e-Front runners

FUJI BW Series (100/160/250AF)

MCCB

Molded Case Circuit Breakers

e-Front runners

Fuji Electric FA Components & Systems Co., Ltd.

EEH120

We’ve expanded our MCCB lineup with the addition of models with global frame sizes of 160AF and 250AF.

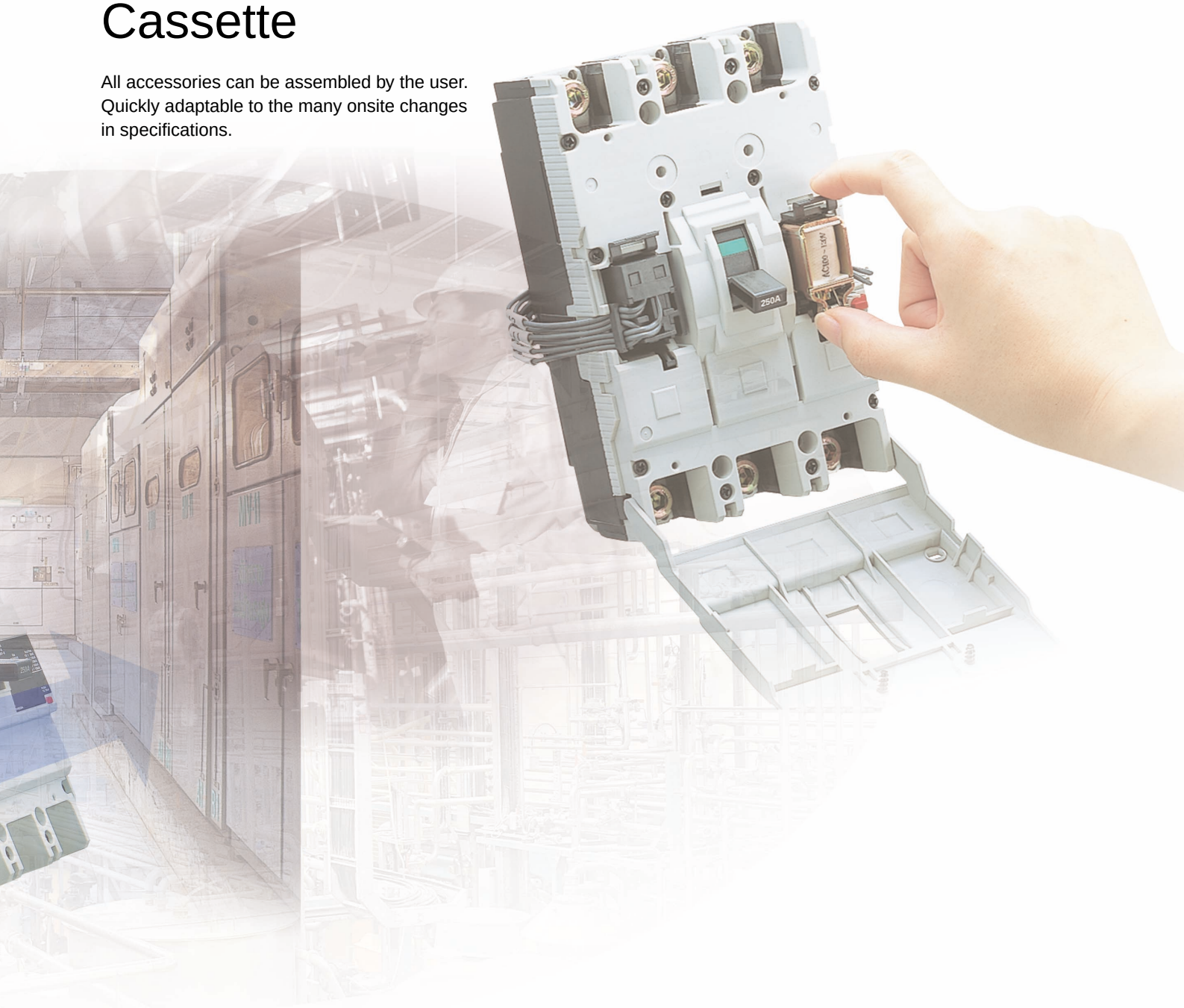
Fuji Electric FA components & Systems Co.,Ltd. was formed in 2003 under the parent company Fuji Electric Holdings Co.,Ltd . which was established in 1923.
MCCB production started in 1968, and the hard earned expertise gained over the years has established global reputation for high quality.
MCCBs are used in many different types of electrical distribution and control systems.The most important requirement is to provide dependable, safe protection of load devices in the event of a short-circuit.
Making use of related technologies, Fuji Electric FA components & Systems Co.,Ltd. has developed a global frame size lineup of MCCBs.
This time we provide a three-fold concept for compact, cassette-type, BW series MCCBs, resulting in a global series.

Compact

We’ve applied high-performance technology to achieve 100AF to 250AF models with a uniform depth of 60 mm.
Compact design has been realized for the MCCB family series from 30AF to 800AF.
We’ve achieved a Ics of 50% Icu.

Cassette

All accessories can be assembled by the user.
Quickly adaptable to the many onsite changes in specifications.



Global

Introducing new frame sizes: 160AF and 250AF
Fully compliant with IEC standards while providing the required safety.

Compact

We’ve reduced external dimensions and increased modularization to the limits. Customers can now reduce costs in panel design and manufacturing.

Reducing external dimensions and unifying the depth to 60 mm lead to smaller panels and easier manufacturing.

For the 30AF to 250AF models, unifying the depth to 60 mm has enabled reduced costs and standardized panel design and manufacturing.

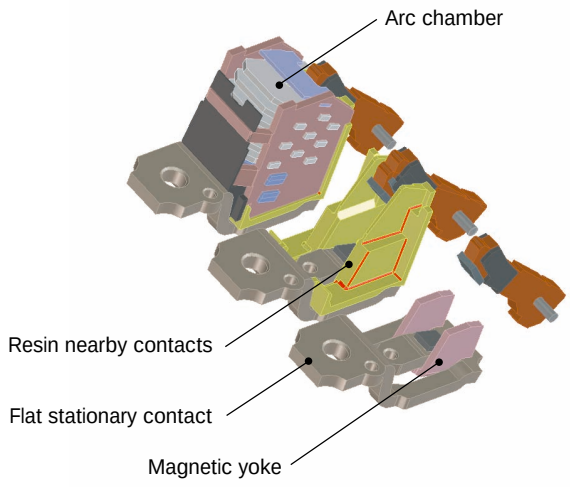
Using uniform external dimensions provides flexibility in responding to changes in specifications.

The 30AF to 100AF models can be mounted on IEC 35mm rail for easy panel mounting.

Enhanced Breaking Technology

“BW Series” circuit breaker emploies an unique and ideal breaking mechanism that give you enhanced breaking capability from the beginning to completion of interruption.

- Achieve high speed contact opening according to increasing electromagnetic force to opening direction by joint using of flat stationary contact and magnetic yoke.
- Accelerate movable contact speed by arcing gas generated from special resin located closely to movable contact.
- Drastically reducing clearing I^2t according to increasing arc driving force to arc chamber by magnetic yoke to rise arc voltage rapidly.



Cassette

User installation provides for speedy on-site response to changes in specifications.

(Customer assembly of accessories enables customer to respond to changes in specifications.)

A wide assortment of user-installed accessories is available.

The number of tasks required when specifications change has been reduced.

Models Auxiliary switch and Alarm switch can be mounted on either the right or left.

Accessory

❶Terminal cover Short

❷Terminal cover Long

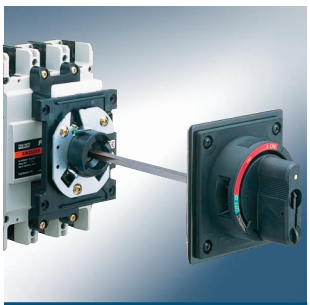
❸Insulation barrier Interphase

❹Flat terminal

❺Auxiliary switch,Alarm switch,Shunt trip

❻Undervltage release

❼Operating handle N-type



❽Operating handle V-type

❾Handle locking device

Global

Compliance with the IEC standards in pursuit of global standards.

