

Meta-MEC
LOW VOLTAGE CIRCUIT BREAKERS



Electric Equipment



MCCB & ELCB



Low Voltage Circuit Breakers

General characteristics

Overview

- General chart 4
- AB type MCCBs 6
- GB type adjustable MCCBs 8

Structure

- Plug-in MCCB 10

Features

- AB type MCCBs up to 225A 12
- GB type adjustable MCCBs up to 250A 14
- 400AF & 800AF MCCBs 16
- Plug-in MCCB 18

Quick selection tables

MCCBs

- 30AF to 225AF 20
- 250AF to 1600AF 22
- Plug-in MCCB 24

ELCBs

- 30AF to 225AF 26
- 4-Pole 50AF to 400AF 28

MCCBs for general use

AB type MCCBs up to 225AF

- Overview 30
- 30AF 31
- 50AF & 60AF 32
- 100AF 33
- 225AF 34
- Accessories 35

GB type adjustable MCCBs up to 250AF

- Overview 44
- Thermal magnetic trip 100AF 45
- Thermal magnetic trip 250AF 46
- Electronic trip 250AF 47
- Accessories 48

AB type MCCBs (400AF & 800AF)

- Overview 51
- 400AF 52
- 800AF 53
- Accessories 54

GB type adjustable MCCBs (400AF & 800AF)

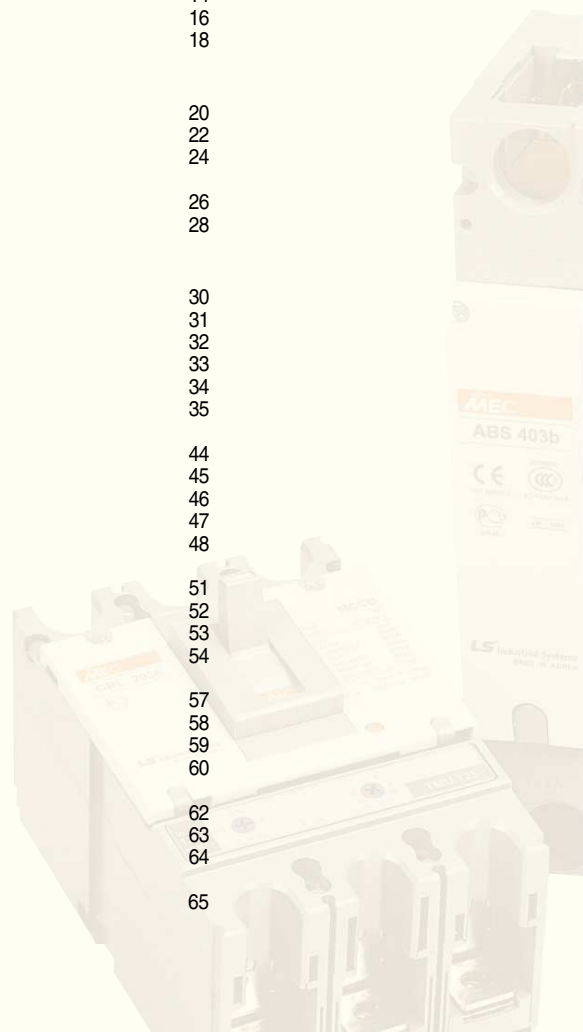
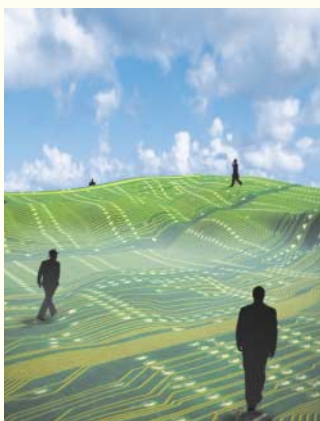
- Overview 57
- 400AF 58
- 800AF 59
- Accessories 60

AB type MCCBs (1200AF)

- Thermal magnetic trip 1200AF 62
- Electronic trip 1200AF 63
- Accessories 64

GB type adjustable MCCBs (1600AF)

- Electronic trip 1600AF 65



Contents:

MCCBs for definite purpose

Motor protection MCCBs	
- Magnetic only type	66
- Thermal magnetic type	68
Key locking MCCBs	71
Plug-in MCCB	72
- Normal type	74
- Line only type	76
- Single-row type	77
- Double-row type	78

ELCBs

Descriptions	80
30AF	81
50AF & 60AF	82
100AF	83
225AF	84
400AF	85
800AF	86
Accessories	87
50AF, 4-Pole	89
100AF, 4-Pole	90
225AF, 4-Pole	91
400AF, 4-Pole	92

Hi-MEC MCCBs

30AF to 225AF Hi-MEC series	93
30AF, 50AF	94
100AF	95
225AF	96
Accessories	97

Technical information

Trip mechanism	99
Application for transformer protection	100
Application for protection of lighting circuit	101
Application for protection of several kinds of loads	102
Application on resistance welding circuits	104
Application for protection of capacitor circuit	105
Application to DC circuits	106
Application to 400Hz systems	107
Influence by mounting position	108
Protection discrimination & Cascading	109
Protection discrimination (ACB-MCCB)	110
Protection discrimination (MCCB-MCCB)	111
Protection discrimination (MCCB-MCB)	114
Cascading (MCCB-MCCB)	120
Current limiting curves	124
Short circuit coordination	130
Accessories	132



Operating curves & temperature compensation curves

AB type MCCBs	148
GB type adjustable MCCBs	157
Hi-MEC MCCBs	161
Plug-in MCCBs	162
Table of the temperature compensation	166

Overall dimensions

AB type MCCBs	168
Plug-in MCCBs	182
GB type adjustable MCCBs	207
Rotary handle	226

Catalogue numbers

Catalogue numbers	228
Catalogue numbers index	294

General characteristics

Overview | General chart

Molded Case Circuit Breakers, MCCBs

AF Type	30AF	50AF	60AF	100AF	225AF	250AF	400AF	800AF	1200AF	1600AF
ABE		ABE53b 5kA	ABE63b 5kA	ABE103b 10kA	ABE203b 18kA		ABE403b 25kA	ABE803b 35kA		
ABS	ABS33b 5kA	ABS53b 10kA	ABS63b 10kA	ABS103b 25kA	ABS203b 25kA		ABS403b 35kA	ABS803b 50kA	ABS1003 65kA	ABS1203 65kA
ABH	ABH33b 10kA	ABH53b 25kA		ABH103b 35kA	ABH203b 35kA		ABH403b 50kA			
ABL							ABL403b 85kA	ABL803b 85kA		
GB Thermal-magnetic adjustable				GBN103 35kA GBH103 50kA GBL103 85kA		GBN203 35kA GBH203 50kA GBL203 85kA				
GB Electronic adjustable		GBL53E 85kA		GBL103E 85kA		GBL203E 85kA	GBN403E 35kA GBH403E 50kA	GBN803E 35kA GBH803E 50kA	ABS1203E 65kA	GBN1603E 65kA

- by three-pole type, ampere frame and breaking capacity at 415VAC.



Molded Case
Circuit Breaker

Same Size



Earth Leakage
Circuit Breaker

Earth Leakage Circuit Breakers, ELCBs

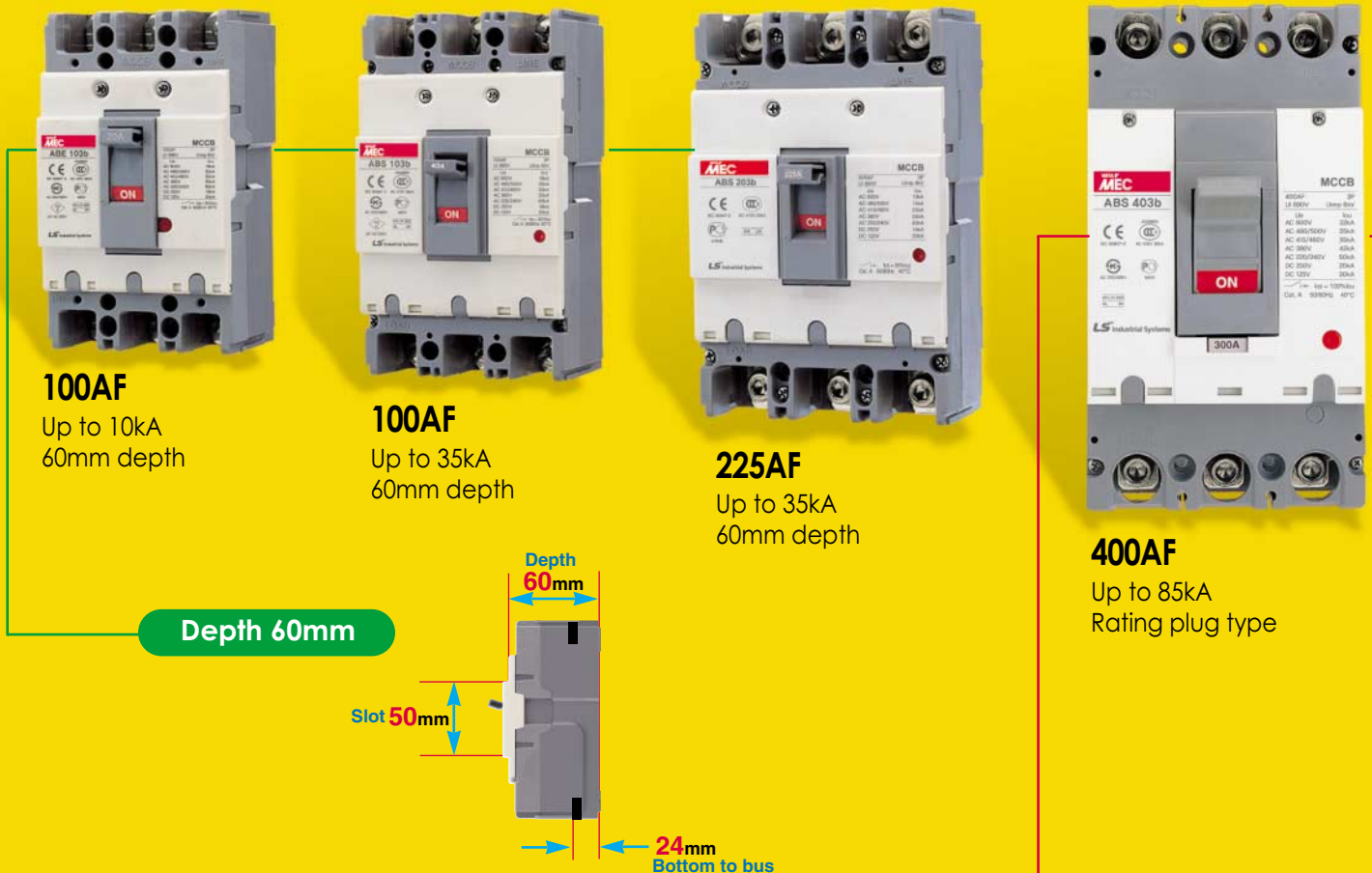
Type	AF	30AF	50AF	60AF	100AF	225AF	250AF	400AF	800AF	1200AF
EBE			EBE53b 5kA	EBE63b 5kA	EBE103b 10kA	EBE203b 18kA		EBE403b 25kA	EBE803b 35kA	
EBS		EBS33b 5kA	EBS53b 10kA	EBS63b 10kA	EBS103b 25kA	EBS203b 25kA		EBS403b 35kA	EBS803b 50kA	
EBH		EBH33b 10kA	EBH53b 25kA		EBH103b 35kA	EBH203b 35kA		EBH403b 50kA		
EBL								EBL403b 85kA	EBL803b 85kA	

- by three-pole type, ampere frame and breaking capacity at 415VAC.



General characteristics

Features | AB type MCCBs



- Offering economical solution with compact sizes and increased interrupting capacities.
- Complete range of two, three and four-pole version.
- Employing a fixed thermal and fixed magnetic trip.
- Rating plugs to change thermal currents are available for 400 and 800AF.
- 3-pole ELCBs physically interchangeable with 3-pole MCCBs are available.
- Offering more accessories such as rear connection and extended rotary type handles.
- Frames made of rigid materials of engineering plastics.
- MCCB with reference temperature 50°C is available



800AF
Up to 85kA
Rating plug type



Rating plug



1200AF
Up to 65kA
Adjustable magnetic trip

Type designation

AB	S	10	3	b	IN	100	AX	SHT=220V
Type		No. of poles		Rated current (A)		Control Voltage of SHT, UVT		
E	Economic	2	2pole	-	for protection of distribution systems	Accessories		
S	Standard	3	3pole	IN	Instantaneous trip characteristics only	AX	Auxiliary contact	
H	High interrupting capacity	4	4pole	M	for motor protection	AL	Alarm switch	
L	Current limit					SHT	Shunt Trip Coil	
Ampere Frame		Classification				UVT	Under Voltage Trip Coil	
3	30AF	40	400AF	-	Old series (ABE30)	D	Direct handle for upto 225AF	
5	50AF	80	800AF	a	Hi-MEC series	N	Direct handle for 400, 800AF	
6	60AF	100	1000AF	b	Meta-MEC series	E	Extended handle	
10	100AF	120	1200AF			X	Rear connection terminal	
20	225AF					MI	Mechanical Interlock	

General characteristics

Features | GB type adjustable MCCBs



100AF

35, 50kA
Thermal-magnetic
configuration



250AF

35, 50, 85kA
Thermal-magnetic
configuration



250AF

85kA
Electronic trip
configuration



400AF

35, 50kA
Electronic trip
configuration

Thermal-magnetic

- Suitable for use in the system where higher fault currents exist.
... 35, 50, 65 and 85kA breakers are available.
- Employing a adjustable thermal magnetic or electronic trip unit.
- Current adjustments are made by the knobs on the front of the trip unit.
- Complete range of three pole version to 1600A.
- Offering more accessories for varied applications and allows easy access to install them.
- Frames made of rigid materials of engineering plastics.
- MCCB with reference temperature 50°C is available



800AF
35, 50kA
Electronic trip
Configuration



AB type 1200AF
65kA
Electronic trip
configuration



GB type 1600AF
65kA
Electronic trip
configuration

Electronic trip

Type designation

GB

Type	
N	Normal
H	High interrupting capacity
L	Current limit

Ampere Frame	
5	50AF
10	100AF
20	225AF
40	400AF
80	800AF
160	1600AF

N

40

3

No. of poles	
2	2pole
3	3pole
4	4pole

Trip unit	
-	Thermal magnetic release
E	Electronic release

E

AX

Accessories	
AX	Auxiliary contact
AL	Alarm switch
SHT	Shunt Trip Coil
UVT	Under Voltage Trip Coil
D	Direct handle for upto 225AF
E	Extended handle
X	Rear connection terminal
MI	Mechanical Interlock

SHT=220V

Control Voltage of SHT, UVT

General characteristics

Structure

Meta-MEC offers more accessories for varied applications and allows easy access to install them, especially for the electrical auxiliaries.

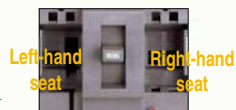


Easy & simple installation

Designed for installation in compartments that are accessible from the front. It is not necessary to take off the cover of the circuit breaker.



aux. cover
opened

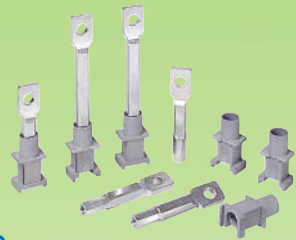


Left-hand seat

This seat is usually for auxiliary and alarm switches. It is not available for 2-pole exclusive size MCCBs.

Right-hand seat

This seat is usually for shunt trip and undervoltage trip units. It is not available for ELCBs and MCCBs with electronic trip unit.



Operating handle

Handle position clearly indicates the tripping of the breaker.



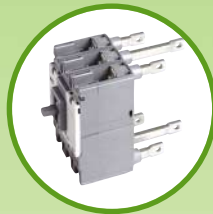
ON Trip Off

Breaker handle and face plate shall indicate rated capacity

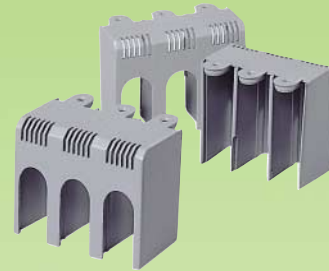
All operating mechanisms are of the quick-make, quick-break type and are "trip free"

Mechanical interlock between two breakers

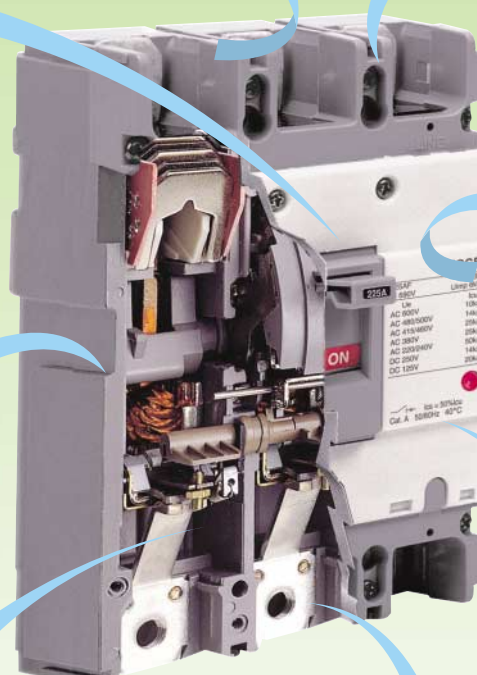
Key-lock built-in types are available.



Rear connection kits



Terminal shields



Manual rotary handles



Direct or extensible mounting

Push-to-trip button to exercise the trip mechanism manually

Trip units



One of three kinds is built in each breaker

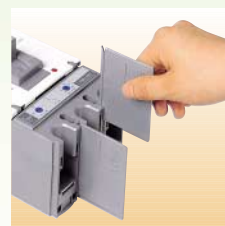
- Thermal-magnetic
- Electronic
- Hydraulic-magnetic

Configurations ; I, LI, LSI, LSIA,

Breakers shall have common tripping of all poles.

Thermal elements shall be factory calibrated to operate in a 40°C ambient environment.

Breakers for 50°C are available on request.



Insulation barriers

- supplied as standard for line side
- optional for load side.

General characteristics

Features | AB type MCCBs up to 225A

Offering economical solution with compact sizes.



105 x 165 x 60mm
225AF -Max. 35kA



90 x 155 x 60mm
50AF, 100AF -Max. 35kA



75 x 130 x 60mm
30AF, 50AF, 60AF
100AF -Max. 10kA

- Offering economical solution with compact sizes and increased interrupting capacities.
- Employing a fixed thermal and fixed magnetic trip.
- Offering more accessories such as rear connection and extended rotary type handles.
- Frames made of rigid materials of engineering plastics.

Key lock built-in MCCBs



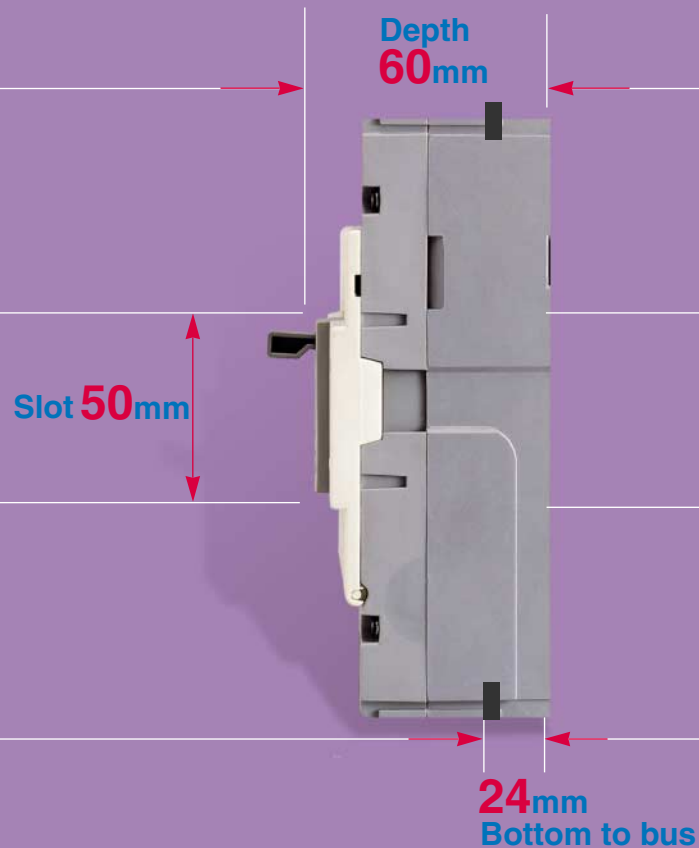
ABS103k

ABS203k



Compact 2-pole exclusive sizes

Three and four-pole versions are available and also offered in the double-pole version up to 100A with breaking capacities of 10, 25 and 35kA at 380/415V.

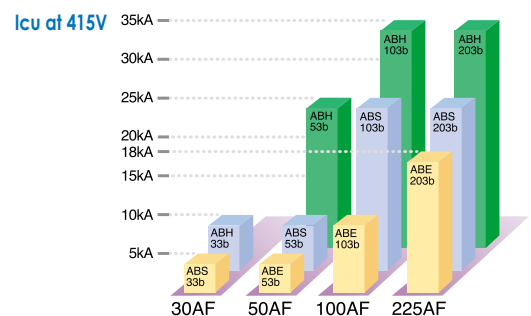


Standardization

3 different physical frame sizes but have the same dimensions for installation.

Earth leakage breakers physically interchangeable with MCCBs.

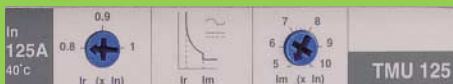
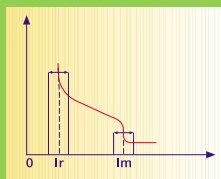
Thanks to the compact earth leakage module it is possible to build the module inside of MCCB without enlarging overall dimensions. Meta-MEC series provide three-pole earth leakage breakers physically interchangeable with MCCBs in the same current rating. It is very useful to construct modular panels.



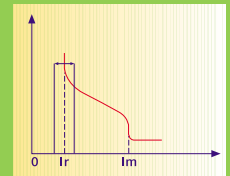
General characteristics

Features | GB type adjustable MCCBs up to 250A

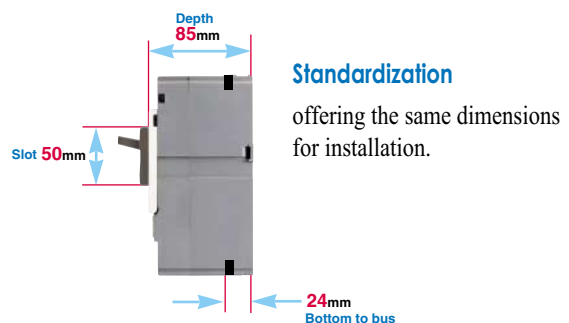
With thermal-magnetic trip unit



2, 3 and 4 pole
 $I_n=16\sim 250$ amp
 Interrupting capacity ... 35, 50 and 85kA
 LI configuration
 ... adjustable thermal & adjustable magnetic trip
 CE, KEMA certificate according to IEC60947-2
 UL508 certificate as a manual motor controller
 Magnetic only release types for motor protection
 are available

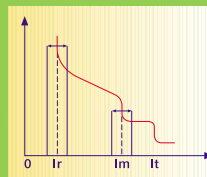


2, 3 and 4 pole
 $I_n=16\sim 100$ amp
 Interrupting capacity ... 35 and 50kA
 Adjustable thermal & fixed magnetic trip
 CE, KEMA certificate according to IEC60947-2
 UL508 certificate as a manual motor controller



Suitable for use in the system where higher fault currents exist

With electronic trip unit



3 pole

In=50, 100, 250amp

Interrupting capacity ... 85kA

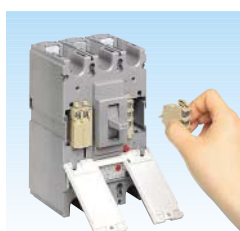
Adjustable thermal & adjustable magnetic trip

Alarm function

warning via LED flickering when the load current

is between 70 to 110% of set current Ir.

LED stays on over 110% of set current Ir.



Common auxiliaries

Auxiliary switch, Alarm switch, Shunt trip and Under voltage trip unit are frequently used electric auxiliaries for MCCBs.

They are designed to be installed easily and to be used in common for all GB type breakers up to 250A

General characteristics

Features | 400AF & 800AF MCCBs

AB type breakers

- Each breaker uses the individual rating plug for determining the continuous current rating.
- MCCB with reference temperature 50°C is available on request.
- Motor protection MCCBs with magnetic only trip are available.



800AF

Thermal-magnetic trip unit
 2, 3 and 4 pole
 $I_n=500, 600, 630, 700, 800A$
 Interrupting capacity ... 35, 50 and 85kA
 Trip unit with LI configuration
 - fixed thermal and magnetic
 - magnetic adjustable type is optional

Rating plug

is available with fixed ampere rating and the installed one is field interchangeable with the other

The pairs of rating plugs interchangeable each other

250A ↔ 300A
 350A ↔ 400A
 500A ↔ 600A
 500A ↔ 630A
 700A ↔ 800A

400AF

Thermal-magnetic trip unit
 2, 3 and 4 pole
 $I_n=250, 300, 350, 400A$
 Interrupting capacity ... 25, 35, 50 and 85kA
 Trip unit with LI configuration
 -fixed thermal and magnetic
 -magnetic adjustable type is optional

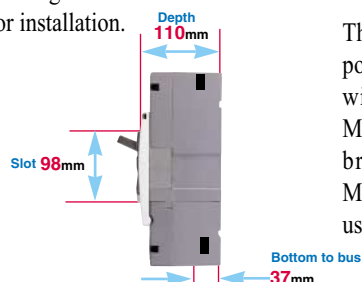


Common auxiliaries for 400 & 800AF breakers

Auxiliary switch, Alarm switch, Shunt trip and Under voltage trip unit are frequently used electric auxiliaries for MCCBs. They are designed to be installed easily and to be used in common for 400 and 800AF breakers regardless of the type of the trip unit.

Standardization

offering the same dimensions for installation.

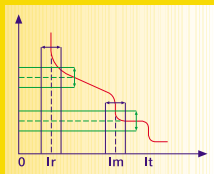


Earth leakage breakers physically interchangeable with MCCBs.

Thanks to the compact earth leakage module it is possible to build the module inside of MCCB without enlarging overall dimensions. Meta MEC series provide three-pole earth leakage breakers physically interchangeable with MCCBs in the same current rating. It is very useful to construct modular panels.

