

ACB/MCCB MCB/MS

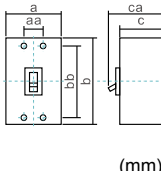


BREAKER &
SWITCHGEAR SYSTEM

MCCB | BM Series

C Series

Adjustable current from 80%~100%

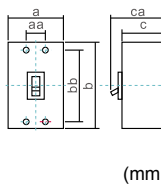
Frame size (AF)		50		100			225			250			400				
Type		BM50-CN		BM100-CN			BM225-CN			BM250-CN			BM400-CN				
Photograph																	
Rated current In (A) at ambient temp.40°C		10,15,20,30,40,50.		10,15,20,30,40, 50,60,75,100.			125,150,175, 200,225.			125,150,175, 200,225,250.			250,300,350,400.				
Number of poles (P)		2	3	2	3	4	2	3	4	2	3	4	2	3	4		
Rated insulation voltage Ui (V)	AC	690		690			690			690			690				
	DC	—	—	—	—	—	250	—	—	250	—	—	250	—	—		
Dimensions  (mm)	a	50	75	50	75	100	105		140	105	105	140	140	140	185		
	b	130		130			165			165			257				
	c	68		68			68			68			103				
	ca	86		86			92			92			155				
	bb	111		111			126			126			194				
	aa	0	25	0	25	25	35			35			44				
	Weight (kg)		0.45	0.65	0.45	0.65	0.85	1.3	1.5	1.9	1.3	1.5	1.9	5.0	5.7	7.5	
Rated breaking capacity (kA) #4.	IEC 60947-2 EN 60947-2 AC CNS 14816-2 Icu/Ics *Note.1	*550V *600V	1.5/0.8		5/2.5		7.5/3.8			7.5/3.8			14/7				
		440V *480V	2.5/1.3		7.5/3.8		15/7.5			15/7.5			22/11				
		380V *400V	2.5/1.3		7.5/3.8		22/11			22/11			25/13				
		220V *230V	5/2.5		10/5		30/15			30/15			35/18				
	CNS 14816-2 JIS C8370 AC (asym/sym) *Note.1	*550V *600V	1.5		5		7.5			7.5			15/14				
		440V *480V	2.5		7.5		18/15			18/15			25/22				
		380V *400V	2.5		7.5		25/22			25/22			30/25				
		220V *240V	5		10		35/30			35/30			40/35				
	IEC 60947-2 EN 60947-2 #1. Icu DC #2.	250V	—		—		10			—	—	10	—	—	10	—	—
		125V	—		—		15			—	—	15	—	—	15	—	—
	Connection		Clamp terminal		Clamp terminal			Clamp terminal			Clamp terminal			Busbar			
	Optional accessories #3.	Alarm switch (AL)	●		●			▲			▲			▲			
Auxiliary switch (AUX)		●		●			▲			▲			▲				
Shunt trip (SHT)		●		●			▲			▲			▲				
Under-voltage trip (UVT)		—	●	—	—	●	—	▲			▲			▲			
External handle		▲		▲			▲			▲			▲				
Terminal cover		▲		▲			▲			▲			▲				
Automatic tripping device		Hydraulic magnetic		Hydraulic magnetic			Thermal adjustable magnetic			Thermal adjustable magnetic			Thermal magnetic				
Tripping button		Equipped		Equipped			Equipped			Equipped			Equipped				

- Note 1. The rated breaking capacities indicated by the voltages which marked with * are for reference.
2. The asym value marked here is an anticipated value under CNS and IEC' S demand. But it will not be printed on the products.
3. “▲” which can be installed by client. “●” which have to be installed by manufacturer. “—” which is not available.

				S Series											
630		800		30			50			100			100		
BM630-CN		BM800-CN		BM30-SN			BM50-SN			BM100-MN			BM100-SN		
															
500,600,630.		700,800.		3,5,10,15,20,30.			10,15,20,30,40,50.			10,15,20,30,40,50,60,75,100.			10,15,20,30,40,50,60,75,100.		
3	4	3	4	2	3	4	2	3	4	2	3	4	2	3	4
690		690		690			690			690			690		
250		250		—	—	—	250	—	—	250	—	—	—	—	—
210	280	210	280	50	75	100	50	75	100	50	75	100	50	75	100
275		275		130			130			130			130		
103		103		68			68			68			68		
155		155		86			86			86			86		
243		243		111			111			111			111		
70		70		0	25	25	0	25	25	0	25	25	0	25	25
10	13	10.5	13.5	0.45	0.65	0.85	0.45	0.65	0.85	0.45	0.65	0.85	0.45	0.65	0.85
14/7		20/10		1.5/0.8			5/2.5			5/2.5			7.5/3.8		
22/11		30/15		2.5/1.3			7.5/3.8			7.5/3.8			10/5		
25/13		35/18		2.5/1.3			7.5/3.8			10/5			15/7.5		
35/18		50/25		5/2.5			10/5			15/7.5			25/13		
15/14		22/20		1.5			5			5			7.5		
25/22		35/30		2.5			7.5			7.5			10		
30/25		40/35		2.5			7.5			10			18/15		
40/35		60/50		5			10			18/15			30/25		
10	—	20	—	—			—			—			—		
—	—	—	—	—			—			—			—		
Busbar		Busbar		Clamp terminal			Clamp terminal			Clamp terminal			Clamp terminal		
▲		▲		●			●			●			●		
▲		▲		●			●			●			●		
▲		▲		●			●			●			●		
▲		▲		—	●	—	—	●	—	—	●	—	—	●	—
▲		▲		▲			▲			▲			▲		
▲		▲		▲			▲			▲			▲		
Thermal adjustable magnetic		Thermal adjustable magnetic		Hydraulic magnetic			Hydraulic magnetic			Hydraulic magnetic			Hydraulic magnetic		
Equipped		Equipped		Equipped			Equipped			Equipped			Equipped		

MCCB | BM Series

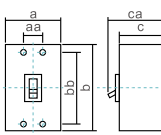
Adjustable current from 80%~100%

Frame size (AF)			125			225			250			400			630	
Type			BM125-SN			BM225-SN			BM250-SN			BM400-SN			BM630-SN	
Photograph																
Rated current In (A) at ambient temp.40℃			10,15,20,30,40,50, 60,75,100,125.			125,150,175, 200,225.			125,150,175, 200,225,250.			250,300,350,400.			500,600,630.	
Number of poles (P)			2	3	4	2	3	4	2	3	4	2	3	4	3	4
Rated insulation voltage Ui (V)		AC	690			690			690			690			690	
		DC	—	—	—	250	—	—	250	—	—	250	—	—	250	
Dimensions  (mm)	a	60	90	120	105		140	105	105	140	140	140	185	210	280	
	b	155			165			165			257			275		
	c	68			68			68			103			103		
	ca	90			92			92			155			155		
	bb	132			126			126			194			243		
	aa	0	30	30	35			35			44			70		
	Weight (kg)		0.9	1.3	1.6	1.3	1.5	1.9	1.3	1.5	1.9	5.0	5.7	7.5	10	13
Rated breaking capacity (kA) #4.	IEC 60947-2 EN 60947-2 AC CNS 14816-2 Icu/Ics *Note.1	*550V *600V	7.5/3.8			15/7.5			15/7.5			20/10			20/10	
		440V *480V	15/7.5			25/13			25/13			30/15			30/15	
		380V *400V	22/11			30/15			30/15			35/18			35/18	
		220V *230V	30/15			50/25			50/25			50/25			50/25	
	CNS 14816-2 JIS C8370 AC (asym/sym) *Note.1	*550V *600V	7.5			18/15			18/15			22/20			22/20	
		440V *480V	18/15			30/25			30/25			35/30			35/30	
		380V *400V	25/22			35/30			35/30			40/35			40/35	
		220V *240V	35/30			60/50			60/50			60/50			60/50	
	IEC 60947-2 EN 60947-2 Icu #1. DC #2.	250V	—			15	—	—	15	—	—	15	—	—	20	—
		125V	—			20	—	—	20	—	—	20	—	—	—	—
Connection		Clamp terminal			Clamp terminal			Clamp terminal			Busbar			Busbar		
Optional accessories #3.	Alarm switch (AL)	●			▲			▲			▲			▲		
	Auxiliary switch (AUX)	●			▲			▲			▲			▲		
	Shunt trip (SHT)	●			▲			▲			▲			▲		
	Under-voltage trip (UVT)	—	●	●	▲			▲			▲			▲		
	External handle	▲			▲			▲			▲			▲		
	Terminal cover	▲			▲			▲			▲			▲		
Automatic tripping device		Hydraulic magnetic			Thermal adjustable magnetic			Thermal adjustable magnetic			Thermal magnetic			Thermal adjustable magnetic		
Tripping button		Equipped			Equipped			Equipped			Equipped			Equipped		