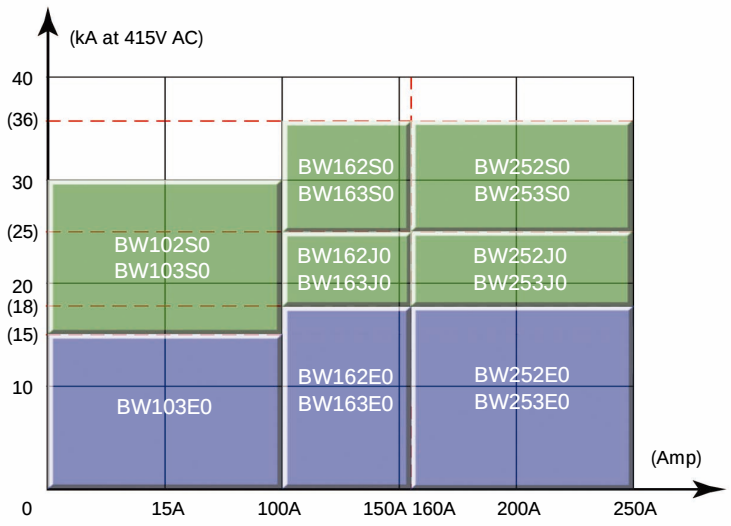
Compliance with the IEC standards in pursuit of global standards.

We've expanded our lineup by adding the 160AF and 250AF global frames.

Conformity with international standards such as IEC 60947-2 for all models. Standards conformity information is given on the nameplate.

Gray, has been adopted as the color for the front surface.

Application by interrupting capacity



e-Front runners

I N D E X

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Quick reference guide 12 Q

Accessories 18 A

Installation 28 I

Characteristic curves 30 C

Dimensions 32 D

• [NEW] FUJI MCCBs Family of Product Models (2/3- poles for Line Protection)

Series		E					S									
Frame size		100	160		250		100		160				250			
Poles		3	2	3	2	3	2	3	2	3	2	3	2	3	2	3
Type		BW103E0	BW162E0	BW163E0	BW252E0	BW253E0	BW102S0	BW103S0	BW162J0	BW163J0	BW162S0	BW163S0	BW252J0	BW253J0	BW252S0	BW253S0
Ordering Code		BW103E0	BW162E0	BW163E0	BW252E0	BW253E0	BW102S0	BW103S0	BW162J0	BW163J0	BW162S0	BW163S0	BW252J0	BW253J0	BW252S0	BW253S0
Note (with)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rated Current (A)		15, 20, 25, 30, 40, 50, 60, 75, 80,100	100, 125, 150, 160		175, 200, 225, 250		15, 20, 25, 30, 40, 50, 60, 75, 80, 100		100, 125, 150, 160		100, 125, 150, 160		175, 200, 225, 250		175, 200, 225, 250	
Rated interrupting	415V AC	15 / 8	18 / 9		18 / 9		30 / 8	30 / 8	25 / 13		36 / 18		25 / 13		36 / 18	
capacity (kA)	380V AC	18 / 9	18 / 9		18 / 9		30 / 15	30 / 15	25 / 13		36 / 18		25 / 13		36 / 18	
IEC60947-2 (Icu/Ics)	230V AC	25 / 13	25 / 13		25 / 13		50 / 25	100 / 50	50 / 25		85 / 43		50 / 25		85 / 43	
See pages		12			13		14		15				16			

• FUJI MCCBs Family of Product Models (2/3- poles for Line Protection)

Series		E							
Frame size		3 0		50		6 0		1 0 0	
Poles		2	3	2	3	2	3	2	3
Type		EA32AC	EA33AC	EA52C	EA53C	EA62C	EA63C	EA102C	EA103C
Ordering Code		BB2AEAC	BB3AEAC	BB2BEC	BB3BEC	BB2CEC	BB3CEC	BB2EEC	BB3EEC
Note (with)		-CE	-CE	-CE	-CE	-CE	-CE	-CE	-CE
Rated Current (A)		3, 5, 10, 15, 20, 30		5, 10, 15, 20, 30, 40, 50		60		50, 60, 75, 100	
Rated interrupting	415V AC	1.5 / 1		2.5 / 2		2.5 / 2		10 / 5	
capacity (kA)	380V AC	1.5 / 1		2.5 / 2		2.5 / 2		10 / 5	
IEC60947-2 (Icu/Ics)	230V AC	2.5 / 2		5 / 3		5 / 3		25 / 13	
See pages		*1							

Series		E					
Frame size		225		400		600	800
Poles		2	3	2	3	3	3
Type		EA202C	EA203C	EA402C	EA403C	EA603C	EA803
Ordering Code		BB2GEC	BB3GEC	BB2KEC	BB3KEC	BB3LEC	BB3MEC
Note (with)		-CE	-CE	-CE	-CE	-CE	-CE
Rated Current (A)		125, 150,175, 200, 225		250, 300, 350, 400		500, 600	700, 800
Rated interrupting	415V AC	18 / 5		25 / 13		35 / 18	35 / 18
capacity (kA)	380V AC	18 / 5		25 / 13		35 / 18	35 / 18
IEC60947-2 (Icu/Ics)	230V AC	35 / 18		35 / 18		50 / 25	50 / 25
See pages		*1					

Series		S									
Frame size		30		50				60			
Poles		2	3	2	3	2	3	2	3	2	3
Type		SA32C	SA33C	SA52C	SA53C	SA52RC	SA53RC	SA62C	SA63C	SA62RC	SA63RC
Ordering Code		BB2ASC	BB3ASC	BB2BSC	BB3BSC	BB2BRC	BB3BRC	BB2CSC	BB3CSC	BB2CRC	BB3CRC
Note (with)		-CE	-CE	-CE	-CE	-CE	-CE	-CE	-CE	-CE	-CE
Rated Current (A)		3, 5, 10, 15, 20, 30		5, 10, 15, 20, 30, 40, 50		10, 15, 20, 30, 40, 50		60		60	
Rated interrupting	415V AC	2.5 / 2		7.5 / 4		10 / 5		7.5 / 4		10 / 5	
capacity (kA)	380V AC	2.5 / 2		7.5 / 4		10 / 5		7.5 / 4		10 / 5	
IEC60947-2 (Icu/Ics)	230V AC	5 / 3		10 / 5		25 / 13		10 / 5		25 / 13	
See pages		*1									

Series		S							
Frame size		100				225			
Poles		2	3	2	3	2	3	2	3
Type		SA102C	SA103C	SA102RC	SA103RC	SA202C	SA203C	SA202RC	SA203RC
Ordering Code		BB2ESD	BB3ESD	BB2ERD	BB3ERD	BB2GSD	BB3GSD	BB2GRD	BB3GRD
Note (with)		-CE	-CE	-CE	-CE	-CE	-CE	-CE	-CE
Rated Current (A)		15, 20, 30, 40, 50, 60, 75, 100		15, 20, 30, 40, 50,60, 75, 100		125, 150, 175, 200, 225		125, 150, 175, 200, 225	
Rated interrupting	415V AC	30 / 8		50 / 13		30 / 8		50 / 13	
capacity (kA)	380V AC	30 / 8		50 / 13		30 / 8		50 / 13	
IEC60947-2 (Icu/Ics)	230V AC	50 / 25		100 / 50		50 / 25		100 / 50	
See pages		*1							

Series		S								
Frame size		400				600	800	1000	1250	1600
Poles		2	3	2	3	3	3	3	3	3
Type		SA402C	SA403C	SA402RC	SA403RC	SA603RC	SA803RC	SA1003E	SA1253E	SA1603E
Ordering Code		BB2KSC	BB3KSC	BB2KRC	BB3KRC	BB3LRC	BB3MRC	BE3NSA	BE3SSB	BE3TSA
Note (with)		-CE	-CE	-CE	-CE	-CE	-CE	-CE	-CE	-CE
Rated Current (A)		250, 300, 350, 400		250, 300, 350, 400		500, 600	700, 800	500-1000	630-1250	800-1600
Rated interrupting	415V AC	35 / 18		50 / 25		50 / 25	50 / 25	65 / 49	65 / 49	85 / 64
capacity (kA)	380V AC	35 / 18		50 / 25		50 / 25	50 / 25	85 / 64	85 / 64	100 / 75
IEC60947-2 (Icu/Ics)	230V AC	50 / 25		85 / 43		85 / 43	85 / 43	100 / 75	100 / 75	125 / 94
See pages		*1								

Notes: For FUJI ELCB product family, refer to FUJI D&C CATALOG (Individual Catalog No.07).
*1 For details, refer to FUJI D&C CATALOG (Individual Catalog No.06).

