

Marking and configuration

MCCB

MCCB model

- ABN: Economic type
- ABS: Standard type
- ABH: High capacity type

Standardized characteristics

- Ui: Rated insulation voltage
- Uimp: Impulse withstand voltage
- Ue: Rated operational voltage
- Icu: Ultimate breaking capacity
- Ics: Service breaking capacity



Rated frequency

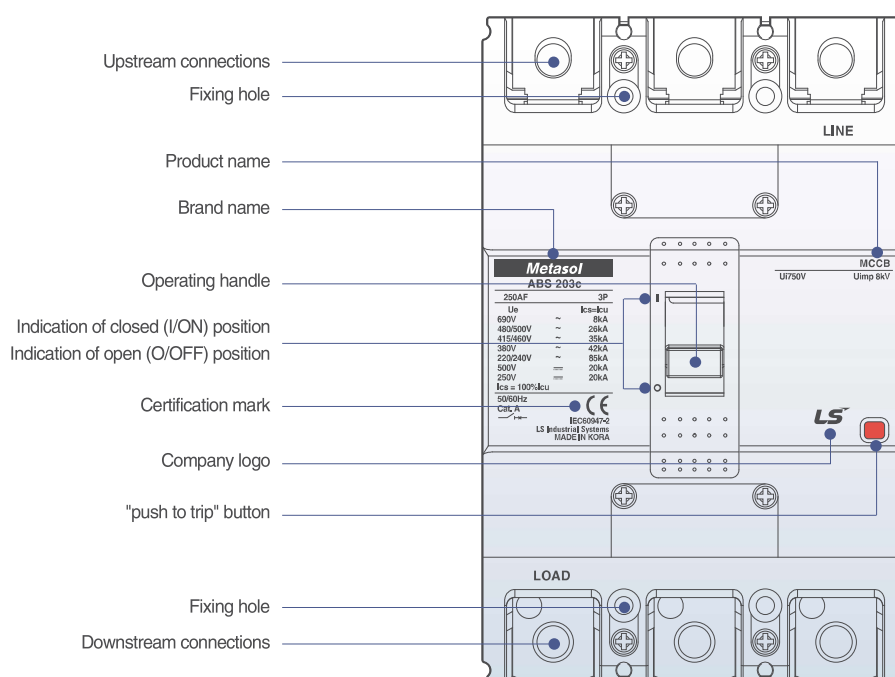
Utilization category

Manufacturer

Standard

Symbol indicating suitability for isolation as defined by IEC 947-2

MCCB



Quick selection table

Molded Case Circuit Breakers

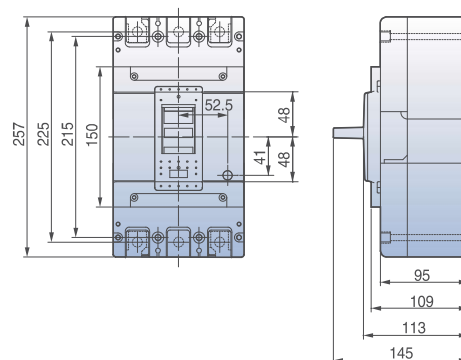


MCCBs

AF		400AF				
Type		N-Type	S-Type	H-Type	L-Type	
Type and Pole	2-pole	ABN402c	ABS402c	ABH402c	ABL402c	
	3-pole	ABN403c	ABS403c	ABH403c	ABL403c	
	4-pole	ABN404c	ABS404c	ABH404c	ABL404c	
Rated current, I _n	A	250, 300, 350, 400				
Rated operational voltage, U _e	AC(V)	690	690	690	690	
	DC(V)	500	500	500	500	
Rated insulation voltage, U _i	V	750	750	750	750	
Rated impulse withstand voltage, U _{imp}	kV	8	8	8	8	
Rated short-circuit breaking capacity(I _{cu}) kA (Sym), KSC8321, IEC 60947-2						
AC	690V	5	8	10	14	
	480/500V	18	35	50	65	
	415/460V	37	50	65	85	
	380V	42	65	70	100	
	220/250V	50	75	85	125	
DC	500V(3P)	10	20	40	40	
	250V(2P)	10	20	40	40	
I _{cs} =% × I _{cu}		100	100	100	75	
Dimensions (mm)	W × H × D (3-pole)	140 × 257 × 109mm (Fig. 4)				
More info.	Ratings	46 page				
	Curves	90 page				
	Drawings	96 page				

Note) MCCBs other than 1000/1200AF can be applied to both 50 and 60Hz.