- Note
1. The rated breaking capacities indicated by the voltages which marked with * are for reference.
 2. The asym value marked here is an anticipated value under CNS and IEC' S demand. But it will not be printed on the products.
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		H Series												
800		50			100			100		100		125		
BM800-SN		BM50-HN			BM100-HN			BM100-H		BM100-HC		BM125-HN		
														
700,800.		10,15,20,30,40,50.			10,15,20,30,40,50,60,75,100.			15,20,30,40,50,60,75,100.		15,20,30,40,50,60,75,100.		10,15,20,30,40,50,60,75,100,125.		
3	4	2	3	4	2	3	4	2	3	2	3	2	3	4
690		690			690			690		690		690		
250		250	—	—	250	—	—	250		250		—	—	—
210	280	50	75	100	60	90	120	105		105		60	90	120
275		130			155			165		165		155		
103		68			68			86		86		68		
155		86			90			112		112		90		
243		111			132			126		126		132		
70		0	25	25	0	30		35		35		0	30	30
10.5	13.5	0.45	0.65	0.85	0.9	1.3	1.6	2.1	2.6	2.1	2.6	0.9	1.3	1.6
25/13		5/2.5			15/7.5			25/13		30/15		15/7.5		
50/25		10/5			25/13			42/21		50/25		25/13		
50/25		15/7.5			30/15			50/25		65/33		30/15		
85/43		25/13			50/25			85/43		100/50		50/25		
30/25		5			18/15			30/25		—		18/15		
60/50		10			30/25			50/42		60/50		30/25		
60/50		18/15			35/30			60/50		75/65		35/30		
100/85		30/25			60/50			100/85		120/100		60/50		
40	—	—			—			40	—	40	—	—		
—	—	—			—			40	—	40	—	—		
Busbar		Clamp terminal			Clamp terminal			Clamp terminal		Clamp terminal		Clamp terminal		
▲		●			●			●		●		●		
▲		●			●			●		●		●		
▲		●			●			●		●		●		
▲		—	●	—	—	●	●	—		—		—	●	●
▲		▲			▲			▲		▲		▲		
▲		▲			▲			▲		▲		▲		
Thermall adjustable magnetic		Hydraulic magnetic			Hydraulic magnetic			Thermal magnetic		Thermal magnetic		Hydraulic magnetic		
Equipped		Equipped			Equipped			Equipped		Equipped		Equipped		

MCCB | BM Series

Frame size (AF)		225		225		400			400		600	
Type		BM225-HB		BM225-HC		BM400-HN			BM400-HC		BM600-HC	
Photograph												
Rated current In (A) at ambient temp.40°C		125,150,175, 200,225.		125,150,175, 200,225.		250,300,350,400.			250,300,350,400.		500,600.	
Number of poles (P)		2	3	2	3	2	3	4	2	3	3	
Rated insulation voltage Ui (V)	AC	690		690		690			690		690	
	DC	250		250		250	—	—	250		250	
Dimensions  (mm)	a	105		105		140	140	185	140		210	
	b	165		165		257			257		275	
	c	86		86		103			103		103	
	ca	112		112		155			132		140	
	bb	126		126		194			194		243	
	aa	35		35		44			44		70	
Weight (kg)		2.1	2.6	2.1	2.6	5.0	5.7	7.5	6.0	6.5	10	
IEC 60947-2 EN 60947-2 AC CNS 14816-2 Icu/Ics *Note.1	*550V *600V	25/13		30/15		25/13			30/15		30/15	
	440V *480V	42/21		50/25		42/21			50/25		50/25	
	380V *400V	50/25		65/33		50/25			65/33		65/33	
	220V *230V	85/43		100/50		85/43			100/50		100/50	
CNS 14816-2 JIS C8370 AC (asym/sym) *Note.1	*550V *600V	30/25		—		35/25			—		—	
	440V *480V	50/42		60/50		50/42			60/50		60/50	
	380V *400V	60/50		75/65		60/50			75/65		75/65	
	220V *240V	100/85		120/100		100/85			120/100		120/100	
IEC 60947-2 EN 60947-2 Icu DC #1. #2.	250V	40	—	40	—	40	—	—	40	—	40	
	125V	40	—	40	—	40	—	—	40	—	—	
Connection		Clamp terminal		Clamp terminal		Busbar			Busbar		Busbar	
Optional accessories #3.	Alarm switch (AL)	●		●		▲			●		●	
	Auxiliary switch (AUX)	●		●		▲			●		●	
	Shunt trip (SHT)	●		●		▲			●		●	
	Under-voltage trip (UVT)	—		—		▲			●		●	
	External handle	▲		▲		▲			—		—	
	Terminal cover	▲		▲		▲			▲		▲	
Automatic tripping device		Thermal magnetic		Thermal magnetic		Thermal magnetic			Thermal magnetic		Thermal adjustable magnetic	
Tripping button		Equipped		Equipped		Equipped			Equipped		Equipped	

- Note 1. The rated breaking capacities indicated by the voltages which marked with * are for reference.
 2. The asym value marked here is an anticipated value under CNS and IEC' S demand. But it will not be printed on the products.
 3. “▲” which can be installed by client. “●” which have to be installed by manufacturer. “—” which is not available.

630		800	800	1000	1200	1600
BM630-HN		BM800-HC	BM800-HS	BM1000-HS	BM1200-HS	BM1600-HS
						
500,600,630.		700,800.	700,800.	1000.	1200.	1400,1600.
3	4	3	3	3	3	3
690		690	690	690	690	690
250		250	250	250	250	250
210	280	210	210	210	210	210
275		275	406	406	406	406
103		103	140	140	140	140
155		140	190	190	190	190
243		243	375	375	375	375
70		70	70	70	70	70
10	13	11	22	23	23	34
25/13		42/21	65/33	65/33	65/33	65/33
50/25		65/33	85/43	85/43	85/43	85/43
50/25		65/33	100/50	100/50	100/50	100/50
85/43		100/50	130/65	130/65	130/65	130/65
30/25		—	75/65	75/65	75/65	75/65
60/50		75/65	100/85	100/85	100/85	100/85
60/50		75/65	120/100	120/100	120/100	120/100
100/85		120/100	150/130	150/130	150/130	150/130
40	—	40	—	—	—	—
—	—	—	—	—	—	—
Busbar		Busbar	Busbar	Busbar	Busbar	Busbar
▲		—	—	—	—	—
▲		—	—	—	—	—
▲		—	—	—	—	—
▲		—	—	—	—	—
▲		—	—	—	—	—
▲		▲	—	—	—	—
Thermal adjustable magnetic		Thermal adjustable magnetic	Thermal adjustable magnetic	Thermal adjustable magnetic	Thermal adjustable magnetic	Thermal adjustable magnetic
Equipped		Equipped	Equipped	Equipped	Equipped	Equipped

