Shihlin Electric

MOLDED CASE CIRCUIT BREAKER

EARTH LEAKAGE CIRCUIT BREAKER

MIRDC ISO 9001 4A6Y010-10

MIRDC ISO 14001 4A6E003-10

SHIHLIN ELECTRIC & ENGINEERING

MCCB Frame Size Selection Table

BM 100 SN 3P 30A

Frame Size	Type	Rated Breaking Capacity (kA) IEC60947-2 220V	380V	415V	440V	500V	Pole	Rated Current In(A)
30	CN	2.5	1.5	1.5	-	-	2, 3	3, 5, 10, 15, 20, 30.
	SN	5	2.5	2.5	2.5	1.5	3	
50	CN	5	2.5	2.5	2.5	1.5	2, 3	10, 15, 20, 30, 40, 50.
60	SN	10	7.5	7.5	7.5	5	2, 3, 4	10, 15, 20, 25, 30, 40, 50, 60.
	HN	25	15	10	10	7.5	2, 3, 4	
	HBN	50	30	25	25	15	3	10, 15, 20, 30, 40, 50, 60.
63	SN	10	7.5	7.5	7.5	5	2, 3, 4	10, 15, 16, 20, 25, 30, 32, 40, 50, 60, 63
	HN	25	15	10	10	5	2, 3, 4	
100	FTD	25	5	5	-	-	1	15, 20, 30, 40, 50, 60, 75, 100
	MN	15	10	10	7.5	5	2, 3	10, 15, 20, 30, 40, 50, 60, 75, 100.
	SN	25	15	10	10	7.5	2, 3	
	HN	50	30	25	25	15	2, 3, 4	
	HS	125	85	85	70	50	3, 4	40, 50, 63, 80, 100.
	BTD	25	15	10	10	5*	2, 3, 4	15, 16, 20, 25, 30, 32, 40, 50, 60, 63, 75, 80, 100
	STD	50	30	25	25	5*	2, 3, 4	
	LTD	85	36	36	32	5*	2, 3, 4	
125	SN	30	22	22	15	7.5	2, 3, 4	15, 20, 30, 40, 50, 60, 75, 100, 125.
	HN	50	30	25	25	15	2, 3, 4	
	LTD	85	36	36	32	5*	2, 3, 4	10, 15, 16, 20, 25, 30, 32, 40, 50, 60, 63, 70, 75, 80, 100, 125.
	HTA	100	50	50	50	10*	2, 3, 4	
	RTA	100	70	70	50	10*	2, 3, 4	
160	SN	50	30	25	25	15	2, 3, 4	125, 140, 160.
	HN	85	36	36	32	20	3, 4	
	HS	125	85	85	70	50	3, 4	
	HTA	100	50	50	50	10*	3, 4	40, 50, 60, 63, 70, 75, 80, 100, 125, 140, 150, 160.
	RTA	100	70	70	50	10*	3, 4	
250	CN	30	22	15	15	7.5	2, 3, 4	125, 150, 175, 200, 225, 250.
	SN	50	30	25	25	15	3, 4	
	HN	85	36	36	32	20	3, 4	175, 200, 225, 250.
	HTA	100	50	50	50	10*	3, 4	175, 200, 225, 250.
	RTA	100	70	70	50	10*	3, 4	
	HS	125	85	85	70	50	3, 4	
400	CN	35	25	25	22	14	2, 3, 4	250, 300, 350, 400.
	SN	50	35	35	30	20	3, 4	
	HN	85	50	50	42	25	3, 4	
	RN	100	70	70	55	42	3, 4	
	UN	125	85	85	85	65	3, 4	
630s	STD	36	25	25	25	10*	3, 4	400. 500, 600, 630.
	LTD	65	36	36	36	10*	3, 4	
	HTD	85	50	50	50	10*	3, 4	
	RTD	100	70	70	70	15*	3, 4	
630	CN	35	25	25	22	14	2, 3, 4	500, 630.
	SN	50	35	35	30	20	3, 4	
	HN	85	50	50	50	25	3, 4	
	RN	100	70	70	70	42	3, 4	
	UN	125	100	85	85	65	3, 4	
800	CN	50	35	35	30	20	3, 4	700, 800.
	SN	85	50	50	50	25	3, 4	
	HN	100	70	70	70	42	3, 4	
	RN	125	100	85	85	65	3, 4	
1000	HS	130	100	85	85	65	3	1000
1200	HS	130	100	85	85	65	3	1200
1600	HS	130	100	85	85	65	3	1400, 1600.

Accessory	
Blank	No Acc.
AX	Auxiliary Switch
AL	Alarm Switch
SHT	Shunt Trip
UVT	Under Voltage Trip

Note
1. There is no SHT for 100HS, 30A and below.
2. There is no UVT for 100HS, 160HS, 250HS.
3. Mark * kA rating is 690V.

ELCB Frame Size Selection Table

BL	100	SN	3P	30A	

Frame Size	Rated Breaking Capacity (kA)				Pole	Rated Current In(A)	Accessory	
	Type	IEC60947-2						
		220V	380V	440V				
50	SN	10	7.5	7.5	3, 4	15, 20, 30, 40, 50.	Blank	No Acc.
100	SN	25	15	10	3, 4	15, 20, 30, 40, 50, 60, 75, 100.	AX	Auxiliary Switch
	HN	50	30	25	3, 4		AL	Alarm Switch
160	SN	50	30	25	3, 4	125, 140, 160.	SHT	Shunt Trip
250	SN	50	30	25	3, 4	175, 200, 225, 250.	UVT	Under Voltage Trip
400	SN	50	35	30	3, 4	250, 300, 350, 400.		
	HN	85	50	42	3, 4			
	RN	100	70	55	3, 4			
	UN	125	85	85	3, 4			
630	HN	85	50	50	3, 4	500, 630.		
	RN	100	70	70	3, 4			
	UN	125	100	85	3, 4			
800	SN	85	50	50	3, 4	700, 800.		
	HN	100	70	70	3, 4			
	RN	125	100	85	3, 4			

BMA Series Frame Size Selection Table

BMA	100	STA	3P	30A	

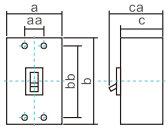
Frame Size	Rated Breaking Capacity (kA)				Pole	Ir Adjustable	Rated Current In(A)
	Type	IEC60947-2					
		220V(240V)	380V(415V)	690V			
125	STA	85	25	8	3, 4	0.8-0.9-1.0	15, 16, 20, 25, 30, 32, 40, 50, 60, 63, 75, 80, 100, 125
	LTA	85	36	8			
	HTA	100	50	10			
160	STA	85	25	8	3, 4	0.8-0.9-1.0	40, 50, 60, 63, 70, 75, 80, 100, 125, 140, 150, 160
	LTA	85	36	8			
	HTA	100	50	10			
250	STA	85	25	8	3, 4	0.8-0.9-1.0	175, 200, 225, 250
	LTA	85	36	8			
	HTA	100	50	10			
400	LTA	70	36	8	3, 4	0.8-0.9-1.0	250, 300, 350, 400
	HTA	85	50	10			
	RTA	100	70	15			
630s	STD	36	25	10	3, 4	N/A	400, 500, 600, 630
	LTD	65	36	10			
	HTD	85	50	10			
	RTD	100	70	15			
630	HTD	85	50	10	3, 4	N/A	500, 600, 630
	RTD	100	70	15			
	HTA	85	50	10		0.8-0.9-1.0	500, 600, 630
	RTA	100	70	15			
	HED	85	50	10		0.4-0.48-0.56-0.64-0.72-0.8-0.9-1.0	630
	RED	100	70	15			
800	HTD	85	50	10	3, 4	N/A	700, 800
	RTD	100	70	15			
	HTA	85	50	10		0.8-0.9-1.0	700, 800
	RTA	100	70	15			
	HED	85	50	10		0.4-0.48-0.56-0.64-0.72-0.8-0.9-1.0	800
	RED	100	70	15			
1250	HED	-	50	35	3, 4	0.4-0.45-0.5-0.6-0.63-0.7-0.8-0.9-1	1250
	RED	-	70	45			
1600	HED	-	50	35	3, 4	0.4-0.45-0.5-0.6-0.63-0.7-0.8-0.9-1	1600
	RED	-	70	45			

Accessory	
Blank	No Acc.
AX	Auxiliary Switch
AL	Alarm Switch
SHT	Shunt Trip
UVT	Under Voltage Trip

MCCB/ELCB Breaking Capacity Selection Table

Series	Rated Breaking Capacity (kA) IEC60947-2 AC380V	Frame Size/ Rated Current In (A)											
		30	50/60	100	125	160	250	400	630	800	1000	1200	1600
BM	100kA								630-UN	800-RN	1000-HS	1200-HS	1600-HS
	85kA			100-HS		160-HS	250-HS	400-UN					
	70kA				125-RTA	160-RTA	250-RTA	400-RN	630-RN 630s-RTD	800-HN			
	50kA				125-HTA	160-HTA	250-HTA	400-HN	630-HN 630s-HTD	800-SN			
	35/36kA			100-LTD	125-LTD	160-HN	250-HN	400-SN	630-SN 630s-LTD	800-CN			
	30kA		60-HBN	100-HN 100-STD		160-SN	250-SN						
	25kA				125-HN				630s-STD				
	15kA		60-HN 63-HN	100-SN 100-BTD	125-SN								
	10kA			100-MN									
	7.5kA		60-SN 63-SN										
	2.5kA	30-SN	50-CN										
	1.5kA	30-CN											
BL	100kA								630-UN	800-RN			
	85kA							400-RN					
	70kA							400-RN	630-RN	800-HN			
	50kA							400-HN	630-HN	800-SN			
	35kA							400-SN					
	30kA			100-HN		160-SN	250-SN						
	15kA			100-SN									
	10kA												
	7.5kA		50-SN										

Molded Case Circuit Breaker

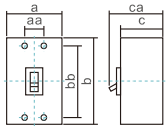
Frame size (AF) (Inm)			30		50		60					
Type			BM30-CN	BM30-SN	BM50-CN		BM60-SN			BM60-HN		BM60-HBN
Appearance												
Rated current In (A) at ambient temp. 40°C			3, 5, 10, 15, 20, 30.	3, 5, 10, 15, 20, 30.	10, 15, 20, 30, 40, 50.		10, 15, 20, 25, 30, 40, 50, 60.			10, 15, 20, 25, 30, 40, 50, 60.		10, 15, 20, 30, 40, 50, 60.
Number of poles (P)			2 / 3	2 / 3	2 / 3		2 / 3 / 4			2 / 3 / 4		3
Rated insulation voltage Ui (V)		AC	690	690	690		690			690		800
		DC	—	—	—		—			—		—
Rated operational voltage Ue (V AC)			500	500	500		500			500		500
Uimp(kV)			6	6	6		6			6		8
Dimensions	 (mm)	a	45 / 67.5	50 / 75	50 / 75		50 / 75 / 100			50 / 75 / 100		90
		b	96	130	130		130			130		155
		c	52	68	68		68			68		68
		ca	67	90	90		90			90		90
		bb	84	111	111		111			111		132
		aa	23.5	25	25		25			25		30
Weight (kg)			0.3 / 0.4	0.45 / 0.65	0.45 / 0.65		0.45 / 0.65 / 0.85			0.45 / 0.65 / 0.85		1.3
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 Icu AC	500V(690V)	—	1.5	1.5		5			7.5		15
		440V	—	2.5	2.5		7.5			10		25
		415V	1.5	2.5	2.5		7.5			10		25
		380V	1.5	2.5	2.5		7.5			15		30
		220V(240V)	2.5	5	5		10			25		50
	DC	250V	—	—	—		—			—		—
		125V	—	—	—		—			—		—
Connection			Clamp terminal	Clamp terminal	Clamp terminal		Clamp terminal			Clamp terminal		Clamp terminal
Optional accessories	Alarm switch	(AL)	—	○	○		○			○		○
	Auxiliary switch	(AX)	—	○	○		○			○		○
	Shunt trip	(SHT)	—	○	○		○			○		○
	Under-voltage trip	(UVT)	—	○	○		○			○		○
	Rotary handle	(EH)	—	●	●		●			●		●
	Terminal cover	(TC)	●	●	●		●			●		●
	Box lug	(TL)	●	●	●		●			●		●
Trip Unit			Hydraulic magnetic	Hydraulic magnetic	Hydraulic magnetic		Hydraulic magnetic			Hydraulic magnetic		Hydraulic magnetic
Tripping button			—	Equipped	Equipped		Equipped			Equipped		Equipped

Note
1. "●" which can be installed by client, "○" which have to be installed by manufacturer. "—" which is not available.
   Above accessories table is for 3P breaker.
2. Ics= 50% Icu
3. Adjustable thermal: 80%~100% In.

63						100							
BM63-SN			BM63-HN			BM100-FTD	BM100-MN		BM100-SN		BM100-HN		
10, 15, 16, 20, 25, 30, 32, 40, 50, 60, 63			10, 15, 16, 20, 25, 30, 32, 40, 50, 60, 63			15, 20, 30, 40, 50 60, 75, 100.	10, 15, 20, 30, 40, 50, 60, 75, 100.		10, 15, 20, 30, 40, 50, 60, 75, 100.		10, 15, 20, 30, 40, 50, 60, 75, 100.		
2	3	4	2	3	4	1	2	3	2	3	2	3	4
800			800			690	690		690		800		
—			—			—	—		250*	—	—		
500			500			415	500		500		500		
8			8			6	6		6		8		
50	75	100	50	75	100	25.4	50	75	50	75	60	90	120
130			130			130	130		130		155		
68			68			60	68		68		68		
90			90			91	90		90		90		
111			111			111	111		111		132		
25			25			—	25		25		30		
0.45	0.65	0.85	0.45	0.65	0.85	0.29	0.45	0.65	0.45	0.65	0.9	1.3	1.6
5			5			—	5		7.5		15		
7.5			10			—	7.5		10		25		
7.5			10			5	10		10		25		
7.5			15			5	10		15		30		
10			25			25	15		25		50		
—			—			—	—		10*	—	—		
—			—			—	—		15*	—	—		
Clamp terminal			Clamp terminal			Clamp terminal	Clamp terminal		Clamp terminal		Clamp terminal		
○			○			—	○		○		○		
○			○			—	○		○		○		
○			○			—	○		○		○		
○			○			—	○		○		○		
●			●			—	●		●		●		
●			●			—	●		●		●		
●			●			●	●		●		●		
Hydraulic magnetic			Hydraulic magnetic			Thermal magnetic	Hydraulic magnetic		Hydraulic magnetic		Hydraulic magnetic		
Equipped			Equipped			Equipped	Equipped		Equipped		Equipped		

Note 1.Breaking Capacity of BM100-FTD is 5kA at 380V/415V/440V
2.* DC application MCCB trip characteristic is different from AC type, please specify when place the order.

Molded Case Circuit Breaker

Frame size (AF) (Inm)			100										
Model			BM100-HS		BM100-BTD			BM100-STD			BM100-LTD		
Appearance													
Rated current In (A) at ambient temp. 40℃			40, 50, 63, 80, 100.		15, 16, 20, 25, 30, 32, 40, 50, 60, 63, 75, 80, 100			15, 16, 20, 25, 30, 32, 40, 50, 60, 63, 75, 80, 100			10,15,16,20,25,30,32,40, 50,60,63,70,75,80,100		
Number of poles (P)			3	4	2	3	4	2	3	4	2	3	4
Rated insulation voltage Ui (V)		AC	690		800			800			800		
		DC	—		—			—			—		
Rated operational voltage Ue (V AC)			500		690			690			690		
Uimp(kV)			8		8			8			8		
Dimensions	 (mm)	a	105	140	50	75	100	50	75	100	50	75	100
		b	165		130			130			130		
		c	86		68			68			68		
		ca	112		90			90			90		
		bb	126		111			111			111		
		aa	35		25			25			—	25	
Weight (kg)			2.1	2.6	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 Icu AC	500V(690V)	50		(5)			(5)			20(5)		
		440V	70		10			25			32		
		415V	85		10			25			36		
		380V	85		15			30			36		
		220V(240V)	125		25			50			85		
	DC	250V	—		—			—			—		
		125V	—		—			—			—		
Connection			Clamp terminal		Clamp terminal			Clamp terminal			Clamp terminal		
Optional accessories	Alarm switch	(AL)	○		●			●			●		
	Auxiliary switch	(AX)	○		●			●			●		
	Shunt trip	(SHT)	○		●			●			●		
	Under-voltage trip	(UVT)	—		●			●			●		
	Rotary handle	(EH)	●		●			●			●		
	Terminal cover	(TC)	●		●			●			●		
	Box lug	(TL)	●		●			●					
Trip Unit			Thermal magnetic		Thermal magnetic			Thermal magnetic			Thermal magnetic		
Tripping button			Equipped		Equipped			Equipped			Equipped		

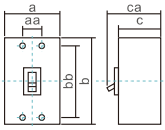
Note 1. "●" which can be installed by client, "○" which have to be installed by manufacturer. "—" which is not available.
Above accessories table is for 3P breaker.
2. Ics= 50% Icu
3. Adjustable thermal: 80%~100% In.

Molded Case Circuit Breaker

125														
BM125-SN			BM125-HN			BM125-LTD			BM125-HTA			BM125-RTA		
10, 15, 20, 30, 40, 50, 60, 75, 100, 125.			10, 15, 20, 30, 40, 50, 60, 75, 100, 125.			15, 16, 20, 25, 30, 32, 40, 50, 60, 63, 75, 80, 100, 125.			10,15,16,20,25,30,32,40, 50,60,63,70,75,80,100,125.			10,15,16,20,25,30,32,40, 50,60,63,70,75,80,100,125.		
2	3	4	2	3	4	2	3	4	2	3	4	2	3	4
800			800			800			800			800		
—			—			—			—			—		
500			500			690			690			690		
8			8			8			8			8		
60	90	120	60	90	120	50	75	100	90		120	90		120
155			155			130			155			155		
68			68			68			68			68		
90			90			90			90			90		
132			132			111			132			132		
30			30			25			30			30		
0	30	30	0	30	30	0.5	0.7	0.9	1	1.2	1.5	1	1.2	1.5
7.5			15			(5)			25(10)			25(10)		
15			25			32			50			50		
22			25			36			50			70		
22			30			36			50			70		
30			50			85			100			100		
—			—			—			—			—		
—			—			—			—			—		
Clamp terminal			Clamp terminal			Clamp terminal			Clamp terminal			Clamp terminal		
○			○			●			●			●		
○			○			●			●			●		
○			○			●			●			●		
—	○	○	—	○	○	●			●			●		
●			●			●			●			●		
●			●			●			●			●		
●			●			●								
Hydraulic magnetic			Hydraulic magnetic			Thermal magnetic			"Adjustable Thermal Fixed magnetic"			"Adjustable Thermal Fixed magnetic"		
Equipped			Equipped			Equipped			Equipped			Equipped		

Molded Case Circuit Breaker

80% ~ 100% Adj. (A)

Frame size (AF) (Inm)			160										
Model			BM160-SN			BM160-HN		BM160-HTA		BM160-RTA		BM160-HS	
Appearance													
Rated current In (A) at ambient temp. 40℃			125, 140, 160.			125, 140, 160.		40, 50, 60, 63, 70, 75, 80, 100, 125, 140, 150, 160		40, 50, 60, 63, 70, 75, 80, 100, 125, 140, 150, 160		125, 140, 160.	
Number of poles (P)			2	3	4	3	4	3	4	3	4	3	4
Rated insulation voltage Ui (V)		AC	800			690		800		800		690	
		DC	—			—		—		—		—	
Rated operational voltage Ue (V AC)			500			500		690		690		500	
Uimp(kV)			8			8		8		8		8	
Dimensions	 (mm)	a	105	105	140	105	140	105	140	105	140	105	140
		b	165			165		165		165		165	
		c	68			68		68		68		86	
		ca	92			92		92		92		112	
		bb	126			126		126		126		126	
		aa	35			35		35		35		35	
Weight (kg)			1.3	1.5	1.9	1.5	1.9	1.5	1.9	1.5	1.9	2.1	2.6
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 Icu AC	500V(690V)	15			20		25(10)		25(10)		50	
		440V	25			32		50		50		70	
		415V	25			36		50		70		85	
		380V	30			36		50		70		85	
		220V(240V)	50			85		100		100		125	
	DC	250V	—			—		—		—		—	
		125V	—			—		—		—		—	
Connection			Clamp terminal			Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal	
Optional accessories	Alarm switch	(AL)	●			●		●		●		○	
	Auxiliary switch	(AX)	●			●		●		●		○	
	Shunt trip	(SHT)	●			●		●		●		○	
	Under-voltage trip	(UVT)	●			●		●		●		—	
	Rotary handle	(EH)	●			●		●		●		●	
	Terminal cover	(TC)	●			●		●		●		●	
	Box lug	(TL)	●			●						●	
Trip Unit			Adj. thermal Fixed magnetic			Adj. thermal Fixed magnetic		Adj. thermal Fixed magnetic		Adj. thermal Fixed magnetic		Thermal magnetic	
Tripping button			Equipped			Equipped		Equipped		Equipped		Equipped	

Note * DC application MCCB trip characteristic is different from AC type, please specify when place the order.

80% ~ 100% Adj. (A)

250																		
BM250-CN			BM250-SN		BM250-HN		BM250-HTA		BM250-RTA		BM250-HS	
125, 150, 175, 200, 225, 250.			125, 150, 175, 200, 225, 250.		175, 200, 225, 250.		175, 200, 225, 250.		175, 200, 225, 250.		175, 200, 225, 250.	
2	3	4	3	4	3	4	3	4	3	4	3	4
690			800		690		800		800		690	
250*	—	—	—		—		—		—		—	
500			500		500		690		690		500	
8			8		8		8		8		8	
105	105	140	105	140	105	140	105	140	105	140	105	140
165			165		165		165		165		165	
68			68		68		68		68		86	
92			92		92		92		92		112	
126			126		126		126		126		126	
35			35		35		35		35		35	
1.3	1.5	1.9	1.5	1.9	1.5	1.9	1.5	1.9	1.5	1.9	2.1	2.6
7.5			15		20		25(10)		25(10)		50	
15			25		32		50		50		70	
15			25		36		50		70		85	
22			30		36		50		70		85	
30			50		85		100		100		125	
10*	—	—	—		—		—		—		—	
15*	—	—	—		—		—		—		—	
Clamp terminal			Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal	
●			●		●		●		●		○	
●			●		●		●		●		○	
●			●		●		●		●		○	
●			●		●		●		●		—	
●			●		●		●		●		●	
●			●		●		●		●		●	
●			●		●						●	
Adj. thermal Fixed magnetic			Adj. thermal Fixed magnetic		Adj. thermal Fixed magnetic		Adj. thermal Fixed magnetic		Adj. thermal Fixed magnetic		Thermal magnetic	
Equipped			Equipped		Equipped		Equipped		Equipped		Equipped	

Note * DC application MCCB trip characteristic is different from AC type, please specify when place the order.

Molded Case Circuit Breaker

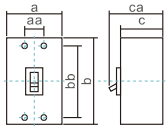
Frame size (AF) (Inm)			400										
Model			BM400-CN			BM400-SN		BM400-HN		BM400-RN		BM400-UN	
Appearance													
Rated current In (A) at ambient temp. 40℃			250, 300, 350, 400.			250, 300, 350, 400.		250, 300, 350, 400.		250, 300, 350, 400.		250, 300, 350, 400.	
Number of poles (P)			2	3	4	3	4	3	4	3	4	3	4
Rated insulation voltage Ui (V)		AC	690			690		690		690		690	
		DC	250*	—	—	—		—		—		—	
Rated operational voltage Ue (V AC)			500			500		500		500		500	
Uimp(kV)			8			8		8		8		8	
Dimensions		a	140	140	185	140	185	140	185	140	185	140	185
		b	257			257		257		257		257	
		c	103			103		103		103		103	
		ca	155			155		155		155		155	
	(mm)	bb	194			194		194		194		194	
		aa	44			44		44		44		44	
Weight (kg)			5.0	5.7	7.5	5.7	7.5	5.7	7.5	5.7	7.5	5.7	7.5
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 Icu AC	500V(690V)	14			20		25		42		65	
		440V	22			30		42		55		85	
		415V	25			35		50		70		85	
		380V	25			35		50		70		85	
		220V(240V)	35			50		85		100		125	
	DC	250V	10*	—	—	—		—		—		—	
		125V	15*	—	—	—		—		—		—	
Connection			Busbar			Busbar		Busbar		Busbar		Busbar	
Optional accessories	Alarm switch	(AL)	●			●		●		●		●	
	Auxiliary switch	(AX)	●			●		●		●		●	
	Shunt trip	(SHT)	●			●		●		●		●	
	Under-voltage trip	(UVT)	●			●		●		●		●	
	Rotary handle	(EH)	●			●		●		●		●	
	Terminal cover	(TC)	●			●		●		●		●	
	Box lug	(TL)	●			●		●		●		●	
Trip Unit			Thermal magnetic			Thermal magnetic		Thermal magnetic		Thermal magnetic		Thermal magnetic	
Tripping button			Equipped			Equipped		Equipped		Equipped		Equipped	

Note
1. "●" which can be installed by client, "○" which have to be installed by manufacturer. "—" which is not available.
   Above accessories table is for 3P breaker.
2. Ics= 50% Icu
3. Adjustable thermal: 80%~100% In.
4. * DC application MCCB trip characteristic is different from AC type, please specify when place the order.

630															
BM630s-STD		BM630s-LTD		BM630s-HTD		BM630s-RTD		BM630s-STA		BM630s-LTA		BM630s-HTA		BM630s-RTA	
400, 500, 600, 630.		400, 500, 600, 630.		400, 500, 600, 630.		400, 500, 600, 630.		400, 500, 600, 630.		400, 500, 600, 630.		400, 500, 600, 630.		400, 500, 600, 630.	
3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4
1000		1000		1000		1000		1000		1000		1000		1000	
—		—		—		—		—		—		—		—	
690		690		690		690		690		690		690		690	
8		8		8		8		8		8		8		8	
140	185	140	185	140	185	140	185	140	185	140	185	140	185	140	185
257		257		257		257		257		257		257		257	
103		103		103		103		103		103		103		103	
155		155		155		155		155		155		155		155	
194		194		194		194		194		194		194		194	
44		44		44		44		44		44		44		44	
5.7	7	5.7	7	5.7	7	5.7	7	5.7	7	5.7	7	5.7	7	5.7	7
14(10)		20(10)		25(10)		42(15)		14(10)		20(10)		25(10)		42(15)	
25		36		50		70		25		36		50		70	
25		36		50		70		25		36		50		70	
25		36		50		70		25		36		50		70	
36		65		85		100		36		65		85		100	
—		—		—		—		—		—		—		—	
—		—		—		—		—		—		—		—	
Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
Thermal magnetic		Thermal magnetic		Thermal magnetic		Thermal magnetic		"Adjustable Thermal Fixed magnetic"		"Adjustable Thermal Fixed magnetic"		"Adjustable Thermal Fixed magnetic"		"Adjustable Thermal Fixed magnetic"	
Equipped		Equipped		Equipped		Equipped		Equipped		Equipped		Equipped		Equipped	

Note * DC application MCCB trip characteristic is different from AC type, please specify when place the order.

Molded Case Circuit Breaker

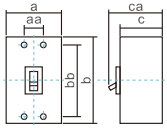
Frame size (AF) (Inm)			630									
Model			BM630-CN		BM630-SN		BM630-HN		BM630-RN		BM630-UN	
Appearance												
Rated current In (A) at ambient temp. 40℃			500, 600, 630.		500, 600, 630.		500, 630.		500, 630.		500, 630.	
Number of poles (P)			3	4	3	4	3	4	3	4	3	4
Rated insulation voltage Ui (V)		AC	690		690		690		690		690	
		DC	250*		250*		250*	—	—		—	
Rated operational voltage Ue (V AC)			500		500		500		500		500	
Uimp(kV)			8		8		8		8		8	
Dimensions	 (mm)	a	210	280	210	280	210	280	210	280	210	280
		b	275		275		275		275		275	
		c	103		103		103		103		103	
		ca	155		155		155		155		155	
		bb	243		243		243		243		243	
		aa	70		70		70		70		70	
Weight (kg)			10	13	10	13	10	13	10	13	10	13
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 Icu AC	500V(690V)	14		20		25		42		65	
		440V	22		30		50		70		85	
		415V	25		35		50		70		85	
		380V	25		35		50		70		100	
		220V(240V)	35		50		85		100		125	
	DC	250V	10*	—	20*	—	40*	—	—		—	
		125V	—		—		—		—		—	
Connection			Busbar		Busbar		Busbar		Busbar		Busbar	
Optional accessories	Alarm switch	(AL)	●		●		●		●		●	
	Auxiliary switch	(AX)	●		●		●		●		●	
	Shunt trip	(SHT)	●		●		●		●		●	
	Under-voltage trip	(UVT)	●		●		●		●		●	
	Rotary handle	(EH)	●		●		●		●		●	
	Terminal cover	(TC)	●		●		●		●		●	
	Box lug	(TL)	●		●		●		●		●	
Trip Unit			Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic	
Tripping button			Equipped		Equipped		Equipped		Equipped		Equipped	

Note 1 "●" which can be installed by client, "○" which have to be installed by manufacturer. "—" which is not available.
Above accessories table is for 3P breaker.
2. Ics= 50% Icu
3. * DC application MCCB trip characteristic is different from AC type, please specify when place the order.

