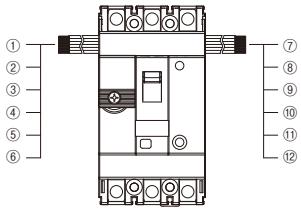
(a) Lead wire type (MCCB)

Lead wire type	MCCB (2P)				MCCB (3P)			
								
Type	**BW32SBG, BW50 □ BG, BW63 □ BG BW50RBGU**				**BW32SBG, BW50 □ BG, BW63 □ BG BW50RBGU**			
Accessory type	Left side		Right side		Left side		Right side	
	Position / Ring mark		Position	Ring mark	Position	Ring mark	Position	Ring mark
Auxiliary switch	Cannot be pulled out to the left side.		①	21/AXc : Yellow	①	11/AXc : White	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	24/AXa : Red	②	14/AXa : Brown		
			③	22/AXb : Blue	③	12/AXb : Green		
			—	—	—	—		
			—	—	—	—		
W(1)*			—	—	—	—		
Auxiliary switch x 2	Cannot be mounted.				①	11/AXc : White	⑦	21/AXc : Yellow
					②	14/AXa : Brown	⑧	24/AXa : Red
					③	12/AXb : Green	⑨	22/AXb : Blue
					—	—	—	—
					—	—	—	—
V(2)*					—	—	—	—
Alarm switch	Cannot be pulled out to the left side.		①	01/ALc : Yellow	①	91/ALc : White	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	04/ALa : Red	②	94/ALa : Brown		
			③	02/ALb : Blue	③	92/ALb : Green		
			—	—	—	—		
			—	—	—	—		
K(8)*			—	—	—	—		
Auxiliary switch + alarm switch	Cannot be pulled out to the left side.		①	01/ALc : Yellow	①	91/ALc : White	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	04/ALa : Red	②	94/ALa : Brown		
			③	02/ALb : Blue	③	92/ALb : Green		
			④	21/AXc : Yellow	④	11/AXc : White		
			⑤	24/AXa : Red	⑤	14/AXa : Brown		
W(1)* K(8)*			⑥	22/AXb : Blue	⑥	12/AXb : Green		
Auxiliary switch x 2 + alarm switch	Cannot be mounted.				①	91/ALc : White	⑦	21/AXc : Yellow
					②	94/ALa : Brown	⑧	24/AXa : Red
					③	92/ALb : Green	⑨	22/AXb : Blue
					④	11/AXc : White	—	—
					⑤	14/AXa : Brown	—	—
V(2)* K(8)*					⑥	12/AXb : Green	—	—
Shunt trip device	Cannot be pulled out to the left side.		①	C1/S1 : White	①	C1/S1 : White	—	—
			②	C2/S2 : White	②	C2/S2 : White	—	—
			—	—	—	—	—	—
			—	—	—	—	—	—
			—	—	—	—	—	—
F □			—	—	—	—	—	—
Auxiliary switch + shunt trip device	Cannot be mounted.				①	C1/S1 : White	⑦	21/AXc : Yellow
					②	C2/S2 : White	⑧	24/AXa : Red
					—	—	⑨	22/AXb : Blue
					—	—	—	—
					—	—	—	—
W(1)* F □					—	—	—	—
Alarm switch + shunt trip device	Cannot be mounted.				①	C1/S1 : White	⑦	01/ALc : Yellow
					②	C2/S2 : White	⑧	04/ALa : Red
					—	—	⑨	02/ALb : Blue
					—	—	—	—
					—	—	—	—
K(8)* F □					—	—	—	—
Auxiliary switch + alarm switch + shunt trip device	Cannot be mounted.				①	C1/S1 : White	⑦	01/ALc : Yellow
					②	C2/S2 : White	⑧	04/ALa : Red
					—	—	⑨	02/ALb : Blue
					—	—	⑩	21/AXc : Yellow
					—	—	⑪	24/AXa : Red
W(1)* K(8)* F □					—	—	⑫	22/AXb : Blue

Note: * ( ) code of Low level circuit

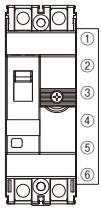
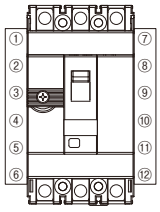
B1

(b) Lead wire type (ELCB)

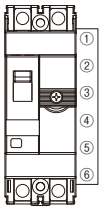
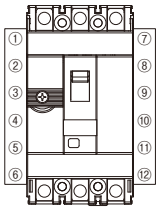
Lead wire type	ELCB (2P)				ELCB (3P)			
								
Type	**EW32SBG, EW50 □ BG, EW63 □ BG EW50RBGU**				**EW32SBG, EW50 □ BG, EW63 □ BG EW50RBGU**			
Accessory type	Left side		Right side		Left side		Right side	
	Position	Ring mark	Position	Ring mark	Position	Ring mark	Position	Ring mark
Auxiliary switch	Cannot be pulled out to the left side.		①	21/AXc : Yellow	①	11/AXc : White	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	24/AXa : Red	②	14/AXa : Brown		
			③	22/AXb : Blue	③	12/AXb : Green		
			—	—	—	—		
			—	—	—	—		
W(1)*			—	—	—	—		
Auxiliary switch x 2	Cannot be mounted.				①	11/AXc : White	⑦	21/AXc : Yellow
					②	14/AXa : Brown	⑧	24/AXa : Red
					③	12/AXb : Green	⑨	22/AXb : Blue
					—	—	—	—
					—	—	—	—
V(2)*					—	—	—	—
Alarm switch	Cannot be pulled out to the left side.		①	01/ALc : Yellow	①	91/ALc : White	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	04/ALa : Red	②	94/ALa : Brown		
			③	02/ALb : Blue	③	92/ALb : Green		
			—	—	—	—		
			—	—	—	—		
K(8)*			—	—	—	—		
Auxiliary switch + alarm switch	Cannot be pulled out to the left side.		①	01/ALc : Yellow	①	91/ALc : White	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	04/ALa : Red	②	94/ALa : Brown		
			③	02/ALb : Blue	③	92/ALb : Green		
			④	21/AXc : Yellow	④	11/AXc : White		
			⑤	24/AXa : Red	⑤	14/AXa : Brown		
W(1)* K(8)*			⑥	22/AXb : Blue	⑥	12/AXb : Green		
Auxiliary switch x 2 + alarm switch	Cannot be mounted.				①	91/ALc : White	⑦	21/AXc : Yellow
					②	94/ALa : Brown	⑧	24/AXa : Red
					③	92/ALb : Green	⑨	22/AXb : Blue
					④	11/AXc : White	—	—
					⑤	14/AXa : Brown	—	—
V(2)* K(8)*					⑥	12/AXb : Green	—	—
Shunt trip device	Cannot be mounted.				①	C1/S1 : White	—	—
					②	C2/S2 : White	—	—
					—	—	—	—
					—	—	—	—
					—	—	—	—
F □					—	—	—	—
Auxiliary switch + shunt trip device	Cannot be mounted.				①	C1/S1 : White	⑦	21/AXc : Yellow
					②	C2/S2 : White	⑧	24/AXa : Red
					—	—	⑨	22/AXb : Blue
					—	—	—	—
					—	—	—	—
W(1)* F □					—	—	—	—
Alarm switch + shunt trip device	Cannot be mounted.				①	C1/S1 : White	⑦	01/ALc : Yellow
					②	C2/S2 : White	⑧	04/ALa : Red
					—	—	⑨	02/ALb : Blue
					—	—	—	—
					—	—	—	—
K(8)* F □					—	—	—	—
Auxiliary switch + alarm switch + shunt trip device	Cannot be mounted.				①	C1/S1 : White	⑦	01/ALc : Yellow
					②	C2/S2 : White	⑧	04/ALa : Red
					—	—	⑨	02/ALb : Blue
					—	—	⑩	21/AXc : Yellow
					—	—	⑪	24/AXa : Red
W(1)* K(8)* F □					—	—	⑫	22/AXb : Blue

Note: * ( ) code of Low level circuit

(c) Terminal block type (MCCB)

Lead wire type	MCCB (2P)				MCCB (3P)			
								
Type	**BW32SBG, BW50 □ BG, BW63 □ BG BW50RBGU**				**BW32SBG, BW50 □ BG, BW63 □ BG BW50RBGU**			
Accessory type	Left side		Right side		Left side		Right side	
	Position	Ring mark	Position	Ring mark	Position	Ring mark	Position	Ring mark
Auxiliary switch	Cannot be mounted.		①	—	①	—	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	—	②	—		
			③	—	③	—		
			④	21/AXcR	④	11/AXcL		
			⑤	22/AXbR	⑤	12/AXbL		
W(1)* A			⑥	24/AXaR	⑥	14/AXaL		
Auxiliary switch x 2	Cannot be mounted.				①	—	⑦	—
					②	—	⑧	—
					③	—	⑨	—
					④	11/AXcL	⑩	21/AXcR
					⑤	12/AXbL	⑪	22/AXbR
V(2)* A					⑥	14/AXaL	⑫	24/AXaR
Alarm switch	Cannot be mounted.		①	04/ALaR	①	94/ALaL	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	02/ALbR	②	92/ALbL		
			③	01/ALcR	③	91/ALcL		
			④	—	④	—		
			⑤	—	⑤	—		
K(8)* A			⑥	—	⑥	—		
Auxiliary switch + alarm switch	Cannot be mounted.		①	04/ALaR	①	94/ALaL	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	02/ALbR	②	92/ALbL		
			③	01/ALcR	③	91/ALcL		
			④	21/AXcR	④	11/AXcL		
			⑤	22/AXbR	⑤	12/AXbL		
W(1)* K(8)* A			⑥	24/AXaR	⑥	14/AXaL		
Auxiliary switch x 2 + alarm switch	Cannot be mounted.				①	94/ALaL	⑦	—
					②	92/ALbL	⑧	—
					③	91/ALcL	⑨	—
					④	11/AXcL	⑩	21/AXcR
					⑤	12/AXbL	⑪	22/AXbR
V(2)* K(8)* A					⑥	14/AXaL	⑫	24/AXaR
Shunt trip device	Cannot be mounted.		①	—	①	—	Cannot be mounted.	
			②	—	②	—		
			③	—	③	—		
			④	C2/S2	④	C2/S2		
			⑤	—	⑤	—		
F □ A			⑥	C1/S1	⑥	C1/S1		
Auxiliary switch + shunt trip device	Cannot be mounted.				①	—	⑦	—
					②	—	⑧	—
					③	—	⑨	—
					④	C2/S2	⑩	21/AXcR
					⑤	—	⑪	22/AXbR
W(1)* F □ A					⑥	C1/S1	⑫	24/AXaR
Alarm switch + shunt trip device	Cannot be mounted.				①	—	⑦	04/ALaR
					②	—	⑧	02/ALbR
					③	—	⑨	01/ALcR
					④	C2/S2	⑩	—
					⑤	—	⑪	—
K(8)* F □ A					⑥	C1/S1	⑫	—

Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Accessories

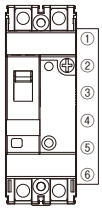
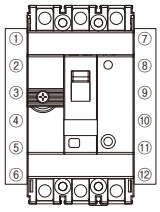
Lead wire type	MCCB (2P)				MCCB (3P)			
								
Type	**BW32SBG, BW50 □ BG, BW63 □ BG BW50RBGU**				**BW32SBG, BW50 □ BG, BW63 □ BG BW50RBGU**			
Accessory type	Left side		Right side		Left side		Right side	
	Position	Ring mark	Position	Ring mark	Position	Ring mark	Position	Ring mark
Auxiliary switch + alarm switch + shunt trip device	Cannot be mounted.				①	—	⑦	04/ALaR
					②	—	⑧	02/ALbR
					③	—	⑨	01/ALcR
					④	C2/S2	⑩	21/AXcR
					⑤	—	⑪	22/AXbR
W(1)* K (8)* F □ A					⑥	C1/S1	⑫	24/AXaR
Undervoltage trip device	Cannot be mounted.				①	—	Cannot be mounted.	
					②	—		
					③	—		
					④	D2/P2		
					⑤	—		
R □					⑥	D1/P1		
Auxiliary switch + Undervoltage trip device	Cannot be mounted.				①	—	⑦	—
					②	—	⑧	—
					③	—	⑨	—
					④	D2/P2	⑩	21/AXcR
					⑤	—	⑪	22/AXbR
W(1)* R □ A					⑥	D1/P1	⑫	24/AXaR
Alarm switch + Undervoltage trip device	Cannot be mounted.				①	—	⑦	04/ALaR
					②	—	⑧	02/ALbR
					③	—	⑨	01/ALcR
					④	D2/P2	⑩	—
					⑤	—	⑪	—
K(8)* R □ A					⑥	D1/P1	⑫	—
Auxiliary switch + alarm switch + Undervoltage trip device	Cannot be mounted.				①	—	⑦	04/ALaR
					②	—	⑧	02/ALbR
					③	—	⑨	01/ALcR
					④	D2/P2	⑩	21/AXcR
					⑤	—	⑪	22/AXbR
W(1)* K(8)* R □ A					⑥	D1/P1	⑫	24/AXaR

Note: * ( ) code of Low level circuit

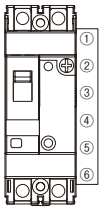
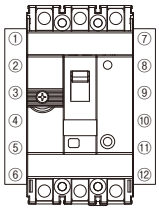
Remarks

1) The undervoltage trip device is factory-mounted when the product is shipped. Specify in the order for the main unit.

(d) Terminal block type (ELCB)

Lead wire type	ELCB (2P)				ELCB (3P)			
								
Type	**EW32SBG, EW50 □ BG, EW63 □ BG EW50RBGU**				**EW32SBG, EW50 □ BG, EW63 □ BG EW50RBGU**			
Accessory type	Left side		Right side		Left side		Right side	
	Position	Ring mark	Position	Ring mark	Position	Ring mark	Position	Ring mark
Auxiliary switch	Cannot be mounted.		①	—	①	—	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	—	②	—		
			③	—	③	—		
			④	21/AXcR	④	11/AXcL		
			⑤	22/AXbR	⑤	12/AXbL		
W(1)* A			⑥	24/AXaR	⑥	14/AXaL		
Auxiliary switch x 2	Cannot be mounted.				①	—	⑦	—
					②	—	⑧	—
					③	—	⑨	—
					④	11/AXcL	⑩	21/AXcR
					⑤	12/AXbL	⑪	22/AXbR
V(2)* A					⑥	14/AXaL	⑫	24/AXaR
Alarm switch	Cannot be mounted.		①	04/ALaR	①	94/ALaL	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	02/ALbR	②	92/ALbL		
			③	01/ALcR	③	91/ALcL		
			④	—	④	—		
			⑤	—	⑤	—		
K(8)* A			⑥	—	⑥	—		
Auxiliary switch + alarm switch	Cannot be mounted.		①	04/ALaR	①	94/ALaL	Can be mounted on the right side as well by purchasing a separately sold product (for right-side mounting).	
			②	02/ALbR	②	92/ALbL		
			③	01/ALcR	③	91/ALcL		
			④	21/AXcR	④	11/AXcL		
			⑤	22/AXbR	⑤	12/AXbL		
W(1)* K(8)* A			⑥	24/AXaR	⑥	14/AXaL		
Auxiliary switch x 2 + alarm switch	Cannot be mounted.				①	94/ALaL	⑦	—
					②	92/ALbL	⑧	—
					③	91/ALcL	⑨	—
					④	11/AXcL	⑩	21/AXcR
					⑤	12/AXbL	⑪	22/AXbR
V(2)* K(8)* A					⑥	14/AXaL	⑫	24/AXaR
Shunt trip device	Cannot be mounted.				①	—	Cannot be mounted.	
					②	—		
					③	—		
					④	C2/S2		
					⑤	—		
F □ A					⑥	C1/S1		
Auxiliary switch + shunt trip device	Cannot be mounted.				①	—	⑦	—
					②	—	⑧	—
					③	—	⑨	—
					④	C2/S2	⑩	21/AXcR
					⑤	—	⑪	22/AXbR
W(1)* F □ A					⑥	C1/S1	⑫	24/AXaR
Auxiliary switch + shunt trip device	Cannot be mounted.				①	—	⑦	04/ALaR
					②	—	⑧	02/ALbR
					③	—	⑨	01/ALcR
					④	C2/S2	⑩	—
					⑤	—	⑪	—
K(8)* F □ A					⑥	C1/S1	⑫	—
Auxiliary switch + alarm switch + shunt trip device	Cannot be mounted.				①	—	⑦	04/ALaR
					②	—	⑧	02/ALbR
					③	—	⑨	01/ALcR
					④	C2/S2	⑩	21/AXcR
					⑤	—	⑪	22/AXbR
W(1)* K(8)* F □ A					⑥	C1/S1	⑫	24/AXaR