MCCB

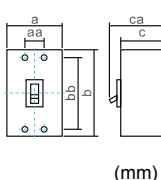
ACB

MCB

BHP

MS

ELCB | BL Series

Frame size (AF)		30		50		100		100		100		
Type		BL30-SN		BL50-SN		BL100-CN		BL100-MN		BL100-SN		
Photograph												
Rated current In (A) at ambient temp.40℃		15,20,30.		15,20,30,40,50.		60,75,100.		15,20,30,40, 50,60,75,100.		15,20,30,40, 50,60,75,100.		
Phase &wire (P)		1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W	
Number of poles (P)		3	4	3	4	3	4	3	4	3	4	
High speed	#4, #7. Rated current sensivity IΔn (mA)	30(15,50,100)* (100-300-500)*		30(15,50,100)* (100-300-500)*		30(15,50,100)* (100-300-500)*		30(15,50,100)* (100-300-500)*		30(15,50,100)* (100-300-500)*		
	IΔn operating time (S)	0.1		0.1		0.1		0.1		0.1		
	Rated non-operating current IΔn (mA)	15(7.5,25,50)* (50-150-250)*		15(7.5,25,50)* (50-150-250)*		15(7.5,25,50)* (50-150-250)*		15(7.5,25,50)* (50-150-250)*		15(7.5,25,50)* (50-150-250)*		
Delay	#7. Rated current sensivity IΔn (mA)	100-300-500 *		100-300-500 *		100-300-500 *		100-300-500 *		100-300-500*		
	IΔn operating time (S)	0.45-1.0-2.0 *		0.45-1.0-2.0 *		0.45-1.0-2.0 *		0.45-1.0-2.0 *		0.45-1.0-2.0 *		
	IΔn max. non-operating time (S)	0.1,0.5,1		0.1,0.5,1		0.1,0.5,1		0.1,0.5,1		0.1,0.5,1		
Dimensions	 (mm)	a	75 100	75 100	90 120	90 120	90 120	90 120	90 120			
		b	130		130		155		155		155	
		c	68		68		68		68		68	
		ca	86		86		90		90		90	
		bb	111		111		132		132		132	
		aa	25		25		30		30		30	
	Weight (kg)	0.7 0.9	0.7 0.9	1.5 1.8	1.5 1.8	1.5 1.8	1.5 1.8	1.5 1.8	1.5 1.8			
Rated breaking capacity (kA) #5, #6.	IEC 60947-2	440V	7.5/3.8		7.5/3.8		7.5/3.8		7.5/3.8		10/5	
	EN 60947-2	380V *400V	7.5/3.8		7.5/3.8		7.5/3.8		10/5		15/7.5	
	CNS 14816-2	220V *230V	10/5		10/5		10/5		15/7.5		25/13	
	Icu/Ics AC	110V	10/5		10/5		10/5		15/7.5		25/13	
	CNS 5422	*415V 440V	7.5		7.5		7.5		7.5		10	
	JIS C8201-2	380V *440V	7.5		7.5		7.5		10		18/15	
	asym/sym AC	220V 240V	10		10		10		18/15		30/25	
		*100V 110V	10		10		10		18/15		30/25	
Connection		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal		
Optional accessories #6.	Alarm switch (AL)	●		●		●		●		●		
	Auxiliary switch (AUX)	●		●		●		●		●		
	Shunt trip (SHT)	●		●		●		●		●		
	Under-voltage trip (UVT)	—		—		●		●		●		
	External handle	▲		▲		▲		▲		▲		
	Terminal cover	▲		▲		▲		▲		▲		
Automatic tripping device		Hydraulic magnetic		Hydraulic magnetic		Hydraulic magnetic		Hydraulic magnetic		Hydraulic magnetic		
Tripping button		Equipped		Equipped		Equipped		Equipped		Equipped		

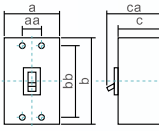
Adjustable current from 80%~100%

125		125		225		225	
BL125-SN		BL125-HN		BL225-CN		BL225-SN	
							
15,20,30,40, 50,60,75,100.		15,20,30,40, 50,60,75,100.		125,150,175, 200,225.		125,150,175, 200,225.	
1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W
3	4	3	4	3	4	3	4
30(15,50,100)* (100-300-500)*		30(15,50,100)* (100-300-500)*		100-300-500(30)*		100-300-500 adjustable(30)*	
0.1		0.1		0.1		0.1	
15(7.5,25,50)* (50-150-250)*		15(7.5,25,50)* (50-150-250)*		50-100-150 adjustable(15)*		50-100-150 adjustable(15)*	
100-300-500 *		100-300-500 *		100-300-500 adjustable		100-300-500 adjustable	
0.45-1.0-2.0 *		0.45-1.0-2.0 *		0.45-1.0-2.0 adjustable		0.45-1.0-2.0 adjustable	
0.1,0.5,1		0.1,0.5,1		0.1,0.5,1		0.1,0.5,1	
90	120	90	120	105	140	105	140
155		155		165		165	
68		68		68		68	
90		90		92		92	
132		132		126		126	
30		30		35		35	
1.5	1.8	1.5	1.8	1.7	2.3	1.7	2.3
15/7.5		25/13		15/7.5		25/13	
22/11		30/15		22/11		30/15	
30/15		50/25		30/15		50/25	
30/15		50/25		30/15		50/25	
18/15		30/25		18/15		30/25	
25/22		35/30		25/22		35/30	
35/30		60/50		35/30		60/50	
35/30		60/50		35/30		60/50	
Clamp terminal		Clamp terminal		Clamp terminal		Clamp terminal	
●		●		▲		▲	
●		●		▲		▲	
●		●		▲		▲	
●		●		▲		▲	
▲		▲		▲		▲	
▲		▲		▲		▲	
Hydraulic magnetic		Hydraulic magnetic		Thermal adjustable magnetic		Thermal adjustable magnetic	
Equipped		Equipped		Equipped		Equipped	

- Note 1. The rated breaking capacities indicated by the voltages which marked with * are for reference.
2. The rated current sensibility for 15, 50, 100mA is not standard spec. Please specify it when placing an order.
3. The operation range of rated current sensibility is 50%~100%
4. The ICU value marked here is an anticipated value under CNS and IEC' S demand. But it will not be printed on the products.
5. "▲" which can be installed by client.
"●" which have to be installed by manufacturer. "—" which is not available.
6. if breaking capacity indication is not available, it can be estimated by interpolation from other voltage indication.

ELCB | BL Series

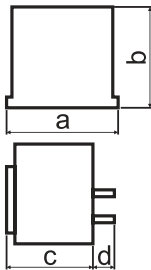
Adjustable current from 80%~100%

Frame size (AF)		250		250		400		
Type		BL250-CN		BL250-SN		BL400-CN		
Photograph								
Rated current In (A) at ambient temp.40°C		250		250		250,300,350,400.		
Phase &wire (P)		1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W	
Number of poles (P)		3	4	3	4	3	4	
High speed	#3, #6. Rated current sensitivity IΔn (mA)	30-100-500 adjustable		30-100-500 adjustable		30-100-500 adjustable		
	5IΔn operating time (S)	0.04		0.04		0.04		
Delay	#6. Rated current sensitivity IΔn (mA)	100-300-500 adjustable		100-300-500 adjustable		100-300-500 adjustable		
	2IΔn operating time (S)	0.45-1.0-2.0 adjustable		0.45-1.0-2.0 adjustable		0.45-1.0-2.0 adjustable		
	2IΔn max. non-operating time (S)	0.1,0.5,1		0.1,0.5,1		0.1,0.5,1		
Leakage indication		Mechanical		Mechanical		Mechanical		
Dimensions	 (mm)	a	105	140	105	140	140	185
		b	165		165		257	
		c	68		68		103	
		ca	92		92		155	
		bb	126		126		194	
		aa	35		35		44	
		Weight (Kg)	1.7	2.3	1.7	2.3	6.6	8.4
Rated breaking capacity (kA) #4, #8.	IEC 60947-2 EN 60947-2 CNS 14816-2	440V	15/7.5		25/13		22/11	
		380V *400V	22/11		30/15		25/13	
		220V *230V	30/15		50/25		35/18	
		110V	30/15		50/25		35/18	
	CNS 5422 JIS C8201-2	*415V 440V	18/15		30/25		25/22	
		380V *440V	25/22		35/30		30/25	
	asym/sym AC	220V *240V	35/30		60/50		40/35	
		*100V 110V	35/30		60/50		40/35	
Connection		Clamp terminal		Clamp terminal		Busbar		
Optional accessories #5.	Alarm switch (AL)	▲		▲		▲		
	Auxiliary switch (AUX)	▲		▲		▲		
	Shunt trip (SHT)	▲		▲		▲		
	Under-voltage trip (UVT)	▲		▲		▲		
	External handle	▲		▲		▲		
	Terminal cover	▲		▲		▲		
Automatic tripping device		Thermal adjustable magnetic		Thermal adjustable magnetic		Thermal magnetic		
Tripping button		Equipped		Equipped		Equipped		

400		400	
BL400-SN		BL400-HN	
			
250,300,350,400		250,300,350,400	
1φ2W,1φ3W 3φ3W	3φ4W	1φ2W,1φ3W 3φ3W	3φ4W
3	4	3	4
30-100-500 adjustable		30-100-500 adjustable	
0.04		0.04	
100-300-500 adjustable		100-300-500 adjustable	
0.45-1.0-2.0 adjustable		0.45-1.0-2.0 adjustable	
0.1,0.5,1		0.1,0.5,1	
Mechanical		Mechanical	
140	185	140	185
257		257	
103		103	
155		155	
194		194	
44		44	
6.6	8.4	6.6	8.4
30/15		42/21	
35/18		50/25	
50/25		85/43	
50/25		85/43	
35/30		50/42	
40/35		60/50	
60/50		100/85	
60/50		100/85	
Busbar		Busbar	
▲		▲	
▲		▲	
▲		▲	
▲		▲	
▲		▲	
▲		▲	
Thermal magnetic		Thermal magnetic	
Equipped		Equipped	

- Note 1. The rated breaking capacities indicated by the voltages which marked with * are for reference.
2. The rated current sensibility for 15, 50, 100mA is not standard spec. Please specify it when placing an order.
3. The operation range of rated current sensibility is 50%~100%
4. The ICU value marked here is an anticipated value under CNS and IEC' S demand. But it will not be printed on the products.
5. “▲” which can be installed by client.
“●” which have to be installed by manufacturer. “—” which is not available.
6. if breaking capacity indication is not available, it can be estimated by interpolation from other voltage indication.