GB type adjustable breakers with electronic trip unit

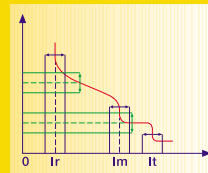
400AF Electronic trip unit
Type GBN403E, GBH403E
3 pole



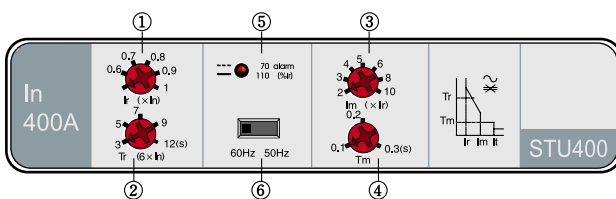
In=400A (adjustable)
Pre-alarm function
Interrupting capacity ... 35, 50kA
Trip unit with LSIA configuration



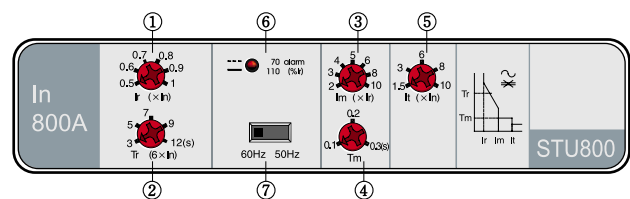
800AF Electronic trip unit
Type GBN803E, GBH803E
3 pole



In=800A (adjustable)
Pre-alarm function
Interrupting capacity ... 35, 50kA
Trip unit with LSIA configuration



- ① Long time pick-up, Ir
- ② Long time delay, tr
- ③ Short time pick-up, Im
- ④ Short time delay, tm
- ⑤ Alarm
- ⑥ Instantaneous pick-up
- ⑦ Rated frequency



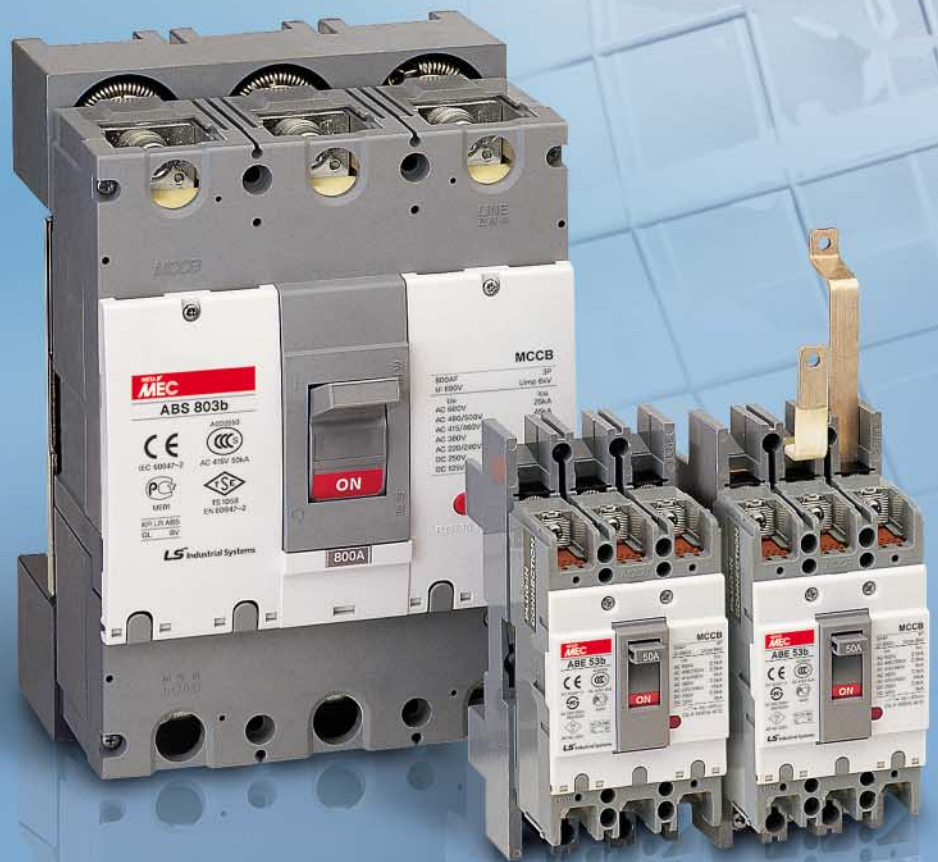
- ① Long time pick-up, Ir
- ② Long time delay, tr
- ③ Short time pick-up, Im
- ④ Short time delay, tm
- ⑤ Instantaneous pick-up
- ⑥ Alarm
- ⑦ Rated frequency

General characteristics

Features | PLUG-IN MCCB

Plug-in MCCB

Plug-in base makes it possible to extract and/or rapidly replace the circuit breaker without having to touch connections for ship and important installations.



PLUG-IN Mounting Block Ordering Information

Terminal for Plug-in accessory

PB

**PLUG-IN
Mounting Block**

A

Applicable MCCB	
A	ABE100b 60-100A
C	ABS100b
D	ABS200b
E	ABL100a
F	ABL200a
G	GBN100
H	GBN200
I	ABS400b
J	ABS800b

3

Number of Poles	
3	3P

FR

Connection type	
FR	Standard(Round Bolt)
FRL	Exclusive connection for power supply
1DB	Single line arrangement (Bus Bar)
2DB	Double lines arrangement

PBA

**PLUG-IN
Accessory**

100

Applicable MCCB	
100	ABS50b ~50A
	ABE100b 60~100A
	ABS100b
225	ABS200b
	ABE200a
	ABS400b

Features

- Four types of mounting blocks to meet customer's different requirements
- Lineup of normal type for MCCBs upto 800AF
- Rapid replacement of the MCCB without having to touch connections
- Certification of ship classification societies-LR, BV, ABS, GL, KR
- Plug-in MCCBs are adjusted to ambient temperature of 45°C

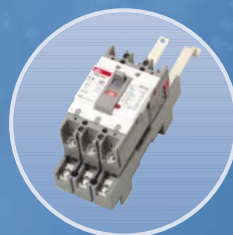
Mounting blocks(Bases)



Normal type



Line-only type



Single-row type



Double-row type



Quick selection table

MCCBs

30AF to 225AF

Frame size(AF)		30		50			
Frame type		ABS	ABH	ABE	ABS	ABH	GBL(E)
Breaking capacity(kA), Icu at 415VAC		5	10	5	10	25	85
Number of poles		2, 3	2, 3	2, 3	2, 3, 4	2, 3, 4	3
Type	2 pole	ABS32b	ABH32b	ABE52b	ABS52b	ABH52b	
	3 pole	ABS33b	ABH33b	ABE53b	ABS53b	ABH53b	GBL53E
	4 pole				ABS54b	ABH54b	
Rated current (A)		(3), 5, 10, 15, 20, 30	5, 10, 15, 20, 30	5, 10, 15, 20, 30, 40, 50		15, 20, 30, 40, 50	50 Electronically adjustable: (0.5-0.6-0.7-0.8-0.9-1.0) × In
Technical data conforming to IEC/EN60947-2							
Rated operational voltage(V), Ue(50/60Hz)		600	600	600	600	600	600
Rated operational voltage(V), Ue(DC)		250	250	250	250	250	-
Rated insulation voltage(V), Ui(50/60Hz)		690	690	690	690	690	690
Rated impulse withstand voltage(kV), Uimp		6	6	6	6	6	6
Ultimate breaking capacity(kA), Icu							
AC 50/60Hz	220/240V	10	25	10	25	50	125
	380V	7.5	14	7.5	14	25	85
	415V	5	10	5	10	25	85
	440/460V	5	10	5	10	25	85
	480/500V	2.5	7.5	2.5	7.5	14	65/50
	600V	2.5	5	2.5	5	10	35
DC	125V	5	10	5	10	20	-
	250V	2.5	5	2.5	5	14	-
Service breaking capacity(%Icu), Ics		50	50	50	50	50	75
Category of use		A	A	A	A	A	A
Endurance (Number of operations)	Mechanical	8500	8500	8500	8500	8500	10000
	Electrical	1500	1500	1500	1500	1500	5000
Type of trip unit							
Thermal-magnetic release						fixed	
Electronic release							LSIA configuration
Pre-alarm via LED							●
Hydraulic-magnetic release		fixed	fixed	fixed	fixed		
Magnetic release only without thermal trip							
Earth leakage protection for 3 pole		▲	▲	▲	▲	▲	
Accessories							
Electrical auxiliaries	Auxiliary switch	●	●	●	●	●	●
	Alarm switch	●	●	●	●	●	●
	Shunt trip	●	●	●	●	●	●
	Undervoltage trip	●	●	●	●	●	●
External accessories	Direct rotary handle	●	●	●	●	●	●
	Extended rotary handle	●	●	●	●	●	●
	Terminal shield	●	●	●	●	●	●
	Insulation barrier	●	●	●	●	●	●
	Rear connection	●	●	●	●	●	●
	Mechanical interlock	-	-	-	-	-	-
	Plug-in device(3 pole)	●	●	●	●	●	-
	Motor operator	-	-	-	-	-	-
Dimensions (W × H × Dmm)	3 pole breaker 75 × 130 × 60		75 × 130 × 60		90 × 155 × 60	105 × 165 × 86	
Weight(kg)	2 pole	0.45	0.45	0.45	0.45	0.7	
	3 pole	0.65	0.65	0.65	0.65	1	1.7
	4 pole				0.85	1.2	
Reference page no.		31		32			

- * Note) 1. ● applicable or available
2. ▲ available as a separate breaker
3. (3) Breaking capacity(at 415VAC) of ABS32b 3A ABS33b 3A is 2.5kA



60		100							225		
ABE	ABS	ABE	ABS	ABH	GBN	GBH	GBL	GBL(E)	ABE	ABS	ABH
5	10	10	25	35	35	50	85	85	18	25	35
2, 3	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	3	2, 3, 4	2, 3, 4	2, 3, 4
ABE62b	ABS62b	ABE102b	ABS102b	ABH102b	GBN102	GBH102	GBL102		ABE202b	ABS202b	ABH202b
ABE63b	ABS63b	ABE103b	ABS103b	ABH103b	GBN103	GBH103	GBL103	GBL103E	ABE203b	ABS203b	ABH203b
	ABS64b	ABE104b	ABS104b	ABH104b	GBN104	GBH104	GBL104		ABE204b	ABS204b	ABH204b
60		5, 10, 15, 20, 30, 40, 50, 60, 75, 100	15, 20, 30, 40, 50, 60, 75, 100		16, 20, 25, 32, 40, 50, 63, 80, 100 Thermally adjustable; (0.8-0.9-1.0) × In			100 Electronically adjustable; (0.5-0.6-0.7-0.8-0.9-1.0) × In	100, 125, 150, 175, 200, 225		
600	600	600	600	600	600	600	600	600	600	600	600
250	250	250	250	250	250	250	250	-	250	250	250
690	690	690	690	690	690	690	690	690	690	690	690
6	6	6	6	6	6	6	6	6	6	6	6
10	25	25	50	65	50	85	125	125	35	50	65
7.5	14	14	25	35	35	50	85	85	18	25	35
5	10	10	25	35	35	50	85	85	18	25	35
5	10	10	25	35	35	50	85	85	18	25	35
2.5	7.5	7.5	14	25	30/22	42/35	65/50	65/50	10	14	25
2.5	5	5	10	18	18	25	35	35	7.5	10	18
5	10	10	20	25	-	-	-	-	15	20	25
2.5	5	5	14	18	35	50	85	-	10	14	18
50	50	50	50	50	75	75	75	75	50	50	50
A	A	A	A	A	A	A	A	A	A	A	A
8500	8500	8500	8500	8500	20000	20000	10000	10000	7000	7000	7000
1500	1500	1500	1500	1500	10000	10000	5000	5000	1000	1000	1000
			fixed	fixed	Adjustable-thermal, Fixed-magnetic			LSIA configuration	fixed	fixed	fixed
								●			
fixed	fixed	fixed									
▲	▲	▲	▲	▲			▲		▲	▲	▲
●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●
-	-	-	-	-	-	-	-	-	-	-	-
●	●	●	●	●	●	●	●	●	●	●	●
-	-	-	-	-	-	-	-	-	-	-	-
75 × 130 × 60		75 × 130 × 60	90 × 155 × 60		90 × 140 × 86		105 × 165 × 86		105 × 165 × 60		
0.45	0.45	0.45	0.7	0.7	1.1	1.1	1.5		1.1	1.1	1.1
0.65	0.65	0.65	1.1	1.1	1.2	1.2	1.7	1.7	1.2	1.2	1.2
	0.85	0.85	1.2	1.2	1.5	1.5	2.1		1.5	1.5	1.5
32		33		45		46		34			

Quick selection table

MCCBs

250AF to 1600AF

Frame size(AF)		250				400				
Frame type		GBN	GBH	GBL	GBL(E)	ABE	ABS	ABH	ABL	
Breaking capacity(kA), Icu at 415VAC		35	50	85	85	25	35	50	85	
Number of poles		2, 3, 4	2, 3, 4	2, 3, 4	3	2,3,4	2,3,4	2,3,4	2, 3, 4	
Type	2 pole	GBN202	GBH202	GBL202		ABE402b	ABS402b	ABH402b	ABL402b	
	3 pole	GBN203	GBH203	GBL203	GBL203E	ABE403b	ABS403b	ABH403b	ABL403b	
	4 pole	GBN204	GBH204	GBL204		ABE404b	ABS404b	ABH404b	ABL404b	
Rated current (A)		125, 160, 200, 250 Thermally adjustable : (0.8- 0.9-1.0) × In			250 Electronically adjustable: (0.5-0.6-0.7-0.8- 0.9-1.0) × In	250, 300, 350, 400 Interchangeable via rating plug between 250 and 300 350 and 400				
Technical data conforming to IEC/EN60947-2										
Rated operational voltage(V), Ue(50/60Hz)		600	600	600	600	600	600	600	600	
Rated operational voltage(V), Ue(DC)		250	250	250	-	250	250	250	250	
Rated insulation voltage(V), Ui(50/60Hz)		690	690	690	690	690	690	690	690	
Rated impulse withstand voltage(kV), Uimp		6	6	6	6	6	6	6	6	
Ultimate breaking capacity(kA), Icu										
	AC 50/60Hz	220/240V	50	85	125	125	35	50	85	125
		380V	35	50	85	85	30	42	65	100
		415V	35	50	85	85	25	35	50	85/50(Ics)
		440/460V	35	50	85	85	25	35	50	85
		480/500V	30/22	42/35	65/50	65/50	18	25	35	65
		600V	18	25	35	35	18	22	25	30
		690V	-	-	-	-	-	-	-	-
	DC	125V	-	-	-	-	20	30	50	60
		250V	35	50	85	-	10	20	40	40
Service breaking capacity(%Icu), Ics			75	75	75	75	100	100	50	50
Category of use		A	A	A	A	A	A	A	A	A
Endurance	Mechanical	10000	10000	10000	10000	4000	4000	4000	4000	4000
(Number of operations)	Electrical	5000	5000	5000	5000	1000	1000	1000	1000	1000
Type of trip unit										
Thermal-magnetic release		Adjustable-thermal & magnetic					fixed	fixed	fixed	fixed
Electronic release						LSIA configuration				
Pre-alarm via LED						●				
Hydraulic-magnetic release										
Magnetic release only without thermal trip				▲			▲			▲
Earth leakage protection	for 3 pole						▲	▲	▲	▲
Accessories										
Electrical auxiliaries	Auxiliary switch	●	●	●	●	●	●	●	●	●
	Alarm switch	●	●	●	●	●	●	●	●	●
	Shunt trip	●	●	●	●	●	●	●	●	●
	Undervoltage trip	●	●	●	●	●	●	●	●	●
External accessories	Direct rotary handle	●	●	●	●	●	●	●	●	●
	Extended rotary handle	●	●	●	●	●	●	●	●	●
	Terminal shield	●	●	●	●	●	●	●	●	●
	Insulation barrier	●	●	●	●	●	●	●	●	●
	Rear connection	●	●	●	●	●	●	●	●	●
	Mechanical interlock	-	-	-	-	●	●	●	●	●
	Plug-in device(3pole)	●	●	●	-	●	●	●	●	●
	Motor operator	-	-	-	-	-	-	-	-	-
Dimensions (W × H × Dmm)	3 pole breaker	105 × 165 × 86				140 × 257 × 113				
Weight(kg)	2 pole	1.5	1.5	1.5	-	5.2	5.2	5.2	5.2	
	3 pole	1.7	1.7	1.7	1.7	6.2	6.2	6.2	6.2	
	4 pole	2.1	2.1	2.1		7.8	7.8	7.8	7.8	
Reference page no.		46			47	52				

* Note) 1. ● applicable or available
2. ▲ available as a separate breaker



400		800					1200		1600	
GBN(E)	GBH(E)	ABE	ABS	ABL	GBN(E)	GBH(E)	ABS	ABS(electronic trip)	GBN(E)	
35	50	35	50	85	35	50	65	65	65	
3	3	2, 3, 4	2, 3, 4	2, 3, 4	3	3	3, 4	3	3	
GBN403E	GBH403E	ABE802b	ABS802b	ABL802b	GBN803E	GBH803E	ABS1003	ABS1203	ABS1203E	GBN1603E
		ABE803b	ABS803b	ABL803b			ABS1004	ABS1204		
		ABE804b	ABS804b	ABL804b						
400 Electronically adjustable : (0.5-0.6-0.7-0.8-0.9-1.0) × In		500, 600, 630, 700, 800 Interchangeable via rating plug between 500 and 600, 500 and 630, 700 and 800			800 Electronically adjustable : (0.5-0.6-0.7-0.8-0.9-1.0) × In		1000	1200	1200 Electronically adjustable: (0.5-0.6-0.7-0.8-0.9-1.0) × In	1600
600	600	600	600	600	600	600	600	600	600	
-	-	250	250	250	-	-	250	250	-	
690	690	690	690	690	690	690	690	690	690	
6	6	6	6	6	6	6	6	6	8	
50	85	50	100	125	50	85	100	100	-	
35	50	42	65	100	35	50	65	65	-	
35	50	35	50	85/50(lcs)	35	50	65	65	65	
30	42	35	50	85	30	42	65	65	45	
22	35	25	45	65	22	35	50	50	22	
18	25	22	25	30	18	25	45	45	-	
-	-	-	-	-	-	-	-	-	20	
-	-	30	50	60	-	-	-	-	-	
-	-	20	40	40	-	-	40	-	-	
50	50	100	50	50	50	50	50	50	50	
A	A	A	A	A	A	A	A	A	A	
4000	4000	2500	2500	2500	2500	2500	2500	2500	10000	
1000	1000	500	500	500	500	500	500	500	4000	
LSIA configuration		fixed	fixed	fixed	LSIA configuration		Fixed-thermal, Adjustable-magnetic		LSIA configuration	●
●	●				●	●			●	●
			▲	▲	▲				●	
●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●
-	-	●	●	●	-	-	-	-	-	-
●	●	●	●	●	●	●	●	●	●	-
●	●	●	●	●	●	●	●	●	●	-
●	●	●	●	●	●	●	●	●	●	-
-	-	●	●	●	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
140 × 257 × 113		210 × 280 × 113					210 × 400 × 105		210 × 400 × 105	210 × 350 × 142.5
-	-	11	11	11	-	-	-	-	-	
7.4	-	11.5	11.5	11.5	11.5	-	19.4	19.4	23	
-	-	18.2	18.2	18.2	-	-	27	-	-	
58	-	53			59	-	62	63	65	

Quick Selection Table

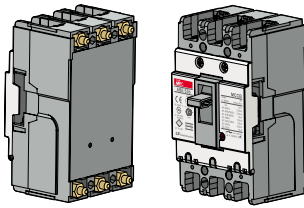
Plug-in MCCBs

Selection table of plug-in MCCBs

Plug-in version Breakers

Figure	Type	Rated current, A	Rated breaking current, kA		
			220V	460V	600V

AB type MCCB



Plug-in version Breakers are available in two types of MCCBs- AB and GB

ABS33b	3, 5, 10, 15, 20, 30	10(5)	5(2.5)	2.5(1.5)
ABH33b	5, 10, 15, 20, 30	25	10	5
ABE53b	5, 10, 15, 20, 30, 40, 50	10	5	2.5
ABS53b	5, 10, 15, 20, 30, 40, 50	25	10	5
ABE63b	60	10	5	2.5
ABS63b	60	25	10	5
ABE103b	5, 10, 15, 20, 30, 40, 50, 60, 75, 100	25	10	5
ABH53b	15, 20, 30, 40, 50	50	25	10
ABS103b	15, 20, 30, 40, 50, 60, 75, 100	50	25	10
ABH103b	15, 20, 30, 40, 50, 60, 75, 100	65	35	18
ABL53a	15, 20, 30, 40, 50	100	85	42
ABL103a	15, 20, 30, 40, 50, 60, 75, 100	100	85	42
ABE203b	100, 125, 150, 175, 200	35	18	7.5
ABS203b	100, 125, 150, 175, 200, 225	50	25	10
ABH203b	100, 125, 150, 175, 200, 225	65	35	18
ABH203a	125, 150, 175, 200, 225	125	65	35
ABL203a	125, 150, 175, 200, 225	125	65	35
ABE403b	300, 350, 400	35	25	18
ABS403b	250, 300, 350, 400	50	35	22
ABH403b	250, 300, 350, 400	85	50	25
ABL403b	250, 300, 350, 400	125	85	30
ABE803b	500, 600, 630, 700, 800	50	35	22
ABS803b	500, 600, 630, 700, 800	100	50	25
ABL803b	500, 600, 630, 700, 800	125	85	30

AB type MCCB



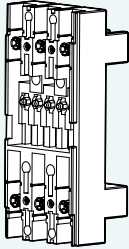
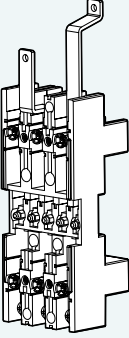
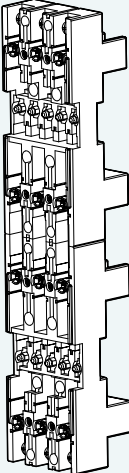
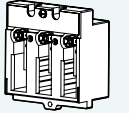
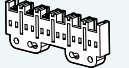
GB type MCCB

GB type MCCB



GBN 53	16, 20, 25, 32, 40, 50	50	35	18
GBH 53	16, 20, 25, 32, 40, 50	85	50	25
GBN103	63, 80, 100	50	35	18
GBH103	63, 80, 100	85	50	25
GBL53	16, 20, 25, 32, 40, 50	125	85	35
GBL103	63, 80, 100	125	85	35
GBN 203	125, 160, 200, 250	50	35	18
GBH 203	125, 160, 200, 250	85	50	25
GBL 203	125, 160, 200, 250	125	85	35

Mounting blocks and Terminal blocks

Mounting block		Terminal	Reference page no	Figure
Mounting block	Type	Terminal		
Normal type	PB-A3-FR	PBA-100	74	 <p>Normal type</p>
Single-row type	PB-A3-1DB		77	
Double-row type	PB-A3-2DB		78	
Line-only type	PB-A3-FRL		-	
Mounting block	Type	Terminal		
Normal type	PB-C3-FR	PBA-100	74	 <p>Single-row type</p>
Single-row type	PB-C3-1DB		77	
Double-row type	PB-C3-2DB		78	
Line-only type	PB-C3-FRL		-	
Mounting block	Type	Terminal	74	 <p>Double-row type</p>
Normal type	PB-E3-FR	PBA-225		
Mounting block	Type	Terminal	74	
Normal type	PB-D3-FR	PBA-225		
Mounting block	Type	Terminal	74	 <p>Line-only type</p>
Normal type	PB-I3-FR	PBA-225		
Mounting block	Type	Terminal	74	
Normal type	PB-J3-FR	PBA-225		
Mounting block	Type	Terminal		 <p>Terminal block for electrical auxiliaries</p>
Normal type	PB-G3-FR	PBA-100	74	
Single-row type	PB-G3-1DB		77	
Double-row type	PB-G3-2DB		78	
Line-only type	PB-G3-FRL	-	76	
Mounting block	Type	Terminal	74	
Normal type	PB-D3-FR	PBA-225		

Quick selection table

ELCBs

30AF to 800AF

Frame size(AF)		30		50			60		
Frame type		EBS	EBH	EBE	EBS	EBH	EBE	EBS	
Breaking capacity(kA), I _{cu} at 415VAC		5	10	5	10	25	5	10	
Number of poles		3	3	2, 3	3	3	3	3	
Type	2 pole	-	-	EBE52b	-	-	-	-	
	3 pole	EBS33b	EBH33b	EBE53b	EBS53b	EBH53b	EBE63b	EBS63b	
Rated current (A) (Non-adjustable)		5, 10, 15, 20, 30		5, 10, 15, 20, 30, 40, 50		40, 50	60		
Residual current(A), I _{Δn}		0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)		0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)			0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)		
Residual non-operating current		0.5 x I _{Δn}		0.5 x I _{Δn}			0.5 x I _{Δn}		
Residual current off-time at I _{Δn}		≤ 0.1 sec		≤ 0.1 sec			≤ 0.1 sec		
Rated operational voltage(V), U _e (50/60Hz)		176-510		176-510			176-510		
Technical data conforming to IEC/EN60947-2									
Rated impulse withstand voltage(kV), U _{imp}		6	6	6	6	6	6	6	
Ultimate breaking capacity(kA), I _{cu}	AC 50/60Hz	220/240V	10	25	10	25	50	10	25
		415/460V	5	10	5	10	25	5	10
Service breaking capacity(%I _{cu}), I _{cs}		50	50	50	50	50	50	50	
Endurance (number of operations)	Mechanical	8500	8500	8500	8500	8500	8500	8500	
	Electrical	1500	1500	1500	1500	1500	1500	1500	
Type of trip unit									
Overcurrent pick-up		Hydraulic-magnetic		Hydraulic-magnetic		Thermal-magnetic	Hydraulic-magnetic		
Earth leakage pick-up		Electronic		Electronic		Electronic	Electronic		
Accessories									
Electrical auxiliaries	Auxiliary switch	●	●	●	●	●	●	●	
	Alarm switch	●	●	●	●	●	●	●	
	Shunt trip	-	-	-	-	-	-	-	
	Undervoltage trip	-	-	-	-	-	-	-	
External accessories	Direct rotary handle	●	●	●	●	●	●	●	
	Terminal shield	●	●	●	●	●	●	●	
	Insulation barrier	●	●	●	●	●	●	●	
	Motor operator	-	-	-	-	-	-	-	
Dimensions (WxHxD mm)	3 pole breaker	75 × 130 × 60		75 × 130 × 60		90 × 155 × 60	75 × 130 × 60		
Weight(kg)	2 pole								
	3 pole	0.7	0.7	0.7	0.7	1	0.7	0.7	
Reference page no.		81		82			82		