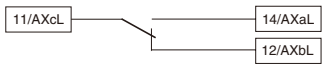
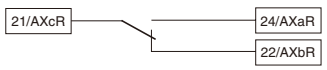
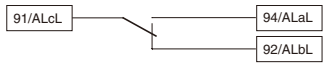
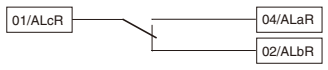
Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Accessories

Lead wire type	ELCB (2P)				ELCB (3P)			
								
Type	**EW32SBG, EW50 □ BG, EW63 □ BG EW50RBGU**				**EW32SBG, EW50 □ BG, EW63 □ BG EW50RBGU**			
Accessory type	Left side		Right side		Left side		Right side	
	Position	Ring mark	Position	Ring mark	Position	Ring mark	Position	Ring mark
Undervoltage trip device	Cannot be mounted.				①	—	Cannot be mounted.	
					②	—		
					③	—		
					④	D2/P2		
					⑤	—		
R □					⑥	D1/P1		
Auxiliary switch + Undervoltage trip device	Cannot be mounted.				①	—	⑦	—
					②	—	⑧	—
					③	—	⑨	—
					④	D2/P2	⑩	21/AXcR
					⑤	—	⑪	22/AXbR
W(1)* R □ A					⑥	D1/P1	⑫	24/AXaR
Alarm switch + Undervoltage trip device	Cannot be mounted.				①	—	⑦	04/ALaR
					②	—	⑧	02/ALbR
					③	—	⑨	01/ALcR
					④	D2/P2	⑩	—
					⑤	—	⑪	—
K(8)* R □ A					⑥	D1/P1	⑫	—
Auxiliary switch + alarm switch + Undervoltage trip device	Cannot be mounted.				①	—	⑦	04/ALaR
					②	—	⑧	02/ALbR
					③	—	⑨	01/ALcR
					④	D2/P2	⑩	21/AXcR
					⑤	—	⑪	22/AXbR
W(1)* K(8)* R □ A					⑥	D1/P1	⑫	24/AXaR
Trip lead	Cannot be mounted.		①	TL1	Cannot be mounted.		⑦	TL1
			②	—			⑧	—
			③	TL2			⑨	TL2
			④	—			⑩	—
			⑤	—			⑪	—
T			⑥	—			⑫	—
Auxiliary switch + trip lead	Cannot be mounted.				①	—	⑦	TL1
					②	—	⑧	—
					③	—	⑨	TL2
					④	11/AXcL	⑩	—
					⑤	12/AXbL	⑪	—
W(1)* T A					⑥	14/AXaL	⑫	—
Alarm switch + trip lead	Cannot be mounted.				①	94/ALaL	⑦	TL1
					②	92/ALbL	⑧	—
					③	91/ALcL	⑨	TL2
					④	—	⑩	—
					⑤	—	⑪	—
K(8)* T A					⑥	—	⑫	—
Auxiliary switch + alarm switch + trip lead	Cannot be mounted.				①	94/ALaL	⑦	TL1
					②	92/ALbL	⑧	—
					③	91/ALcL	⑨	TL2
					④	11/AXcL	⑩	—
					⑤	12/AXbL	⑪	—
W(1)* K(8)* T A					⑥	14/AXaL	⑫	—

Note: * ( ) code of Low level circuit
Remarks
1) The undervoltage trip device is factory-mounted when the product is shipped. Specify in the order for the main unit.
2) The trip lead cannot be mounted on the global product (EW50RBGU).
3) The trip lead is factory-mounted when the product is shipped. Specify in the order for the main unit.

(4) Operations and ratings of auxiliary and alarm switches [IEC 60947-5-1, JIS C 8201-5-1]

(a) Operations of auxiliary and alarm switches

Type of switches		State of MCCB/ELCB		
		ON	OFF	Tripped
Auxiliary switch	For left side			
	For right side			
Alarm switch	For left side			
	For right side			

(b) Ratings of auxiliary and alarm switches

	IEC60947-5-1			Reference: NECA C4505		Minimum load
	Voltage [V]	Switching current [A]		Voltage [V]	Switching current [A]	
		AC15	DC13		Resistive load	
Standard type	125V AC	5	–	125V AC	5	5V DC 160mA 30V DC 30mA
	250V AC	5	–	250V AC	3	
	–	–	–	30V DC	4	
	125V DC	–	0.6	125V DC	0.4	
	250V DC	–	0.3	250V DC	0.2	
Microload	–	–	–	30V DC	0.1	5V DC 1mA

(5) Shunt trip device

● Ratings of shunt trip device

Main unit applicable type (basic designation)		Mounting position	AC		DC		Voltage rating	Product code	Time rating	Operating time [ms]
MCCB	ELCB		Voltage [V]	Input [VA]	Voltage [V]	Input [W]				
BW32 **BW50** **BW63**	**EW32** **EW50** **EW63**	Built-in	24	40	24	40	24V AC/DC	FR	Continuous (With burn-out preventive contact)	6-13
			100-130 (50/60Hz)	60	100-110	60	100-130V AC/ 100-110V DC	F6		
			200-240 (50/60Hz)	70	200-220	70	200-240V AC/ 200-220V DC	FK		
			380-440 (50/60Hz)	70	–	–	380-440V AC	FP		

Note 1: Specify the voltage rating in the order.
Note 2: The operating range of the trip voltage of the shunt trip device is 70 to 110% of the rated operating voltage.

(6) Undervoltage trip device

● Ratings of undervoltage trip device

Main unit applicable type (basic designation)		Mounting position	AC		DC		Voltage rating	Product code
MCCB	ELCB		Voltage [V]	Input [VA]	Voltage [V]	Input [W]		
BW32 **BW50** **BW63**	**EW32** **EW50** **EW63**	External	–	–	24	1	24V DC	RR
					100-110	2	100-110V DC	RL
			24	1	–	–	24V AC	RZ
			100-130	3	–	–	100-130V AC	R6
			200-240	5	–	–	200-240V AC	R4
			380-415	8	–	–	380-415V AC	RP
			400-440	9	–	–	400-440V AC	RO

Note 1: Specify the voltage rating in the order.
Note 2: The pick-up voltages of the undervoltage trip device are: Trip voltage: 70 to 35% of the rated voltage; voltage allowing closing operation: 85% to 110% of the rated voltage

(7) Accessory lead wire pull-out system

● Specifications of lead wire

Type of lead wire	Size of lead wire	Length of lead wire	Indication on lead wire
32 to 63AF	0.4mm^2 (AWG22)	About 500mm	Each lead wire has a ring mark indicating a terminal symbol.

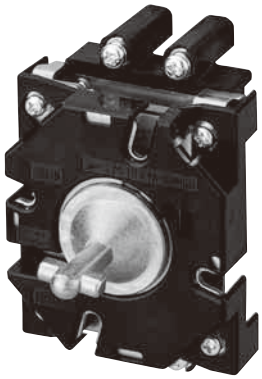
B1

■ External Accessories

(1) Variation of external accessories

The following shows various external accessories.

External operating handle (N type)
Page B1-201



External operating handle (V type)
Page B1-201

Padlock-compatible type

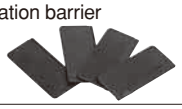
Handle locking cover (cap type: L1)
Page B1-201

Terminal cover (long type)
Page B1-201

Interphase barrier
Page B1-201

Terminal cover (short type)
Page B1-201

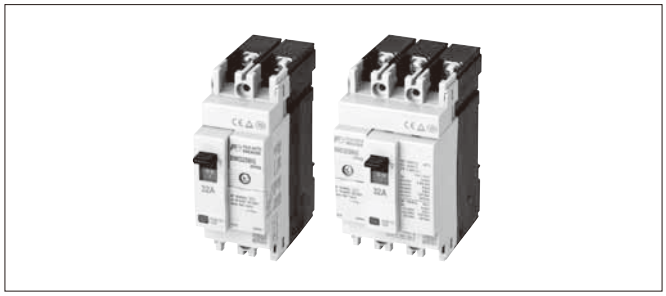
■ List of Separately Sold Parts

Product name	Specification		Type (i.e., product code)	Quantity/ type
Auxiliary switch 	Standard	Lead wire type left side pull-out	**BW9W1SB1**	1
		Lead wire type right side pull-out	**BW9W1SB1-R**	1
		Terminal block type left side mounting	**BW9W1SB1-A**	1
		Terminal block type right side mounting	**BW9W1SB1-RA**	1
	Low level circuit	Lead wire type left side pull-out	**BW9W1DB1**	1
		Lead wire type right side pull-out	**BW9W1DB1-R**	1
		Terminal block type left side mounting	**BW9W1DB1-A**	1
		Terminal block type right side mounting	**BW9W1DB1-RA**	1
Alarm switch 	Standard	Lead wire type left side pull-out	**BW9K1SB1**	1
		Lead wire type right side pull-out	**BW9K1SB1-R**	1
		Terminal block type left side mounting	**BW9K1SB1-A**	1
		Terminal block type right side mounting	**BW9K1SB1-RA**	1
	Low level circuit	Lead wire type left side pull-out	**BW9K1DB1**	1
		Lead wire type right side pull-out	**BW9K1DB1-R**	1
		Terminal block type left side mounting	**BW9K1DB1-A**	1
		Terminal block type right side mounting	**BW9K1DB1-RA**	1
Auxiliary/alarm switch 	Standard	Lead wire type left side pull-out	**BW9WKSB1**	1
		Lead wire type right side pull-out	**BW9WKSB1-R**	1
		Terminal block type left side mounting	**BW9WKSB1-A**	1
		Terminal block type right side mounting	**BW9WKSB1-RA**	1
	Low level circuit	Lead wire type left side pull-out	**BW9WKDB1**	1
		Lead wire type right side pull-out	**BW9WKDB1-R**	1
		Terminal block type left side mounting	**BW9WKDB1-A**	1
		Terminal block type right side mounting	**BW9WKDB1-RA**	1
Shunt trip device 	24V AC/DC	Lead wire type left side pull-out	**BW9FRB1**	1
	100-130V AC/100-110V DC		**BW9F6B1**	1
	200-240V AC/200-220V DC		**BW9FKB1**	1
	380-440V AC		**BW9FPB1**	1
	24V AC/DC	Terminal block type left side mounting	**BW9FRB1-A**	1
	100-130V AC/100-110V DC		**BW9F6B1-A**	1
	200-240V AC/200-220V DC		**BW9FKB1-A**	1
	380-440V AC		**BW9FPB1-A**	1
External operating handle 	V type (panel mounting)	RESET-open	**BW9V0BA**	1
		OFF-open	**BW9V0BA-G**	1
		RESET-open for emergency stop	**BW9V0BA-E**	1
		OFF-open for emergency stop	**BW9V0BA-EG**	1
	N type (main unit mounting)	RESET-open	**BW9N0BA**	1
		OFF-open	**BW9N0BA-G**	1
		RESET-open for emergency stop	**BW9N0BA-E**	1
		OFF-open for emergency stop	**BW9N0BA-EG**	1
Terminal cover 	Short type	Manually-detachable, 2-pole, transparent	**BW9BTBA-S2**	2
		Manually-detachable, 2-pole, light gray	**BW9BTBA-S2W**	2
		Manually-detachable, 3-pole, transparent	**BW9BTBA-S3**	2
		Manually-detachable, 3-pole, light gray	**BW9BTBA-S3W**	2
		Tool-detachable, 2-pole, transparent	**BW9BTBA-S2H**	2
		Tool-detachable, 2-pole, light gray	**BW9BTBA-S2WH**	2
		Tool-detachable, 3-pole, transparent	**BW9BTBA-S3H**	2
		Tool-detachable, 3-pole, light gray	**BW9BTBA-S3WH**	2
	Long type	Manually-detachable, 2-pole, transparent	**BW9BTBA-L2**	2
		Manually-detachable, 2-pole, light gray	**BW9BTBA-L2W**	2
		Manually-detachable, 3-pole, transparent	**BW9BTBA-L3**	2
		Manually-detachable, 3-pole, light gray	**BW9BTBA-L3W**	2
		Tool-detachable, 2-pole, transparent	**BW9BTBA-L2H**	2
		Tool-detachable, 2-pole, light gray	**BW9BTBA-L2WH**	2
		Tool-detachable, 3-pole, transparent	**BW9BTBA-L3H**	2
		Tool-detachable, 3-pole, light gray	**BW9BTBA-L3WH**	2
Insulation barrier 	Interphase barrier		**BW9BPBA**	4
Handle locking cover 	Cap type L1	–	**BW9L1BA**	1
		Padlock-compatible type	**BW9L1BA-P**	1
Handle key lock	Plate type Q2		**BW9Q2BA**	1

Note: See the internal accessory combinations (pages B1-191 to B1-198) to check mountability.

Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Data, Characteristics curves, Dimensions

■ BW32, 50, 63□BG



Basic type				BW32SBG		BW50EBG		BW50SBG	
Number of poles				2	3	2	3	2	3
Rated insulation voltage [V]		AC		440		440		440	
		DC		125		125		125	
Rated breaking capacity	IEC60947-2 EN60947-2 JISC8201-2-1 Icu/Ics [kA]	AC	440V	2.5/2.5		2.5/2.5		7.5/4	
			415V	5/5		5/5		10/5	
			400V	5/5		5/5		10/5	
			380V	5/5		5/5		10/5	
			240V	7.5/7.5		7.5/7.5		15/15	
			230V	7.5/7.5		7.5/7.5		15/15	
		DC	125V	10/10		–/–		10/10	
	GB14048.2 Icu/Ics [kA]	AC	400V	5/5		5/5		10/5	
			230V	7.5/7.5		7.5/7.5		15/15	
		DC	125V	10/10		–/–		10/10	

Basic type				BW63EBG		BW63SBG	
Number of poles				2	3	2	3
Rated insulation voltage [V]		AC		440		440	
		DC		125		125	
Rated breaking capacity	IEC60947-2 EN60947-2 JISC8201-2-1 Icu/Ics [kA]	AC	440V	2.5/2.5		7.5/4	
			415V	5/5		10/5	
			400V	5/5		10/5	
			380V	5/5		10/5	
			240V	7.5/7.5		15/15	
			230V	7.5/7.5		15/15	
		DC	125V	–/–		10/10	
	GB14048.2 Icu/Ics [kA]	AC	400V	5/5		10/5	
			230V	7.5/7.5		15/15	
		DC	125V	–/–		10/10	

● Optional accessories

Product name				Type symbol (i.e., symbol code)	See page:
Internal accessories	Auxiliary switch (lead wire type)	Standard	1	W	B1-199
			2	V	B1-199
		Low level circuit	1	1	B1-199
			2	2	B1-199
	Alarm switch (lead wire type)	Standard	1	K	B1-199
		Low level circuit	1	8	B1-199
	Shunt trip device (lead wire type)	24V AC/DC		FR	B1-199
		100-130V AC/100-110V DC		F6	B1-199
		200-240V AC/200-220V DC		FK	B1-199
		380-440V AC		FP	B1-199
	Lead wire terminal block		1	A	B1-204
			2	A	B1-204
	Undervoltage trip device (terminal block type only)	24V DC		RR	B1-199
		100-110V DC		RL	B1-199
		24V AC		RZ	B1-199
		100-130V AC		R6	B1-199
		200-240V AC		R4	B1-199
		380-415V AC		RP	B1-199
		400-440V AC		RO	B1-199

● List of product ratings

Specification for □ : rated current (code)

Product	Basic type (i.e., product code)	Rated current [A]	Code for □
Line protection use (standard products)	**BW32SBG-2P□**	3	003
		5	005
		10	010
		15	015
		20	020
		30	030
		32	032
	BW32SBG-3P□	3	003
		5	005
		10	010
		15	015
		20	020
		30	030
		32	032
	BW50EBG-2P□	3	003
		5	005
		10	010
		15	015
		20	020
		30	030
		32	032
		40	040
		50	050
	BW50EBG-3P□	3	003
		5	005
		10	010
		15	015
		20	020
		30	030
		32	032
		40	040
		50	050
	BW50SBG-2P□	3	003
		5	005
		10	010
		15	015
		20	020
		30	030
		32	032
		40	040
		50	050
	BW50SBG-3P□	3	003
		5	005
		10	010
		15	015
		20	020
		30	030
		32	032
		40	040
		50	050
	BW63EBG-2P□	60	060
		63	063
	BW63EBG-3P□	60	060
		63	063
	BW63SBG-2P□	60	060
		63	063
	BW63SBG-3P□	60	060
		63	063

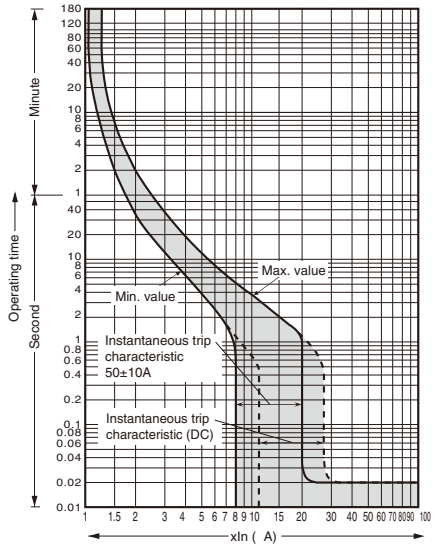
● Attached components

- Terminal screw 2P: 4 screws, 3P: 6 screws
- Interphase barrier 2P: 2 barriers, 3P: 4 barriers (provided for BW63EBG and BW63SBG only)
- Instruction Manual

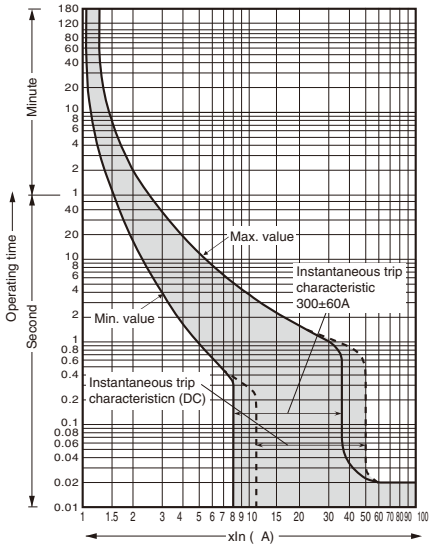
Note 1: Mounting screws are not included. When necessary, use commercially-available screws (recommended size: M4 x 60).