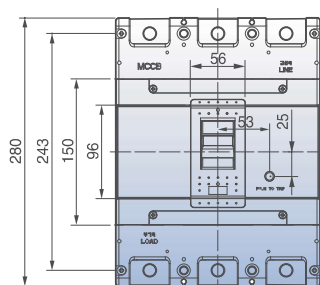
Type	AF	400AF	800AF	1000AF	1200AF
ABN		ABN400c 37kA	ABN800c 37kA		
ABS		ABS400c 50kA	ABS800c 65kA	ABS1000b 65kA	ABS1200b 65kA
ABH		ABH400c 65kA			
ABL		ABL400c 85kA	ABL800c 85kA	ABL1000b 85kA	ABL1200b 85kA



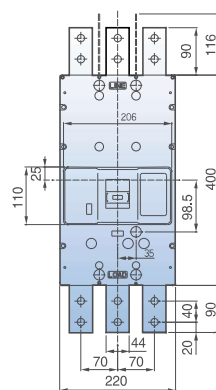
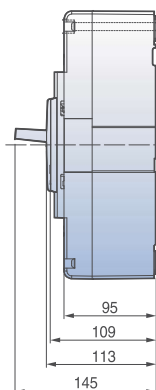
(Fig. 4)



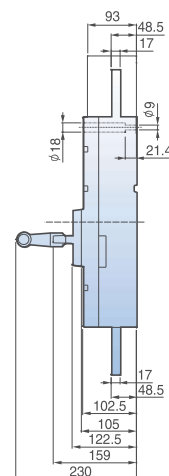
	800 AF			1000 AF		1200 AF		
	N-Type	S-Type	L-Type	S-Type	L-Type	S-Type		L-Type
	ABN802c	ABS802c	ABL802c	-	-	-	-	-
	ABN803c	ABS803c	ABL803c	ABS1003b	ABL1003b	ABS1203b	ABS1203bE	ABL1203b
	ABN804c	ABS804c	ABL804c	ABS1004b	ABL1004b	ABS1204b	-	ABL1204b
	500, 630, 700, 800			1000		1200		
	690	690	690	600	600	600	600	600
	500	500	500	-	-	-	-	-
	750	750	750	690	690	690	690	690
	8	8	8	6	6	6	6	6
	8	10	14	-	-	-	-	-
	25	45	65	50	75	50	50	75
	37	65	85	65	85	65	65	85
	45	75	100	65	85	65	65	85
	50	85	125	100	125	100	100	125
	10	20	40	-	-	-	-	-
	10	20	40	-	-	-	-	-
	100	100	75	50	50	50	50	50
	210 × 280 × 109mm (Fig. 5)			220 × 400 × 105mm (Fig. 6)		220 × 400 × 105mm (Fig. 6)		
	48 page			50 page		50 page	51 page	50 page
	90 page			91 page		91 page	92 page	91 page
	97 page			98 page		98 page	99 page	98 page



(Fig. 5)



(Fig. 6)



