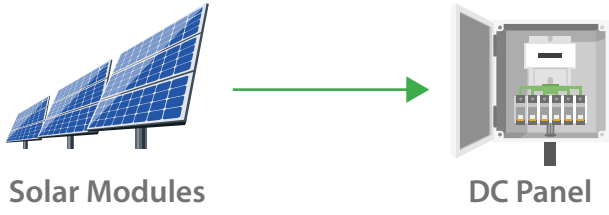


RENEWABLE ENERGY SOLUTION

ACB/MCCB/MCB/SPD/
SWITCH/FUSE





Solar Modules

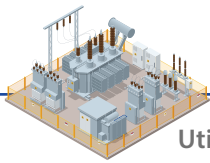
DC Panel



Inverter



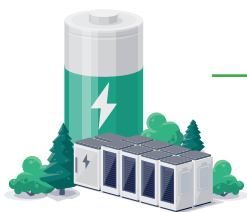
LV/MV Switchgear



Utility Grid



LV/MV Switchgear



Battery



DC 1000/1500V



MCCB

- 63~250A
- DC 1000~1500V
- Icu 40kA



MCB

- 1~63A
- DC 250~1000V
- Icu 10kA



FUSE

- In 4~50A
- DC1000~1500V



DS

- In 20~50A
- DC1000~1500V



SPD

- DC1000~1500V
- Up 3.6~5.8kV
- I_{max} 40kA
- t_A ≤ 25ns

AC 380~1000V, 24kV



MCCB

- In 3~1600A
- Icu 1.5~70kA
- Ue 380~1000V



ACB

- In 400~6300A
- Icu 65~120kA
- Ue 690~1140V



VCB

- In 630~4000A
- Icu 63~100kA
- Ue 12~24kV

DC 1000/1500V



MCCB

- 63~250A
- DC 1000~1500V
- Icu 40kA



FUSE

- In 4~50A
- DC1000~1500V



SPD

- DC1000~1500V
- Up 3.6~5.8kV
- I_{max} 40kA
- t_A ≤ 25ns

Application

BMA DC type circuit breaker can be used in DC power system for circuit conducting, carrying, breaking and protecting. Protection includes overload and short circuit and also can be used as isolation purpose.

- The operating voltage of DC type breaker is DC500~1000V, Uimp=8kV, with breaking capacity of 40kA and operating current of 100~800A.
- Product can be used at places such as charging station, solar energy generation, new energy vehicles, energy storage equipment and other various DC applications.
- Equipped with thermal magnetic tripping unit, protecting electrical safety.
- BMA DC type circuit breaker is comply with IEC 60947-2 standard.
- Certification: CE, TUV

Conditions of Use

1. Ambient temperature: - 35°C ~ 70°C, Storage temperature: - 40°C ~ 85°C .
2. Relative humidity: Could not exceed 50% when the surrounding temperature is +40°C, Please consider the possibility of frosting on the surface of the product due to temperature change.
3. Altitude: Altitude \leq 4000m.
4. Atmospheric environment: in the absence of excessive amounts of water vapor, oil vapor, smoke, dust, salt, corrosive substances, etc.
5. Pollution level: 3
6. Category: A type
7. Should be installed in a place where there is no danger of explosion, conductive dust, corrosion of metal or damage to insulation, and no rain or snow.

Type designation

BMA	250	-	HTD	DC	2	250	A1
↓	↓		↓	↓	↓	↓	↓
Type	Frame size (AF)		Model	Usage	Pole	Rated current	Wiring
BMA	250: 250AF		HTD	DC PV	2 : 2P	63~250A	A1,A2

Note: BMA250-UTD DC PV has passed PV certification.

BMA	250	-	UTD	DC	4	225	C3
↓	↓		↓	↓	↓	↓	↓
Type	Frame size (AF)		Model	Usage	Pole	Rated current	Wiring
BMA	250: 250AF		UTD	DC	4: 4P	100~250A	C1,C3

Specification DC 1000V

Type		BMA250-HTD DC	BMA400-RTD DC		
Number of poles (P)		2P	2P	3P	4P
Rated current In (A)		63,70,75,80,100,125,140,150, 160,175,180,200,225,250	250, 300, 350, 400		
Rated operation voltage Ue(V) (DC)		1000	500	750	1000
Rated insulation voltage Ui (V)		1250	1000		
Rated impulse withstand voltage (kV)		8	8		
Rated breaking capacity Icu/Ics (kA)		40/40	40/40	40/40	40/40
Dimensions (mm)	W	90	140		185
	H	200	257		
	D	105	103		
Mechanical life time		10000	5,000		
Electrical life time		5000	1,000		
Wiring (note 1)		A1, A2	A1, A2	B1,B2	C1,C2,C3,C4
Optional accessories	Internal accessories	Alarm switch (AL)	○		
		Auxiliary switch (AX)	○		
		Shunt trip (SHT)	○		
		Under-voltage trip (UVT)	-		
	External accessories	Rotary handle (EH)	-		
		Motor operation device (MT)	-		
Trip Unit		Thermal Magnetic	Thermal Magnetic		
Tripping button		○	○		

Note 1: Please refer to P.5 for wiring method

MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

Specification

Type		BMA630-RTD DC			BMA800-RTD DC		
Number of poles (P)		2P	3P	4P	2P	3P	4P
Rated current In (A)		500, 600, 630			700, 800		
Rated operation voltage Ue(V) (DC)		500	750	1000	500	750	1000
Rated insulation voltage Ui (V)		1000			1000		
Rated impulse withstand voltage (kV)		8			8		
Rated breaking capacity Icu/Ics (kA)		40/40	40/40	40/40	40/40	40/40	40/40
Dimensions (mm)	W	210		280	210		280
	H	275			275		
	D	103			103		
Mechanical life time		5,000			3,000		
Electrical life time		1,000			500		
Wiring (note 1)		A1, A2	B1,B2	C1,C2,C3,C4	A1, A2	B1,B2	C1,C2,C3,C4
Optional accessories	Internal accessories	Alarm switch (AL)		○	○		
		Auxiliary switch (AX)		○	○		
		Shunt trip (SHT)		○	○		
		Under-voltage trip (UVT)		○	○		
	External accessories	Rotary handle (EH)		○	○		
		Motor operation device (MT)		○	○		
Trip Unit		Thermal Magnetic			Thermal Magnetic		
Tripping button		○			○		

Note 1: Please refer to P.5 for wiring method

MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

Specification DC 1500V

Type		BMA250-UTD DC	
Number of poles (P)		4P	
Rated current In (A)		63,70,75,80,100,125,140,150, 160,175,180,200,225,250	
Rated operation voltage Ue(V) (DC)		1500	
Rated insulation voltage Ui (V)		1600	
Rated impulse withstand voltage (kV)		12	
Rated breaking capacity Icu/Ics (kA)		50/50	
Dimensions (mm)	W	142	
	H	200	
	D	103	
Mechanical life time		10000	
Electrical life time		5000	
Wiring (note 1)		C1, C3	
Optional accessories	Internal accessories	Alarm switch (AL)	○
		Auxiliary switch (AX)	○
		Shunt trip (SHT)	○
		Under-voltage trip (UVT)	-
	External accessories	Rotary handle (EH)	-
		Motor operation device (MT)	-
Trip Unit		Thermal Magnetic	
Tripping button		○	

Note 1: Please refer to P.5 for wiring method

MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

Wiring Diagram

Wiring method	2P		3P	
	A1	A2	B1	B2
No grounding	500V	500V	750V	750V
Single pole grounding	250V	500V (*Note 1)	500V (*Note 1)	750V (*Note 2)
Center point grounding	500V	-	-	-

Wiring method	4P			
	C1	C2	C3	C4
No grounding	1000V	1000V	1000V	1000V
Single pole grounding	750V (*Note 2)	750V (*Note 2)	500V	1000V (*Note 3)
Center point grounding	-	-	1000V	-

Model wiring method		
Model	Pole	Applicable method
BMA250-HTD DC	2P	A1、A2
BMA250-UTD DC	4P	C1、C3
BMA400/630/800-RTD DC	3P	B1、B2
	4P	C1、C2、C3、C4

Note 1: Ensure the the non-grounded pole is in series with 2 sets of contacts

Note 2: Ensure the the non-grounded pole is in series with 3 sets of contacts

Note 3: Ensure the the non-grounded pole is in series with 4 sets of contacts

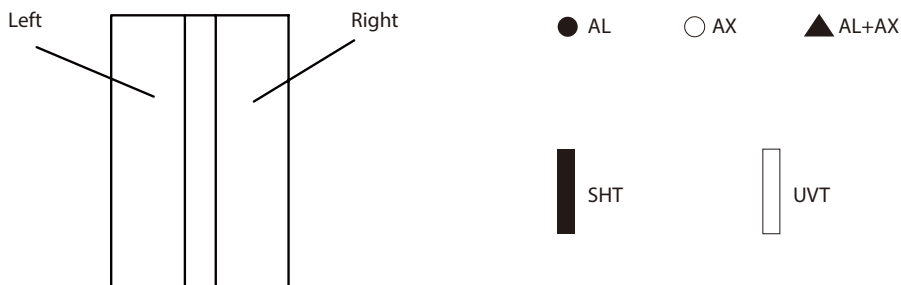
Internal Accessories Installation Table

■ AL: Alarm Switch / AX: Auxiliary Switch / SHT: Shunt Trip / UVT: Under Voltage Trip

Model	Poles	AL	AX	SHT	UVT	AL+AX
BMA250-HTD DC BMA250-HTD DC PV	2P					
BMA250-UTD DC	4P					
BMA400-RTD DC	2P 3P 4P					
BMA630/800-RTD DC	2P 3P 4P					

Model	Poles	AL+SHT	AL+UVT	AX+SHT	AX+UVT	AL+AX+SHT	AX+AL+UVT
BMA250-HTD DC BMA250-HTD DC PV	2P						
BMA250-UTD DC	4P						
BMA400-RTD DC	2P 3P 4P						
BMA630/800-RTD DC	2P 3P 4P						

Note: Accessories can be installed on both right and left side for 2P, except for BMA250-RTD



MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

Internal Accessories Installation Table

Accessory	Model	Pole	Applicable breaker
Extended Rotary Handle	MA-250HD	2P	BMA-250 HTD DC BMA-250 HTD DC PV
	MA-400N	2/3/4P	BMA400-RTD DC
	MA-800N	2/3/4P	BMA630-RTD DC BMA800-RTD DC
Rotary Handle	EH400N	2/3/4P	BMA400-RTD DC
	EH800N	2/3/4P	BMA630-RTD DC BMA800-RTD DC
Motor Operation Device	MT-400N	2/3/4P	BMA400-RTD DC
	MT-800N	2/3/4P	BMA630-RTD DC BMA800-RTD DC
Front Connection	PGIF-400N	2/3P	BMA400-RTD DC
Rear Connection	PGI-400NW	2/3/4P	BMA400-RTD DC
	PGI-800NW	2/3/4P	BMA630-RTD DC BMA800-RTD DC