● Characteristic Curves

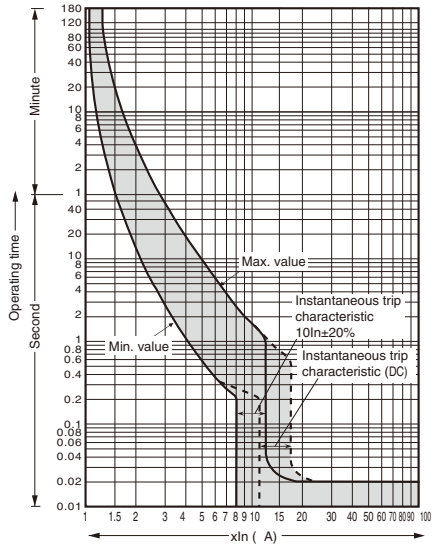
3A, 5A



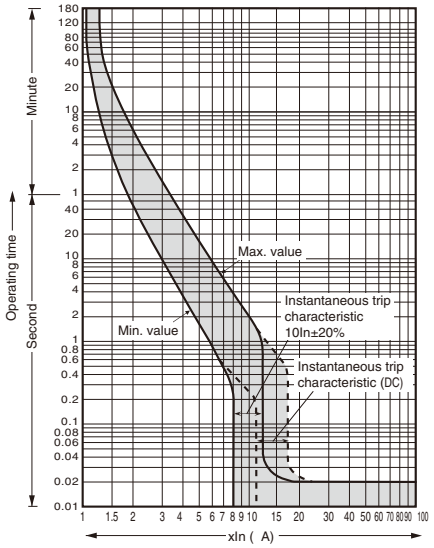
10 to 30A



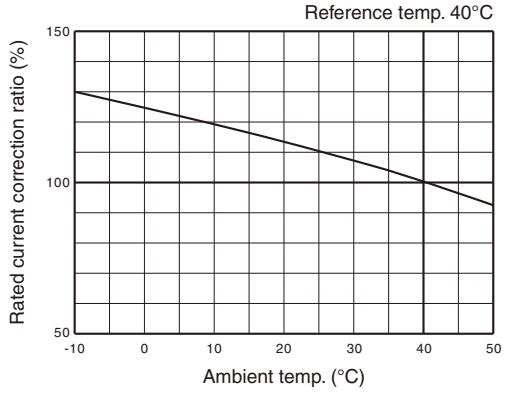
32 to 50A



60A, 63A



● Temperature correction curve

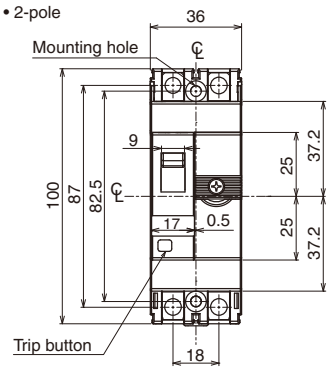


B1

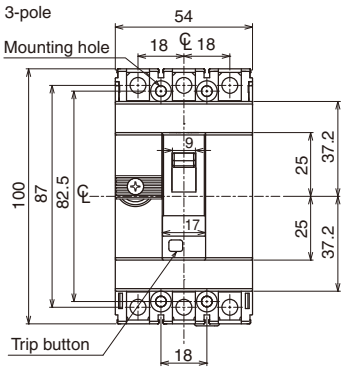
● Dimensions, mm

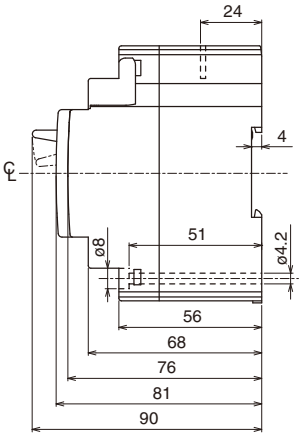
Front mounting type

• 2-pole

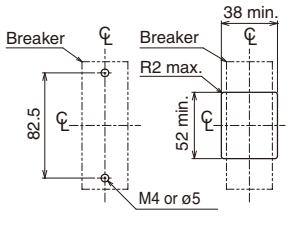


• 3-pole



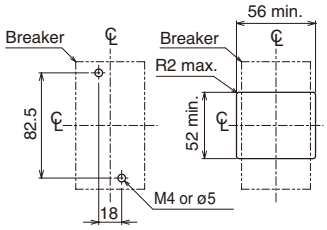


• 2-pole

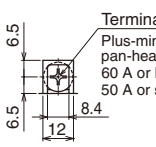


Panel drilling Front panel cutting

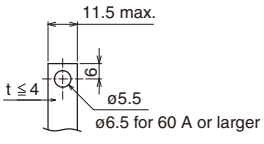
• 3-pole



Panel drilling Front panel cutting

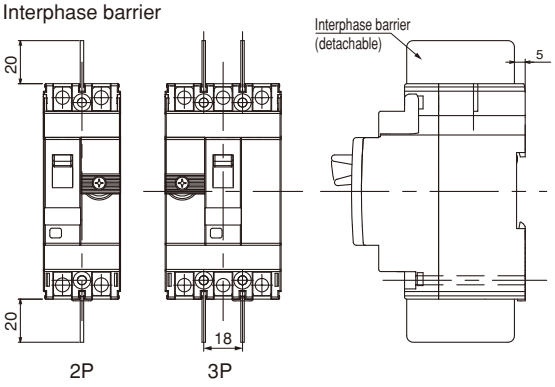


Terminal section detail



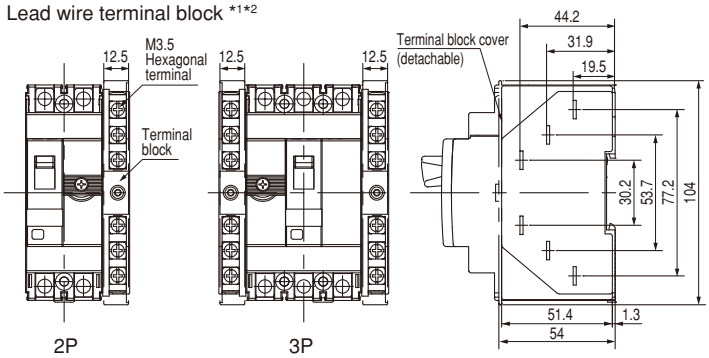
Processing of conductor directly mounted on main unit

Interphase barrier



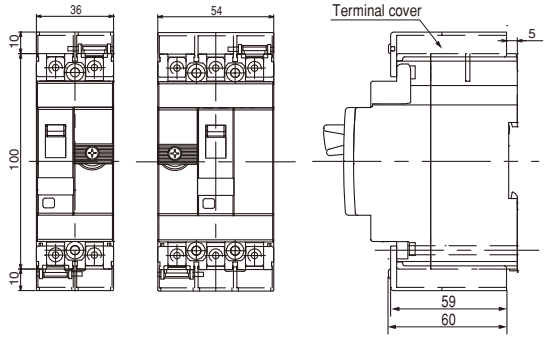
2P 3P

Lead wire terminal block *1*2



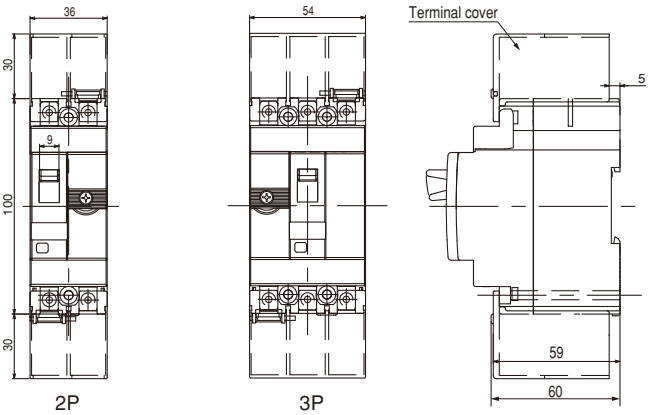
2P 3P

Terminal cover (short)



2P 3P

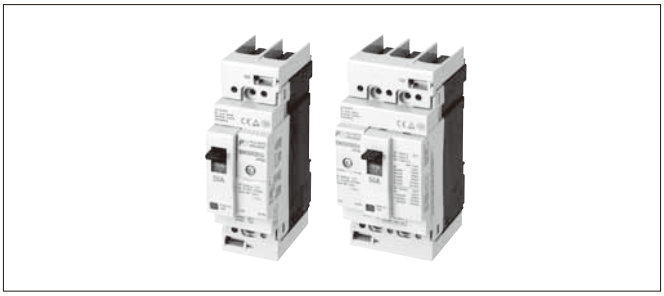
Terminal cover (long)



2P 3P

(Note *1) The terminal block is mounted on the accessory mounting side. For the accessory mounting positions, see the List of internal accessory combinations on pages B1-195 to B1-198.
(Note *2) Connectable wire: single wire: 1 to 1.6 ø, stranded wire: 0.5 to 2 mm^2

■ BW50RBGU (UL489 Listed)



Basic type				BW50RBGU	
Number of poles				2	3
Rated insulation voltage [V]		AC		440	
		DC		125	
Rated breaking capacity	UL489 CAN/CSA C22.2 No.5 (kA)	AC	240V	18	
	IEC60947-2 EN60947-2 JISC8201-2-1 Icu/Ics (kA)	AC	440V	7.5/4	
			415V	10/5	
			400V	10/5	
			380V	10/5	
			240V	15/15	
			230V	15/15	
		DC	125V	10/10	
	GB14048.2 Icu/Ics (kA)	AC	400V	10/5	
			230V	15/15	
		DC	125V	10/10	

● Attached components

- Terminal cover 2
- Terminal screw 2P: 4 screws, 3P: 6 screws
- Instruction Manual

Note 1: Mounting screws are not included. When necessary, use commercially-available screws (recommended size: M4 x 60).

● Optional accessories

Product name				Type symbol (i.e., symbol code)	See page:
Internal accessories	Auxiliary switch (lead wire type)	Standard	1	W	B1-199
			2	V	B1-199
		Low level circuit	1	1	B1-199
			2	2	B1-199
	Alarm switch (lead wire type)	Standard	1	K	B1-199
		Low level circuit	1	8	B1-199
	Shunt trip device (lead wire type)	24V AC/DC		FR	B1-199
		100-130V AC/100-110V DC		F6	B1-199
		200-240V AC/200-220V DC		FK	B1-199
		380-440V AC		FP	B1-199
	Lead wire terminal block		1	A	B1-207
			2	A	B1-207
	Undervoltage trip device (terminal block type only)	24V DC		RR	B1-199
		100-110V DC		RL	B1-199
		24V AC		RZ	B1-199
		100-130V AC		R6	B1-199
		200-240V AC		R4	B1-199
		380-415V AC		RP	B1-199
		400-440V AC		RO	B1-199

● List of product ratings

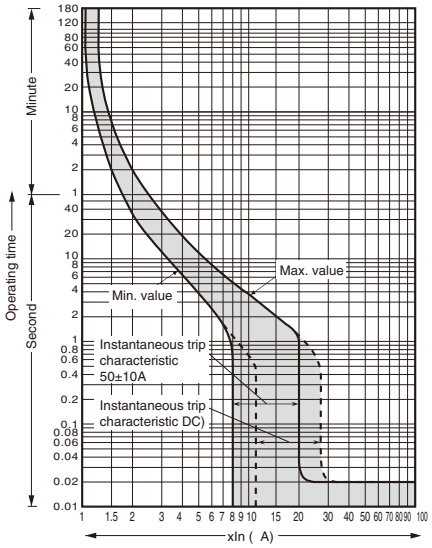
Specification for □ : Rated current (code)

Product	Basic type	Rated current [A]	Code for □
Line protection use (UL489 Listed)	**BW50RBGU-2P□**	3	003
		5	005
		10	010
		15	015
		20	020
		30	030
		40	040
		50	050
	BW50RBGU-3P□	3	003
		5	005
		10	010
		15	015
		20	020
		30	030
		40	040
		50	050

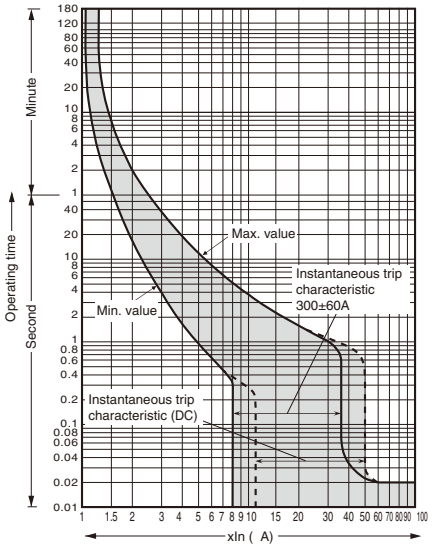
Molded Case Circuit Breakers / Earth Leakage Circuit Breakers
G-TWIN Λ (Lambda) Series Data, Characteristics curves, Dimensions