• FUJI MCCBs Family of Product Models (3-poles for Line Protection)

Series		H				
Frame size		100	225	400	600	800
Poles		3	3	3	3	3
Type		H103CA	H203CA	H403C	H603C	H803C
Note (with)		-	-	-	-	-
Rated Current (A)		15, 20, 30, 40, 50 60, 75, 100	125, 150, 175, 200 225	250, 300, 350, 400	500, 600	700, 800
Rated interrupting	440V AC	70 / 70	70 / 70	70 / 35	70 / 35	70 / 35
capacity (kA)	400V AC	70 / 70	70 / 70	70 / 35	70 / 35	70 / 35
IEC60947-2 (Icu/Ics)	230V AC	100 / 100	100 / 100	125 / 63	125 / 63	125 / 63

SOON TO BE RELEASED

• FUJI MCCBs Family of Product Models (4-poles for Line Protection)

Series		S									
Frame size		100		225		400		600		800	
Poles		4	4	4	4	4	4	4	4	4	4
Type		SA104BA	SA104RA	SA204BA	SA204RA	SA404BA	SA404RA	SA604BA	SA604RA	SA804BA	SA804RA
Note (with)		-	-	-	-	-	-	-	-	-	-
Rated Current (A)		15, 20, 30, 40, 50 60, 75, 100		125, 150, 175, 200 225		250, 300, 350, 400		500, 600		700, 800	
Rated interrupting	440V AC	25 / 13	50 / 25	25 / 13	50 / 25	35 / 18	50 / 25	35 / 18	50 / 25	35 / 18	50 / 25
capacity (kA)	400V AC	30 / 15	50 / 25	35 / 18	50 / 25	35 / 18	50 / 25	45 / 23	65 / 33	45 / 23	65 / 33
IEC60947-2 (Icu/Ics)	230V AC	50 / 25	85 / 43	50 / 25	85 / 43	50 / 25	85 / 43	50 / 25	85 / 43	50 / 25	85 / 43

SOON TO BE RELEASED

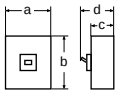
E series/2, 3-pole IEC and CE marking conformed types

Frame			100A	160A	
Pole			3	2	3
Type			**BW103E0**	**BW162E0**	**BW163E0**
Rated current (A)			15, 20, 25, 30, 40, 50, 60, 75, 80, 100	100, 125, 150, 160	100, 125, 150, 160
Rated insulation voltage	(V AC)		690	690	690
[IEC 60947-2, JIS C8201-2]	(V DC)		250	250	250
Rated interrupting capacity (kA)	600V AC		–	–	–
IEC 60947-2	550V AC		5/3	5/3	5/3
JIS C 8201-2	440V AC		10/5	15/8	15/8
(Icu/Ics) *1	415V AC		15/8	18/9	18/9
	400V AC		15/8	18/9	18/9
	380V AC		18/9	18/9	18/9
	240V AC		25/13	25/13	25/13
	230V AC		25/13	25/13	25/13
	250V DC		5/3	5/3	5/3
Dimensions (mm)		a	75	105	105
		b	130	165	165
Page 32, 33		c	60	60	60
		d	81	86	86
Mass (kg) Front mounting type			0.78	1.36	1.56
Tripping device			Thermal-magnetic		
Front mounting, front connection			●	●	●
Internal accessories	*See page 18*				
Auxiliary switch			●	●	●
Alarm switch			●	●	●
Auxiliary switch + Alarm switch			●	●	●
Shunt trip			●	●	●
Under voltage release			●	●	●
External accessories	*See page 22*				
Operating handle N type			●	●	●
Operating handle V type			●	●	●
Terminal cover Short			–	●	●
Terminal cover Long			●	●	●
Insulation barrier Interphase			●	●	●
Flat terminal			–	●	●
Block terminal			●	●	●
Handle locking device			●	●	●
IEC 35mm rail mounting			●	–	–

Notes: *1 Icu: Rated ultimate short-circuit breaking capacity
Ics: Rated service short-circuit breaking capacity

● Available – Not available

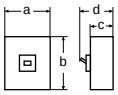
E series/2, 3-pole IEC and CE marking conformed types

Frame			250A	
Pole			2	3
Type			**BW252E0**	**BW253E0**
Rated current (A)			175, 200, 225, 250	175, 200, 225, 250
Rated insulation voltage	(V AC)		690	690
[IEC 60947-2, JIS C8201-2]	(V DC)		250	250
Rated interrupting capacity (kA)	600V AC		–	–
IEC 60947-2	550V AC		5/3	5/3
JIS C 8201-2	440V AC		15/8	15/8
(Icu/Ics) *1	415V AC		18/9	18/9
	400V AC		18/9	18/9
	380V AC		18/9	18/9
	240V AC		25/13	25/13
	230V AC		25/13	25/13
	250V DC		5/3	5/3
Dimensions (mm)		a	105	105
		b	165	165
Page 32, 33		c	60	60
		d	86	86
Mass (kg) Front mounting type			1.36	1.56
Tripping device			Thermal-magnetic	
Front mounting, front connection			●	●
Internal accessories	*See page 18*			
Auxiliary switch			●	●
Alarm switch			●	●
Auxiliary switch + Alarm switch			●	●
Shunt trip			●	●
Under voltage release			●	●
External accessories	*See page 22*			
Operating handle N type			●	●
Operating handle V type			●	●
Terminal cover Short			●	●
Terminal cover Long			●	●
Insulation barrier Interphase			●	●
Flat terminal			●	●
Block terminal			●	●
Handle locking device			●	●
IEC 35mm rail mounting			–	–

Notes: *1 Icu: Rated ultimate short-circuit breaking capacity
Ics: Rated service short-circuit breaking capacity

● Available – Not available

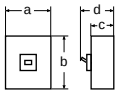
S series/2, 3-pole IEC and CE marking conformed types

Frame			100A	
Pole			2	3
Type			**BW102S0**	**BW103S0**
Rated current (A)			15, 20, 25, 30, 40, 50, 60, 75, 80, 100	15, 20, 25, 30, 40, 50, 60, 75, 80, 100
Rated insulation voltage	(V AC)		690	690
[IEC 60947-2, JIS C8201-2]	(V DC)		250	250
Rated interrupting capacity (kA)	600V AC		–	–
IEC 60947-2	550V AC		10/3	10/3
JIS C 8201-2	440V AC		20/5	20/5
(Icu/Ics) *1	415V AC		30/8	30/8
	400V AC		30/15	30/15
	380V AC		30/15	30/15
	240V AC		50/25	100/50
	230V AC		50/25	100/50
	250V DC		5	10
Dimensions (mm)		a	50	75
		b	130	130
Page 32, 33		c	60	60
		d	81	81
Mass (kg) Front mounting type			0.6	0.78
Tripping device			Thermal-magnetic	
Front mounting, front connection			●	●
Internal accessories	*See page 18*			
Auxiliary switch			●	●
Alarm switch			●	●
Auxiliary switch + Alarm switch			●	●
Shunt trip			●	●
Under voltage release			●	●
External accessories	*See page 22*			
Operating handle N type			●	●
Operating handle V type			●	●
Terminal cover Short			–	–
Terminal cover Long			●	●
Insulation barrier Interphase			●	●
Flat terminal			–	–
Block terminal			●	●
Handle locking device			●	●
IEC 35mm rail mounting			●	●

Notes: *1 Icu: Rated ultimate short-circuit breaking capacity
Ics: Rated service short-circuit breaking capacity

● Available – Not available

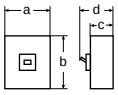
S series/2, 3-pole IEC and CE marking conformed types