800								1000	1200	1600
BM800-CN		BM800-SN		BM800-HN		BM800-RN		BM1000-HS	BM1200-HS	BM1600-HS
700, 800.		700, 800.		700, 800.		700, 800.		1000	1200	1400, 1600.
3	4	3	4	3	4	3	4	3	3	3
690		690		690		690		1000	1000	1000
250*	—	250*	—	—		—		—	—	—
500		500		500		500		500	500	500
8		8		8		8		8	8	8
210	280	210	280	210	280	210	280	210	210	210
275		275		275		275		406	406	406
103		103		103		103		140	140	140
155		155		155		155		190	190	190
243		243		243		243		375	375	375
70		70		70		70		70	70	70
10.5	13.5	10.5	13.5	10.5	13.5	10.5	13.5	23	23	23
20		25		42		65		65	65	65
30		50		70		85		85	85	85
35		50		70		85		85	85	85
35		50		70		100		100	100	100
50		85		100		125		130	130	130
20*	—	40*	—	—		—		—	—	—
—		—		—		—		—	—	—
Busbar		Busbar		Busbar		Busbar		Busbar	Busbar	Busbar
●		●		●		●		○	○	○
●		●		●		●		○	○	○
●		●		●		●		○	○	○
●		●		●		●		○	○	○
●		●		●		●		—	—	—
●		●		●		●		—	—	—
●		●		●		●		●	●	●
Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic	Fixed thermal Adj. magnetic	Fixed thermal Adj. magnetic
Equipped		Equipped		Equipped		Equipped		Equipped	Equipped	Equipped

Note * DC application MCCB trip characteristic is different from AC type, please specify when place the order.

Molded Case Circuit Breaker (BMA Series)

Frame size (AF) (Inm)			125			160			250			400		
Model			BMA 125-STA	BMA 125-LTA	BMA 125-HTA	BMA 160-STA	BMA 160-LTA	BMA 160-HTA	BMA 250-STA	BMA 250-LTA	BMA 250-HTA	BMA 400-LTA	BMA 400-HTA	BMA 400-RTA
Appearance														
Rated current In (A) at ambient temp. 40℃			15,16,20,25,30,32,40, 50,60,63,75,80,100,125A			40,50,60,63,70,75,80, 100,125,140,150,160A			175,200,225,250A			250, 300, 350, 400A		
Number of poles (P)			3	4		3	4		3	4		3	4	
Rated insulation voltage Ui (V)		AC	800			800			800			800		
Rated operational voltage Ue(V AC)			690			690			690			690		
Uimp(kV)			8			8			8			8		
Dimensions	 (mm)	a	90	120		105	140		105	140		140	185	
		b	155	155		165	165		165	165		257	257	
		c	68	68		68	68		68	68		103	103	
		ca	92	92		92	92		92	92		155	155	
		bb	132	132		126	126		126	126		194	194	
		aa	30	30		35	35		35	35		44	44	
Weight (kg)			0.7	0.9		1.5	1.9		1.5	1.9		5.7	7.5	
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 Icu AC	690V	8 kA	8 kA	10 kA	8 kA	8 kA	10 kA	8 kA	8 kA	10 kA	8 kA	10 kA	15 kA
		415V	25 kA	36 kA	50 kA	25 kA	36 kA	50 kA	25 kA	36 kA	50 kA	36 kA	50 kA	70 kA
		380V	25 kA	36 kA	50 kA	25 kA	36 kA	50 kA	25 kA	36 kA	50 kA	36 kA	50 kA	70 kA
		220V(240V)	85 kA	85 kA	100 kA	85 kA	85 kA	100 kA	85 kA	85 kA	100 kA	70 kA	85 kA	100 kA
Connection			Clamp terminal	Clamp terminal	Clamp terminal	Clamp terminal	Clamp terminal	Clamp terminal	Clamp terminal	Clamp terminal	Clamp terminal	Busbar	Busbar	Busbar
Optional accessories	Alarm switch	(AL)	●	●	●	●	●	●	●	●	●	●	●	●
	Auxiliary switch	(AX)	●	●	●	●	●	●	●	●	●	●	●	●
	Shunt trip	(SHT)	●	●	●	●	●	●	●	●	●	●	●	●
	Under-voltage trip	(UVT)	●	●	●	●	●	●	●	●	●	●	●	●
	Rotary handle	(EH)	●	●	●	●	●	●	●	●	●	●	●	●
	Terminal cover	(TC)	●	●	●	●	●	●	●	●	●	●	●	●
Trip Unit			Adjustable Thermal Fixed Magnetic			Adjustable Thermal Fixed Magnetic			Adjustable Thermal Fixed Magnetic			Adjustable Thermal Fixed Magnetic		
Tripping button			Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped

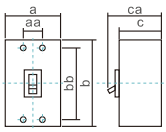
Note 1. Ics=100%Icu

630															
BMA630s-STD		BMA630s-LTD		BMA630s-HTD		BMA630s-RTD		BMA630s-STA		BMA630s-LTA		BMA630s-HTA		BMA630s-RTA	
400, 500, 600, 630A		400, 500, 600, 630A		400, 500, 600, 630A		400, 500, 600, 630A		400, 500, 600, 630A		400, 500, 600, 630A		400, 500, 600, 630A		400, 500, 600, 630A	
3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4
1000		1000		1000		1000		1000		1000		1000		1000	
690		690		690		690		690		690		690		690	
8		8		8		8		8		8		8		8	
140	185	140	185	140	185	140	185	140	185	140	185	140	185	140	185
257		257		257		257		257		257		257		257	
103		103		103		103		103		103		103		103	
155		155		155		155		155		155		155		155	
194		194		194		194		194		194		194		194	
44		44		44		44		44		44		44		44	
5.7	7	5.7	7	5.7	7	5.7	7	5.7	7	5.7	7	5.7	7	5.7	7
10 kA		10 kA		10 kA		15 kA		10 kA		10 kA		10 kA		15 kA	
25 kA		36 kA		50 kA		70 kA		25 kA		36 kA		50 kA		70 kA	
25 kA		36 kA		50 kA		70 kA		25 kA		36 kA		50 kA		70 kA	
36 kA		65 kA		85 kA		100 kA		36 kA		65 kA		85 kA		100 kA	
Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
●		●		●		●		●		●		●		●	
Thermal magnetic		Thermal magnetic		Thermal magnetic		Thermal magnetic		Adjustable Thermal Fixed magnetic		Adjustable Thermal Fixed magnetic		Adjustable Thermal Fixed magnetic		Adjustable Thermal Fixed magnetic	
Equipped		Equipped		Equipped		Equipped		Equipped		Equipped		Equipped		Equipped	

Molded Case Circuit Breaker (BMA Series)

Frame size (AF) (Inm)	630		630		630		800		800		800	
Model	BMA 630-HTD	BMA 630-RTD	BMA 630-HTA	BMA 630-RTA	BMA 630-HED	BMA 630-RED	BMA 800-HTD	BMA 800-RTD	BMA 800-HTA	BMA 800-RTA	BMA 800-HED	BMA 800-RED
Appearance												
Rated current In (A) at ambient temp. 40℃	500, 600, 630A		500, 600, 630A		630A		700, 800A		700, 800A		800A	
Number of poles (P)	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4
Rated insulation voltage Ui (V) AC	1000		1000		1000		1000		1000		1000	
Rated operational voltage Ue(V AC)	690		690		690		690		690		690	
Uimp(kV)	8		8		8		8		8		8	
Dimensions (mm) a	210 280	210 280	210 280	210 280	210 280	210 280	210 280	210 280	210 280	210 280	210 280	210 280
Dimensions (mm) b	275		275		275		275		275		275	
Dimensions (mm) c	103		103		103		103		103		103	
Dimensions (mm) ca	155		155		155		155		155		155	
Dimensions (mm) bb	243		243		243		243		243		243	
Dimensions (mm) aa	70		70		70		70		70		70	
Weight (kg)	10 13	10 13	10 13	10 13	11.5 15.3	11.5 15.3	10 13	10 13	10 13	10 13	12 15.8	12 15.8
Rated breaking capacity (kA) IEC 60947-2 EN 60947-2 Icu AC 690V	10kA	15kA	10kA	15kA	10kA	15kA	10kA	15kA	10kA	15kA	10kA	15kA
Rated breaking capacity (kA) IEC 60947-2 EN 60947-2 Icu AC 415V	50kA	70kA	50kA	70kA	50kA	70kA	50kA	70kA	50kA	70kA	50kA	70kA
Rated breaking capacity (kA) IEC 60947-2 EN 60947-2 Icu AC 380V	50kA	70kA	50kA	70kA	50kA	70kA	50kA	70kA	50kA	70kA	50kA	70kA
Rated breaking capacity (kA) IEC 60947-2 EN 60947-2 Icu AC 220V(240V)	85kA	100kA	85kA	100kA	85kA	100kA	85kA	100kA	85kA	100kA	85kA	100kA
Connection	Busbar	Busbar	Busbar	Busbar	Busbar	Busbar	Busbar	Busbar	Busbar	Busbar	Busbar	Busbar
Optional accessories: Alarm switch (AL)	●	●	●	●	●	●	●	●	●	●	●	●
Optional accessories: Auxiliary switch (AX)	●	●	●	●	●	●	●	●	●	●	●	●
Optional accessories: Shunt trip (SHT)	●	●	●	●	●	●	●	●	●	●	●	●
Optional accessories: Under-voltage trip (UVT)	●	●	●	●	●	●	●	●	●	●	●	●
Optional accessories: Rotary handle (EH)	●	●	●	●	●	●	●	●	●	●	●	●
Optional accessories: Terminal cover (TC)	●	●	●	●	●	●	●	●	●	●	●	●
Trip Unit	Fixed Thermal Adjustable Magnetic		Adjustable Thermal Fixed magnetic		Electronic		Fixed Thermal Adjustable Magnetic		Adjustable Thermal Fixed magnetic		Electronic	
Tripping button	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped

Note 1. Ics=100%Icu

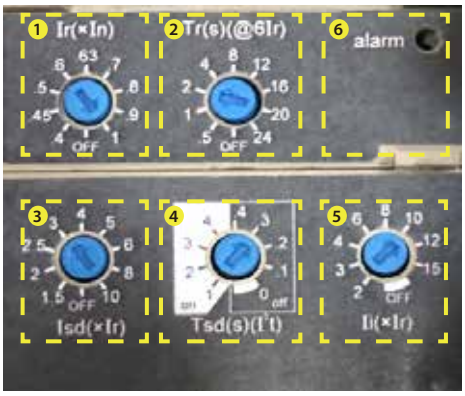
Frame size (AF) (Inm)			1000				1250				1600			
Model			BMA 1000-HED		BMA 1000-RED		BMA 1250-HED		BMA 1250-RED		BMA 1600-HED		BMA 1600-RED	
Appearance														
Rated current In (A) at ambient temp. 40℃			1000A				1250A				1600A			
Number of poles (P)			3	4	3	4	3	4	3	4	3	4	3	4
Rated insulation voltage Ui (V)		AC	1000				1000				1000			
Rated operationa voltage Ue(V AC)			690				690				690			
Uimp(kV)			8				8				8			
Dimensions	 (mm)	a	210	280	210	280	210	280	210	280	210	280	210	280
		b	327				327				327			
		c	141				141				141			
		ca	205				205				205			
		bb	200				200				200			
		aa	199	339	199	339	199	339	199	339	199	339	199	339
Weight (kg)			13.3	17.2	13.3	17.2	13.3	17.2	13.3	17.2	13.3	17.2	13.3	17.2
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 Icu AC	690V	35		45		35		45		35		45	
		415V	50		70		50		70		50		70	
		380V	50		70		50		70		50		70	
		220V(240V)	—	—	—	—	—	—	—	—	—	—	—	—
Accessory			AL/AX/SHT/ Rotary handle				AL/AX/SHT/ Rotary handle				AL/AX/SHT/ Rotary handle			

Condition:

1. Operation Temp.: -25°C ~ +70 °C
2. Storage Temp.: -40 °C ~ 85 °C
3. Altitude: ≦2000m
4. Pollution class: 3
5. Category: B
6. Relative humidity: ≦ 90%

Neutral Protection:

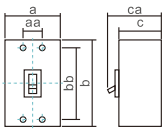
4P4D: 100% In 3D+N/2: 50% In 4P3D: No protection



1. Overload Setting Knob (Ir=0.4/0.45/0.5/0.6/0.63/0.7/0.8/0.9/1/OFF)
2. Overload Tripping Time Setting Knob (Tr=0.5/1/2/4/8/12/16/20/24/OFF)
3. (Isd=1.5/2/2.5/3/4/5/6/8/10/OFF)
4. (I2t on: Tsd=0.1/0.2/0.3/0.4; I2t off: Tsd=0/0.1/0.2/0.3/0.4)
5. Instantaneous Setting Knob (Ii=2/3/4/6/8/10/12/15/OFF)
6. Alarm indicator: Overload (red light)

Protection												
Long-time												
Current setting(A)		Ir=In×	0.4	0.45	0.5	0.6	0.63	0.7	0.8	0.9	1	OFF
Time Delay (s) Accuracy: ±20%		Tr (s)	0.5	1	2	4	8	12	16	20	24	OFF
		1.5×Ir	8	16	32	64	128	192	256	320	384	
		6×Ir	0.5	1	2	4	8	12	16	20	24	
		7.2×Ir	0.35	0.7	1.39	2.78	5.56	8.3	11.1	13.9	16.7	
Short-time												
Current setting(A)	Accuracy: ±10%	Isd=Ir×	1.5	2	2.5	3	4	5	6	8	10	OFF
Time Delay Tsd(s)		I²t off	0	0.1	0.2	0.3	0.4					
		I²t on		0.1	0.2	0.3	0.4					
Time Delay (ms) at 10×Ir (I2t off or on)	Tsd(Max. resettable time)		20	80	140	230	350					
	Tsd(Max. trip time)		80	140	200	320	500					
Instantaneous												
Current setting(A)	Accuracy: ±10%	Ii=Ir×	2	3	4	6	8	10	12	15	OFF	
Tripping time		60 ±20 ms										

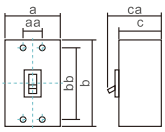
Earth Leakage Circuit Breaker

Frame size (AF) (Inm)			50		100			
Model			BL50-SN		BL100-SN		BL100-HN	
Appearance								
Rated current In (A) at ambient temp. 40°C			15, 20, 30, 40, 50.		15, 20, 30, 40, 50, 60, 75, 100.		15, 20, 30, 40, 50, 60, 75, 100.	
Phase & wire (P)			1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W
Number of poles (P)			3	4	3	4	3	4
Rated voltage (VAC)			230, 400.		230, 400.		230, 400.	
High speed	Rated current sensitivity I△n AC type (mA)		30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)		30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)		30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)	
High speed	Rated current sensitivity I△n A type (mA)		30-100-300-500mA(adj)		30-100-300-500mA(adj)		30-100-300-500mA(adj)	
High speed	2I△n operating time (S)		0.1		0.1		0.1	
High speed	5I△n operating time (S)		0.04		0.04		0.04	
Delay	Rated current sensitivity I△n AC type (mA)		100-300-500mA(adj)		100-300-500mA(adj)		100-300-500mA(adj)	
Delay	Rated current sensitivity I△n A type (mA)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)	
Delay	2I△n operating time (S)		0.1- 0.4- 0.8- 2.0 adjustable		0.1- 0.4- 0.8- 2.0 adjustable		0.1- 0.4- 0.8- 2.0 adjustable	
Delay	2I△n max. non-operating time (S)		0, 0.2, 0.4, 1.0		0, 0.2, 0.4, 1.0		0, 0.2, 0.4, 1.0	
Delay	Leakage detection mode		Mechanical push-button		Mechanical push-button		Mechanical push-button	
Dimensions	 (mm)	a	75	100	90	120	90	120
Dimensions		b	130		155		155	
Dimensions		c	68		68		68	
Dimensions		ca	90		90		90	
Dimensions		bb	111		132		132	
Dimensions		aa	25		30		30	
Weight (kg)			0.7	0.9	1.5	1.8	1.5	1.8
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 CNS 14816-2 Icu	AC 440V	7.5		10		25	
Rated breaking capacity (kA)		AC 380V	7.5		15		30	
Rated breaking capacity (kA)		AC 220V	10		25		50	
Connection			Clamp terminal		Clamp terminal		Clamp terminal	
Optional accessories	Alarm switch	(AL)	○		○		○	
Optional accessories	Auxiliary switch	(AX)	○		○		○	
Optional accessories	Shunt trip	(SHT)	○		○		○	
Optional accessories	Under-voltage trip	(UVT)	—		○		○	
Optional accessories	Rptary handle	(EH)	●		●		●	
Optional accessories	Terminal cover	(TC)	●		●		●	
Optional accessories	Leakage alarm module	(AM)	—		○		○	
Optional accessories	Box lug	(TL)	●		●		●	
Trip Unit			Hydraulic magnetic		Hydraulic magnetic		Hydraulic magnetic	
Tripping button			Equipped		Equipped		Equipped	

Note
1. "●" which can be installed by client, "○" which have to be installed by manufacturer. "—" which is not available.
2. Specify defult rated current sensitivity when place the order.
3. Ics= 50% Icu
4. Adjustable thermal: 80%~100% In.
5. Specify, when order delay type rated current sensitivity 30-100-500mA.

80% ~ 100% Adj. (A)									
160		250		400					
BL160-SN		BL250-SN		BL400-SN		BL400-HN		BL400-RN	
125, 140, 160.		175, 200, 225, 250.		250, 300, 350, 400.		250, 300, 350, 400.		250, 300, 350, 400.	
1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W
3	4	3	4	3	4	3	4	3	4
230, 400.		230, 400.		230, 400.		230, 400.		230, 400.	
30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)		30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)		30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)		30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)		30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)	
30-100-300-500mA(adj)		30-100-300-500mA(adj)		30-100-300-500mA(adj)		30-100-300-500mA(adj)		30-100-300-500mA(adj)	
0.1		0.1		0.1		0.1		0.1	
0.04		0.04		0.04		0.04		0.04	
100-300-500mA(adj)		100-300-500mA(adj)		100-300-500mA(adj)		100-300-500mA(adj)		100-300-500mA(adj)	
100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)	
0.1- 0.4- 0.8- 2.0 adjustable		0.1- 0.4- 0.8- 2.0 adjustable		0.1- 0.4- 0.8- 2.0 adjustable		0.1- 0.4- 0.8- 2.0 adjustable		0.45- 1.0- 2.0 adjustable	
0, 0.2, 0.4, 1.0		0, 0.2, 0.4, 1.0		0, 0.2, 0.4, 1.0		0, 0.2, 0.4, 1.0		0.1, 0.5, 1.0	
Mechanical push-button		Mechanical push-button		Mechanical push-button		Mechanical push-button		Mechanical push-button	
105	140	105	140	140	185	140	185	140	185
165		165		257		257		257	
68		68		103		103		103	
92		92		155		155		155	
126		126		194		194		194	
35		35		44		44		44	
1.7	2.3	1.7	2.3	6.6	8.4	6.6	8.4	5.7	7.5
25		25		30		42		55	
30		30		35		50		70	
50		50		50		85		100	
Clamp terminal		Clamp terminal		Busbar		Busbar		Busbar	
●		●		●		●		●	
●		●		●		●		●	
●		●		●		●		●	
●		●		●		●		●	
●		●		●		●		●	
●		●		●		●		●	
○		○		○		○		○	
●		●		●		●		●	
Adj. thermal Fixed magnetic		Adj. thermal Fixed magnetic		Thermal magnetic		Thermal magnetic		Thermal magnetic	
Equipped		Equipped		Equipped		Equipped		Equipped	

Earth Leakage Circuit Breaker

Frame size (AF) (Inm)			400		630			
Model			BL400-UN		BL630-HN		BL630-RN	
Appearance								
Rated current In (A) at ambient temp. 40°C			250, 300, 350, 400.		500, 630.		500, 630.	
Phase & wire (P)			1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W
Number of poles (P)			3	4	3	4	3	4
Rated voltage (VAC)			230, 400.		230, 400.		230, 400.	
High speed	Rated current sensitivity I△n AC type (mA)		30-100-500mA (adj) *15mA, *30mA, *100mA *100-300-500mA (adj)		100-300-500mA (adj)		100-300-500mA (adj)	
	Rated current sensitivity I△n A type (mA)		30-100-300-500mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)	
	2I△n operating time (S)		0.1		0.1		0.1	
	5I△n operating time (S)		0.04		0.04		0.04	
Delay	Rated current sensitivity I△n AC type (mA)		100-300-500mA(adj)		100-300-500mA(adj)		100-300-500mA(adj)	
	Rated current sensitivity I△n A type (mA)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)	
	2I△n operating time (S)		0.45- 1.0- 2.0 adjustable		0.45- 1.0- 2.0 adjustable		0.45- 1.0- 2.0 adjustable	
	2I△n max. non-operating time (S)		0.1, 0.5, 1.0		0.1, 0.5, 1.0		0.1, 0.5, 1.0	
	Leakage detection mode		Mechanical push-button		Mechanical push-button		Mechanical push-button	
Dimensions	 (mm)	a	140	185	210	280	210	280
		b	257		257		257	
		c	103		103		103	
		ca	155		155		155	
		bb	194		243		243	
		aa	44		70		70	
Weight (kg)			5.7	7.5	10.0	13.0	10.0	13.0
Rated breaking capacity (kA)	IEC 60947-2 EN 60947-2 CNS 14816-2 Icu	AC 440V	85		50		70	
		AC 380V	85		50		70	
		AC 220V	125		85		100	
Connection			Busbar		Busbar		Busbar	
Optional accessories	Alarm switch	(AL)	●		●		●	
	Auxiliary switch	(AX)	●		●		●	
	Shunt trip	(SHT)	●		●		●	
	Under-voltage trip	(UVT)	●		●		●	
	Rotary handle	(EH)	●		●		●	
	Terminal cover	(TC)	●		●		●	
	Leakage alarm module	(AM)	○		○		○	
	Box lug	(TL)	●		●		●	
Trip Unit			Thermal magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic	
Tripping button			Equipped		Equipped		Equipped	

Note
1. "●" which can be installed by client, "○" which have to be installed by manufacturer. "—" which is not available.
2. Specify defult rated current sensitivity when place the order.
3. Ics= 50% Icu
4. Adjustable thermal: 80%~100% In.
5. Specify, when order delay type rated current sensitivity 30-100-500mA.

630		800					
BL630-UN		BL800-SN		BL800-HN		BL800-RN	
500, 630.		700, 800.		700, 800.		700, 800.	
1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W	1ø2W, 3ø3W.	3ø4W
3	4	3	4	3	4	3	4
230, 400.		230, 400.		230, 400.		230, 400.	
100-300-500mA (adj)		100-300-500mA (adj)		100-300-500mA (adj)		100-300-500mA (adj)	
100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)	
0.1		0.1		0.1		0.1	
0.04		0.04		0.04		0.04	
100-300-500mA(adj)		100-300-500mA(adj)		100-300-500mA(adj)		100-300-500mA(adj)	
100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)		100-300-500-1000mA(adj)	
0.45- 1.0- 2.0 adjustable		0.45- 1.0- 2.0 adjustable		0.45- 1.0- 2.0 adjustable		0.45- 1.0- 2.0 adjustable	
0.1, 0.5, 1.0		0.1, 0.5, 1.0		0.1, 0.5, 1.0		0.1, 0.5, 1.0	
Mechanical push-button		Mechanical push-button		Mechanical push-button		Mechanical push-button	
210	280	210	280	210	280	210	280
257		257		257		257	
103		103		103		103	
155		155		155		155	
243		243		243		243	
70		70		70		70	
10.0	13.0	10.5	13.5	10.5	13.5	10.5	13.5
85		50		70		85	
100		50		70		100	
125		85		100		125	
Busbar		Busbar		Busbar		Busbar	
●		●		●		●	
●		●		●		●	
●		●		●		●	
●		●		●		●	
●		●		●		●	
●		●		●		●	
○		○		○		○	
●		●		●		●	
Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic		Fixed thermal Adj. magnetic	
Equipped		Equipped		Equipped		Equipped	

Optional Accessories Installation Table

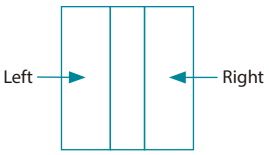
- **AL: Alarm Switch / AX: Auxiliary Switch / SHT: Shunt Trip / UVT: Under Voltage Trip**

Model	Poles	AL	AX	SHT or UVT	AL+AX	AL+ SHT or UVT	AX+ SHT or UVT	AL+AX+ SHT or UVT
BM30-SN BM50-CN BM60-SN/HN BM63-SN/HN BM100-SN/MN	3P	● ●	○ ○	▮ ▮	● ○	● ▮	○ ▮	—
BL50-SN	3P 4P	●	○	▮ (#1.)	—	—	—	—
BM60-HBN BM100-HN BM125-SN/HN	3P 4P	● ●	○ ○	▮ ▮ (3P) ▮ (4P)	● ○	● ▮ (3P) ● ▮ (4P)	○ ▮ (3P) ○ ▮ (4P)	—
BL100-SN BL100-HN	3P 4P	●	○	▮ No UVT for 3P	—	● ▮ (#2.)	○ ▮ (#2.)	—
BM100-HS BM160-HS BM250-HS	3P 4P	● ●	○ ○	▮ ▮ (#1.)	● ○	● ▮ (#1.)	○ ▮ (#1.)	—
BM100-BTD/STD/LTD BM125-LTD/HTA/RTA BM160-SN/HN/HTA/RTA BM250-SN/HN/HTA/RTA BMA125-STA/LTA/HTA BMA160-STA/LTA/HTA BMA250-STA/LTA/HTA	3P 4P	● ●	○ ○	▮ ▮	● ○	● ▮	○ ▮	● ○ ▮
BL160-SN BL250-SN/ CN	3P 4P	●	○	▮	—	—	—	—
BM400-SN/HN/CN/RN/UN BMA400-LTA/HTA/RTA BM630s-STD/LTD/HTD/RTD BM630s-STA/LTA/HTA/RTA BMA630s-STD/LTD/HTD/RTD BMA630s-STA/LTA/HTA/RTA	3P 4P	● ●	○ ○ ○ ○ ○ ○	▮	● ● ○ ○ ○ ○ AX can be installed in AL position	● ● ▮	○ ○ ○ ▮	● ● ○ ▮
BL400-SN/HN/RN/UN	3P 4P	● ●	○ ○ ○	▮	● ● ○ AX can be installed in AL position	● ▮	○ ▮	—
BM630-SN/HN/CN/RN/UN BM800-CN/SN/HN/RN BMA630-HTD/RTD/HTA/ RTA/HED/RED BMA800-HTD/RTD/HTA/ RTA/HED/RED	3P 4P	● ● ●	○ ○ ○ ○ ○ ○ ○ ○	▮	● ● ● ○ ○ ○ ○ ○ AX can be installed in AL position	● ● ● ▮	○ ○ ○ ○ ○ ▮	● ● ● ○ ○ ○ ▮ AX can be installed in AL position
BL630-HN/RN/UN BL800-SN/HN/RN	3P 4P	● ● ●	○ ○ ○ ○	▮	● ● ● ○	● ▮	○ ○ ▮	● ○ ▮
BM1000-HS BM1200-HS BM1600-HS	3P	●	○	▮	—	● ▮	○ ▮	—

2P, 125Af and below : Accessories are installed on the right side.

Note:
1. Standard: AL and AX are installed on left side, SHT and UVT are installed on right side.
2. SHT is equipped with coil anti-burn switch.
3. BL series can not do right side installation.
4. UVT of BM30-SN~BM100-HN can not install on its left side.
5. #1 means have no UVT.
6. #2 means only can apply to 4P breakers.

● : AL
○ : AX
▮ : SHT or UVT



Optional Accessories | Application Table

Rotary Handle

TYPE	Poles	Model
EH-100N	3P、4P	BM30-SN, BM50-CN, BM60-SN/HN, BM63-SN/HN, BM100-SN/MN, BL50-SN
EH-100T	3P、4P	BM100-BTD/STD
EH-100L	3P、4P	BM100-LTD, BM125-LTD
EH-125T	2P、3P、4P	BM125-HTA/RTA
EH-125N	3P、4P	BM60-HBN, BM100-HN, BM125-SN/HN, BL100-SN/HN, BMA125-STA/LTA/HTA
EH-250N	3P、4P	BM160-SN*/HN, BM250-CN*/SN/HN, BL160-SN, BL250-SN
EH-250T	3P、4P	BM160-HTA/RTA, BMA160-STA/LTA/HTA, BM250-HTA/RTA, BMA250-STA/LTA/HTA
EH-400N	3P、4P	BM400-CN*/SN/HN/RN/UN, BL400-SN/HN/RN/UN, BMA400-LTA/HTA/RTA BM630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA, BMA630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA
EH-800N	3P、4P	BM630-SN/HN/RN/UN, BM800-CN/SN/HN/RN, BL630-HN/RN/UN, BL800-SN/HN/RN, BMA630-HTD/RTD/HTA/RTA/HED/RED, BMA800-HTD/RTD/HTA/RTA/HED/RED
EH-250H	3P、4P	BM100-HS, BM160-HS, BM250-HS

Note：indicates the value is can applied to 2P model.