MCCB
DC Series

MCB
DC Series

SPD
DC Series

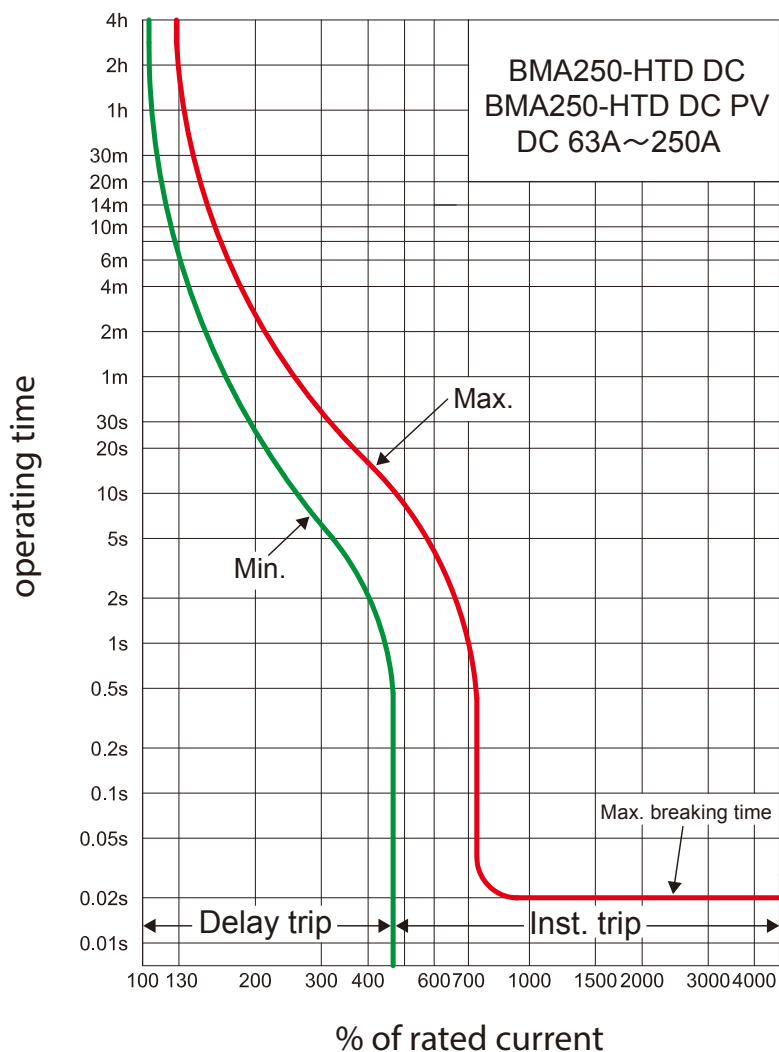
SD
DC Series

FUSE
DC Series

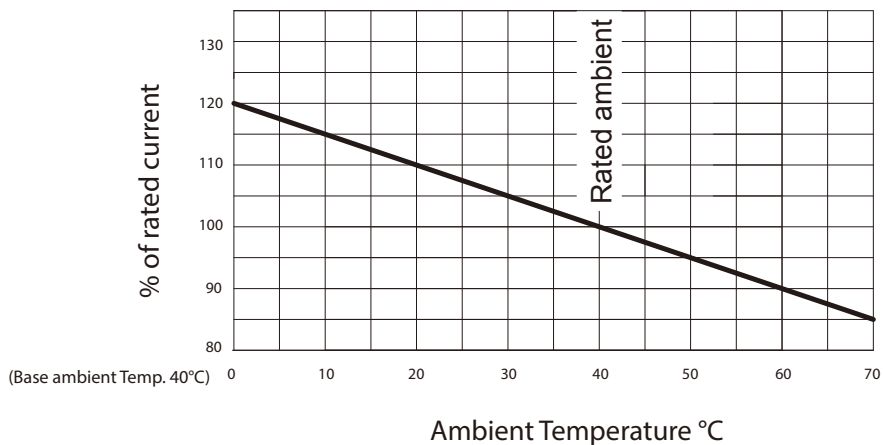
MCCB/
ACB
AC Series

Tripping Characteristic Curve

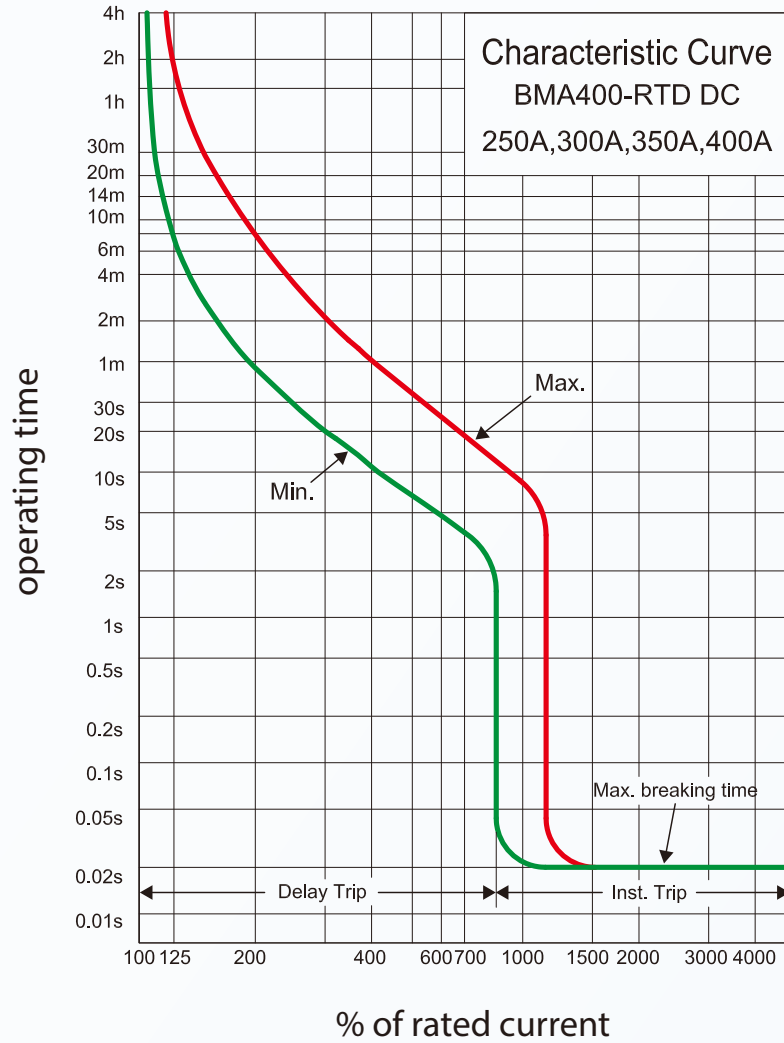
- BMA250-HTD DC
 - Characteristic Curve



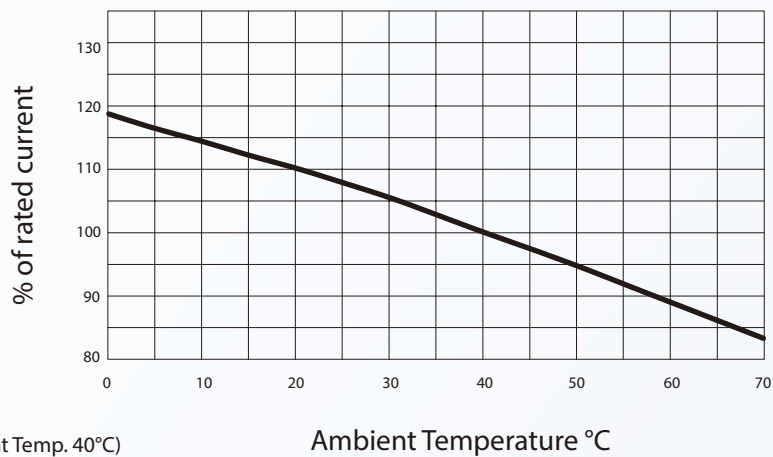
- Compensation Curve



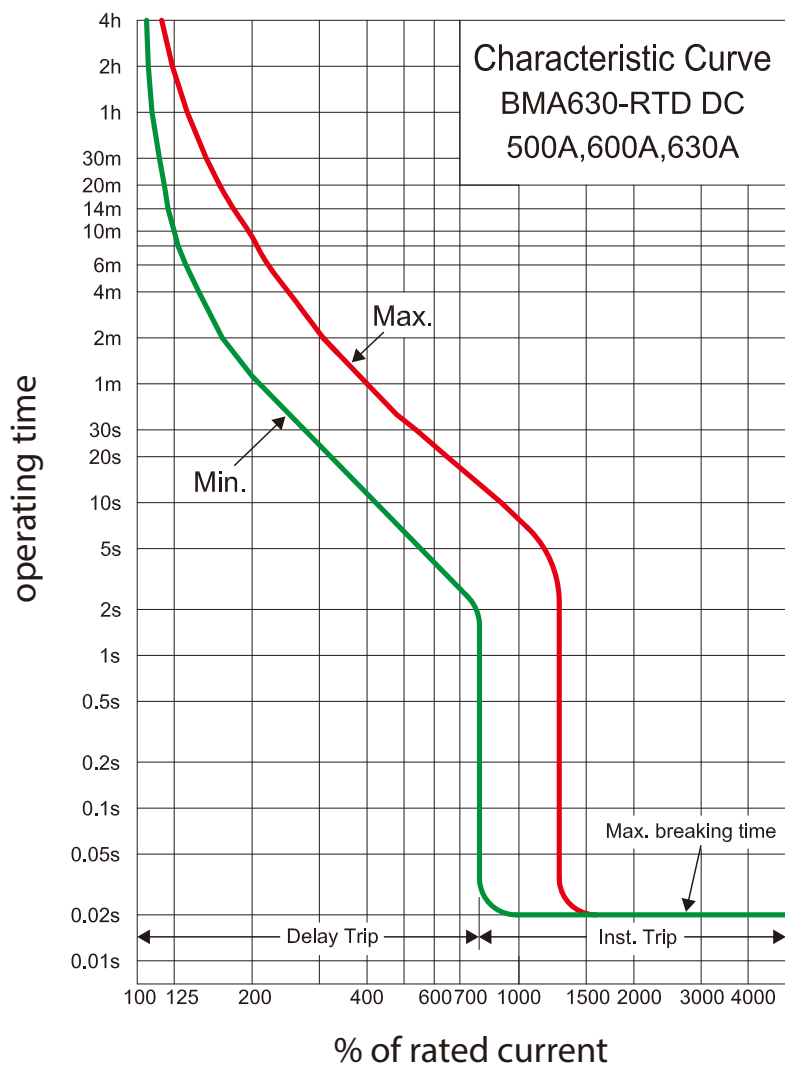
BMA400-RTD DC
 ■ Characteristic Curve



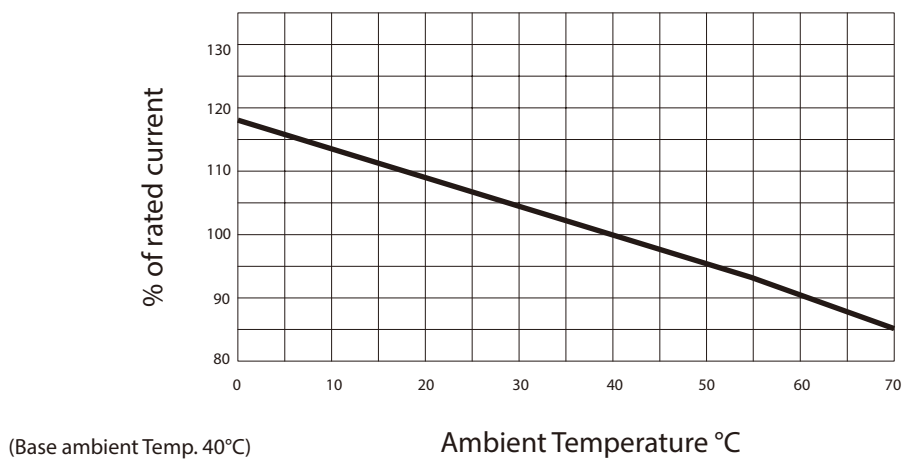
■ Compensation Curve



BMA630-RTD DC
 ■ Characteristic Curve



■ Compensation Curve



MCCB
 DC Series

MCB
 DC Series

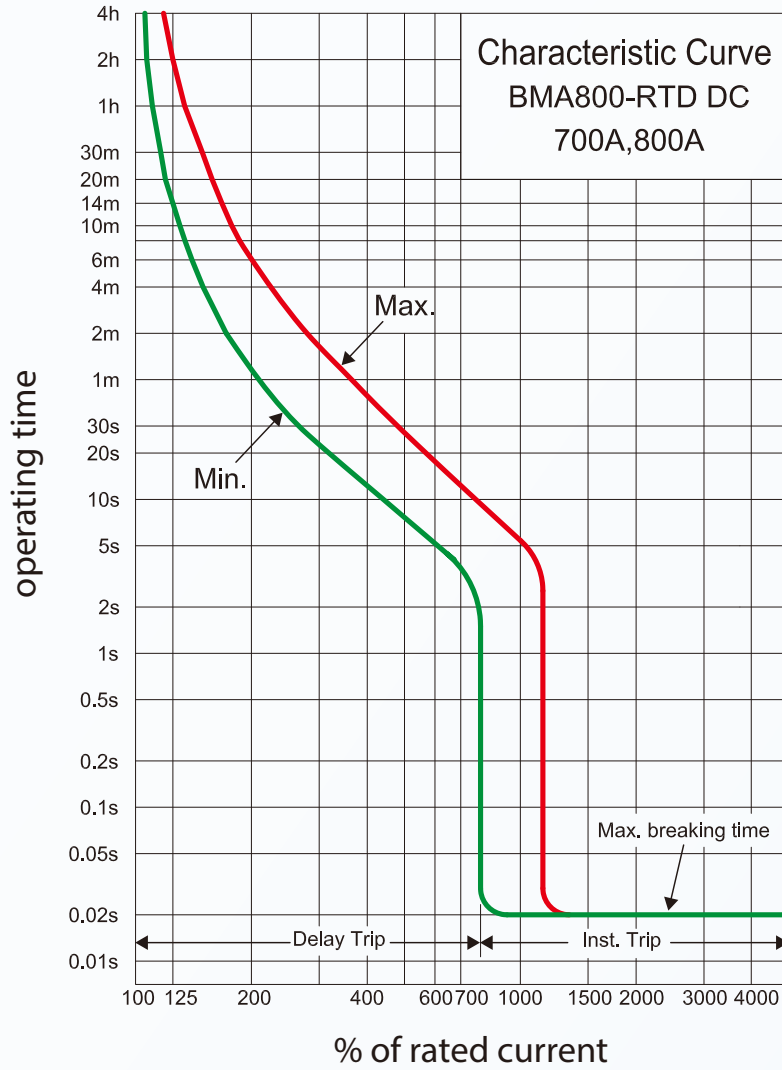
SPD