Frame		160A			
Pole		2	3	2	3
Type		**BW162J0**	**BW163J0**	**BW162S0**	**BW163S0**
Rated current (A)		100, 125, 150, 160	100, 125, 150, 160	100, 125, 150, 160	100, 125, 150, 160
Rated insulation voltage	(V AC)	690	690	690	690
[IEC 60947-2, JIS C8201-2]	(V DC)	250	250	250	250
Rated interrupting capacity (kA)	600V AC	–	–	–	–
IEC 60947-2	550V AC	8/4	8/4	10/5	10/5
JIS C 8201-2	440V AC	20/10	20/10	25/13	25/13
(Icu/Ics) *1	415V AC	25/13	25/13	36/18	36/18
	400V AC	25/13	25/13	36/18	36/18
	380V AC	25/13	25/13	36/18	36/18
	240V AC	50/25	50/25	85/43	85/43
	230V AC	50/25	50/25	85/43	85/43
	250V DC	20/10	20/10	30/15	30/15
Dimensions (mm)	a	105	105	105	105
	b	165	165	165	165
Page 32, 33	c	60	60	60	60
	d	86	86	86	86
Mass (kg) Front mounting type		1.36	1.56	1.36	1.56
Tripping device		Thermal-magnetic			
Front mounting, front connection		●	●	●	●
Internal accessories	*See page 18*				
Auxiliary switch		●	●	●	●
Alarm switch		●	●	●	●
Auxiliary switch + Alarm switch		●	●	●	●
Shunt trip		●	●	●	●
Under voltage release		●	●	●	●
External accessories	*See page 22*				
Operating handle N type		●	●	●	●
Operating handle V type		●	●	●	●
Terminal cover Short		●	●	●	●
Terminal cover Long		●	●	●	●
Insulation barrier Interphase		●	●	●	●
Flat terminal		●	●	●	●
Block terminal		●	●	●	●
Handle locking device		●	●	●	●
IEC 35mm rail mounting		–	–	–	–

Notes: *1 Icu: Rated ultimate short-circuit breaking capacity
Ics: Rated service short-circuit breaking capacity

● Available – Not available

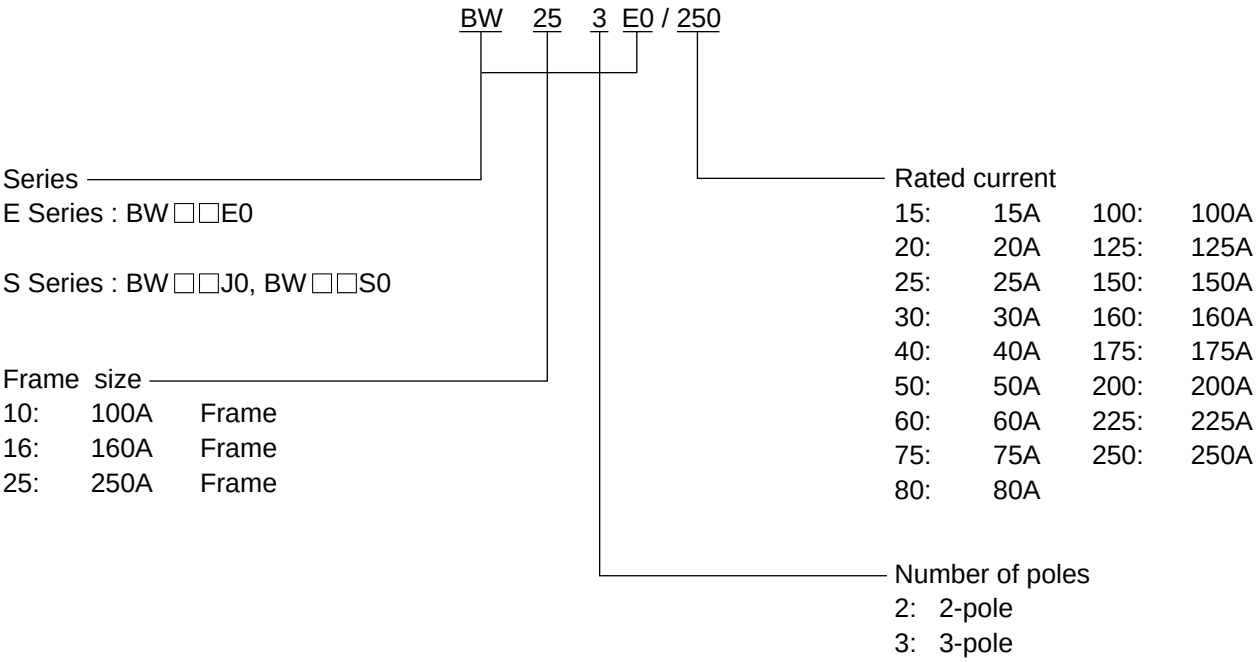
S series/2, 3-pole IEC and CE marking conformed types

Frame			250A			
Pole			2	3	2	3
Type			**BW252J0**	**BW253J0**	**BW252S0**	**BW253S0**
Rated current (A)			175, 200, 225, 250	175, 200, 225, 250	175, 200, 225, 250	175, 200, 225, 250
Rated insulation voltage	(V AC)		690	690	690	690
[IEC 60947-2, JIS C8201-2]	(V DC)		250	250	250	250
Rated interrupting capacity (kA)	600V AC		–	–	–	–
IEC 60947-2	550V AC		8/4	8/4	10/5	10/5
JIS C 8201-2	440V AC		20/10	20/10	25/13	25/13
(Icu/Ics) *1	415V AC		25/13	25/13	36/18	36/18
	400V AC		25/13	25/13	36/18	36/18
	380V AC		25/13	25/13	36/18	36/18
	240V AC		50/15	50/15	85/43	85/43
	230V AC		50/15	50/15	85/43	85/43
	250V DC		20/10	20/10	30/15	30/15
Dimensions (mm)		a	105	105	105	105
		b	165	165	165	165
Page 32, 33		c	60	60	60	60
		d	86	86	86	86
Mass (kg) Front mounting type			1.36	1.56	1.36	1.56
Tripping device			Thermal-magnetic			
Front mounting, front connection			●	●	●	●
Internal accessories	*See page 18*					
Auxiliary switch			●	●	●	●
Alarm switch			●	●	●	●
Auxiliary switch + Alarm switch			●	●	●	●
Shunt trip			●	●	●	●
Under voltage release			●	●	●	●
External accessories	*See page 22*					
Operating handle N type			●	●	●	●
Operating handle V type			●	●	●	●
Terminal cover Short			●	●	●	●
Terminal cover Long			●	●	●	●
Insulation barrier Interphase			●	●	●	●
Flat terminal			●	●	●	●
Block terminal			●	●	●	●
Handle locking device			●	●	●	●
IEC 35mm rail mounting			–	–	–	–

Notes: *1 Icu: Rated ultimate short-circuit breaking capacity
Ics: Rated service short-circuit breaking capacity

● Available – Not available

■ Type number of MCCB body



• **Example**

S series
3-pole, 250A Frame BW253S0
Rated current 250A 250

Complete type number BW253S0/250

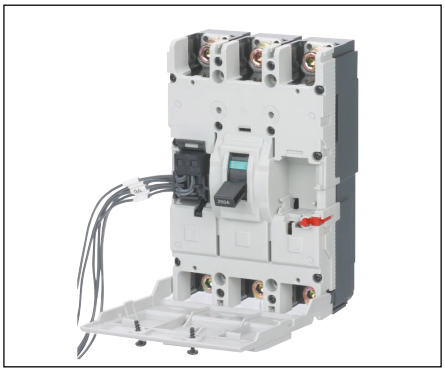
■ Type number of MCCB accessories

See page 18 and later for the Type number of each accessory.

• **Example**

See page 24 for the selection of insulation barriers interphase.
3-pole, 250A Frame BZ-B40B

■ Internal Accessories



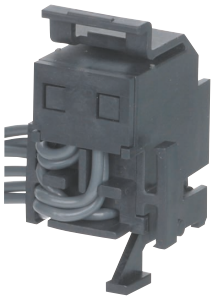
Auxiliary switch and Alarm switch

These devices indicate the MCCB's operation status electrically.