● Characteristic Curves

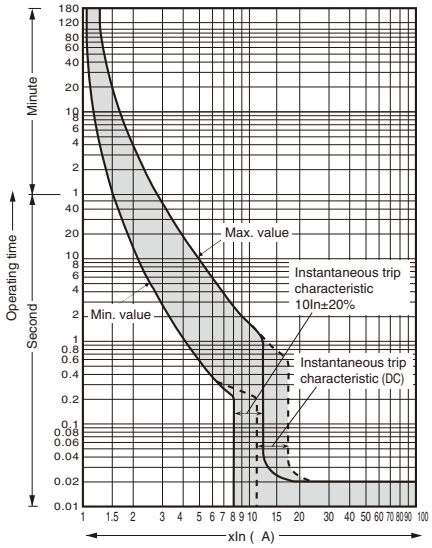
3A, 5A



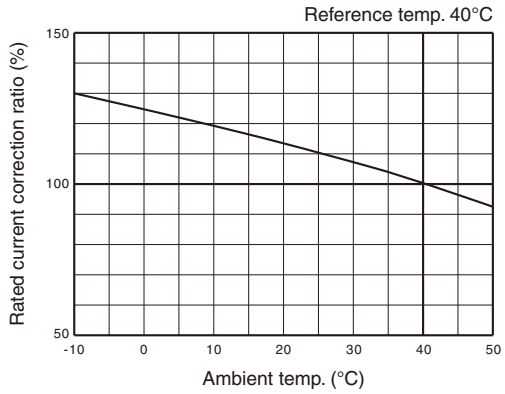
10 to 30A



40A, 50A



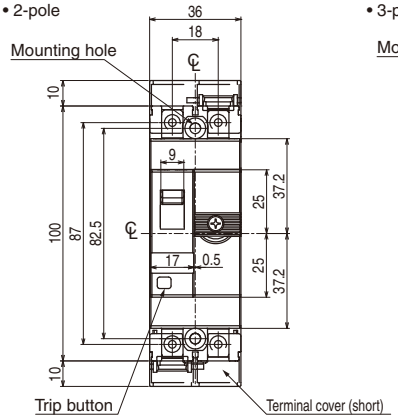
● Temperature correction curve



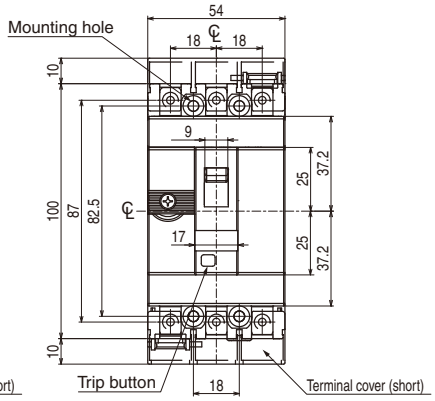
● Dimensions, mm

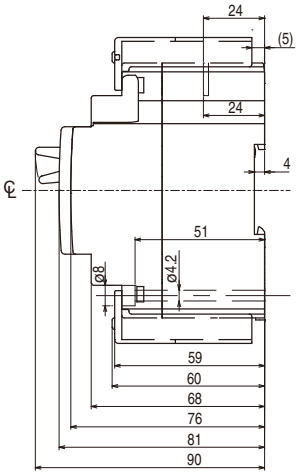
Front mounting type

• 2-pole

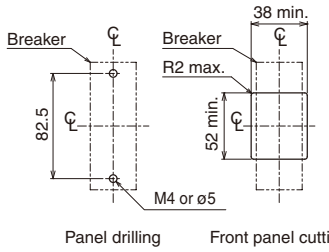


• 3-pole



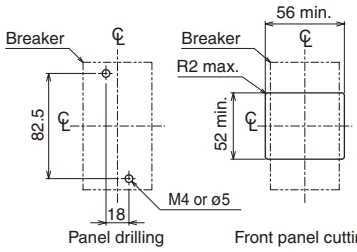


• 2-pole

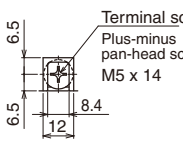


Panel drilling　Front panel cutting

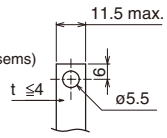
• 3-pole



Panel drilling　Front panel cutting

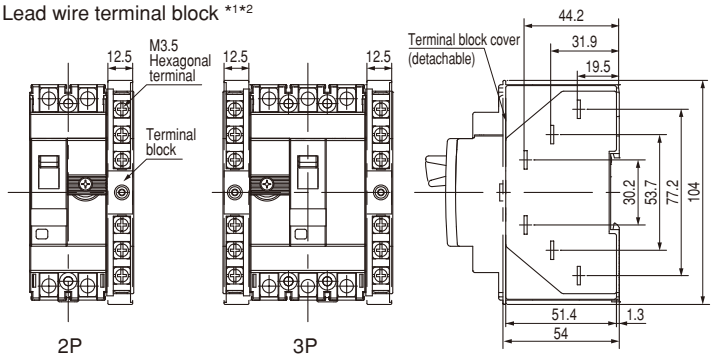


Terminal section detail



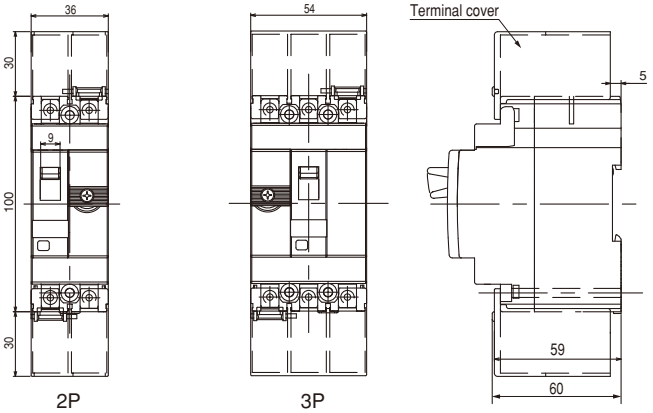
Processing of conductor
directly mounted on main unit

Lead wire terminal block *1*2



2P　3P

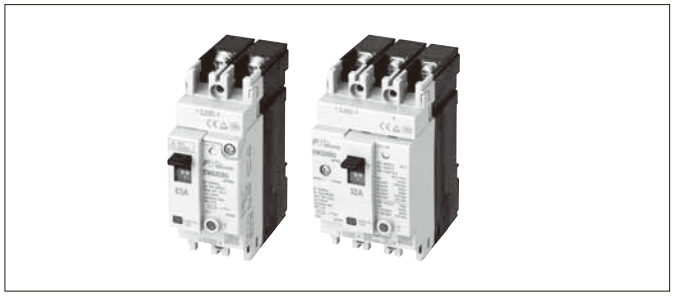
Terminal cover (long)



2P　3P

(Note *1) The terminal block is mounted on the accessory mounting side. For the accessory mounting positions, see the List of internal accessory combinations on pages B1-195 to B1-198.
(Note *2) Connectable wire: single wire: 1 to 1.6 ø, stranded wire: 0.5 to 2 mm^2

■ EW32, 50, 63□BG (Standard Product)



Basic type				EW32SBG		EW50EBG		EW50SBG	
Number of poles				2	3	2	3	2	3
Rated operational voltage AC [V]				100-240	100-440	100-240	100-440	100-240	100-440
Rated sensitive current [mA]				30	30,100,200,500	30	30,100,200,500	30	30,100,200,500
Maximum operating time [s]				0.1		0.1		0.1	
Rated breaking capacity	IEC60947-2 EN60947-2 JISC8201-2-2 Icu/Ics [kA]	AC	440V	–/–	2.5/2.5	–/–	2.5/2.5	–/–	7.5/4
			415V	–/–	5/5	–/–	5/5	–/–	10/5
			400V	–/–	5/5	–/–	5/5	–/–	10/5
			380V	–/–	5/5	–/–	5/5	–/–	10/5
			240V	7.5/7.5	7.5/7.5	7.5/7.5	7.5/7.5	15/15	15/15
			230V	7.5/7.5	7.5/7.5	7.5/7.5	7.5/7.5	15/15	15/15
			100V	7.5/7.5	7.5/7.5	7.5/7.5	7.5/7.5	15/15	15/15
	GB14048.2 Icu/Ics [kA]	AC	400V	–/–	5/5	–/–	5/5	–/–	10/5
			230V	7.5/7.5	7.5/7.5	7.5/7.5	7.5/7.5	15/15	15/15

Basic type				EW63EBG		EW63SBG	
Number of poles				2	3	2	3
Rated operational voltage AC [V]				100-240	100-440	100-240	100-440
Rated sensitive current [mA]				30	30,100,200,500	30	30,100,200,500
Maximum operating time [s]				0.1		0.1	
Rated breaking capacity	IEC60947-2 EN60947-2 JISC8201-2-2 Icu/Ics [kA]	AC	440V	–/–	2.5/2.5	–/–	7.5/4
			415V	–/–	5/5	–/–	10/5
			400V	–/–	5/5	–/–	10/5
			380V	–/–	5/5	–/–	10/5
			240V	7.5/7.5	7.5/7.5	15/15	15/15
			230V	7.5/7.5	7.5/7.5	15/15	15/15
			100V	7.5/7.5	7.5/7.5	15/15	15/15
	GB14048.2 Icu/Ics [kA]	AC	400V	–/–	5/5	–/–	10/5
			230V	7.5/7.5	7.5/7.5	15/15	15/15

● Optional accessories

Product name				Type symbol (i.e., symbol code)	See page:
Internal accessories	Auxiliary switch (lead wire type)	Standard	1	W	B1-199
			2	V	B1-199
		Low level circuit	1	1	B1-199
			2	2	B1-199
	Alarm switch (lead wire type)	Standard	1	K	B1-199
		Low level circuit	1	8	B1-199
	Shunt trip device (lead wire type)	24V AC/DC		FR	B1-199
		100-130V AC/100-110V DC		F6	B1-199
		200-240V AC/200-220V DC		FK	B1-199
		380-440V AC		FP	B1-199
	Lead wire terminal block		1	A	B1-210
			2	A	B1-210
	Undervoltage trip device (terminal block type only)	24V DC		RR	B1-199
		100-110V DC		RL	B1-199
		24V AC		RZ	B1-199
		100-130V AC		R6	B1-199
		200-240V AC		R4	B1-199
		380-415V		RP	B1-199
		AC400-440V		RO	B1-199
	Trip lead (terminal block type only)			T	B1-199

● List of product ratings

Specification for □ : Rated current (code)
Specification for ■ : Rated sensitive current (code)

Product	Basic type (i.e., product code)	Rated current [A]	Rated current Code for □	Rated sensitive current [mA]	Rated sensitive current Code for ■
Line protection use (standard products)	**EW32SBG-2P□■**	5	005	30	B
		10	010		
		15	015		
		20	020		
		30	030		
		32	032		
	EW32SBG-3P□■	5	005	30	B
		10	010	100	C
		15	015	200	E
		20	020	500	H
		30	030		
		32	032		
	EW50EBG-2P□■	5	005	30	B
		10	010		
		15	015		
		20	020		
		30	030		
		32	032		
		40	040		
		50	050		
	EW50EBG-3P□■	5	005	30	B
		10	010	100	C
		15	015	200	E
		20	020	500	H
		30	030		
		32	032		
		40	040		
		50	050		
	EW50SBG-2P□■	5	005	30	B
		10	010		
		15	015		
		20	020		
		30	030		
		32	032		
		40	040		
		50	050		
	EW50SBG-3P□■	5	005	30	B
		10	010	100	C
		15	015	200	E
		20	020	500	H
		30	030		
		32	032		
		40	040		
		50	050		
	EW63EBG-2P□■	60	060	30	B
		63	063		
	EW63EBG-3P□■	60	060	30	B
		63	063	100	C
				200	E
				500	H
	EW63SBG-2P□■	60	060	30	B
		63	063		
	EW63SBG-3P□■	60	060	30	B
		63	063	100	C
				200	E
				500	H

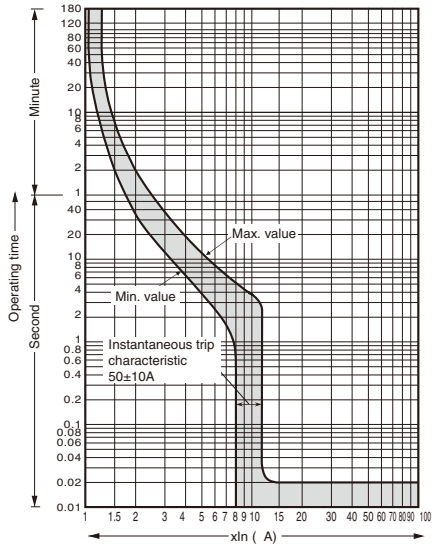
● Attached components

- Terminal screw 2P: 2 screws, 3P: 4 screws
- Interphase barrier 2P: 2 barriers, 3P: 4 barriers (provided for EW63EBG and EW63SBG only)
- Instruction Manual

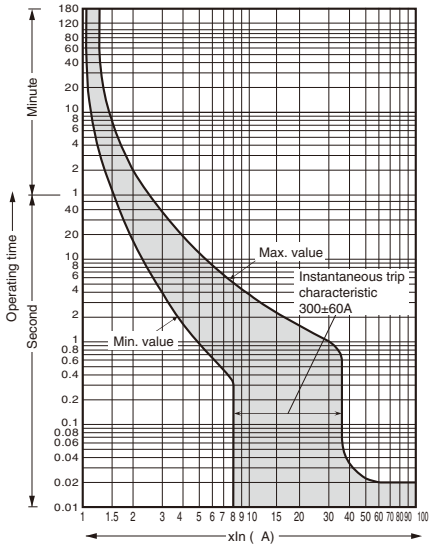
Note 1: Mounting screws are not included. When necessary, use commercially-available screws (recommended size: M4 x 60).