 DC Series

SD
 DC Series

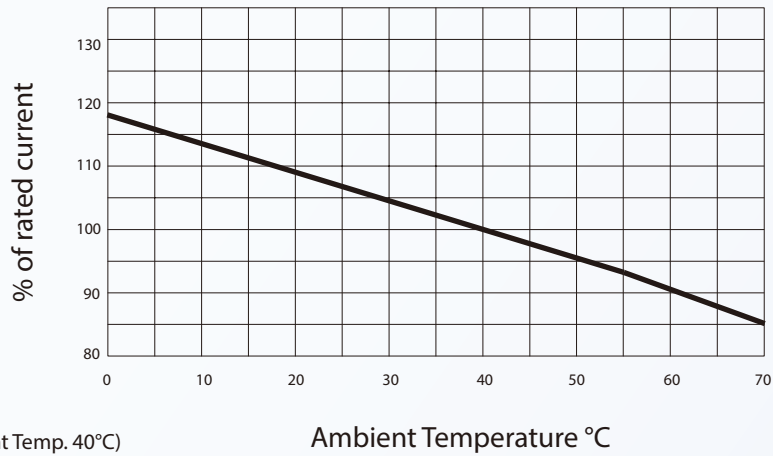
FUSE
 DC Series

MCCB/
 ACB
 AC Series

BMA800-RTD DC
 ■ Characteristic Curve

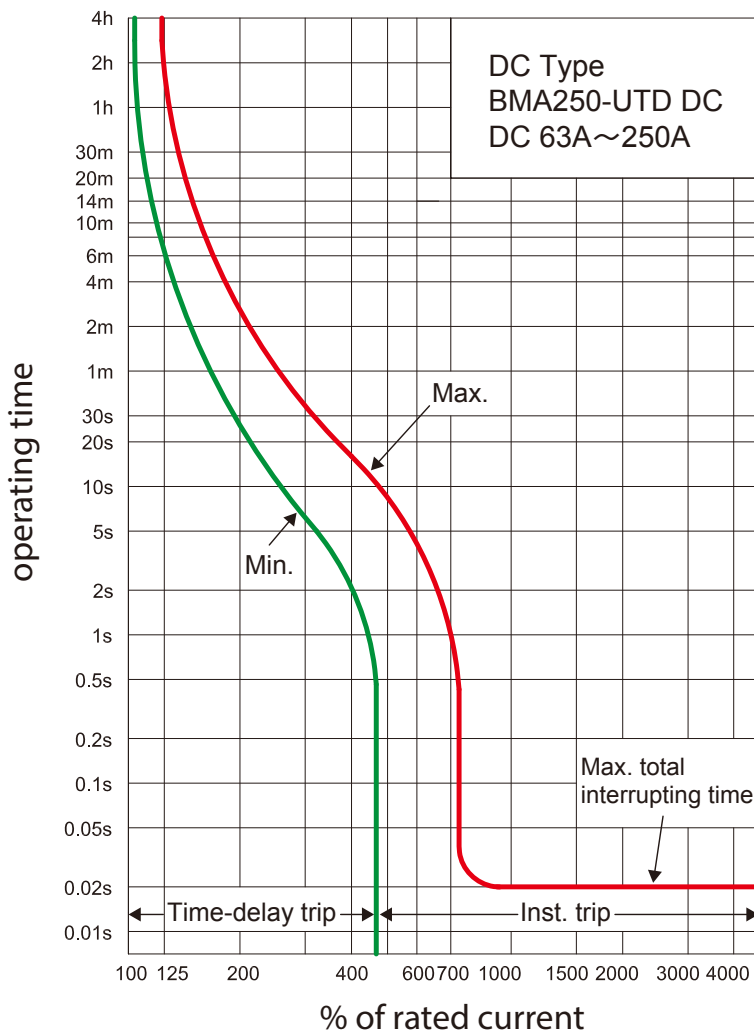


■ Compensation Curve

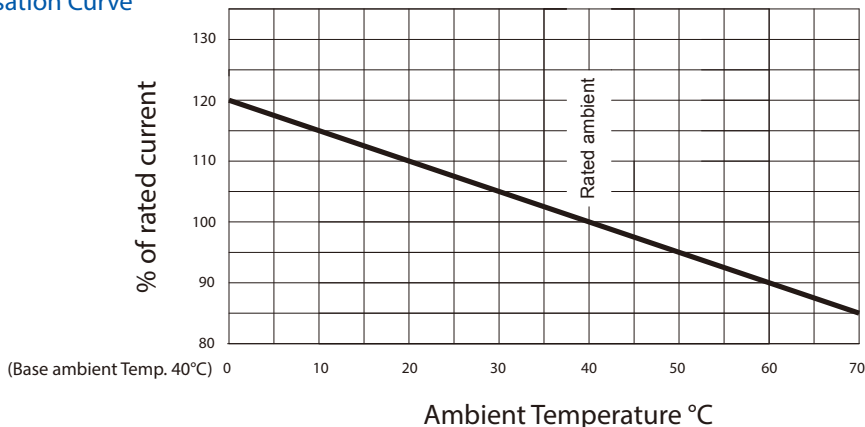


BMA-250 UTD

- Characteristic Curve



- Compensation Curve



MCCB
DC Series

MCB
DC Series

SPD
DC Series

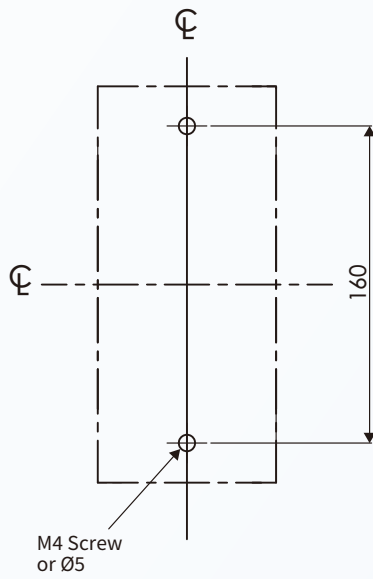
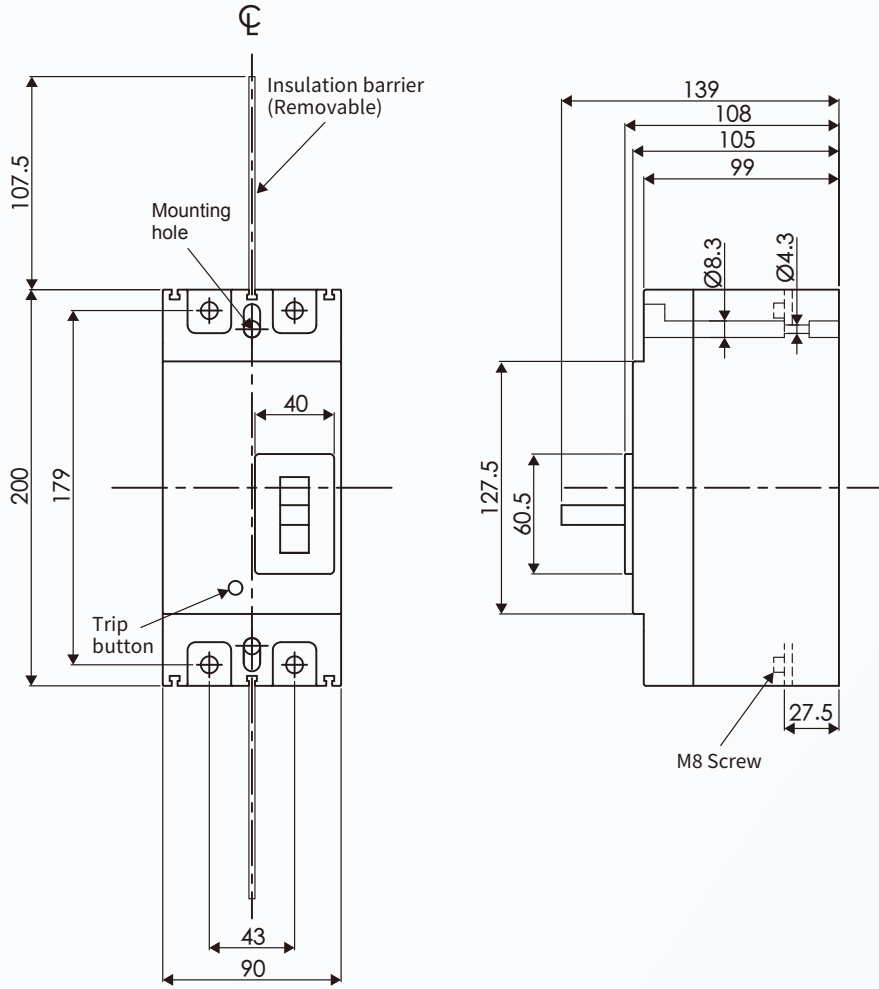
SD
DC Series

FUSE
DC Series

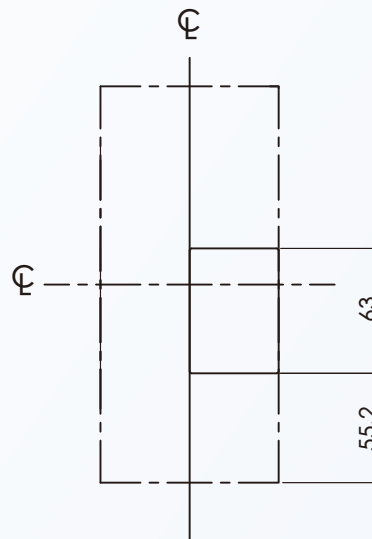
MCCB/
ACB
AC Series

Dimension

BMA250-HTD DC

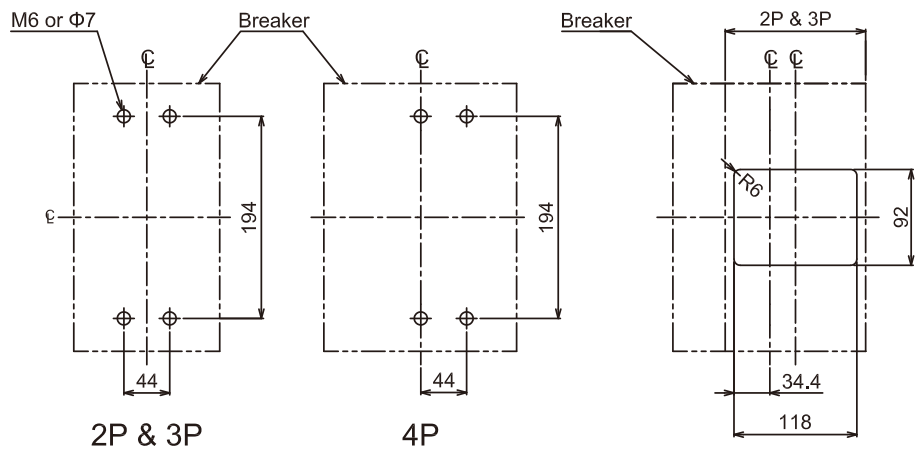
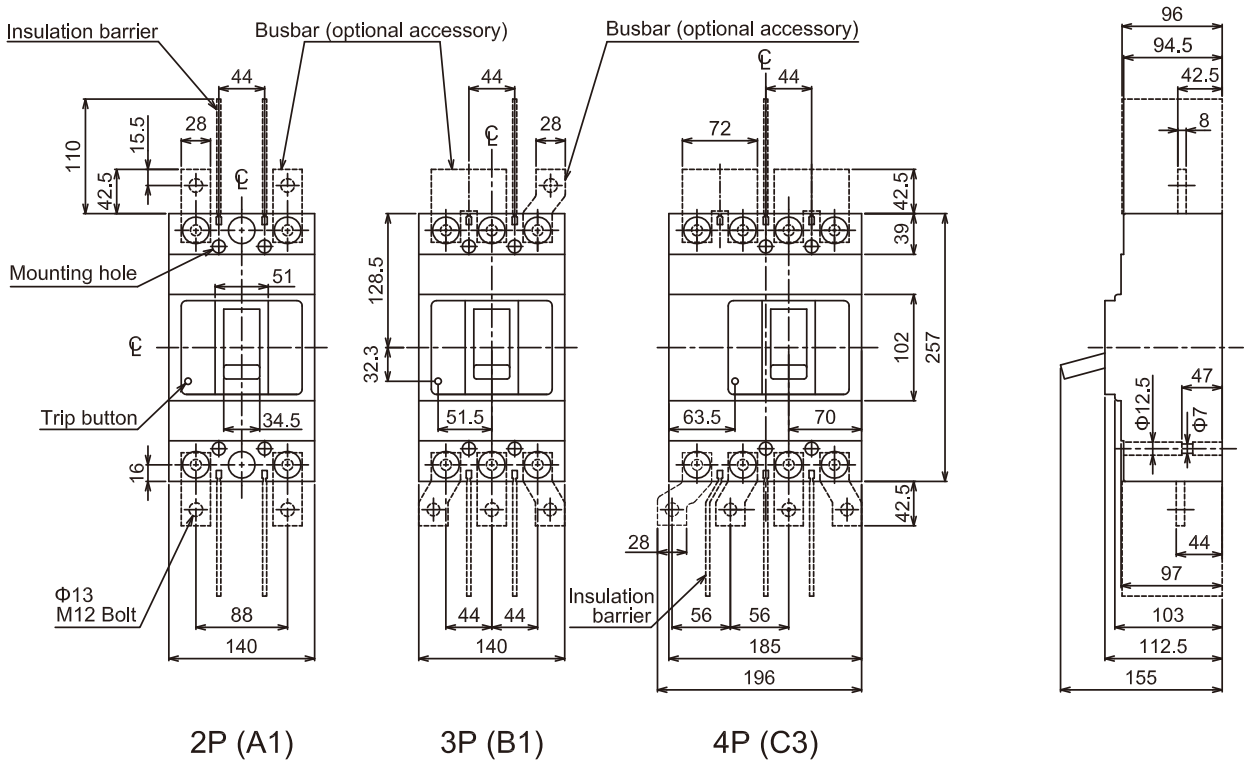