- Auxiliary switch (AUX)
  Indicates the ON/OFF status of MCCB.
- Alarm switch (AL)
  Indicates the trip status of MCCB. A MCCB trips when:
  • an overload occurs.
  • a short-circuit current flows through the MCCB.
- Both the auxiliary switch and alarm switch can be installed either on the right or left side of MCCB body.

MCCB Type		Type number		
E series	**S series**	Auxiliary switch (AUX)	Alarm switch (AL)	Auxiliary switch + Alarm switch (AUX+AL)
BW103E0	BW102S0, BW103S0	**BW9W1SB0**	**BW9K1SB0**	**BW9WKSB0**
BW162E0, BW163E0 BW252E0, BW253E0	BW162J0, BW163J0 BW162S0, BW163S0 BW252J0, BW253J0 BW252S0, BW253S0	**BW9W1SG0**	**BW9K1SG0**	**BW9WKSG0**

■ Internal mouning method



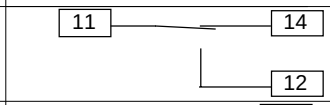
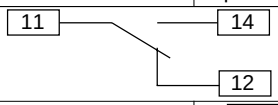
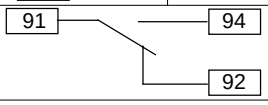
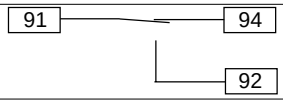
Auxiliary switches + Alarm switches (AUX+AL)

- All auxiliary switches (AUX) and alarm switches (AL) are electrical pre-wired with wires of 1 mm^2, 500 mm long.
- The auxiliary switch, alarm switch and auxiliary plus alarm switch have almost the same appearance.

● Rating of auxiliary switches (AUX) and alarm switches (AL)

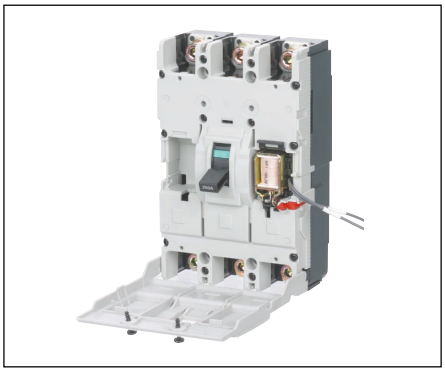
Type number	AC			DC			Minimum load current
	Voltage (V)	Make/Break current (A)		Voltage (V)	Make/Break current (A)		
		AC12	AC15		DC12	DC14	
BW9W1SB0	24	5	5	24	4	3	5V DC 160mA
BW9K1SB0	48	5	5	48	2.5	1	30V DC 30mA
BW9WKSB0	125	5	3	125	0.4	0.4	
	250	3	2	250	0.2	0.2	
BW9W1SG0	24	5	5	24	4	3	
BW9K1SG0	48	5	5	48	2.5	1	
BW9WKSG0	125	5	3	125	0.4	0.4	
	250	3	2	250	0.2	0.2	

● Operation of auxiliary switches(AUX) and alarm switches(AL)

Accessory	Handle position		
	ON	OFF	Trip
Auxiliary switch (AUX)			
Alarm switch (AL)			

A

■ Internal Accessories



Shunt trip (SHT) and Under voltage release (UVR)

- Shunt trip (SHT)
  A device that issues an electrical signal to trip the MCCB
- Under voltage release (UVR)
  A device that is used to trip the MCCB when the main circuit voltage drops lower than the specified value.
- Both the shunt trip and under voltage release can be installed on the right side of MCCB body.

● Shunt trip (SHT)

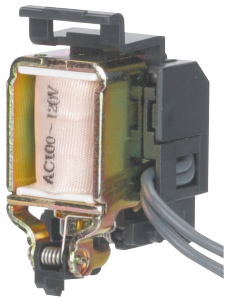
MCCB Type		Type number	□ Code	Operating voltage
E series	**S series**			
BW103E0	BW102S0, BW103S0	**BW9FAB0**	A	100-130V AC
		BW9FKB0	K	200-277V AC
		BW9FPB0	P	380-480V AC
		BW9FRB0	R	24V DC
		BW9FSB0	S	48V DC
BW162E0, BW163E0	BW162J0, BW163J0	**BW9FAG0**	A	100-120V AC
BW252E0, BW253E0	BW162S0, BW163S0	**BW9F1G0**	1	120-130V AC
	BW252J0, BW253J0	**BW9FKG0**	K	200-240V AC
	BW252S0, BW253S0	**BW9FBG0**	B	277V AC
		BW9FPG0	P	380-440V AC
		BW9FHG0	H	440-480V AC
		BW9FRG0	R	24V DC
		BW9FSG0	S	48V DC

● Under voltage release (UVR)

MCCB type		Type number	□ Code	Operating voltage
E series	**S series**			
BW103E0	BW102S0, BW103S0	**BW9RAB0**	A	100-130V AC
		BW9RKB0	K	200-240V AC
		BW9RBB0	B	277V AC
		BW9RPB0	P	380-415V AC
		BW9RHB0	H	440-480V AC
		BW9RRB0	R	24V DC
		BW9RSB0	S	48V DC
		BW9RLB0	L	125V DC
BW162E0, BW163E0	BW162J0, BW163J0	**BW9RAG0**	A	100-130V AC
BW252E0, BW253E0	BW162S0, BW163S0	**BW9RKG0**	K	200-240V AC
	BW252J0, BW253J0	**BW9RBG0**	B	277V AC
	BW252S0, BW253S0	**BW9RPG0**	P	380-415V AC
		BW9RHG0	H	440-480V AC
		BW9RRG0	R	24V DC
		BW9RSG0	S	48V DC
		BW9RLG0	L	125V DC

Note: Shunt trip (SHT) is capable of internal mounting only.
Under voltage release (UVR) for 100AF is capable of internal mounting only.
Under voltage release (UVR) for 160AF and 250AF is capable of external mounting only.

■ Internal mouning method



Shunt trip (SHT)

■ External mouning method (160A and 250A Frame only)

Under voltage release (UVR)

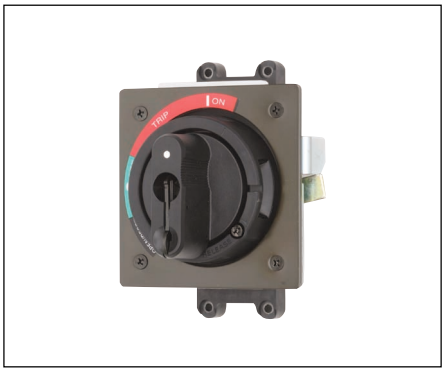
● Shunt trip (SHT)

Type number	Power consumption		Time rating of coil	Operating time (ms)	Allowable voltage function
	AC VA	DC W			
BW9F□B0	30	30	Continuous	13-21	AC voltage : 85% to 110% of coil rated voltage DC voltage : 75% to 125% of coil rated voltage
BW9F□G0	30	35			

● Under voltage release (UVR)

Type number	Coil rated voltage	Power consumption		Allowable voltage function
		AC VA	DC W	
BW9R□B0	110-130V AC	5	-	Tripping voltage: 70 to 35% of coil rated voltage Closing voltage: 85% to 110% of coil rated voltage
	200-240V AC	5	-	
	277V AC	5	-	
	380-415V AC	5	-	
	440-480V AC	5	-	
	24V DC	-	5	
	48V DC	-	5	
	125V DC	-	5	
BW9R□G0	110-130V AC	200	-	
	200-240V AC	150	-	
	277V AC	150	-	
	380-415V AC	200	-	
	440-480V AC	200	-	
	24V DC	-	150	
	48V DC	-	150	
	125V DC	-	300	

■ External accessories

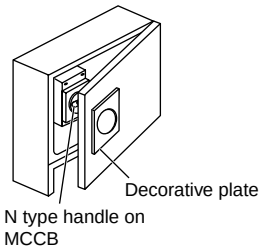


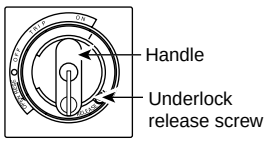
Operating handle (N type)

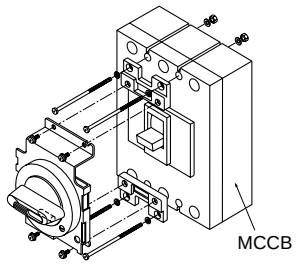
- The structure is that the handle oprerating mechanism is installed on the MCCB body.
- Attaching the dustproof packing ensures the degree of protection IP50 stipulated by IEC60529.
- Conforms to isolation stipulated by IEC60947-1.