Extended Rotary Handle

TYPE	Poles	Model
MA-100N	3P、4P	BM30-SN, BM50-CN, BM60-SN/HN, BM63-SN/HN, BM100-SN/MN, BL50-SN
MA-100T	3P、4P	BM100-BTD/STD
MA-100L	3P、4P	BM100-LTD, BM125-LTD
MA-125T	2P、3P、4P	BM125-HTA/RTA, BMA125-STA/LTA
MA-125N	3P、4P	BM60-HBN, BM100-HN, BM125-SN/HN, BL100-SN/HN, BMA125-STA/LTA/HTA
MA-250N	3P、4P	BM160-SN/HN, BM250-SN/HN, BMA125-STA/LTA/HTA, BMA250-STA/LTA/HTA, BL160-SN, BL250-SN
MA-250T	3P、4P	BM160-HTA/RTA, BMA160-STA/LTA/HTA, BM250-HTA/RTA, BMA250-STA/LTA/HTA
MA-400N	3P、4P	BM400-SN/HN/RN/UN, BL400-SN/HN/RN/UN, BMA400-LTA/HTA/RTA BM630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA, BMA630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA
MA-800N	3P、4P	BM630-SN/HN/RN/UN, BM800-CN/SN/HN/RN, BL630-HN/RN/UN, BL800-SN/HN/RN, BMA630-HTD/RTD/HTA/RTA/HED/RED , BMA800-HTD/RTD/HTA/RTA/HED/RED
MA-250H	3P、4P	BM100-HS, BM160-HS, BM250-HS

Terminal Cover

TYPE	Pole	Long cover	Short cover	Model
TC-30N	2	TC30CN2P	—	BM30-CN
	3	TC30CN3P	—	
TC-100N	2	TC100N2P-K	TCS100N2P-K	BM30-SN, BM50-CN,BM60/63-SN/HN BM100-MN/SN, BL50-SN BM100-BTD/STD BM100/125-LTD
	3	TC100N3P-K	TCS100N3P-K	
	4	TC100N4P-K	TCS100N4P-K	
TC-125N	2	TC125N2P-K	TCS125N2P-K	BM60-HBN BM100-HN, BM125-SN/HN BL100-SN/HN
	3	TC125N3P-K	TCS125N3P-K	
	4	TC125N4P	TCS125N4P	
TC-125A	2、3	TC125A3P-K	TCS125A3P-K	BM125-HTA/RTA BMA125-STA/LTA/HTA
	4	TC125A4P-K	TCS125A4P-K	
TC-250N	3	TC250N3P-K	—	BM160-SN/HN, BM250-CN/SN/HN BM160/250-HTA/RTA BMA160/250-STA/LTA/HTA BL160-SN, BL250-SN
	4	TC250N4P-K	—	
TC-250H	3	TC250H3P	—	BM100-HS BM160/250-HS
TC-400N	3	TC400N3P	—	BM400-CN/SN/HN/RN/UN BM630s-STD/LTD/HTD/RTD BM630s-STA/LTA/HTA/RTA BMA400-LTA/HTA/RTA BMA400-HTD/RTD/HMF/RMF BMA630s-STD/LTD/HTD/RTD BMA630s-STA/LTA/HTA/RTA BL400-SN/HN/RN/UN
	4	TC400N4P	—	
TC-630N	3	TC630N3P	—	BM630-CN/SN/HN/UN/RN BM800-CN/SN/HN/RN BM630-HE/RE/UE, BM800-SE/HE/RE BMA630-HTD/RTD/HTA/RTA BMA800-HTD/RTD/HTA/RTA BMA630-HED/RED BMA800-HED/RED BL630-HN/RN/UN, BL800-SN/HN/RN
	4	TC630N4P	—	

Motor Operation Device

TYPE	Poles	Model
MT-100N	3P、4P	BM30-SN, BM50-CN, BM60-SN/HN, BM63-SN/HN, BM100-SN/MN, BL50-SN
MT-125N	3P、4P	BM60-HBN, BM100-HN, BM125-SN/HN, BL100-SN/HN, BMA125-STA/LTA/RTA
MT-250N	3P、4P	BM160-SN/HN, BM250-SN/HN, BL160-SN, BL250-SN, BMA160-STA/LTA/HTA, BMA250-STA/LTA/HTA
MT-400N	3P、4P	BM400-SN/HN/RN/UN, BL400-SN/HN/RN/UN, BMA400-LTA/HTA/RTA BM630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA BMA630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA
MT-800N	3P、4P	BM630-SN/HN/RN/UN, BM800-CN/SN/HN/RN, BL630-HN/RN/UN, BL800-SN/HN/RN, BMA630-HTD/RTD/HTA/RTA/HED/RED, BMA800-HTD/RTD/HTA/RTA/HED/RED
MT-250E	3P、4P	BM100-HS, BM160-HS, BM250-HS

Note：Applicable voltage : ① DC 24V ② AC 110V/ DC 110V ③ AC 230V/ DC 220V

Rear Connection

TYPE	Poles	Model
PGI-100N50	3P	BM30-SN, BM50-CN, BM60-SN/HN, BM63-SN/HN, BL50-SN (50A and below), BM50-CN
PGI-100N	3P	BM60-SN/HN, BM100-SN/MN (60A and below)
PGI-125N50	3P	BM60-HBN, BM100-HN, BM125-SN/HN, BL100-SN/HN (50A and below)
	4P	BM100-HN, BM125-SN, BL100-SN/HN (50A and below)
PGI-125M	2P、3P、4P	BM125-HTA/RTA
PGI-125N	3P	BM60-HBN, BM100-HN, BM125-SN, BL100-SN/HN (60A and above)
	4P	BM100-HN, BM125-SN, BL100-SN/HN (60A and above)
PGI-250N	3P、4P	BM160-SN/HN, BM160-HTA/RTA, BM250-SN/HN, BM250-HTA/RTA, BL160-SN, BL250-SN
PGI-400N	3P、4P	BM400-SN/HN/RN/UN, BL400-SN/HN/RN/UN, BM630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA, BMA630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA
PGI-800N	3P、4P	BM630-SN/HN/RN/UN, BM800-CN/SN/HN/RN, BL630-HN/RN/UN, BL800-SN/HN/RN
PGI-BM250	3P	BM100-HS, BM160-HS, BM250-HS

Locking Device

TYPE	Poles	Model
FHL-250M	2P、3P、4P	BM125-HTA/RTA, BMA125-STA/ LTA/ HTA
	3P、4P	BM160/250- HN / HTA / RTA / SN , BM250 CN, BMA160/250-STA/LTA/HTA, *BL160/250-SN
FHL-400M	3P、4P	BM400-CN/SN/HN/RN/UN, BM400-HE/RE/UE, BMA400-LTA/HTA/RTA, BMA630s-STD/STA/LTD/LTA/HTD/HTA/RTD/RTA, BM630s-STD/STA/LTD/LTA/HTD/HTA/RTD/RTA
FHL-800M	3P、4P	BM630-SN/HN/RN/UN, BM800-CN/SN/HN/RN, BM630-HE/RE/UE, BM800-SE/HE/RE, BMA630-HED/RED, BMA800-HED/RED, BMA630/800- HTD/RTD

Box Lug

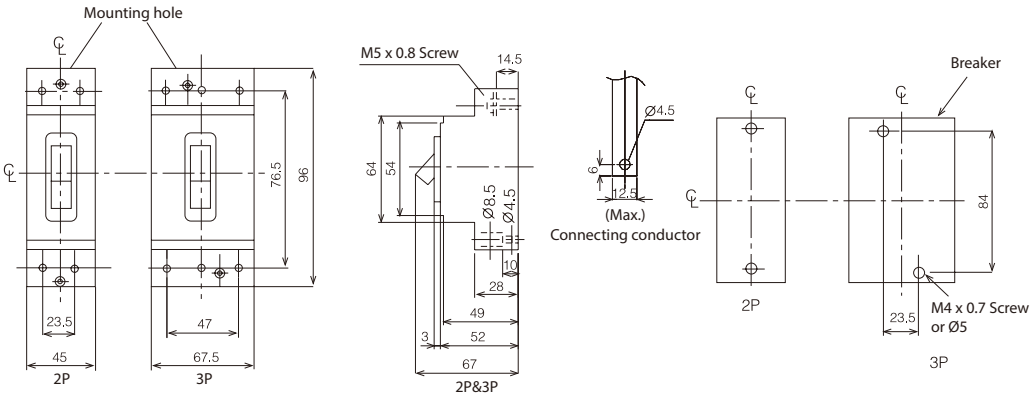
Model	Rated Current	Applicable Breaker	
		MCCB	ELCB
TL-100N	50A	BM30-SN, BM50-CN, BM60-SN*, BM60-HN*, BM63-SN*, BM63-HN*, BM100-SN*	BL50-SN
TL-125N	50A	BM60-HBN*, BM100-HN*, BM125-SN*, BM125-HN*	BL100-SN*, BL100-HN*
	125A	BM60-SN**, BM60-HN**, BM63-SN**, BM63-HN**, BM60-HBN**, BM100-MN**, BM100-SN**, BM100-HN**, BM125-SN**, BM125-HN**	BL100-SN**, BL100-HN**
TL-250N	250A	BM160-SN, BM160-HN, BM250-CN, BM250-SN, BM250-HN	BL160-SN, BL250-SN
TL-250H	50A	BM100-HS*	–
	100A	BM100-HS**, BM100-HE, BM100-RE, BM100-UE	–
	250A	BM160-HS, BM250-HS, BM160-HE, BM160-RE, BM160-UE, BM250-HE, BM250-RE, BM250-UE	–
TL-400N	400A	BM400-CN, BM400-SN, BM400-HN, BM400-RN, BM400-UN, BM400-HE, BM400-RE, BM400-UE	BL400-SN, BL400-HN BL400-RN, BL400UN
TL-800N	800A	BM630-CN, BM630-SN, BM630-HN, BM630-RN, BM630-UN, BM630-HE, BM630-RE, BM630-UE	BL630-HN, BL630-RN, BL630-UN
		BM800-CN, BM800-SN, BM800-HN, BM800-RN, BM800-SE, BM800-HE, BM800-RE	BL800-SN, BL800-HN BL800-RN
TL-1200H	1200A	BM1000-HS, BM1200-HS, BM1000-SE, BM1000-HE, BM1250-SE, BM1250-HE	–
TL-1600H	1600A	BM1600-HS	–

Torque Table

Model	Rated Current	Screw "A" torque			Screw "A" torque			Applicable wire		Length(mm)	
		N・m	kgf・cm	lb・in	N・m	kgf・cm	lb・in	ISO	AWG / MCM	L1	L2
TL-100N	50A	2~3	20~30	17.5~26.5	2*~3	20*~30	17*~27	2.5~16 mm²	14 AWG~6 AWG	14	–
TL-125N	50A	3.9~4.9	40~50	35~43.5							
	125A	4.9~6.9	50~70	43.5~61	6	61	53	10~50 mm²	8 AWG~1 AWG		
TL-250N	50A	4.9~6.9	50~70	43.5~61	2*~3	20*~30	17*~27	2.5~16 mm²	14 AWG~6 AWG	21	–
	100A				6	61	53	10~50 mm²	8 AWG~1 AWG		
	250A				15	153	133	50~120 mm²	1 AWG~250 AWG		
TL-250H	50A				2*~3	20*~30	17*~27	2.5~16 mm²	14 AWG~6 AWG		
	100A				6	61	53	10~50 mm²	8 AWG~1 AWG		
	250A				15	153	133	50~120 mm²	1 AWG~250 AWG		
TL-400N	400A	40~50	400~500	350~440	31	316	275	120~240 mm²	250 AWG~500 AWG	30	–
TL-800N	800A										
TL-1200H	1200A										60
TL-1600H	1600A	22.5~37.2	230~380	200~330							

Dimension of circuit breaker

BM30-CN



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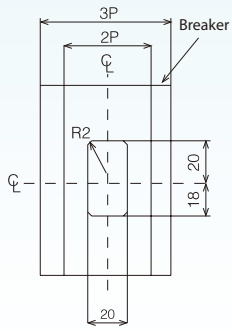
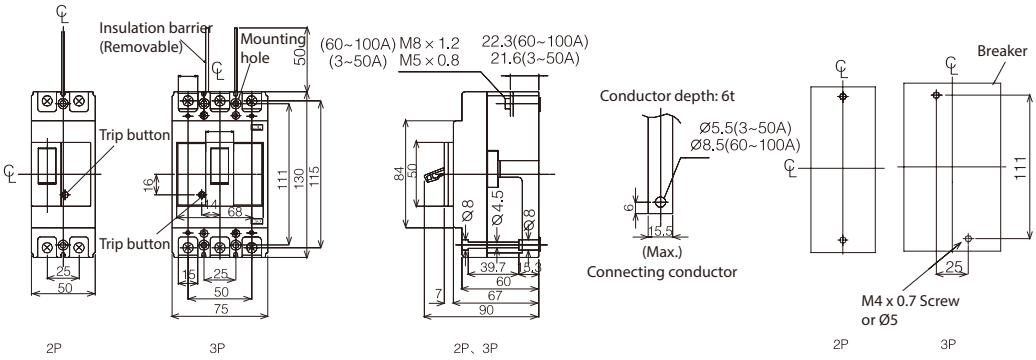


BM30-SN, BM50-CN, 60-SN/HN, 63-SN/HN, 100-SN



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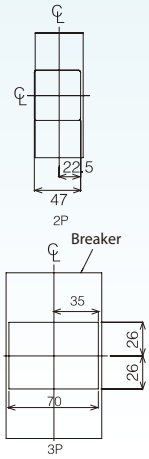
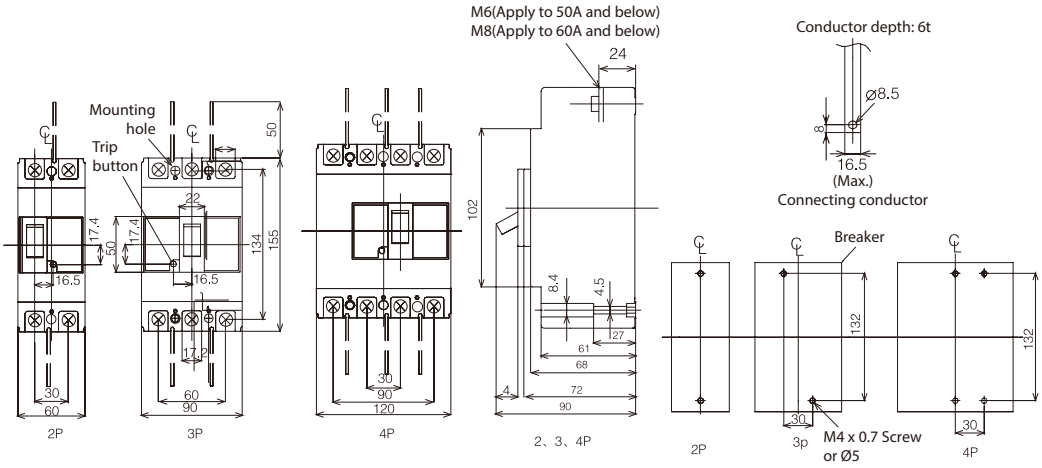


BM60-HBN, BM100-HN, BM125-SN/HN



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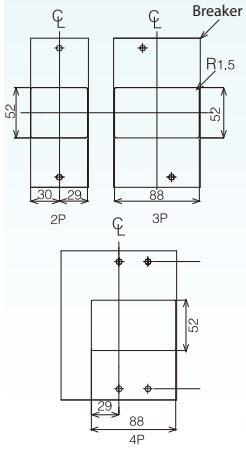
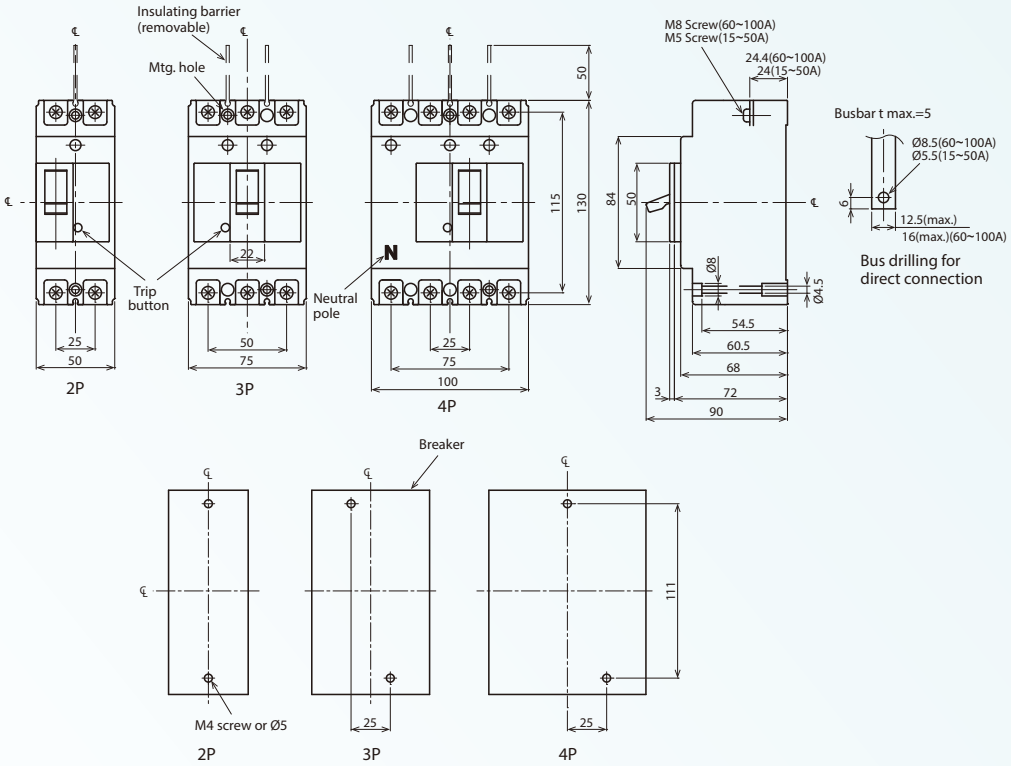


BM100-BTD/STD



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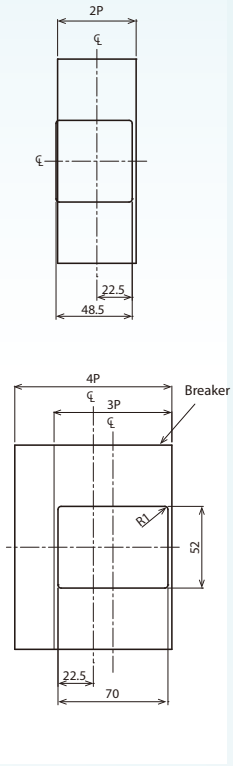
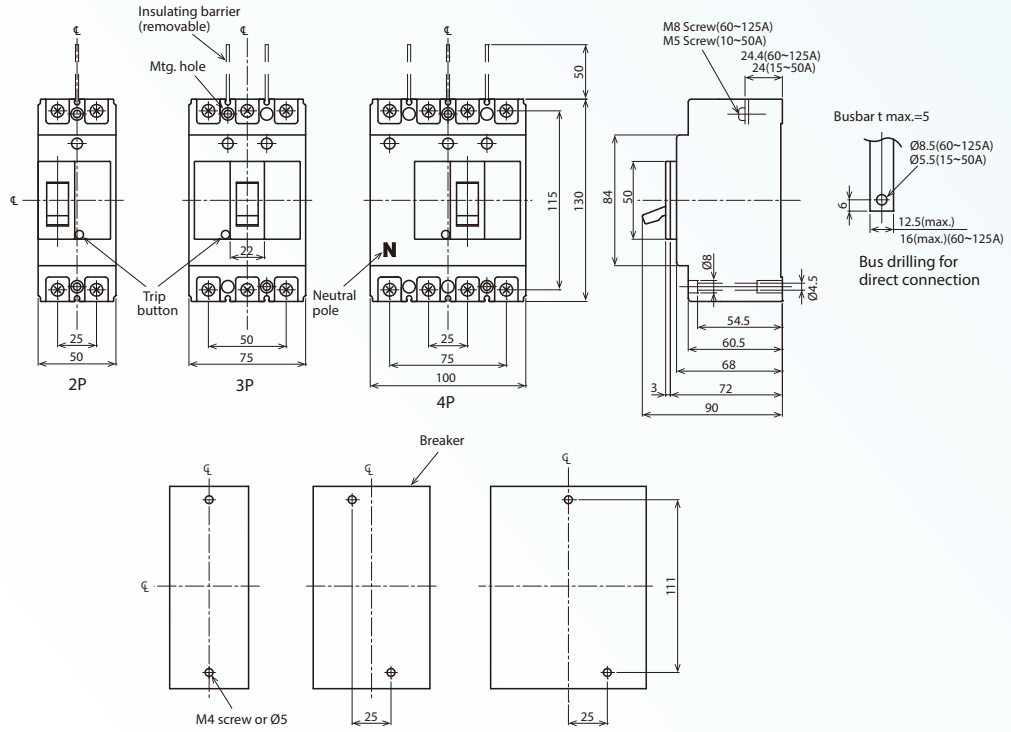


BM100-LTD, BM125-LTD



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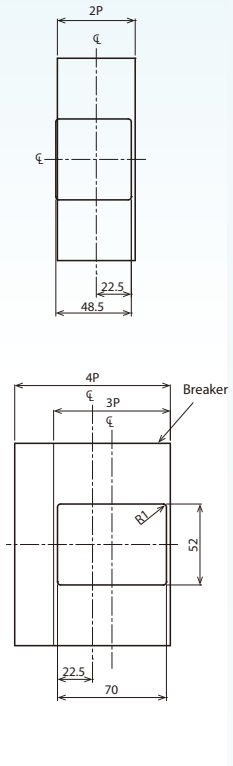
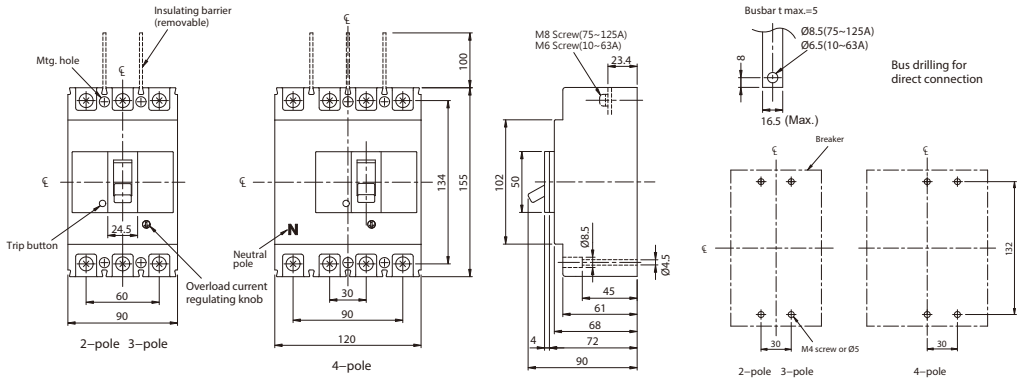


BM125-HTA/RTA



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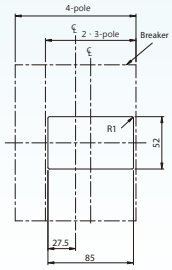
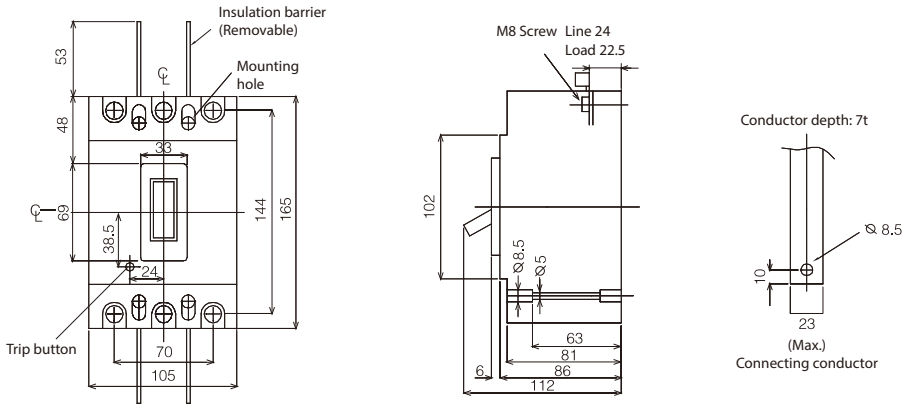


BM100-HS, BM160-HS, BM250-HS



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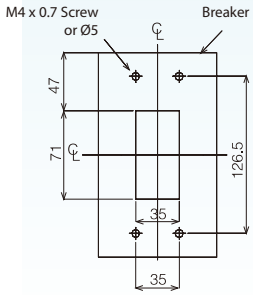
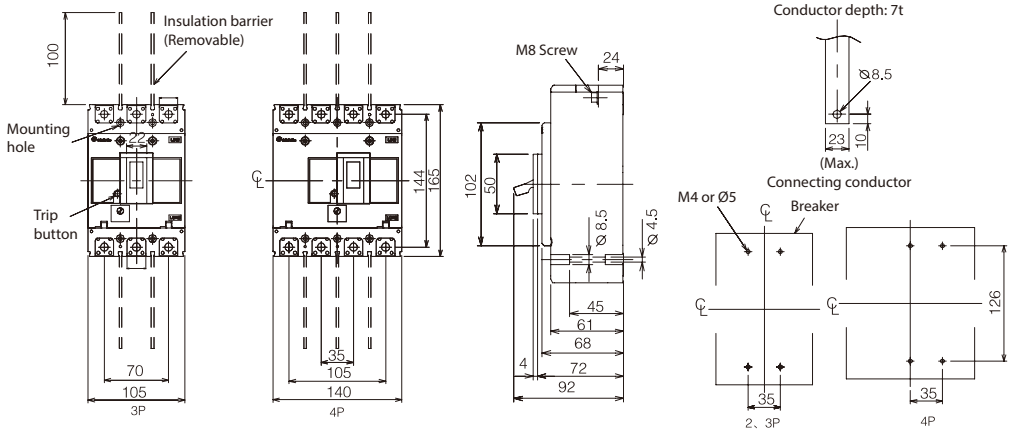


BM160-SN/HN, BM250-SN/HN



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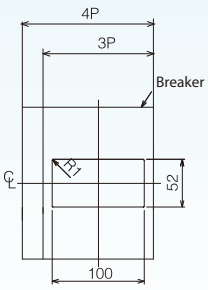
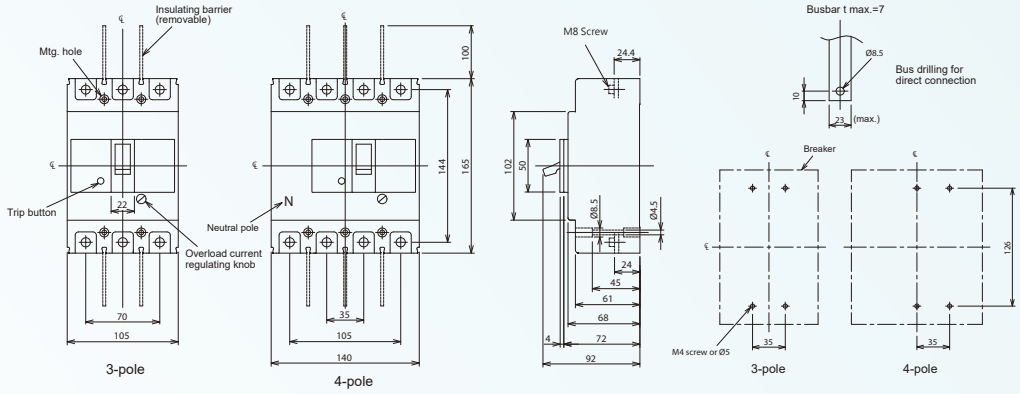


Dimension of circuit breaker

BM160/250-HTA/RTA



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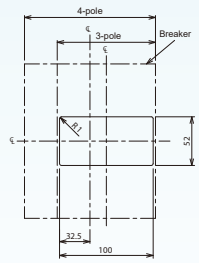
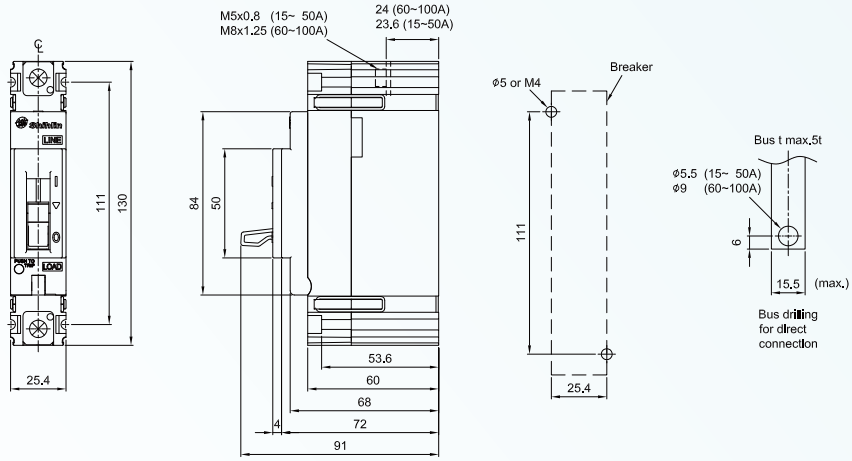


BM100-FTD



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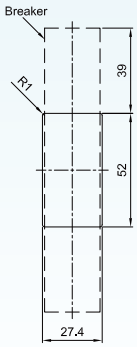
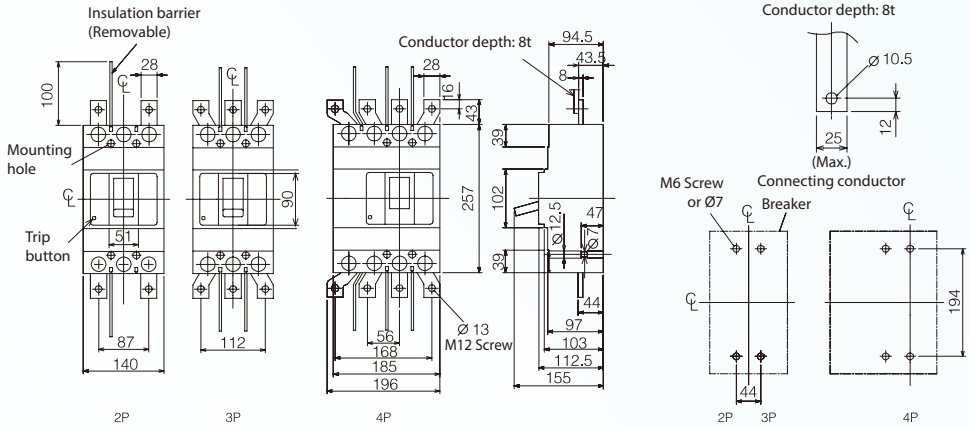