* Note) ● applicable or available



100			225			400				800		
EBE	EBS	EBH	EBE	EBS	EBH	EBE	EBS	EBH	EBL	EBE	EBS	EBL
10	25	35	18	25	35	25	35	50	85	35	50	85
2, 3	3	3	3	3	3	3	3	3	3	3	3	3
EBE102b	-	-	-	-	-	-	-	-	-	-	-	-
EBE103b	EBS103b	EBH103b	EBE203b	EBS203b	EBH203b	EBE403b	EBS403b	EBH403b	EBL403b	EBE803b	EBS803b	EBL803b
60, 75, 100	40, 50, 60, 75, 100	60, 75, 100	100, 125, 150, 175, 200, 225			250, 300, 350, 400				500, 600, 700, 800		
0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)			0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)			0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)				0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)		
0.5 x I _{Δn}			0.5 x I _{Δn}			0.5 x I _{Δn}				0.5 x I _{Δn}		
≤ 0.1 sec			≤ 0.1 sec			≤ 0.1 sec				≤ 0.1 sec		
176-510 (EBE102b : 88-242)			176-510			176-510				176-510		
6	6	6	6	6	6	6	6	6	6	6	6	6
25	50	65	35	50	65	35	50	85	125	50	100	125
10	25	35	18	25	35	25	35	50	85	35	50	85
50	50	50	50	50	50	50	50	50	50	50	50	50
8500	8500	8500	7000	7000	7000	4000	4000	4000	4000	4000	4000	4000
1500	1500	1500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Hydraulic-magnetic	Thermal-magnetic	Thermal-magnetic			Thermal-magnetic				Thermal-magnetic			
Electronic	Electronic	Electronic			Electronic				Electronic			
•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•
-	-	-	-	-	-	•	•	•	•	•	•	•
-	-	-	-	-	-	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•
-	-	-	-	-	-	-	-	-	-	-	-	-
75 × 130 × 60	90 × 155 × 60		105 × 165 × 60			140 × 257 × 110				210 × 280 × 110		
0.7	1	1.2	1.4	1.4	1.4	7	7	7	7	11.5	11.5	11.5
	83		84			85				86		

Quick selection table

ELCBs

50AF to 400AF, 4-Pole

Frame size(AF)		50	
Frame type		EBS	EBH
Breaking capacity(kA), I _{cu} at 415VAC		25	35
Number of poles		4	4
Type	4 pole	EBS54b	EBH54b
Rated current (A) (Non-adjustable)		15, 20, 30, 40, 50	
Residual current(A), I _{Δn}		0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)	
Residual non-operating current		0.5 x I _{Δn}	
Residual current off-time at I _{Δn}		≤ 0.1 sec	
Rated operational voltage(V), U _e (50/60Hz)		176-510	
Technical data conforming to IEC/EN60947-2			
Rated impulse withstand voltage(kV), U _{imp}		6	
Ultimate breaking capacity(kA), I _{cu}			
	AC 50/60Hz	220/240V	50
		415/460V	25
			65
			35
Service breaking capacity(%I _{cu}), I _{cs}		50	
Endurance (number of operations)	Mechanical	4000	
	Electrical	6000	
Type of trip unit			
Overcurrent pick-up		Thermal-magnetic	
Earth leakage pick-up		Electronic	
Accessories			
Electrical auxiliaries	Auxiliary switch	●	●
	Alarm switch	●	●
External accessories	Direct rotary handle	●	●
	Terminal shield	●	●
	Insulation barrier	●	●
	Motor operator	-	-
Dimensions (WxHxD mm)	4 pole breaker	120X175X60	
Weight(kg)	4 pole	1.4	
Reference page no.		89	

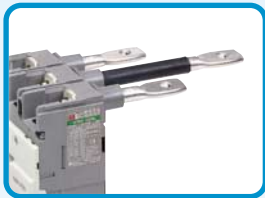
* Note) ● applicable or available



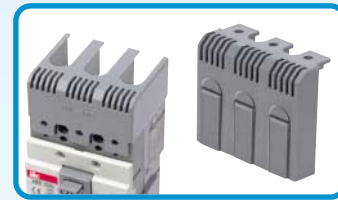
100		225		400	
EBS	EBH	EBS	EBH	EBE	EBS
25	35	25	35	25	35
4	4	4	4	4	4
EBS104b	EBH104b	EBS204b	EBH204b	EBE404b	EBS404b
15, 20, 30, 40, 50, 60, 75, 100		100, 125, 150, 175, 200, 225		250, 300, 350, 400	
0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)		0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)		0.03 (Fixed) 0.1-0.2-0.5 (Adjustable)	
0.5 x I _{Δn} ≤ 0.1 sec		0.5 x I _{Δn} ≤ 0.1 sec		0.5 x I _{Δn} ≤ 0.1 sec	
176-510		176-510		176-510	
6		6		6	
50	65	50	65	35	50
25	35	25	35	25	35
50		50		50	
4000		4000		4000	
6000		4000		1000	
Thermal-magnetic		Thermal-magnetic		Thermal-magnetic	
Electronic		Electronic		Electronic	
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
-	-	-	-	-	-
120X175X60		140X185X60		185X257X109	
1.4		1.9		8.4	
90		91		92	

- Offering economical solution with compact and increased interrupting capacities compared to the existing breakers.
- Employing a fixed thermal and fixed magnetic trip.
- Frames made of rigid materials of engineering plastics.
- 3-pole Earth leakage circuit breakers physically interchangeable with 3-pole MCCBs are available.
- Offering more accessories such as rear connection and extended rotary type handles.
- Key lock built-in MCCBs are available.

Rear connection



Terminal shield



Manual rotary handle



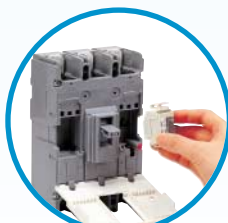
Extensible mounting



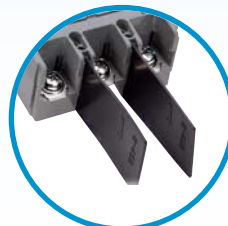
Direct mounting



Electrical auxiliaries
- auxiliary switch
- alarm switch
- shunt trip
- undervoltage trip



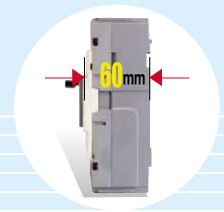
Unique design
for auxiliaries



Insulation barrier



30AF



Rated current, In	3, 5, 10, 15, 20, 30A
Magnetic Trip	(8 to 16) × In
Type of trip unit	Hydraulic-magnetic
Number of poles	2, 3 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Category of use	Type According to IEC947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABS	ABH
220/240V	10kA	25kA
380/415V	7.5/5kA	14/10kA
440/460V	5kA	10kA
480/500V	2.5kA	7.5kA
600V	2.5kA	5kA

Earth leakage circuit breaker



Types EBS33b, EBH33b physically interchangeable with MCCBs.

※ see details (p. 81)

Rating	for 5kA at 415V ... type ABS	
In	2pole	3pole
3A Note)	ABS32b/3	ABS33b/3
5A	ABS32b/5	ABS33b/5
10A	ABS32b/10	ABS33b/10
15A	ABS32b/15	ABS33b/15
20A	ABS32b/20	ABS33b/20
30A	ABS32b/30	ABS33b/30
In	for 10kA at 415V ... type ABH	
In	2pole	3pole
5A	ABH32b/5	ABH33b/5
10A	ABH32b/10	ABH33b/10
15A	ABH32b/15	ABH33b/15
20A	ABH32b/20	ABH33b/20
30A	ABH32b/30	ABH33b/30

* Note) Breaking capacity(at 415VAC) of ABS32b 3A ABS33b 3A is 2.5kA

Optional accessories	Auxiliary switch
※ see details (p. 35~36)	Alarm switch
	Shunt trip
	Undervoltage trip
	Manual rotary handle
	Terminal shield
	Rear connection unit
	Insulational barrier (standard for line side only)

Certificate
CE, KEMA, Lloyd

Dimensions	2pole	50(W) × 130(H) × 60(D)
(mm)	3pole	75(W) × 130(H) × 60(D)

MCCBs for general use

AB type MCCBs

50AF & 60AF



Rated current, In	5, 10, 15, 20, 30, 40, 50, 60
Magnetic Trip	Non-adjustable (see operating curves)
Type of trip unit	Thermal-magnetic for ABH type Hydraulic-magnetic for ABE/ABS types
Number of poles	2, 3, 4 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Category of use	Type A according to IEC947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABE	ABS	ABH
220/240V	10kA	25kA	50kA
380/415V	7.5/5kA	14/10kA	25kA
440/460V	5kA	10kA	25kA
480/500V	2.5kA	7.5kA	14kA
600V	2.5kA	5kA	10kA

Earth leakage circuit breaker



Types EBE53b, EBS53b, EBH53b
physically interchangeable
with MCCBs

* see details (p. 82)

Optional accessories

- Auxiliary switch
- Alarm switch
- Shunt trip
- Undervoltage trip
- Manual rotary handle
- Terminal shield
- Rear connection unit
- Insulational barrier
(standard for line side only)

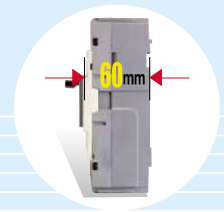
* see details (p. 35 for ABE/ABS types
p. 38 for ABH types

Rating	for 5kA at 415V ... type ABE			
	In	2pole	3pole	
5A		ABE52b/5	ABE53b/5	
10A		ABE52b/10	ABE53b/10	
15A		ABE52b/15	ABE53b/15	
20A		ABE52b/20	ABE53b/20	
30A		ABE52b/30	ABE53b/30	
40A		ABE52b/40	ABE53b/40	
50A		ABE52b/50	ABE53b/50	
60A		ABE62b/60	ABE63b/60	
Rating	for 10kA at 415V ... type ABS			
	In	2pole	3pole	4pole
5A		ABS52b/5	ABS53b/5	ABS54b/5
10A		ABS52b/10	ABS53b/10	ABS54b/10
15A		ABS52b/15	ABS53b/15	ABS54b/15
20A		ABS52b/20	ABS53b/20	ABS54b/20
30A		ABS52b/30	ABS53b/30	ABS54b/30
40A		ABS52b/40	ABS53b/40	ABS54b/40
50A		ABS52b/50	ABS53b/50	ABS54b/50
60A		ABS62b/60	ABS63b/60	ABS64b/60
Rating	for 25kA at 415V ... type ABH			
	In	2pole	3pole	4pole
15A		ABH52b/15	ABH53b/15	ABH54b/15
20A		ABH52b/20	ABH53b/20	ABH54b/20
30A		ABH52b/30	ABH53b/30	ABH54b/30
40A		ABH52b/40	ABH53b/40	ABH54b/40
50A		ABH52b/50	ABH53b/50	ABH54b/50

Certificate
CE, KEMA, Lloyd

Dimensions(mm)	ABE/ABS types	ABH type
2pole	50(W) × 130(H) × 60(D)	60(W) × 155(H) × 60(D)
3pole	75(W) × 130(H) × 60(D)	90(W) × 155(H) × 60(D)
4pole	100(W) × 130(H) × 60(D)	120(W) × 155(H) × 60(D)

100AF



Rated current, In	15, 20, 30, 40, 50, 60, 75, 100
Magnetic Trip Range	Non-adjustable (see operating curves)
Type of trip unit	Thermal-magnetic for ABS/ABH types Hydraulic-magnetic for ABE type
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Category of use	Type A according to IEC947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABE	ABS	ABH
220/240V	25kA	50kA	65kA
380/415V	14/10kA	25kA	35kA
440/460V	10kA	25kA	35kA
480/500V	7.5kA	14kA	25kA
600V	5kA	10kA	18kA

Earth leakage circuit breaker



Types EBE103b, EBS103b, EBH103b
physically interchangeable with MCCBs

* see details (p. 83)

Key lock built-in type ;

* see details (p. 71)

Optional accessories

- Auxiliary switch
- Alarm switch
- Shunt trip
- Undervoltage trip
- Manual rotary handle
- Terminal shield
- Rear connection unit
- Insulational barrier
(standard for line side only)

* see details (p. 35 for ABE/ABS types
p. 38 for ABH types)

Rating	for 10kA at 415V ... type ABE			
In	2pole	3pole	4pole	
5A	ABE102b/5	ABE103b/5	ABE104b/5	
10A	ABE102b/10	ABE103b/10	ABE104b/10	
15A	ABE102b/15	ABE103b/15	ABE104b/15	
20A	ABE102b/20	ABE103b/20	ABE104b/20	
30A	ABE102b/30	ABE103b/30	ABE104b/30	
40A	ABE102b/40	ABE103b/40	ABE104b/40	
50A	ABE102b/50	ABE103b/50	ABE104b/50	
60A	ABE102b/60	ABE103b/60	ABE104b/60	
75A	ABE102b/75	ABE103b/75	ABE104b/75	
100A	ABE102b/100	ABE103b/100	ABE104b/100	
In	for 25kA at 415V ... type ABS			
In	2pole	3pole	4pole	
15A	ABS102b/15	ABS103b/15	ABS104b/15	
20A	ABS102b/20	ABS103b/20	ABS104b/20	
30A	ABS102b/30	ABS103b/30	ABS104b/30	
40A	ABS102b/40	ABS103b/40	ABS104b/40	
50A	ABS102b/50	ABS103b/50	ABS104b/50	
60A	ABS102b/60	ABS103b/60	ABS104b/60	
75A	ABS102b/75	ABS103b/75	ABS104b/75	
100A	ABS102b/100	ABS103b/100	ABS104b/100	
In	for 35kA at 415V ... type ABH			
In	2pole	3pole	4pole	
15A	ABH102b/15	ABH103b/15	ABH104b/15	
20A	ABH102b/20	ABH103b/20	ABH104b/20	
30A	ABH102b/30	ABH103b/30	ABH104b/30	
40A	ABH102b/40	ABH103b/40	ABH104b/40	
50A	ABH102b/50	ABH103b/50	ABH104b/50	
60A	ABH102b/60	ABH103b/60	ABH104b/60	
75A	ABH102b/75	ABH103b/75	ABH104b/75	
100A	ABH102b/100	ABH103b/100	ABH104b/100	

Dimensions(mm)	ABE types	ABS/ABH type
2pole	50(W) × 130(H) × 60(D)	60(W) × 155(H) × 60(D)
3pole	75(W) × 130(H) × 60(D)	90(W) × 155(H) × 60(D)
4pole	100(W) × 130(H) × 60(D)	120(W) × 155(H) × 60(D)

Certificate
CE, KEMA, Lloyd

MCCBs for general use

AB type MCCBs

225AF



Rated current, In	100, 125, 150, 175, 200, 225A
Magnetic Trip Range	(8 to 15) × In
Type of trip unit	Thermal-magnetic
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Category of use	Type A according to IEC947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABE	ABS	ABH
220/240V	35kA	50kA	65kA
380/415V	18kA	25kA	35kA
440/460V	18kA	25kA	35kA
480/500V	10kA	14kA	25kA
600V	7.5kA	10kA	18kA

Earth leakage circuit breaker



Types EBE203b, EBS203b, EBH203b
physically interchangeable with MCCBs.

※ see details (p.84)

Key lock built-in type ;
※ see details (p. 71)

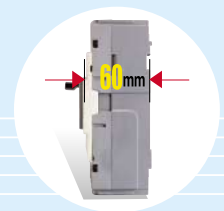


Rating	for 18kA at 415V ... type ABE		
In	2pole	3pole	4pole
100A	ABE202b/100	ABE203b/100	ABE204b/100
125A	ABE202b/125	ABE203b/125	ABE204b/125
150A	ABE202b/150	ABE203b/150	ABE204b/150
175A	ABE202b/175	ABE203b/175	ABE204b/175
200A	ABE202b/200	ABE203b/200	ABE204b/200
225A	ABE202b/225	ABE203b/225	ABE204b/225
In	for 25kA at 415V ... type ABS		
In	2pole	3pole	4pole
100A	ABS202b/100	ABS203b/100	ABS204b/100
125A	ABS202b/125	ABS203b/125	ABS204b/125
150A	ABS202b/150	ABS203b/150	ABS204b/150
175A	ABS202b/175	ABS203b/175	ABS204b/175
200A	ABS202b/200	ABS203b/200	ABS204b/200
225A	ABS202b/225	ABS203b/225	ABS204b/225
In	for 35kA at 415V ... type ABH		
In	2pole	3pole	4pole
100A	ABH202b/100	ABH203b/100	ABH204b/100
125A	ABH202b/125	ABH203b/125	ABH204b/125
150A	ABH202b/150	ABH203b/150	ABH204b/150
175A	ABH202b/175	ABH203b/175	ABH204b/175
200A	ABH202b/200	ABH203b/200	ABH204b/200
225A	ABH202b/225	ABH203b/225	ABH204b/225

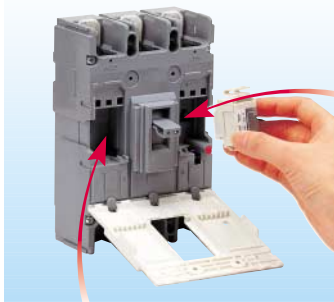
Optional accessories	Auxiliary switch Alarm switch Shunt trip Undervoltage trip Manual rotary handle Terminal shield Rear connection unit Insulational barrier (standard for line side only)
※ see details (p. 35-36)	

Certificate
CE, KEMA, Lloyd

Dimensions (mm)	2/3pole	105(W) × 165(H) × 60(D)
	4pole	140(W) × 165(H) × 60(D)



Electrical auxiliaries



Right-hand seat

Left-hand seat

Maximum possibilities

Left-hand seat

Option of connecting AX or AL or XL
This seat is not available for 2-pole breakers.

Right-hand seat

Option of connecting AX or AL or XL or SHT or UVT.
This seat is not available for ELCBs.



Auxiliary switch, AX



Alarm switch, AL



Shunt trip, SHT



Under voltage trip, UVT

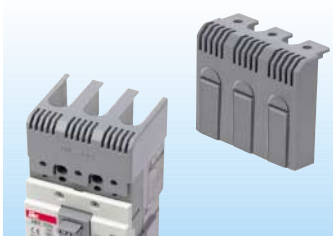
Application to

ABE52b	ABE53b	EBE53b	
ABE62b	ABE63b	EBE63b	
ABE102b	ABE103b	ABE104b	EBE102b,103b
ABS32b	ABS33b	EBS33b	
ABS52b	ABS53b	ABS54b	EBS53b
ABS62b	ABS63b	ABS64b	EBS63b
ABH32b	ABH33b	EBH33b	

Model Catalog No.

AX1E100R-LWT	83011156101	Auxiliary switch, AX Signals the contact position of the breaker - opening by manual or fault - closing Consists of a changeover contact (1NO+NC) 1 auxiliary switch fit for the left-hand seat of a handle(LWT)
AX1E100T-LWT	83011156104	1 auxiliary switch fit for the right-hand seat of a handle(LWT)
AX1E100R-TBT	83011156107	1 auxiliary switch fit for the left-hand seat of a handle(TBT)
AX1E100T-TBT	83011156110	1 auxiliary switch fit for the right-hand seat of a handle(TBT)
AL1E100R-LWT	83011156102	Alarm switch, AL Signals the contact position of the breaker - tripping by manual or fault - not operated by normal opening or closing of a breaker Consists of a changeover contact (1NO+NC) 1 alarm switch fit for the left-hand seat of a handle(LWT)
AL1E100T-LWT	83011156105	1 alarm switch fit for the right-hand seat of a handle(LWT)
AL1E100R-TBT	83011156108	1 alarm switch fit for the left-hand seat of a handle(TBT)
AL1E100T-TBT	83011156111	1 alarm switch fit for the right-hand seat of a handle(TBT)
XL1E100R-LWT	83011156103	Combination switch, XL Consists of a auxiliary switch and a alarm switch (2NO+NC) 1 combination switch fit for the left-hand seat of a handle(LWT)
XL1E100T-LWT	83011156106	1 combination switch fit for the right-hand seat of a handle(LWT)
XL1E100R-TBT	83011156109	1 combination switch fit for the left-hand seat of a handle(TBT)
XL1E100T-TBT	83011156112	1 combination switch fit for the right-hand seat of a handle(TBT)
ST12CE100	83211157101	Shunt trip, SHT Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied. Each unit is fitted into the right-hand seat of a handle. Not applicable to ELCBs. For 12V AC/DC common use
ST24CE100	83211157102	For 24V AC/DC common use
ST48CE100	83211157103	For 48V AC/DC common use
ST60CE100	83211157104	For 60V AC/DC common use
ST110CE100	83211157105	For 110V AC/DC common use
ST220CE100	83211157107	For 220V AC/DC common use
ST250CE100	83211157109	For 250V AC/DC common use
ST380AE100	83211157110	For 380~450V AC
ST440AE100	83211157111	For 440~480V AC
ST500AE100	83211157112	For 500~550V AC
ST125DE100	83211157106	For 125V DC
ST240DE100	83211157108	For 240V DC
UV24CE100	83211157137	Under voltage trip, UVT trips the breaker when control voltage disappears or falls. Each unit is fitted into the right-hand seat of a handle. Not applicable to ELCBs. For 24V AC/DC common use
UV48CE100	83211157138	For 48V AC/DC common use
UV110CE100	83211157139	For 110V AC/DC common use
UV220CE100	83211157140	For 220V AC/DC common use
UV380AE100	83211157141	For 380~440V AC
UV440AE100	83211157142	For 440~480V AC

External accessories



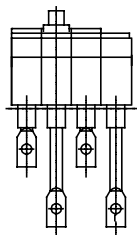
Terminal shield



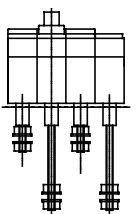
Insulation barrier



Rear connection



Bar type



Round type

Application to

ABE52b	ABE53b	EBE53b	
ABE62b	ABE63b	EBE63b	
ABE102b	ABE103b	ABE104b	EBE102b,103b
ABS32b	ABS33b	EBS33b	
ABS52b	ABS53b	ABS54b	EBS53b
ABS62b	ABS63b	ABS64b	EBS63b
ABH32b	ABH33b	EBH33b	

Model Catalog No.

IB50	67221152001	Insulation barriers
		These are partitions for the insulation between the phases. Barriers for the line side of the breaker are supplied as standard. Barriers for the load side are optional. One(1) barrier ... 50mm length (Set quantity: 500pcs)
TBL-13B TBL-12B	64621151202 64621151201	Terminal shields
		These are applied to the line/load side of the breaker to prevent accidental contact from live parts. Long and short types are available
		<i>Long type</i>
		3 pole shield 2 pole shield (use 2 ea for 4 pole)
TBS-13B TBS-12B	64621151204 64621151203	<i>Short type</i>
		3 pole shield 2 pole shield (use 2 ea for 4 pole)
X-35R-52 X-35R-53	83161159109 83161159110	Rear connection kits
		Bar and Round types are available. To apply to 4 pole MCCB use 2 sets of the kit for 2-pole MCCB
X-35B-102 X-35B-103	83161159101 83161159102	<i>Application to ;</i>
		ABE52b ABE53b EBE53b ABS32b ABS33b EBS33b ABS52b ABS53b ABS54b EBS53b ABH32b ABH33b EBH33b
X-35R-102 X-35R-103	83161159111 83161159112	a set of the ROUND type for a 2-pole MCCB
		a set of the ROUND type for a 3-pole MCCB
X-35R-102 X-35R-103	83161159111 83161159112	<i>Application to ;</i>
		ABE62b ABE63b EBE63b ABE102b ABE103b ABE104b EBE102b,103b ABS62b ABS63b ABS64b EBS63b
X-35B-102 X-35B-103	83161159101 83161159102	a set of the BAR type for a 2-pole MCCB
		a set of the BAR type for a 3-pole MCCB
X-35R-102 X-35R-103	83161159111 83161159112	a set of the ROUND type for a 2-pole MCCB
		a set of the ROUND type for a 3-pole MCCB



Manual rotary handles



Direct mounting type

Application to

ABE53b	EBE53b
ABE63b	EBE63b
ABE102b ABE103b ABE104b	EBE102b, 103b
ABS33b	EBS33b
ABS53b ABS54b	EBS53b
ABS63b ABS64b	EBS63b
ABH33b	EBH33b



Extensible mounting type

Model

Catalog No.

D-35S

83111158101

D-35L

83111158102

D-35R

83111158103

E-35S

83111158110

E-35L

83111158111

E-35R

83111158112

Direct mounting

Vertical type

Horizontal (ON in left-hand) type

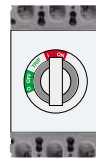
Horizontal (ON in right-hand) type

Extensible mounting

Vertical type

Horizontal (ON in left-hand) type

Horizontal (ON in right-hand) type



Vertical type

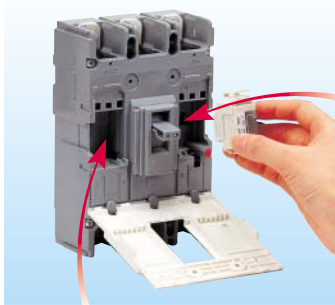


Horizontal type
ON in right-hand



Horizontal type
ON in left-hand

Electrical auxiliaries ...optional



Left-hand seat

Right-hand seat

Application to

ABS102b	ABS103b	ABS104b	EBS103b
ABH52b	ABH53b	ABH54b	EBH53b
ABH102b	ABH103b	ABH104b	EBH103b

Maximum possibilities

Left-hand seat

Option of connecting AX or AL or XL
This seat is not available for 2-pole breakers.

Right-hand seat

Option of connecting AX or AL or XL or SHT or UVT
This seat is not available for ELCBs.