● N type

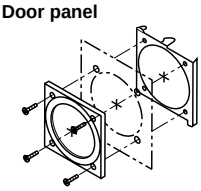
MCCB type		Type number	Dustproof packing
E series	**S series**		
BW103E0	BW102S0, BW103S0	**BW9N0B0**	-
BW162E0, BW163E0 BW252E0, BW253E0	BW162J0, BW163J0 BW162S0, BW163S0 BW252J0, BW253J0 BW252S0, BW253S0	**BZ-N40C**	BZ-NP-1C







Door panel



● Operating method

- The ON, OFF, and RESET operation can be made for MCCB by rotating the handle. When the MCCB automatically interrupts the circuit, the handle indicates TRIP.
- By turning the RELEASE screw with a screwdriver, the door can be opened while the MCCB remained on.
- The handle can be locked ON or OFF using a padlock. Use a commercially-available padlock. The shackle of the padlock should be max.ϕ5mm for BW9N0B0, max.ϕ8mm for BZ-N40C.

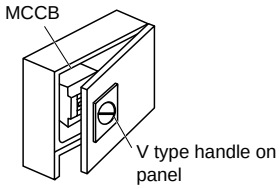
■ External accessories

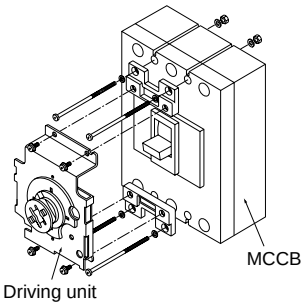
Operating handle (V type)

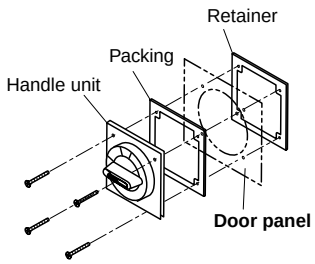
- The structure is that the handle oprerating mechanism is installed on the door surface.
- The standard V type operating handle ensures the degree of protection IP54 stipulated by IEC60529.
- The space between the operating handle and the MCCB can be adjusted by using the extension shaft.
- The operating handle mechanism can interlock the switchboard door.
- Conforms to isolation stipulated by IEC60947-1.

● V type

MCCB type		Type number
E series	**S series**	
BW103E0	BW102S0, BW103S0	**BW9V0B0**
BW162E0, BW163E0 BW252E0, BW253E0	BW162J0, BW163J0 BW162S0, BW163S0 BW252J0, BW253J0 BW252S0, BW253S0	**BZ6V40C**







● Operating method

- The ON, OFF, and RESET operation can be made for MCCB by rotating the handle. When the MCCB automatically interrupts the circuit, the handle indicates TRIP.
- By turning the RELEASE screw with a screwdriver, the door can be opened while the MCCB remained on.
- The handle can be locked OFF using a padlock. Use a commercially-available padlock. The shackle of the padlock should be max.ϕ5mm for BW9N0B0, max.ϕ8mm for BZ-N40C.

A

External accessories

Terminal cover

- Finger protection guards against shock from accidentally touching live terminals.

MCCB type		Long type number	Short type number	Packing quantity
E series	**S series**			
BW103E0	BW103S0	**BW9BTB0-L3**	**–**	2pcs
BW162E0, BW163E0 BW252E0, BW253E0	BW162J0, BW163J0 BW162S0, BW163S0 BW252J0, BW253J0 BW252S0, BW253S0	**BZ-TB40B**	**BZ-TS40B**	

External accessories

Insulation barrier Interphase

- The interphase barrier reinforces the insulation between terminals.
- Two insulation barriers are supplied with the MCCB body.
  If additional insulation barriers are needed, please place an order with the following type number.

MCCB type		Type number	Packing quantity
E series	**S series**		
BW103E0	BW102S0, BW103S0	**BW9BPB0**	2pcs
BW162E0, BW163E0 BW252E0, BW253E0	BW162J0, BW163J0 BW162S0, BW163S0 BW252J0, BW253J0 BW252S0, BW253S0	**BZ-B40B**	4pcs

External accessories

Flat terminal

- To facilitate connecting work:
  Additional flat terminals can be attached to 160 to 250A frames.
  Attach flat terminals according to the screw size and tightening torque as shown in the table below.

MCCB type		Type number	MCCB side		Flat Terminal side		Packing quantity
E series	**S series**		Screw Size	Torque	Screw Size	Torque	
BW162E0 BW252E0	BW162J0 BW162S0 BW252J0 BW252S0	**BZ-S50B-2252**	M8 × 20	8 ~ 13N•m	M8 × 25	8 ~ 10N•m	4pcs
BW163E0 BW253E0	BW163J0 BW163S0 BW253J0 BW253S0	**BZ-S50B-2253**	M8 × 20	8 ~ 13N•m	M8 × 25	8 ~ 10N•m	6pcs

A

External accessories

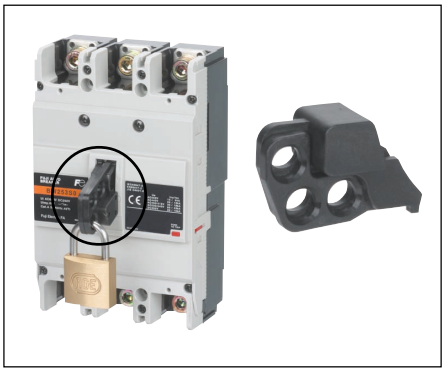
Block terminal

This connector screws directly to the standard connectors.

MCCB type		Rated	Wire	Type	Packing quantity
E series	**S series**	current (A)	size (mm^2)	number	
–	BW102S0	15 to 50 60 to 100	1.5 to 16 5.5 to 50	**BW9SSL0B0-052** **BW9SSL0B0-102**	3pcs
BW103E0	BW103S0	15 to 50 60 to 100	1.5 to 16 5.5 to 50	**BW9SSL0B0-053** **BW9SSL0B0-103**	
BW162E0, BW163E0	BW162J0, BW163J0 BW162S0, BW163S0	100 to 160	42.4 to 152 5.5 to 50	**BW9SSL0G0(*)**	
BW252E0, BW253E0	BW252J0, BW253J0 BW252S0, BW253S0	175 to 250			

Note:(*) The Icu decreases to 50% when Block terminals are installed to the power supply side.

External accessories

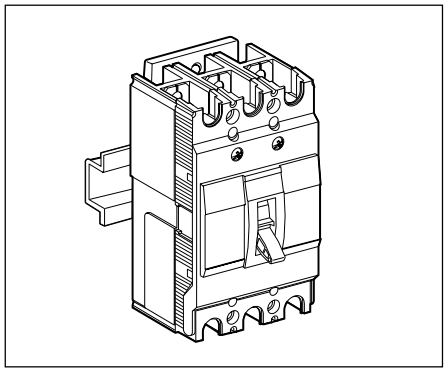


Handle locking device

- This key lock device snaps on to the enable the handle to be locked in either the OFF position. It can be used either as a handle locking cover or, with the addition of a padlock, as an OFF lock.
- Use a commercially-available padlock. The shackle of the padlock should 4 to 8mm diameter.

MCCB type		Type number
E series	**S series**	
BW103E0	BW102S0, BW103S0	**BW9Q1B0**
BW162E0, BW163E0 BW252E0, BW253E0	BW162J0, BW163J0 BW162S0, BW163S0 BW252J0, BW253J0 BW252S0, BW253S0	**BW9Q1G0**

External accessories



IEC 35mm rail mounting

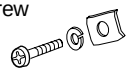
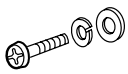
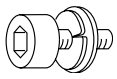
- Unfication of the external and basic dimensions has expanded the range of models mountable on IEC 35mm rails.

