

MOLDED CASE CIRCUIT BREAKER EARTH LEAKAGE CIRCUIT BREAKER



 **MIRDC**
ISO 9001
4A6Y010-10

 **MIRDC**
ISO 14001
4A6E003-10



BM Series Frame Size Selection Table







Frame Size	Type	Rated Breaking Capacity (kA)					Pole	Rated Current In(A)	Accessory		
		IEC60947-2							Blank	No Acc.	
		220V	380V	415V	440V	500V					
30	CN	2.5	1.5	1.5	-	-	2, 3	3, 5, 10, 15, 20, 30.	Blank	No Acc.	
	SN	5	2.5	2.5	2.5	1.5	3		AX	Auxiliary Switch	
50	CN	5	2.5	2.5	2.5	1.5	2, 3	10, 15, 20, 30, 40, 50.	AL	Alarm Switch	
	SN	10	7.5	7.5	7.5	5	2, 3, 4		SHT	Shunt Trip	
60	HN	25	15	10	10	7.5	2, 3, 4	10, 15, 20, 25, 30, 40, 50, 60.	UVT	Under Voltage Trip	
	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	10, 15, 20, 30, 40, 50, 60, 75, 100.			
	MN	15	10	10	7.5	5	2, 3				
	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				
125	STD	50	30	25	25	5*	2, 3, 4	15, 16, 20, 25, 30, 32, 40, 50, 60, 63, 75, 80, 100			
	LTD	85	36	36	32	5*	2, 3, 4				
	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				
160	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				
	SN	50	30	25	25	15	2, 3, 4		125, 140, 160.		
250	HN	85	36	36	32	20	3, 4	40, 50, 60, 63, 70, 75, 80, 100, 125, 140, 150, 160.			
	HTA	100	50	50	50	10*	3, 4				
	RTA	100	70	70	50	10*	3, 4				
	HS	125	85	85	70	50	3, 4				
400	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				
	HTA	100	50	50	50	10*	3, 4				
	RTA	100	70	70	50	10*	3, 4				
	HS	125	85	85	70	50	3, 4				
630s	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				
	STD	36	25	25	25	10*	3, 4				
630	LTD	65	36	36	36	10*	3, 4	400, 500, 600, 630.			
	HTD	85	50	50	50	10*	3, 4				
	RTD	100	70	70	70	15*	3, 4				
	CN	35	25	25	22	14	2, 3, 4				
800	SN	50	35	35	30	20	3, 4	500, 630.			
	HN	85	50	50	50	25	3, 4				
	RN	100	70	70	70	42	3, 4				
	UN	125	100	85	85	65	3, 4				
1000	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				
1200	HS	130	100	85	85	65	3	1000			
1600	HS	130	100	85	85	65	3	1200			
1600	HS	130	100	85	85	65	3	1400, 1600.			

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.

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		500		
Uimp(kV)		6		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		130		155	
		c	52		68		68		68		68		68		68	
		ca	67		90		90		90		90		90		90	
		bb	84		111		111		111		111		111		132	
		aa	23.5		25		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		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		Hydraulic magnetic		
Tripping button		—		Equipped		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

125

BM125-SN

BM125-HN

BM125-LTD

BM125-HTA






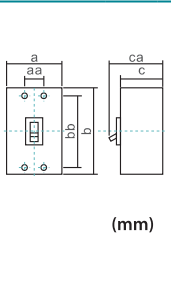
BM125-RTA



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°C		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		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	
		(mm)											
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






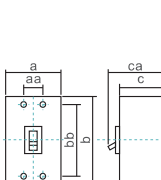
BM250-HS



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°C		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	 (mm)	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	
		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	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		






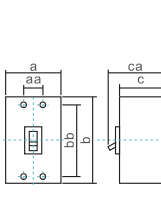
Note 1. "●" which can be installed by client, "○" which have to be installed by manufacturer. "—" which is not available.
Above accessories table is for 3P breaker.

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.

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°C		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	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	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
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	Fixed thermal Adj. magnetic	Fixed thermal Adj. magnetic
Equipped	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.