BM400-SN/HN/RN/UN



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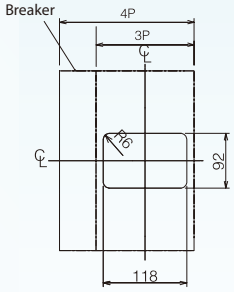
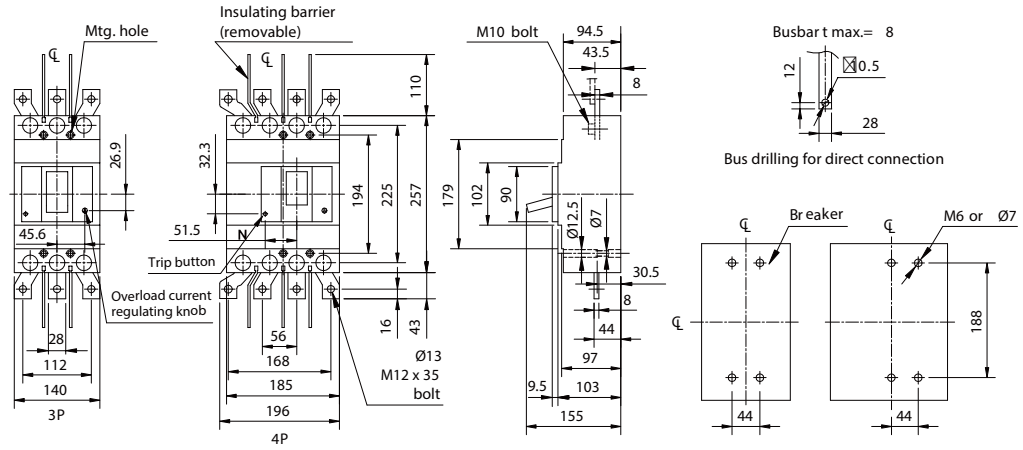


BM630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA



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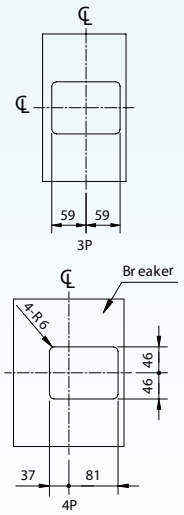
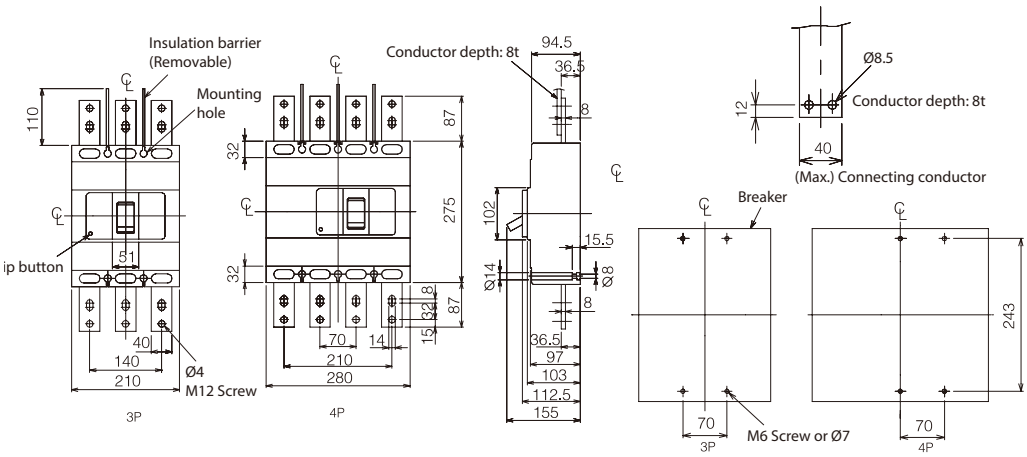


BM630-SN/HN/RN/UN



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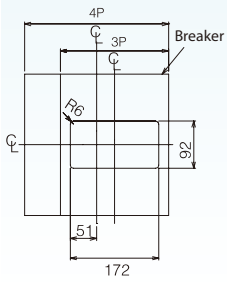
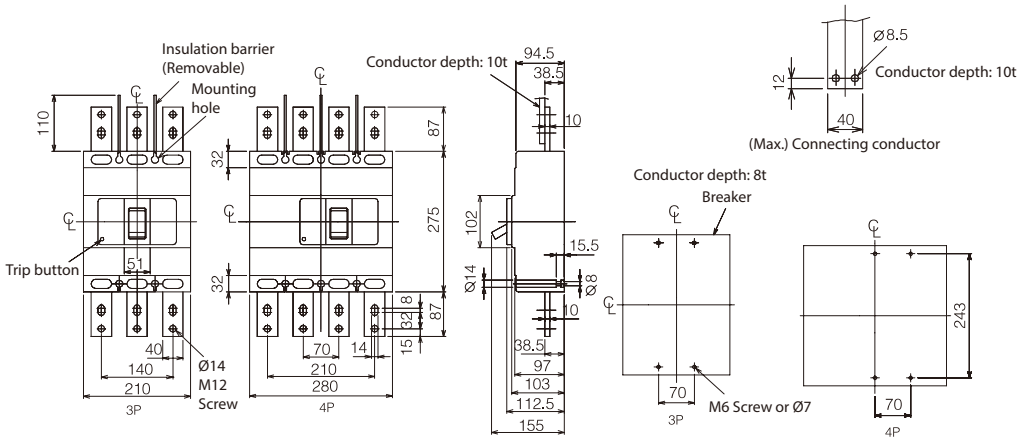
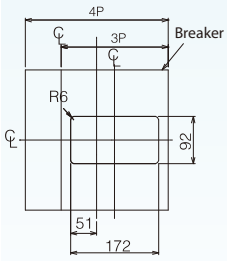


BM800-CN/SN/HN/RN

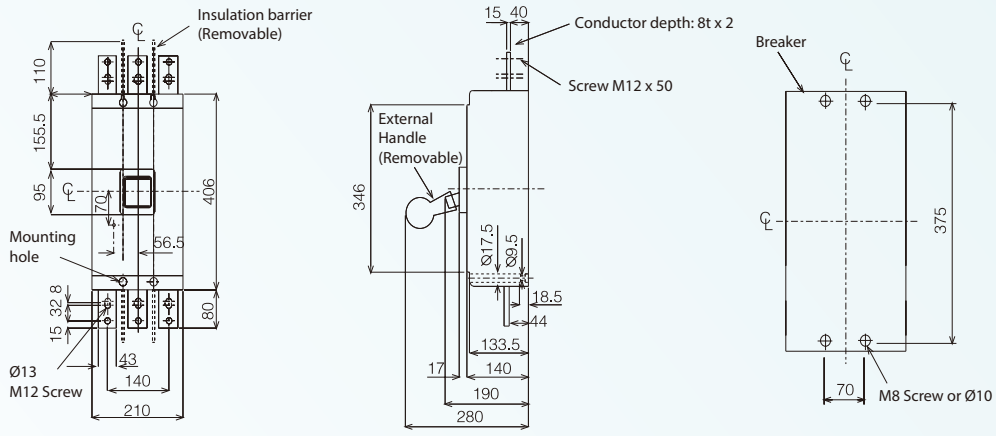


Panel cut

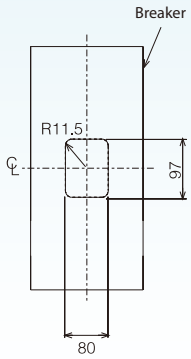


Dimension of circuit breaker

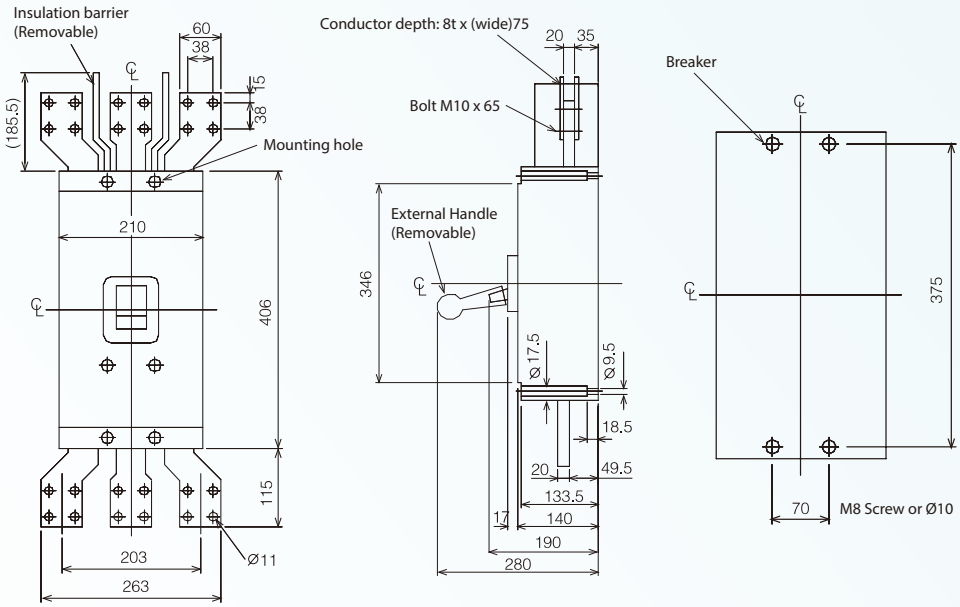
BM1000-HS, BM1200-HS



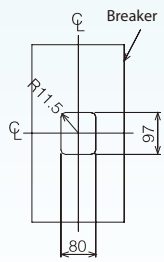
Panel cut



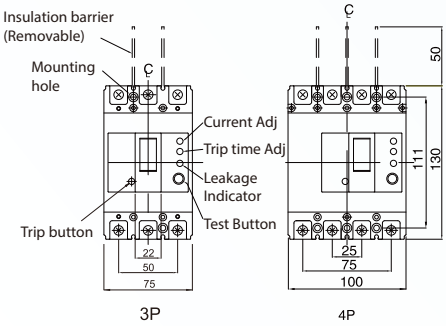
BM1600-HS

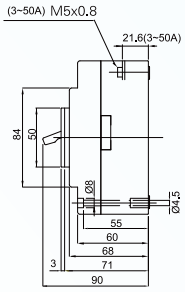


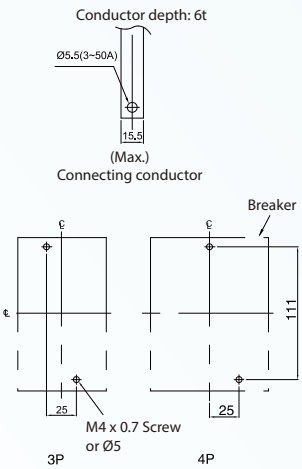
Panel cut



BL50-SN







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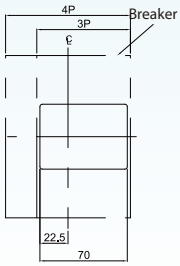
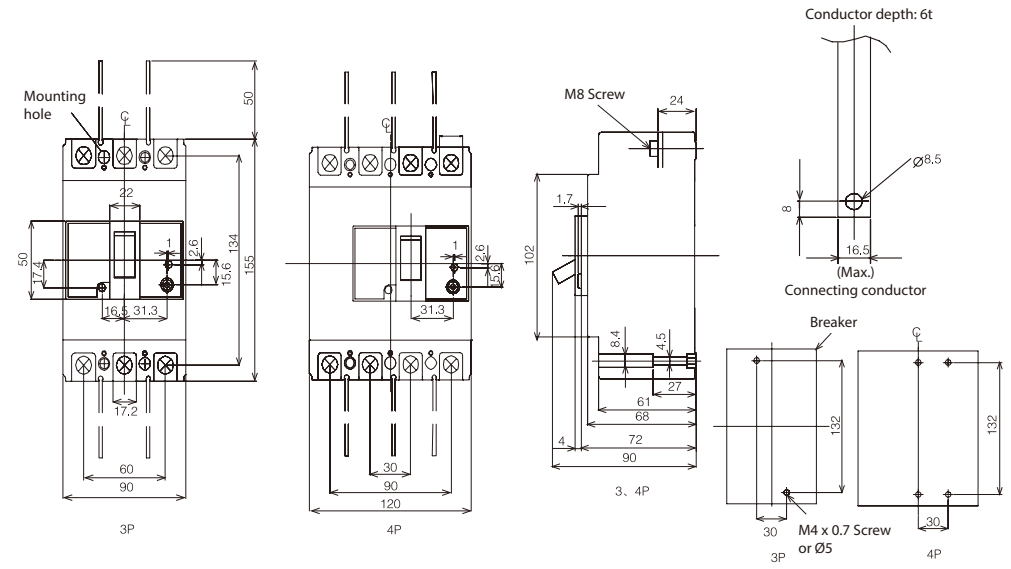
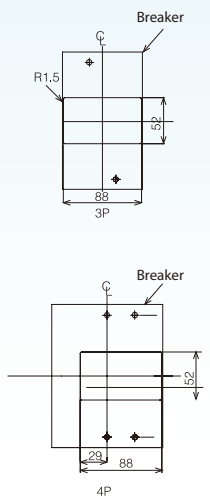