MCCB type		Type number
E series	**S series**	
BW103E0	BW102S0, BW103S0	**BW9PDB0**

A

Terminal Connection

● Terminal Connection/Front mounting, Front Connection
- MCCBs and cables according to the screw size and tightening torque as shown in the table below.
- To facilitate the connecting work, the following parts are prepared.
  Flat terminal : See page 25
  Block terminal : See page 25

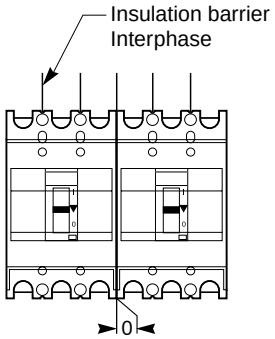
MCCB type		Screw and Bolt	Size	Tightening torque [N•m]
E series	**S series**			
BW103E0	BW102S0, BW103S0	Pan-head screw 	Rated current: 15 to 50A M5 ×13.5	2
			Rated current: 60 to 100A M8 ×13.5	5.5
BW162E0, BW163E0 BW252E0, BW253E0	BW162J0, BW163J0 BW162S0, BW163S0 BW252J0, BW253J0 BW252S0, BW253S0	 Hexagonal head bolt	M8 ×16	8-13

Arc Space

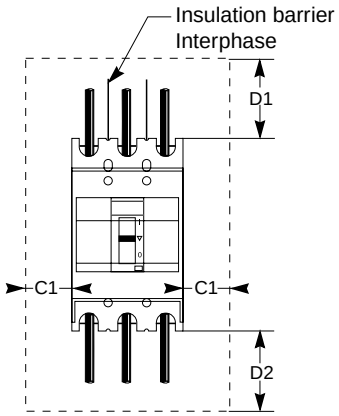
- When wiring, secure the insulation space as shown in the table below.
- To the bare conductors, carry out insulation protection with the insulation taping or the insulation barrier Interphase in the range as shown in the table below.

MCCB type		Rated interrupting capacity (kA) 415V AC	Bare or painted sheet metal insulated bars			Bare busbar under voltage	
E series	**S series**		C1	D1	D2	D1	D2
BW103E0		15	40	45	45	75	45
–	BW102S0 BW103S0	30	40	45	45	75	95
BW162E0 BW163E0 BW252E0 BW253E0	–	18	50	60	45	140	45
–	BW162J0 BW163J0 BW252J0 BW253J0	25	50	60	45	140	45
–	BW252S0 BW253S0	36	50	60	45	140	45

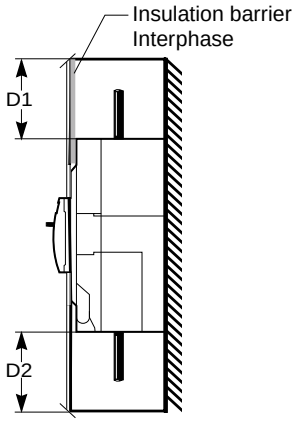
Minimum distance between two adjacent MCCB



Minimum distance between MCCB and trip, bottom or side panels



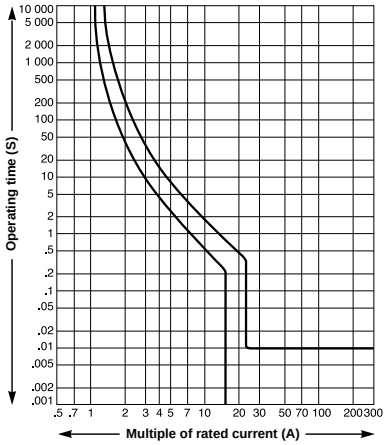
Minimum distance between MCCB and front or rear panels