400AF MCCB

ABN400c, ABS400c, ABH400c, ABL400c

Metasol

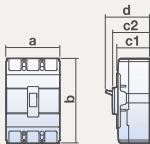


ABS403c



ABL404c

Ratings

Frame size			400AF														
Type and Pole			N-Type				S-Type			H-Type			L-Type				
			2-pole				ABN402c			ABS402c			ABH402c			ABL402c	
			3-pole				ABN403c			ABS403c			ABH403c			ABL403c	
			4-pole				ABN404c			ABS404c			ABH404c			ABL404c	
Rated current, In			250-300-350-400A														
Rated operational voltage, Ue			AC: 690V														
			DC: 500V														
Rated insulation voltage, Ui			AC: 750V														
Rated impulse withstand voltage, Uimp			8kV														
Rated short-circuit breaking			N-Type				S-Type			H-Type			L-Type				
capacity, Icu	AC	690V	5kA				8kA			10kA			14kA				
		480/500V	18kA				35kA			50kA			65kA				
IEC 60947-2 (Icu)		415/460V	37kA				50kA			65kA			85kA				
		380V	42kA				65kA			70kA			100kA				
		220/250V	50kA				75kA			85kA			125kA				
		DC	500V(3P)	10kA				20kA			40kA			40kA			
		250V(3P)	10kA				20kA			40kA			40kA				
Ics=100%Icu		125V	100%				100%			100%			75%				
Protective function			Overload, Short-circuit														
Type of trip unit			Thermal-Magnetic														
Magnetic trip range			8~12In														
Endurance	Mechanical		4000 operations														
	Electrical		1000 operations														
Connection	Standard		Front connection														
	Optional		Rear connection														
			Plug-in														
Mounting	Standard		Screw fixing														
Dimensions (mm)		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p	2p	3p	4p			
	a		140	140	184	140	140	184	140	140	184	140	140	184			
	b		257				257			257			257				
	c1 Note)		109				109			109			109				
	c2 Note)		113				113			113			113				
	d		145				145			145			145				
			145				145			145			145				
Weight, kg		Standard	5.2	6.2	7.8	5.2	6.2	7.8	5.2	6.2	7.8	5.2	6.2	7.8			
Certification		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p	2p	3p	4p			
CE marking		CE	○				○			○			○				

Note) Depth by door cut size : c1 for large cut, c2 for small cut

For more information

- Drawings ▶ 96 page
- Trip curves ▶ 90 page
- Accessories ▶ 72 page
- Connection and mounting ▶ 111 page

Ordering types

Breaker types

ABN type (37kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
250 A	ABN402c/250	ABN403c/250	ABN404c/250
300 A	ABN402c/300	ABN403c/300	ABN404c/300
350 A	ABN402c/350	ABN403c/350	ABN404c/350
400 A	ABN402c/400	ABN403c/400	ABN404c/400

ABS type (50kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
250 A	ABS402c/250	ABS403c/250	ABS404c/250
300 A	ABS402c/300	ABS403c/300	ABS404c/300
350 A	ABS402c/350	ABS403c/350	ABS404c/350
400 A	ABS402c/400	ABS403c/400	ABS404c/400

ABH type(65kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
250 A	ABH402c/250	ABH403c/250	ABH404c/250
300 A	ABH402c/300	ABH403c/300	ABH404c/300
350 A	ABH402c/350	ABH403c/350	ABH404c/350
400 A	ABH402c/400	ABH403c/400	ABH404c/400

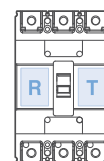
ABL type(85kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
250 A	ABL402c/250	ABL403c/250	ABL404c/250
300 A	ABL402c/300	ABL403c/300	ABL404c/300
350 A	ABL402c/350	ABL403c/350	ABL404c/350
400 A	ABL402c/400	ABL403c/400	ABL404c/400

Accessories



Electrical auxiliaries

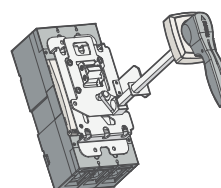
AX	Auxiliary Switch
AL	Alarm Switch
SHT	Shunt Trip
UVT	Undervoltage trip



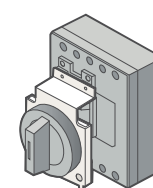
Maximum possibilities

T-position	Option of 2AX, 2AL and SHT or UVT
R-position	Option of 2AX, 2AL and SHT or UVT

Note) For more detail see 73 page



E-70U



N-70

External accessories

IBL400	Insulation barrier
T1-43A	Terminal cover (Long) - 2, 3pole
T1-44A	Terminal cover (Long) - 4pole
N-70	Rotary handle (Direct)
E-70U	Rotary handle (Extended)
MI-43	Mechanical interlock - 2, 3pole
MI-44	Mechanical interlock - 4pole
X-402	Rear terminal - 2pole
X-403	Rear terminal - 3pole
X-404	Rear terminal - 4pole
PB-I3-FR	Plug-in kit