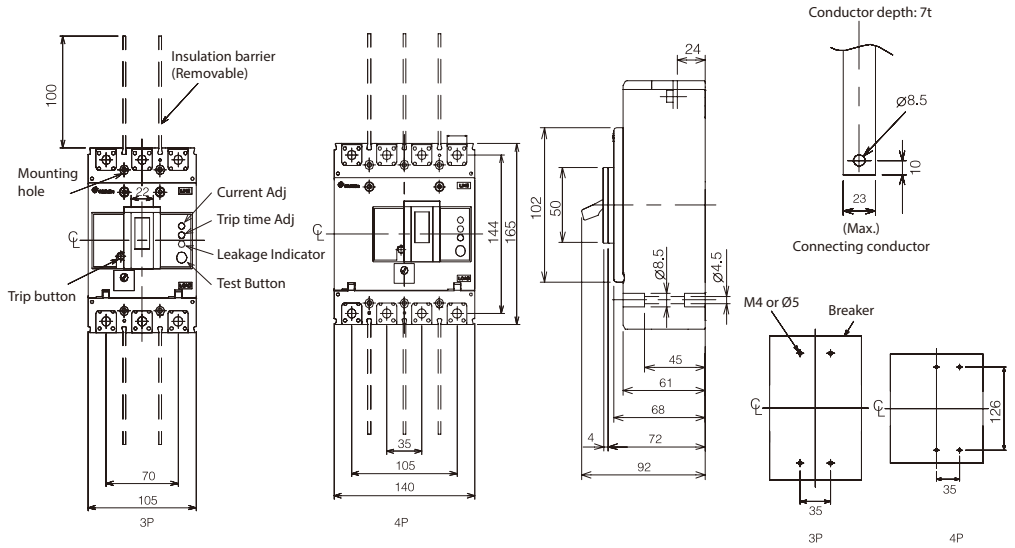
BL100-SN/HN



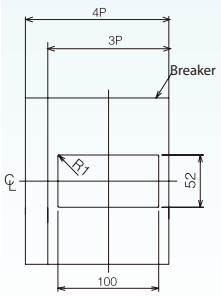
Panel cut



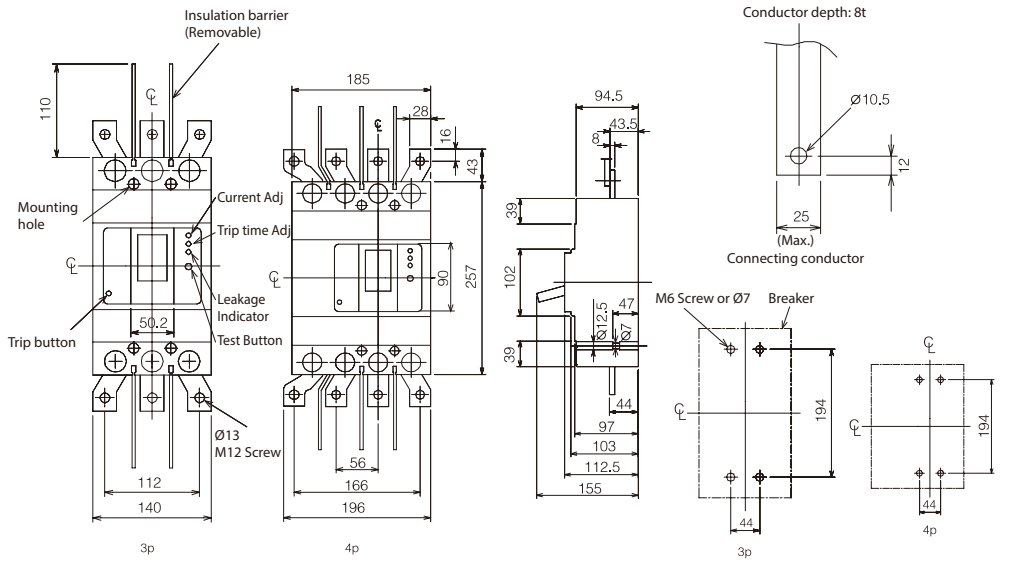
BL160-SN, BL250-SN



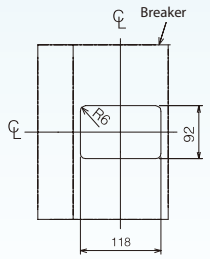
Panel cut



BL400-SN/HN/RN/UN

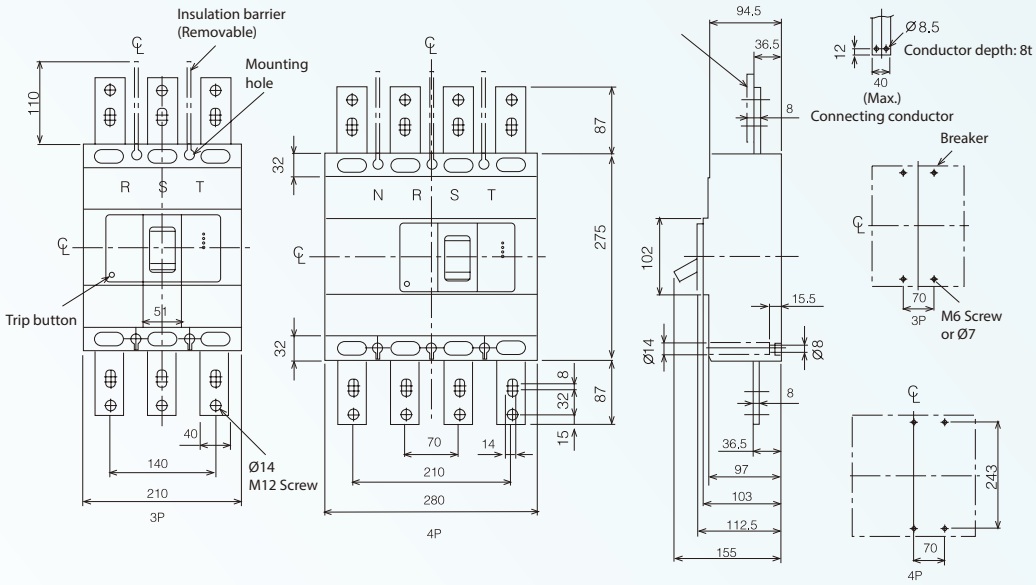


Panel cut

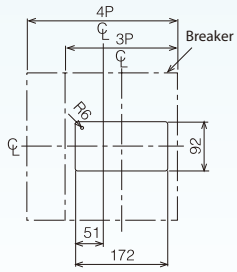


Dimension of circuit breaker

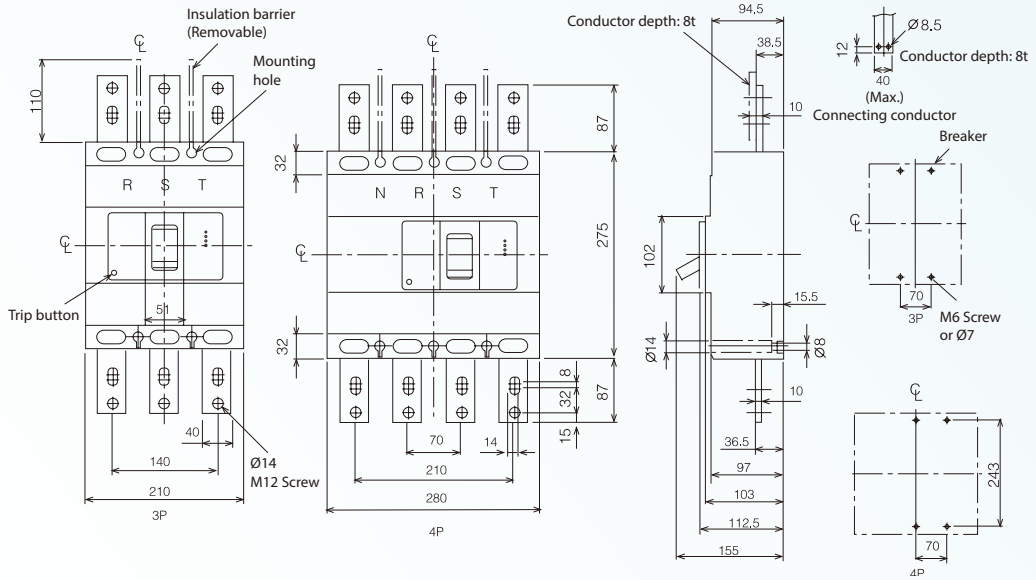
BL630-HN/RN/UN



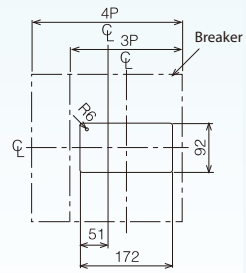
Panel cut



BL800-SN/HN/RN

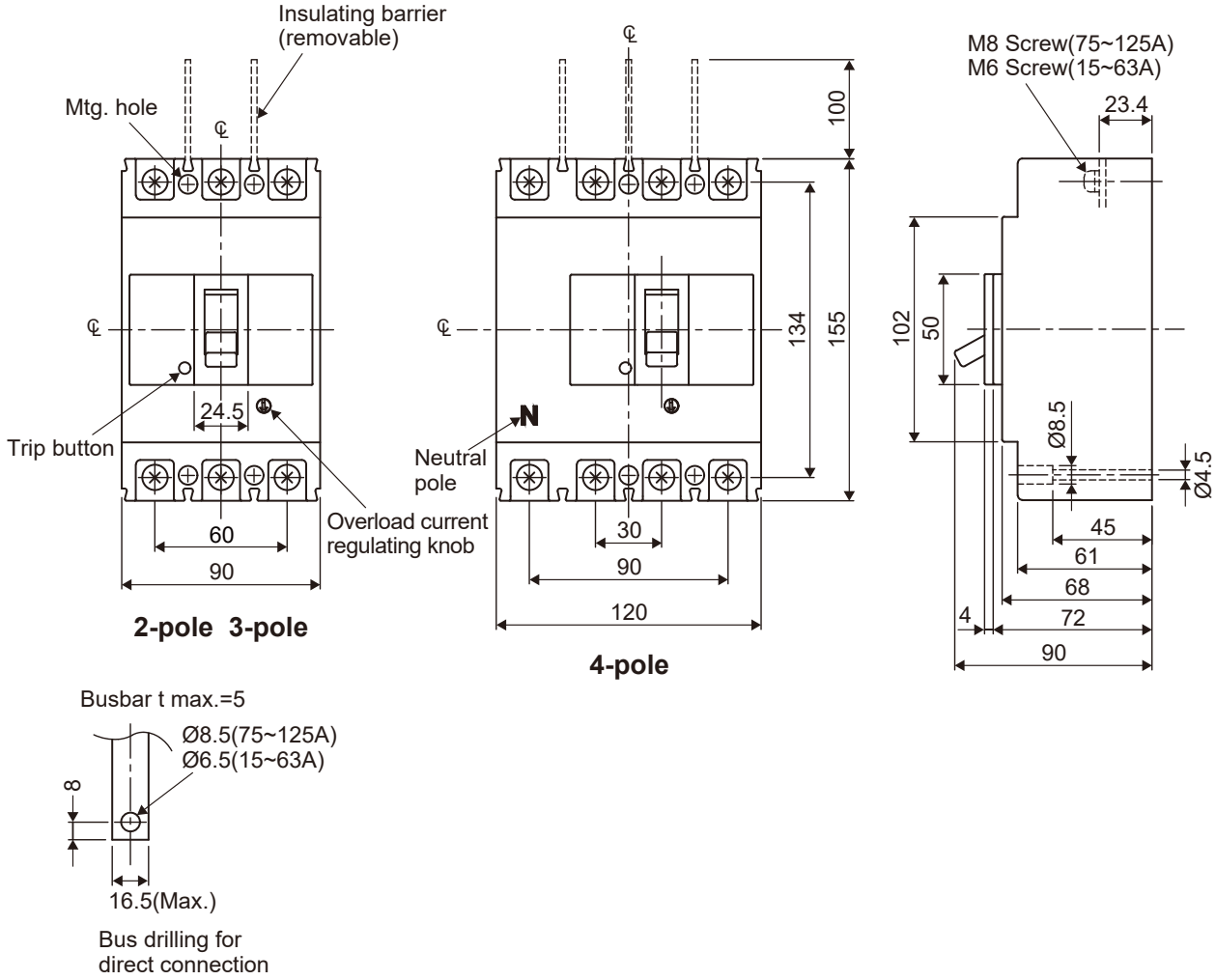


Panel cut

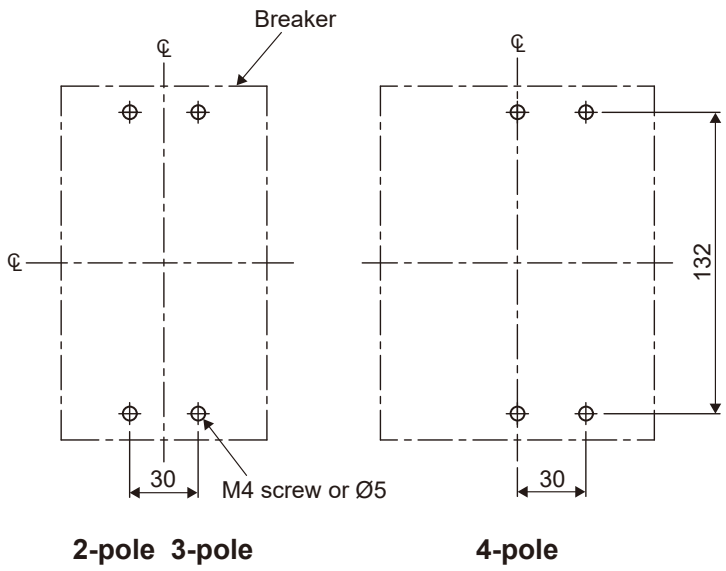


Dimension of circuit breaker

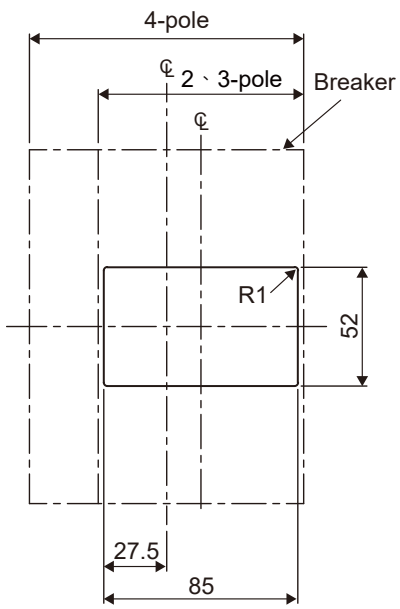
BMA125-STA/LTA/HTA



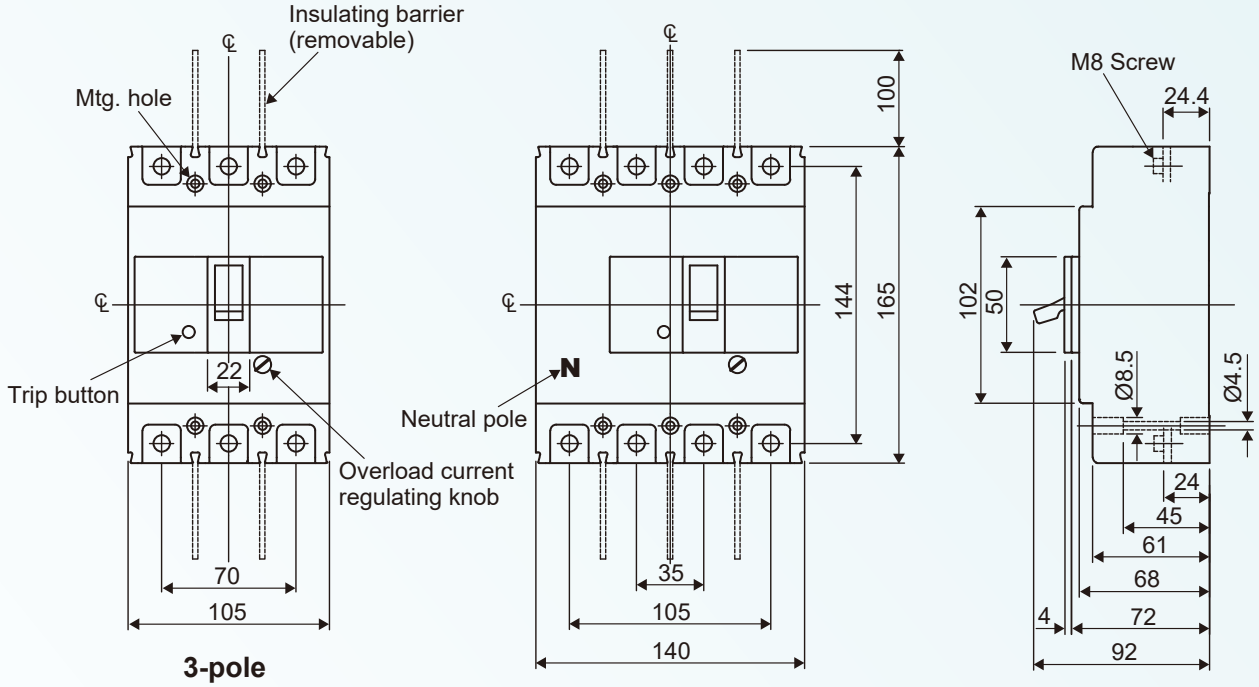
Mounting

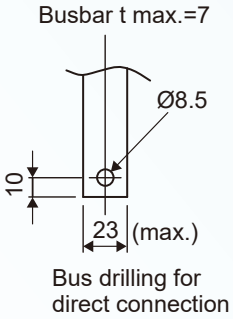


Panel cut

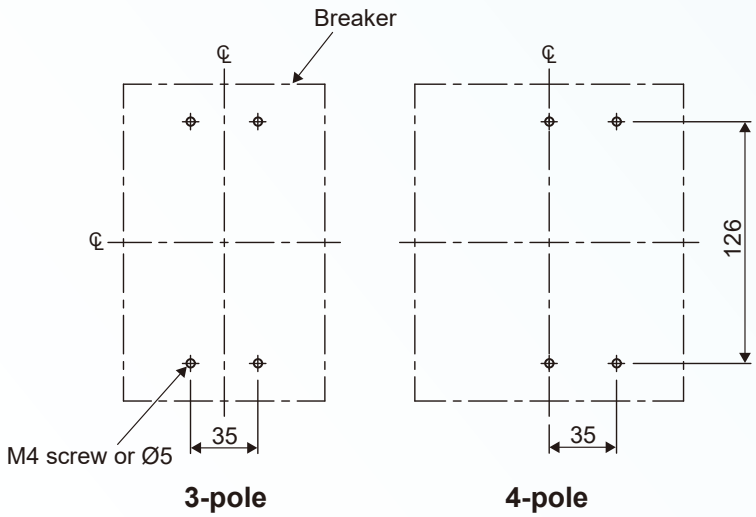


BMA160-STA/LTA/HTA, BMA250-STA/LTA/HTA

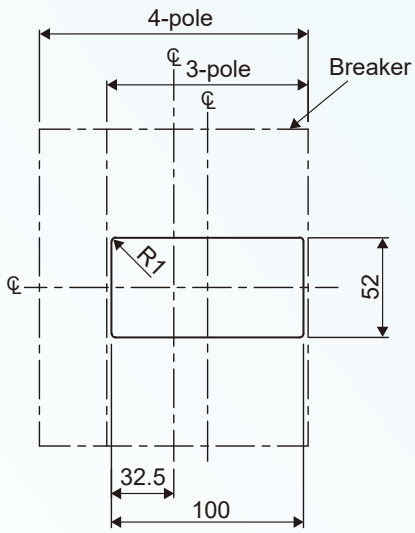




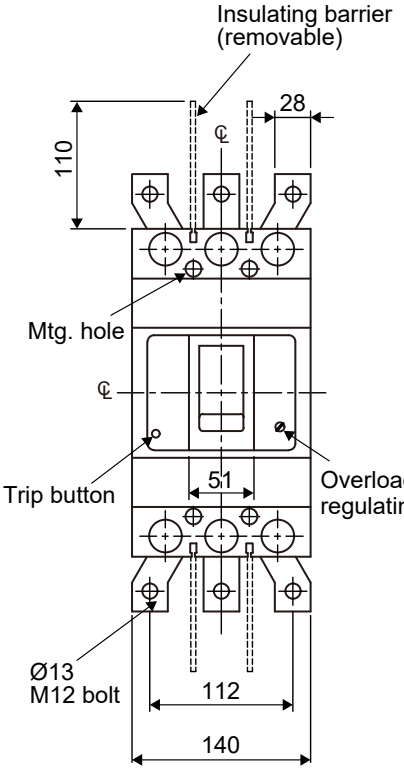
Mounting



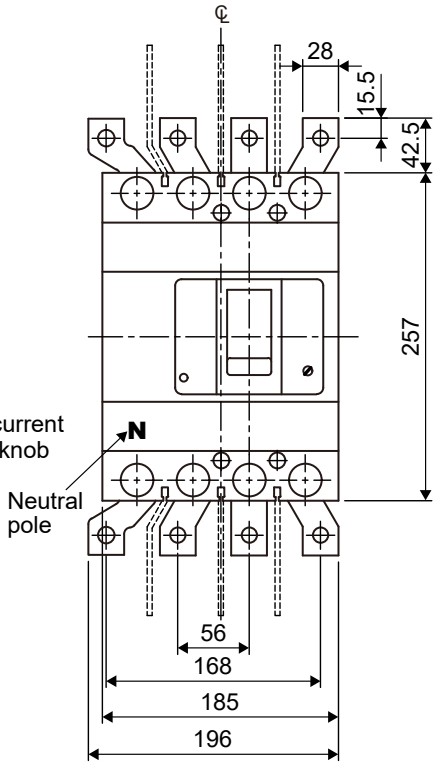
Panel cut



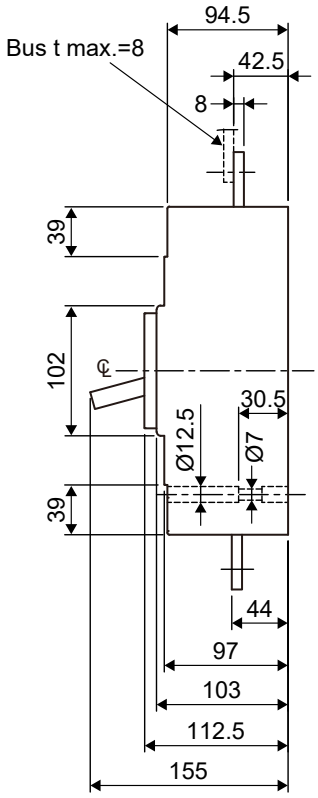
BMA400-LTA/HTA/RTA

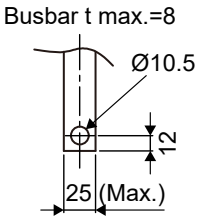


3-pole



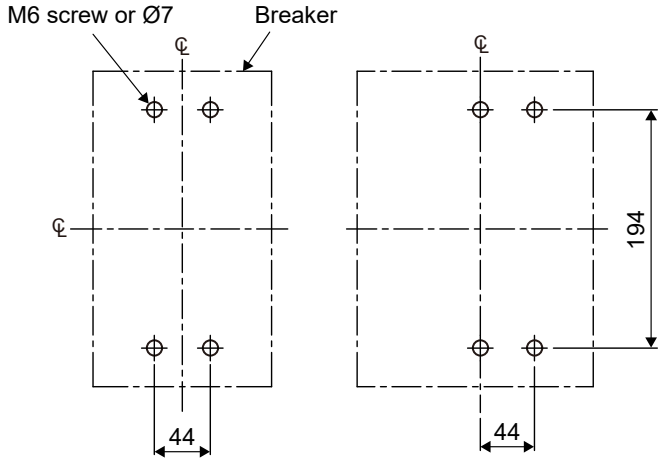
4-pole





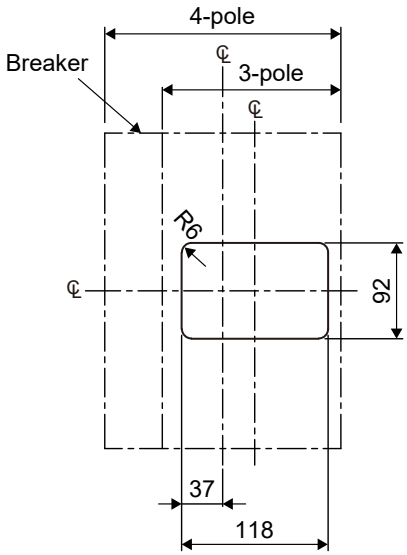
Bus drilling for
direct connection

Mounting

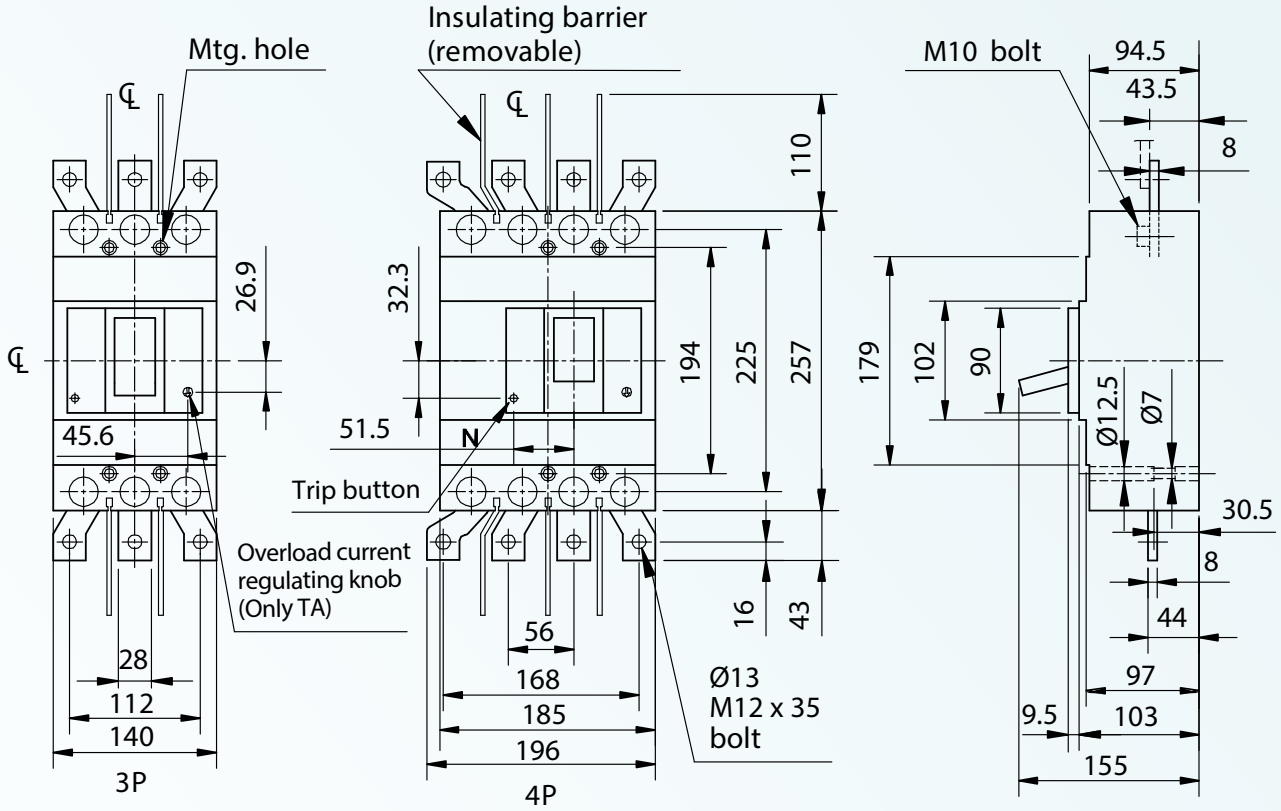


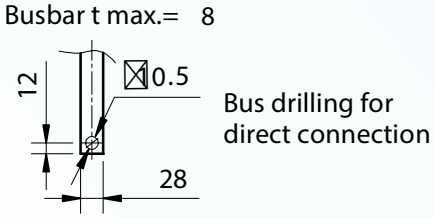
3-pole 4-pole

Panel cut

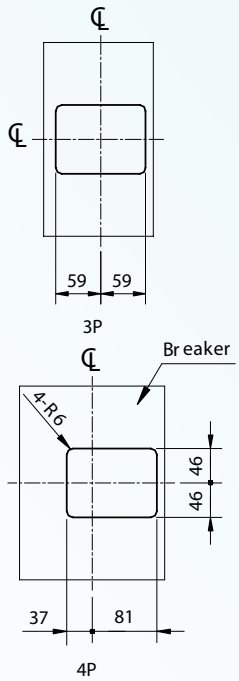


BMA630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA

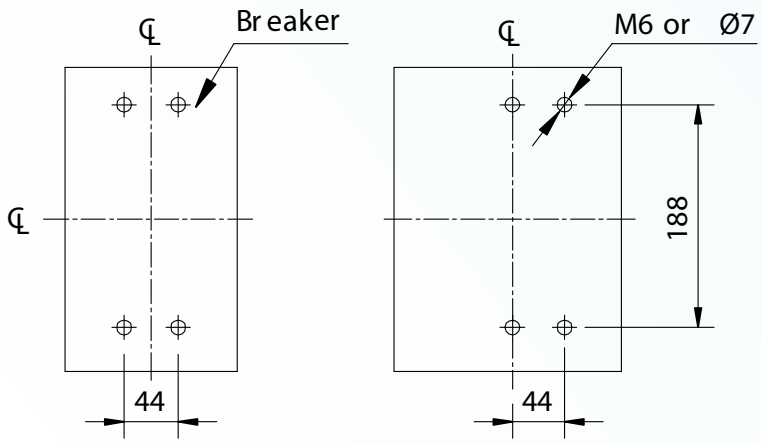




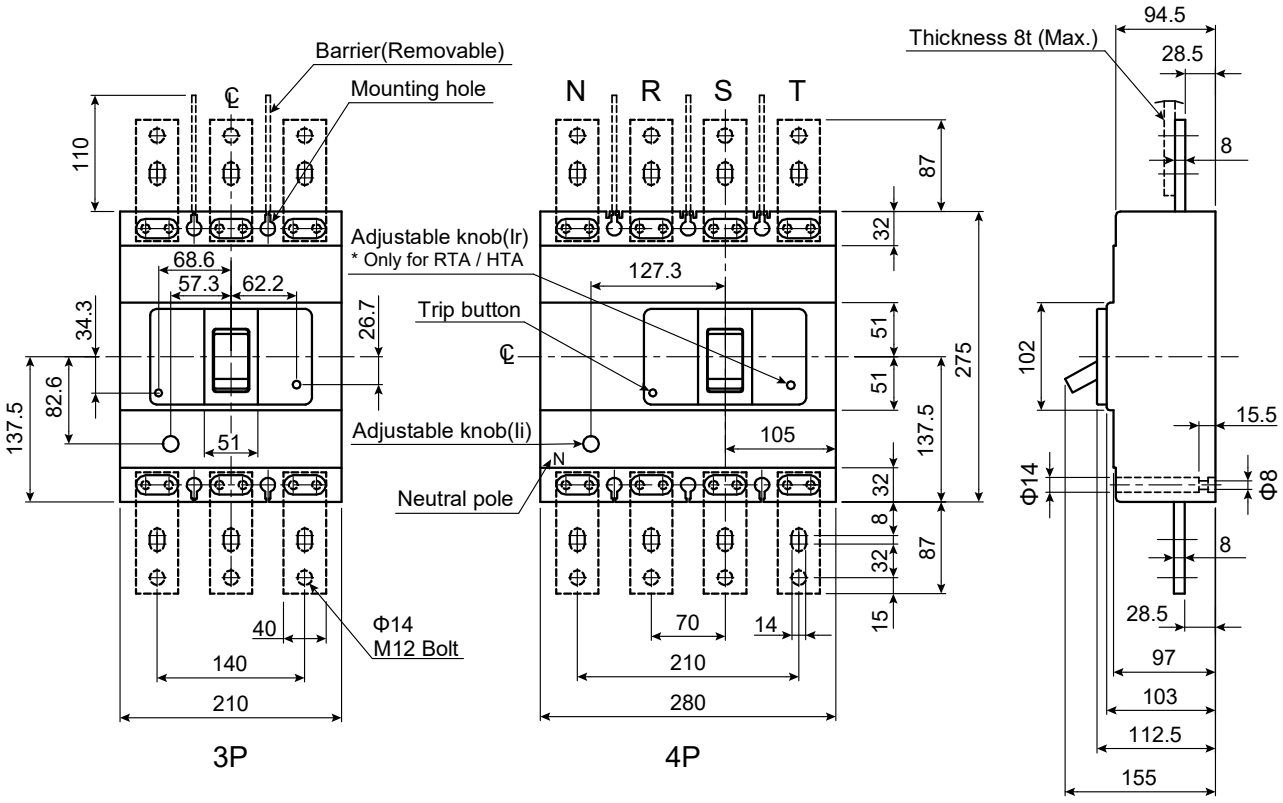
Panel Cut



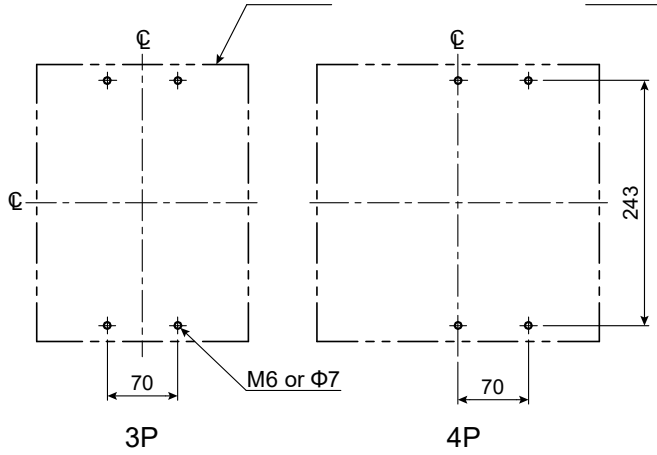
Mounting



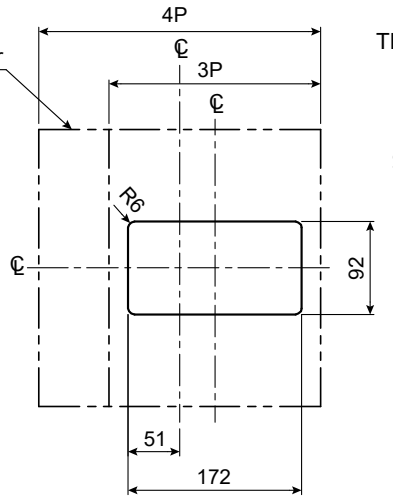
BMA630-HTA/RTA, BMA800-HTA/RTA



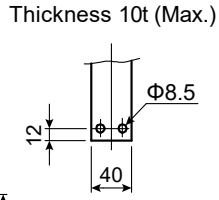
Mounting



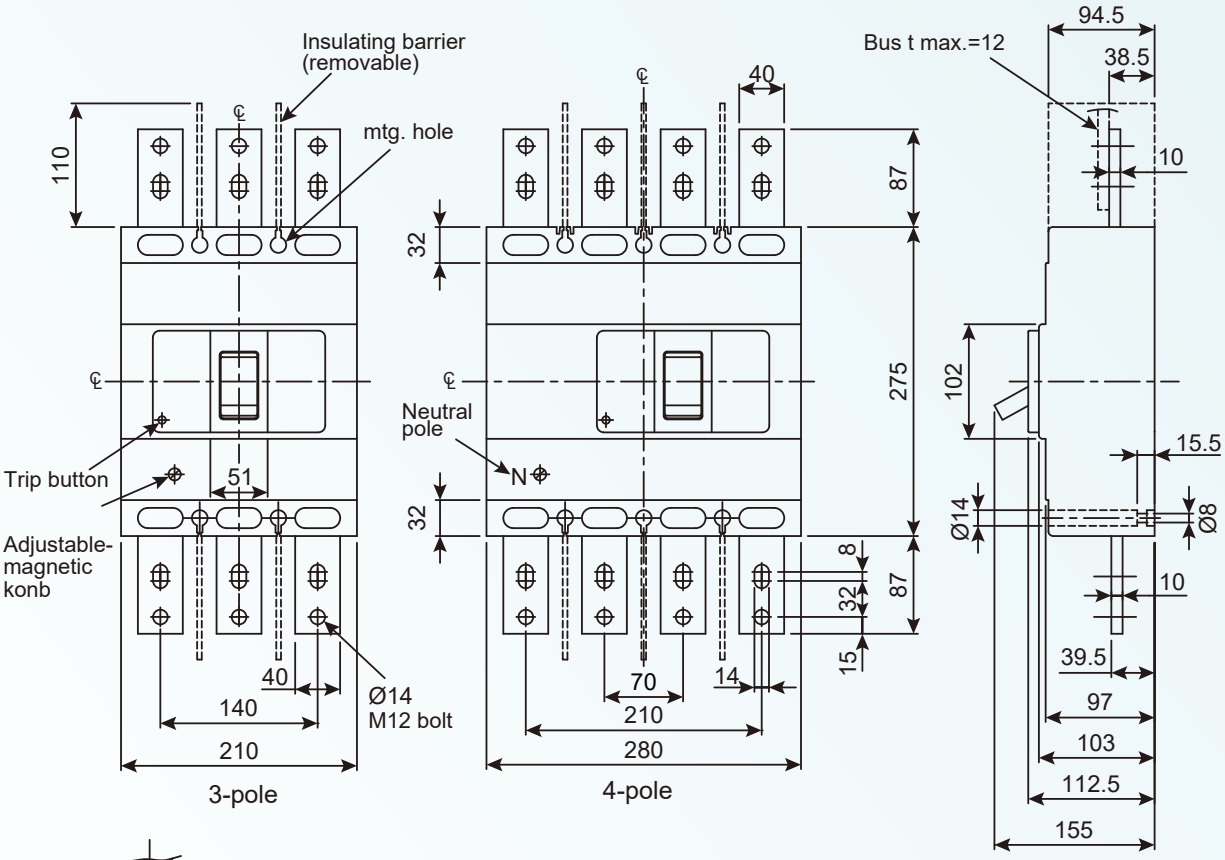
Panel cut

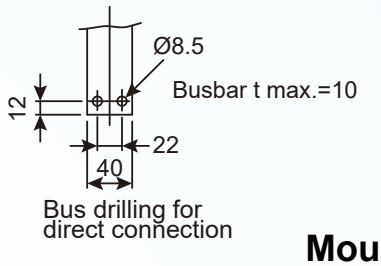


Conductor

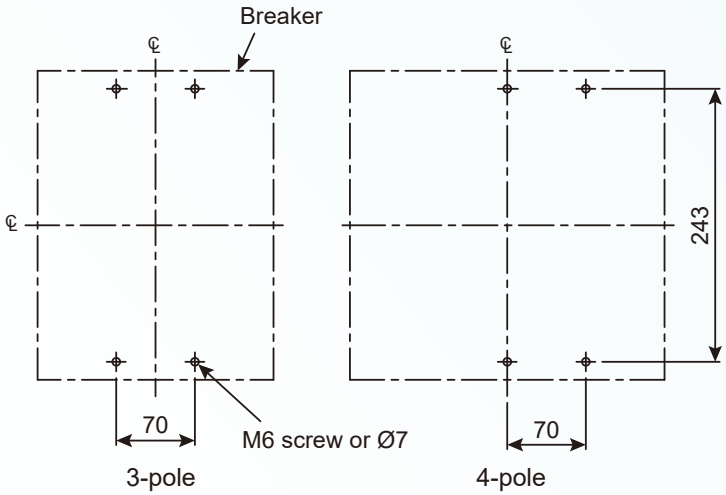


BMA800-HTD/RTD

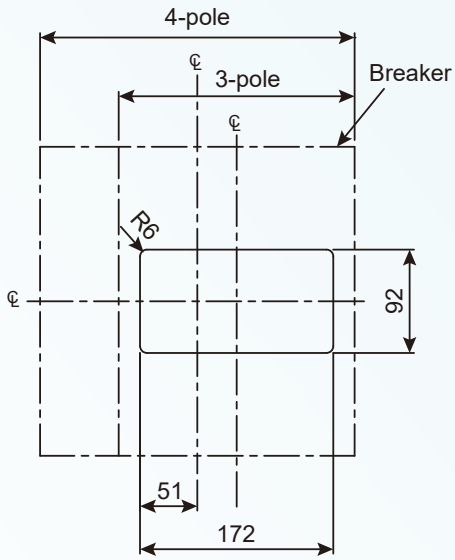




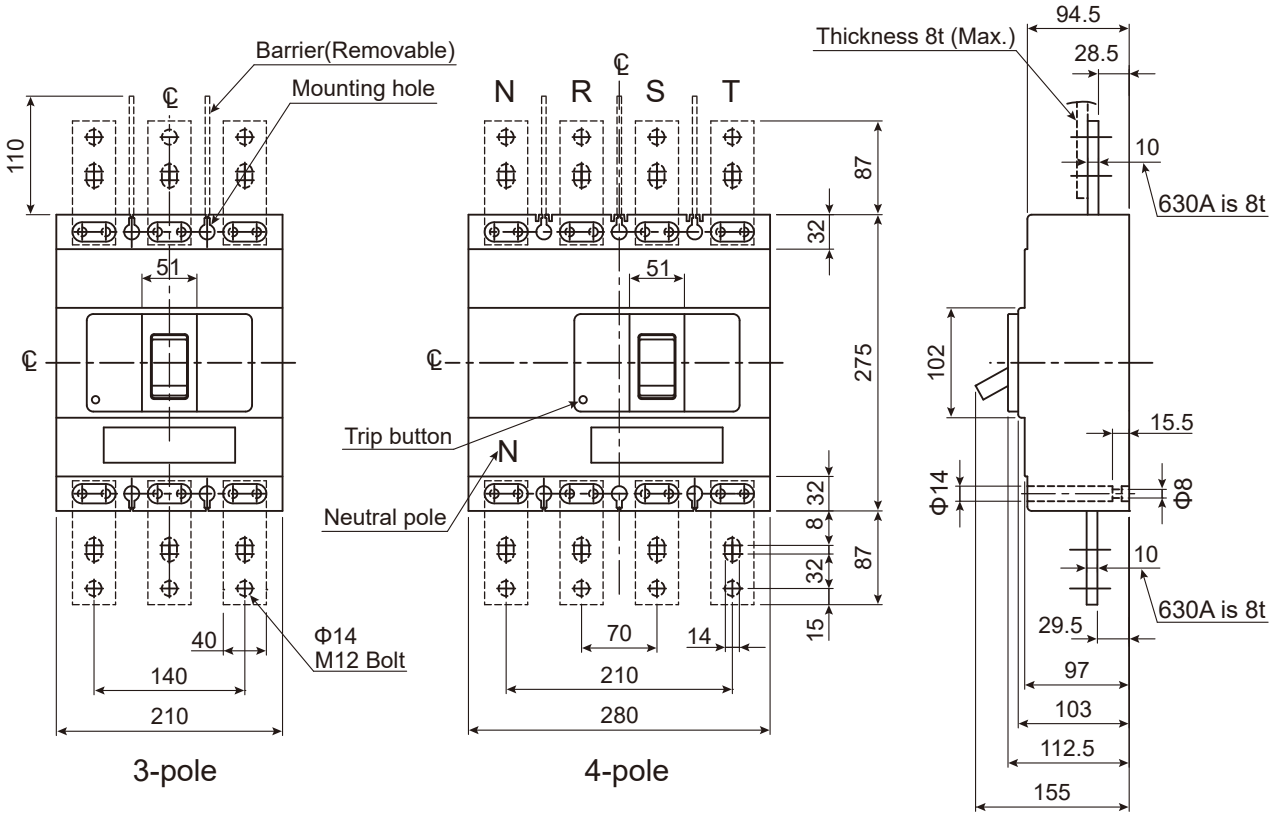
Mounting

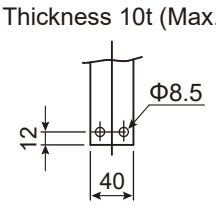


Panel Cut

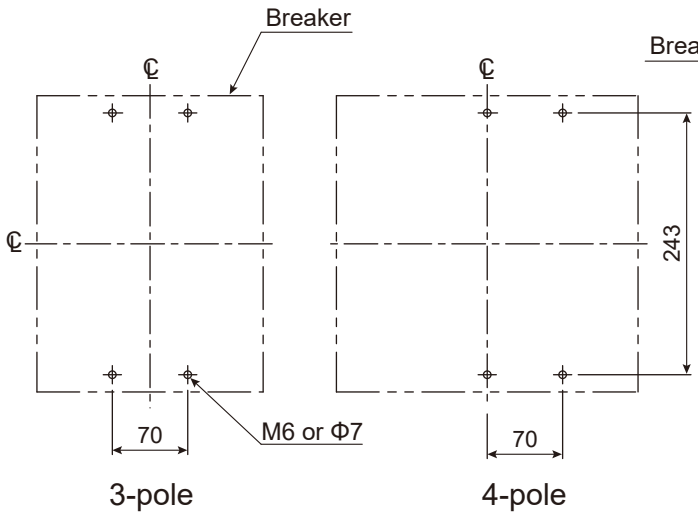


BMA630-HED/RED, BMA800-HED/RED

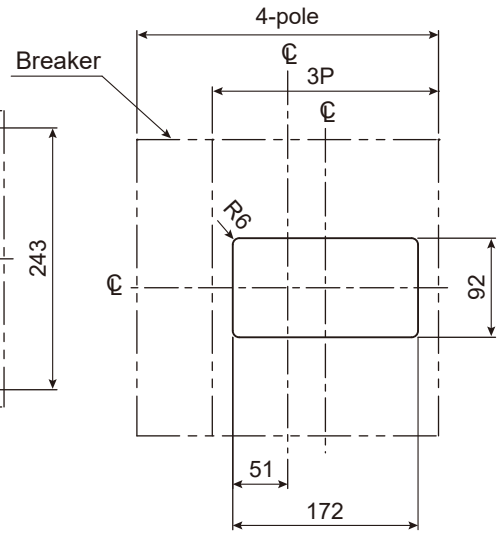




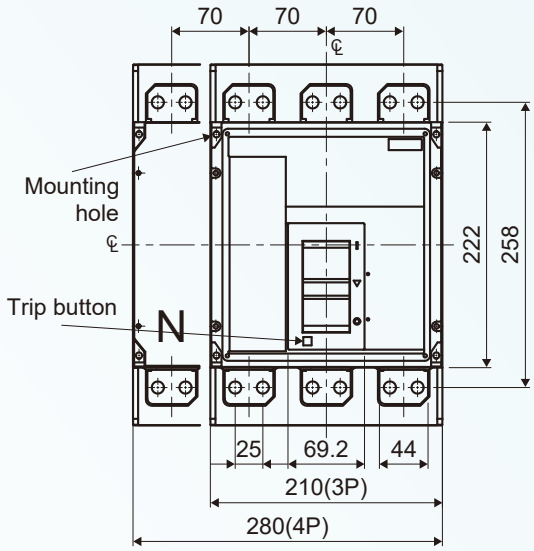
Mounting

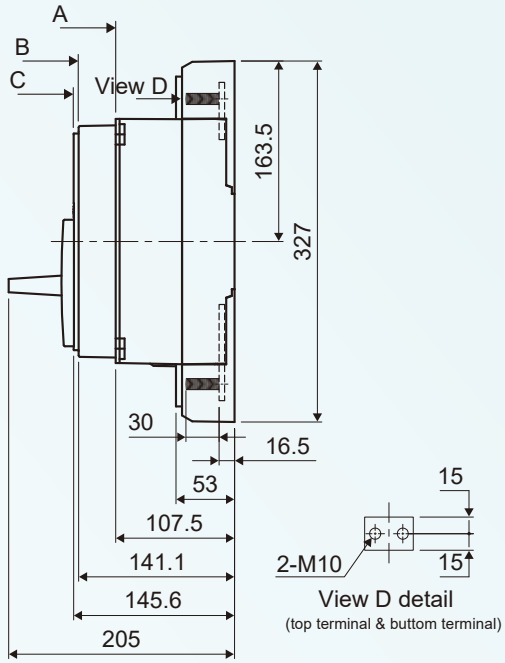


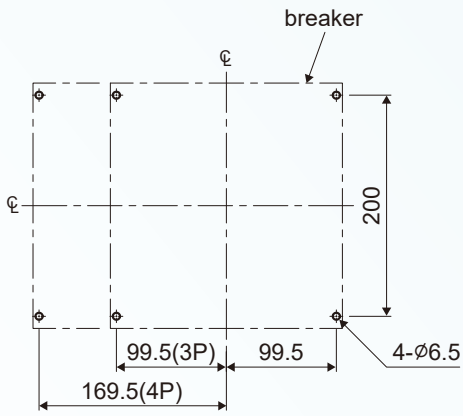
Panel Cut



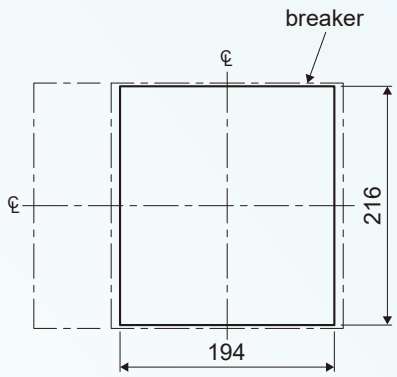
BMA1000-HED/RED, BMA1250-HED/RED, BMA1600-HED/RED