● Characteristic Curves

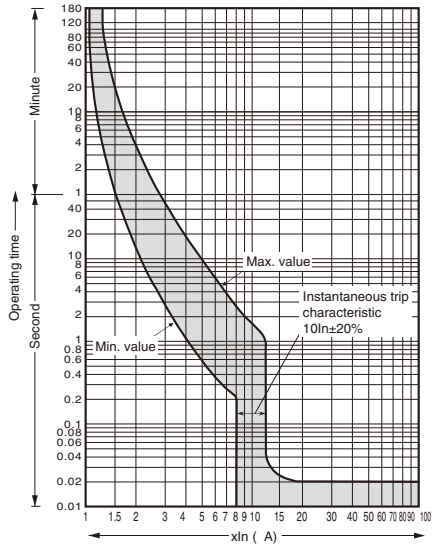
5A



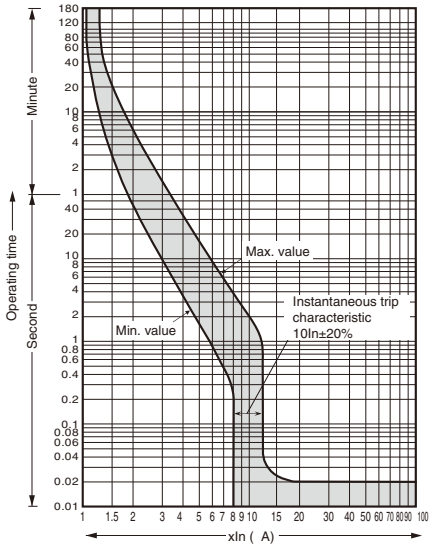
10 to 30A



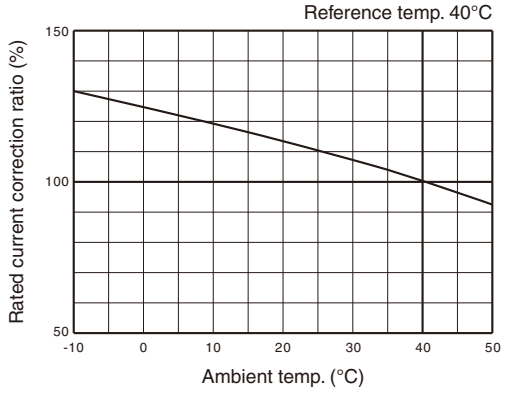
32 to 50A



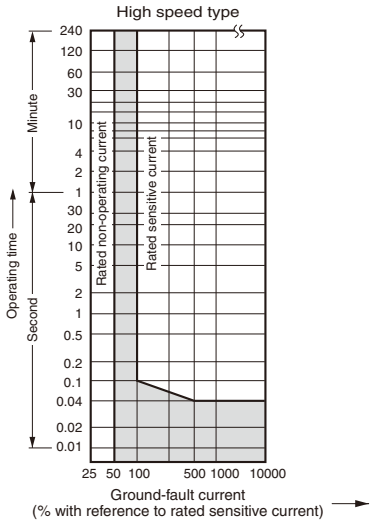
60A, 63A



● Temperature correction curve



● Earth leakage tripping

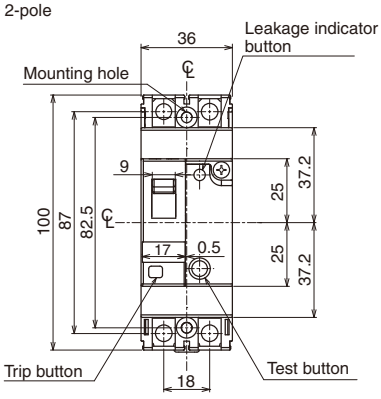


B1

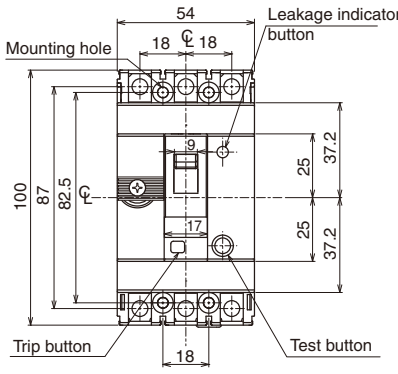
● Dimensions, mm

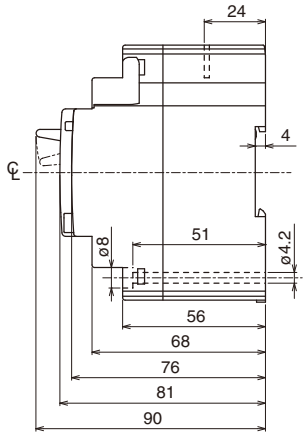
Front mounting type

• 2-pole

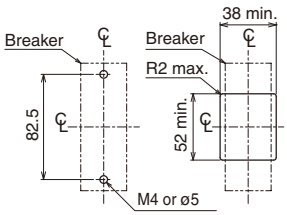


• 3-pole



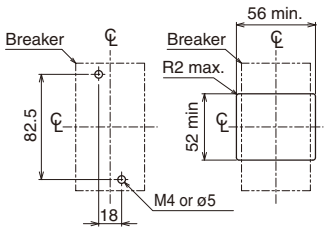


• 2-pole

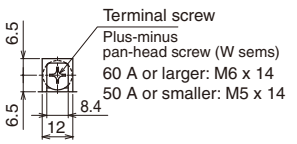


Panel drilling Front panel cutting

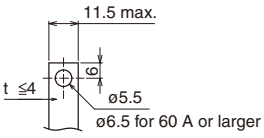
• 3-pole



Panel drilling Front panel cutting

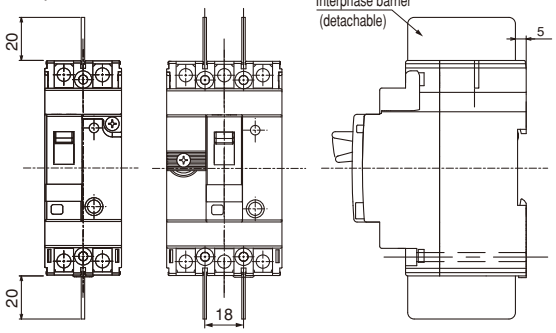


Terminal section detail



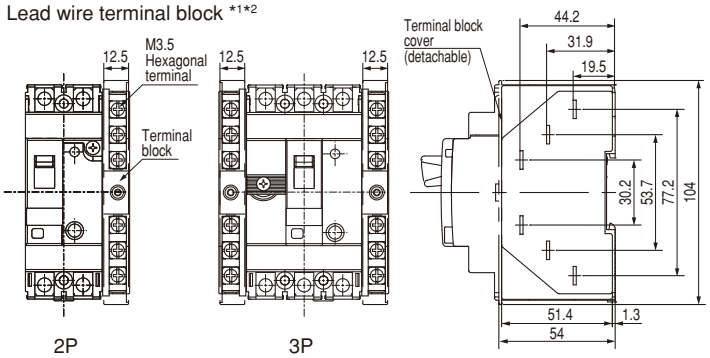
Processing of conductor directly mounted on main unit

Interphase barrier



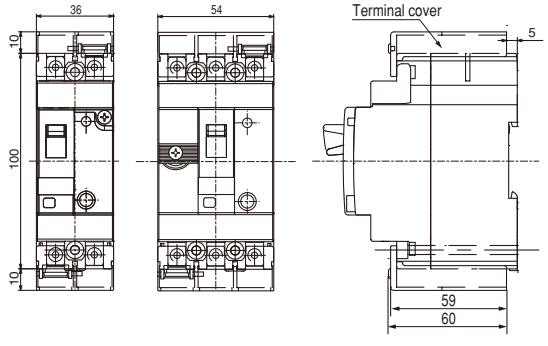
2P 3P

Lead wire terminal block *1*2



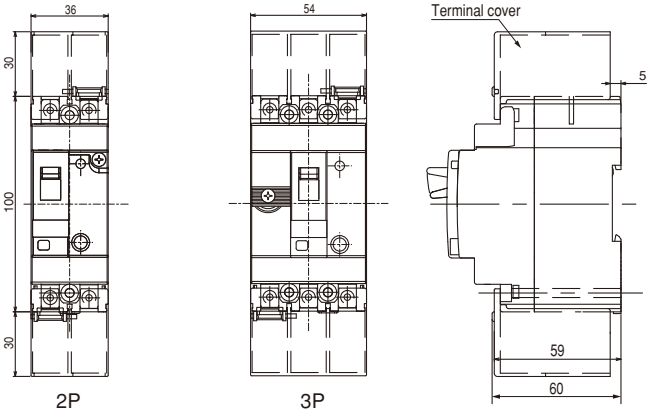
2P 3P

Terminal cover (short)



2P 3P

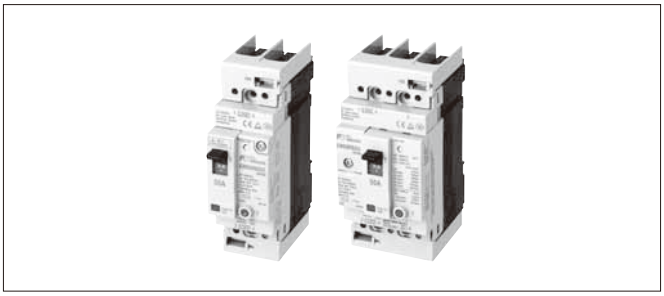
Terminal cover (long)



2P 3P

(Note *1) The terminal block is mounted on the accessory mounting side. For the accessory mounting positions, see the List of internal accessory combinations on pages B1-195 to B1-198.
(Note *2) Connectable wire: single wire: 1 to 1.6 ø, stranded wire: 0.5 to 2 mm^2

■ EW50RBGU (Global Product)



Basic type				EW50RBGU	
Number of poles				2	3
Rated operational voltage AC [V]		IEC		100-240	100-440
Rated operational voltage AC [V]		UL		240	240
Rated sensitive current [mA]				30	30, 50, 100, 200, 500
Maximum operating time [s]				0.1	
Rated breaking capacity	UL489 CAN/CSA C22.2 No.5 [kA]	AC	240V	18	18
	IEC60947-2 EN60947-2 JISC8201-2-2 Icu/Ics [kA]	AC	440V	–/–	7.5/4
			415V	–/–	10/5
			400V	–/–	10/5
			380V	–/–	10/5
			240V	15/15	15/15
			230V	15/15	15/15
			100V	15/15	15/15
	GB14048.2 Icu/Ics [kA]	AC	400V	–/–	10/5
			230V	15/15	15/15

● Attached components

- Terminal cover 2
- Terminal screw 2P: 4 screws, 3P: 6 screws
- Instruction Manual

● Optional accessories

Product name				Type symbol (i.e., symbol code)	See page:
Internal accessories	Auxiliary switch (lead wire type)	Standard	1	W	B1-199
			2	V	B1-199
		Low level circuit	1	1	B1-199
			2	2	B1-199
	Alarm switch (lead wire type)	Standard	1	K	B1-199
		Low level circuit	1	8	B1-199
	Shunt trip device (lead wire type)	24V AC/DC		FR	B1-199
		100-130V AC/100-110V DC		F6	B1-199
		200-240V AC/200-220V DC		FK	B1-199
		380-440V AC		FP	B1-199
	Lead wire terminal block		1	A	B1-213
			2	A	B1-213
	Undervoltage trip device (terminal block type only)	24V DC		RR	B1-199
		100-110V DC		RL	B1-199
		24V AC		RZ	B1-199
		100-130V AC		R6	B1-199
		200-240V AC		R4	B1-199
		380-415V AC		RP	B1-199
		400-440V AC		RO	B1-199

● List of product ratings

Specification for □ : Rated current (code)
Specification for ■ : Rated sensitive current (code)

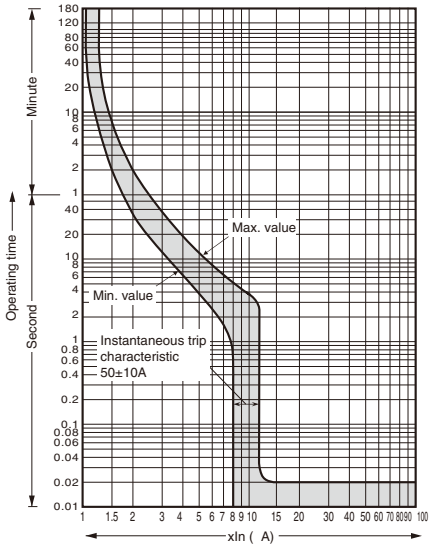
Product	Basic type	Rated current		Rated sensitive current	
		[A]	Code for □	[mA]	Code for ■
Line protection use (global product)	**EW50SBGU-2P□■**	5	005	30	B
		10	010		
		15	015		
		20	020		
		30	030		
		40	040		
		50	050		
	EW50SBGU-3P□■	5	005	30	B
		10	010	50	D
		15	015	100	C
		20	020	200	E
		30	030	500	H
		40	040		
		50	050		

B1

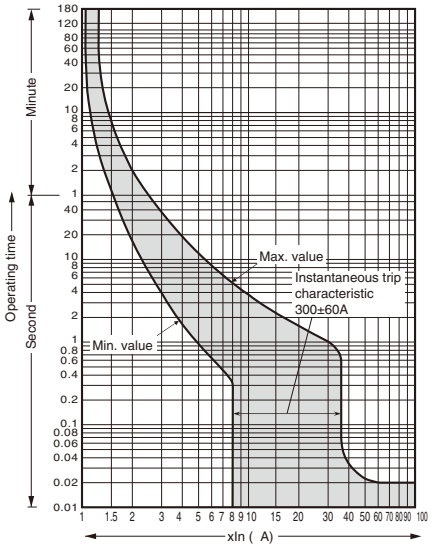
B1

● Characteristic Curves

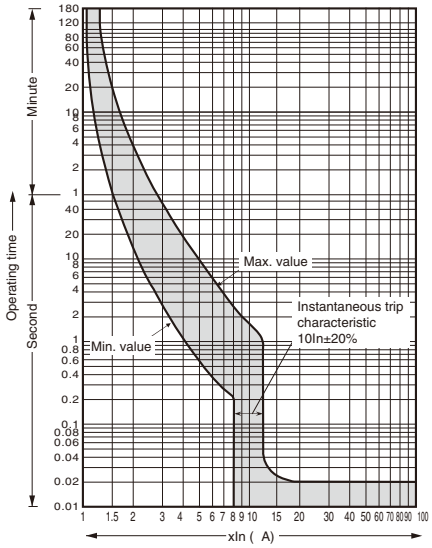
5A



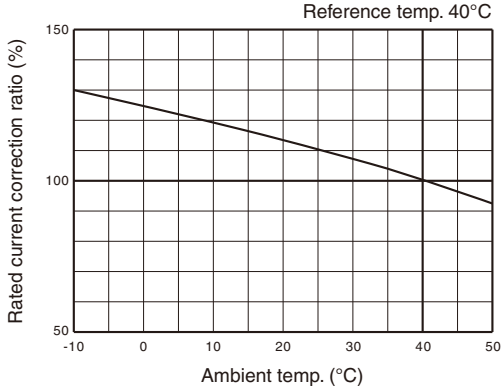
10 to 30A



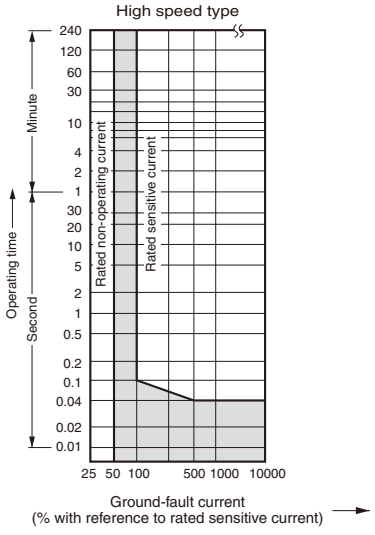
40A, 50A



● Temperature correction curve



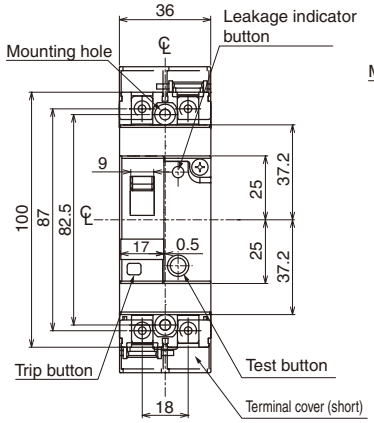
● Earth leakage tripping



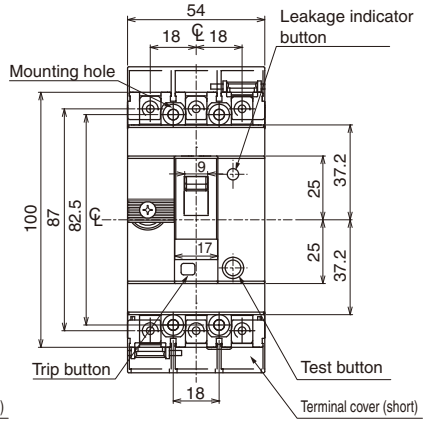
● Dimensions, mm

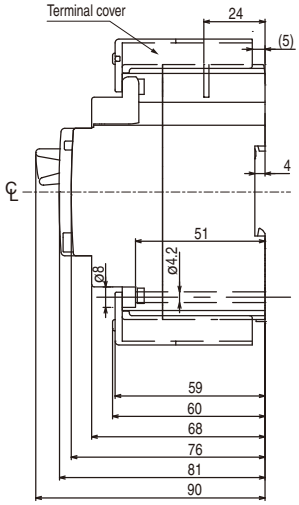
Front mounting type

• 2-pole

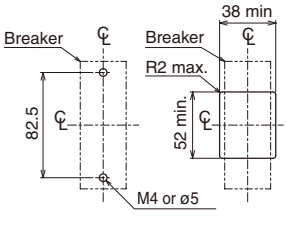


• 3-pole



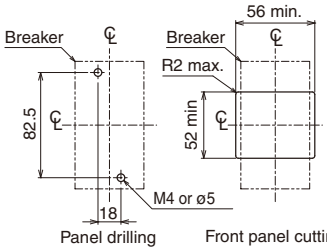


• 2-pole

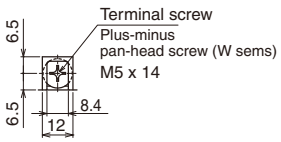


Panel drilling Front panel cutting

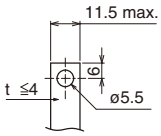
• 3-pole



Panel drilling Front panel cutting

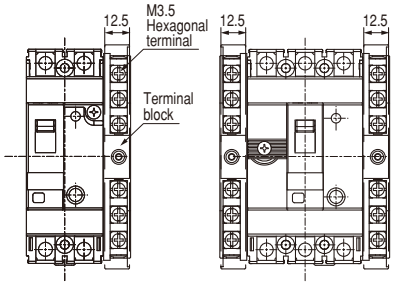


Terminal section detail

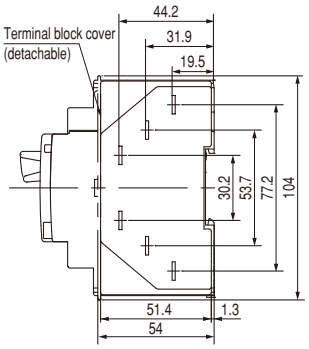


Processing of conductor directly mounted on main unit

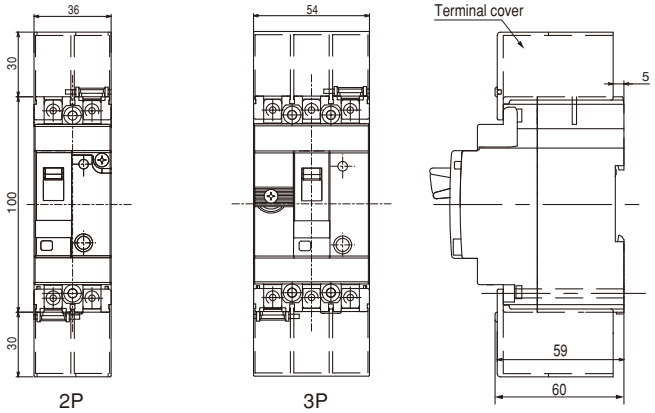
Lead wire terminal block *1*2



2P 3P



Terminal cover (long)