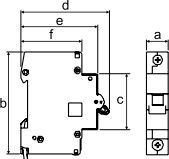
ACB | BA Series

Frame (AF)			2000 - AF				3200 - AF				4000 - AF		5000 - AF		6300 - AF		
Type			BA2000 - H				BA3200 - H				BA4000 - H		BA5000 - H		BA6300 - H		
Feature																	
Type			Fixed Type		Drawout type		Fixed Type		Drawout type		Drawout type						
Rated Current (In)A			630.800.1000. 1250.1600.2000.				2000.2500.3200.				4000.		5000.		6300.		
Adjustable Range of Rated Current (A)			0.4~1.0In														
Max. Rated Voltage (Ue) 50/60HZ V			AC 690														
Rated Insulated Voltage (Ui) 50/60HZ V			AC 1000														
Rated Impulse Withstand Voltage (Uimp) kV			DC 12														
Pole			3	4	3	4	3	4	3	4	3	4	3	4	3	4	
N Pole Rated Current (In) A			-	100%	-	100%	-	100%	-	100%	-	100%	-	100%	-	100%	
Rated breaking capacity (kA)	IEC 60947-2 CNS 14816-2 Icu/Ics kA	*AC 690V	50 / 33				65 / 43				-						
		*AC 440V	75 / 48				85 / 55				100 / 100						
		AC 380V	85 / 55				100 / 65				130 / 130						
		*AC 220V	150 / 95				170 / 110				200 / 200						
		Rated short time withstand capacity (Icw) kA(1/3 sec)		55 / 50				65 / 60				100 / 100					
Electrical Control Type	Standard Type (M Type)		0														
	Communication Type (H Type)		0														
Electrical Life (Times)			10000														
Bus bar connection type			Horizontal / Vertical				Horizontal				Horizontal						
Dimensions (mm)		Horizontal	a	360	455	375	470	420	535	435	550	815	930	815	930	930	
			b	405	405	439	439	405	405	439	439	439	439	439	439	439	
			c	295	295	383.5	383.5	295	295	383.5	383.5	383.5	383.5	383.5	383.5	383.5	
			d	60	60	67.5	67.5	75	75	82.5	82.5	100	100	100	100	100	
		Vertical	a	360	455	375	470	-				-					
			b	405	405	439	439	-				-					
			c	295	295	295	295	-				-					
			d	66	66	66	66	-				-					
Auxiliary Switch (Standard Device)			4C														
Motor drive			AC 110 / 220 / 380V DC 110 / 220V (Optional)														
Optional accessory	Under-voltage Trip (UVT)		AC 110V / 220 - 230V / 380-400V (Optional)														
	Manual Program Editor		English Version														
	ST-DP Interface		0														
	ST Power Module		0														
	Power ZCT		0														

Note: The rated breaking capacities indicated by voltage which marked with * are for reference.

MCB / BHA Series

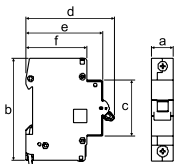
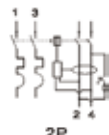
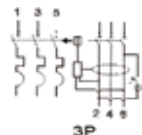
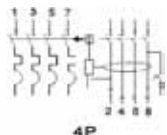


Type	Frame Size	Pole	Rated current (A)	Breaking capacity(kA)	Trip characteristic	
BHA	63	1 / 2 / 3 / 4	6 ~ 63	4.5 / 6	C / D	
Pole		1	2	3	4	
Dimension (mm)		a	18	36	54	72
		b	45.5			
		c	83.4			
		d	73.3			
		e	63.8			
		f	50.5			
Diagram						
Weight		113g	228g	341g	456zg	
Rated Voltage		230V	230V / 400V	400V	400V	
Rated Current		6 / 10 / 16 / 20 / 25 / 32 / 40 / 50 / 63				
Part number illustration		BHA - 1 2 3 4 5 1 BHA : BHA series MCB 2 Breaking Capacity : 2-4,5kA , 3-6kA 3 Pole : 1-1Pole , 2-2 Pole , 3-3 Pole , 4-4 Pole 4 Trip Characteristic : C , D 5 Rated Current : 6,10,16,20,25,32,40,50,63A				

- 1 BHA : BHA series MCB
 2 Breaking Capacity : 2-4.5kA , 3-6kA
 3 Pole : 1-1Pole , 2-2 Pole , 3-3 Pole , 4-4 Pole
 4 Trip Characteristic : C , D
 5 Rated Current : 6,10,16,20,25,32,40,50,63A

RCCB / BHL Series



Type	Frame Size	Pole	Rated current (A)	Breaking capacity(kA)	Trip characteristic	
BHL	32 63	1P+N 1 / 2 / 3 / 4	6 ~ 32 6 ~ 63	4.5 / 6	C / D	
Pole		1	2	3	4	
Dimension (mm)		a	36	72	117	135
		b	45.5			
		c	83.4			
		d	73.3			
		e	63.8			
		f	50.5			
Diagram		 1P+N	 2P	 3P	 4P	
Weight		166g	423g	630g	770g	
Rated Voltage		230V	230V / 400V	400V	400V	
Rated Current		6 ~ 32	6 / 10 / 16 / 20 / 25 / 32 / 40 / 50 / 63			
Part number illustration		BHL - 1 2 3 4 5				
		1 BHL : BHA series RCBO 2 Breaking Capacity : 2:4.5kA , 3:6kA 3 Poles 1:1P+N 2:2 Poles 3:3 Pole 4:Pole 4 Trip Characteristic : C , D 5 Rated Current:6,10,16,20,25,32,40,50,63A				

- 1 BHL : BHA series RCBO
 2 Breaking Capacity : 2:4.5kA , 3:6kA
 3 Poles 1:1P+N 2:2 Poles 3:3 Pole 4:Pole
 4 Trip Characteristic : C , D
 5 Rated Current:6,10,16,20,25,32,40,50,63A

MCCB

ACB

MCB

BHP

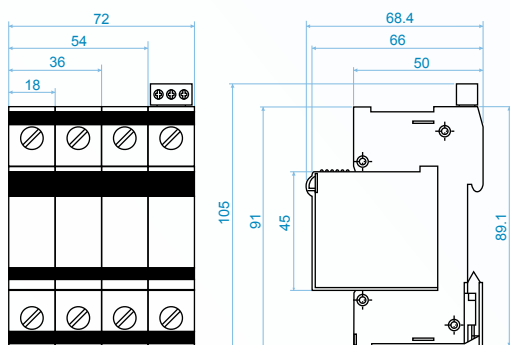
MS

Surge Protective Device / BHP Series

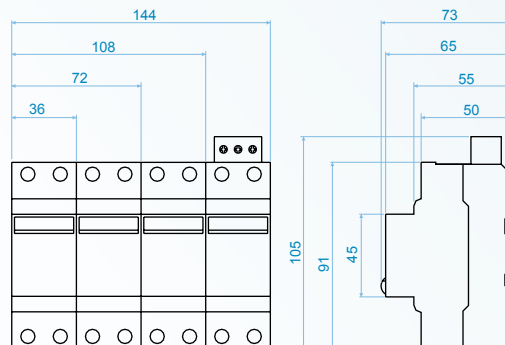
Type							
		BHP15		BHP30		BHP40	
Uc(V)		275		275	385	275	440
Up(kV)		≤ 1.0		≤ 1.2	≤ 1.4	≤ 1.4	≤ 1.7
In(kA)(8/20 μ s)		5		10	10	15	15
Imax(kA)(8/20 μ s) II class Protection		15		30	30	40	40
Iimp(kA)(10/350 μ s) I class Protection		-		-	-	-	-
Connection wire diameter mm ²	L-N	≥ 2		≥ 5.5	≥ 5.5	≥ 5.5	≥ 5.5
	PE	≥ 2		≥ 5.5	≥ 5.5	≥ 5.5	≥ 5.5
Gap discharge	Dc(V)	600		600		600	
	Uimp(V)	≤ 950		≤ 950		≤ 950	
	Iimp(kA)	40		60		60	
Type							
		BHP65		BHP100		BHP180	
Uc(V)		275	440	440	440	275	440
Up(kV)		≤ 1.6	≤ 2.0	≤ 2.5	≤ 2.5	≤ 2.9	≤ 3.2
In(kA)(8/20 μ s)		20	20	20	60	100	100
Imax(kA)(8/20 μ s) II class Protection		65	65	65	100	180	180
Iimp(kA)(10/350 μ s) I class Protection		-	-	-	10	18	18
Connection wire diameter mm ²	L-N	≥ 5.5	≥ 5.5	≥ 5.5	≥ 14	≥ 14	≥ 14
	PE	≥ 5.5	≥ 5.5	≥ 5.5	≥ 22	≥ 22	≥ 22
Gap discharge	Dc(V)	600		600		600	
	Uimp(V)	≤ 1000		≤ 1400		≤ 1400	
	Iimp(kA)	120		400		500	