Auxiliary switch, AX



Alarm switch, AL



Shunt trip, SHT



Under voltage trip, UVT

Model	Catalog No.
AX1H100R-LWT	83011156113
AX1H100T-LWT	83011156116
AX1H100R-TBT	83011156119
AX1H100T-TBT	83011156122
AL1H100R-LWT	83011156114
AL1H100T-LWT	83011156117
AL1H100R-TBT	83011156120
AL1H100T-TBT	83011156123
XL1H100R-LWT	83011156115
XL1H100T-LWT	83011156118
XL1H100R-TBT	83011156121
XL1H100T-TBT	83011156124
ST12CH100	83211157113
ST24CH100	83211157114
ST48CH100	83211157115
ST60CH100	83211157116
ST110CH100	83211157117
ST220CH100	83211157119
ST250CH100	83211157121
ST380AH100	83211157122
ST440AH100	83211157123
ST500AH100	83211157124
ST125DH100	83211157118
ST240DH100	83211157120
UV24CH100	83211157143
UV48CH100	83211157144
UV110CH100	83211157145
UV220CH100	83211157146
UV380AH100	83211157147
UV440AH100	83211157148

Auxiliary switch, AX

Signals the contact position of the breaker

- opening by manual or fault

- closing

Consists of a changeover contact (1NO+NC)

1 auxiliary switch fit for the left-hand seat of a handle(LWT)

1 auxiliary switch fit for the right-hand seat of a handle(LWT)

1 auxiliary switch fit for the left-hand seat of a handle(TBT)

1 auxiliary switch fit for the right-hand seat of a handle(TBT)

Alarm switch, AL

Signals the contact position of the breaker

- tripping by manual or fault

- not operated by normal opening or closing of a breaker

Consists of a changeover contact (1NO+NC)

1 alarm switch fit for the left-hand seat of a handle(LWT)

1 alarm switch fit for the right-hand seat of a handle(LWT)

1 alarm switch fit for the left-hand seat of a handle(TBT)

1 alarm switch fit for the right-hand seat of a handle(TBT)

Combination switch, XL

Consists of a auxiliary switch and a alarm switch (2NO+NC)

1 combination switch fit for the left-hand seat of a handle(LWT)

1 combination switch fit for the right-hand seat of a handle(LWT)

1 combination switch fit for the left-hand seat of a handle(TBT)

1 combination switch fit for the right-hand seat of a handle(TBT)

Shunt trip, SHT

Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied.

Each unit is fitted into the right-hand seat of a handle.

Not applicable to ELCBs.

For 12V AC/DC common use

For 24V AC/DC common use

For 48V AC/DC common use

For 60V AC/DC common use

For 110V AC/DC common use

For 220V AC/DC common use

For 250V AC/DC common use

For 380~450V AC

For 440~480V AC

For 500~550V AC

For 125V DC

For 240V DC

Under voltage trip, UVT

trips the breaker when control voltage disappears or falls.

Each unit is fitted into the right-hand seat of a handle.

Not applicable to ELCBs.

For 24V AC/DC common use

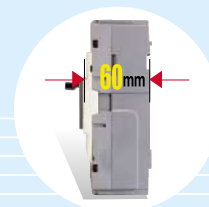
For 48V AC/DC common use

For 110V AC/DC common use

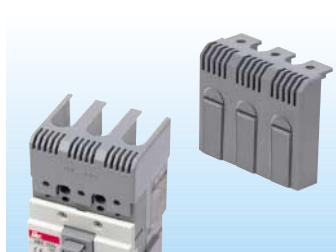
For 220V AC/DC common use

For 380~440V AC

For 440~480V AC



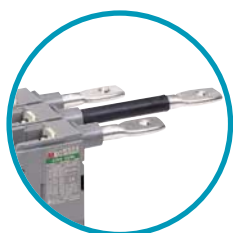
External accessories



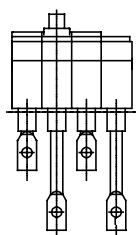
Terminal shield



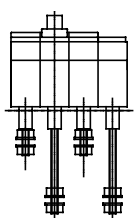
Insulation barrier



Rear connection



Bar type



Round type

Application to

ABS102b	ABS103b	ABS104b	EBS103b
ABH52b	ABH53b	ABH54b	EBH53b
ABH102b	ABH103b	ABH104b	EBH103b

Model Catalog No.

Model	Catalog No.	Insulation barriers
IB50	67221152001	<p>These are partitions for the insulation between the phases. Barriers for the line side of the breaker are supplied as standard. Barriers for the load side are optional.</p> <p>One(1) barrier ... 50mm length (Set quantity: 500pcs) for ABS102b ABS103b ABS104b EBS103b ABH52b ABH53b ABH54b EBH53b</p>
IB80	67221152002	<p>One(1) barrier ... 80mm length (Set quantity: 500pcs) for ABH102b ABH103b ABH104b EBH103b</p>
		Terminal shields
		<p>These are applied to the line/load side of the breaker to prevent accidental contact with live parts. Long and short types are available</p> <p><i>Long type</i></p> <p>TBL-22B 64621152201 2 pole shield TBL-23B 64621152202 3 pole shield TBL-24B 64621152203 4 pole shield</p> <p><i>Short type</i></p> <p>TBS-22B 64621152204 2 pole shield TBS-23B 64621152205 3 pole shield TBS-24B 64621152206 4 pole shield</p>
		Rear connection kits
		<p>Bar and Round types are available.</p> <p>To apply to 4 pole MCCB use 2 sets of the kit for 2-pole MCCB</p> <p>X-45B-102 83161159103 a set of the BAR type for a 2-pole MCCB X-45B-103 83161159104 a set of the BAR type for a 3-pole MCCB X-45B-104 83161159105 a set of the BAR type for a 4-pole MCCB X-45R-102 83161159113 a set of the ROUND type for a 2-pole MCCB X-45R-103 83161159114 a set of the ROUND type for a 3-pole MCCB X-45R-104 83161159115 a set of the ROUND type for a 4-pole MCCB</p>

Manual rotary handles



Direct mounting type



Extensible mounting type

Application to

ABS103b	ABS104b	EBS103b
ABH53b	ABH54b	EBH53b
ABH103b	ABH104b	EBH103b

Model

Catalog No.

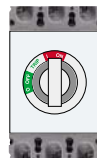
Model	Catalog No.	Mounting Type
D-45S	83111158104	Vertical type
D-45L	83111158105	Horizontal (ON in left-hand) type
D-45R	83111158106	Horizontal (ON in right-hand) type
Extensible mounting		
E-45S	83111158113	Vertical type
E-45L	83111158114	Horizontal (ON in left-hand) type
E-45R	83111158115	Horizontal (ON in right-hand) type

Direct mounting

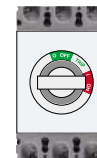
- Vertical type
- Horizontal (ON in left-hand) type
- Horizontal (ON in right-hand) type

Extensible mounting

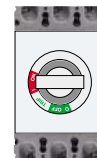
- Vertical type
- Horizontal (ON in left-hand) type
- Horizontal (ON in right-hand) type



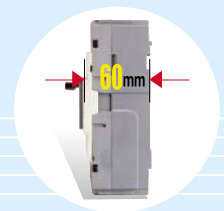
Vertical type



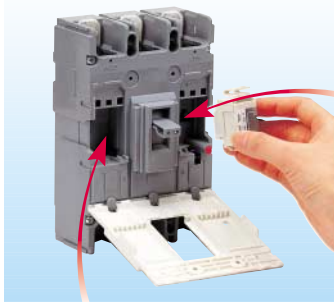
Horizontal type
ON in right-hand



Horizontal type
ON in left-hand



Electrical auxiliaries ... optional



Right-hand seat

Left-hand seat

Maximum possibilities

Left-hand seat

Option of connecting AX or AL or XL. This seat is not available for 2-pole breakers.

Right-hand seat

Option of connecting AX or AL or XL or SHT or UVT. This seat is not available for ELCBs.

Application to

ABE202b	ABE203b	ABE204b	EBE203b
ABS202b	ABS203b	ABS204b	EBS203b
ABH202b	ABH203b	ABH204b	EBH203b

Model

Catalog No.

AX1H200R-LWT	83011156125
AX1H200T-LWT	83011156128
AX1H200R-TBT	83011156131
AX1H200T-TBT	83011156134

AL1H200R-LWT	83011156126
AL1H200T-LWT	83011156129
AL1H200R-TBT	83011156132
AL1H200T-TBT	83011156135

XL1H200R-LWT	83011156127
XL1H200T-LWT	83011156130
XL1H200R-TBT	83011156133
XL1H200T-TBT	83011156136

ST12CH200	83211157125
ST24CH200	83211157126
ST48CH200	83211157127
ST60CH200	83211157128
ST110CH200	83211157129
ST220CH200	83211157131
ST250CH200	83211157133
ST380AH200	83211157134
ST440AH200	83211157135
ST500AH200	83211157136
ST125DH200	83211157130
ST240DH200	83211157132

UV24CH200	83211157149
UV48CH200	83211157150
UV110CH200	83211157151
UV220CH200	83211157152
UV380AH200	83211157153
UV440AH200	83211157154

Auxiliary switch, AX

Signals the contact position of the breaker
- opening by manual or fault
- closing

Consists of a changeover contact (1NO+NC)

- 1 auxiliary switch fit for the left-hand seat of a handle(LWT)
- 1 auxiliary switch fit for the right-hand seat of a handle(LWT)
- 1 auxiliary switch fit for the left-hand seat of a handle(TBT)
- 1 auxiliary switch fit for the right-hand seat of a handle(TBT)

Alarm switch, AL

Signals the contact position of the breaker
- tripping by manual or fault

- not operated by normal opening or closing of a breaker
Consists of a changeover contact (1NO+NC)

- 1 alarm switch fit for the left-hand seat of a handle(LWT)
- 1 alarm switch fit for the right-hand seat of a handle(LWT)
- 1 alarm switch fit for the left-hand seat of a handle(TBT)
- 1 alarm switch fit for the right-hand seat of a handle(TBT)

Combination switch, XL

Consists of a auxiliary switch and a alarm switch (2NO+NC)

- 1 combination switch fit for the left-hand seat of a handle(LWT)
- 1 combination switch fit for the right-hand seat of a handle(LWT)
- 1 combination switch fit for the left-hand seat of a handle(TBT)
- 1 combination switch fit for the right-hand seat of a handle(TBT)

Shunt trip, SHT

Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied. Each unit is fitted into the right-hand seat of a handle. Not applicable to ELCBs.

- For 12V AC/DC common use
- For 24V AC/DC common use
- For 48V AC/DC common use
- For 60V AC/DC common use
- For 110V AC/DC common use
- For 220V AC/DC common use
- For 250V AC/DC common use
- For 380~450V AC
- For 440~480V AC
- For 500~550V AC
- For 125V DC
- For 240V DC

Under voltage trip, UVT

trips the breaker when control voltage disappears or falls. Each unit is fitted into the right-hand seat of a handle. Not applicable to ELCBs.

- For 24V AC/DC common use
- For 48V AC/DC common use
- For 110V AC/DC common use
- For 220V AC/DC common use
- For 380~440V AC
- For 440~480V AC



Auxiliary switch, AX



Alarm switch, AL



Shunt trip, SHT



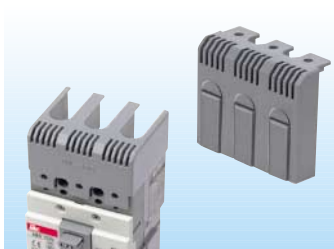
Under voltage trip, UVT

MCCBs for general use

AB type MCCBs

Accessories

External accessories



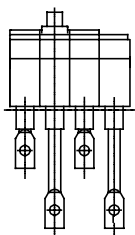
Terminal shield



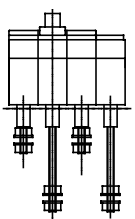
Insulation barrier



Rear connection



Bar type



Round type

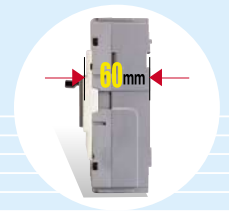
Application to

ABE202b	ABE203b	ABE204b	EBE203b
ABS202b	ABS203b	ABS204b	EBS203b
ABH202b	ABH203b	ABH204b	EBH203b

Model

Catalog No.

Model	Catalog No.	Insulation barriers
IB80	67221152002	<p>These are partitions for the insulation between the phases. Barriers for the line side of the breaker are supplied as standard. Barriers for the load side are optional.</p> <p>One(1) barrier ... 80mm length (Set quantity: 500pcs)</p>
TBL-33B	64621153201	<p>Terminal shields</p> <p>These are applied to the line/load side of the breaker to prevent accidental contact with live parts. Long and short types are available</p> <p><i>Long type</i></p> <p>2, 3 pole shield</p> <p>4 pole shield</p> <p><i>Short type</i></p> <p>2, 3 pole shield</p> <p>4 pole shield</p>
TBL-34B	64621153202	
TBS-33B	64621153203	<p>Rear connection kits</p> <p>Bar and Round types are available.</p> <p>a set of the BAR type for a 2-pole MCCB</p> <p>a set of the BAR type for a 3-pole MCCB</p> <p>a set of the BAR type for a 4-pole MCCB</p> <p>a set of the ROUND type for a 2-pole MCCB</p> <p>a set of the ROUND type for a 3-pole MCCB</p> <p>a set of the ROUND type for a 4-pole MCCB</p>
TBS-34B	64621153204	
X-55B-202	83161159106	
X-55B-203	83161159107	
X-55B-204	83161159108	
X-55R-202	83161159116	
X-55R-203	83161159117	
X-55R-204	83161159118	



Manual rotary handles



Direct mounting type



Extensible mounting type

Application to

ABE202b	ABE203b	ABE204b	EBE203b
ABS202b	ABS203b	ABS204b	EBS203b
ABH202b	ABH203b	ABH204b	EBH203b

Model

Catalog No.

D-55S
D-55L
D-55R

83111158107
83111158108
83111158109

Direct mounting

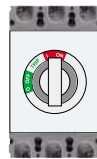
Vertical type
Horizontal (ON in left-hand) type
Horizontal (ON in right-hand) type

E-55S
E-55L
E-55R

83111158116
83111158117
83111158118

Extensible mounting

Vertical type
Horizontal (ON in left-hand) type
Horizontal (ON in right-hand) type



Vertical type



Horizontal type
ON in right-hand



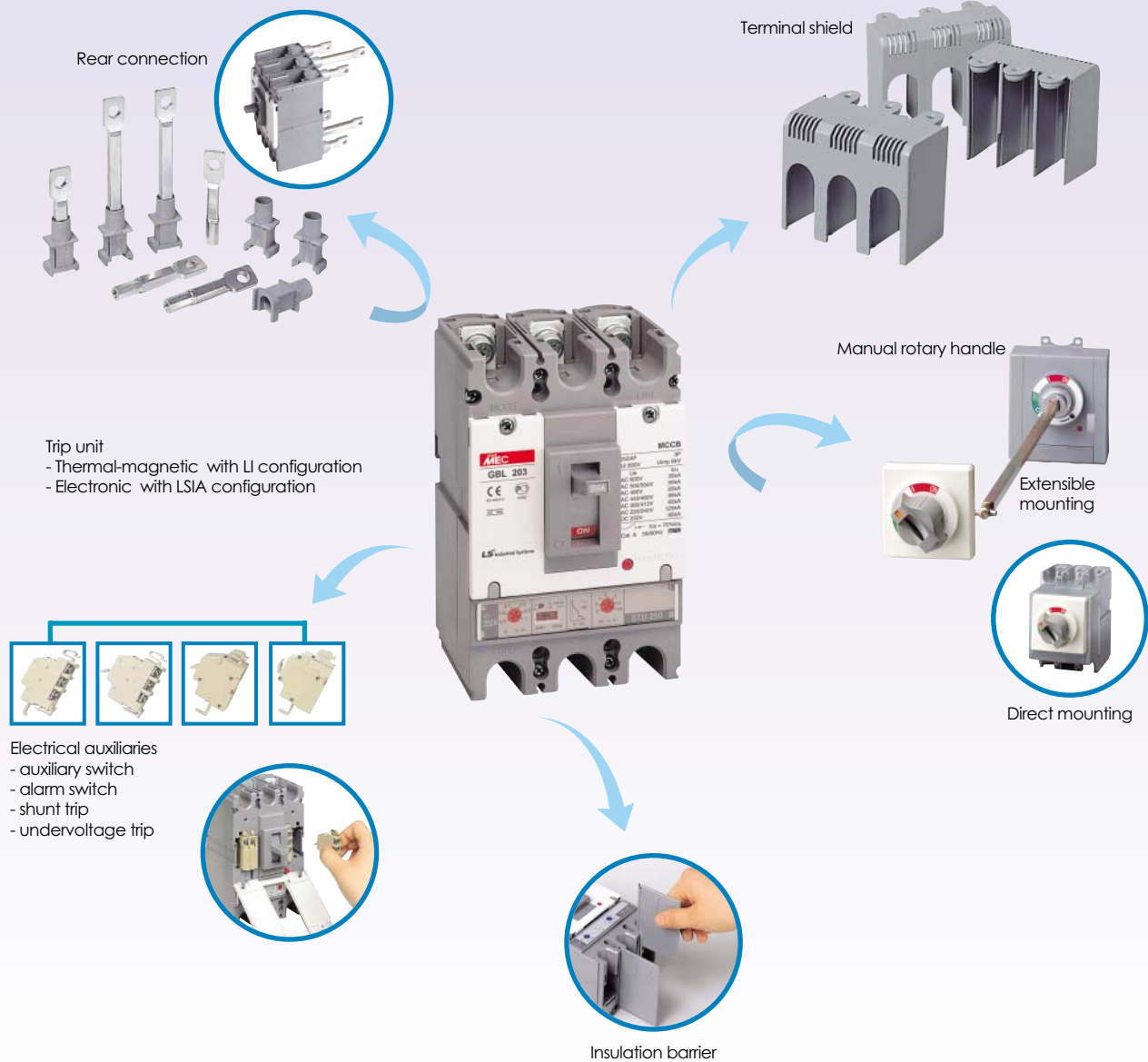
Horizontal type
ON in left-hand

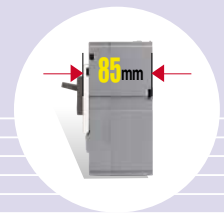
MCCBs for general use

GB type adjustable MCCBs up to 250AF

Overview

- Suitable for use in the system where higher fault currents exist.
35, 65 and 85kAIC breakers are available.
- Employing a adjustable trip unit.
- Current adjustments are made by knobs on the front of the trip unit.
- Electric auxiliaries are common use up to 250 amperes.
- UL508 certificate as a manual motor controller.

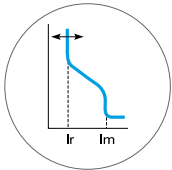




Thermal magnetic trip



Knob for adjusting thermal current



Rated current, In	16, 20, 25, 32, 40, 50, 63, 80, 100A
Type of trip unit	Adjustable thermal and fixed magnetic
Thermal current	$(0.8-0.9-1.0) \times I_n$... adjustable via knob
Magnetic Trip	$(8 \text{ to } 12) \times I_n$... fixed
	Min. $500A \pm 20\%$
Number of poles	2, 3, 4 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Category of use	Type A according to IEC947-2
Breaking capacity, Icu	$I_{cs} = 75\%$ of Icu

Type	GBN	GBH
220/240V	50kA	85kA
380/415V	35kA	50kA
440/460V	35kA	50kA
480/500V	30/22kA	42/35kA
600V	18kA	25kA

Optional accessories

- Auxiliary switch
 - Alarm switch
 - Shunt trip
 - Undervoltage trip
 - Manual rotary handle
 - Terminal shield
 - Rear connection unit
 - Insulation barrier
(standard for line side only)
- * see details (p. 48)

Rating	for 35kA at 415V ... Type GBN			
In	2pole	3pole	4pole	Adjustable thermal range
16A	GBN102/16	GBN103/16	GBN104/16	12.8-14.4-16A
20A	GBN102/20	GBN103/20	GBN104/20	16-18-20A
25A	GBN102/25	GBN103/25	GBN104/25	20-22.5-25A
32A	GBN102/32	GBN103/32	GBN104/32	25.6-28.8-32A
40A	GBN102/40	GBN103/40	GBN104/40	32-36-40A
50A	GBN102/50	GBN103/50	GBN104/50	40-45-50A
63A	GBN102/63	GBN103/63	GBN104/63	50.4-56.7-63A
80A	GBN102/80	GBN103/80	GBN104/80	64-72-80A
100A	GBN102/100	GBN103/100	GBN104/100	80-90-100A
In	for 50kA at 415V ... Type GBH			
In	2pole	3pole	4pole	Adjustable thermal range
16A	GBH102/16	GBH103/16	GBH104/16	12.8-14.4-16A
20A	GBH102/20	GBH103/20	GBH104/20	16-18-20A
25A	GBH102/25	GBH103/25	GBH104/25	20-22.5-25A
32A	GBH102/32	GBH103/32	GBH104/32	25.6-28.8-32A
40A	GBH102/40	GBH103/40	GBH104/40	32-36-40A
50A	GBH102/50	GBH103/50	GBH104/50	40-45-50A
63A	GBH102/63	GBH103/63	GBH104/63	50.4-56.7-63A
80A	GBH102/80	GBH103/80	GBH104/80	64-72-80A
100A	GBH102/100	GBH103/100	GBH104/100	80-90-100A

Certificate
CE, KEMA, Lloyd & UL

UL508 certificate as a manual motor controller

Dimensions (mm)	2/3pole	90(W) × 140(H) × 86(D)
	4pole	120(W) × 140(H) × 86(D)

MCCBs for general use

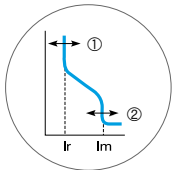
GB type adjustable MCCBs

Thermal magnetic trip 250AF

Thermal magnetic trip



- ① Knob for adjusting thermal current
- ② Knob for adjusting Magnetic current



Rated current, I_n	16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160, 200, 250A			
Type of trip unit	Adjustable thermal and adjustable magnetic trip			
Thermal current	(0.8-0.9-1.0) × I _n ... adjustable via knob			
Magnetic current	(5-6-7-8-9-10) × I _n ... adjustable for I _n =125 to 250A (8 to 12) × I _n ... fixed for I _n =16 to 100A			
Number of poles	2, 3, 4 pole			
Connection	Front (standard) Rear (optional)			
Mounting	Fixed only			
Category of use	Type A according to IEC947-2			
Breaking capacity, I_{cu}	I _{cs} = 75% of I _{cu}			
	Type	GBN	GBH	GBL
220/240V		50kA	85kA	125kA
380/415V		35kA	50kA	85kA
440/460V		35kA	50kA	85kA
480/500V		30/22kA	42/35kA	65/50kA
600V		18kA	25kA	35kA

Rating	for 35kA at 415V ... Type GBN				Adjustable thermal range
	I _n	2pole	3pole	4pole	
125A	GBN202/125	GBN203/125	GBN204/125	100-112.5-125A	
160A	GBN202/160	GBN203/160	GBN204/160	128-144-160A	
200A	GBN202/200	GBN203/200	GBN204/200	160-180-200A	
250A	GBN202/250	GBN203/250	GBN204/250	200-225-250A	
Rating	for 50kA at 415V ... Type GBH				Adjustable thermal range
	I _n	2pole	3pole	4pole	
125A	GBH202/125	GBH203/125	GBH204/125	100-112.5-125A	
160A	GBH202/160	GBH203/160	GBH204/160	128-144-160A	
200A	GBH202/200	GBH203/200	GBH204/200	160-180-200A	
250A	GBH202/250	GBH203/250	GBH204/250	200-225-250	
Rating	for 85kA at 415V ... Type GBL				Adjustable thermal range
	I _n	2pole	3pole	4pole	
16A	GBL102/16	GBL103/16	GBL104/16	12.8-14.4-16A	
20A	GBL102/20	GBL103/20	GBL104/20	16-18-20A	
25A	GBL102/25	GBL103/25	GBL104/25	20-22.5-25A	
32A	GBL102/32	GBL103/32	GBL104/32	25.6-28.8-32A	
40A	GBL102/40	GBL103/40	GBL104/40	32-36-40A	
50A	GBL102/50	GBL103/50	GBL104/50	40-45-50A	
63A	GBL102/63	GBL103/63	GBL104/63	50.4-56.7-63A	
80A	GBL102/80	GBL103/80	GBL104/80	64-72-80A	
100A	GBL102/100	GBL103/100	GBL104/100	80-90-100A	
125A	GBL202/125	GBL203/125	GBL204/125	100-112.5-125A	
160A	GBL202/160	GBL203/160	GBL204/160	128-144-160A	
200A	GBL202/200	GBL203/200	GBL204/200	160-180-200A	
250A	GBL202/250	GBL203/250	GBL204/250	200-225-250A	

* Note; Magnetic currents are non-adjustable from I_n=16 to 100A

Optional accessories

- Auxiliary switch
- Alarm switch
- Shunt trip
- Undervoltage trip
- Manual rotary handle
- Terminal shield
- Rear connection unit
- Insulational barrier (standard for line side only)

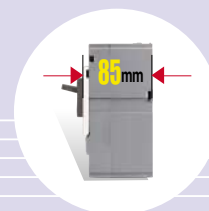
※ see details (p. 48)

Certificate
CE, KEMA, Lloyd & UL

UL508 certificate as a manual motor controller

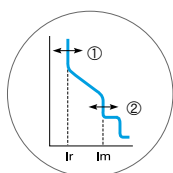
Dimensions (mm)	2/3pole	90(W) × 140(H) × 86(D)
	4pole	120(W) × 140(H) × 86(D)

- Motor protection circuit breaker - magnetic only release type: see details(p. 67)
- MCCBs with electronic trip units: see details(p. 47)



Electronic trip 250AF

Electronic trip



Trip unit configuration



- ① Knob for adjusting long time pick-up current
- Selector of frequency
- LED for alarm
- ② Knob for adjusting short time pick-up current

Rated current, I_n	50, 100, 250A												
Type of trip unit	Electronic trip												
Long time pick-up, I_r	$(0.5-0.6-0.7-0.8-0.9-1.0) \times I_n \dots$ adjustable via knob												
Short time pick-up, I_m	$(2-3-4-5-6-8-10) \times I_r \dots$ adjustable via knob												
Instantaneous pick-up	$11 \times I_n \dots$ fixed												
Alarm	Warning via LED flickering when the load current is between 70 to 110% of set current I_r . LED stays on over 110% of set current I_r .												
Rated frequency	50-60 selectable by the switch of the trip unit												
Number of poles	3 pole												
Connection	Front (standard) Rear (optional)												
Mounting	Fixed only												
Category of use	Type A according to IEC947-2												
Breaking capacity, I_{cu}	$I_{cs} = 75\%$ of I_{cu}												
	<table border="1"> <thead> <tr> <th>Type</th> <th>GBL</th> </tr> </thead> <tbody> <tr> <td>220/240V</td> <td>125kA</td> </tr> <tr> <td>380/415V</td> <td>85kA</td> </tr> <tr> <td>440/460V</td> <td>85kA</td> </tr> <tr> <td>480/500V</td> <td>65/50kA</td> </tr> <tr> <td>600V</td> <td>35kA</td> </tr> </tbody> </table>	Type	GBL	220/240V	125kA	380/415V	85kA	440/460V	85kA	480/500V	65/50kA	600V	35kA
Type	GBL												
220/240V	125kA												
380/415V	85kA												
440/460V	85kA												
480/500V	65/50kA												
600V	35kA												

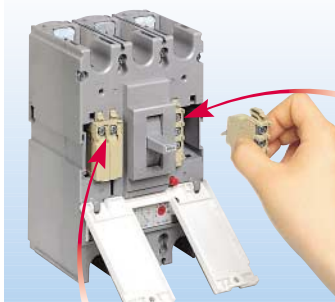
Rating		
I_n	3pole	Adjustable thermal range
50A	GBL53E	25-30-35-40-45-50A
100A	GBL103E	50-60-70-80-90-100A
250A	GBL203E	125-150-175-200-225-250A

Optional accessories	Auxiliary switch Alarm switch Shunt trip Undervoltage trip Manual rotary handle Terminal shield Rear connection unit Insulational barrier (standard for line side only)
* see details (p. 48)	

Dimensions(mm) 3pole 90(W) × 140(H) × 86(D)

· MCCBs with thermal-magnetic trip: see details (p. 46)

Electrical auxiliaries



Right-hand seat

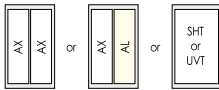
Left-hand seat

Common use for GB type breakers up to 250Amp.
 ... GBN, GBH, GBL

Maximum possibilities

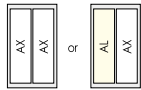
Left-hand seat

Option of connecting 2AX or AX+AL or SHT or UVT

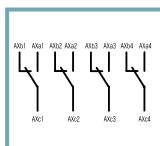


Right-hand seat

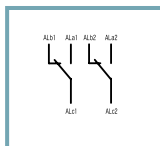
Option of connecting 2AX or AL+AX



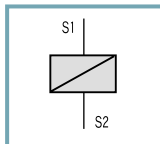
Auxiliary switch, AX



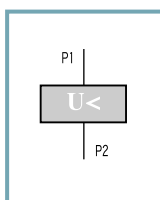
Alarm switch, AL



Shunt trip, SHT



Under voltage trip, UVT



Model

Catalog No.