2P 3P

(Note *1) The terminal block is mounted on the accessory mounting side. For the accessory mounting positions, see the List of internal accessory combinations on pages B1-195 to B1-198.
(Note *2) Connectable wire: single wire: 1 to 1.6 ø, stranded wire: 0.5 to 2 mm^2

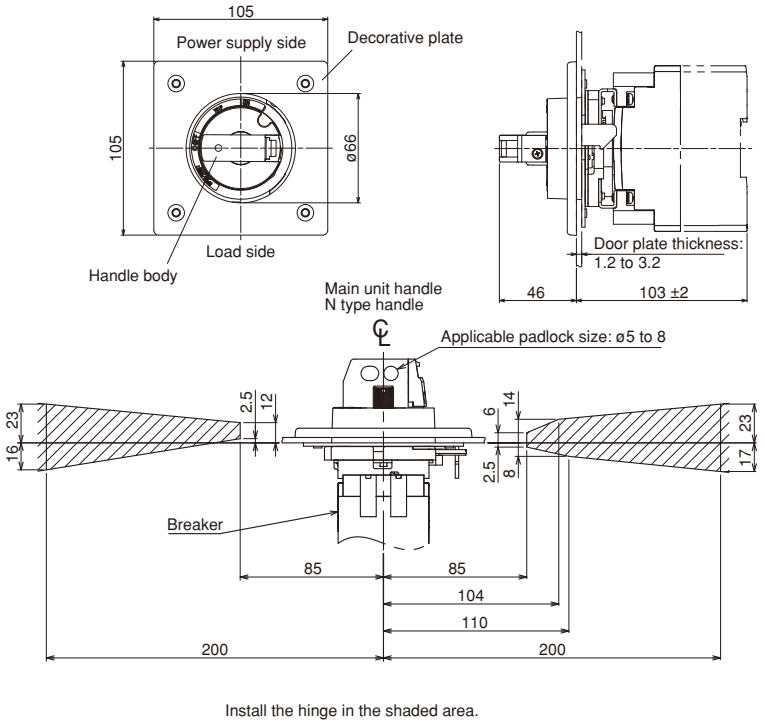
B1

■ External operating handle

● Dimensions, mm

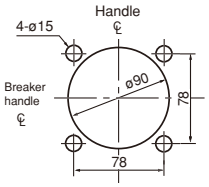
N type handle

BW9N0BA



Install the hinge in the shaded area.

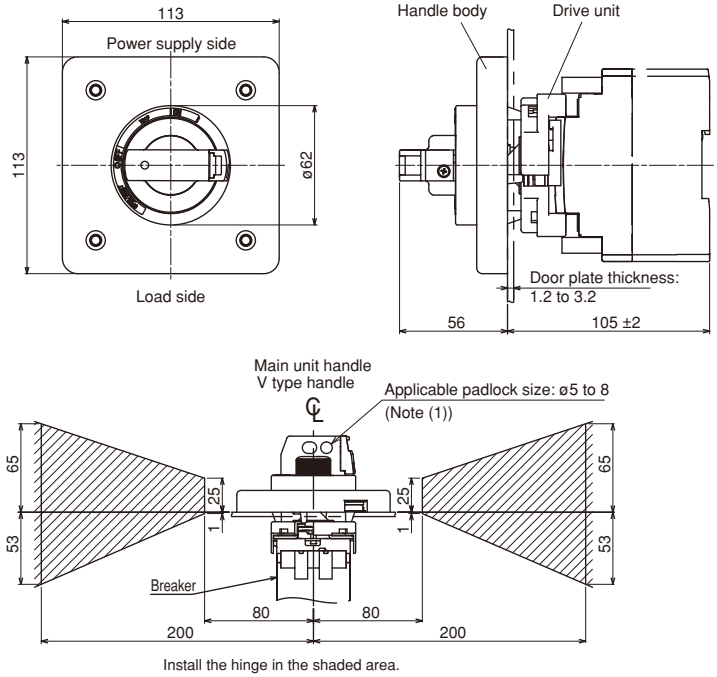
Door panel cutout



Note: Align the center of the panel cutout with the center of the handle of the breaker main unit.

V type handle

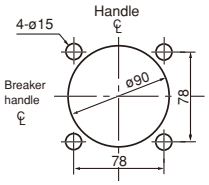
BW9V0BA



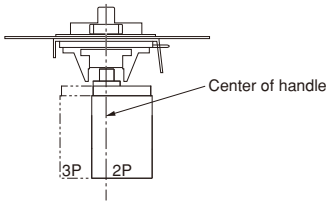
Install the hinge in the shaded area.

Note (1): Padlockable on the drive unit side when the door is open (applicable padlock size: ø5 to 6)

Door panel cutout



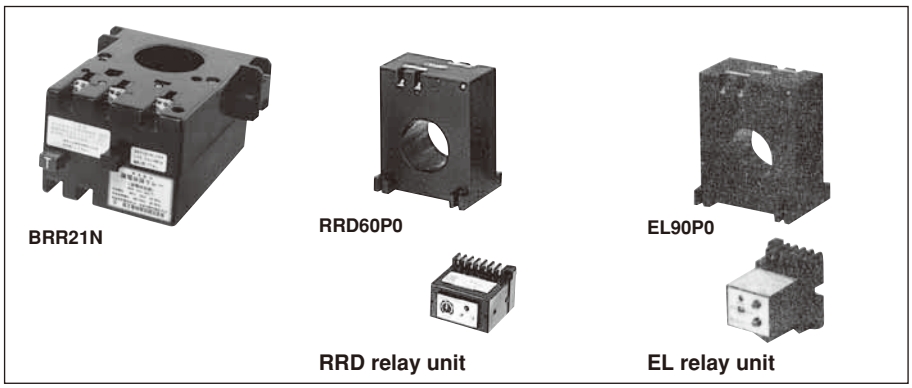
Note: Align the center of the panel cutout with the center of the handle of the breaker main unit.



Earth leakage protective relays

■ Description

In the earth leakage relay the breaking mechanism is omitted from the ELCB, and the ZCT and earth leakage tripping device are integrated into a common body. These relays are available in both instantaneous and time-delay versions.
Generally these relays are used in conjunction with MCCB's, ACB's and motor starters.



Relay and sensor–Unit type
BRR/Pass-through type
- Instantaneous trip
- Solid-state tripping device
- Sensitive current: 30, 100, 200mA
  500mA
- Control voltage: Up to 415V AC

Relay and sensor–Separate type
RRD/Pass-through type
- Time-delay trip
- Solid-state tripping device
- Sensitive current: 100/200, 200/500mA
  500/1000mA
- Control voltage: Up to 415V AC

EL/Pass-through type
- Instantaneous or time-delay trip
- Solid-state tripping device
- Sensitive current:
  30, 100/200, 200/500mA
  500/1000mA
- Control voltage: Up to 415V AC
- Easily modified from front mounting to flush mounting

■ Selection guide

● BRR(Unit type)/Solid-state tripping device

Type		BRR01N	BRR09N	BRR11N	BRR19N	BRR21N	BRR29N	BRR22N	BRR25N
Sensor hole	(mm)	ø10		ø25		ø40			
Main circuit voltage	(V AC)	Max. 600		120, 240					
Control voltage *	(V AC)	120, 240				120, 240, 415			
Rated sensitive current	(mA)	30	100	30	100	30	100	200	500
Mass	(kg)	0.12		0.2		0.52			

Type		BRR42H	BRR45H
No. of poles		2, 3, 4	
Main circuit voltage	(V AC)	Max. 600	
Rated current	(A)	400	
Control voltage *	(V AC)	120, 240, 415	
Rated sensitive current	(mA)	200	500
Mass	(kg)	2-pole: 3.0, 3-pole: 3.3, 4-pole: 3.6	

● RRD(Separate type)/Solid-state tripping device

Type			RRD6AZ□		RRD8AZ□		RRD10AZ□		RRD12AZ□		RRD25P0	RRD40P0	RRD60P0	RRD90P0	RRD120P0
No. of poles or sensor hole		(mm)	3	4	3	4	3	4	3	4	ø25	ø40	ø60	ø90	ø120
Main circuit voltage		(V AC)	Max. 600								Max. 600				
Rated current		(A)	600		800		1000		1200		–				
Control voltage *		(V AC)	120, 240, 415								120, 240, 415				
Rated sensitive current (mA)	Time-delay type 0.2 to 2 sec. adjustable		100/200, 200/500, 500/1000								100/200, 200/500, 500/1000				
Mass/Relay+Sensor		(kg)	8.1	12.0	9.3	14.6	12.0	16.0	15.7	25.4	0.7	1.2	1.8	2.6	7.0

Note: * 100/110V or 200/220V is available.

Earth Leakage Protective Relays
BRR, RRD, and EL types

■ Selection guide

● EL (Separate type)/Solid-state tripping device

Type		EL25P0	EL40P0	EL60P0	EL90P0	EL120P0
Sensor hole (mm)		ø25	ø40	ø60	ø90	ø120
Main circuit voltage (V AC)		Max. 600				
Control voltage (V AC)		100/200, 120/240, 415				
Rated sensitive current (mA)	Instantaneous	30, 100/200, 200/500 500/1000			100/200, 200/500 500/1000	
	Time-delay type	100/200, 200/500, 500/100 (Tripping time: 0.3 or 0.8 sec. fixed)				
Mass/Relay+Sensor (kg)		0.3	0.85	1.45	2.25	6.6

■ Auxiliary contact ratings

Type		Contact arrangement	Thermal current	Making current	Breaking current (cos ø=0.3–0.4) (L/R=7ms) 415V AC	240V AC	120V AC	24V DC
BRR01N, 09N		1NO *	3A	10A (at 240V AC)	–	1A	1A	–
11N, 19N		SPDT	3A		–	1A	1A	–
BRR21N, 29N, 22N, 25N BRR42H, 45H		SPDT	5A	10A (at 240V AC)	2.5A	5A	5A	2A
EL	120/240V AC	SPDT	5A	10A	–	3A	3A	2A
	415V AC	1NO	3A	6A	2A	3A	3A	2A
RRD	120/240V AC	2PDT	5A	10A	–	3A	3A	2A
	415V AC	SPDT	5A	6A	2.5A	3A	3A	2A

Note: * Also available with SPDT contact.

■ Type number nomenclature, BRR unit type

BRR 2 1 N-0 24 S

Protection
S : Without enclosure (standard)

Control voltage (AC)
1 : 100/110V 12 : 120V
2 : 200/220V 24 : 240V
4 : 415V

Poles
N-0 : Pass-through type
H-2 : 2-pole with conductor and terminal assembly
H-3 : 3-pole with conductor and terminal assembly
H-4 : 4-pole with conductor and terminal assembly

Sensitive current
1 : 30mA
9 : 100mA
2 : 200mA
5 : 500mA

Rated current
0 : Pass-through type ø10
1 : Pass-through type ø25
2 : Pass-through type ø40
4 : 400A

Basic type

■ Specifications/BRR type

Series	Rated current *1 (A)	Sensor hole or No. of poles	Rated sensitive current *2 (mA)	Control voltage *3 (V AC)	Tripping time (sec)	Type
BRR	2-wire: 37 3-wire: 37 4-wire: 27	ø10mm	30	120 240	0.1	**BRR01N-012S** **BRR01N-024S**
			100	120 240		**BRR09N-012S** **BRR09N-024S**
	2-wire: 162 3-wire: 115 4-wire: 115	ø25mm	30	120 240		**BRR11N-012S** **BRR11N-024S**
			100	120 240		**BRR19N-012S** **BRR19N-024S**
	2-wire: 344 3:wire: 298 4-wire: 257	ø40mm	30	120 240 415		**BRR21N-012S** **BRR21N-024S** **BRR21N-04S**
			100	120 240 415		**BRR29N-012S** **BRR29N-024S** **BRR29N-04S**
			200	120 240 415		**BRR22N-012S** **BRR22N-024S** **BRR22N-04S**
			500	120 240 415		**BRR25N-012S** **BRR25N-024S** **BRR25N-04S**
	400	2-pole	200	120 240 415	0.1	**BRR42H-212S** **BRR42H-224S** **BRR42H-24S**
			500	120 240 415		**BRR45H-212S** **BRR45H-224S** **BRR45H-24S**
		3-pole	200	120 240 415		**BRR42H-312S** **BRR42H-324S** **BRR42H-34S**
			500	120 240 415		**BRR45H-312S** **BRR45H-324S** **BRR45H-34S**
		4-pole	200	120 240 415		**BRR42H-412S** **BRR42H-424S** **BRR42H-44S**
			500	120 240 415		**BRR45H-412S** **BRR45H-424S** **BRR45H-44S**

Notes: *1 Using IV 600V cable.
*2 Non-tripping current is 0.5 times sensitive current.
*3 100/110V or 200/220V is available.

■ Wire size

ZCT sensing hole diameter and applicable cable(IV 600V)

Diameter (mm)	Wire 2-wire	3-wire	4-wire
10	3.5mm^2	3.5mm^2	2mm^2
25	38mm^2	22mm^2	22mm^2
40	125mm^2	100mm^2	80mm^2
60	325mm^2	200mm^2	200mm^2
90, 120	500mm^2	500mm^2	500mm^2

Conforming to JIS C 3307.

Earth Leakage Protective Relays
RRD series

■ Specifications/RRD type, with conductors

Series	Rated current (A)	No. of poles	Rated sensitive current *1 (mA)	Control voltage *2 (V AC)	Tripping time (sec)	Type
RRD	600	3-pole: 3 4-pole: 4 Replace the□ mark in the type number by the code shown below.	100/200	120 240 415	0.2–2 adjustable	**RRD6AZ□-1/2-V12** **RRD6AZ□-1/2-V24** **RRD6AZ□-1/2-V4**
			200/500	120 240 415		**RRD6AZ□-2/5-V12** **RRD6AZ□-2/5-V24** **RRD6AZ□-2/5-V4**
			500/1000	120 240 415		**RRD6AZ□-5/10-V12** **RRD6AZ□-5/10-V24** **RRD6AZ□-5/10-V4**
	800		100/200	120 240 415		**RRD8AZ□-1/2-V12** **RRD8AZ□-1/2-V24** **RRD8AZ□-1/2-V4**
			200/500	120 240 415		**RRD8AZ□-2/5-V12** **RRD8AZ□-2/5-V24** **RRD8AZ□-2/5-V4**
			500/1000	120 240 415		**RRD8AZ□-5/10-V12** **RRD8AZ□-5/10-V24** **RRD8AZ□-5/10-V4**
	1000		100/200	120 240 415		**RRD10AZ□-1/2-V12** **RRD10AZ□-1/2-V24** **RRD10AZ□-1/2-V4**
			200/500	120 240 415		**RRD10AZ□-2/5-V12** **RRD10AZ□-2/5-V24** **RRD10AZ□-2/5-V4**
			500/1000	120 240 415		**RRD10AZ□-5/10-V12** **RRD10AZ□-5/10-V24** **RRD10AZ□-5/10-V4**
	1200		100/200	120 240 415		**RRD12AZ□-1/2-V12** **RRD12AZ□-1/2-V24** **RRD12AZ□-1/2-V4**
			200/500	120 240 415		**RRD12AZ□-2/5-V12** **RRD12AZ□-2/5-V24** **RRD12AZ□-2/5-V4**
			500/1000	120 240 415		**RRD12AZ□-5/10-V12** **RRD12AZ□-5/10-V24** **RRD12AZ□-5/10-V4**

Notes: *1 The rated sensitive current can be selected by jumper connection.
Non-tripping current 0.5 times sensitive current.

*2 100/110V or 200/220V is available.