Dimensions

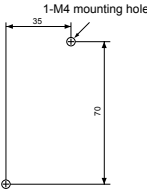
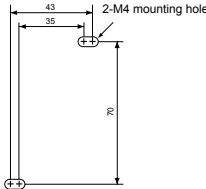
BHP 15,30,40,65,100kA



BHP 100,180kA



MS | SD-P Series (DC Contactor)

Type	Magnetic Contactor	Nonreversing		SD-P11(S)	SD-P16(S)	SD-P21(S)
		Reversing		SD-2×P11(S)	SD-2×P16(S)	SD-2×P21(S)
	Magnetic Switch	without enclosure	Nonreversing	MDO-P11(S)	MDO-P16(S)	MDO-P21(S)
			Reversing	MDO-2×P11(S)	MDO-2×P16(S)	MDO-2×P21(S)
		with enclosure	Nonreversing	-	-	-
			Reversing	-	-	-
	with enclosure (push button)	Nonreversing	-	-	-	
	Rated Capacity	CNS 14816 JIS C8201 JEM 1038 AC 3 (kW/HP/A)	1 ø	100~110V	0.55/0.75/12	0.75/1/16
200~220V				1.1/1.5/12	1.5/2/16	2.2/3/24
3 ø			200~220V	3/4/12	3.7/5/16	5.5/7.5/24
			380~440V	4/5.5/9	5.5/7.5/12	11/15/21
			500~550V	4/5.5/7	5.5/7.5/10	11/15/17
Ie max AC3 220V (A)			12	16	24	
Ith AC1 (A)			20	30	40	
IEC 60947-4-1 EN 60947-4-1 DIN VDE 0660 AC 3 (kW/HP/A)		3 ø	240V	3.5/4.5/13	4.5/6/18	5.5/7.5/24
			440V	5.5/7.5/12	7.5/10/16	11/15/21
			550V	5.5/7.5/9	7.5/10/13	11/15/17
			660V	5.5/7.5/7	7.5/10/9	11/15/14
		Ith (A)		20	30	32
UL 508 CSA-C22.2 FLA (HP/A)		1 ø	100~110V	0.5/9.8	1/16	2/24
			200~240V	2/12	3/17	3/17
		3 ø	200~240V	3/9.6	5/15.2	7.5/22
			440~480V	7.5/11	10/14	15/21
			500~600V	10/11	10/11	15/17
		Ith (A)		24	30	35
	Auxiliary Contact	NEMA		0	0	1
Standard		1a	1a1b	1a1b		
Special		1b	-	-		
Dimensions						
			0.25A 3.3A 0.4A 4.4A 0.6A 6.5A 0.9A 9A 1.2A 11A 1.7A 15A 2.1A		0.25A 3.3A 0.4A 4.4A 0.6A 6.5A 0.9A 9A 1.2A 11A 1.7A 15A 2.1A	
Thermal Overload Relay Range (A)						
Thermal Overload Relay	two element		TH-P12(S)	TH-P20(S)	TH-P20(S)	
	three element		TH-P12E(S)	TH-P20E(S)	TH-P20E(S)	
	with phase failure protection		TH-P12PP(S)	TH-P20PP(S)	TH-P20PP(S)	

MCCB

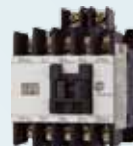
ACB

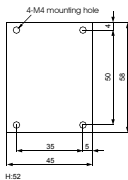
MCB

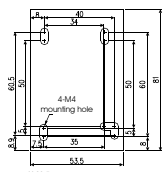
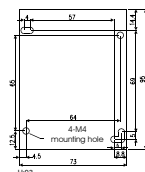
BHP

MS

MS | S-P Series (AC Contactor)



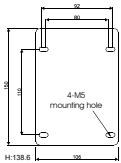
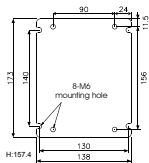
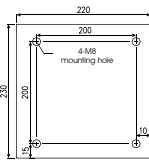
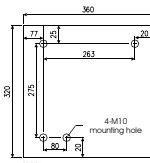
Type	Magnetic Contactor	Nonreversing		S-P06S	S-P09S	S-P11(S)	S-P12(S)	S-P15(S)
		Reversing		-	-	S-2XP11(S)	S-2XP12(S)	S-2XP15(S)
	Magnetic Switch	without enclosure	Nonreversing	MSO-P06S	MSO-P09S	MSO-P11(S)	MSO-P12(S)	MSO-P15(S)
			Reversing	-	-	MSO-2×P11(S)	MSO-2×P12(S)	MSO-2×P15(S)
		with enclosure	Nonreversing	-	-	MS-P11(S)	MS-P12(S)	MS-P15(S)
Reversing			-	-	MS-2×P11(S)	MS-2×P12(S)	MS-2×P15(S)	
Rated Capacity	CNS 14816 JIS C8201 JEM 1038 AC 3 (kW/HP/A)	1 ø	100~110V	0.2/0.3/5.5	0.3/0.4/9	0.55/0.75/12	0.55/0.75/12	0.75/1/16
			200~220V	0.4/0.5/4.3	0.75/1/7.5	1.1/1.5/12	1.1/1.5/12	1.5/2/16
		3 ø	200~220V	1.5/2/7.5	2.2/3/10.1	3/4/12	3/4/12	3.7/5/16
			380~440V	2.2/3/6	3.7/5/8	4/5.5/9	4/5.5/9	5.5/7.5/12
			500~550V	2.2/3/5	2.2/3/10.1	4/5.5/7	4/5.5/7	5.5/7.5/10
		I _e max AC3 220V (A)		7.5	10.1	12	12	16
		I _{th} AC1 (A)		20	20	20	20	30
	IEC 60947-4-1 EN 60947-4-1 DIN VDE 0660 AC 3 (kW/HP/A)	3 ø	240V	1.5/2/7.5	2.2/3/10.1	3.5/4.5/13	3.5/4.5/13	4.5/6/18
			440V	3/4/6.5	4/5.5/8.5	5.5/7.5/12	5.5/7.5/12	7.5/10/16
			550V	3/4/5	4/5.5/6.5	5.5/7.5/9	5.5/7.5/9	7.5/10/13
			660V	3/4/4	4/5.5/5	5.5/7.5/7	5.5/7.5/7	7.5/10/9
		I _{th} (A)		20	20	20	20	30
	UL 508 CSA-C22.2 FLA (HP/A)	1 ø	100~110V	0.25/5.8	0.5/9.8	0.5/9.8	0.5/9.8	1/16
			200~240V	1/8	1.5/10	2/12	2/12	3/17
		3 ø	200~240V	2/6.8	3/9.6	3/9.6	3/9.6	5/15.2
			440~480V	3/4.8	5/7.6	7.5/11	7.5/11	10/14
			500~600V	3/3.9	5/6.1	10/11	10/11	10/11
		I _{th} (A)		20	20	24	24	30
	Auxiliary Contact	NEMA		00	00	0	0	0
		Standard		1a	1a	1a	1a1b	1a
Special		-	-	1b	2a(2b)	1b		
Dimensions								
Thermal Overload Relay Range (A)				0.13A 1.3A 0.2A 2A 0.32A 3.2A 0.5A 5A 0.8A 7.5A  0.25A 3.3A 0.4A 4.4A 0.6A 6.5A 0.9A 9A 1.2A 11A 1.7A 15A 2.1A 				
Thermal Overload Relay	two element		-	-	TH-P12(S)	TH-P12(S)	TH-P12(S)	
	three element		-	-	TH-P12E(S)	TH-P12E(S)	TH-P12E(S)	
	with phase failure protection		TH-P09PPS	TH-P09PPS	TH-P12PP(S)	TH-P12PP(S)	TH-P12PP(S)	