AX1G250

83011146001

Auxiliary switch, AX

Signals the contact position of the breaker
 - opening by manual or fault
 - closing
 Consists of one change over switch per unit
 1 auxiliary switch (1NO+NC)

AL1G250

83011146002

Alarm switch, AL

Signals the contact position of the breaker
 - tripping by manual or fault
 - not operated by normal opening or closing of a breaker
 Consists of one change over switch
 1 alarm switch (1NO+NC)

ST12CG250

83211146011

Shunt trip, SHT

Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied. This unit is fitted into the left-hand seat of a handle.

ST24CG250

83211146012

For 12V AC/DC common use

ST48CG250

83211146013

For 24V AC/DC common use

ST60CG250

83211146014

For 48V AC/DC common use

ST100CG250

83211146015

For 60V AC/DC common use

ST200CG250

83211146017

For 100~125VAC / 100~110VDC

ST250CG250

83211146019

For 200~240VAC / 200~220VDC

ST380AG250

83211146020

For 250V AC/DC common use

ST440AG250

83211146021

For 380~450V AC

ST500AG250

83211146022

For 440~480V AC

ST125DG250

83211146016

For 500~550V AC

ST240DG250

83211146018

For 125V DC

For 240V DC

UV24CG250

83211146051

Under voltage trip, UVT

Trips the breaker when control voltage disappears or falls. This unit is fitted into the left-hand seat of a handle.

UV48CG250

83211146052

For 24V AC/DC common use

UV100CG250

83211146053

For 48V AC/DC common use

UV200CG250

83211146054

For 100~110V AC/DC common use

UV380AG250

83211146055

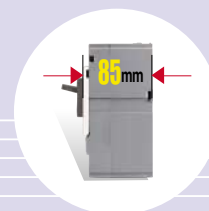
For 200~220V AC/DC common use

UV440AG250

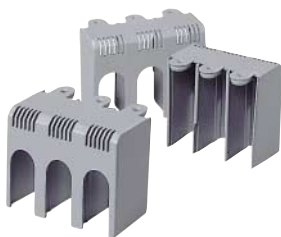
83211146056

For 380~440V AC

For 440~480V AC



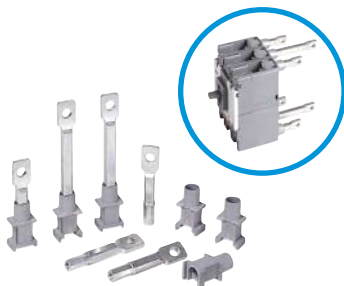
External accessories



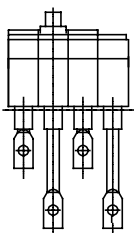
Terminal shield



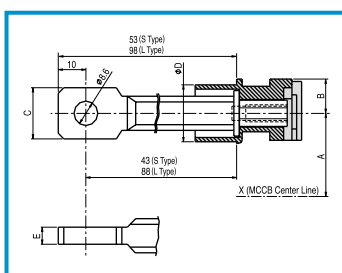
Insulation barriers



Rear connection kits



Bar type



Model

Catalog No.

IBG250

Insulation barriers

These are partitions for the insulation between the phases. Barriers for the line side of the breaker are supplied as standard. Barriers for the load side are optional. Common use for all GB type breakers up to 250Amp. One(1) barrier

Terminal shields

These are applied to the line/load side of the breaker to prevent accidental contact with live parts.

Different by breaker dimensions.

Use 3pole shield for 2pole breakers

TB-13T	64621141101	3 pole shield for GBN/GBH103
TB-14T	64621141102	4 pole shield for GBN/GBH104
TBS-13T	64621141103	3 pole shield for GBN/GBH103
TBS-14T	64621141104	4 pole shield for GBN/GBH104
TB-23T	64621142301	3 pole shield for GBN/GBH203, GBL103/203(E)
TB-24T	64621142302	4 pole shield for GBN/GBH204, GBL104/204
TBS-23T	64621142303	3 pole shield for GBN/GBH203, GBL103/203(E)
TBS-24T	64621142304	4 pole shield for GBN/GBH204, GBL104/204

Rear connection kits ... Bar type

X-102	72311141291	a set for 2 pole MCCBs of GBN/GBH102
X-103	72311141292	a set for 3 pole MCCBs of GBN/GBH103
X-104	72311141293	a set for 4 pole MCCBs of GBN/GBH104
X-202	72311142291	a set for 2 pole MCCBs of GBN/GBH202, GBL102/202
X-203	72311142292	a set for 3 pole MCCBs of GBN/GBH203, GBL103/203(E)
X-204	72311142293	a set for 4 pole MCCBs of GBN/GBH204, GBL104/204

Manual rotary handles



Direct mounting type



Extensible mounting type

Model

Catalog No.

D-30S
D-30L
D-30R

83111147101
83111147102
83111147103

Direct mounting

Applicable for GBN/GBH 100AF, 3-4 pole

Vertical type
Horizontal (ON in left-hand) type
Horizontal (ON in right-hand) type

D-60S
D-60L
D-60R

83111147111
83111147112
83111147113

Applicable for GBN/GBH/GBL 250AF, GBL100, 3-4 pole

Vertical type
Horizontal (ON in left-hand) type
Horizontal (ON in right-hand) type

E-30S
E-30L
E-30R

83111147151
83111147152
83111147153

Extensible mounting

Applicable for GBN/GBH 100AF, 3-4 pole

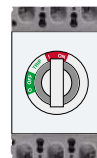
Vertical type
Horizontal (ON in left-hand) type
Horizontal (ON in right-hand) type

E-60S
E-60L
E-60R

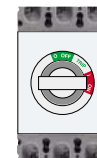
83111147161
83111147162
83111147163

Applicable for GBN/GBH/GBL 250AF, GBL100, 3-4 pole

Vertical type
Horizontal (ON in right-hand) type
Horizontal (ON in right-hand) type



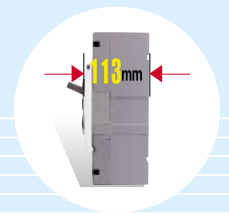
Vertical type



Horizontal type
ON in right-hand

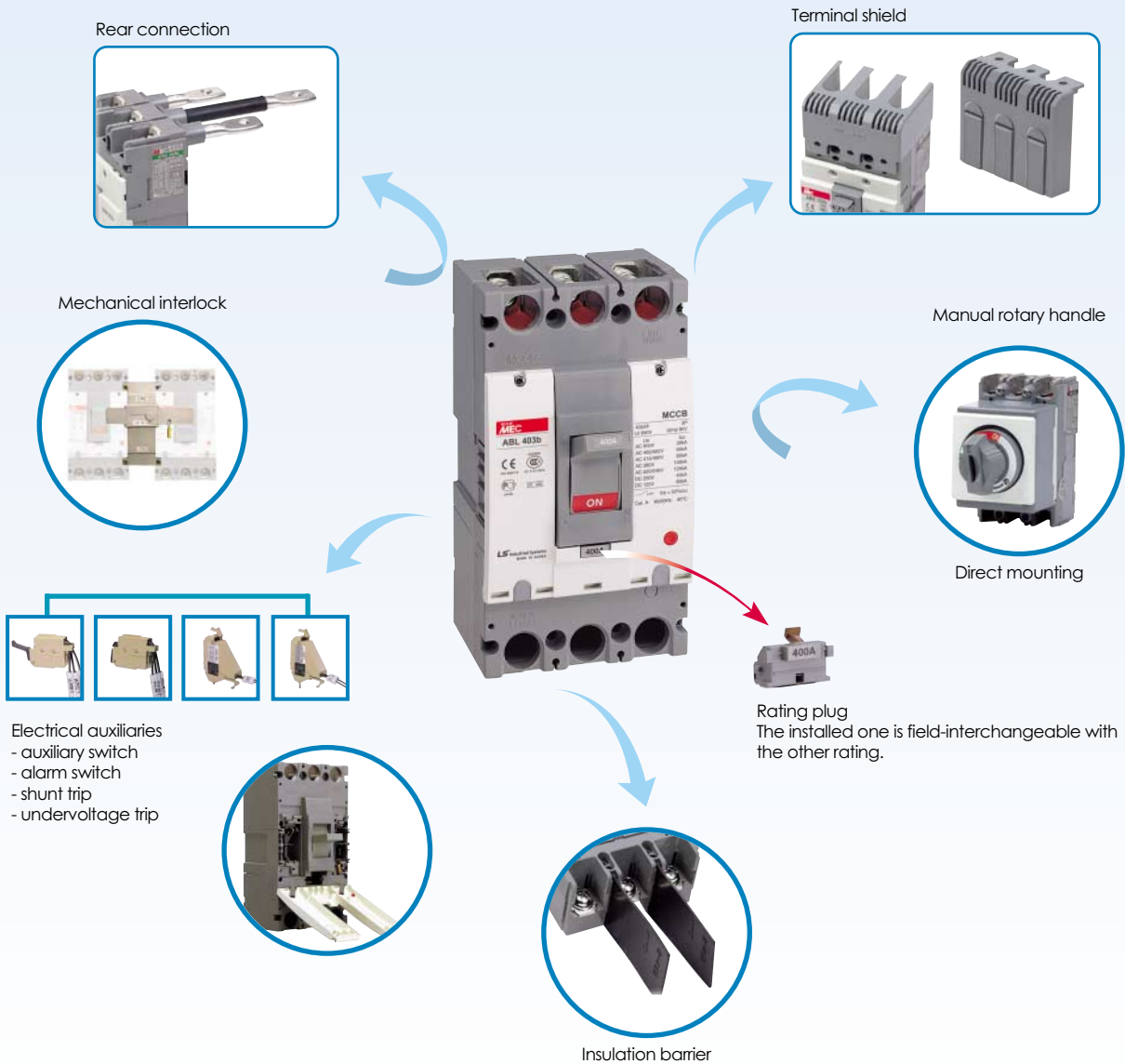


Horizontal type
ON in left-hand



400AF & 800AF

- Each breaker uses the individual rating plug for determining the continuous current rating.
- Electric auxiliaries are common use between 400 to 800AF.
- 3-pole Earth leakage circuit breakers which are physically interchangeable with 3-pole MCCBs are available.
- MCCB with reference temperature 50°C is available on request.
- Motor protection MCCBs with magnetic only trip are available.
- CE & KEMA certificated according to IEC60947-2.





Rated current, In	250, 300, 350, 400A				
Type of trip unit	Interchangeable thermal and fixed magnetic				
Thermal current	Interchangeable by rating plugs				
Magnetic Trip	(9 to 15) × In ... fixed Magnetic-adjustable types are optional				
Number of poles	2, 3, 4 pole				
Connection	Front (standard) Rear (optional)				
Mounting	Fixed only				
Category of use	Type A according to IEC947-2				
Breaking capacity, Icu	Ics = 100% of Icu(ABE, ABS), 50% of Icu(ABH, ABL)				
	Type	ABE	ABS	ABH	ABL
	220/240V	35kA	50kA	85kA	125kA
	380V/415V	30/25kA	42/35kA	65/50kA	100/85kA
	440/460V	25kA	35kA	50kA	85kA
	480/500V	18kA	25kA	35kA	65kA
	600V	18kA	22kA	25kA	30kA

Earth leakage circuit breaker



Types EBE/S/H/L403
physically interchangeable with
MCCBs.

※ see details (p. 85)

Optional accessories

- Auxiliary switch
- Alarm switch
- Shunt trip
- Undervoltage trip
- Manual rotary handle
- Terminal shield
- Mechanical interlock
- Rear connection unit
- Insulation barrier
(standard for line side only)

※ see details (p. 60)

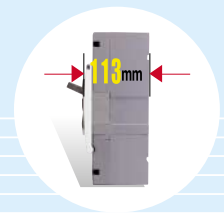
Rating	for 25kA at 415V ... Type ABE				Interchangeable rating plug
	In	2pole	3pole	4pole	
250A	ABE402b/250	ABE403b/250	ABE404b/250	300A	
300A	ABE402b/300	ABE403b/300	ABE404b/300	250A	
350A	ABE402b/350	ABE403b/350	ABE404b/350	400A	
400A	ABE402b/400	ABE403b/400	ABE404b/400	350A	
Rating	for 35kA at 415V ... Type ABS				Interchangeable rating plug
	In	2pole	3pole	4pole	
250A	ABS402b/250	ABS403b/250	ABS404b/250	300A	
300A	ABS402b/300	ABS403b/300	ABS404b/300	250A	
350A	ABS402b/350	ABS403b/350	ABS404b/350	400A	
400A	ABS402b/400	ABS403b/400	ABS404b/400	350A	
Rating	for 50kA at 415V ... Type ABH				Interchangeable rating plug
	In	2pole	3pole	4pole	
250A	ABH402b/250	ABH403b/250	ABH404b/250	300A	
300A	ABH402b/300	ABH403b/300	ABH404b/300	250A	
350A	ABH402b/350	ABH403b/350	ABH404b/350	400A	
400A	ABH402b/400	ABH403b/400	ABH404b/400	350A	
Rating	for 85kA at 415V ... Type ABL				Interchangeable rating plug
	In	2pole	3pole	4pole	
250A	ABL402b/250	ABL403b/250	ABL404b/250	300A	
300A	ABL402b/300	ABL403b/300	ABL404b/300	250A	
350A	ABL402b/350	ABL403b/350	ABL404b/350	400A	
400A	ABL402b/400	ABL403b/400	ABL404b/400	350A	

Dimensions (mm)	2/3pole	140(W) × 257(H) × 113(D)
	4pole	185(W) × 257(H) × 113(D)

Certificate
TÜV

- MCCB with reference temperature 50°C is available on request.
- Motor protection circuit breaker - magnetic only release type: see p. 68
- MCCB with electronic trip unit: see p. 58

800AF



Rating plug

Rated current, In	500, 600, 700, 800A		
Type of trip unit	Interchangeable thermal and fixed magnetic		
Thermal current	Interchangeable by rating plugs		
Magnetic Trip	(9 to 15) × In ... fixed Magnetic-adjustable types are optional		
Number of poles	2, 3, 4 pole		
Connection	Front (standard) Rear (optional)		
Mounting	Fixed only		
Category of use	Type A according to IEC947-2		
Breaking capacity, Icu	Ics = 100% of Icu(ABE), 50% of Icu(ABS, ABL)		
Type	ABE	ABS	ABL
220/240V	50kA	100kA	125kA
380/415V	42/35kA	60/50kA	100/85kA
440/460V	35kA	50kA	85kA
480/500V	25kA	45kA	65kA
600V	22kA	25kA	30kA

Earth leakage circuit breaker



Types EBE/S/L803
physically interchangeable
with MCCBs.

※ see details (p. 86)

Optional accessories

- Auxiliary switch
- Alarm switch
- Shunt trip
- Undervoltage trip
- Manual rotary handle
- Terminal shield
- Mechanical interlock
- Rear connection unit
- Insulational barrier
(standard for line side only)

※ see details (p. 60)

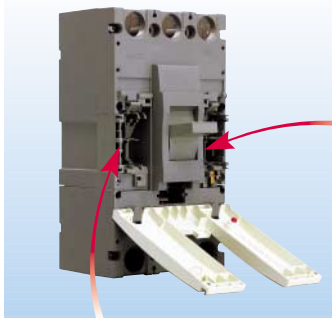
Rating	for 35kA at 415V ... Type ABE			
In	2pole	3pole	4pole	Interchangeable rating plug
500A	ABE802b/500	ABE803b/500	ABE804b/500	600A
600A	ABE802b/600	ABE803b/600	ABE804b/600	500A
630A	ABE802b/630	ABE803b/630	ABE804b/630	500A
700A	ABE802b/700	ABE803b/700	ABE804b/700	800A
800A	ABE802b/800	ABE803b/800	ABE804b/800	700A
In	2pole	3pole	4pole	Interchangeable rating plug
500A	ABS802b/500	ABS803b/500	ABS804b/500	600A
600A	ABS802b/600	ABS803b/600	ABS804b/600	500A
630A	ABS802b/630	ABS803b/630	ABS804b/630	500A
700A	ABS802b/700	ABS803b/700	ABS804b/700	800A
800A	ABS802b/800	ABS803b/800	ABS804b/800	700A
In	2pole	3pole	4pole	Interchangeable rating plug
500A	ABL802b/500	ABL803b/500	ABL804b/500	600A
600A	ABL802b/600	ABL803b/600	ABL804b/600	500A
630A	ABL802b/630	ABL803b/630	ABL804b/630	500A
700A	ABL802b/700	ABL803b/700	ABL804b/700	800A
800A	ABL802b/800	ABL803b/800	ABL804b/800	700A

Dimensions (mm)	2/3pole	210(W) × 280(H) × 113(D)
	4pole	280(W) × 280(H) × 113(D)

Certificate
TÜV

- MCCB with reference temperature 50°C is available on request.
- Motor protection circuit breaker - magnetic only release type: see p. 68
- MCCB with electronic trip unit: see p. 59

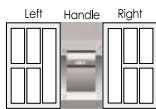
Electrical auxiliaries



Left-hand seat

Right-hand seat

Maximum possibilities



Left-hand seat

Option of connecting 2AX, 2AL and SHT or UVT



Right-hand seat

Option of connecting 2AX, 2AL and SHT or UVT



This seat is not available for GBN403E, GBN803E and ELCBs.



Auxiliary switch, AX



Alarm switch, AL



Shunt trip, SHT



Under voltage trip, UVT

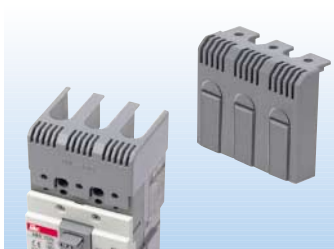
Common use for breakers

Type AB 400AF and 800AF as well as type GB 400AF and 800AF.

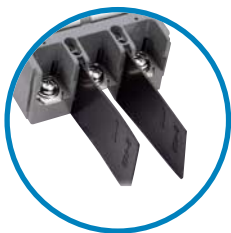
Model	Catalog No.	
AX1L800	83011136002	Auxiliary switch, AX Signals the contact position of the breaker - opening by manual or fault - closing Consists of one change over switch per unit 1 auxiliary switch (1NO+NC) 2 auxiliary switch (2NO+NC)
AX2L800	83011136003	
AL1L800	83011136004	Alarm switch, AL Signals the contact position of the breaker - tripping by manual or fault - not operated by normal opening or closing of a breaker Consists of one change over switch 1 alarm switch (1NO+NC) 2 alarm switch (2NO+NC)
AL2L800	83011136001	
XL2L800	83011137001	Combination switch, XL Consists of a change over contact (1NO+NC) 2 combination switch fit for the right-hand seat of a handle(LWT)
ST48CL800 LWT	83211137001	Shunt trip, SHT Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied. For 24~48V AC/DC common use LWT For 100~240VAC / 100~220VDC LWT For 380~550VAC LWT For 24~48V AC/DC common use TBT (2P, 3P) For 100~240VAC / 100~220VDC TBT (2P, 3P) For 380~550VAC TBT (2P, 3P) For 24~48V AC/DC common use TBT (4P) For 100~240VAC / 100~220VDC TBT (4P) For 380~550VAC TBT (4P)
ST240CL800 LWT	83211137002	
ST550AL800 LWT	83211137003	
ST48CL800 TBT	83211137004	
ST240CL800 TBT	83211137005	
ST550AL800 TBT	83211137006	
ST48CL804 TBT	83211137007	
ST240CL804 TBT	83211137008	
ST550AL804 TBT	83211137009	
UV48CL800	83211137021	Under voltage trip, UVT Trips the breaker when control voltage disappears or falls. For 48V AC/DC common use For 100~125VAC/100~110VDC For 200~240VAC/200~220VDC For 380~440V AC For 440~480V AC
UV100CL800	83211137022	
UV200CL800	83211137023	
UV380AL800	83211137024	
UV440AL800	83211137025	



External accessories



Terminal shield



Insulation barrier



Mechanical interlock

Model **Catalog No.**

IBL400	67211132003
IBL800	67211132003
T1-43A	64621131201
T1-44A	64621131204
T1-63A	64621131202
T1-64A	64621131205
MI-43S	56121138005
MI-44S	56121138007
MI-83S	56121138006
MI-84S	56121138008

Insulation barriers

These are partitions for the insulation between the phases. Barriers for the line side of the breaker are supplied as standard.

Barriers for the load side are optional.

One(1) barrier for AB 400AF (250 to 400A)

One(1) barrier for AB 800AF (500 to 800A)

Terminal shields

These are applied to the line/load side of the breaker to prevent accidental contact from live parts.

Different by breaker dimensions.

Use 3pole shield for 2pole breakers

for 3 pole AB 400AF (250 to 400A)

for 4 pole AB 400AF (250 to 400A)

for 3 pole AB 800AF (500 to 800A)

for 4 pole AB 800AF (500 to 800A)

Mechanical interlock

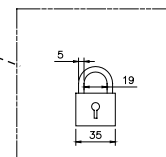
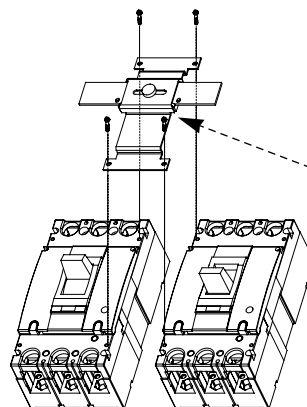
These are applied between two breakers to prevent mechanically them closing together.

for 3 pole AB 400AF (250 to 400A)

for 4 pole AB 400AF (250 to 400A)

for 3 pole AB 800AF (500 to 800A)

for 4 pole AB 800AF (500 to 800A)



Applicable lock if necessary
(not supplied)

MCCBs for general use

AB type MCCBs

400AF & 800AF

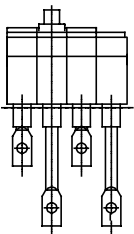
External accessories



Direct mounting type



Rear connection



Bar type



Rating plug

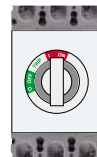
Model	Catalog No.
-------	-------------

N-70S	83111138101
N-70L	83111138102
N-70R	83111138103
N-80S	83111138111
N-80L	83111138112
N-80R	83111138113

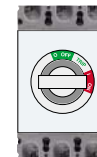
Manual rotary handle ... Direct mounting types

Applicable for AB 400AF, 3-4 pole

- Vertical type
 - Horizontal (ON in left-hand) type
 - Horizontal (ON in right-hand) type
- Applicable for AB 800AF, 3-4 pole
- Vertical type
 - Horizontal (ON in left-hand) type
 - Horizontal (ON in right-hand) type



Vertical type



Horizontal type
ON in right-hand



Horizontal type
ON in left-hand

Rear Connection Kits ... Bar type * Note

X-402	a set for 2 pole MCCBs of AB 400AF
X-403	a set for 3 pole MCCBs of AB 400AF
X-404	a set for 4 pole MCCBs of AB 400AF
X-802	a set for 2 pole MCCBs of AB 800AF
X-803	a set for 3 pole MCCBs of AB 800AF
X-804	a set for 4 pole MCCBs of AB 800AF

* Note: AS connection of the rear connection it requires experts' skill, it is not separately provided from MCCB.