Mounting



Panel cut

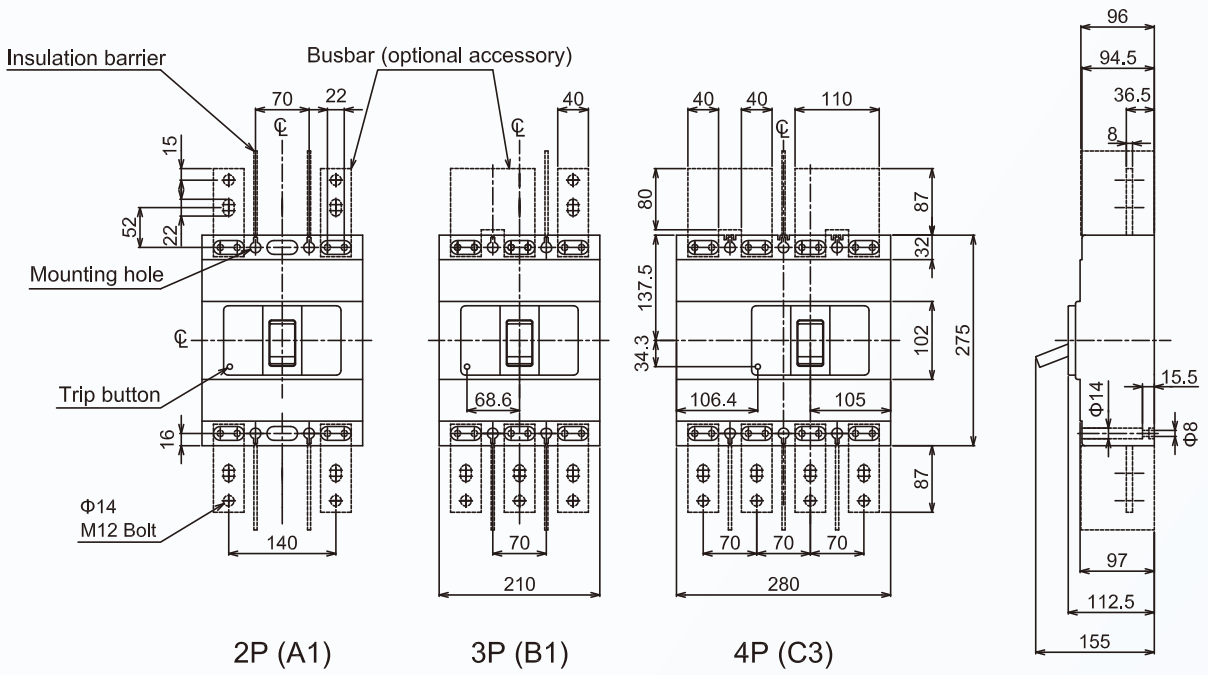
BMA400-RTD DC



Installation

Panel cut

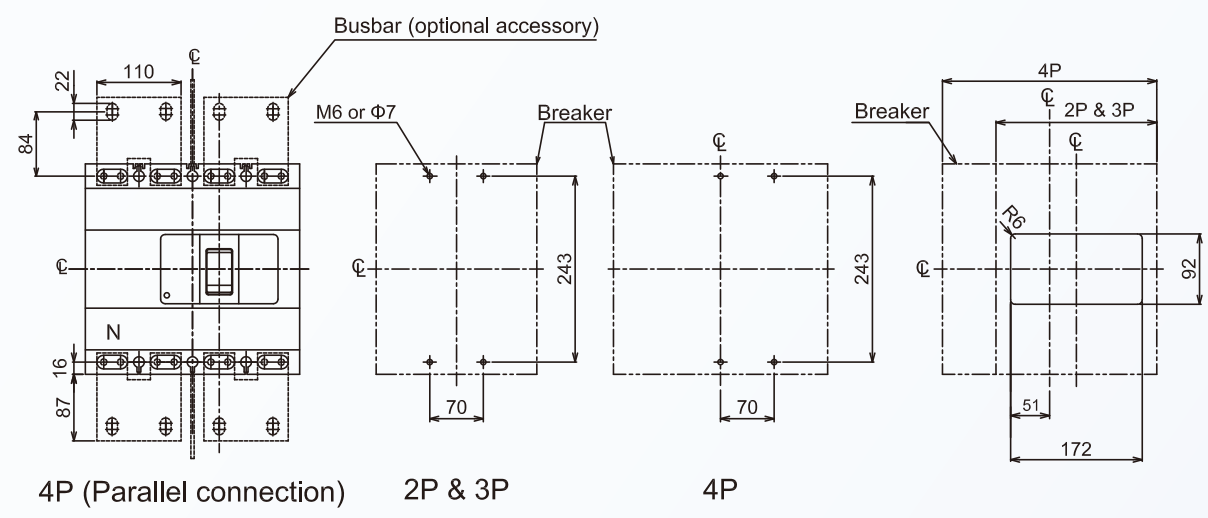
BMA630-RTD DC



2P (A1)

3P (B1)

4P (C3)



4P (Parallel connection)

2P & 3P

4P

Installation

Panel cut

MCCB
DC Series

MCB
DC Series

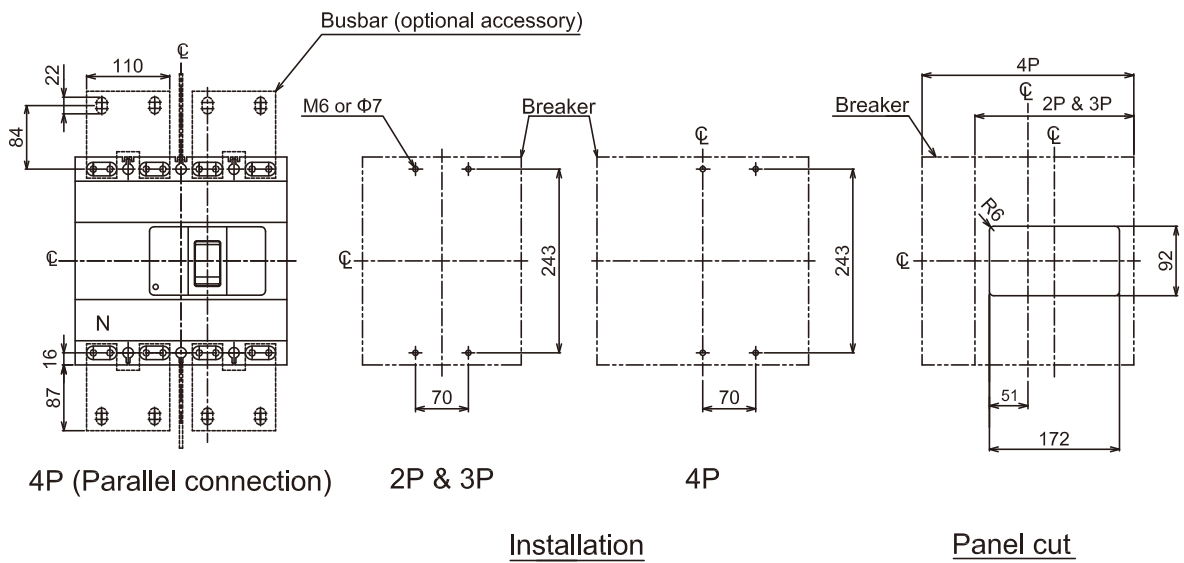
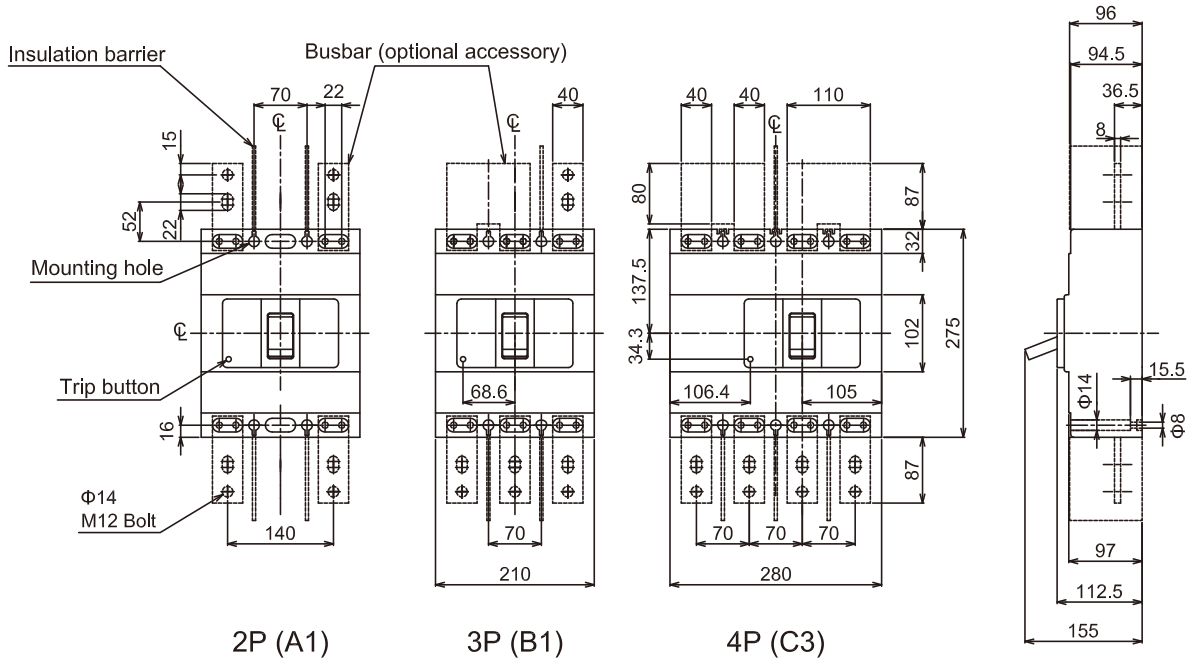
SPD
DC Series

SD
DC Series

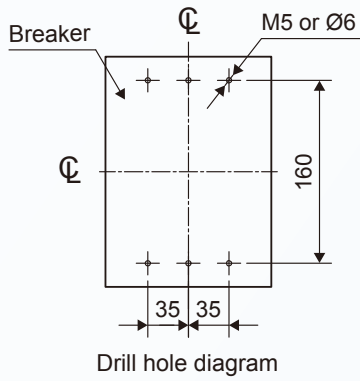
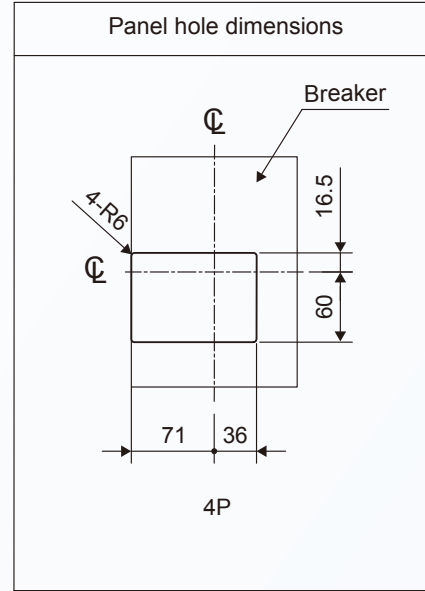
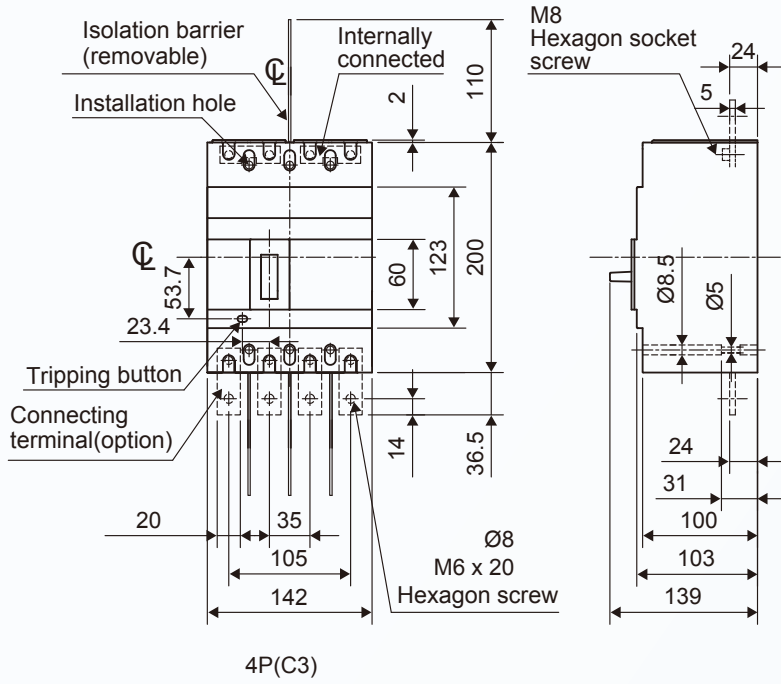
FUSE
DC Series