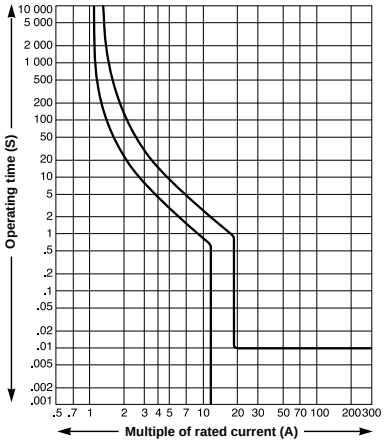
■ E and S series, 2, 3-pole

BW103E0□,
BW102S0□, BW103S0□

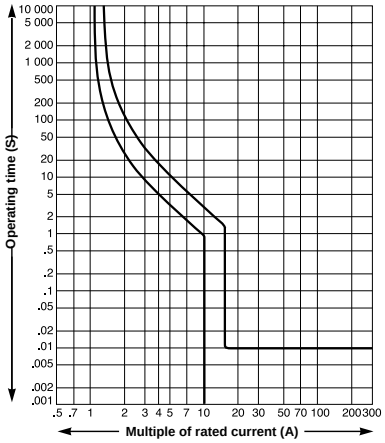
15A



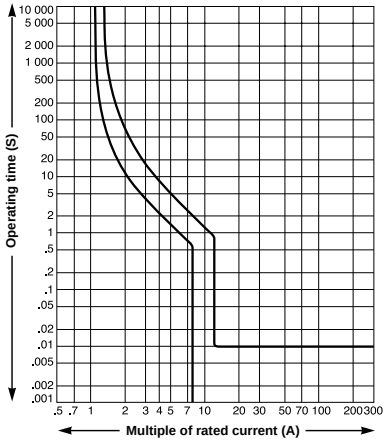
20A



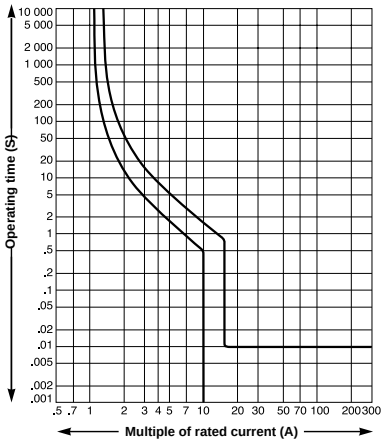
25A



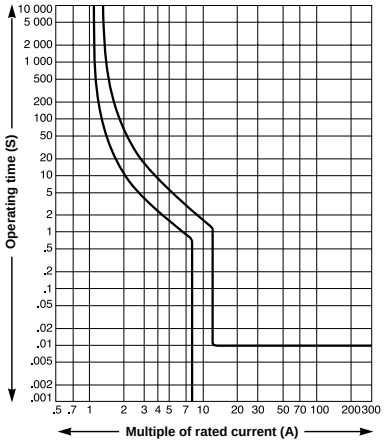
30A



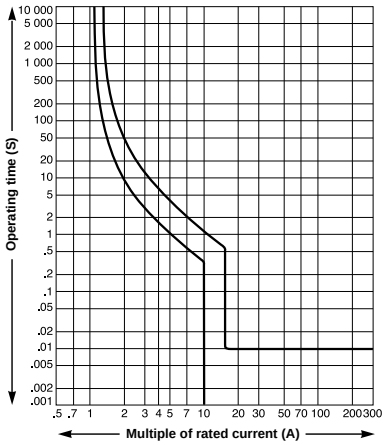
40A



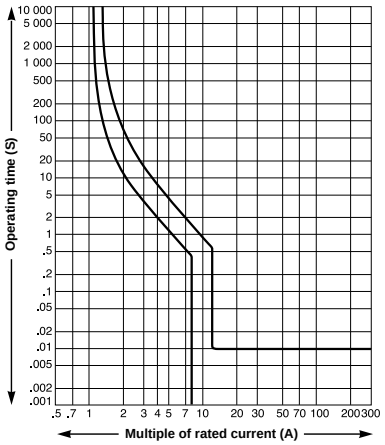
50A



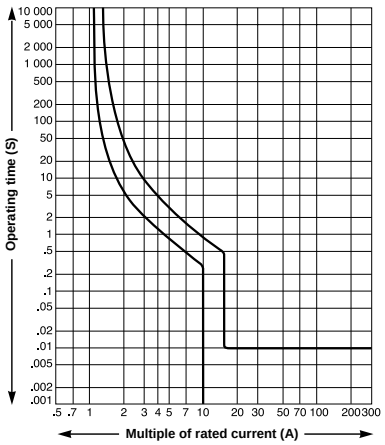
60A



75A



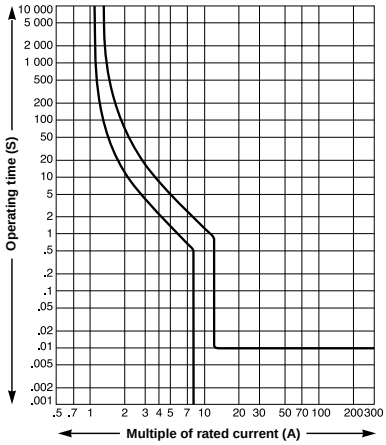
80A



■ E and S series, 2, 3-pole

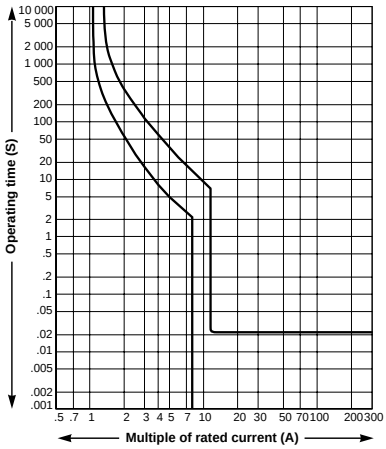
BW103E0□,
BW102S0□, BW103S0□

100A

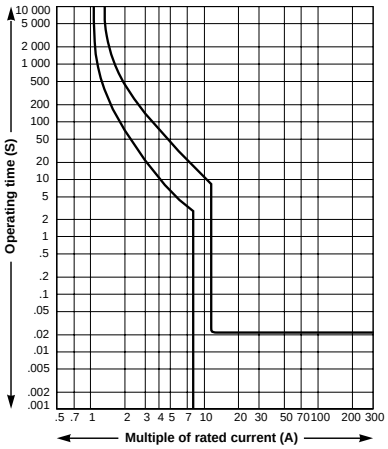


BW162E0□, BW163E0□, BW252E0□, BW253E0□,
BW252J0□, BW253J0□, BW162J0□, BW163J0□, BW162S0□, BW163S0□, BW252S0□, BW253S0□

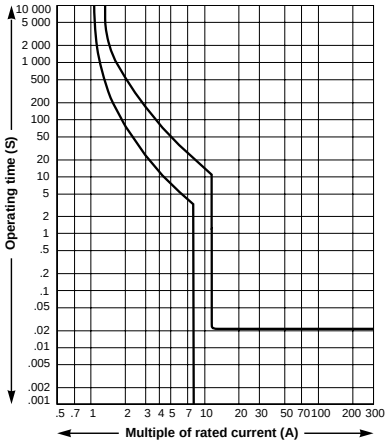
100A - 125A



150A - 200A



225A - 250A

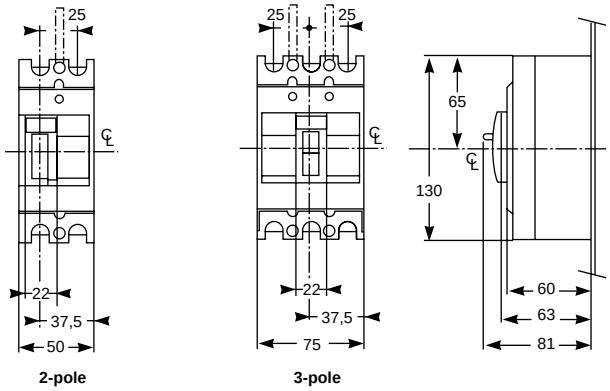


C

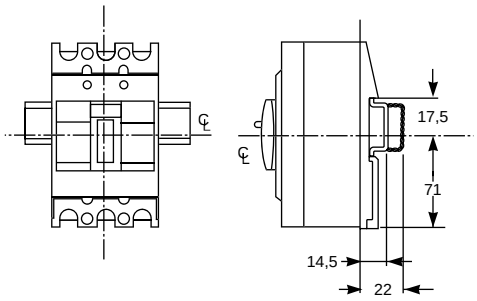
■ Dimensions, mm

●Front mounting, front connection

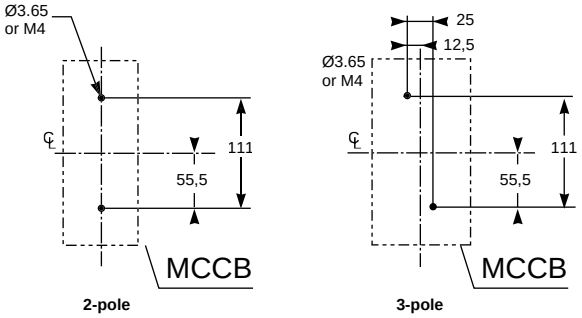
BW103E0□,
BW102S0□, BW103S0□



• Mounting on IEC 35mm rail



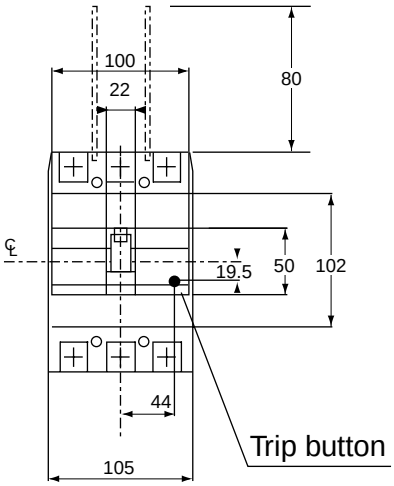
• Panel drilling

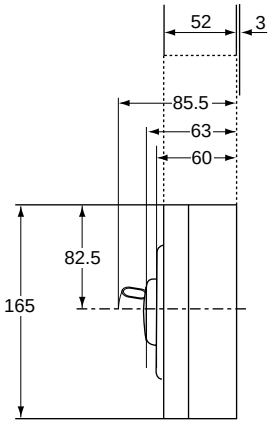


■ Dimensions, mm

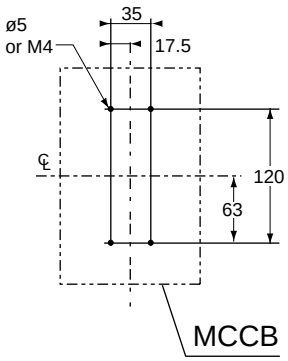
●Front mounting, front connection

BW162E0□, BW163E0□, BW252E0□, BW253E0□,
BW162J0□, BW163J0□, BW162S0□, BW163S0□, BW252J0□, BW253J0□, BW252S0□, BW253S0□



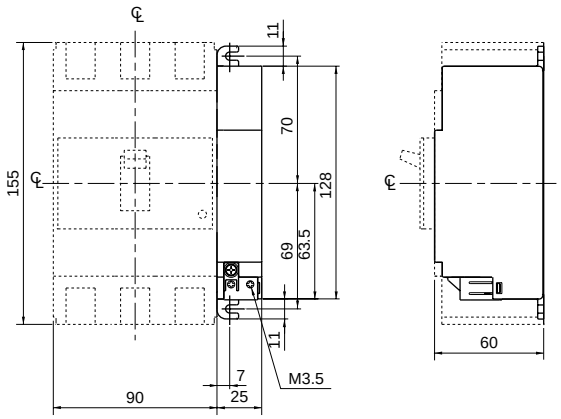


• Panel drilling



●Under voltage release

Applicable MCCB:
BW162E0□, BW163E0□, BW252E0□, BW253E0□,
BW162J0□, BW163J0□, BW162S0□, BW163S0□, BW252J0□, BW253J0□, BW252S0□, BW253S0□



D

⚠ Safety Considerations

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- Customers are requested to prepare safety measures when they apply the products introduced in this catalog to such systems or facilities that will affect human lives or cause severe damage to property if the products become faulty.
- For safe operation, wiring should be conducted only by qualified engineers who have sufficient technical knowledge about electrical work or wiring.

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