Model	Catalog No.
-------	-------------

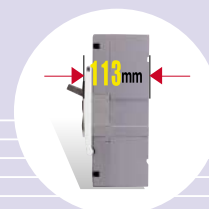
RP250	73261132111	RATING PLUG 250A
RP300	73261132112	RATING PLUG 300A
RP350	73261132113	RATING PLUG 350A
RP400	73261132114	RATING PLUG 400A
RP500	73261132115	RATING PLUG 500A
RP600	73261132116	RATING PLUG 600A
RP630	73261132117	RATING PLUG 630A
RP700	73261132118	RATING PLUG 700A
RP800	73261132119	RATING PLUG 800A

Rating plug

Model	Catalog No.
-------	-------------

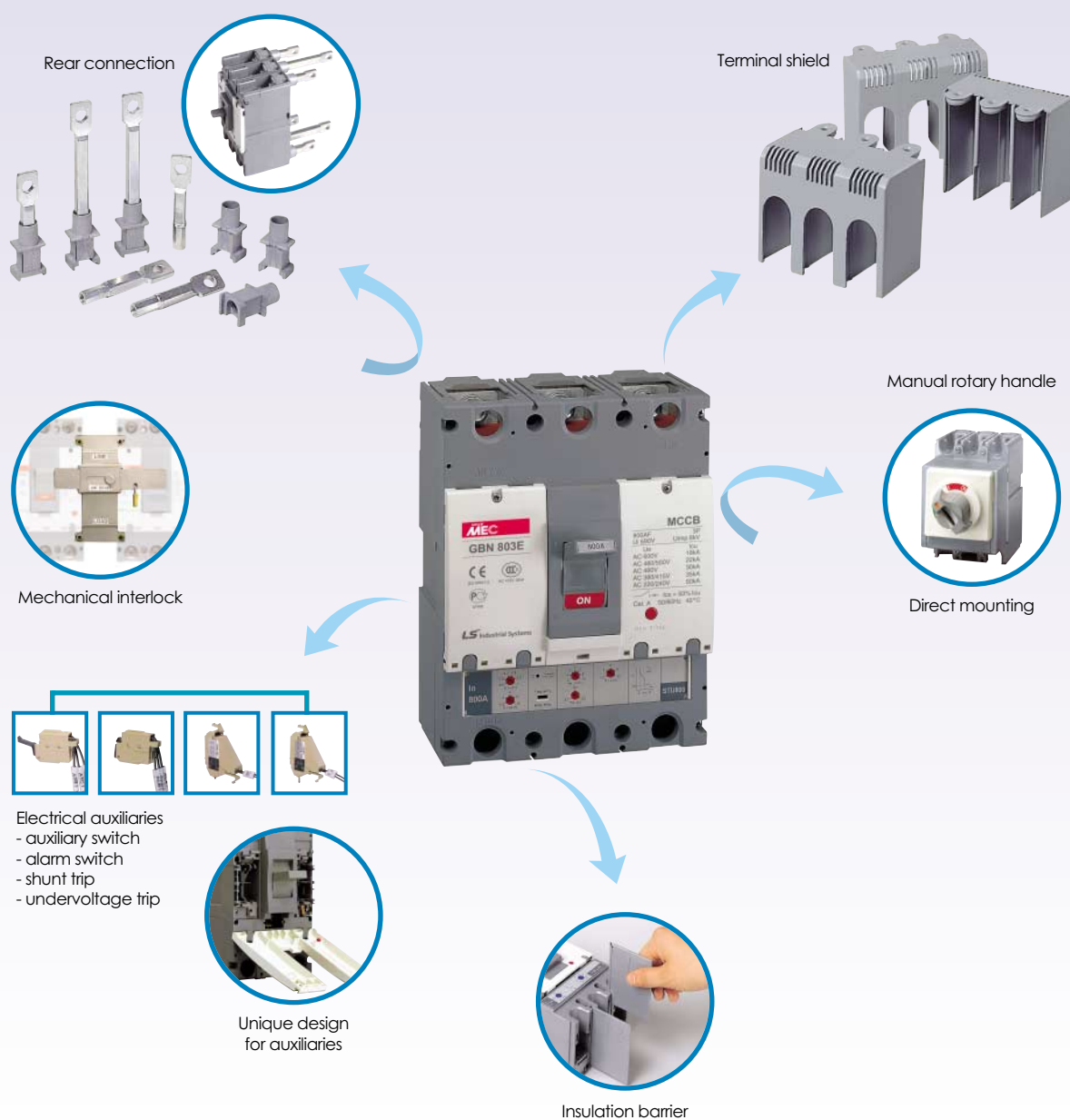
BB062	83261132011	BUSBAR, ABE/S/L802α (500, 600, 630A)
BB802	83261132012	BUSBAR, ABE/S/L802α (700, 800A)
BB603	83261132013	BUSBAR, ABE/S/L803α (500, 600, 630A)
BB803	83261132014	BUSBAR, ABE/S/L803α (700, 800A)
BB604	83261132015	BUSBAR, ABE/S/L804α (500, 600, 630A)
BB804	83261132016	BUSBAR, ABE/S/L804α (700, 800A)

Bus bar (Optional parts for 800AF MCCB)



400AF & 800AF

- Electric trip units with LSIA configuration.
- Electric auxiliaries are common use between 400 to 800AF.
- Motor protection MCCBs with magnetic only trip are available.
- CE & KEMA certificated according to IEC60947-2.

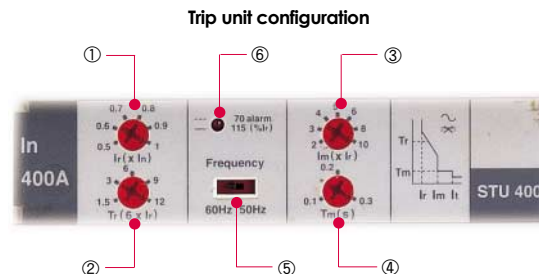
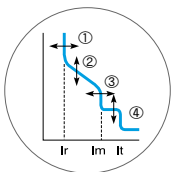


MCCBs for general use

GB type adjustable MCCBs

400AF

Electronic trip



Rated current, In	400A	
Type of trip unit	Electronic trip with LSIA configuration	
① Long time pick-up, Ir	(0.5-0.6-0.7-0.8-0.9-1.0) x In ... adjustable via knob	
② Long time delay, tr	1.5-3-6-9-12 sec at 6 x Ir ... adjustable via knob	
③ Short time pick-up, Im	(2-3-4-5-6-8-10) x Ir ... adjustable via knob	
④ Short time delay, tm	0.1-0.2-0.3 sec ... adjustable	
Instantaneous pick-up	≥ 12.5 x In ... fixed	
⑤ Rated frequency	50-60 selectable by the switch of the trip unit	
⑥ Alarm	Warning via LED flickering when the load current is between 70 to 115% of set current Ir. LED stays on over 115% of set current Ir	
Number of poles	3 pole	
Connection	Front only	
Mounting	Fixed only	
Category of use	Type A according to IEC947-2	
Breaking capacity, Icu	Ics = 50% of Icu	
	Type	GBN GBH
	220/240V	50kA 85kA
	380/415V	35kA 50kA
	440/460V	30kA 42kA
	480/500V	22kA 35kA
	600V	18kA 25kA

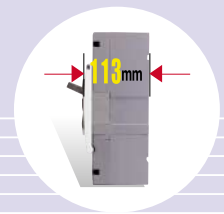
Rating			
In	Model	Catalog No.	Adjustable thermal range
400A	GBN403E	0031018100	200-240-280-320-360-400A
	GBH403E	0031019300	200-240-280-320-360-400A

Optional accessories	
* see details (p. 60)	Auxiliary switch
	Alarm switch
	Shunt trip
	Undervoltage trip
	Manual rotary handle
	Terminal shield
	Insulational barrier (standard for line side only)

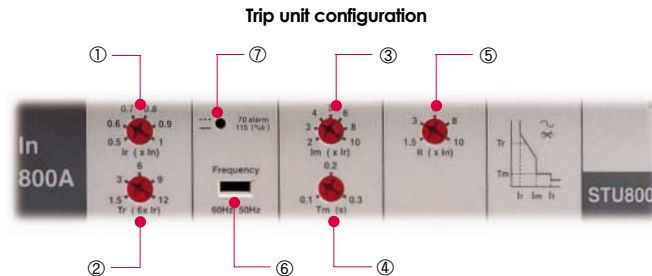
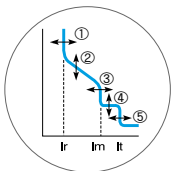
Dimensions(mm) 3pole 140(W) x 257(H) x 113(D)

If the GBN 403E/GBN803E/GBH403E/GBH803E, are used at high temperature, the setting must take into account the thermal limits of circuit breaker :
 the overload protection setting cannot exceed 0.9 at 50°, 0.8 at 60° and 0.7 at 70°.
 • Motor protection circuit breaker - magnetic only release type: see p. 68
 • MCCB with thermal-magnetic trip unit: see p. 52

Certificate
CE



Electronic trip



Rated current, In	800A
Type of trip unit	Electronic trip with LSIA configuration
① Long time pick-up, Ir	(0.5-0.6-0.7-0.8-0.9-1.0) x In ... adjustable via knob
② Long time delay, tr	1.5-3-6-9-12 sec at 6 x Ir ... adjustable via knob
③ Short time pick-up, Im	(2-3-4-5-6-8-10) x Ir ... adjustable via knob
④ Short time delay, tm	0.1-0.2-0.3 sec ... adjustable
⑤ Instantaneous pick-up	(1.5-3-6-8-10) x In ... adjustable via knob
⑥ Rated frequency	50-60 selectable by the switch of the trip unit
⑦ Alarm	Warning via LED flickering when the load current is between 70 to 115% of set current Ir. LED stays on over 115% of set current Ir
Number of poles	3 pole
Connection	Front only
Mounting	Fixed only
Category of use	Type A according to IEC947-2
Breaking capacity, Icu	Ics = 50% of Icu
Type	GBN GBH
220/240V	50kA 85kA
380/415V	35kA 50kA
440/460V	30kA 42kA
480/500V	22kA 35kA
600V	18kA 25kA

Rating			
In	Model	Catalog No.	Adjustable thermal range
800A	GBN803E	0039007000	400-480-560-640-720-800A
	GBH803E	0039007300	400-480-560-640-720-800A

Optional accessories	Auxiliary switch
* see details (p. 60)	Alarm switch
	Shunt trip
	Undervoltage trip
	Manual rotary handle
	Terminal shield
	Insulational barrier (standard for line side only)

Dimensions(mm) 3pole 210(W) x 280(H) x 113(D)

If the GBN 403E/GBN803E/GBH403E/GBH803E, are used at high temperature, the setting must take into account the thermal limits of circuit breaker : the overload protection setting cannot exceed 0.9 at 50°, 0.8 at 60° and 0.7 at 70°.

- Motor protection circuit breaker - magnetic only release type: see p. 68
- MCCB with thermal-magnetic trip unit: see p. 53

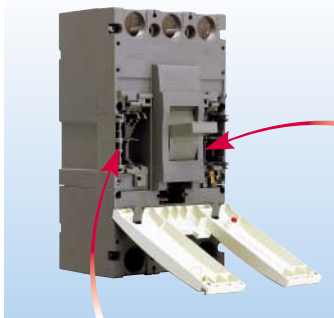
Certificate
CE

MCCBs for general use

GB type adjustable MCCBs

400AF & 800AF

Electrical auxiliaries



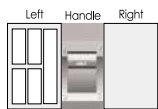
Left-hand seat

Right-hand seat

Common use for breakers

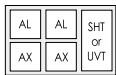
Type AB 400AF and 800AF as well as type GB 400AF and 800AF.

Maximum possibilities



Left-hand seat

Option of connecting 2AX, 2AL and SHT or UVT



Right-hand seat

This seat is not available.



Auxiliary switch, AX



Alarm switch, AL



Shunt trip, SHT



Under voltage trip, UVT

Model	Catalog No.
AX1L800	83011136002
AX2L800	83011136003
AL1L800	83011136004
AL2L800	83011136001
XL2L800	83011137001
ST48CL800LWT	83211137001
ST240CL800LWT	83211137002
ST550AL800LWT	83211137003
ST48CL800TBT	83211137004
ST240CL800TBT	83211137005
ST550AL800TBT	83211137006
UV48CL800	83211137021
UV100CL800	83211137022
UV200CL800	83211137023
UV380AL800	83211137024
UV440AL800	83211137025

Auxiliary switch, AX

Signals the contact position of the breaker

- opening by manual or fault
- closing

Consists of one change over switch per unit

- 1 auxiliary switch (1NO+NC)
- 2 auxiliary switch (2NO+NC)

Alarm switch, AL

Signals the contact position of the breaker

- tripping by manual or fault
- not operated by normal opening or closing of a breaker

Consists of one change over switch

- 1 alarm switch (1NO+NC)
- 2 alarm switch (2NO+NC)

Combination switch, XL

Consists of a change over contact (1NO+NC)

- 2 combination switch fit for the right-hand seat of a handle(LWT)

Shunt trip, SHT

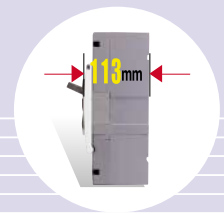
Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied.

- For 24~48V AC/DC common use LWT
- For 100~240VAC / 100~220VDC LWT
- For 380~550VAC LWT
- For 24~48V AC/DC common use TBT
- For 100~240VAC / 100~220VDC TBT
- For 380~550VAC TBT

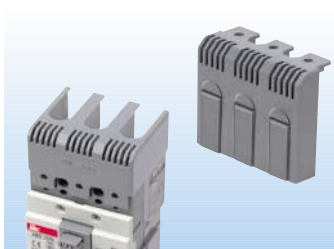
Under Voltage trip, UVT

Trips the breaker when control voltage disappears or falls.

- For 48V AC/DC common use
- For 100~125VAC/100~110VDC
- For 200~240VAC/200~220VDC
- For 380~440V AC
- For 440~480V AC



External accessories



Terminal shield



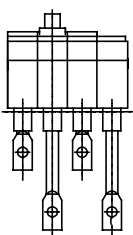
Insulation barrier



Direct mounting type



Rear connection



Bar type

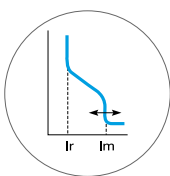
Type GB MCCBs use the same accessories with the AB type 400AF & 800AF MCCBs.

* see details (p. 53)

Model	Catalog No.	
Insulation barriers		
IBL400	67211132003	One(1) barrier for GBN403E, GBH403E
IBL800	67211132003	One(1) barrier for GBN803E, GBH803E
Terminal shields		
T1-43A	64621131201	for GBN403E, GBH403E
T1-63A	64621131202	for GBN803E, GBH803E
Mechanical interlock		
MI-83S	56121138006	for 3 pole GBN803E, GBH803E
Manual rotary handle, Direct mounting types		
		<i>Applicable for GBN403E, GBH403E</i>
N-70S	83111138101	Vertical type
N-70L	83111138102	Horizontal (ON in left-hand) type
N-70R	83111138103	Horizontal (ON in right-hand) type
		<i>Applicable for GBN803E, GBH803E</i>
N-80S	83111138111	Vertical type
N-80L	83111138112	Horizontal (ON in left-hand) type
N-80R	83111138113	Horizontal (ON in right-hand) type
Rear connection kits ... Bar type * Note		
X-403		a set for GBN403E, GBH403E
X-803		a set for GBN803E, GBH803E
Bus bar (Optional parts for 800AF MCCB)		
BB603	83261132013	BUSBAR, GBN803E & GBH803E (500, 600A)
BB803	83261132014	BUSBAR, GBN803E & GBH803E (800A)

* Note: AS connection of the rear connection it requires experts' skill, it is not separately provided from MCCB.

Thermal magnetic trip



Rated current, In	1000, 1200A
Type of trip unit	Fixed thermal and adjustable magnetic
Frequency	50 or 60Hz (Not common use)
Number of poles	3, 4 pole
Connection	Front (standard)
Mounting	Fixed only
Category of use	Type A according to IEC60947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABS
220/240V	100kA
380/415V	65kA
440/460V	65kA
480/500V	50kA
600V	45kA

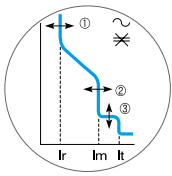
Rating	For 50Hz			
	In	3pole	4pole	Magnetic adjustable range
1000A	ABS1003/50	ABS1004/50		3000 to 6000A
1200A	ABS1203/50	ABS1204/50		3000 to 7200A
		For 60Hz		
	In	3pole	4pole	Magnetic adjustable range
1000A	ABS1003/60	ABS1004/60		3000 to 6000A
1200A	ABS1203/60	ABS1204/60		3000 to 7200A

Optional accessories	Auxiliary switch Alarm switch Shunt trip Undervoltage trip Insulation barrier (standard for line side only)
* see details (p. 64)	

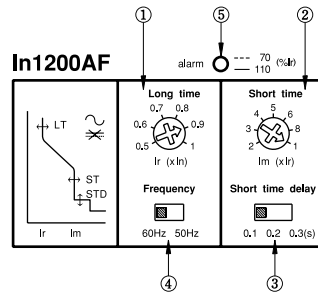
Dimensions (mm)	3pole	210(W) × 580(H) × 105(D)
	4pole	280(W) × 580(H) × 105(D)

- MCCB with reference temperature 50°C is available on request.
- MCCB with electronic trip unit: see p. 63

Electronic trip



Trip unit configuration



Rated current, In	1200A
Type of trip unit	Electronic trip with LSIA configuration
① Long time pick-up, Ir	(0.5-0.6-0.7-0.8-0.9-1.0) × In ... adjustable via knob
② Short time pick-up, Im	(2-3-4-5-6-8-10) × Ir ... adjustable via knob
③ Short time delay, tm	0.1-0.2-0.3 sec ... adjustable
Instantaneous pickup	11 × In ... fixed
④ Rated frequency	50-60 selectable by the switch of the trip unit
⑤ Alarm	Warning via LED flickering when the load current is between 70 to 110% of set current Ir. LED stays on over 110% of set current Ir
Number of poles	3 pole
Connection	Front only
Mounting	Fixed only
Category of use	Type A according to IEC60947-2
Breaking capacity, Icu	Ics = 50% of Icu
Type	ABS
220/240V	100kA
380/415V	65kA
440/460V	65kA
480/500V	50kA
600V	45kA

Rating		
In	3pole	Adjustable thermal range
1200A	ABS1203E	600-720-840-960-1080-1200A

Optional accessories	Auxiliary switch Alarm switch Shunt trip Undervoltage trip Insulational barrier (standard for line side only)
-----------------------------	---

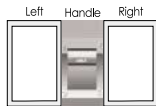
Dimensions(mm)	3pole	210(W) × 580(H) × 105(D)
-----------------------	--------------	--------------------------

Electrical auxiliaries



Seats for electrical auxiliaries
... both sides of the handle

Maximum possibilities



Left-hand seat

Option of connecting
SHT or UVT

Right-hand seat

Option of connecting
AX1 or AX2 or AL1 or AL2 or XL1 or
X2L

Model	Catalog No.	
		Auxiliary switch, AX
		Signals the contact position of the breaker
		- opening by manual or fault
		- closing
		Consists of one or two change over contacts per unit
AX1S1200	83011126001	1 auxiliary switch (1NO+NC)
AX2S1200	83011126006	2 auxiliary switch (2NO+NC)
		Alarm switch, AL
		Signals the contact position of the breaker
		- tripping by manual or fault
		- not operated by normal opening or closing of a breaker
		Consists of one or two change over contacts per unit
AL1S1200	83011126002	1 alarm switch (1NO+NC)
		Combination switch, XL
		Consists of one or two auxiliary switch and a alarm switch per unit
XL1S1200	83011126007	1 aux. switch and 1 alarm switch (1NO+NC)
XL2S1200	83011126008	2 aux. switch and 1 alarm switch (2NO+NC)
		Shunt trip, SHT
		Trips the breaker when any AC(DC) voltage between 85(75) and 110(125)% of nominal control voltage is applied.
ST100AS1200	83211126001	For AC100~110V
ST125AS1200	83211126002	For AC125V
ST200AS1200	83211126003	For AC200~220V
ST380AS1200	83211126004	For AC380~440V
ST480AS1200	83211126005	For AC480~550V
ST24DS1200	83211126006	For DC24V
ST48DS1200	83211126007	For DC48V
ST100DS1200	83211126008	For DC100~110V
ST125DS1200	83211126009	For DC125V
ST200DS1200	83211126010	For DC200~220V
		Under voltage trip, UVT
		Trips the breaker when control voltage disappears or falls.
		Insulation barriers
IB1200	67211123005	One (1) barrier

Electronic trip



- Suitable for use in the system where higher fault current exist.
- Employing an electronic trip unit
- Current adjustment are made by the knobs on the front of the trip unit.
- Offering more accessories for varied applications and allows easy access to install them.
- The accessories (Auxiliary switch, Alarm switch, Shunt trip, Undervoltage trip, Handle, Motor operator, Rear connection)

Frame type	GB Type (electronic trip)	
Breaking capacity (kA), Icu at 415VAC	65	
Number of poles	3	
Type	3 pole	GBN1603E
Rated current (A)	1600	
In at 40°C	Electronically adjustable	
Rated operational voltage (V), Ue (50/60Hz)	690	
Rated impulse withstand voltage (kV), Uimp	8	
Ultimate breaking capacity (kA), Icu	415V	65
	500V	45
Service breaking capacity (kA), Ics	415V	35
	500V	30
Category of use	A	
Endurance (number of operations)	Mechanical	10000
	Electrical	4000

Type of trip unit

- Long time pick-up, Ir (A) :

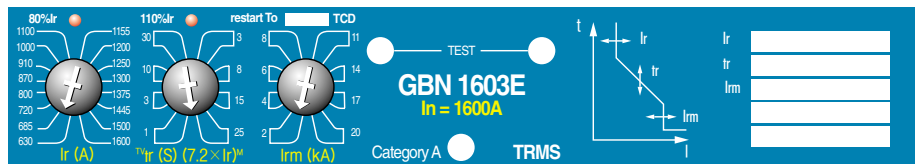
630-685-720-800-870-910-1000-1100-1155-1200-1250-1300-1375-1445-1500-1600A

- Long time delay, tr (s) :

[TV] 1-3-10-30 sec at 7.2 Ir ... adjustable via knob : TV mode for transformer and line protection

[M] 3-8-15-25 sec at 7.2 Ir ... adjustable via knob : M mode for motor protection

- Instantaneous pick-up, Irm (A) : 2-4-6-8-11-14-17-20 kA ... adjustable via knob



Rating	
In	3pole
1600A	GBN1603E

Optional accessories

Auxiliary switch, Alarm switch, Shunt trip, Undervoltage trip, Insulational barrier (standard for line side only), Direct rotary handel, Extended rotary handle, Rear connection, Plug-in device, Motor operator

Dimensions(mm)	3pole	210(W) × 380(H) × 142.5(D)
-----------------------	--------------	----------------------------

MCCBs for definite purpose

Motor protection MCCBs



Case 1. MCCB with magnetic only release

MCCB provides protection against short-circuit without thermal elements.

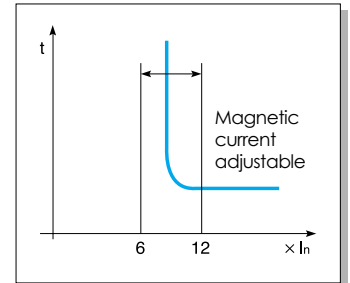
Selecting MCCB by

- motor power
- type of starting
- fault current

Contactors for motor switching.

Overload relay for protection against overload and phase failure.

* see details (p. 67)



MCCB operating curve



Case 2. Thermal-Magnetic Motor protection breaker

MCCB offers protections against short-circuit and overload.

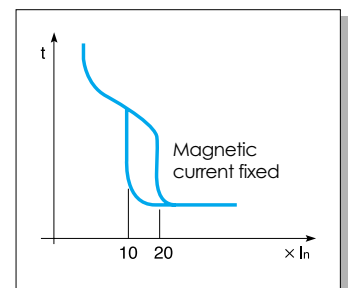
Sometimes it covers manual switching without a contactor for economic solution.

All current ratings are non-adjustable.

Thermal currents are similar to full load currents of motors.

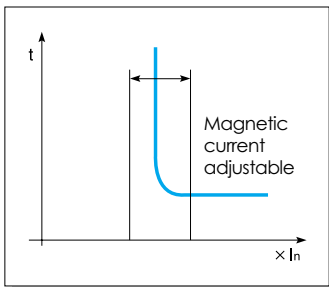
Magnetic trip currents are between 10 to 20 times of thermal currents.