MCCB/
ACB
AC Series

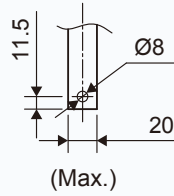
BMA800-RTD DC



BMA-250 UTD DC



Maximum thickness of the bus bar 5t

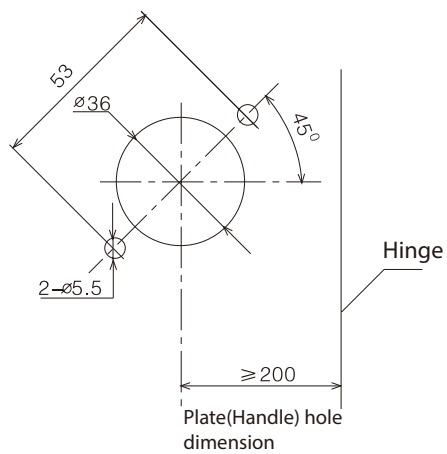
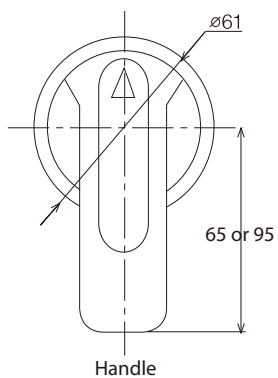
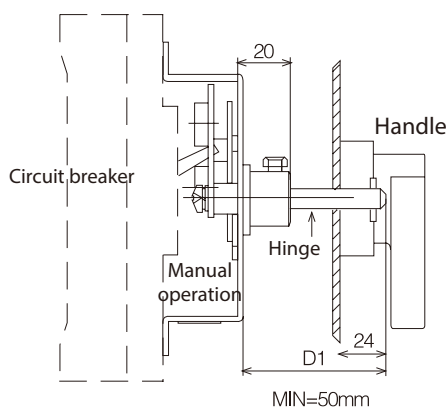
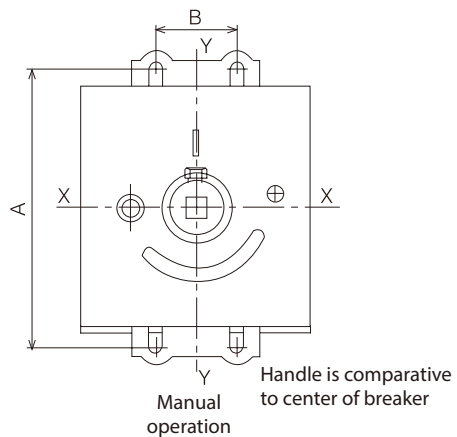


Connecting terminal/
Bus bar diagram

External Accessories

- Extended Rotary Handle

Type	Applicable breaker	Dimensions (mm)		
		A	B	Y
MA-250HD	BMA250-HTD DC BMA250-HTD DC PV	177	35	10
MA-400N	BMA400-RTD DC	221	44	10
MA-800N	BMA630-RTD DC BMA800-RTD DC	242	70	10



MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

■ Rotary Handle

Type	Applicable breaker	Dimensions (mm)								
		A	B	C	D	E	F	G	H	I
EH-400N	BMA400-RTD DC	150	173	60	108	112	10	44	194	M4 screw or Ø5
EH-800N	BMA630-RTD DC BMA800-RTD DC	150	173	60	108	112	10	70	243	

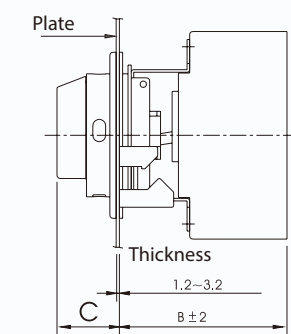
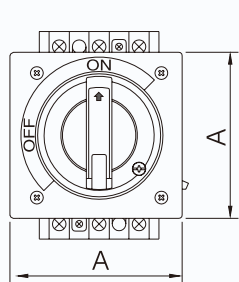
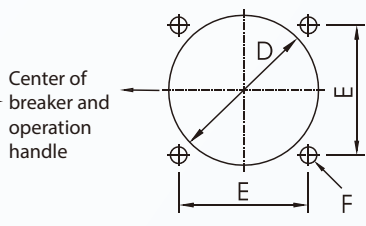
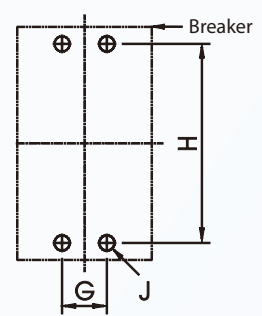


Fig. 1



Panel Dimension

Fig. 2



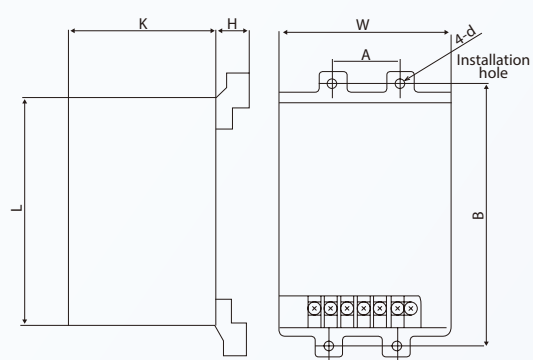
Breaker Dimension

Fig. 3

■ Motor Operation Device

Type	Applicable breaker	Dimensions (mm)						
		A	B	d	H	K	L	W
MT-400N	BMA400-RTD DC	44	194	Ø6.5	36	115	176	130
MT-400N P*								
MT-800N	BMA630-RTD DC BMA800-RTD DC	70	243	Ø6.5	36	115	176	130

*Note: MT-400N P should use with Rear connection (PGI 400N)



MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

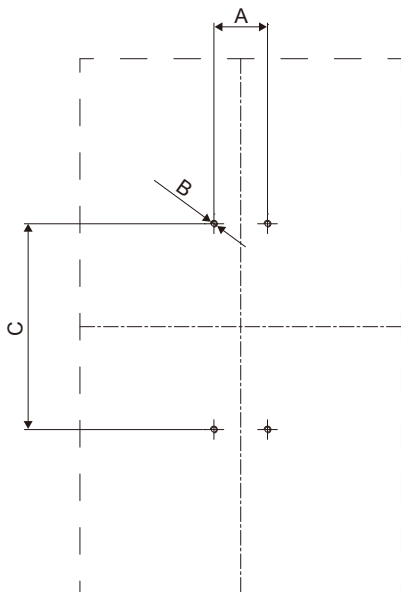
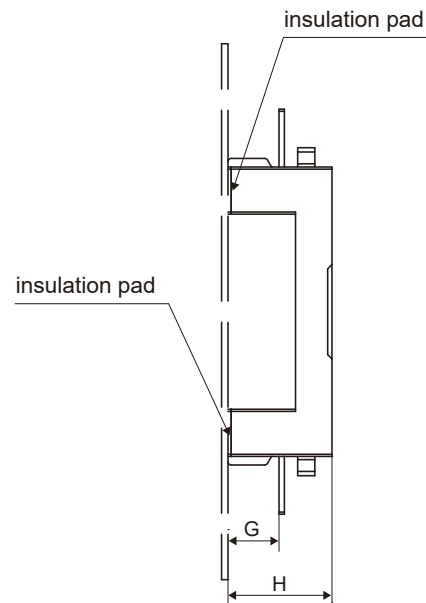
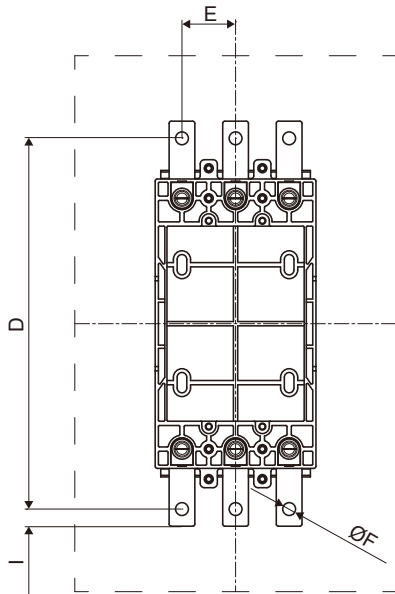
FUSE
DC Series

MCCB/
ACB
AC Series

Connection

- Front Connection

Type	Applicable breaker	Dimensions (mm)									Connect Direction	
		A	B	C	D	E	F	G	H	I	horizontal	vertical
PGIF-400N	BMA400-RTD DC	44	M5	244	326	44	10.5	36	85	13	√	



MCCB
DC Series

MCB
DC Series

SPD
DC Series

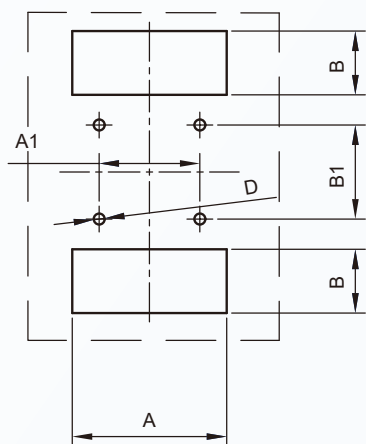
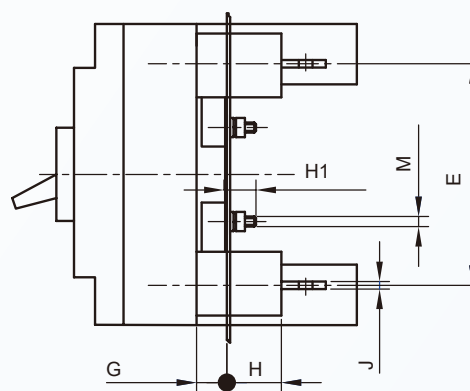
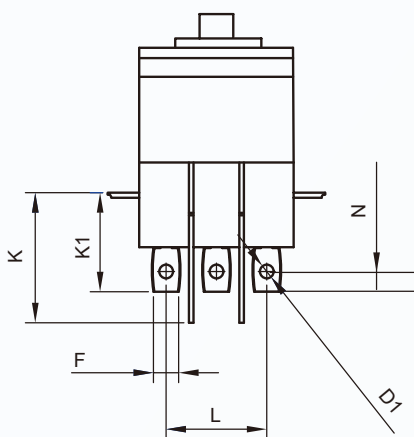
SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

■ Rear Connection

Type	Applicable breaker	Pole	Dimensions (mm)																Connect Direction			
			A	A1	B	B1	C	D	D1	E	G	H	H1	J	K	K1	L	M	N	horizontal	vertical	
PGI-400N	BMA400-RTD DC	2/3P	137	44	50	135	175	Ø10	Ø13	225	18	40	24	8	120	79	88	M8	22.5	√	√	
		4P	181	88													130					
PGI-800N	BMA630-RTD DC BMA800-RTD DC	2/3P	212	140	57	143	185	Ø10	Ø13	243	17	53	20	11	/	146	140	M8	18.5	√		
		4P	282	210													210					



MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

DC Miniature Circuit Breaker

Applications :

Applied to DC power supply, solar energy, energy storage, etc.
Used to protect and control electrical equipment and circuits from overload and short-circuit.

Type designation :

BHA	DC	5	4	16
↓	↓	↓	↓	↓
Type	Voltage type	Rated breaking capacity (kA)	Number of poles (P)	Rated current In (A)
		DC250V (1P) DC500V (2P) DC750V(3P) DC1000V(4P)		
BHA	DC	5: 10kA	1, 2, 3, 4	1, 2, 3, 4, 5, 6, 10, 16 20, 25, 32, 40, 50, 63

Standard: IEC 60947-2

Technical specification :

Rated voltage: DC250V(1P) 、 DC500V (2P) 、 DC750V(3P) 、 DC1000V(4P)

Rated current: 1~63A

Rated breaking capacity : 10,000A

Instantaneous tripping: $I_i=10I_n(\pm 20\%)$

Mechanical life: 20,000 operations

Wiring capabilities: stranded wire -16mm² / Rigid wire -25mm²

Ambient temperature: -40°C~+70°C

Rated impulse withstand voltage: 4kV

Features :

Complete protection function → with overload and short circuit protection

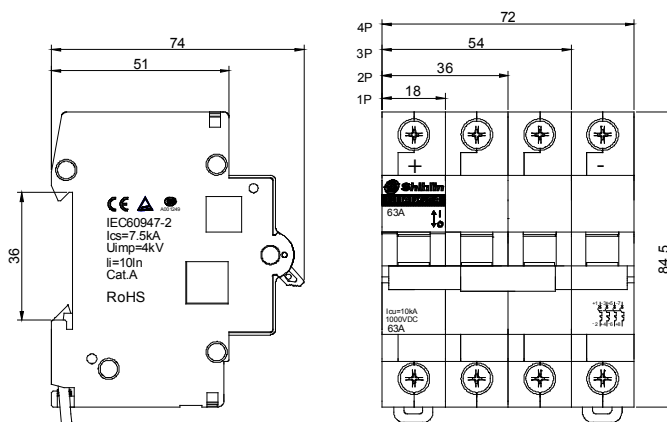
Complete accessories available → shunt trip(SHT), under-voltage trip(UVT), over-voltage trip(OVT), auxiliary switch(AX), alarm switch(AL).