Note) For more detail see 80 page

800AF MCCB

ABN800c, ABS800c, ABL800c

Metasol

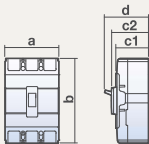


ABS803c



ABL804c

Ratings

Frame size			800AF								
Type and Pole			N-Type			S-Type			L-Type		
	2-pole		ABN802c			ABS802c			ABL802c		
	3-pole		ABN803c			ABS803c			ABL803c		
	4-pole		ABN804c			ABS804c			ABL804c		
Rated current, In			500-630-700-800A								
Rated operational voltage, Ue			AC: 690V								
			DC: 500V								
Rated insulation voltage, Ui			AC: 750V								
Rated impulse withstand voltage, Uimp			8kV								
Rated short-circuit breaking capacity, Icu			N-Type			S-Type			L-Type		
IEC 60947-2 (Icu)	AC	690V	8kA			10kA			14kA		
		480/500V	25kA			45kA			65kA		
		415/460V	37kA			65kA			85kA		
		380V	45kA			75kA			100kA		
	DC	220/250V	50kA			85kA			125kA		
		500V(3P)	10kA			20kA			40kA		
		250V(3P)	10kA			20kA			40kA		
Ics=100%Icu		125V	100%			100%			75%		
Protective function			Overload, Short-circuit								
Type of trip unit			Thermal-Magnetic								
Magnetic trip range			8~12In								
Endurance	Mechanical		2500 operations								
	Electrical		500 operations								
Connection	Standard		Front connection								
	Optional		Rear connection								
			Plug-in								
Mounting	Standard		Screw fixing								
Dimensions (mm)		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p
	a	210	210	280	210	210	280	210	210	280	
	b	280			280			280			
	c1 Note)	109			109			109			
	c2 Note)	113			113			113			
	d	145			145			145			
Weight, kg	Standard	11	11.5	18.2	11	11.5	18.2	11	11.5	18.2	
Certification		Pole	2p	3p	4p	2p	3p	4p	2p	3p	4p
CE marking		CE	○			○			○		

Note) Depth by door cut size : c1 for large cut, c2 for small cut

For more information

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Ordering types

Breaker types

ABN type (37kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
500 A	ABN802c/500	ABN803c/500	ABN804c/500
630 A	ABN802c/630	ABN803c/630	ABN804c/630
700 A	ABN802c/700	ABN803c/700	ABN804c/700
800 A	ABN802c/800	ABN803c/800	ABN804c/800

ABS type (65kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
500 A	ABS802c/500	ABS803c/500	ABS804c/500
630 A	ABS802c/630	ABS803c/630	ABS804c/630
700 A	ABS802c/700	ABS803c/700	ABS804c/700
800 A	ABS802c/800	ABS803c/800	ABS804c/800

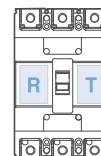
ABL type(85kA/460V)			
Rated current, In	2-pole	3-pole	4-pole
500 A	ABL802c/500	ABL803c/500	ABL804c/500
630 A	ABL802c/630	ABL803c/630	ABL804c/630
700 A	ABL802c/700	ABL803c/700	ABL804c/700
800 A	ABL802c/800	ABL803c/800	ABL804c/800

Accessories



Electrical auxiliaries

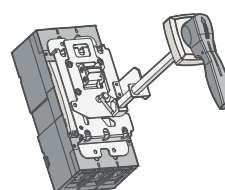
AX	Auxiliary Switch
AL	Alarm Switch
SHT	Shunt Trip
UVT	Undervoltage trip



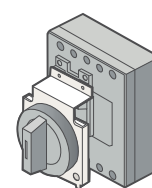
Maximum possibilities

T-position	Option of 2AX, 2AL and SHT or UVT
R-position	Option of 2AX, 2AL and SHT or UVT

Note) For more detail see 73 page



E-80U



N-80

External accessories

IBL800	Insulation barrier
T1-63A	Terminal cover (Long) - 2, 3pole
T1-64A	Terminal cover (Long) - 4pole
N-80	Rotary handle (Direct)
E-80U	Rotary handle (Extended)
MI-83S	Mechanical interlock - 2, 3pole
MI-84S	Mechanical interlock - 4pole
X-802	Rear terminal - 2pole
X-803	Rear terminal - 3pole
X-804	Rear terminal - 4pole
PB-J3-FR	Plug-in kit

Note) For more detail see 80 page