* see details (p. 69)



MCCB operating curve

1.6A to 250A



Operating curve

Type of trip unit	Adjustable magnetic trip without thermal elements
Rated current, In	1.6, 3.2, 6.3, 12, 20, 32, 50, 63, 100, 160, 200, 250A
Magnetic current	(6-12) × In (6-step adjustment)
Number of poles	3 poles
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Category of use	Type A according to IEC60947-2
Breaking capacity, Icu	Ics = 75% of Icu

Type	GBL
220/240V	125kA
380/415V	85kA
440/460V	85kA
480/500V	65/50kA
600V	35kA

Rating

In	Setting current	Catalog No.
1.6A	10-12-14-16-18-20A	GBL103IN/1.6
3.2A	20-24-28-32-36-40A	GBL103IN/3.2
6.3A	40-48-56-64-72-80A	GBL103IN/6.3
12A	70-84-98-112-126-140A	GBL103IN/12
20A	120-144-168-192-216-240A	GBL103IN/20
32A	180-216-252-288-324-360A	GBL103IN/32
50A	300-360-420-480-560-600A	GBL103IN/50
63A	400-480-560-640-720-800A	GBL103IN/63
63A	400-480-560-640-720-800A	GBL203IN/63
100A	625-750-875-1000-1125-1250A	GBL103IN/100
100A	625-750-875-1000-1125-1250A	GBL203IN/100
160A	1000-1200-1400-1600-1800-2000A	GBL203IN/160
200A	1250-1500-1750-2000-2250-2500A	GBL203IN/200
250A	2000-2250-2500-2750-3000-3250A	GBL203IN/250

Optional accessories

※ see details (p. 48)

- Auxiliary switch
- Alarm switch
- Shunt trip
- Undervoltage trip
- Manual rotary handle
- Terminal shield
- Rear connection unit
- Insulational barrier (standard for line side only)

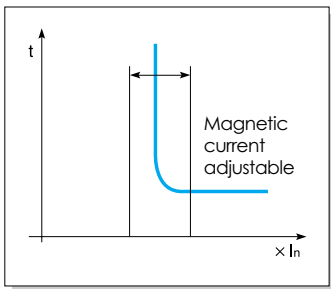
Dimensions(mm)

105(W) × 165(H) × 86(D)

MCCBs for definite purpose

Motor protection MCCBs

300 to 800A



Operating curve

Type of trip unit	Adjustable magnetic trip without thermal elements
Rated current, In	300, 350, 400, 500, 600, 700, 800A
Magnetic current	(4-10) × In ... adjustable
Number of poles	3 poles
Connection	Front (standard)
Mounting	Fixed only
Category of use	Type A according to IEC60947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABL403bIN	ABL803bIN
220/240V	125kA	125kA
380/415V	65kA	65kA
440/460V	65kA	65kA
480/500V	50kA	50kA
600V	35kA	42kA

Rating

In	Setting current	Catalog No.
300A	1200 to 3000A	ABL403bIN/300
350A	1400 to 3500A	ABL403bIN/350
400A	1600 to 4000A	ABL403bIN/400
400A	1500 to 3750A	ABL803bIN/400
500A	2000 to 5000A	ABL803bIN/500
600A	2400 to 6000A	ABL803bIN/600
700A	2800 to 7000A	ABL803bIN/700
800A	3200 to 8000A	ABL803bIN/800

Accessories available

* see details (p. 60)

Auxiliary switch
Alarm switch
Shunt trip
Undervoltage release
Manual rotary handle
Terminal shield
Insulational barrier
Rear connection unit
Mechanical Interlock

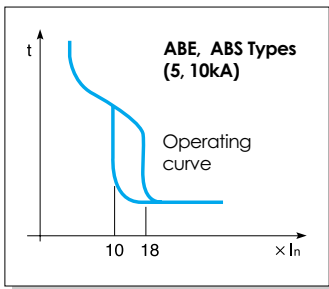
Dimensions (mm)	ABL403bIN	140(W) × 257(H) × 110(D)
	ABL803bIN	210(W) × 280(H) × 110(D)

Thermal magnetic type

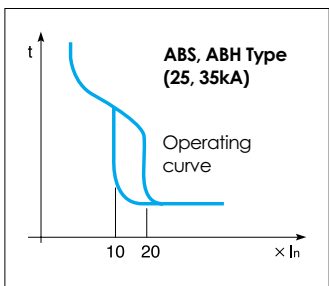
10A to 90A



Type of trip unit	Fixed thermal and magnetic trip Thermal-magnetic ; ABH53, ABH103, ABS103 types Hydraulic-magnetic ; ABE53, ABE63, ABE103, ABS53, ABS63 types
Rated current, I_n	10, 12, 16, 24, 32, 40, 45, 60, 75, 90 ... fixed
Magnetic Trip	(10 to 20) × I _n ... fixed
Number of poles	3 poles
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Category of use	Type A according to IEC947-2



※ Accessories details (p. 35)



※ Accessories details (p. 38)

Accessories available

- Auxiliary switch
- Alarm switch
- Shunt trip
- Undervoltage release
- Manual rotary handle
- Terminal shield
- Insulational barrier
- Rear connection unit

Rating	for 5kA at 415V, 3 pole	Breaking capacity, I _{cu}	
10A	ABE53bM/10	220/240V 10kA	
12A	ABE53bM/12	380/415V 7.5/5kA	
16A	ABE53bM/16	440/460V 5kA	
24A	ABE53bM/24	480/500V 2.5kA	
32A	ABE53bM/32	600V 2.5kA	
45A	ABE53bM/45		
60A	ABE63bM/60		
Rating	for 10kA at 415V, 3 pole	Breaking capacity, I _{cu}	
10A	ABS53bM/10	220/240V 25kA	
12A	ABS53bM/12	380/415V 14/10kA	
16A	ABS53bM/16	440/460V 10kA	
24A	ABS53bM/24	480/500V 7.5kA	
32A	ABS53bM/32	600V 5kA	
40A	ABS53bM/40		
45A	ABS53bM/45		
60A	ABS63bM/60		
75A	ABE103bM/75		
90A	ABE103bM/90		
Rating	for 25kA at 415V, 3 pole	Breaking capacity, I _{cu}	
16A	ABH53bM/16	220/240V 50kA	
24A	ABH53bM/24	380/415V 25kA	
32A	ABH53bM/32	440/460V 25kA	
45A	ABH53bM/45	480/500V 14kA	
60A	ABS103bM/60	600V 10kA	
75A	ABS103bM/75		
90A	ABS103bM/90		
Rating	for 35kA at 415V, 3 pole	Breaking capacity, I _{cu}	
60A	ABH103bM/60	220/240V 65kA	
75A	ABH103bM/75	380/415V 35kA	
90A	ABH103bM/90	440/460V 35kA 480/500V 25kA 600V 18kA	
Dimension (mm)	3 pole	5kA & 10kA	25kA & 35kA
		75(W) × 130(H) × 60(D)	90(W) × 155(H) × 60(D)

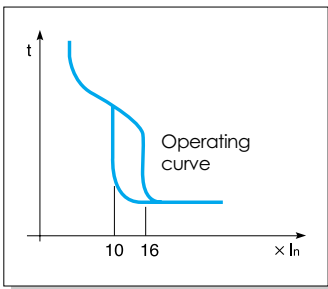
MCCBs for definite purpose

Motor protection MCCBs

125A to 225A



Type of trip unit	Fixed thermal and magnetic trip		
Rated current, I_n	125, 150, 175, 225 ... fixed		
Magnetic Trip	(10 to 16) × I _n ... fixed		
Number of poles	3 poles		
Connection	Front (standard) Rear (optional)		
Mounting	Fixed only		
Category of use	Type A according to IEC947-2		
Breaking capacity, I_{cu}	I _{cs} = 50% of I _{cu}		
220/240V	35kA	50kA	65kA
380/415V	18kA	25kA	35kA
440/460V	18kA	25kA	35kA
480/500V	10kA	14kA	25kA
600V	7.5kA	10kA	18kA



Rating	for 18kA at 415V, 3 pole
125A	ABE203bM/125
150A	ABE203bM/150
175A	ABE203bM/175
225A	ABE203bM/225
	for 25kA at 415V, 3 pole
125A	ABS203bM/125
150A	ABS203bM/150
175A	ABS203bM/175
225A	ABS203bM/225
	for 35kA at 415V, 3 pole
125A	ABH203bM/125
150A	ABH203bM/150
175A	ABH203bM/175
225A	ABH203bM/225

Accessories available	Auxiliary switch
※ Accessories details (p.41)	Alarm switch
	Shunt trip
	Undervoltage trip
	Manual rotary handle
	Terminal shield
	Insulational barrier
	Rear connection unit

Dimension(mm) 3 pole	105(W) × 165(H) × 60(D)
-----------------------------	-------------------------

Lug terminal MCCBs



Key lock device



with key lock device



without key lock device

Lug terminal MCCBs with key lock device are used to prevent the breakers from unauthorized closing when the breakers are tripped or opened.

The lock device is built in the right-hand of the breaker handle as shown in the picture.

Lug terminal MCCB	with key lock device	without key lock device
Rated current, In	30, 60, 100, 150A	30, 40, 50, 60, 75, 100, 125, 150, 200, 225A
Reference temperature	55°C	55°C
Type of trip unit	Thermal-magnetic	Thermal-magnetic
Number of poles	3 pole	3 pole
Connection	Front (standard)	Front (standard)
Type of terminal	Lug	Lug
Mounting	Fixed only	Fixed only
Category of use	Type A according to IEC947-2	Type A according to IEC947-2
Breaking capacity, Icu	Ics = 100% of Icu	Ics = 100% of Icu
Type	ABS	ABS
220V	25kA	25kA
380V	20kA	20kA

Rating	Rating	for 5kA at 415V	In	Model
	In		30A	ABS103bL/30
	30A	ABS103k/30	40A	ABS103bL/40
	60A	ABS103k/60	50A	ABS103bL/50
	100A	ABS103k/100	60A	ABS103bL/60
	150A	ABS203k/150	75A	ABS103bL/75
			100A	ABS103bL/100
			125A	ABS203bL/125
			150A	ABS203bL/150
			200A	ABS203bL/200
			225A	ABS203bL/225

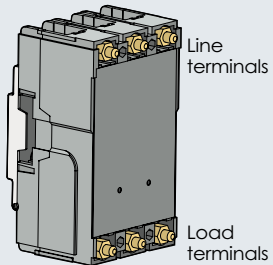
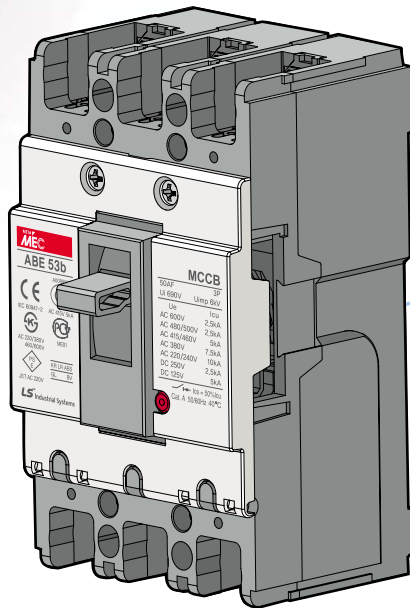
Accessories	
	Auxiliary switch
	Alarm switch
	Terminal shield
	Sealing plate (supplied as standard)

Dimensions (mm)	ABS103k	ABS203k
	90(W) × 155(H) × 60(D)	105(W) × 165(H) × 60(D)

Certificate
CE

plug-in MCCBs

Layout of Plug-in MCCBs



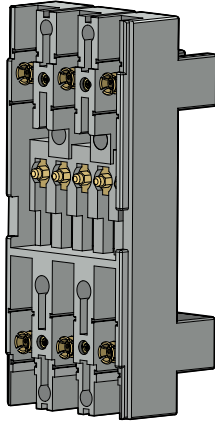
Plug-in version breaker

Plug-in version breaker has plug-type terminals on the back for line and / or load sides. Standard breakers can not be used for the purpose.

Mounting blocks

available in 4 styles

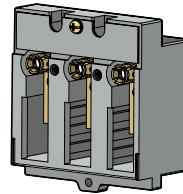
Normal type



Normal type block

- type name: PB-□-FR
- available for breaker rating upto 800A

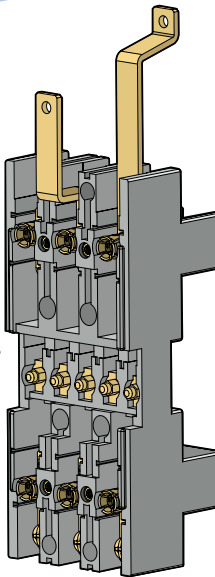
Line-only type



Line-only type block

- type name: PB-□-FRL
- available for breaker rating upto 100A

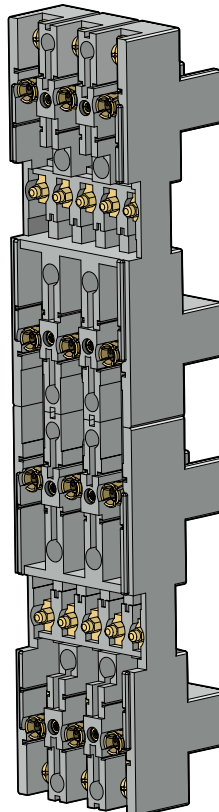
Single-row type



Single-row type block

- type name: PB-□-1DB
- available for breaker rating upto 100A

Double-row type



Double-row type block

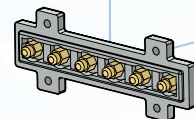
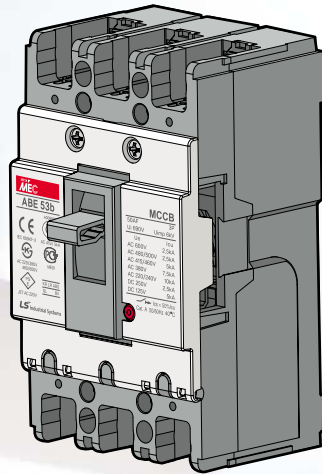
- type name: PB-□-2DB
- available for breaker rating upto 100A

Selection of plug-in MCCBs

Normal type

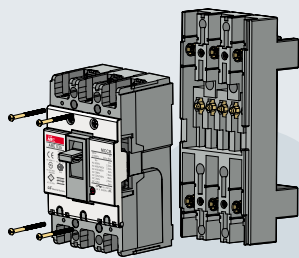
Plug-in version breaker

-MCCB rating : 30 to 800AF

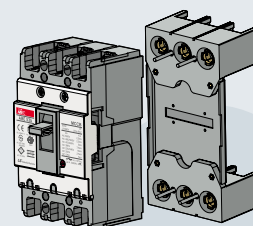


Terminal block

- type name: PBA-225U
- for electrical auxiliaries
- mounting on the back of the breaker size 225~800AF
- should be used together with the terminal block PBA-225L

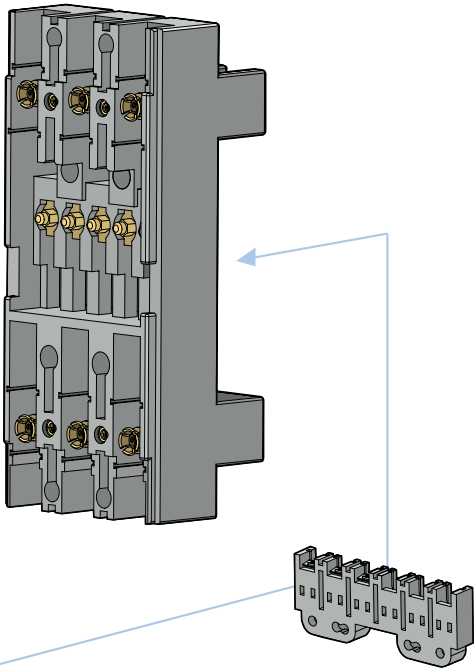


30~100AF



225~800AF

Mounting block



Terminal block

- type name:
PBA-225L for 225~800AF
PBA-100 for 30~100AF
- for electrical auxiliaries
- mounting on the back of the mounting block

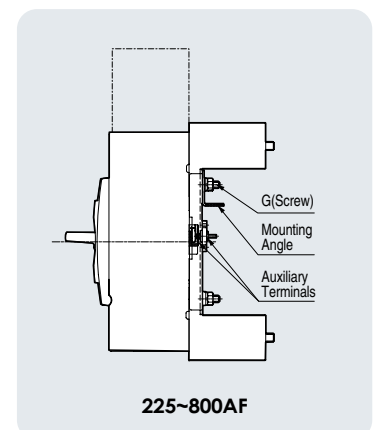
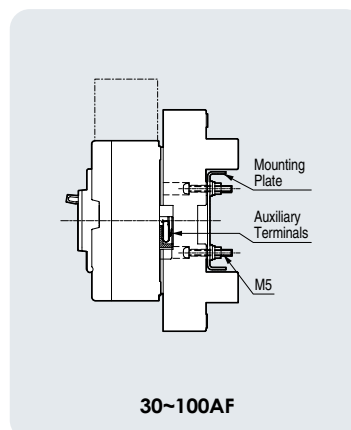
Type names of blocks

Block	Plug-in version breaker	Terminal block
PB-A3-FR	ABH33b, ABS33b, ABS53b, ABE53b, ABS63b, ABE63b, ABE103b	PBA-100
PB-C3-FR	ABS103b, ABH53b, ABH103b	
PB-G3-FR	GBN53, GBN103, GBH53, GBH103	
PB-D3-FR	ABE203b, ABS203b, ABH203b, ABH203a, ABL203a, GBL53, GBL103, GBN203, GBH203, GBL203	PBA-225U (mounting on the breaker)
PB-E3-FR	ABL53a, ABL103a	PBA-225L (mounting on the block)
PB-I3-FR	ABE403b, ABS403b, ABH403b, ABL403b	
PB-J3-FR	ABE603b, ABS603b, ABL603b, ABE803b, ABS803b, ABL803b	

Electrical auxiliaries

Internal accessories for standard breakers such as auxiliary switch, alarm switch, shunt trip and undervoltage trip can be used for plug-in version breakers without any modification. For the convenient wiring for plug-in MCCBs the use of exclusive terminal blocks are recommended as shown below.

Mounting position of terminal blocks

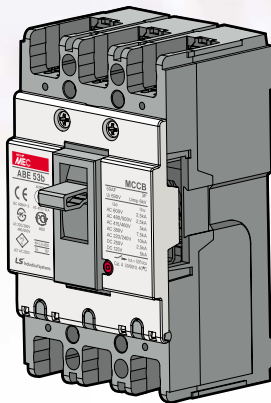


Selection of plug-in MCCBs

Line-only type

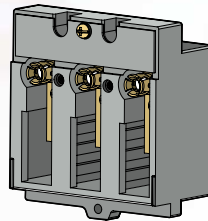
Plug-in version breaker

- MCCB rating: 30 to 100AF
- plug-type terminals on



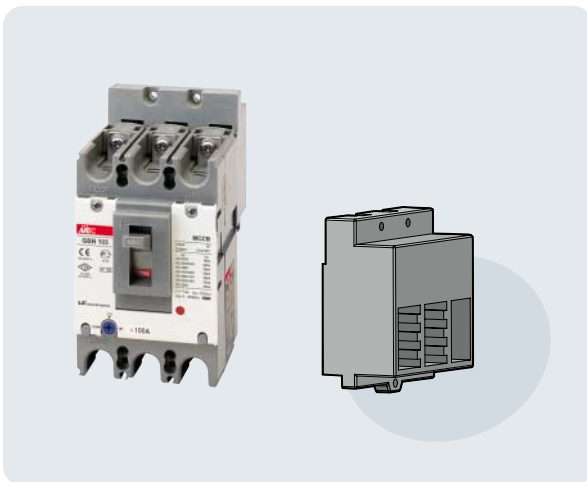
Line side

Mounting



Type names of blocks

block	Plug-in version breaker	Terminal block
PB-A3-FRL	ABH33b, ABS33b, ABS53b, ABE53b, ABS63b, ABE63b, ABE103b	N.A.
PB-C3-FRL	ABS103b, ABH53b, ABH103b	
PB-G3-FRL	GBN53, GBN103, GBH53, GBH103	



Electrical auxiliaries

Internal accessories for standard breakers such as auxiliary switch, alarm switch, shunt trip and undervoltage trip can be used for plug-in version breakers without any modification.

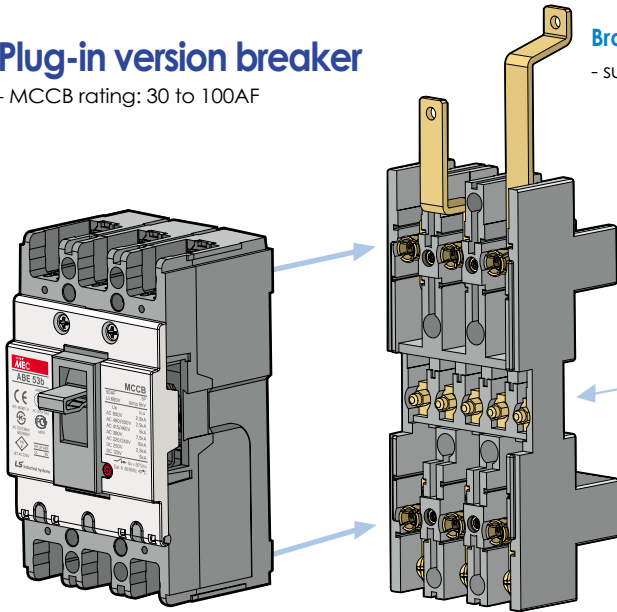
Single-row type

Mounting

Plug-in version breaker

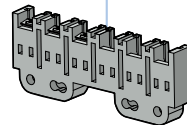
- MCCB rating: 30 to 100AF

Branch busbars
- supplied as standard



Type names of blocks

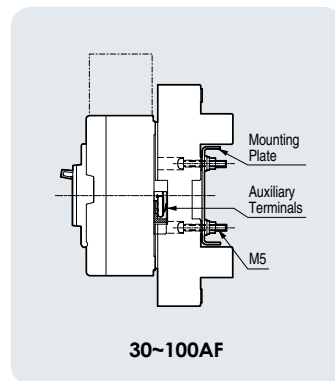
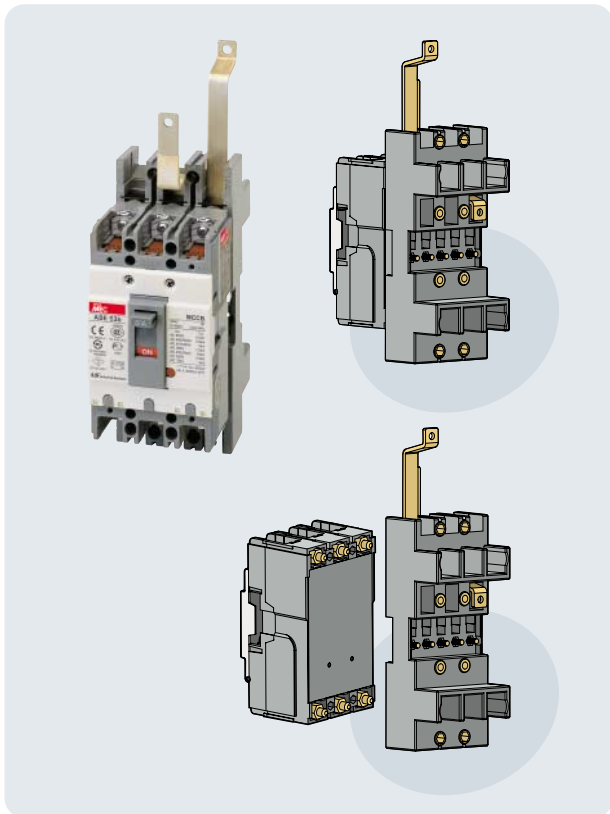
Blocks	Plug-in version Breakers	Terminal block
PB-A3-1DB	ABH33b, ABS33b, ABS53b, ABE53b, ABS63b, ABE63b, ABE103b	PBA-100
PB-C3-1DB	ABS103b, ABH53b, ABH103b	
PB-G3-1DB	GBN53, GBN103, GBH53, GBH103	



Terminal block

Electrical auxiliaries

Internal accessories for standard breakers such as auxiliary switch, alarm switch, shunt trip and undervoltage trip can be used for plug-in version breakers without any modification. For the convenient wiring for plug-in MCCBs the use of exclusive terminal blocks are recommended as show below



30~100AF

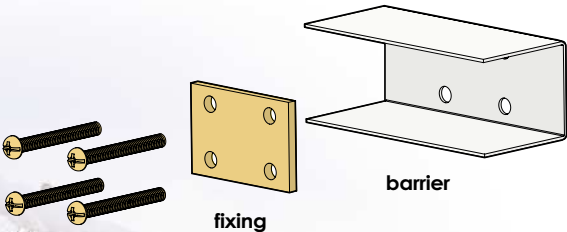
Selection of plug-in MCCBs

Double-row type

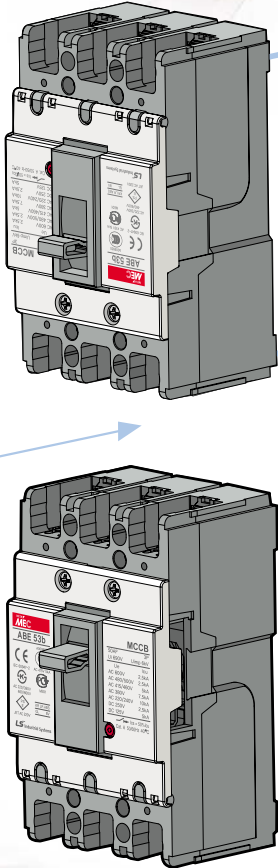
Branch busbars
- supplied as standard

Plug-in version breaker

- MCCB rating: 30 to 100AF



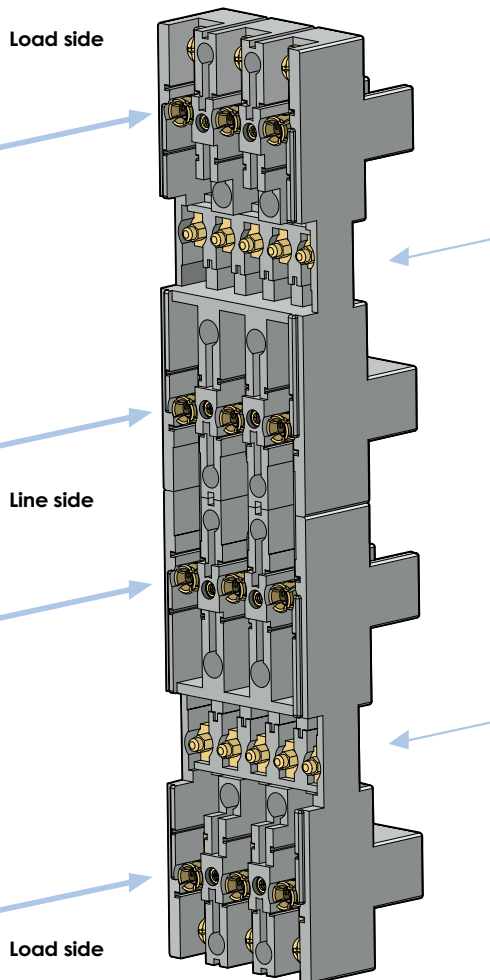
*These items are supplied as standard



Type names of blocks

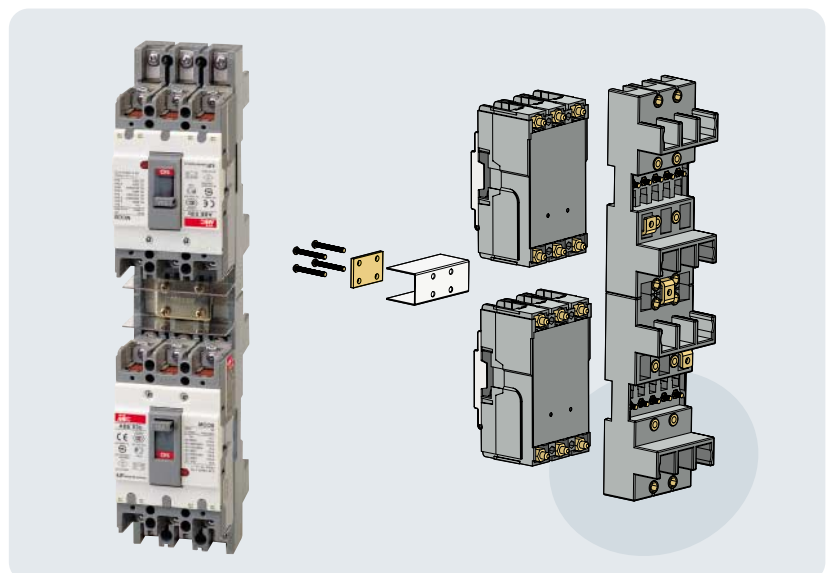
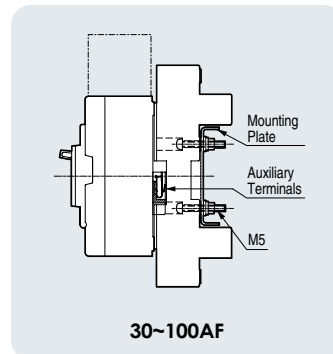
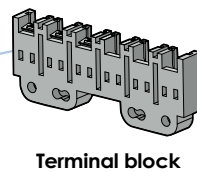
Blocks	Plug-in version Breakers	Terminal block
PB-A3-2DB	ABH33b, ABS33b, ABS53b, ABE53b, ABS63b, ABE63b, ABE103b	PBA-100
PB-C3-2DB	ABS103b, ABH53b, ABH103b	
PB-G3-2DB	GBN53, GBN103, GBH53, GBH103	