Easy installation → Modularized structure design can be tool-free installed on standard DIN-rail TH35mm.

Certification: CE, TUV

Dimension

Unit: mm



MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

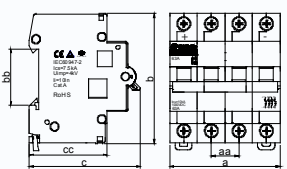
FUSE
DC Series

MCCB/
ACB
AC Series

■ Specification

Frame size (AF)	63			
Type	BHA DC5			

Appearance

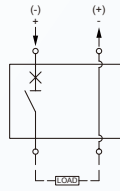
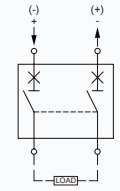
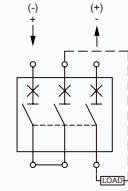
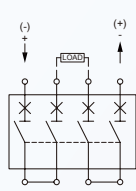
Dimensions (mm) 	Number of poles (P)	1	2	3	4
	a	18	36	54	72
	b	85.3			
	c	50.5			
	aa	18			
	bb	36			
	cc	74			

Weight (g)	122	244	366	488
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Rated operation voltage U_e (V) (DC)	250	500	750	1000
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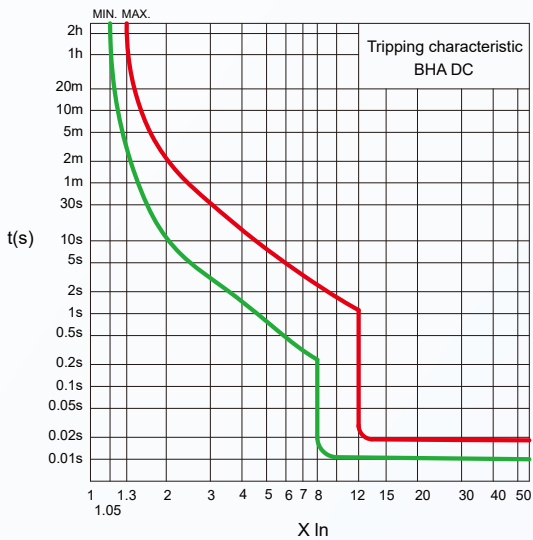
Rated current I_n (A)	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63			
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Rated breaking capacity I_{cu} (kA)	250V/10kA	500V/10kA	750V/10kA	1000V/10kA
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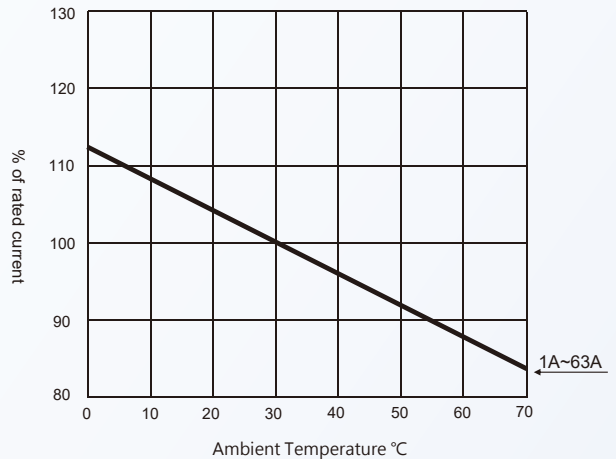
Wiring Diagram				
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Note: $I_{cs}=75\%I_{cu}$

■ Characteristic Curve



■ Compensation Curve



DC Surge Protection Device


Function :

It is mainly applied to the battery components of the solar power generation system, the DC circuit of the inverter and surge protection for solar power system equipment with a DC1000V

Feature :

- a. Modularization, mistake proofing design, easy to access plug-in module → no need to power-off during replacement in case of failure
- b. Status indicator window for failure display, also come with fault alarm auxiliary contact (1C)
- c. Certification: CE, TUV

Type designation :

BHP	40	PV5	
↓	↓	↓	
Type	Maximum discharge current I _{max} (8/20μs)	Solar power system	
BHP	40: 40kA	PV5: DC1000V PV6: DC1500V	

Specification :

Model	BHP40 PV5	BHP40 PV6
Standard	EN 61643-31:2019	EN 61643-31:2019
Operation voltage U _{oc}	≤1000 Vdc	1500 Vdc
Maximum continuous operation voltage U _{cpv}	1060 Vdc	1500 Vdc
Maximum discharge current I _{max}	40kA (8/20μs)	40kA (8/20μs)
Nominal discharge current I _n	20kA (8/20μs)	20kA (8/20μs)
Voltage protection level U _p (at I _n)	3.6kV	5.8 kV
Reaction time t _A	≤25ns	
Leakage current mA	<0.05mA	
Operating temperature	-40°C~85°C	
Humidity	≤95%	
Flame resistance rating	V0 (Comply with UL94)	
Enclosure rating	IP20	
Protection type	DC+/DC-、DC+/PE、DC-/PE	
Failure display	"When the display window is red, the module needs to be replace"	
Auxiliary contact capacity	250VAC/0.1A 125VDC/0.2A 75VDC/0.5A	
Installation	35mm DIN rail	
Wiring	4-25mm ²	
Screw	M5	
Certification	CE, TUV	

MCCB
DC Series

MCB
DC Series

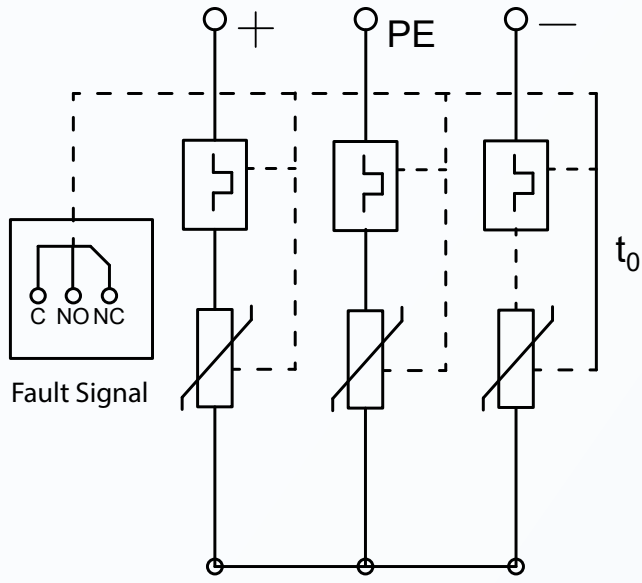
SPD
DC Series

SD
DC Series

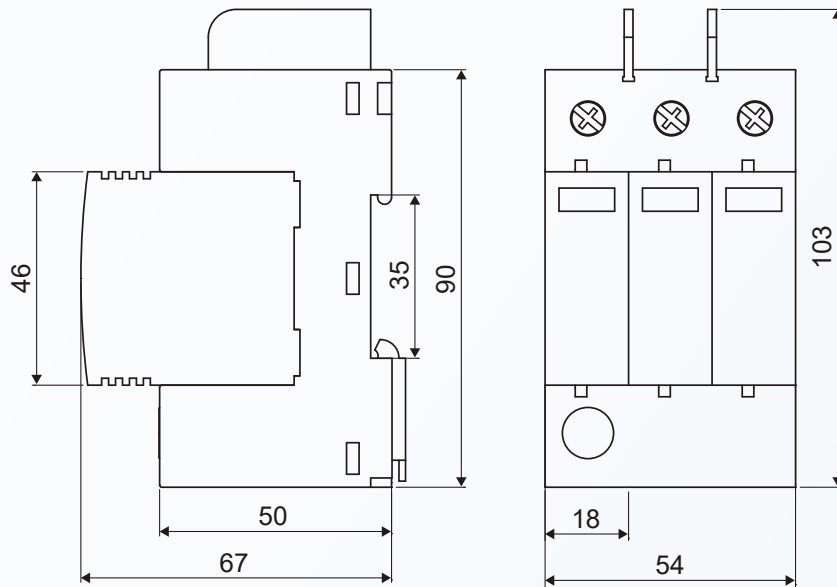
FUSE
DC Series

MCCB/
ACB
AC Series

■ Schematic



■ Dimension



Switch For DC System

- SWD50

■ **Application :**

SWD DC isolation switch, applicable for solar energy, wind power generation, energy storage equipment DC system.

■ **Feature :**

- a. Rapid switching time with 5ms
- b. Certification: CE, TUV



■ **Type designation :**

SWD	50	-	A	20	-	4A1
↓	↓		↓	↓		↓
Type	Frame size (AF)		Voltage type	Rated current(A)		DC poles & Wiring diagram
SWD	50: 50AF		A: DC1000V	16, 20, 25, 32, 40, 50		2P1, 4P2, 6P3, 8P4, 4A1

■ **Specification :**

Type	600V	800V	1000V	Circuit	Contact
SWD50-A16-2P1	36A	26A	16A	1	
SWD50-A20-2P1	40A	30A	20A	1	
SWD50-A25-2P1	55A	45A	25A	1	
SWD50-A16-4P2	36A	26A	16A	2	
SWD50-A20-4P2	40A	30A	20A	2	
SWD50-A25-4P2	55A	45A	25A	2	
SWD50-A16-6P3	36A	26A	16A	3	
SWD50-A20-6P3	40A	30A	20A	3	
SWD50-A25-6P3	55A	45A	25A	3	
SWD50-A16-8P4	36A	26A	16A	4	
SWD50-A20-8P4	40A	30A	20A	4	
SWD50-A25-8P4	55A	45A	25A	4	
SWD50-A32-4A1	32A	32A	32A	1	
SWD50-A40-4A1	40A	40A	40A	1	
SWD50-A50-4A1	50A	50A	50A	1	

MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

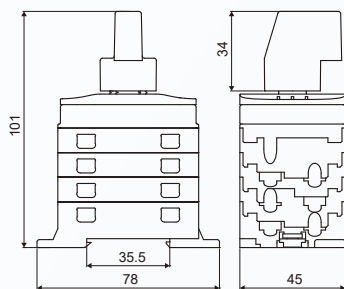
MCCB/
ACB
AC Series

■ Specification :

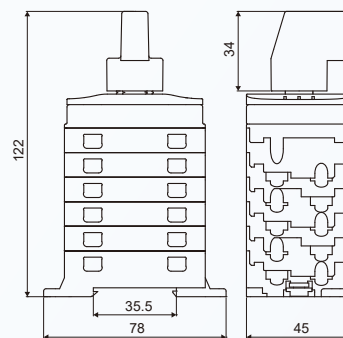
Type		SWD50			
Standard		IEC 60947-3			
Rated current		16.20.25.32.40.50A			
Rated voltage		DC 1000V			
Rated insulation voltage		1500V			
Rated impulse voltage		8000V			
Rated short-time withstand current (1s)	Current	16.20A	25A	32.40A	50A
	Wiring Method	2P1.4P2.6P3.8P4			4A1
	Withstand Current	1200A	1400A	2000A	2400A
Rated short-circuit capability	Current	16.20A	25A	32.40A	50A
	Wiring Method	2P1.4P2.6P3.8P4			4A1
	Making Capacity	1200A	1400A	2000A	2400A
Rated limit short circuit current		5000A			
Operating temperature range		-40°C~ 70°C			
Storage temperature range		-40°C~ 85°C			
Installation		35mm din rail			
Enclosure rating		IP20			
Certification		TUV.CE			
Wiring size		4-16mm ²			

■ Dimension

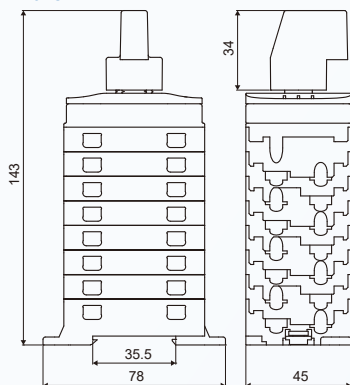
■ 2P1



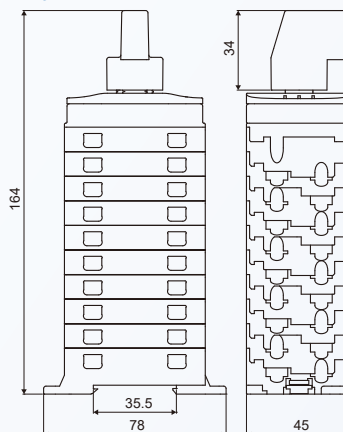
■ 4P2, 4A1



■ 6P3



■ 8P4



Switch For DC System

- SND50

■ **Application :**

SND DC isolation switch, applicable for the sloar energy, wind power generaton, energy storage equipment DC system.