						
S-P16(S)	S-P21(S)	S-P21A(S)	S-P25(S)	S-P30T(S)	S-P35T(S)	S-P40T(S)
S-2XP16(S)	S-2XP21(S)	S-2XP21A(S)	S-2XP25(S)	S-2XP30T(S)	S-2XP35T(S)	S-2XP40T(S)
MSO-P16(S)	MSO-P21(S)	MSO-P21A(S)	MSO-P25(S)	MSO-P30T(S)	MSO-P35T(S)	MSO-P40T(S)
MSO-2×P16(S)	MSO-2×P21(S)	MSO-2×P21A(S)	MSO-2×P25(S)	MSO-2×P30T(S)	MSO-2×P35T(S)	MSO-2×P40T(S)
MS-P16(S)	MS-P21(S)	MS-P21A(S)	MS-P25(S)	MS-P30T(S)	MS-P35T(S)	MS-P40T(S)
MS-2×P16(S)	MS-2×P21(S)	MS-2×P21A(S)	MS-2×P25(S)	MS-2×P30T(S)	MS-2×P35T(S)	MS-2×P40T(S)
MS-P16(N)PB(S)	MS-P21(N)PB(S)	MS-P21A(N)PB(S)	MS-P25(N)PB(S)	MS-P30T(N)PB(S)	MS-P35T(N)PB(S)	MS-P40T(N)PB(S)
0.75/1/16	1.1/1.5/24	1.1/1.5/24	1.3/1.7/26	1.5/2/30	1.8/2.5/35	2.2/3/44
1.5/2/16	2.2/3/24	2.2/3/24	2.6/3.5/26	3/4/30	3.7/5/35	4/5.5/44
3.7/5/16	5.5/7.5/24	5.5/7.5/24	6.5/8.5/26	7.5/10/30	9/12.5/35	11/15/44
5.5/7.5/12	11/15/21	11/15/21	12/16/23	15/20/27	15/20/27	22/30/40
5.5/7.5/10	11/15/17	11/15/17	12/16/20	15/20/22	15/20/22	22/30/32
16	24	24	26	30	35	44
30	40	40	40	50	50	65
4.5/6/18	5.5/7.5/24	5.5/7.5/24	6.5/8.5/26	7.5/10/30	9/12.5/35	11/15/44
7.5/10/16	11/15/21	11/15/21	12/16/23	15/20/27	15/20/27	22/30/40
7.5/10/13	11/15/17	11/15/17	12/16/20	15/20/22	15/20/22	22/30/32
7.5/10/9	11/15/14	11/15/14	12/16/16	15/20/18	15/20/18	22/30/26
30	32	32	32	50	50	50
1/16	2/24	2/24	2/24	2/24	2/24	3/34
3/17	3/17	3/17	3/17	5/28	5/28	7.5/40
5/15.2	7.5/22	7.5/22	10/28	10/28	10/28	15/42
10/14	15/21	15/21	15/21	20/27	20/27	20/27
10/11	15/17	15/17	15/17	30/32	30/32	30/32
30	35	35	40	50	50	50
0	1	1	1	2	2	2
1a1b	1a1b	2a2b	1a1b	2a2b	2a2b	2a2b
-	-	-	-	-	-	-
						
0.25A 0.4A 0.6A 0.9A 1.2A 1.7A 2.1A 3.3A 4.4A 6.5A 9A 11A 15A 21A 				0.25A 0.4A 0.6A 0.9A 1.2A 1.7A 2.1A 3.3A 4.4A 6.5A 9A 11A 15A 21A 28A 33A 40A 		
TH-P20(S)	TH-P20(S)	TH-P20(S)	TH-P20(S)	TH-P20(TA)(S)	TH-P20(TA)(S)	TH-P20(TA)(S)
TH-P20E(S)	TH-P20E(S)	TH-P20E(S)	TH-P20E(S)	TH-P20E(TA)(S)	TH-P20E(TA)(S)	TH-P20E(TA)(S)
TH-P20PP(S)	TH-P20PP(S)	TH-P20PP(S)	TH-P20PP(S)	TH-P20(TA)PP(S)	TH-P20(TA)PP(S)	TH-P20(TA)PP(S)

MS | S-P Series



Type	Magnetic Contactor	Nonreversing		S-P50T(S)	S-P60T(S)	S-P80T(S)	S-P100T(S)	S-P125T(S)
		Reversing		S-2XP50T(S)	S-2XP60T(S)	S-2XP80T(S)	S-2XP100T(S)	S-2XP125T(S)
	Magnetic Switch	without enclosure	Nonreversing	MSO-P50T(S)	MSO-P60T(S)	MSO-P80T(S)	MSO-P100T(S)	MSO-P125T(S)
			Reversing	MSO-2 × P50T(S)	MSO-2 × P60T(S)	MSO-2 × P80T(S)	MSO-2 × P100T(S)	MSO-2 × P125T(S)
		with enclosure	Nonreversing	MS-P50T(S)	MS-P60T(S)	MS-P80T(S)	MS-P100T(S)	MS-P125T(S)
			Reversing	MS-2 × P50T(S)	MS-2 × P60T(S)	MS-2 × P80T(S)	MS-2 × P100T(S)	MS-2 × P125T(S)
Rated Capacity	CNS 14816 JIS C8201 JEM 1038	1 ∅	100~110V	3/4/58	3.7/5/68	4.5/6/80	-	-
			200~220V	5.5/7.5/58	7.5/10/68	9/12.5/80	-	-
		3 ∅	200~220V	15/20/58	19/25/65	22/30/80	25/35/105	37/50/135
			380~440V	30/40/52	37/50/65	40/54/75	55/75/100	75/100/130
			500~550V	30/40/41	37/50/52	45/60/60	55/75/85	75/100/105
		I _e max AC3 220V (A)		58	68	80	105	135
	I _{th} AC1 (A)		80	100	100	135	170	
	IEC 60947-4-1 EN 60947-4-1 DIN VDE 0660	3 ∅	240V	15/20/58	19/25/65	22/30/80	30/40/105	37/50/135
			440V	30/40/52	37/50/65	40/54/75	60/80/105	75/100/130
			550V	30/40/41	37/50/52	45/60/60	60/80/85	75/100/105
			660V	30/40/34	37/50/43	45/60/60	60/80/70	75/100/90
		I _{th} (A)		80	90	100	135	150
		UL 508 CSA-C22.2	1 ∅	100~110V	5/56	5/56	7.5/80	-
	200~240V			10/50	10/50	15/68	-	-
	3 ∅		200~240V	20/54	20/54	25/68	30/80	50/130
			440~480V	30/40	40/52	50/65	60/77	100/124
			500~600V	40/41	50/52	60/62	60/62	100/99
	I _{th} (A)		80	90	90	100	150	
	Auxiliary Contact	NEMA		2	2	3	3	3
		Standard		2a2b	2a2b	2a2b	2a2b	2a2b
Special		-	-	-	-	-		
Dimensions								
Thermal Overload Relay Range (A)				11A 33A 15A 40A 21A 54A 28A 	11A 15A 21A 28A 33A 40A 54A 67A 80A 	40A 54A 67A 80A 105A 130A 160A 		
Thermal Overload Relay		two element	TH-P60(S)	TH-P60(TA)(S)	TH-P60(TA)(S)	TH-P120(TA)(S)	TH-P120(TA)(S)	
		three element	TH-P60E(S)	TH-P60E(TA)(S)	TH-P60E(TA)(S)	TH-P120E(TA)(S)	TH-P120E(TA)(S)	
		with phase failure protection	TH-P60PP(S)	TH-P60(TA)PP(S)	TH-P60(TA)PP(S)	TH-P120(TA)PP(S)	TH-P120(TA)PP(S)	