■ Type number nomenclature, RRD type

RRD 40 P0 - 2/5 -V2

Control voltage (AC)
V1 : 100/110V V4 : 415V V24 : 240V
V2 : 200/220V V12 : 120V

Sensitive current (selective)
1/2 : 100/200mA
2/5 : 200/500mA 5/10 : 500/1000mA

Poles
P0 : Pass-through type
Z3 : 3-pole with conductor
Z4 : 4-pole with conductor

Dia. of sensor hole or rated current
25 : ø25 6A : 600A
40 : ø40 8A : 800A
60 : ø60 10A : 1000A
90 : ø90 12A : 1200A
120 : ø120

Basic type

■ Specifications/RRD, poss-through type

Series	Rated current *1 (A)	Sensor hole (mm)	Rated sensitive current *2 (mA)	Control voltage *3 (V AC)	Tripping time (sec)	Type
RRD	2-wire: 162 3-wire: 115 4-wire: 115	ø25	100/200	120	0.2–2 adjustable	**RRD25P0-1/2-V12**
				240		**RRD25P0-1/2-V24**
				415		**RRD25P0-1/2-V4**
			200/500	120		**RRD25P0-2/5-V12**
				240		**RRD25P0-2/5-V24**
				415		**RRD25P0-2/5-V4**
			500/1000	120		**RRD25P0-5/10-V12**
				240		**RRD25P0-5/10-V24**
				415		**RRD25P0-5/10-V4**
	2-wire: 344 3-wire: 298 4-wire: 257	ø40	100/200	120		**RRD40P0-1/2-V12**
				240		**RRD40P0-1/2-V24**
				415		**RRD40P0-1/2-V4**
			200/500	120		**RRD40P0-2/5-V12**
				240		**RRD40P0-2/5-V24**
				415		**RRD40P0-2/5-V4**
			500/1000	120		**RRD40P0-5/10-V12**
				240		**RRD40P0-5/10-V24**
				415		**RRD40P0-5/10-V4**
	2-wire: 650 3-wire: 469 4-wire: 469	ø60	100/200	120		**RRD60P0-1/2-V12**
				240		**RRD60P0-1/2-V24**
				415		**RRD60P0-1/2-V4**
			200/500	120		**RRD60P0-2/5-V12**
				240		**RRD60P0-2/5-V24**
				415		**RRD60P0-2/5-V4**
			500/1000	120		**RRD60P0-5/10-V12**
				240		**RRD60P0-5/10-V24**
				415		**RRD60P0-5/10-V4**
	2-wire: 842 3-wire: 842 4-wire: 842	ø90	100/200	120		**RRD90P0-1/2-V12**
				240		**RRD90P0-1/2-V24**
				415		**RRD90P0-1/2-V4**
			200/500	120		**RRD90P0-2/5-V12**
				240		**RRD90P0-2/5-V24**
				415		**RRD90P0-2/5-V4**
			500/1000	120		**RRD90P0-5/10-V12**
				240		**RRD90P0-5/10-V24**
				415		**RRD90P0-5/10-V4**
	2-wire: 842 3-wire: 842 4-wire: 842	ø120	100/200	120		**RRD120P0-1/2-V12**
				240		**RRD120P0-1/2-V24**
				415		**RRD120P0-1/2-V4**
			200/500	120		**RRD120P0-2/5-V12**
				240		**RRD120P0-2/5-V24**
				415		**RRD120P0-2/5-V4**
			500/1000	120		**RRD120P0-5/10-V12**
				240		**RRD120P0-5/10-V24**
				415		**RRD120P0-5/10-V4**

Notes: *1 Using IV 600V cable. *(See page B1-217 for reference.)*
*2 The rated sensitive current can be selected by jumper connection.
Non-tripping current 0.5 times sensitive current.
*3 100/110V or 200/220V is available.

Earth Leakage Protective Relays
EL types

■ Specifications/EL type

Series	Rated current *1 (A)	Sensor hole (mm)	Rated sensitive current *2 (mA)	Control voltage *3 (V AC)	Tripping time (sec)	120/240V Type	415V Type
EL Instantaneous	2-wire: 162 3-wire: 115 4-wire: 115	ø25	30 100/200 200/500 500/1000	120/240 415	0.1	**EL25P0-30MA-V12** **EL25P0-1/2-V12** **EL25P0-2/5-V12** **EL25P0-5/10-V12**	**EL25P0-30MA-V4** **EL25P0-1/2-V4** **EL25P0-2/5-V4** **EL25P0-5/10-V4**
	2-wire: 344 3-wire: 298 4-wire: 257	ø40	30 100/200 200/500 500/1000			**EL40P0-30MA-V12** **EL40P0-1/2-V12** **EL40P0-2/5-V12** **EL40P0-5/10-V12**	**EL40P0-30MA-V4** **EL40P0-1/2-V4** **EL40P0-2/5-V4** **EL40P0-5/10-V4**
	2-wire: 650 3-wire: 469 4-wire: 469	ø60	30 100/200 200/500 500/1000			**EL60P0-30MA-V12** **EL60P0-1/2-V12** **EL60P0-2/5-V12** **EL60P0-5/10-V12**	**EL60P0-30MA-V4** **EL60P0-1/2-V4** **EL60P0-2/5-V4** **EL60P0-5/10-V4**
	2-wire: 842 3-wire: 842 4-wire: 842	ø90	100/200 200/500 500/1000			**EL90P0-1/2-V12** **EL90P0-2/5-V12** **EL90P0-5/10-V12**	**EL90P0-1/2-V4** **EL90P0-2/5-V4** **EL90P0-5/10-V4**
	2-wire: 842 3-wire: 842 4-wire: 842	ø120	100/200 200/500 500/1000			**EL120P0-1/2-V12** **EL120P0-2/5-V12** **EL120P0-5/10-V12**	**EL120P0-1/2-V4** **EL120P0-2/5-V4** **EL120P0-5/10-V4**
EL Time delay	2-wire: 162 3-wire: 115 4-wire: 115	ø25	100/200 200/500 500/1000	120/240 415	0.3	**EL25P0-1/2-D3-V12** **EL25P0-2/5-D3-V12** **EL25P0-5/10-D3-V12**	**EL25P0-1/2-D3-V4** **EL25P0-2/5-D3-V4** **EL25P0-5/10-D3-V4**
	2-wire: 344 3-wire: 298 4-wire: 257	ø40	100/200 200/500 500/1000			**EL40P0-1/2-D3-V12** **EL40P0-2/5-D3-V12** **EL40P0-5/10-D3-V12**	**EL40P0-1/2-D3-V4** **EL40P0-2/5-D3-V4** **EL40P0-5/10-D3-V4**
	2-wire: 650 3-wire: 469 4-wire: 469	ø60	100/200 200/500 500/1000			**EL60P0-1/2-D3-V12** **EL60P0-2/5-D3-V12** **EL60P0-5/10-D3-V12**	**EL60P0-1/2-D3-V4** **EL60P0-2/5-D3-V4** **EL60P0-5/10-D3-V4**
	2-wire: 842 3-wire: 842 4-wire: 842	ø90	100/200 200/500 500/1000			**EL90P0-1/2-D3-V12** **EL90P0-2/5-D3-V12** **EL90P0-5/10-D3-V12**	**EL90P0-1/2-D3-V4** **EL90P0-2/5-D3-V4** **EL90P0-5/10-D3-V4**
	2-wire: 842 3-wire: 842 4-wire: 842	ø120	100/200 200/500 500/1000			**EL120P0-1/2-D3-V12** **EL120P0-2/5-D3-V12** **EL120P0-5/10-D3-V12**	**EL120P0-1/2-D3-V4** **EL120P0-2/5-D3-V4** **EL120P0-5/10-D3-V4**
	2-wire: 162 3-wire: 115 4-wire: 115	ø25	100/200 200/500 500/1000	120/240 415	0.8	**EL25P0-1/2-D8-V12** **EL25P0-2/5-D8-V12** **EL25P0-5/10-D8-V12**	**EL25P0-1/2-D8-V4** **EL25P0-2/5-D8-V4** **EL25P0-5/10-D8-V4**
	2-wire: 344 3-wire: 298 4-wire: 257	ø40	100/200 200/500 500/1000			**EL40P0-1/2-D8-V12** **EL40P0-2/5-D8-V12** **EL40P0-5/10-D8-V12**	**EL40P0-1/2-D8-V4** **EL40P0-2/5-D8-V4** **EL40P0-5/10-D8-V4**
	2-wire: 650 3-wire: 469 4-wire: 469	ø60	100/200 200/500 500/1000			**EL60P0-1/2-D8-V12** **EL60P0-2/5-D8-V12** **EL60P0-5/10-D8-V12**	**EL60P0-1/2-D8-V4** **EL60P0-2/5-D8-V4** **EL60P0-5/10-D8-V4**
	2-wire: 842 3-wire: 842 4-wire: 842	ø90	100/200 200/500 500/1000			**EL90P0-1/2-D8-V12** **EL90P0-2/5-D8-V12** **EL90P0-5/10-D8-V12**	**EL90P0-1/2-D8-V4** **EL90P0-2/5-D8-V4** **EL90P0-5/10-D8-V4**
	2-wire: 842 3-wire: 842 4-wire: 842	ø120	100/200 200/500 500/1000			**EL120P0-1/2-D8-V12** **EL120P0-2/5-D8-V12** **EL120P0-5/10-D8-V12**	**EL120P0-1/2-D8-V4** **EL120P0-2/5-D8-V12** **EL120P0-5/10-D8-V4**

Notes: *1 Using IV 600V cable. *(See page B1-217 for reference.)*
*2 Non tripping current is 0.5 times sensitive current.
*3 100/110V or 200/220V is available.

● Type number nomenclature, ELtype

EL 25 P0 - 1/2 - D3-V4

Basic type

Diameter of sensor hole (mm)
25 : ø25 60 : ø60 120 : ø120
40 : ø40 90 : ø90

Pass-through type

Sensitive current
30MA : 30mA
1/2 : 100/200mA (selective)
2/5 : 200/500mA (selective)
5/10 : 500/1000mA (selective)

Control voltage (AC)
No-mark : 100/200V V12 : 120/240V
V4 : 415V

Tripping time
Blank : Instantaneous
D3 : 0.3 sec. time delay
D8 : 0.8 sec. time delay

■ Specifications/EL type, UL 1053 recognized [UL File No. E176596]

Series	Sensor hole (mm)	Rated sensitive current (mA)	Control voltage	Tripping time (sec)	Type		
					24 VAC/DC Control	100/200 VAC Control	120/240 VAC Control
EL	ø25	30	24 VAC/DC 100/200 VAC 120/240 VAC	0.1	**EL25P0-30MA-AD24-00415UL**	**EL25P0-30MA-00415UL**	**EL25P0-30MA-V12-00415UL**
		50/100			**EL25P0-05/1-AD24-00415UL**	**EL25P0-05/1-00415UL**	**EL25P0-05/1-V12-00415UL**
		100/200			**EL25P0-1/2-AD24-00415UL**	**EL25P0-1/2-00415UL**	**EL25P0-1/2-V12-00415UL**
		200/500			**EL25P0-2/5-AD24-00415UL**	**EL25P0-2/5-00415UL**	**EL25P0-2/5-V12-00415UL**
		500/1000			**EL25P0-5/10-AD24-00415UL**	**EL25P0-5/10-00415UL**	**EL25P0-5/10-V12-00415UL**
	ø40	30			**EL40P0-30MA-AD24-00415UL**	**EL40P0-30MA-00415UL**	**EL40P0-30MA-V12-00415UL**
		50/100			**EL40P0-05/1-AD24-00415UL**	**EL40P0-05/1-00415UL**	**EL40P0-05/1-V12-00415UL**
		100/200			**EL40P0-1/2-AD24-00415UL**	**EL40P0-1/2-00415UL**	**EL40P0-1/2-V12-00415UL**
		200/500			**EL40P0-2/5-AD24-00415UL**	**EL40P0-2/5-00415UL**	**EL40P0-2/5-V12-00415UL**
		500/1000			**EL40P0-5/10-AD24-00415UL**	**EL40P0-5/10-00415UL**	**EL40P0-5/10-V12-00415UL**
	ø60	30			**EL60P0-30MA-AD24-00415UL**	**EL60P0-30MA-00415UL**	**EL60P0-30MA-V12-00415UL**
		50/100			**EL60P0-05/1-AD24-00415UL**	**EL60P0-05/1-00415UL**	**EL60P0-05/1-V12-00415UL**
		100/200			**EL60P0-1/2-AD24-00415UL**	**EL60P0-1/2-00415UL**	**EL60P0-1/2-V12-00415UL**
		200/500			**EL60P0-2/5-AD24-00415UL**	**EL60P0-2/5-00415UL**	**EL60P0-2/5-V12-00415UL**
		500/1000			**EL60P0-5/10-AD24-00415UL**	**EL60P0-5/10-00415UL**	**EL60P0-5/10-V12-00415UL**
	ø90	30			**EL90P0-30MA-AD24-00415UL**	**EL90P0-30MA-00415UL**	**EL90P0-30MA-V12-00415UL**
		50/100			**EL90P0-05/1-AD24-00415UL**	**EL90P0-05/1-00415UL**	**EL90P0-05/1-V12-00415UL**
		100/200			**EL90P0-1/2-AD24-00415UL**	**EL90P0-1/2-00415UL**	**EL90P0-1/2-V12-00415UL**
		200/500			**EL90P0-2/5-AD24-00415UL**	**EL90P0-2/5-00415UL**	**EL90P0-2/5-V12-00415UL**
		500/1000			**EL90P0-5/10-AD24-00415UL**	**EL90P0-5/10-00415UL**	**EL90P0-5/10-V12-00415UL**
	ø115	30			**EL115P0-30MA-AD24-00415UL**	**EL115P0-30MA-00415UL**	**EL115P0-30MA-V12-00415UL**
		50/100			**EL115P0-05/1-AD24-00415UL**	**EL115P0-05/1-00415UL**	**EL115P0-05/1-V12-00415UL**
		100/200			**EL115P0-1/2-AD24-00415UL**	**EL115P0-1/2-00415UL**	**EL115P0-1/2-V12-00415UL**
		200/500			**EL115P0-2/5-AD24-00415UL**	**EL115P0-2/5-00415UL**	**EL115P0-2/5-V12-00415UL**
		500/1000			**EL115P0-5/10-AD24-00415UL**	**EL115P0-5/10-00415UL**	**EL115P0-5/10-V12-00415UL**

● Type number nomenclature, EL type, UL 1053 recognized

EL 25 P0 - 30MA - AD24 - 00415 UL

Special ratings in clause IV
00415 UL : UL agreement goods

Control voltage
No mark : 100/200V AC
V12 : 120/240V AC
AD24 : 24V AC/DC

Sensitivity current
30MA : 30mA (Pick-up current 22mA)
05/1 : 50/100mA (Pick-up current 40/80mA)
1/2 : 100/200mA (Pick-up current 80/160mA)
2/5 : 200/500mA (Pick-up current 160/400mA)
5/10 : 500/1000mA (Pick-up current 400/800mA)

Pass-through type
P0 : through type

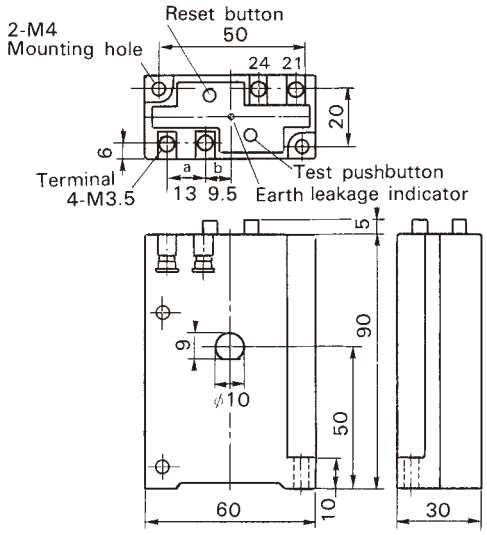
Diameter of sensor hole
25 : 25mm diameter
40 : 40mm diameter
60 : 60mm diameter
90 : 90mm diameter
115 : 115mm diameter

Basic type

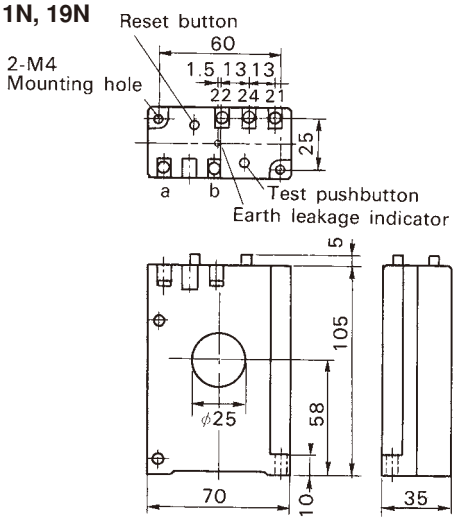
Earth Leakage Protective Relays
BRR type