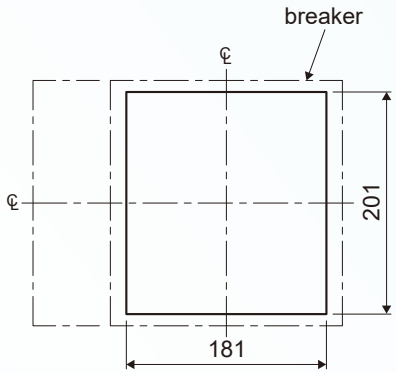




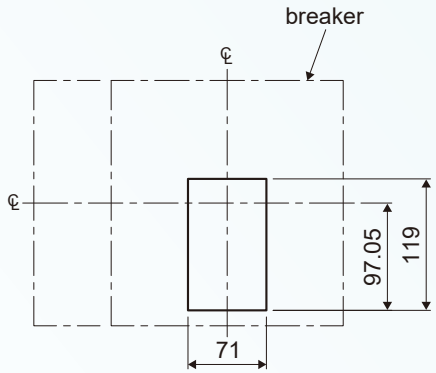
Panel drilling



Panel dimension：A



Panel dimension：B



Panel dimension：C

Optional Accessories | Dimensions

Rotary Handle

Type	Poles	fig.1				fig.2			fig.3		
		A	B	C	D	E	F	G	H	J	K
EH-100N	3P, 4P	104	105	39	44	90	78	10	25	111	M4 or ø5
EH-100T	3P, 4P	104	105	39	44	90	78	10	25	111	
EH-100L	3P, 4P	104	105	39	44	90	78	10	35	126	
EH-125N	3P, 4P	104	105	39	44	90	78	10	30	132	
EH-250N	3P, 4P	104	105	39	44	90	78	10	35	126	
EH-250H	3P, 4P	104	125	39	44	90	78	10	35	126.5	
EH-400N	3P, 4P	150	173	60	77	108	112	10	44	194	
EH-800N	3P, 4P	150	173	60	77	108	112	10	70	243	

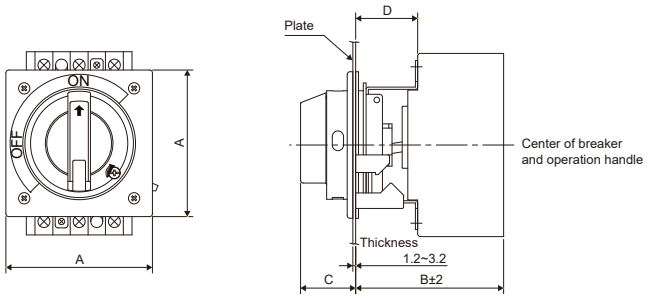
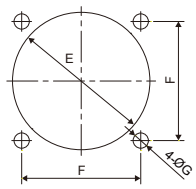
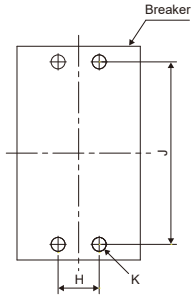


Fig. 1



Panel Dimension
Fig. 2



Breaker Dimension
Fig. 3

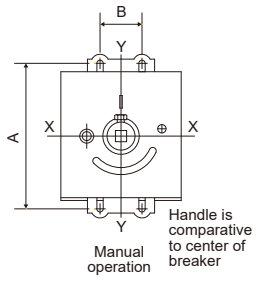
Note: 1. Optional for dust and water protection.

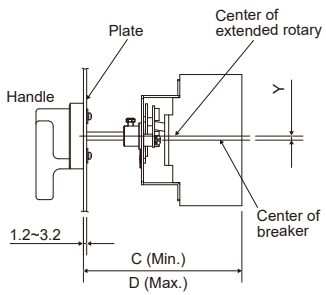
Extended Rotary Handle

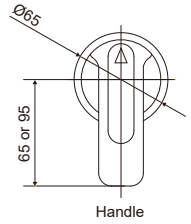
Type	Dimensions (mm)					Screw
	A	B	C	D	Y	
MA-100N	111	25	125	229	+8	M4x80
MA-100T	111	25	125	229	0	M4x75
MA-100L	111	25	125	229	0	M4x75
MA-125N	114	30	125	229	+8	M4x80
MA-250N	126	35	125	229	0	ST3x10
MA-250H	126	35	143	247	0	M4x50
MA-400N	221	44	190	290	+10	M5x50
MA-800N	242	70	190	290	+10	M6x125 & M6x12

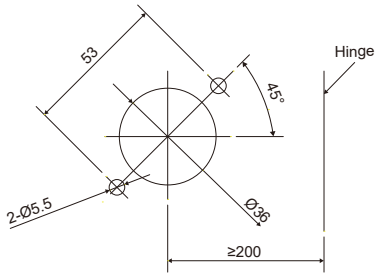
Motor Operation Device

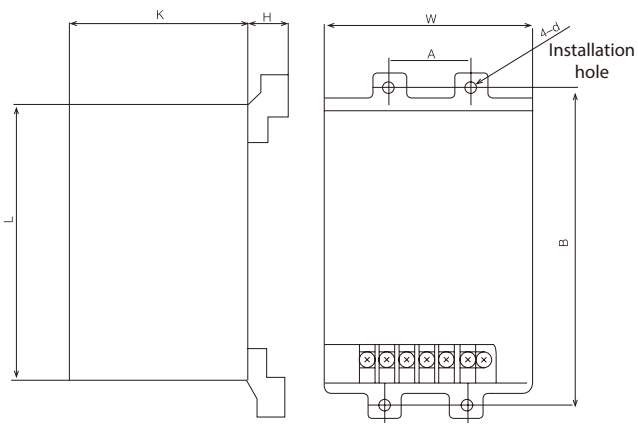
Type	Dimensions (mm)						
	A	B	d	H	K	L	W
MT-100N	25	111	ø4.5	16.5	79	102	74
MT-125N	30	132	ø4.5	15	77	116	90
MT-250N	35	126	ø4.5	15	77	116	90
MT-250E	35	143.5	ø4.5	15	77	116	90
MT-400N	44	194	ø4.5	36	115	176	130
MT-800N	70	234	ø4.5	36	115	176	130





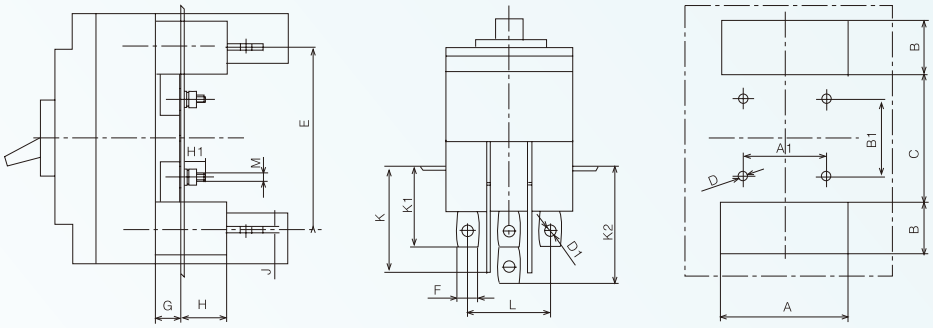






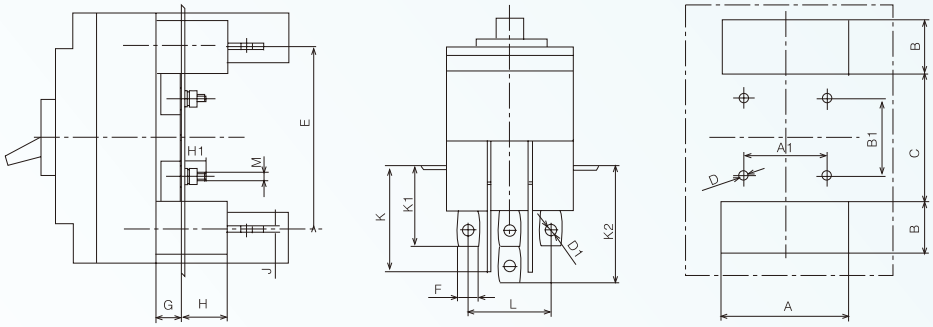
Rear Connection

Type	Poles	Dimensions (mm)																		Connect Direction	
		A	A1	B	B1	C	D	D1	E	F	G	H	H1	J	K	K1	K2	L	M	Horizontal	Vertical
PGI-100N	3	74	50	24	58	90	ø5	/	116	M10	9.5	28	12	M10	/	62	122	50	M4	◎	◎
	4	99	75															75			
PGI-125N	3	92	60	30	70	104	ø6	/	134	M10	13	26	16	M10	/	62	122	60	M5	◎	◎
	4	122	90															90			
PGI-250N	3	107	70	38	76	106	ø6	ø10	144	25	13	34	15	6	/	79	134	70	M5	◎	◎
	4	142	105															105			
PGI-400N	3	137	44	50	135	175	ø10	ø13	225	28	18	40	24	8	120	79	/	44	M8	◎	◎
	4	181	88															88			
PGI-800N	3	212	140	57	143	185	ø10	ø13	243	44	17	53	20	11	/	146	/	140	M8	◎	◎
	4	282	210															210			



Rear Connection

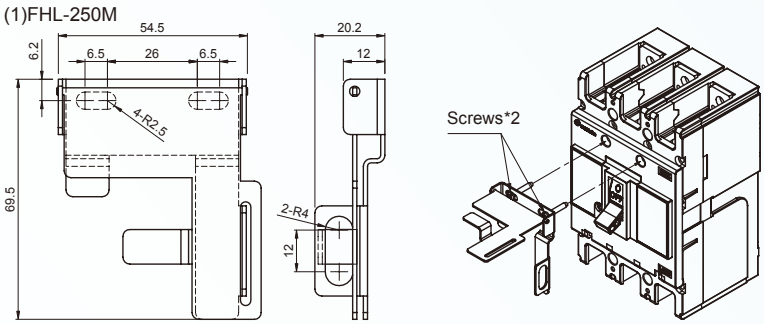
Type	Poles	Dimensions (mm)																		Connect Direction	
		A	A1	B	B1	C	D	D1	E	F	G	H	H1	J	K	K1	K2	L	M	Horizontal	Vertical
PGI-BM250	3	107	70	38	76	106	ø6	ø10	144	25	13	34	15	6	/	79	134	70	M5	◎	◎