					
S-P150T(S)	S-P200T(S)	S-P220T(S)	M-300C	M-401C	M-600C
S-2XP150T(S)	S-2XP200T(S)	S-2XP220T(S)	RC-300C	RC-401C	-
MSO-P150T(S)	MSO-P200T(S)	MSO-P220T(S)	MTO-300C	MTO-401C	MTO-600C
MSO-2×P150T(S)	MSO-2×P200T(S)	MSO-2×P220T(S)	RTO-300C	RTO-401C	-
MS-P150T(S)	MS-P200T(S)	MS-P220T(S)	MT-300C	MT-401C	MT-600C
MS-2×P150T(S)	MS-2×P200T(S)	MS-2×P220T(S)	RT-300C	RT-401C	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
45/60/165	55/75/200	65/75/225	90/125/300	110/150/400	160/220/600
90/125/160	110/150/190	120/150/220	160/220/300	220/300/400	315/420/600
90/125/130	110/150/150	132/150/180	160/220/250	220/300/350	315/420/500
165	200	225	300	400	600
200	240	260	350	420	660
45/60/165	55/75/200	65/75/225	90/125/300	110/150/400	160/220/600
90/125/160	110/150/190	120/150/220	160/220/300	220/300/400	315/420/600
90/125/130	110/150/150	132/150/180	160/220/250	220/300/350	315/420/500
90/125/110	110/150/125	132/150/150	160/220/200	220/300/300	315/420/400
200	240	260	350	420	660
-	-	-	-	-	-
-	-	-	-	-	-
60/154	75/192	75/192	100/248	125/312	200/480
125/156	150/180	150/180	200/240	250/302	400/477
125/125	150/144	150/144	200/192	250/242	400/382
200	240	260	300	400	600
3	4	4	5	5	-
2a2b	2a2b	2a2b	2a2b	2a2b	2a2b
-	-	-	-	-	-
					
	80A 105A 130A 160A 200A 		105A 130A 160A 200A 260A 350A 	260A 350A 500A 	
TH-P120(TA)(S)	TH-P220CT(TA)(S)	TH-P220CT(TA)(S)	TH-P400CT(S)	TH-P400CT(S)	TH-P600CT(S)
TH-P120E(TA)(S)	TH-P220CTE(TA)(S)	TH-P220CTE(TA)(S)	TH-P400ECT(S)	TH-P400ECT(S)	TH-P600ECT(S)
TH-P120(TA)PP(S)	TH-P220CT(TA)PP(S)	TH-P220CT(TA)PP(S)	TH-P400CTPP(S)	TH-P400CTPP(S)	TH-P600CTPP(S)

Capacitor Contactors | S-PSC Series

Type					S-P11SC	S-P16SC	S-P21SC	S-P35SC	S-P60SC	S-P80SC
										
Rated Capacity	IEC 60947-4-1 EN 60947-4-1 DIN VDE0660	AC-6b (kVAR/A)	3 ∅	220V~240V	6.7/18	8.5/22	10/26	15/39	25/66	35/92
				400V~440V	12.5/16	16.7/22	20/26	25/33	45/59	60/86
				550V~600V	18/16	24/21	30/26	36/31	58/51	75/78
	Ith (A)				20	30	40	50	90	100
Auxiliary Contact	Auxiliary Contact				2a or 1a1b	2a1b	2a1b	3a2b	3a2b	3a2b
	IEC 60947-5-1 EN 60947-5-1	AC 12 (A)	110V	6	6	6	6	6	6	
			220V	5	5	5	5	5	5	
			440V	3	3	3	3	3	3	
			550V	3	3	3	3	3	3	
		Ith (A)		16	16	16	16	16	16	
	Mechanical / Electrical Life (10 thousand)				100/20	100/20	100/20	100/20	100/20	100/20
On / Off Frequency (time per / hour)				240	240	240	240	240	240	

Definite Purpose Magnetic Contactor | SF Series

Type		20	25	30	35	40
Type	1 Pole	SF20C1	SF25C1	SF30C1	SF35C1	SF40C1
	2 Pole	SF20C2	SF25C2	SF30C2	SF35C2	SF40C2
	1 Pole w/shunt	SF20C3	SF25C3	SF30C3	SF35C3	SF40C3
Start Current(A) (Per Pole)	AC 240V / AC 277V	120	150	180	180	180
	AC 480V	100	125	150	150	150
	AC 600V	80	100	120	120	120
Start Current(A) (Single Phase) (2 Pole)	AC 240V / AC 277V	120	150	180	210	240
	AC 480V	100	125	150	175	200
	AC 600V	80	100	120	140	160
Rated Current w/resistance load (A)		30	35	40	50	50
Full Rated Current (A)		20	25	30	35	40
Mechanical / Electrical life (10 thousand)		50/20	50/20	50/20	50/20	50/20
Operation frequency (time / hour)		360	360	360	360	360



Magnetic Control Relays | SR Series

			SR-P40	SR-P50	SR-P80
Type					
Auxiliary Contact			4a (4NO) 3a1b (3NO 1NC) 2a2b (2NO 2NC)	5a (5NO) 4a1b (4NO 1NC) 3a2b (3NO 2NC) 2a3b (2NO 3NC)	8a (8NO) 7a1b (7NO 1NC) 6a2b (6NO 2NC) 5a3b (5NO 3NC) 4a4b (4NO 4NC)
Rated Capacity (A)	IEC 60947-4-1 AC 12	110V	6	6	6
		220V	5	5	5
		440V	3	3	3
		550V	3	3	3
	IEC 60947-4-1 DC 12	24V	5	5	5
		48V	3	3	3
		110V	0.3	0.3	0.3
		220V	0.2	0.2	0.2
Operation Current (lth)(A)		16	16	16	
(UL)		A600,Q300	A600,Q300	A600,Q300	
Electrical life (10 thousand)		50	50	50	
Mechanical (10 thousand)		500	500	500	
operation frequency (time / hour)		1200	1200	1200	

Auxiliary Contact Block | AP Series

Fitting			2P FRONT MOUNT			4P FRONT MOUNT			SIDE MOUNT		
											
Type			AP-02	AP-11	AP-20	AP-22	AP-31	AP-40	APS-11	APL-11	
Auxiliary Contact			2b (2NO)	1a1b (1NO 1NC)	2a (2NO)	2a2b (2NO 2NC)	3a1b (3NO 1NC)	4a (4NO)	1a1b (1NO 1NC)	1a1b (1NO 1NC)	
Selected			S-P11、S-P12、S-P16、S-P21、S-P25、S-P30T、 S-P35T、S-P40T、S-P50T、S-P60T、SR-P40、SR-P50							S-P125T、S-P150T S-P200T、S-P220T	
Rated Capacity (A)	IEC 60947-4-1 AC 12	110V	6								
		220V	5								
		440V	3								
		550V	3								
Operation Current (lth) (A)			16								

Star-delta Starter | EYD Series

Type		21		35		50		60	
Type	Without enclosure (no CT)	EYD-O-P21(S)		EYD-O-P35(S)		EYD-O-P50(S)		EYD-O-P60(S)	
	Without enclosure (with CT)	EYD-O-P21T(S)		EYD-O-P35T(S)		EYD-O-P50T(S)		EYD-O-P60T(S)	
	With enclosure (no CT)	EYD-E-P21(S)		EYD-E-P35(S)		EYD-E-P50(S)		EYD-E-P60(S)	
	With enclosure (with CT)	EYD-A-P21(S)		EYD-A-P35(S)		EYD-A-P50(S)		EYD-A-P60(S)	
Rated Breaking Capacity	kW / HP	kW	HP	kW	HP	kW	HP	kW	HP
	200-220V	11	15	19	25	22	30	30	40
	380-440V	19	25	30	40	45	60	55	75
Thermal Overload Relay		TH-P20 TH-P20TA		TH-P60 TH-P60TA		TH-P60 TH-P60TA		TH-P120 TH-P120TA	

Type		80		100		125		150		220	
Type	without enclosure	EYD-O-P80(S)		EYD-O-P100(S)		EYD-O-P125(S)		EYD-O-P150(S)		EYD-O-P220(S)	
	without enclosure	EYD-O-P80T(S)		EYD-O-P100T(S)		EYD-O-P125T(S)		EYD-O-P150T(S)		EYD-O-P220T(S)	
	with enclosure	EYD-E-P80(S)		EYD-E-P100(S)		EYD-E-P125(S)		EYD-E-P150(S)		EYD-E-P220(S)	
	with enclosure	EYD-A-P80(S)		EYD-A-P100(S)		EYD-A-P125(S)		EYD-A-P150(S)		EYD-A-P220(S)	
Rated Breaking Capacity	kW / HP	kW	HP	kW	HP	kW	HP	kW	HP	kW	HP
	200-220V	37	50	45	60	55	75	75	100	110	150
	380-440V	75	100	90	125	110	150	132	180	200	260
Thermal Overload Relay		TH-P120 TH-P120TA		TH-P120 TH-P120TA		TH-P220CT		TH-P220CT TH-P400CT		TH-P400CT	

Note: EYD-E-P21 ~P220 is with enclosure, push button, pilot light and door lock.