■ **Feature :**

a.Rapid switching time with 5ms

b. Certification: CE,TUV



■ **Type designation :**

SND	50	-	B	20	4A1
↓	↓		↓	↓	↓
Type	Frame size(AF)		Voltage type	Rated current(A)	DC poles & Wiring diagram
SND	50:50AF		B:DC 1500V	20, 30, 40, 50	2P1, 4P2, 6P3, 8P4, 4A1

■ **Specification :**

Type	1000V	1200V	1500V	Circuit	Contact
SND50-B20-2P1	40A	30A	20A	1	
SND50-B30-2P1	50A	40A	30A	1	
SND50-B20-4P2	40A	30A	20A	2	
SND50-B30-4P2	50A	40A	30A	2	
SND50-B20-6P3	40A	30A	20A	3	
SND50-B30-6P3	50A	40A	30A	3	
SND50-B20-8P4	40A	30A	20A	4	
SND50-B30-8P4	50A	40A	30A	4	
SND50-B40-4A1	40A	40A	40A	1	
SND50-B50-4A1	50A	50A	50A	1	

MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

■ Specification :

Specification	SND50
Standard	IEC 60947-3
Rated current (A)	20, 30, 40, 50
Rated voltage Ue (V) DC	1500
Rated insulation voltage Ui (V) DC	1500
Rated impulse voltage Uimp (kV)	8
Rated short-time withstand current Icw 1s (A)	780
Rated short circuit capability Icm (A)	1200
Rated limit short circuit current (A)	5000
Wiring	2P1, 4P2, 6P3, 8P4, 4A1
Operation temperature range	-40°C ~ 85°C
storage temperature range	-40°C ~ 85°C
Installation	35mm Din rail
Enclosure rating	IP20
Wiring size	4 - 10mm ²
Certification	TUV, CE

MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

Fuse For DC System

- FUD

■ **Application :**

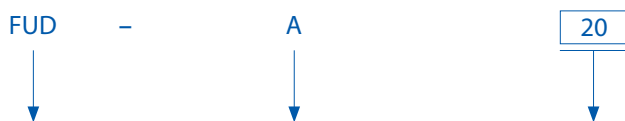
This series of fuse is used in circuit with rated voltage of DC1000V&1500V and rated current below 50A system. Can connect in series with solar panels and batteries, achieving short circuit breaking function with rated breaking capacity of 20kA. Comply with standard IEC60269-1 / IEC60269-6.

■ **Feature :**

- a. Failure indication
- b. CE Declaration, TUV certificated

■ **Type designation :**

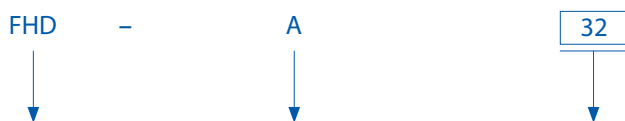
a. Fuse



Type	Voltage type	Rated current(A)
FUD	A: DC1000V	4,16,20,25,30,32
	B: DC1500V	4,16,20,25,30,32,40,50



b. Fuse holder



Type	Voltage type	Frame size (AF)
FHD	A: DC1000V	32: 32AF
	B: DC1500V	50: 50AF



MCCB
DC Series

MCB
DC Series

SPD
DC Series

SD
DC Series

FUSE
DC Series

MCCB/
ACB
AC Series

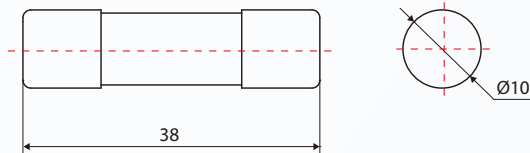
■ Specification :

Type	FUD-A32	FUD-B50
Standard	IEC 60269-1 IEC 60269-6	IEC 60269-1 IEC 60269-6
Rated Voltage	DC 1000V	DC 1500V
Rated Current	16,20,32A	4, 16, 20, 25, 30, 32, 40, 50
Breaking capacity	20kA	20kA
Consume	6W	7.2~15.6W
Ambient air temperature	-40°C~ 90°C	-40~90°C
Certification	TUV,CE	TUV,CE

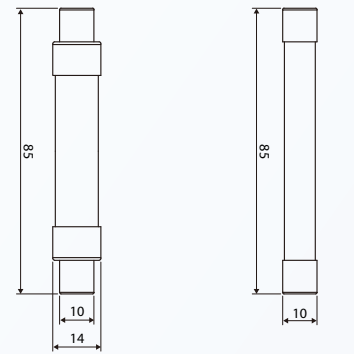
Type	FHD-A32	FHD-B50
Standard	IEC 60947-1 IEC 60947-3	IEC60947-1 IEC 60947-3
Frame Size	32AF	50AF
Rated Voltage	DC 1000V	DC 1500V
Breaking capacity	20kA	20kA
Consume	6W	7.2~15.6W
Enclosure rating	IP20	IP20
Ambient air temperature	-40°C~ 90°C	-40~90°C
Certification	TUV,CE	TUV,CE
Wiring size	1-10mm ²	1~16mm ²
Installation	35mm din rail	35mm Din rail
Screw	M5	M5
Failure indication	Indicator light	Indicator light

■ Dimension

FUD-A



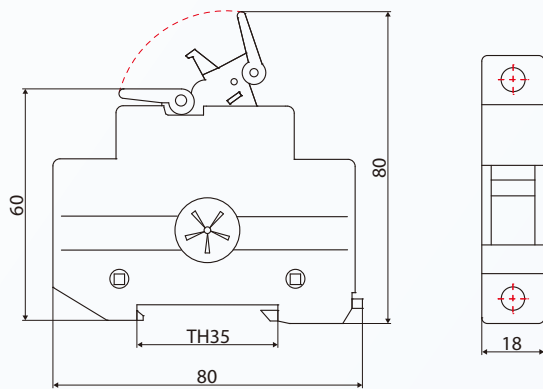
FUD-B



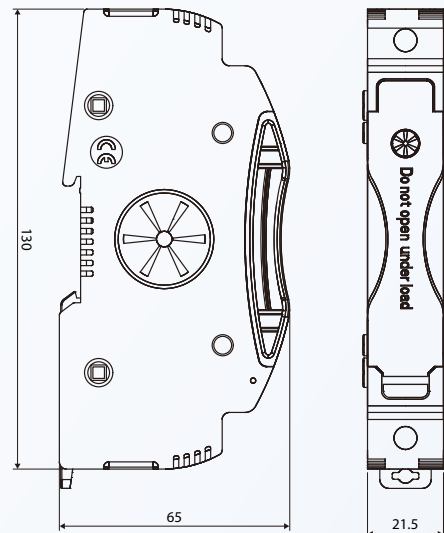
More than 25A

25A and below

FHD-A



FHD-B



Specification

Model		BMA250-UTD		BMA250-U2TD	
Number Rated current In (A) at 40°C of poles (P)		63A,75A,80A,100A,125A,140A,150A, 160A,175A,200A,225A,250A		63A,75A,80A,100A,125A,140A,150A, 160A,175A,200A,225A,250A	
Number of pole		3P		3P	
Ue (V)	AC	AC380/400/415V AC690V AC800V AC1000V		AC380/400/415V AC690V AC800V AC1000V	
	DC	-		-	
Uimp (kV)		8		8	
Ui (V)	AC	1140		1140	
	DC	-		-	
AC Icu / Ics	1000V	12	12	12	12
	800V	25	25	50	37
	690V	50	50	50	50
	415V	100	100	100	100
	400V	100	100	100	100
	380V	100	100	100	100
Trip unit		Thermal Magnetic		Thermal Magnetic	
Ir adjustable range		Fixed		Fixed	
Magnetic range		10In		10In	
Endurance	Mechanical	8,000		8,000	
	Electrical	20,000		20,000	
Connection		Clamp terminal		Clamp terminal	
Mounting		Screw fixed		Screw fixed	