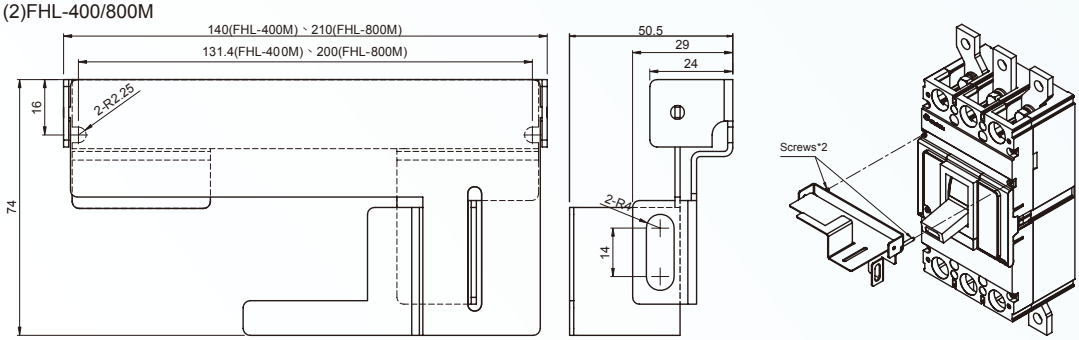
Locking Device

Dimensions

(1)FHL-250M

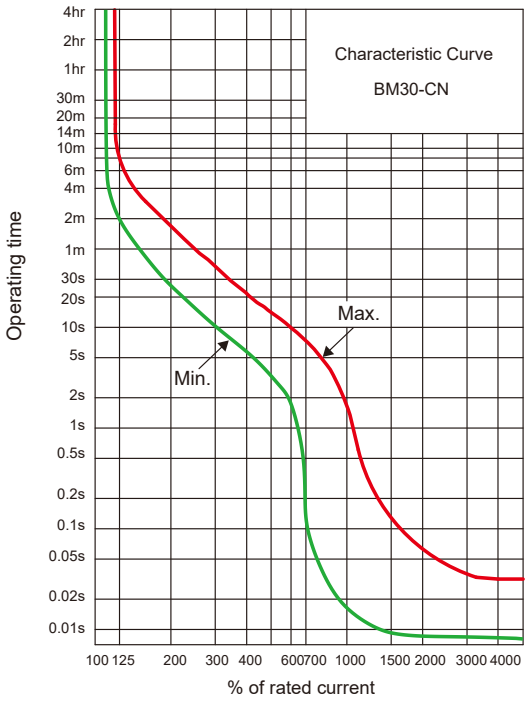


(2)FHL-400/800M

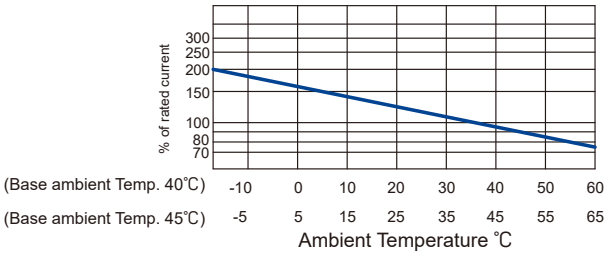


Tripping Characteristic Curve

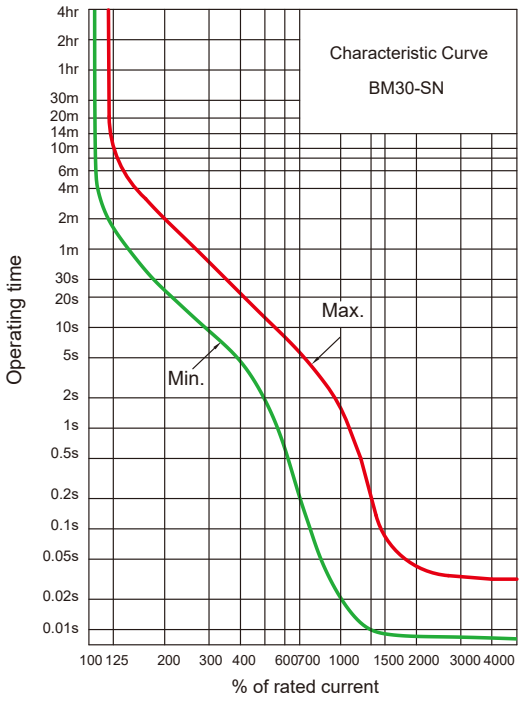
BM30-CN



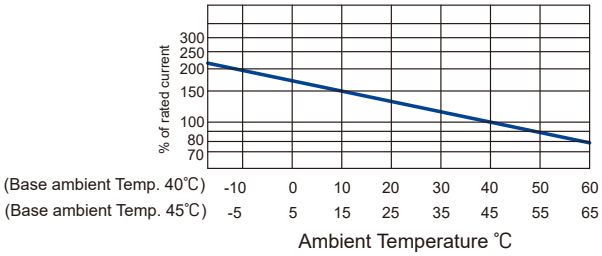
Compensation Curve



BM30-SN

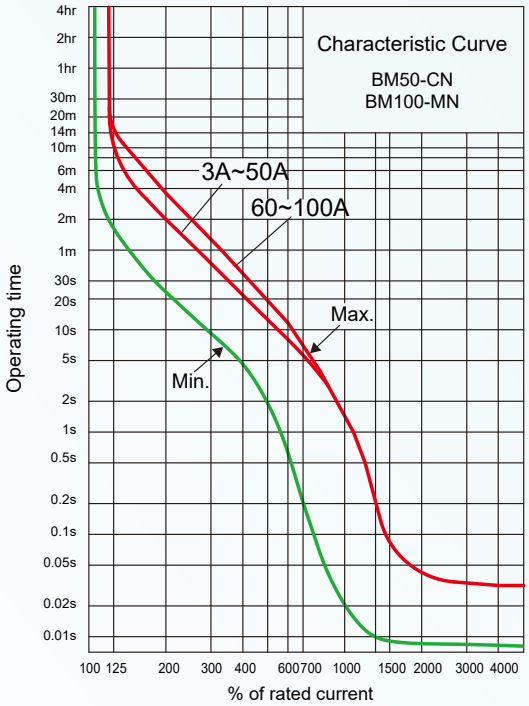


Compensation Curve

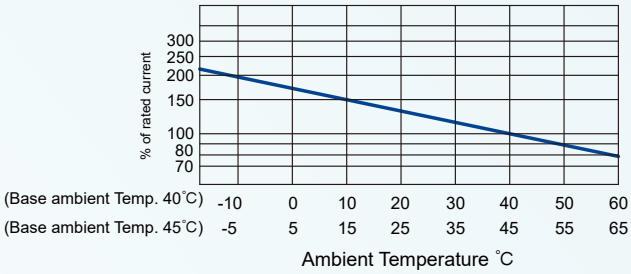


Tripping Characteristic Curve

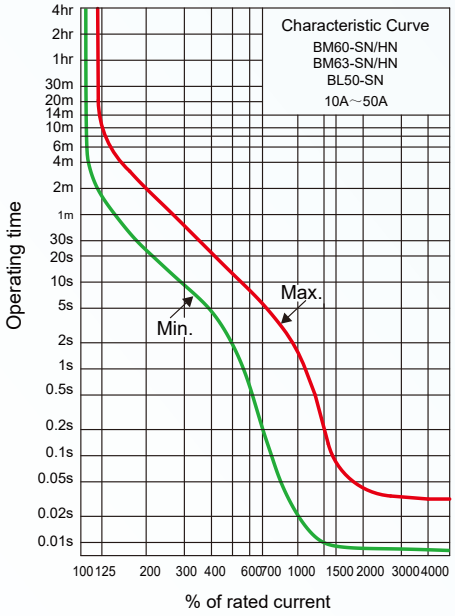
BM50-CN BM100-MN

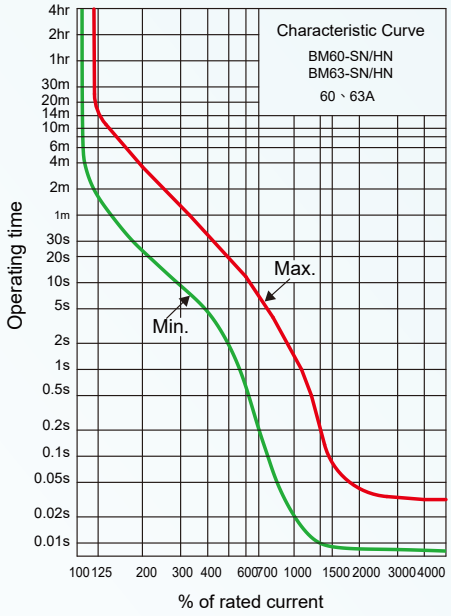


Compensation Curve

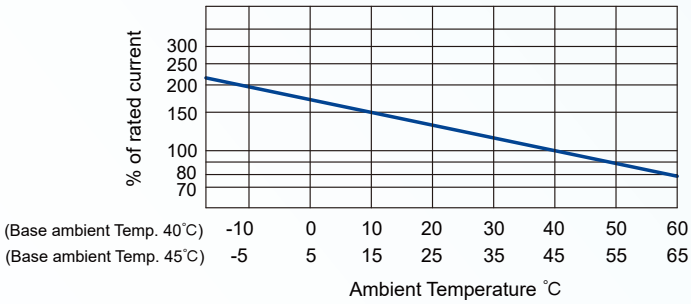


BM60-SN、BM60-HN、BM63-SN、BM63-HN、BL50-SN



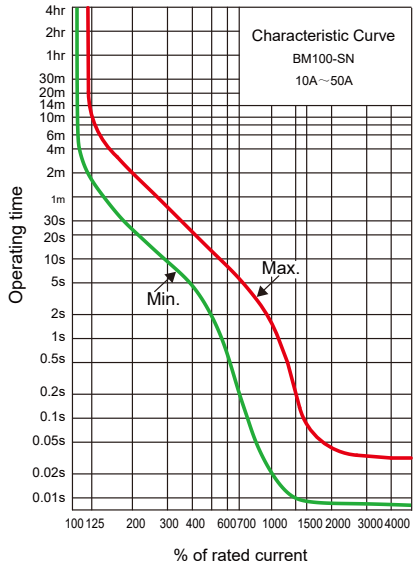


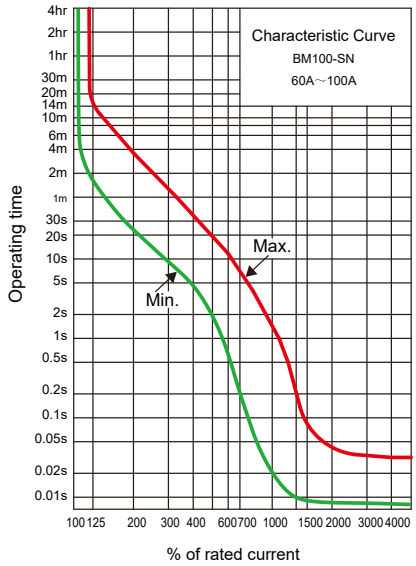
Compensation Curve



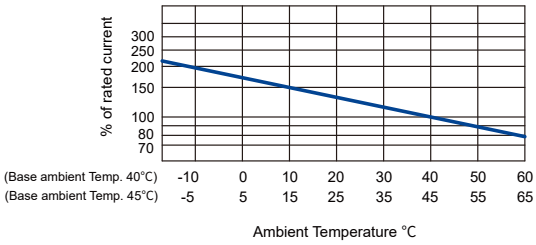
Tripping Characteristic Curve

BM100-SN

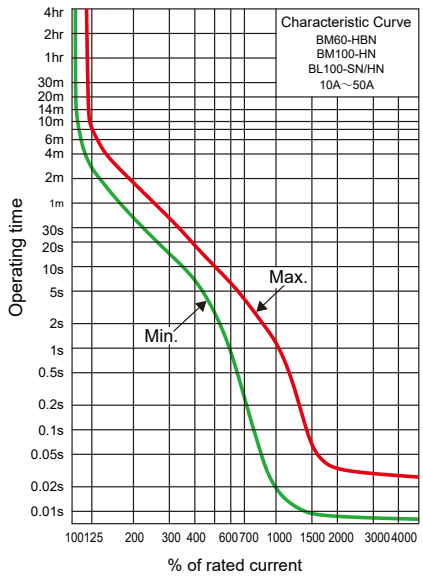


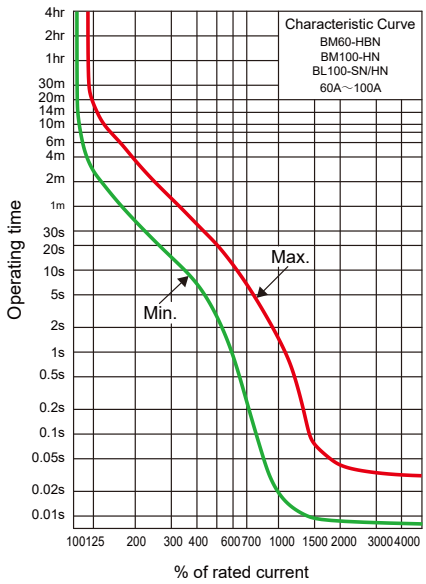


Compensation Curve

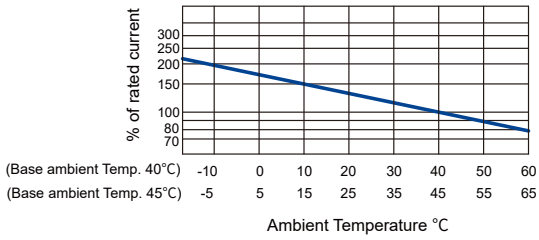


BM60-HBN、BM100-HN、BL100-SN/HN



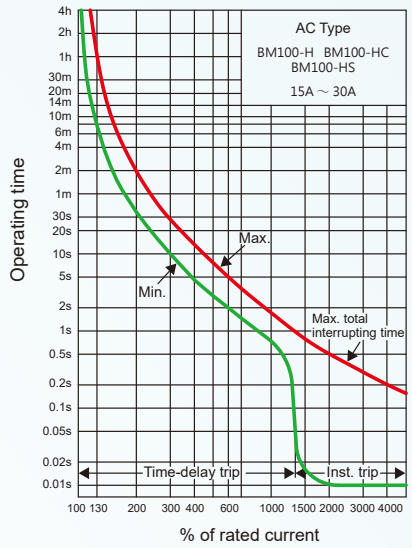


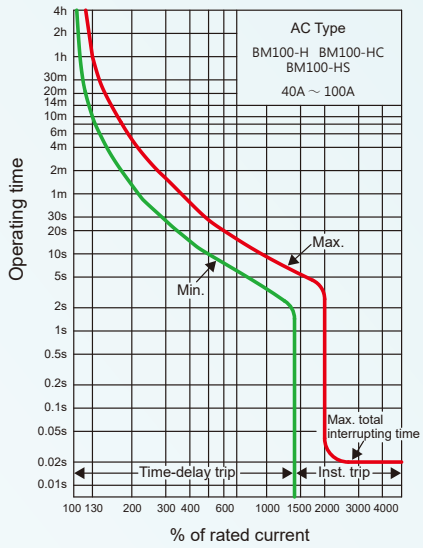
Compensation Curve



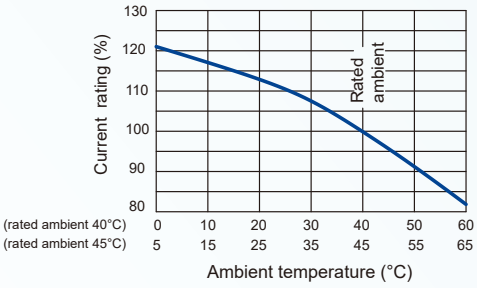
Tripping Characteristic Curve

BM100-HS

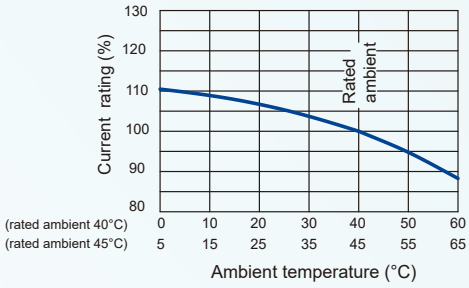




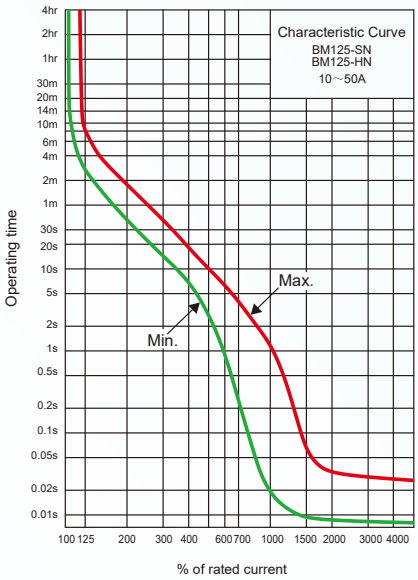
Compensation Curve

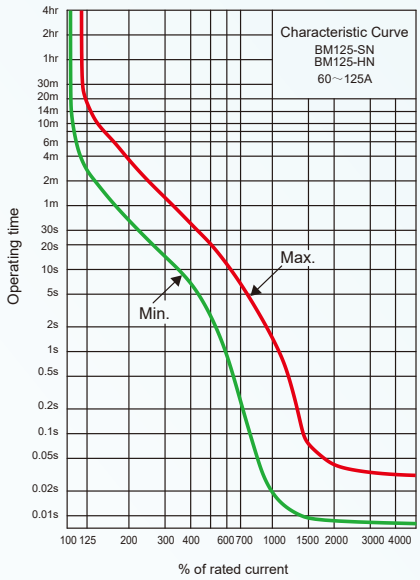


Compensation Curve

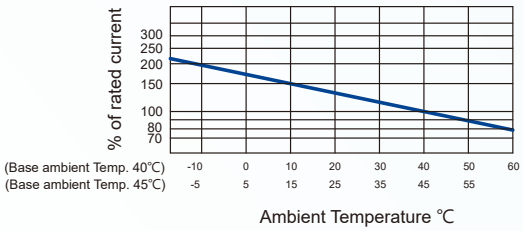


BM125-SN/HN



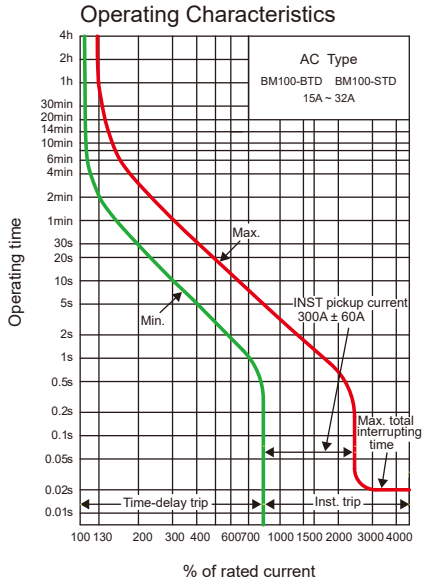


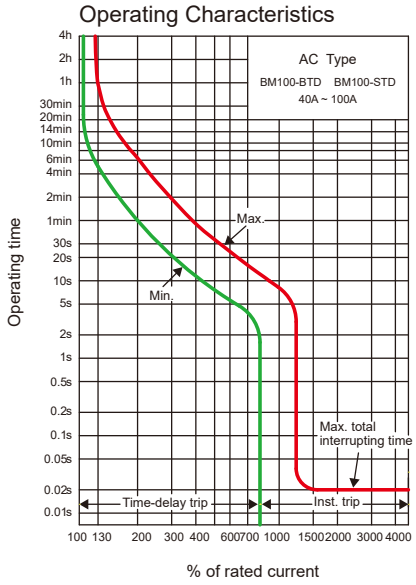
Compensation Curve

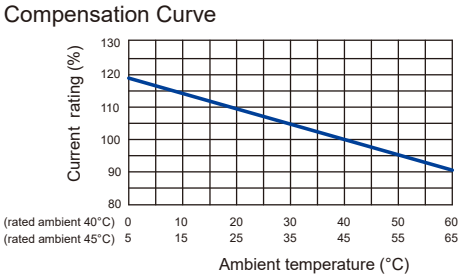


Tripping Characteristic Curve

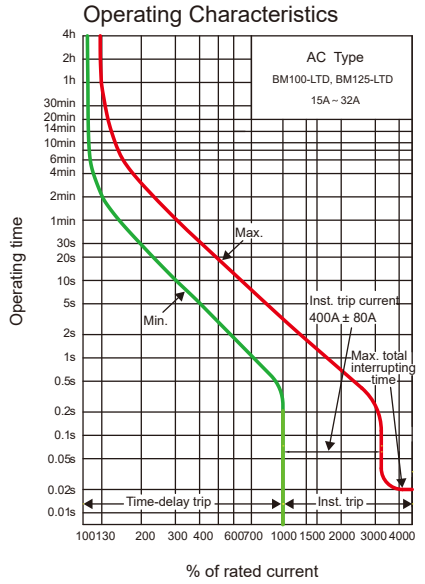
BM100-BTD/STD

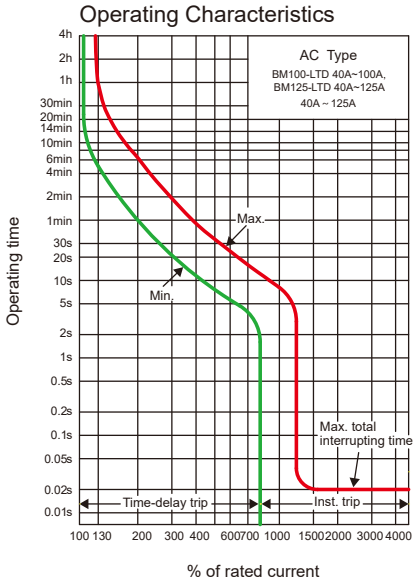


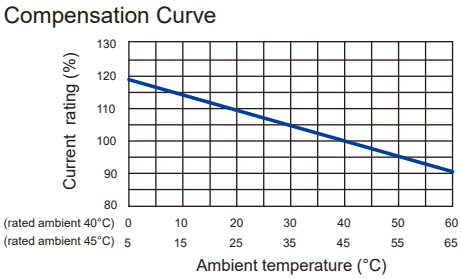




BM100-LTD,BM125-LTD

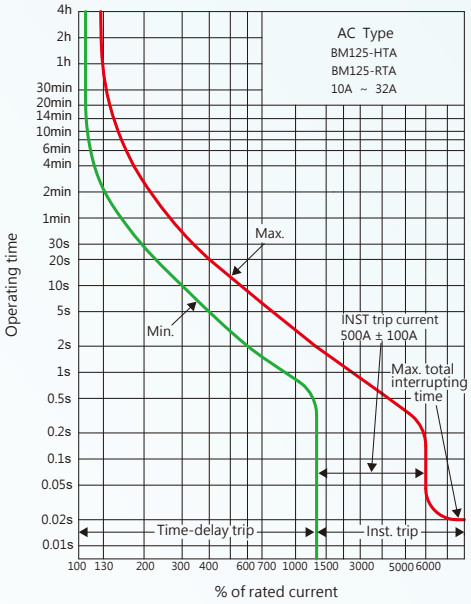


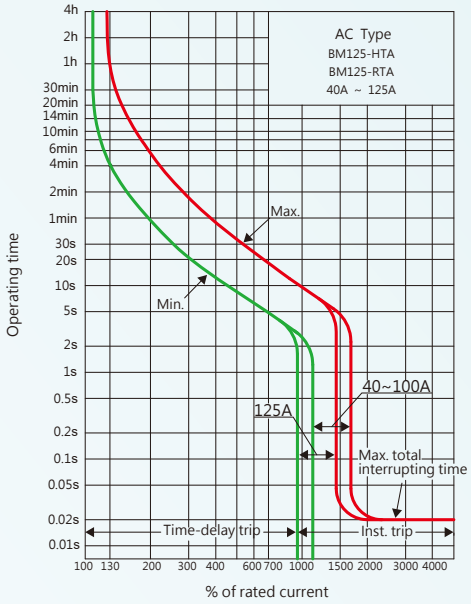




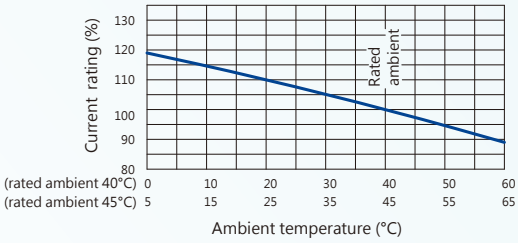
Tripping Characteristic Curve

BM125-HTA/RTA

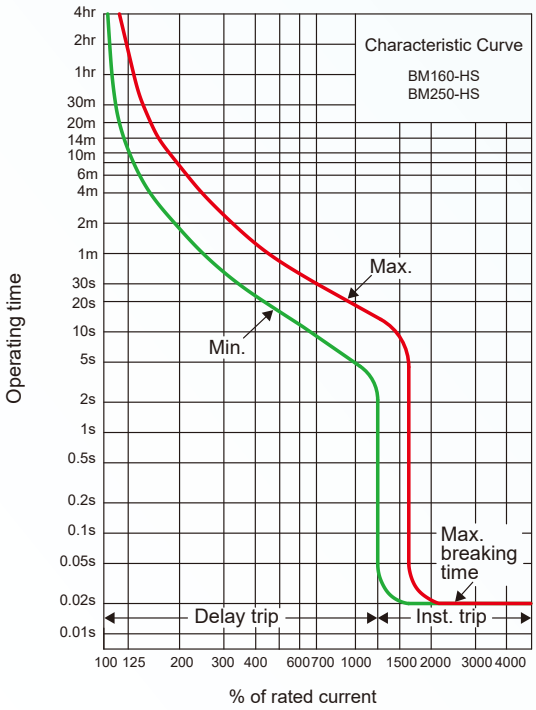




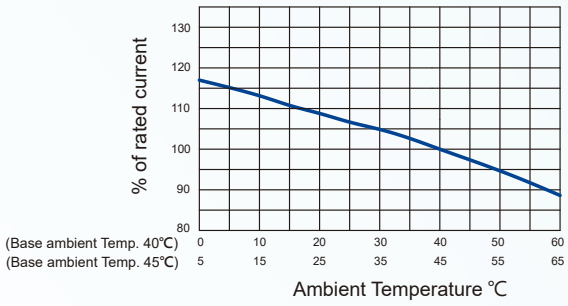
Compensation Curve



BM160-HS、BM250-HS

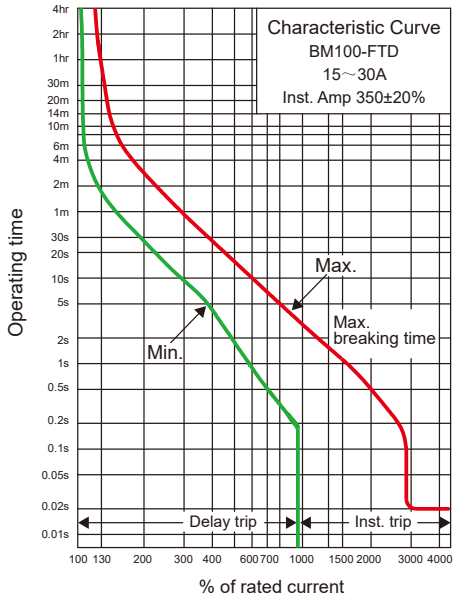


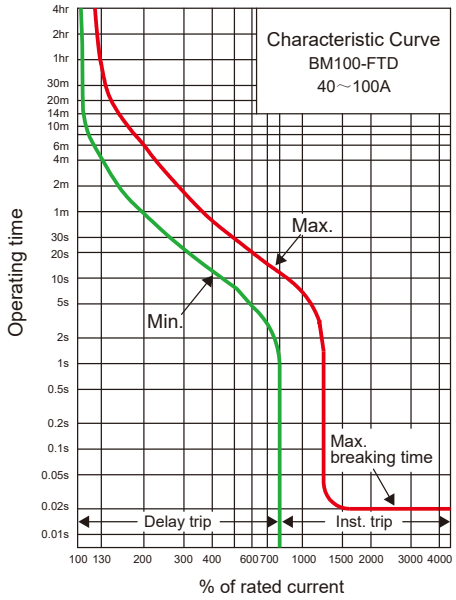
Compensation Curve



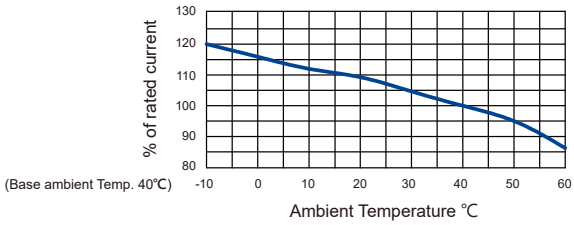
Tripping Characteristic Curve

BM100-FTD

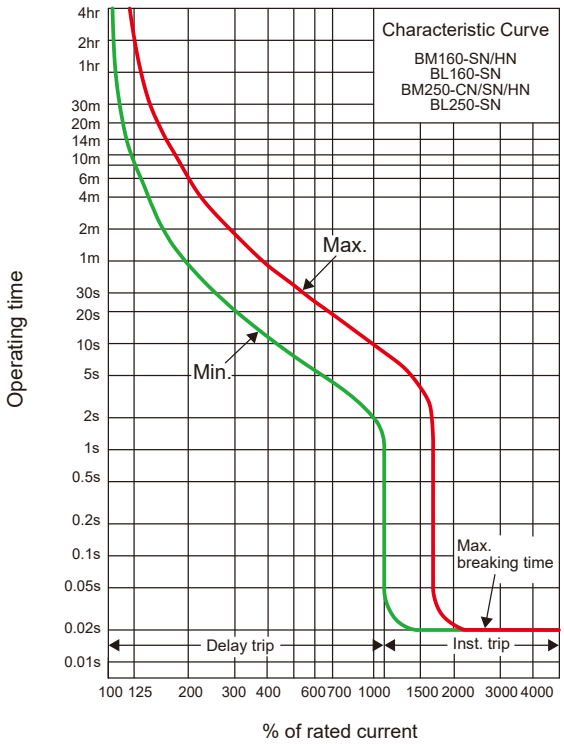




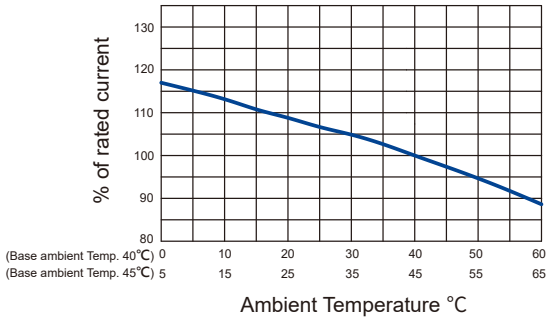
Compensation Curve



BM(BL)160-SN/HN、BM(BL)250-CN/SN/HN

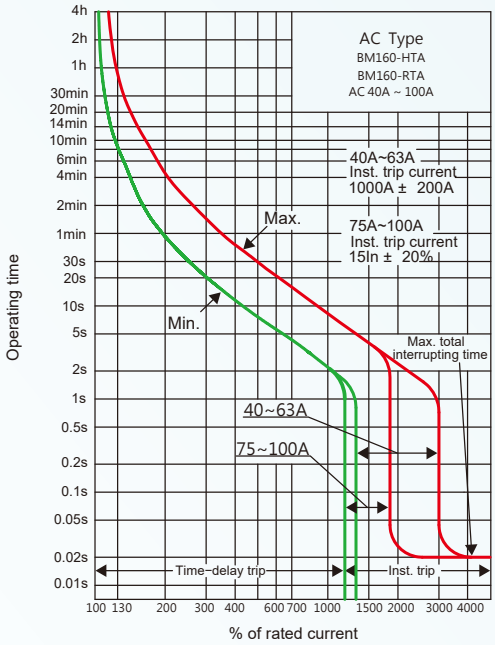


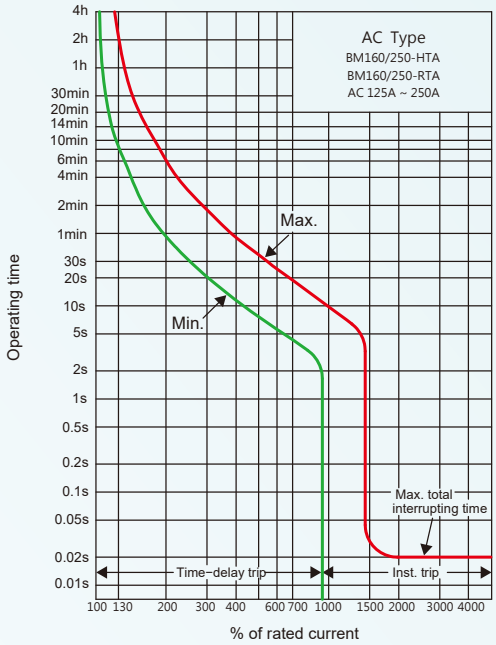
Compensation Curve



Tripping Characteristic Curve

BM160/250-HTA/RTA





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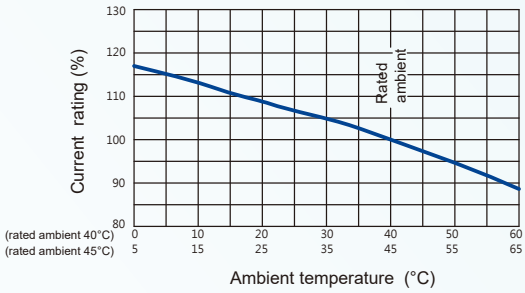
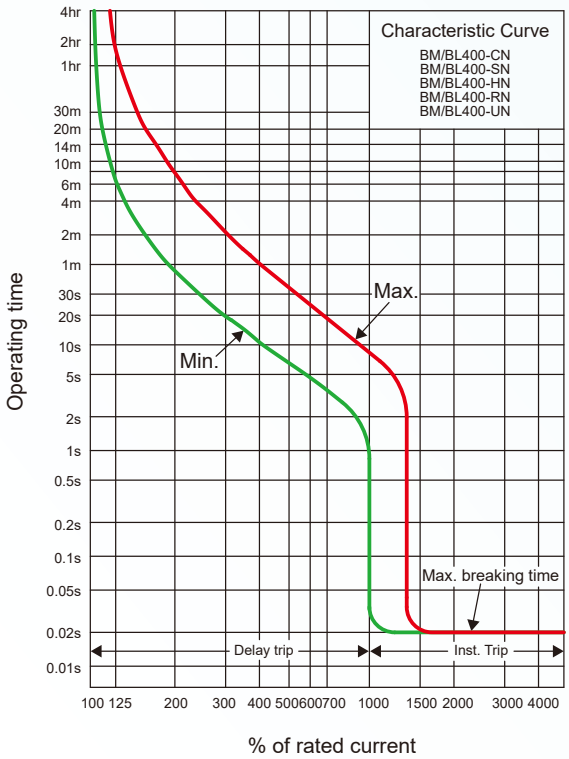
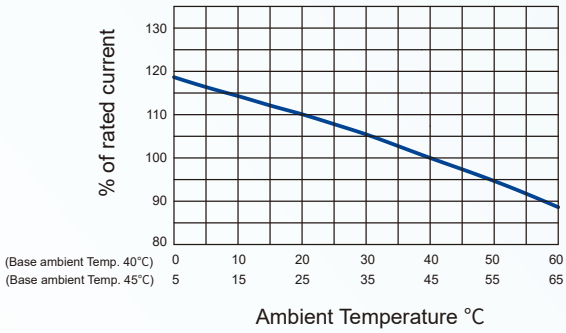


BM(BL)400-CN/SN/HN/RN/UN

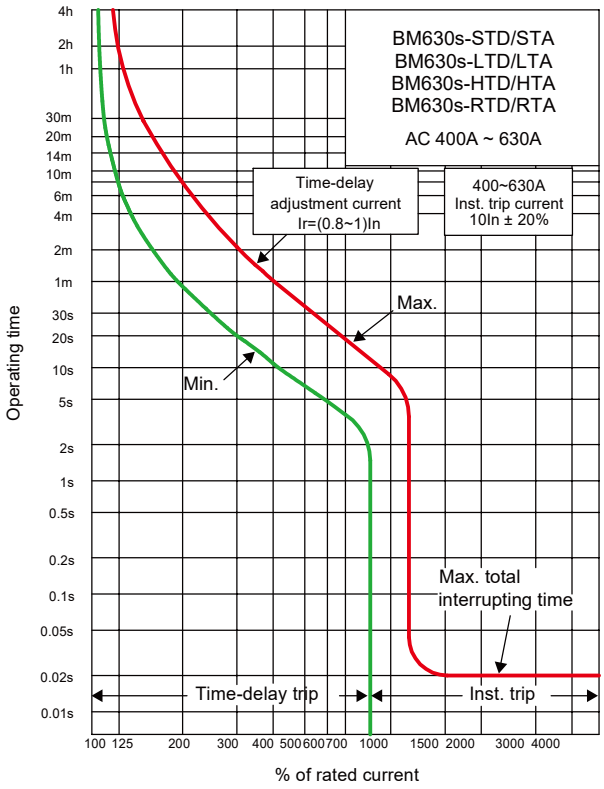


Compensation Curve

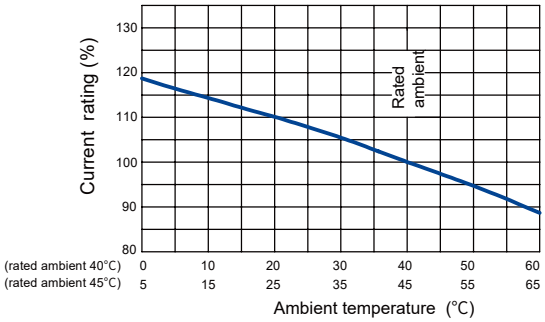


Tripping Characteristic Curve

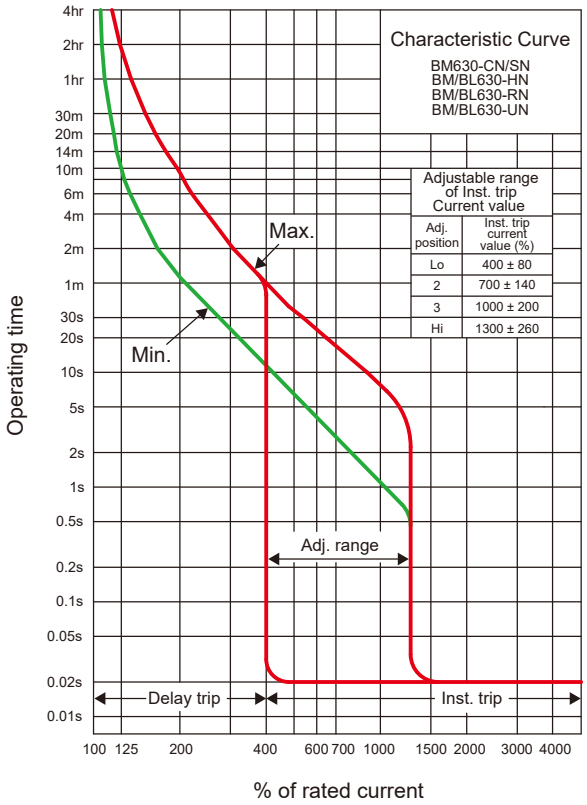
BM630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA



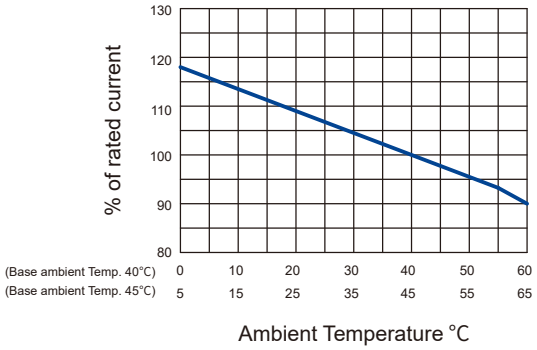
Compensation Curve



BM(BL)630-CN/SN/HN/RN/UN

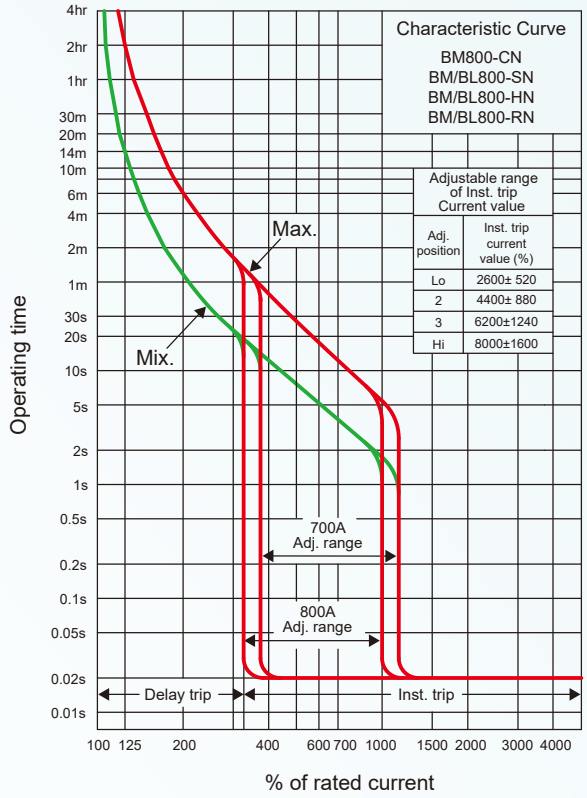


Compensation Curve

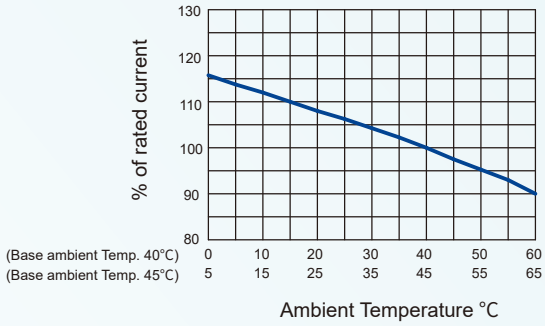


Tripping Characteristic Curve

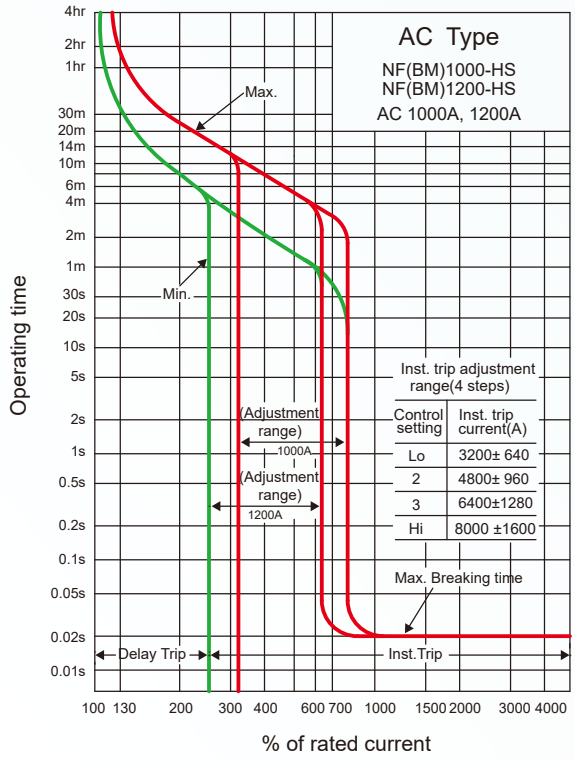
BM(BL)800-CN/SN/HN/RN



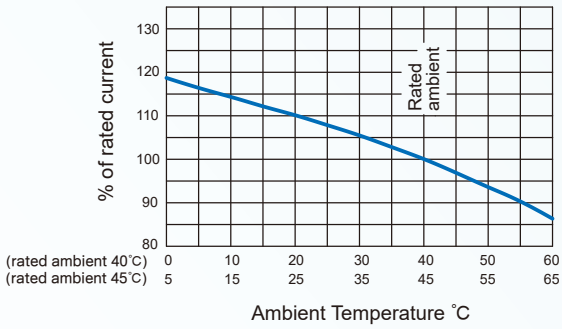
Compensation Curve



BM1000-HS、BM1200-HS

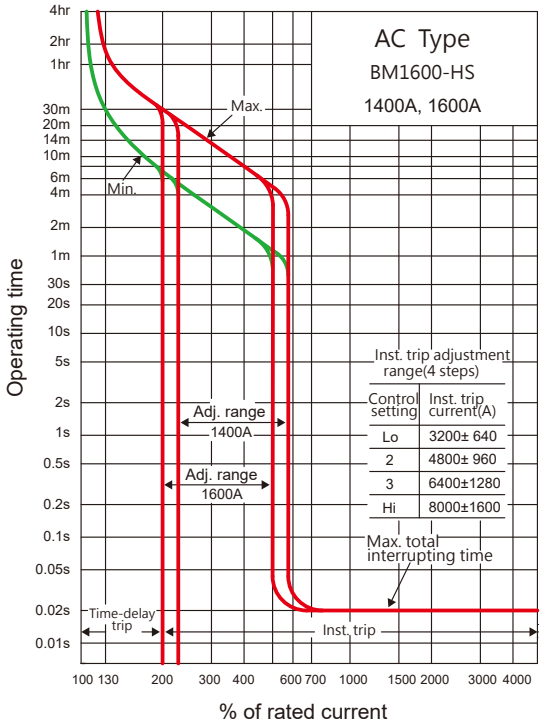


Compensation Curve

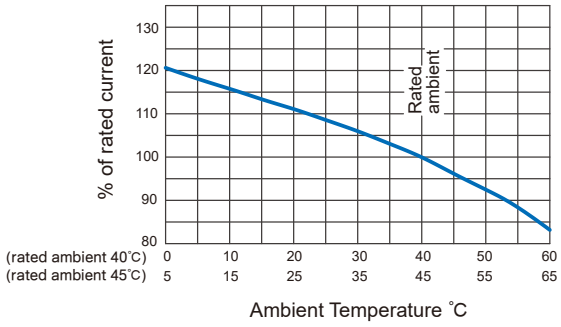


Tripping Characteristic Curve

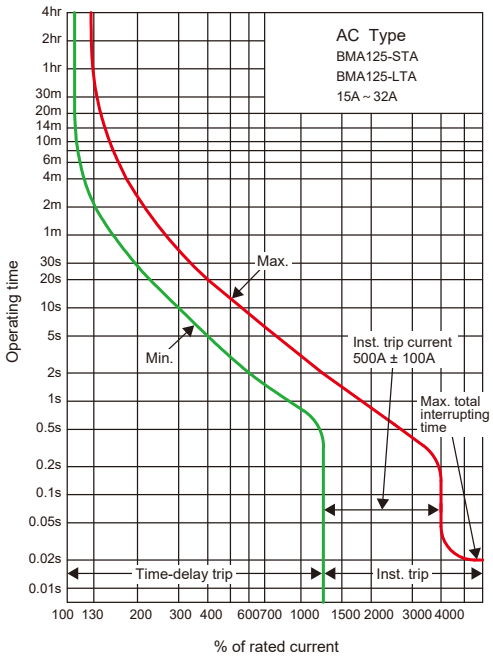
BM1600-HS

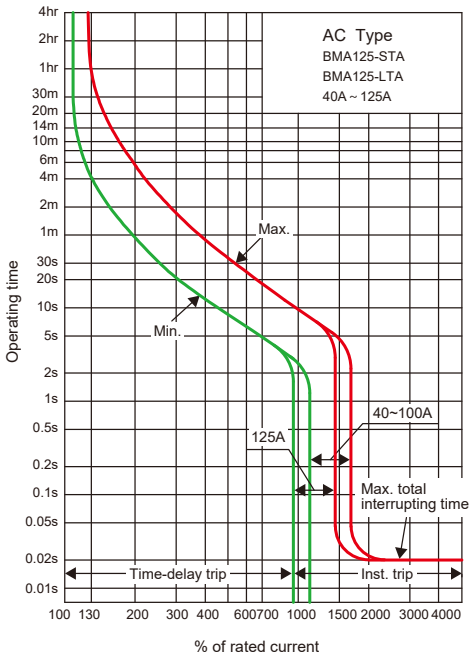


Compensation Curve

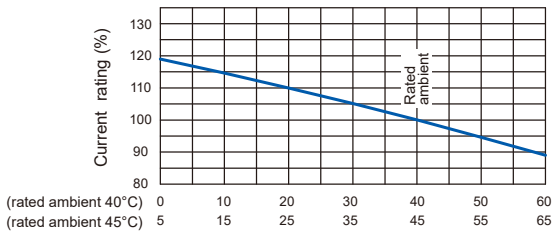


BMA125-STA/LTA/HTA



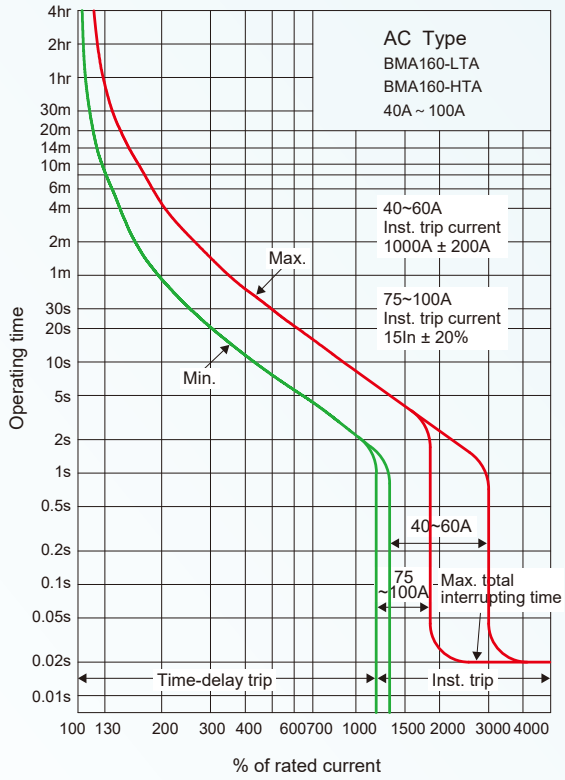


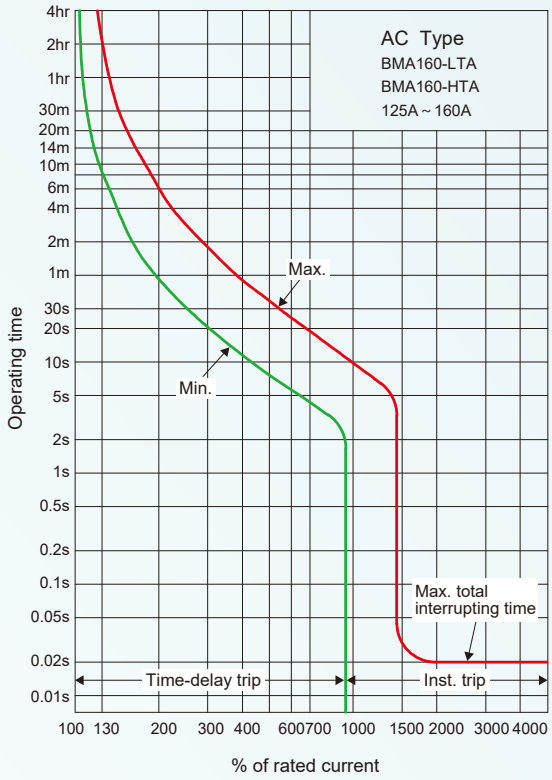
Compensation Curve

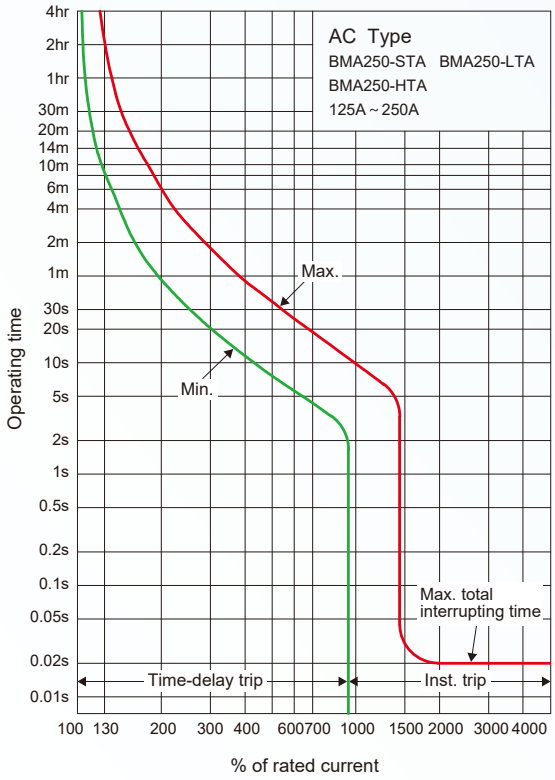


Tripping Characteristic Curve

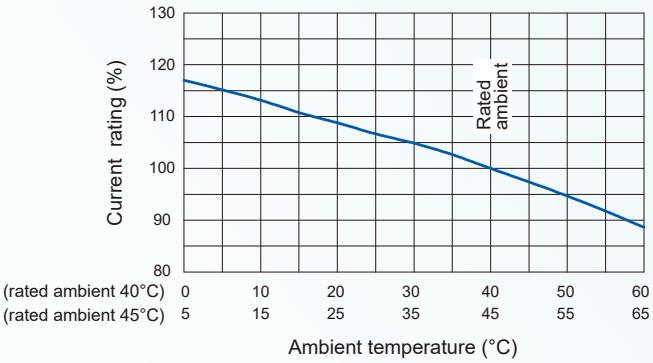
BMA160-STA/LTA/HTA, BMA250-STA/LTA/HTA





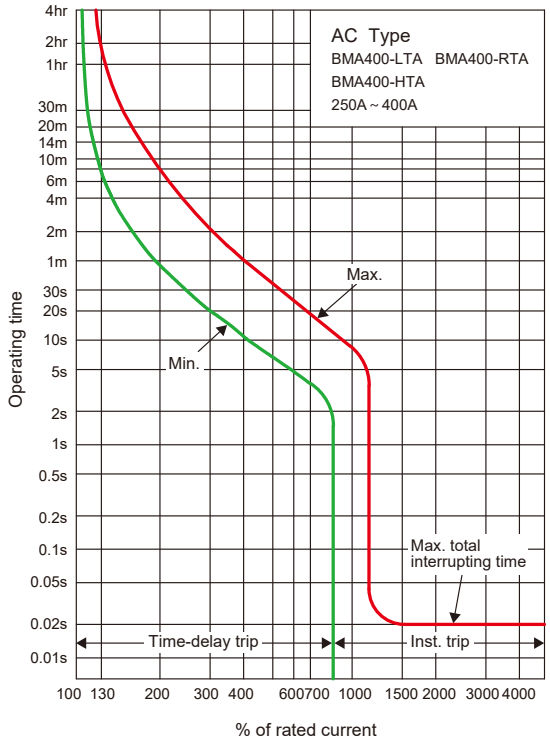


Compensation Curve

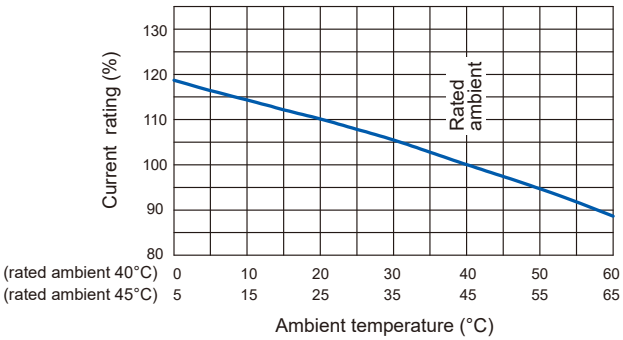


Tripping Characteristic Curve

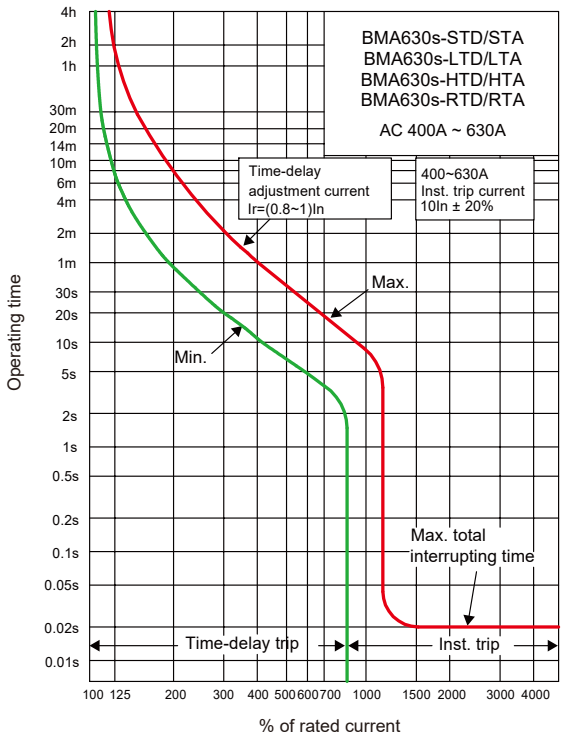
BMA400-LTA/HTA/RTA



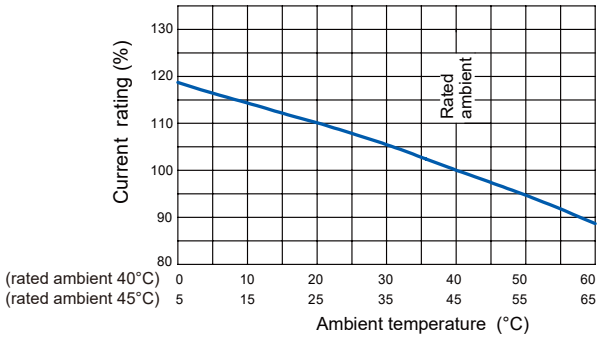
Compensation Curve



BMA630s-STD/LTD/HTD/RTD/STA/LTA/HTA/RTA

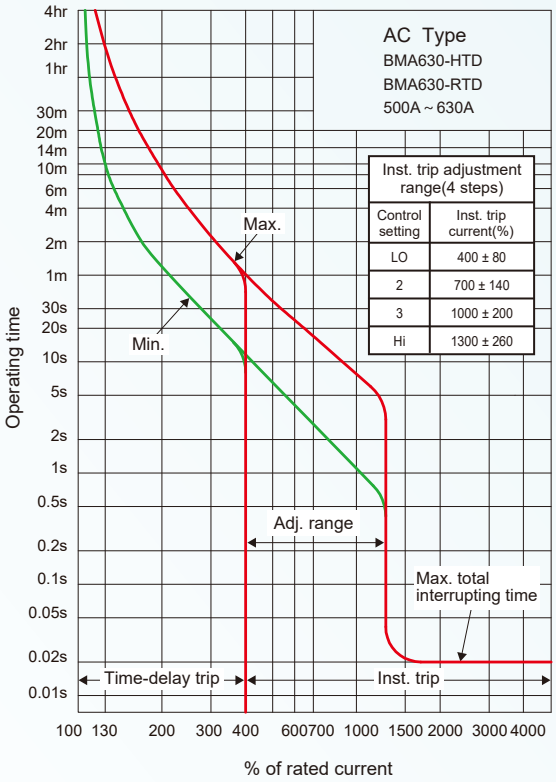


Compensation Curve



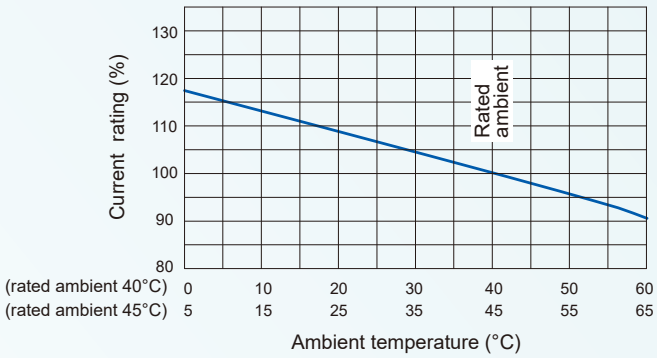
Tripping Characteristic Curve

BMA630-HTD/RTD/HTA/RTA

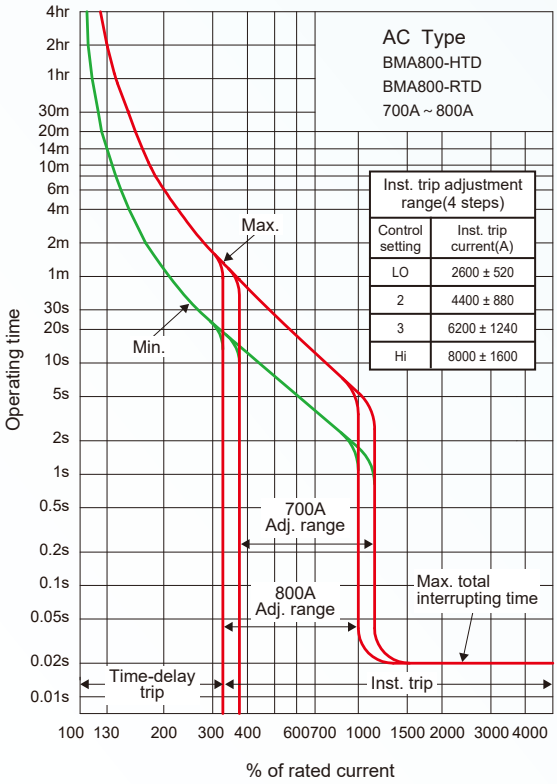


Inst. trip adjustment range(4 steps)	
Control setting	Inst. trip current(%)
LO	400 ± 80
2	700 ± 140
3	1000 ± 200
Hi	1300 ± 260

Compensation Curve

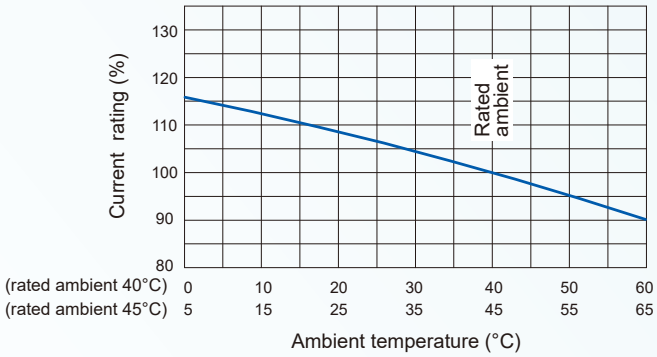


BMA800-HTD/RTD/HTA/RTA



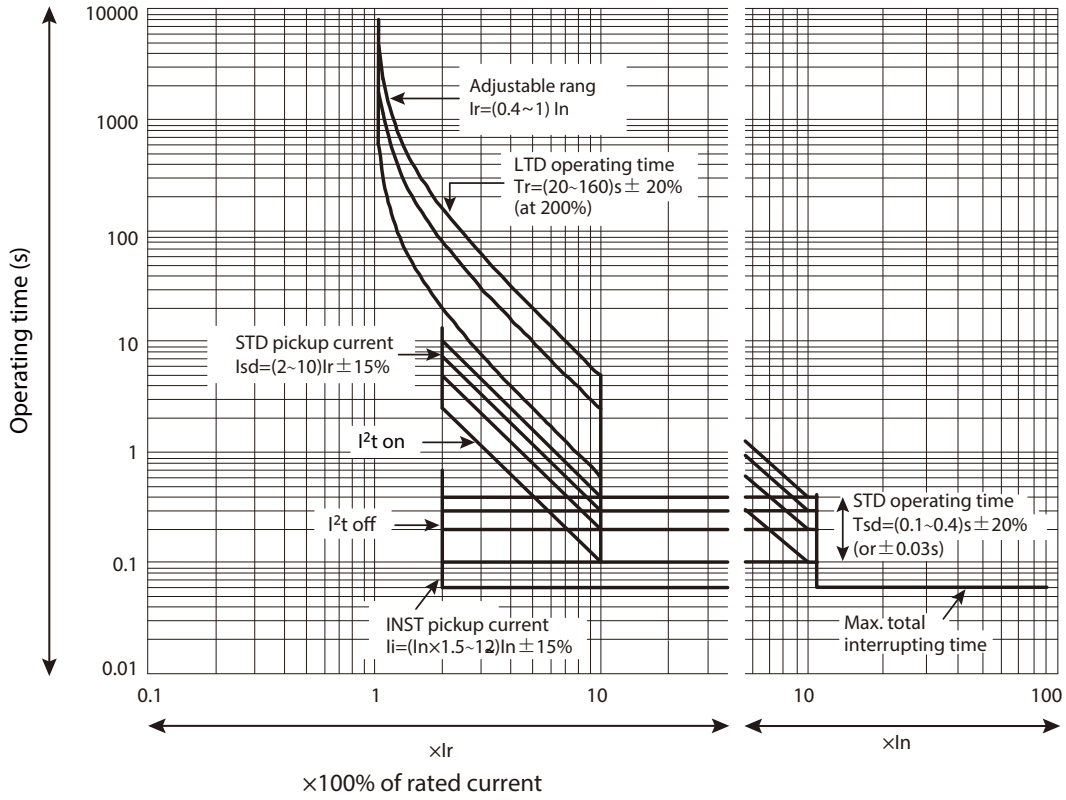
Inst. trip adjustment range(4 steps)	
Control setting	Inst. trip current(A)
LO	2600 ± 520
2	4400 ± 880
3	6200 ± 1240
Hi	8000 ± 1600

Compensation Curve

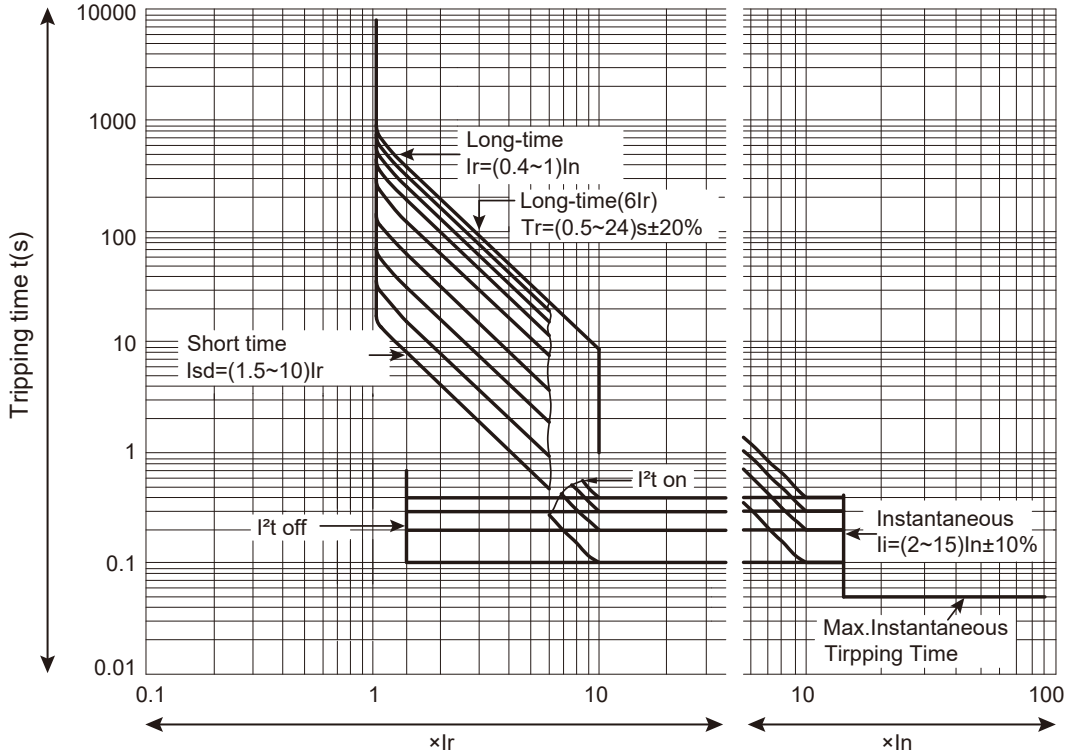


Tripping Characteristic Curve

BMA630-HED/RED, BMA800-HED/RED



BMA1000-HED/RED, BMA1250-HED/RED, BMA1600-HED/RED

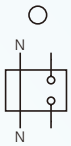


Wiring Example

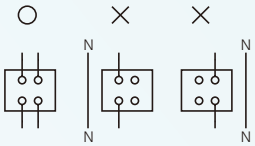
■ ELCB Wiring Diagram

○ Correct ✕ Incorrect

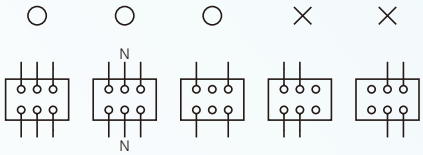
1P



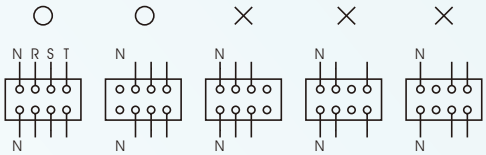
2P



3P

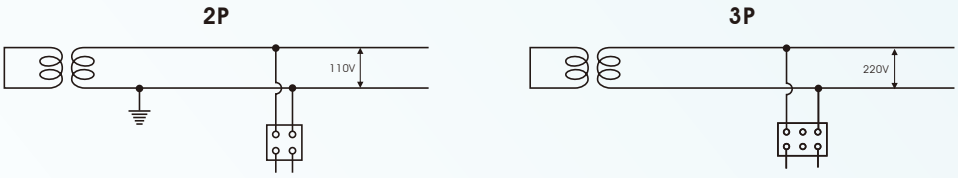


4P



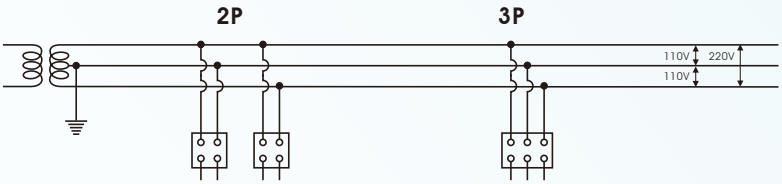
■ Power Circuit System

1 Phase 2 Wire
110V、220V



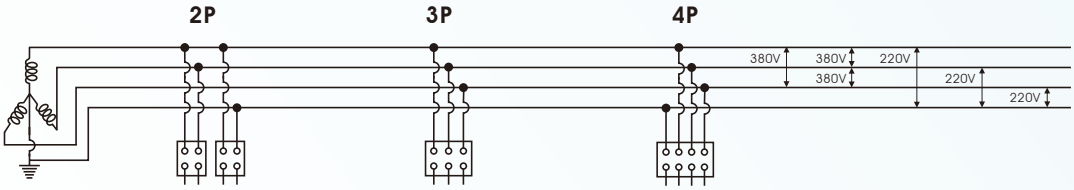
(1P 110V) (3P 220V)

I Phase 3 Wire
110V、220V



(1P 110V)(1P 220V) (3P 110V/220V)

3 Phase 4 Wire
220V、380V



(1P 380V)(1P 220V) (3P 380V) (3 Phase 4 220V/380V)

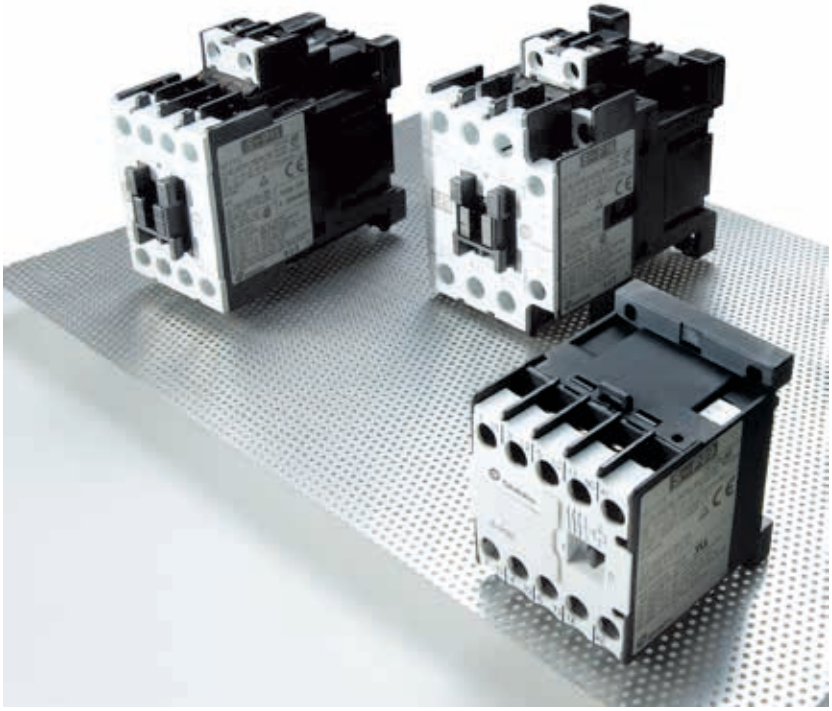
Shihlin Electric

CIRCUIT BREAKER (MCCB / ELCB / EMCCB / MCB)

Breaker & Switchgear System

AIR CIRCUIT BREAKER

AUTOMATIC TRANSFER SWITCHES



MAGNETIC CONTACTOR / SWITCH (CONTACTOR / MS / MMS)

SURGE PROTECTIVE DEVICE

SMART METER

INVERTER

LOW VOLTAGE POWER CAPACITORS

SHIHLIN ELECTRIC & ENGINEERING

MOTOR CONTROL (CONTACTOR/ MS/ MMS), CIRCUIT BREAKER (MCCB/ ELCB/ EMCCB/ MCB), AIR CIRCUIT BREAKER, AUTOMATIC TRANSFER SWITCHES (Panel Board Type/ Residential Unit Use), SURGE PROTECTIVE DEVICE, LOW VOLTAGE POWER CAPACITORS, SMART METER, INVERTER

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e-mail. b.export@seec.com.tw
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