EYD-A-P21 ~P220 is with enclosure, push button, pilot light, door lock and current meter.

EYD-O-P21 ~P220 is attached with CT as current meter.



EYD-O-P60



EYD-E-P21



EYD-A-P50

Magnetic Switch Selection Table

kW(HP)	Three Phase 200~220V																							
	Relay Range(A)		Selection Table																					
0.03 (1/25)	0.25A	0.19~0.31A	S-CR11	S-P11、S-P12	S-P15、S-P16	S-P21	S-P25	S-P30T	S-P35T	S-P40T														
0.05 (1/15)	0.4A	0.3~0.5A																						
0.1 (1/8)	0.6A	0.45~0.75A																						
0.15 (1/5)	0.9A	0.7~1.1A																						
0.2 (1/4)	1.2A	0.9~1.5A																						
0.3 (2/5)	1.7A	1.3~2.1A																						
0.4 (1/2)	2.1A	1.6~2.6A																						
0.75(1)	3.3A	2.5~4.1A																						
1.1 (1 1/2)	4.4A	3.4~5.4A																						
1.5 (2)	6.5A	5~8A																						
2.2 (3)	9A	7~11A																						
3 (4)	11A	9~13A																						
3.7 (5)	15A	12~18A																						
5.5 (7 1/2)	21A	17~24A																						
6.5 (8 1/2)	28A	22~34A	S-P50T	S-P60T	S-P80T																			
7.5 (10)																								
9 (12 1/2)	33A	28~38A																						
11 (15)	40A	32~48A																						
15 (20)	54A	43~65A																						
19 (25)	67A	54~80A									S-P100T	S-P125、S-P125T	S-P150、S-P150T											
22 (30)																								
25 (35)	80A	60~100A																						
30 (40)	105A	80~130A																						
37 (50)	130A	100~160A																						
45 (60)	160A	120~200A																						
55 (75)	200A	150~250A																S-P200、S-P200T	S-P220、S-P220T	S-P300	S-P401			
65 (85)																								
75 (100)	260A	200~320A																						
90 (125)	350A	260~440A																						
110 (150)																								
132 (180)	500A	400~600A																						
160 (220)																								

MCCB

ACB

MCB

BHP

MS

Magnetic Switch Selection Table

kW(HP)	Three Phase 380~440V	
	Relay Range(A)	Selection Table
0.05 (1/16)	0.25A	0.19~0.31A
0.1 (1/8)	0.4A	0.3~0.5A
0.2 (1/4)	0.6A	0.45~0.75A
0.3 (2/5)	0.9A	0.7~1.1A
0.4 (1/2)	1.2A	0.9~1.5A
0.75 (1)	1.7A	1.3~2.1A
1.1 (1 1/2)	2.1A	1.6~2.6A
1.5 (2)	3.3A	2.5~4.1A
2.2 (3)	4.4A	3.4~5.4A
3 (4)	6.5A	5~8A
3.7 (5)	9A	7~11A
4 (5 1/2)		
4.5 (6)	11A	9~13A
5.5 (7 1/2)		
7.5 (10)	15A	12~18A
11 (15)	21A	17~24A
12 (16)		
15 (20)	28A	22~34A
19 (25)	33A	28~38A
22 (30)	40A	32~48A
25 (35)		
30 (40)	54A	43~65A
37 (50)	67A	54~80A
40 (54)		
50 (70)	80A	60~100A
55 (75)	105A	80~130A
75 (100)		
90 (125)	160A	120~200A
110 (150)	200A	150~250A
132 (180)		
150 (200)	260A	200~320A
160 (220)	350A	260~440A
220 (300)		
250 (350)	500A	400~600A
315 (420)		

Magnetic Switch Selection Table

kW(HP)	Three Phase 500~550V											
	Relay Range(A)		Selection Table									
0.12 (1/8)	0.25A	0.19~0.31A	S-CR11	S-P11、S-P12	S-P15、S-P16	S-P21	S-P25	S-P30T	S-P35T	S-P40T		
0.18 (1/4)	0.4A	0.3~0.5A										
0.25 (1/3)	0.6A	0.45~0.75A										
0.37 (1/2)	0.9A	0.7~1.1A										
0.55 (3/4)	1.2A	0.9~1.5A										
0.75 (1)	1.7A	1.3~2.1A										
1.1 (1.5)	2.1A	1.6~2.6A										
1.5 (2)	3.3A	2.5~4.1A										
2.2 (3)	4.4A	3.4~5.4A										
4 (5 1/2)	6.5A	5~8A										
4.5 (6)	9A	7~11A										
5.5 (7 1/2)	11A	9~13A										
7.5 (10)												
11 (15)	15A	12~18A										
12 (16)												
15 (20)	21A	17~24A										
19 (25)	28A	22~34A										
22 (30)	33A	28~38A										
30 (40)	40A	32~48A										
37 (50)	54A	43~65A										
45 (60)												
50 (70)	67A	54~80A										
55 (75)	80A	60~100A										
75 (100)	105A	80~130A										
90 (125)	130A	100~160A										
110 (150)												
132 (180)	160A	120~200A										
150 (200)	200A	150~250A										
160 (220)	260A	200~320A										
220 (300)	350A	260~440A										
315 (420)	500A	400~600A										

MCCB

ACB

MCB

BHP

MS

Magnetic Switch Selection Table

kW(HP)	Single Phase 100~110V										
	Relay Range(A)		Selection Table								
0.035 (1/20)	1.7A	1.3~2.1A	S-CR11	S-P11、S-P12	S-P15、S-P16	S-P21	S-P25	S-P30T	S-P35T	S-P40T	
0.065 (1/12)	2.1A	1.6~2.6A									
0.1(1/8)	3.3A	2.5~4.1A									
0.15 (1/5)	4.4A	3.4~5.4A									
0.3 (2/5)	6.5A	5~8A									
0.4 (1/2)	9A	7~11A									
0.55 (3/4)	11A	9~13A									
0.75 (1)	15A	12~18A									
1.1 (1 1/2)	21A	17~24A									
1.3 (1 3/4)	28A	22~34A									
1.5 (2)											
1.8 (2 1/2)	33A	28~38A									
2.2 (3)	40A	32~48A									
3 (4)	54A	43~65A									
3.7 (5)	67A	54~80A									
4.5 (6)	80A	60~100A									

kW(HP)	Single Phase 200~220V										
	Relay Range(A)		Selection Table								
0.035 (1/20)	0.9A	0.7~1.1A	S-CR11	S-P11、S-P12	S-P15、S-P16	S-P21	S-P25	S-P30T	S-P35T	S-P40T	
0.065 (1/12)	1.2A	0.9~1.5A									
0.1 (1/8)	1.7A	1.3~2.1A									
0.15 (1/5)	2.1A	1.6~2.6A									
0.3 (2/5)	3.3A	2.5~4.1A									
0.4 (1/2)	4.4A	3.4~5.4A									
0.55 (3/4)											
0.75 (1)	6.5A	5~8A									
1.1 (1 1/2)	9A	7~11A									
1.3 (1 3/4)	11A	9~13A	S-P50T	S-P60T	S-P80T						
1.5 (2)	15A	12~18A									
2.2 (3)	21A	17~24A									
2.6 (3 1/2)	28A	22~34A									
3 (4)											
3.7 (5)	33A	28~38A									
4 (5 1/2)	40A	32~48A									
5.5 (7 1/2)	54A	43~65A									
7.5 (10)	67A	54~80A									
9 (12 1/2)	80A	60~100A									

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Head Office	16F, No.88, Sec.6, Chung Shan N. Rd., Taipei, 111 Taiwan T. +886-2-2834-2662 F. +886-2-2836-6187
Export Sales Dept.	13F, No.90, Sec.6, Chung Shan N. Rd., Taipei, 111 Taiwan T. +886-2-2834-2662 F. +886-2-2832-1003 e-mail. export@seec.com.tw
Breaker and Switchgear Factory	No.234, ChungLun,HsinFun, HsinChu,Taiwan T. +886-3-599-5111 F. +886-3-599-5259
Overseas Office Shihlin Electric U.S.A.	80 South Lake Avenue, Suite 780, Pasadena, CA 91101 T. +1-626-535-0132 F. +1-626-535-0134 e-mail. sales@seecusa.com

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