MCCB
DC Series

MCB
DC Series

SPD
DC Series

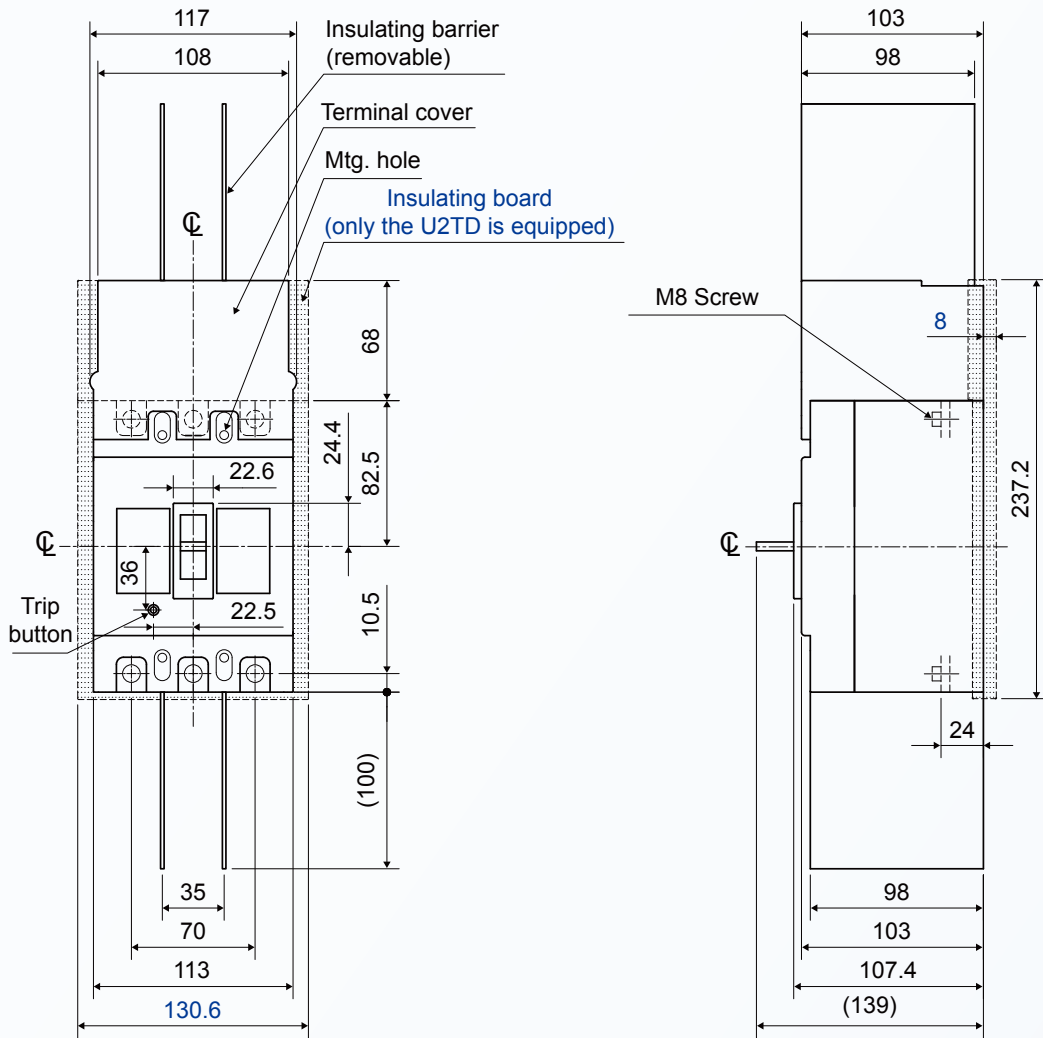
SD
DC Series

FUSE
DC Series

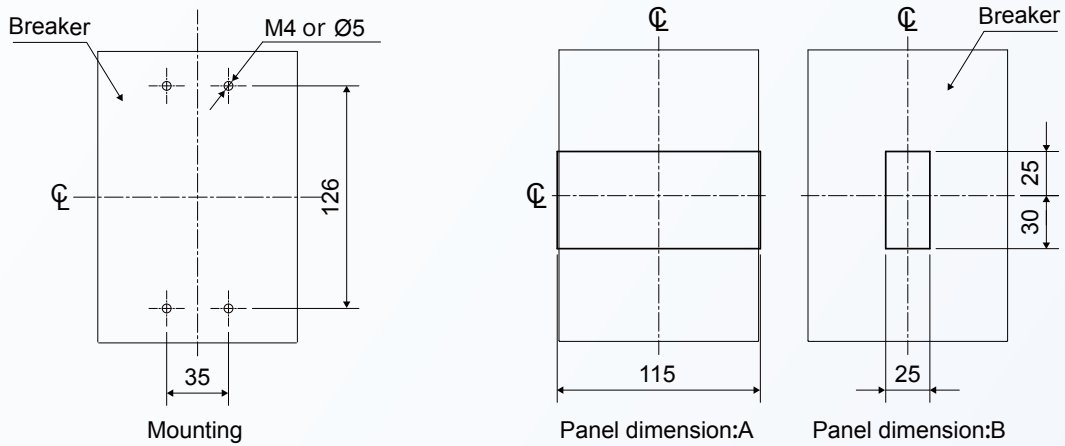
MCCB/
ACB
AC Series

Dimension

BMA250-UTD/U2TD

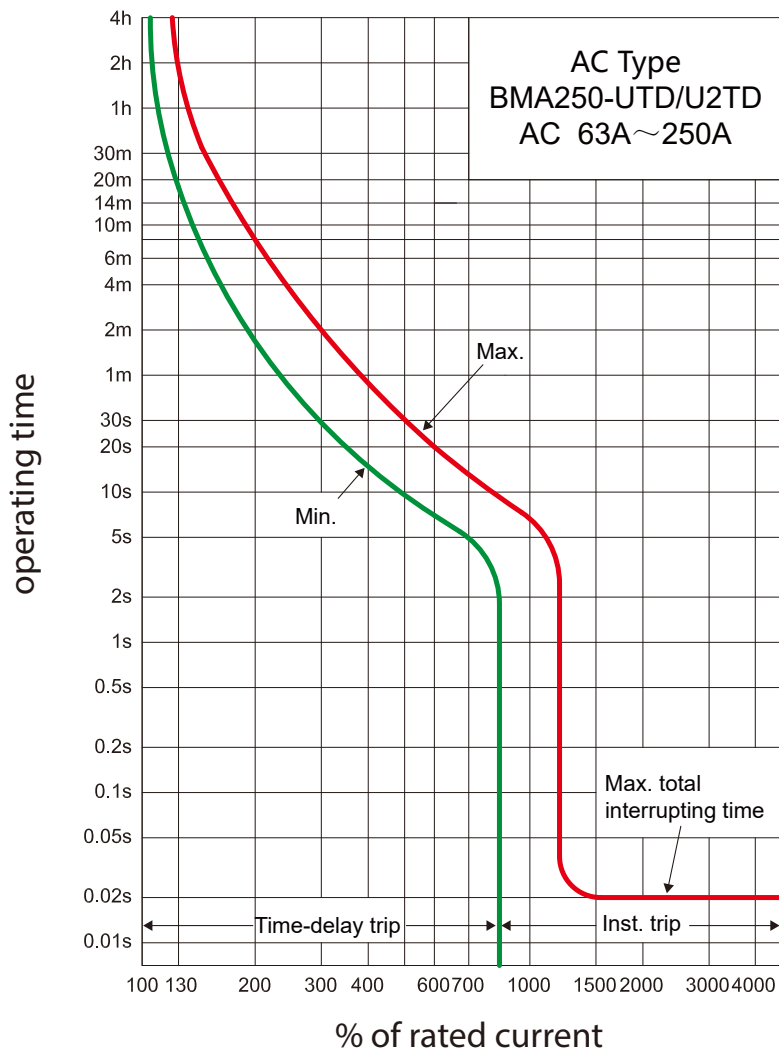


Panel cut

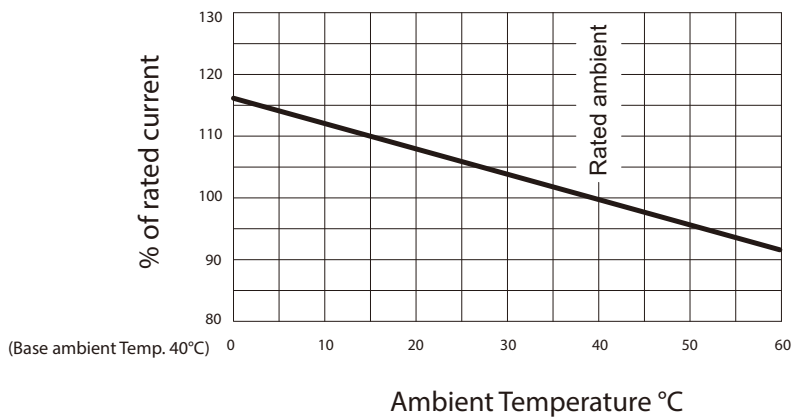


Tripping Characteristic Curve

- BMA250-UTD/U2TD
 - Characteristic Curve



- Compensation Curve



Specification

Model		BWA-4000U			
Type		Fixed		Drawout	
Rated current In (A)		1000, 1250, 1600, 2000, 2500, 3200, 4000			
Rated operation voltage Ue (V)		AC 1000/1140V			
Insulation voltage Ui (V)		AC 1250V			
Rated impulse withstand voltage, Uimp (kV)		12			
Pole		3P	4P	3P	4P
Rated Breaking Capacity IEC 60946-2 Icu/Ics (kA)	AC1000/1140V	50/50			
Rated short time withstand current, Icw/1s (kA)	AC1000/1140V	50			
Mechanical life time	No maintance	12,500			
	Maintance	25,000			
Electrical life time	AC1000/1140V	1,000			
Wiring		Horizontal / Vertical			
Dimensions (mm)	W	425	540	465	580
	H	400	400	435	435
	D	386	386	476	476
Auxiliary contact		4C, 5a5b			
Charging		"AC 110V/220V/380V DC 110V/220V Optional"			
Certification		TUV, CE			

MCCB
DC Series

MCB
DC Series

SPD
DC Series

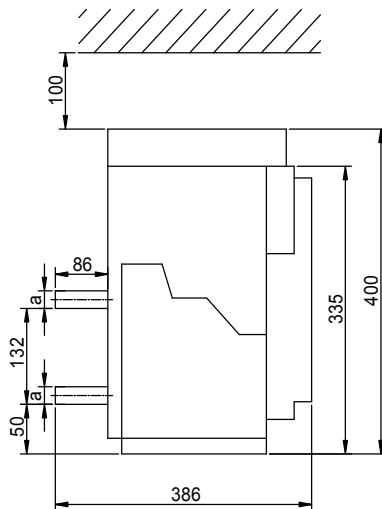
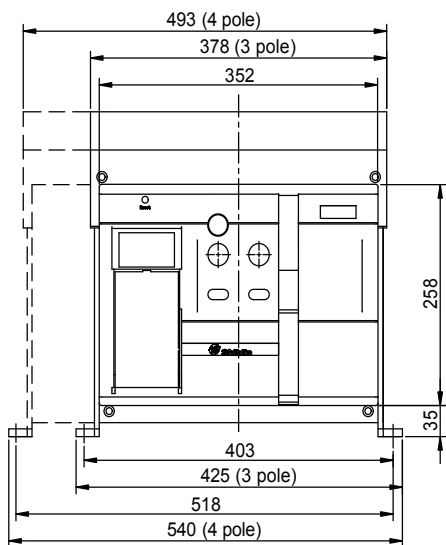
SD
DC Series

FUSE
DC Series

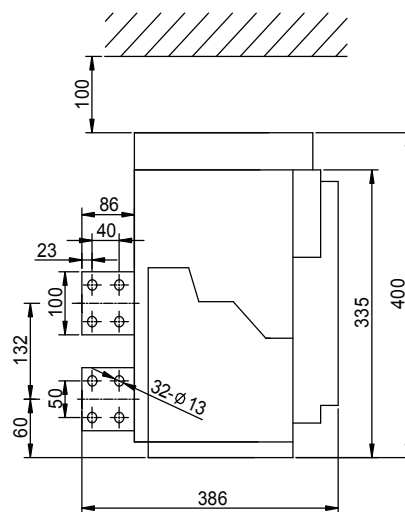
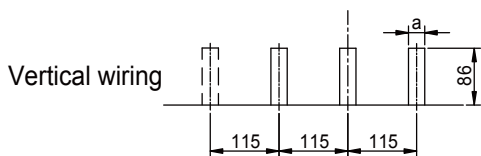
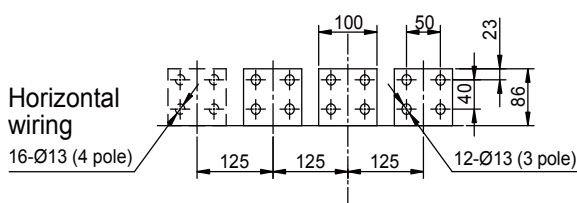
MCCB/
ACB
AC Series

Dimension

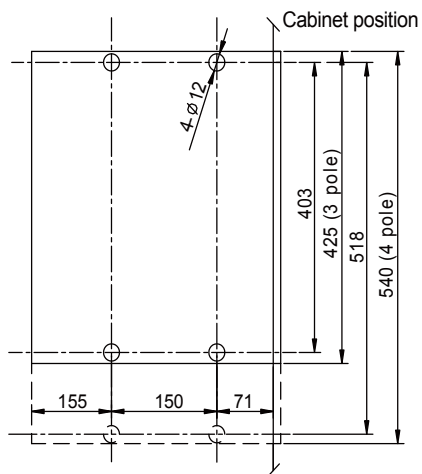
BWA-4000U appearance dimension and installation dimension (Fixed type)



Horizontal type



Vertical type



In	a mm
1000-4000A	20

MCCB
DC Series

MCB
DC Series

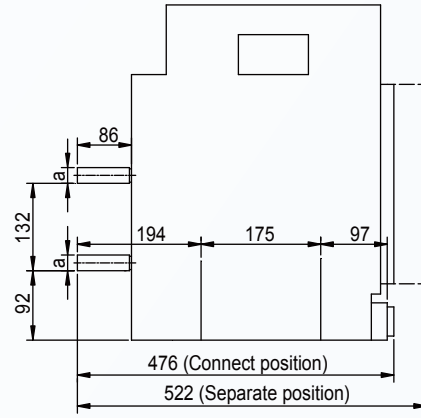
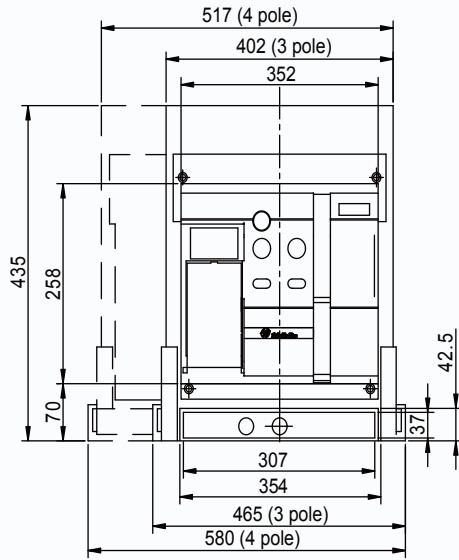
SPD
DC Series

SD
DC Series

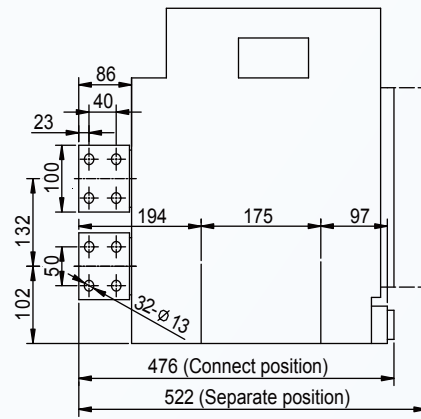
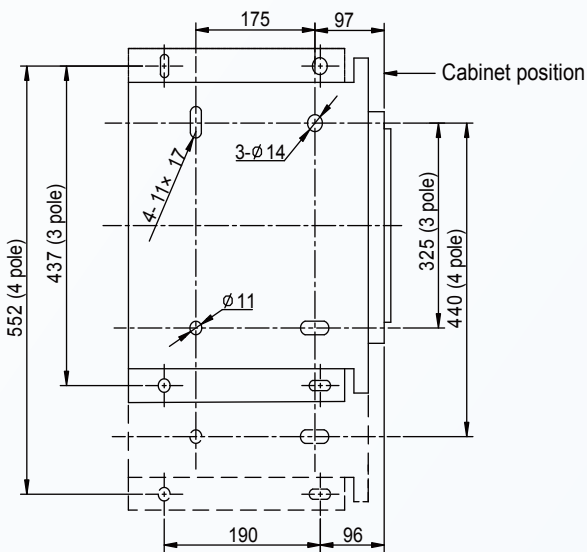
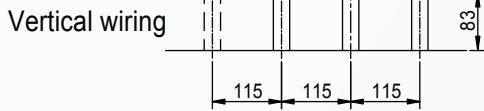
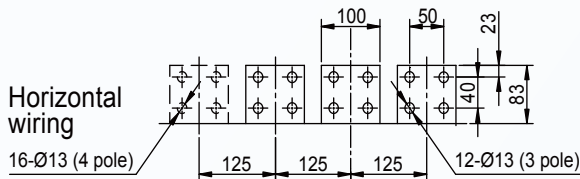
FUSE
DC Series

MCCB/
ACB
AC Series

BWA-4000U appearance dimension and installation dimension (Drawout)



Horizontal type



Vertical type

In	a mm
1000-4000A	20

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