■ Dimensions, mm

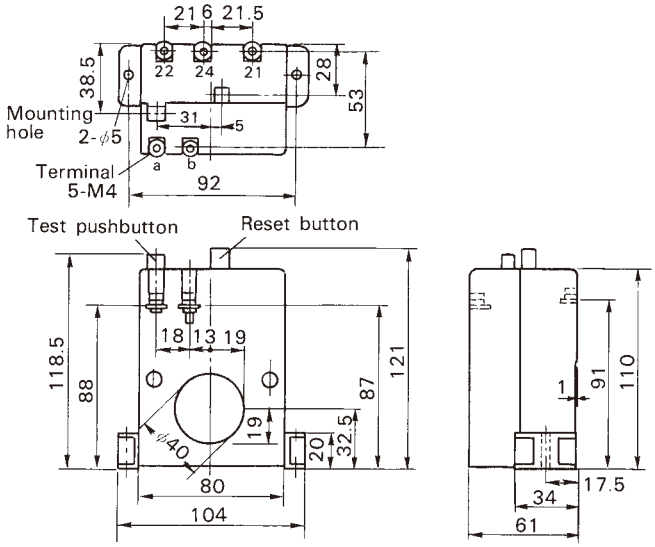
BRR01N, 09N



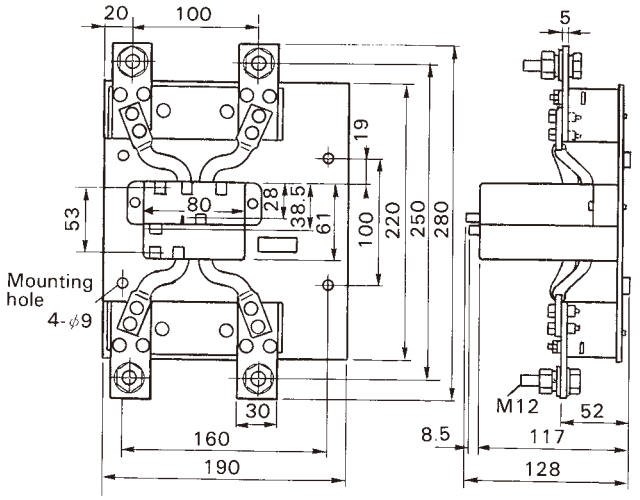
BRR11N, 19N



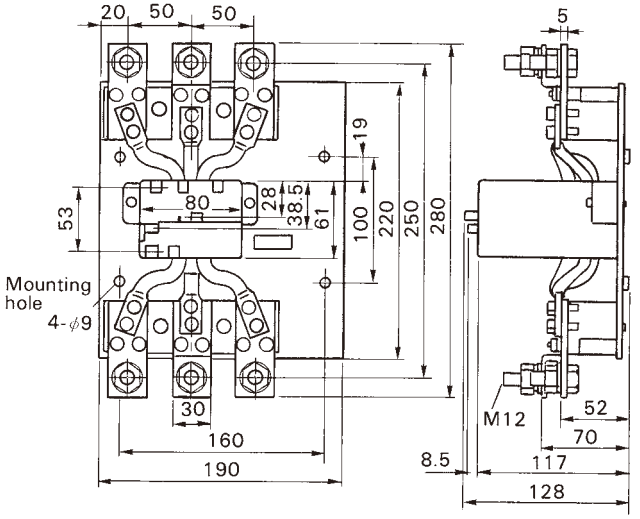
BRR21N, 29N, 22N, 23N, 25N



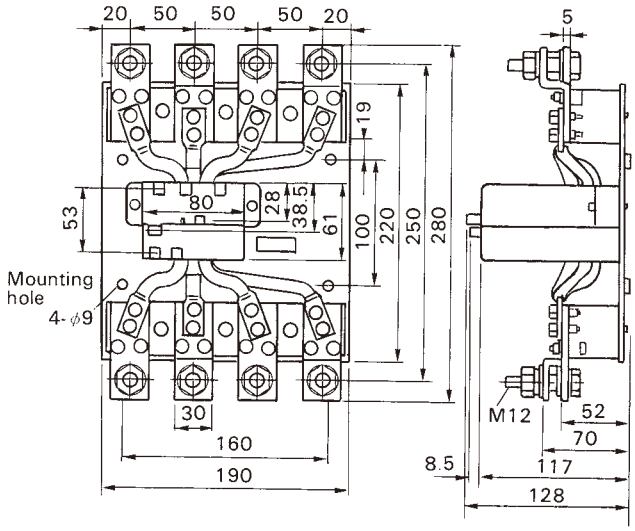
BRR42H, 45H
2-pole



3-pole

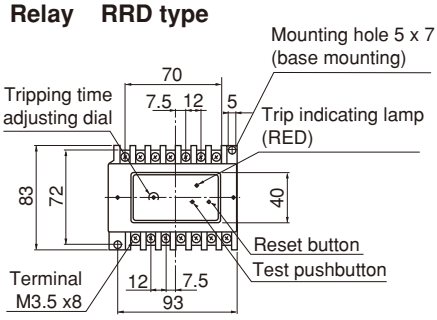


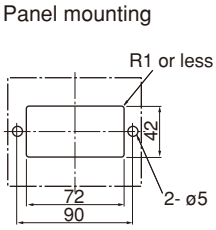
4-pole

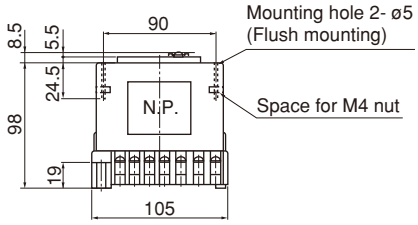


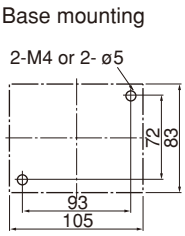
■ Dimensions, mm

Relay RRD type

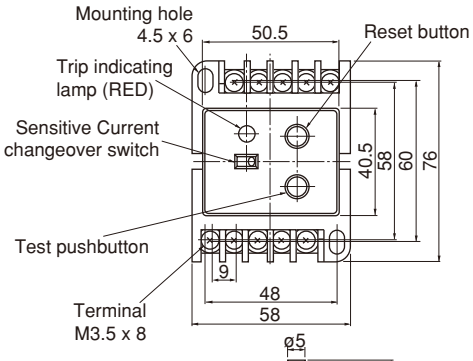


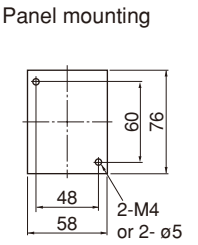


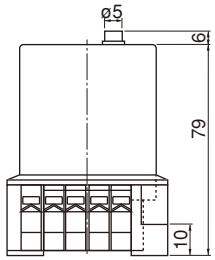


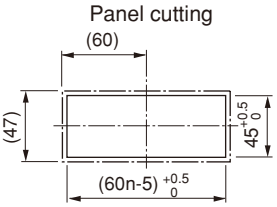


Relay EL type



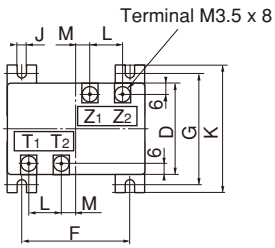


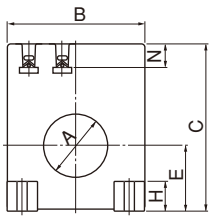




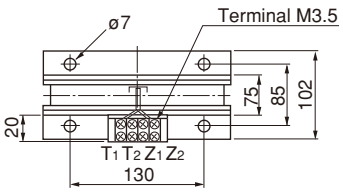
Note: When flush mounting type is required, an adaptor EL-E is needed. (Sold separately)

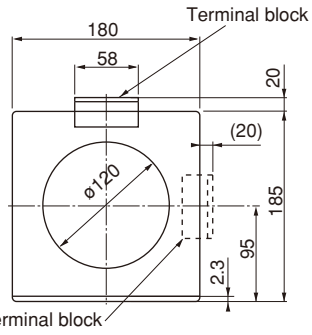
Sensors
RRD25, 40, 60, 90P0
EL25, 40, 60, 90P0





RRD120, EL120P0





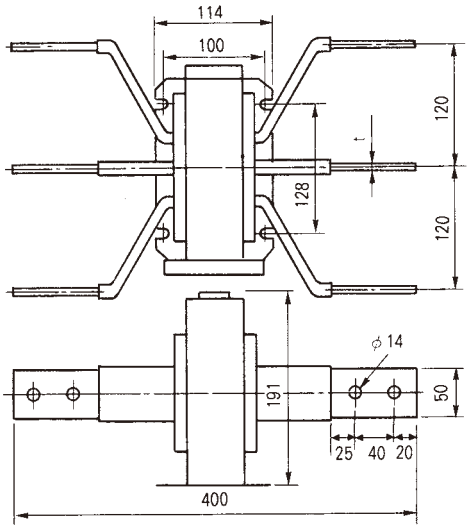
Type	A	B	C	D	E	F	G	H	J	K	L	M	N
RRD25	ø25	55	72	29	28	40	42	10	5	54	13	7	7
EL25	ø25	55	72	29	28	40	42	10	5	54	13	7	7
RRD40	ø40	90	115	62	45	70	75	18	5	90	22	8	18
EL40	ø40	90	115	62	45	70	75	18	5	90	22	8	18
RRD60	ø60	120	145	62	60	100	75	18	6	90	22	8	18
EL60	ø60	120	145	62	60	100	75	18	6	90	22	8	18
RRD90	ø90	160	185	66	80	125	88	22	7	110	22	8	18
EL90	ø90	160	185	66	80	125	88	22	7	110	22	8	18

B1

■ Dimensions, mm

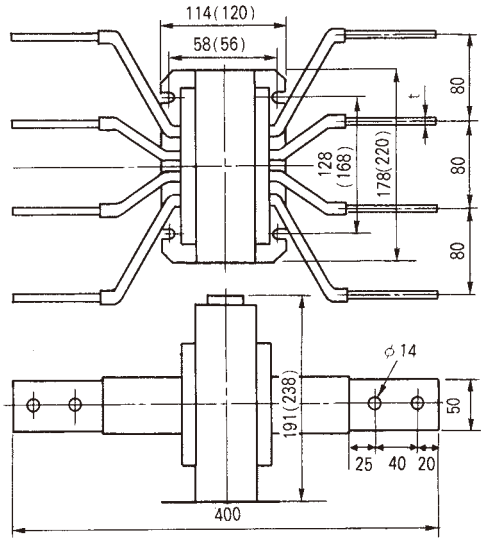
Sensors

RRD6AZ3, 8AZ3, 10AZ3



t RRD6AZ3: 6
RRD8AZ3: 8
RRD10AZ3: 12

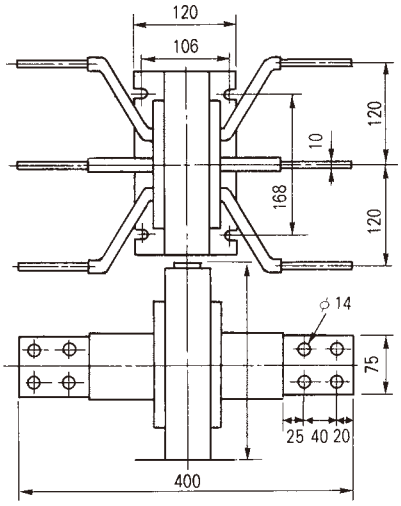
RRD6AZ4, 8AZ4, 10AZ4



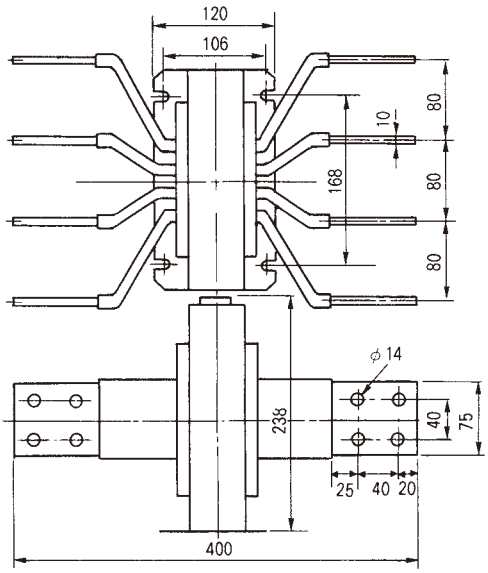
t RRD6AZ4: 6
RRD8AZ4: 8
RRD10AZ4: 12

( ) : For RRD10AZ4

RRD12AZ3

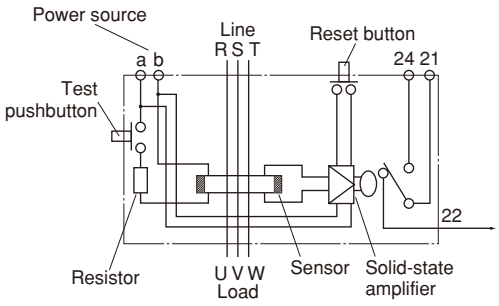


RRD12AZ4

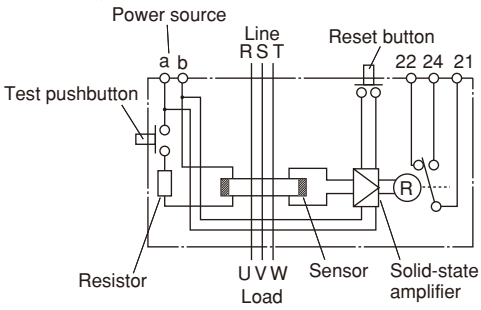


■ Wiring diagrams

BRR01N, 09N

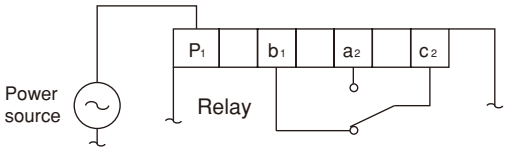


BRR11N, 19N, 21N, 29N, 22N, 23N, 25N
BRR42H, 45H

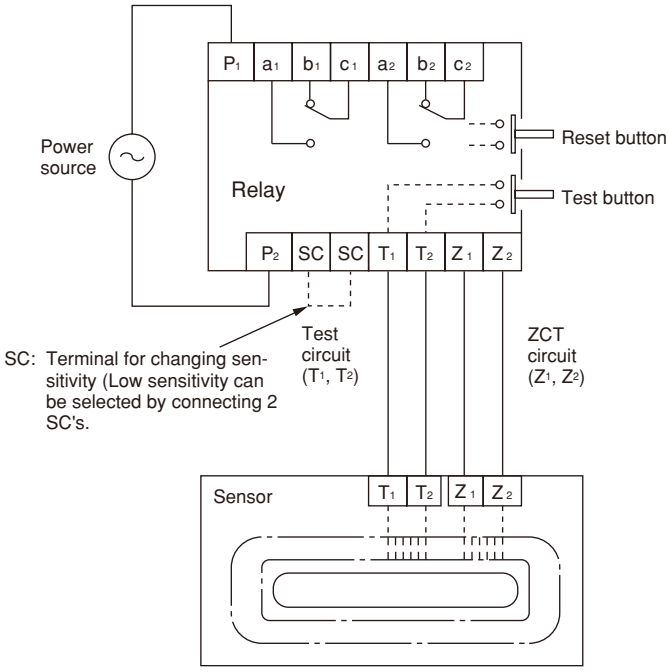


RRD type

● **415VAC**

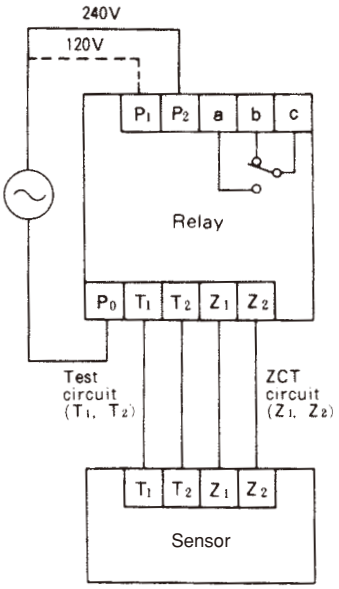


● **100/110VAC, 200/220VAC, 120VAC, 240VAC**



EL type

100/200VAC, 120/240VAC



415VAC