Mounting



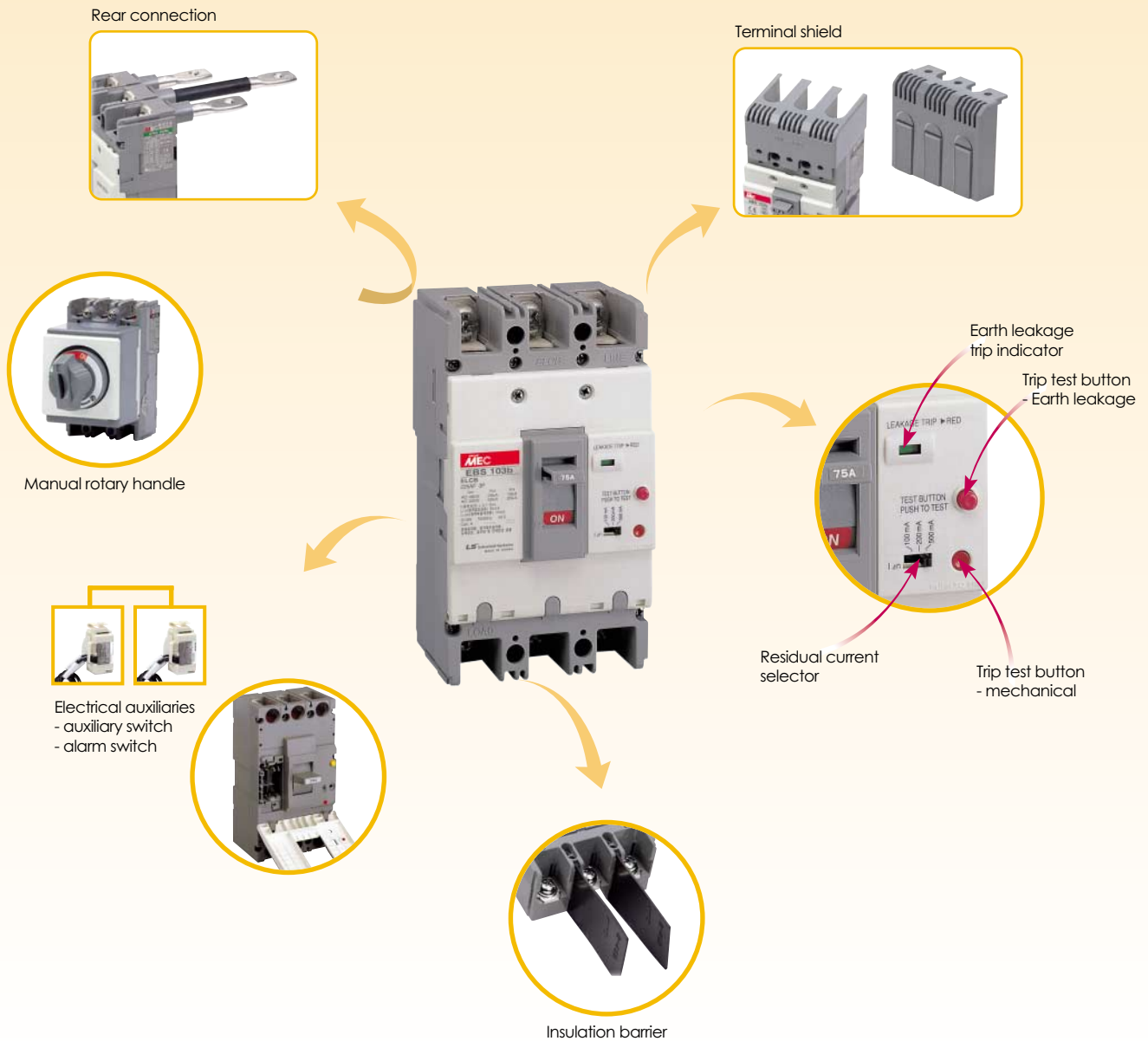
Electrical auxiliaries

Internal accessories for standard breakers such as auxiliary switch, alarm switch, shunt trip and undervoltage trip can be used for plug-in version breakers without any modification. For the convenient wiring for plug-in MCCBs the use of exclusive terminal blocks are recommended as show below

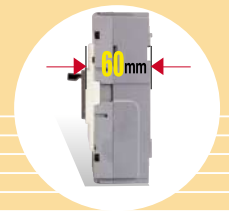


Descriptions

- Protection against overload, short-circuit and ground fault.
- Offering economical solution with compact and increased interrupting capacities compared to the existing breakers.
- Employing a fixed thermal and fixed magnetic trip.
- Frames made of rigid materials of engineering plastics
- Offering the physically same size with MCCBs.



30AF



MCCBs

physically interchangeable with ELCBs.

※ see details (p. 31)

Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	5, 10, 15, 20, 30A ... fixed
Rated residual current, I_{Δn}	0.03A ... fixed 0.1-0.2-0.5A ... adjustable
Residual non-operating current	0.5 x I _{Δn}
Residual current off-time at I_{Δn}	≤ 0.1 sec
Magnetic trip current	(8 to 16) x I _n ... fixed
Type of trip unit	Hydraulic-magnetic for overcurrent pick-up Electronic for earth leakage pick-up
Number of poles	3 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	I _{cs} = 50% of I _{cu}

Type	EBS	EBH
220/240V	10kA	25kA
415/460V	5kA	10kA

Rating	for I _{Δn} =0.03A (30mA)	
	5kA	10kA
I _n		
5A	EBS33b/5/30	EBH33b/5/30
10A	EBS33b/10/30	EBH33b/10/30
15A	EBS33b/15/30	EBH33b/15/30
20A	EBS33b/20/30	EBH33b/20/30
30A	EBS33b/30/30	EBH33b/30/30
I _n	for I _{Δn} =0.1-0.2-0.5A (100-200-500mA)	
	5kA	10kA
5A	EBS33b/5/100	EBH33b/5/100
10A	EBS33b/10/100	EBH33b/10/100
15A	EBS33b/15/100	EBH33b/15/100
20A	EBS33b/20/100	EBH33b/20/100
30A	EBS33b/30/100	EBH33b/30/100

* Note: Breaking capacity at 415VAC.

Optional accessories	Auxiliary switch Alarm switch Terminal shield Rear connection unit Insulation barrier (standard for line side only)
※ see details (p. 87)	

Dimensions(mm)	3pole	75(W) x 130(H) x 60(D)
-----------------------	--------------	------------------------

ELCBs

50AF & 60AF



MCCBs

physically interchangeable with ELCBs

※ see details (p. 32)

Optional accessories

- Auxiliary switch
- Alarm switch
- Manual rotary handle
- Terminal shield
- Rear connection unit
- Insulation barrier (standard for line side only)

※ see details (p. 81)

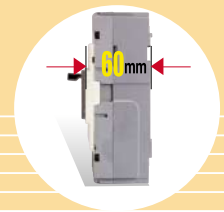
Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	5, 10, 15, 20, 30, 40, 50, 60A ... fixed
Rated residual current, $I_{\Delta n}$	0.03A ... fixed 0.1-0.2-0.5A ... adjustable
Residual non-operating current	$0.5 \times I_{\Delta n}$
Residual current off-time at $I_{\Delta n}$	≤ 0.1 sec
Magnetic trip current	$(8 \text{ to } 16) \times I_n$... fixed
Type of trip unit	Hydraulic-magnetic for overcurrent pick-up (Thermal -magnetic for EBH type only) Electronic for earth leakage pick-up
Number of poles	3 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	$I_{cs} = 50\%$ of I_{cu}

Type	EBE	EBS	EBH
220/240V	10kA	25kA	50kA
415/460V	5kA	10kA	25kA

Rating	for $I_{\Delta n}=0.03A$ (30mA)			
	I_n	5kA(2pole)	5kA	10kA
5A	EBE52b/5/30	EBE53b/5/30	EBS53b/5/30	N.A.
10A	EBE52b/10/30	EBE53b/10/30	EBS53b/10/30	N.A.
15A	EBE52b/15/30	EBE53b/15/30	EBS53b/15/30	N.A.
20A	EBE52b/20/30	EBE53b/20/30	EBS53b/20/30	N.A.
30A	EBE52b/30/30	EBE53b/30/30	EBS53b/30/30	N.A.
40A	EBE52b/40/30	EBE53b/40/30	EBS53b/40/30	EBH53b/40/30
50A	EBE52b/50/30	EBE53b/50/30	EBS53b/50/30	EBH53b/50/30
60A	N.A.	EBE63b/60/30	EBS63b/60/30	N.A.
Rating	for $I_{\Delta n}=0.1-0.2-0.5A$ (100-200-500mA)			
	I_n	5kA(2pole)	5kA	10kA
5A	EBE52b/5/100	EBE53b/5/100	EBS53b/5/100	N.A.
10A	EBE52b/10/100	EBE53b/10/100	EBS53b/10/100	N.A.
15A	EBE52b/15/100	EBE53b/15/100	EBS53b/15/100	N.A.
20A	EBE52b/20/100	EBE53b/20/100	EBS53b/20/100	N.A.
30A	EBE52b/30/100	EBE53b/30/100	EBS53b/30/100	N.A.
40A	EBE52b/40/100	EBE53b/40/100	EBS53b/40/100	EBH53b/40/100
50A	EBE52b/50/100	EBE53b/50/100	EBS53b/50/100	EBH53b/50/100
60A	N.A.	EBE63b/60/100	EBS63b/60/100	N.A.

* Note: Breaking capacity at 415VAC.

Dimensions (mm)	3pole	Types EBE, EBS	Types EBH
		75(W) × 130(H) × 60(D)	90(W) × 155(H) × 60(D)



100AF



MCCBs

physically interchangeable with ELCBs.

※ see details (p. 33)

Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz 88 to 242Vac for EBE102b only
Rated current, I_n	40, 50, 60, 75, 100A ... fixed
Rated residual current, $I_{\Delta n}$	0.03A ... fixed 0.1-0.2-0.5A ... adjustable
Residual non-operating current	$0.5 \times I_{\Delta n}$
Residual current off-time at $I_{\Delta n}$	≤ 0.1 sec
Magnetic trip current	$(8 \text{ to } 16) \times I_n$... fixed
Type of trip unit	Thermal -magnetic for overcurrent pick-up (Hydraulic-magnetic for EBE type only) Electronic for earth leakage pick-up
Number of poles	3 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	$I_{cs} = 50\%$ of I_{cu}

Type	EBE	EBS	EBH
220/240V	25kA	50kA	65kA
415/460V	10kA	25kA	35kA

Rating	for $I_{\Delta n}=0.03A$ (30mA)			
	I_n	10kA(2pole)	10kA	25kA
40A	N.A.	N.A.	EBS103b/40/30	N.A.
50A	N.A.	N.A.	EBS103b/50/30	N.A.
60A	EBE102b/60/30	EBE103b/60/30	EBS103b/60/30	EBH103b/60/30
75A	EBE102b/75/30	EBE103b/75/30	EBS103b/75/30	EBH103b/75/30
100A	EBE102b/100/30	EBE103b/100/30	EBS103b/100/30	EBH103b/100/30
Rating	for $I_{\Delta n}=0.1-0.2-0.5A$ (100-200-500mA)			
	I_n	10kA(2pole)	10kA	25kA
40A	N.A.	N.A.	EBS103b/40/100	N.A.
50A	N.A.	N.A.	EBS103b/50/100	N.A.
60A	EBE102b/60/100	EBE103b/60/100	EBS103b/60/100	EBH103b/60/100
75A	EBE102b/75/100	EBE103b/75/100	EBS103b/75/100	EBH103b/75/100
100A	EBE102b/100/100	EBE103b/100/100	EBS103b/100/100	EBH103b/100/100

* Note: Breaking capacity at 415VAC.

Optional accessories	Auxiliary switch Alarm switch Manual rotary handle Terminal shield Rear connection unit Insulational barrier (standard for line side only)
※ see details (p. 81)	

Dimensions (mm)	3pole	Types EBE, EBS	Types EBH
		75(W) × 130(H) × 60(D)	90(W) × 155(H) × 60(D)



MCCBs

physically interchangeable with ELCBs.

※ see details (p. 34)

Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	125, 150, 175, 200, 225A ... fixed
Rated residual current, I_{Δn}	0.03A ... fixed 0.1-0.2-0.5A ... adjustable
Residual non-operating current	0.5 × I _{Δn}
Residual current off-time at I_{Δn}	≤ 0.1 sec
Magnetic trip current	(8 to 16) × I _n ... fixed
Type of trip unit	Thermal-magnetic for overcurrent pick-up Electronic for earth leakage pick-up
Number of poles	3 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	I _{cs} = 50% of I _{cu}
Type	EBE EBS EBH
220/240V	35kA 50kA 65kA
415/460V	18kA 25kA 35kA

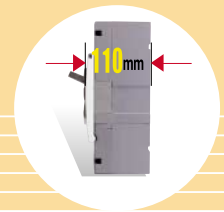
Rating	for I _{Δn} =0.03A (30mA)			
	I _n	18kA	25kA	35kA
125A	EBE203b/125/30	EBS203b/125/30	EBH203b/125/30	EBH203b/125/30
150A	EBE203b/150/30	EBS203b/150/30	EBH203b/150/30	EBH203b/150/30
175A	EBE203b/175/30	EBS203b/175/30	EBH203b/175/30	EBH203b/175/30
200A	EBE203b/200/30	EBS203b/200/30	EBH203b/200/30	EBH203b/200/30
225A	EBE203b/225/30	EBS203b/225/30	EBH203b/225/30	EBH203b/225/30
Rating	for I _{Δn} =0.1-0.2-0.5A (100-200-500mA)			
	I _n	18kA	25kA	35kA
125A	EBE203b/125/100	EBS203b/125/100	EBH203b/125/100	EBH203b/125/100
150A	EBE203b/150/100	EBS203b/150/100	EBH203b/150/100	EBH203b/150/100
175A	EBE203b/175/100	EBS203b/175/100	EBH203b/175/100	EBH203b/175/100
200A	EBE203b/200/100	EBS203b/200/100	EBH203b/200/100	EBH203b/200/100
225A	EBE203b/225/100	EBS203b/225/100	EBH203b/225/100	EBH203b/225/100

* Note; Breaking capacity at 415VAC.

Optional accessories	Auxiliary switch Manual rotary handle Terminal shield Rear connection unit Insulational barrier (standard for line side only)
※ see details (p. 81)	

Dimensions(mm)	3pole	105(W) × 165(H) × 60(D)
-----------------------	--------------	-------------------------

400AF



MCCBs

physically interchangeable with ELCBs.

※ see details (p. 52)

Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	250, 300, 350, 400A ... fixed
Rated residual current, I_{Δn}	0.03A ... fixed
	0.1-0.2-0.5A ... adjustable
Residual non-operating current	0.5 x I _{Δn}
Residual current off-time at I_{Δn}	≤ 0.1 sec
Magnetic trip current	(8 to 16) × I _n ... fixed
Type of trip unit	Thermal -magnetic for overcurrent pick-up Electronic for earth leakage pick-up
Number of poles	3 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	I _{cs} = 50% of I _{cu}

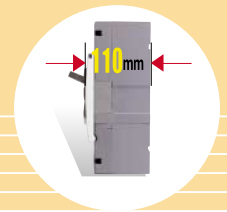
Type	EBE	EBS	EBH	EBL
220/240V	35kA	50kA	85kA	125kA
415/460V	25kA	35kA	50kA	85kA

Rating	for I _{Δn} =0.03A (30mA)			
	In	25kA	35kA	50kA
250A	EBE403b/250/30	EBS403b/250/30	EBH403b/250/30	EBL403b/250/30
300A	EBE403b/300/30	EBS403b/300/30	EBH403b/300/30	EBL403b/300/30
350A	EBE403b/350/30	EBS403b/350/30	EBH403b/350/30	EBL403b/350/30
400A	EBE403b/400/30	EBS403b/400/30	EBH403b/400/30	EBL403b/400/30
Rating	for I _{Δn} =0.1-0.2-0.5A (100-200-500mA)			
	In	25kA	35kA	50kA
250A	EBE403b/250/100	EBS403b/250/100	EBH403b/250/100	EBL403b/250/100
300A	EBE403b/300/100	EBS403b/300/100	EBH403b/300/100	EBL403b/300/100
350A	EBE403b/350/100	EBS403b/350/100	EBH403b/350/100	EBL403b/350/100
400A	EBE403b/400/100	EBS403b/400/100	EBH403b/400/100	EBL403b/400/100

* Note; Breaking capacity at 415VAC.

Optional accessories	Auxiliary switch
※ see details (p. 82)	Alarm switch
	Shunt trip
	Undervoltage trip
	Manual rotary handle
	Terminal shield
	Rear connection unit
	Insulational barrier (standard for line side only)

Dimensions(mm)	3pole	140(W) × 257(H) × 110(D)
-----------------------	--------------	--------------------------



MCCBs

physically interchangeable with ELCBs.

※ see details (p. 53)

Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	500, 600, 700, 800A ... fixed
Rated residual current, $I_{\Delta n}$	0.03A ... fixed 0.1-0.2-0.5A ... adjustable
Residual non-operating current	$0.5 \times I_{\Delta n}$
Residual current off-time at $I_{\Delta n}$	≤ 0.1 sec
Magnetic trip current	$(8 \text{ to } 16) \times I_n$... fixed
Type of trip unit	Thermal-magnetic for overcurrent pick-up Electronic for earth leakage pick-up
Number of poles	3 pole
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	$I_{cs} = 50\%$ of I_{cu}

Type	EBE	EBS	EBL
220/240V	50kA	100kA	125kA
415/460V	35kA	50kA	85kA

Rating	for $I_{\Delta n}=0.03A$ (30mA)		
	I_n	35kA	50kA
500A	EBE803b/500/30	EBS803b/500/30	EBL803b/500/30
600A	EBE803b/600/30	EBS803b/600/30	EBL803b/600/30
700A	EBE803b/700/30	EBS803b/700/30	EBL803b/700/30
800A	EBE803b/800/30	EBS803b/800/30	EBL803b/800/30
Rating	for $I_{\Delta n}=0.1-0.2-0.5A$ (100-200-500mA)		
	I_n	35kA	50kA
500A	EBE803b/500/100	EBS803b/500/100	EBL803b/500/100
600A	EBE803b/600/100	EBS803b/600/100	EBL803b/600/100
700A	EBE803b/700/100	EBS803b/700/100	EBL803b/700/100
800A	EBE803b/800/100	EBS803b/800/100	EBL803b/800/100

* Note: Breaking capacity at 415VAC.

Optional accessories	Auxiliary switch Alarm switch Shunt trip Undervoltage trip Manual rotary handle Terminal shield Rear connection unit Insulational barrier (standard for line side only)
-----------------------------	--

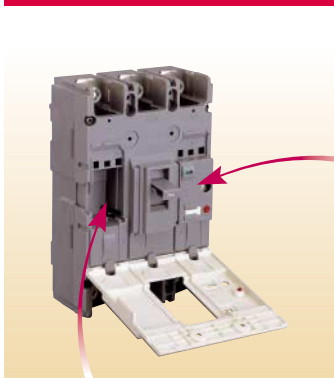
※ see details (p. 82)

Dimensions(mm)	3pole	210(W) × 280(H) × 110(D)
-----------------------	--------------	--------------------------

Accessories

Electrical auxiliaries

up to 225AF



Left-hand seat

Right-hand seat
(not available)

Maximum possibilities

Left-hand seat

Option of connecting AX or AL or XL
This seat is not available for 2-pole breakers

Right-hand seat

This seat is not available for Earth leakage breakers



Auxiliary switch, AX



Alarm switch, AL

Catalog No.

Applicable breaker types

EBE53b	EBS103b	EBE203b
EBE63b	EBH53b	EBS203b
EBE102b,103b	EBH103b	EBH203b
EBS33b		
EBS53b		
EBS63b		
EBH33b		

AX1E100R-LWT	AX1E100R-LWT	AX1H200R-LWT
AX1E100R-TBT	AX1H100R-TBT	AX1H200R-TBT

AL1E100R-LWT	AL1H100R-LWT	AL1H200R-LWT
AL1E100R-TBT	AL1H100R-TBT	AL1H200R-TBT

XL1E100R-LWT	XL1H100R-LWT	XL1H200R-LWT
XL1E100R-TBT	XL1H100R-TBT	XL1H200R-TBT

page 31	page 34	page 37
page 33	page 36	page 39
page 32	page 35	page 38
page 32	page 35	page 38
page 32	page 35	page 38

Auxiliary switch, AX

Consists of a changeover contact (1NO+NC)
1 auxiliary switch fit for the left-hand seat of a handle

Alarm switch, AL

Consists of a changeover contact (1NO+NC)
1 alarm switch fit for the left-hand seat of a handle

Combination switch, XL

Consists of a auxiliary switch and a alarm switch (2NO+NC)
1 combination switch fit for the left-hand 1 seat of a handle

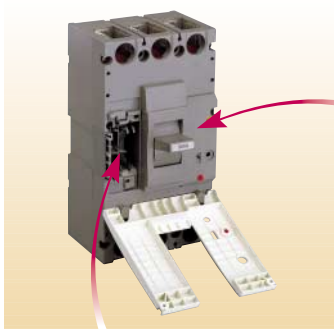
Other accessories

Reference page no. for more detail
Manual rotary handle
Terminal shield
Rear connection unit
Insulational barrier

Accessories

Electrical auxiliaries

Thermal magnetic type



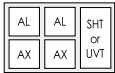
Left-hand seat

Right-hand seat
(not available)

Maximum possibilities

Left-hand seat

Option of connecting
2AX and 2AL and SHT or UVT



Right-hand seat

This seat is not available for Earth
leakage breakers

Catalog No.

Auxiliary switch, AX

AX1L800 1 auxiliary switch (1NO+NC)

Alarm switch, AL

AL1L800 Consists of one change over switch
1 alarm switch (1NO+NC)

Shunt trip, SHT

ST48CL800 For 24~48V AC/DC common use
ST100CL800 For AC100~125/DC100~110V
ST200CL800 For AC200~240/DC200~220V
ST380AL800 For AC380~460V
ST480AL800 For AC480~550V

Under voltage trip, UVT

UV24CL800 For 24V AC/DC common use
UV48CL800 For 48V AC/DC common use
UV100CL800 For 100~110V AC/DC common use
UV200CL800 For 200~220V AC/DC common use
UV380AL800 For 380~440V AC
UV440AL800 For 440~480V AC

See page 50 for more detail

Other accessories

Manual rotary handle	See page 56
Terminal shield	See page 55
Insulational barrier	See page 55

50AF, 4-pole



Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	15, 20, 30, 40, 50A --- fixed
Rated residual current, I_{Δn}	0.03A --- fixed
	0.1-0.2-0.5A ---Adjustable
Residual non-operating current	0.5 x I _{Δn}
Residual current off-time at I_{Δn}	≤0.1 sec
Type of trip unit	Thermal-magnetic for overcurrent pick-up Electronic for earthleakage pick-up
No. of poles	4pole (3pole+neutral)
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	I _{cs} =50% of I _{cu}

Type	EBS	EBH
220/240V	50kA	65kA
415/460V	25kA	35kA

Rating	for I _{Δn} =0.03A (30mA)		
	In	25kA	35kA
	15A	EBS54b/15/30	EBH54b/15/30
	20A	EBS54b/20/30	EBH54b/20/30
	30A	EBS54b/30/30	EBH54b/30/30
	40A	EBS54b/40/30	EBH54b/40/30
	50A	EBS54b/50/30	EBH54b/50/30
	for I _{Δn} =0.1-0.2-0.5A (100-200-500mA)		
	In	25kA	35kA
	15A	EBS54b/15/100	EBH54b/15/100
	20A	EBS54b/20/100	EBH54b/20/100
	30A	EBS54b/30/100	EBH54b/30/100
	40A	EBS54b/40/100	EBH54b/40/100
	50A	EBS54b/50/100	EBH54b/50/100

Optional accessories	Auxiliary switch
※ See page (p.81)	Alarm switch
	Manual rotary handle
	Terminal shield
	Rear connection unit
	Insulational barrier (standard for line side only)

Dimensions(mm)	120(W) × 175(H) × 60(D)
-----------------------	-------------------------



Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	15, 20, 30, 40, 50, 60, 75, 100A --- fixed
Rated residual current, I_{Δn}	0.03A --- fixed 0.1-0.2-0.5A ---Adjustable
Residual non-operating current	0.5 x I _{Δn}
Residual current off-time at I_{Δn}	≤0.1 sec
Type of trip unit	Thermal-magnetic for overcurrent pick-up Electronic for earthleakage pick-up
No. of poles	4pole (3pole+neutral)
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	I _{cs} =50% of I _{cu}

Type	EBS	EBH
220/240V	50kA	65kA
415/460V	25kA	35kA

Rating	for I _{Δn} =0.03A (30mA)	
	I _n	
	25kA	35kA
15A	EBS104b/15/30	EBH104b/15/30
20A	EBS104b/20/30	EBH104b/20/30
30A	EBS104b/30/30	EBH104b/30/30
40A	EBS104b/40/30	EBH104b/40/30
50A	EBS104b/50/30	EBH104b/50/30
60A	EBS104b/60/30	EBH104b/60/30
75A	EBS104b/75/30	EBH104b/75/30
100A	EBS104b/100/30	EBH104b/100/30
	for I _{Δn} =0.1-0.2-0.5A (100-200-500mA)	
	I _n	
	25kA	35kA
15A	EBS104b/15/100	EBH104b/15/100
20A	EBS104b/20/100	EBH104b/20/100
30A	EBS104b/30/100	EBH104b/30/100
40A	EBS104b/40/100	EBH104b/40/100
50A	EBS104b/50/100	EBH104b/50/100
60A	EBS104b/60/30	EBH104b/60/30
75A	EBS104b/75/30	EBH104b/75/30
100A	EBS104b/100/30	EBH104b/100/30

Optional accessories

* See page (p.81)

- Auxiliary switch
- Alarm switch
- Manual rotary handle
- Terminal shield
- Rear connection unit
- Insulational barrier
(standard for line side only)

Dimensions(mm)

120(W) × 175(H) × 60(D)

225AF, 4-pole



Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	100, 125, 150, 175, 200, 225A --- fixed
Rated residual current, I_{Δn}	0.03A --- fixed
	0.1-0.2-0.5A ---Adjustable
Residual non-operating current	0.5 x I _{Δn}
Residual current off-time at I_{Δn}	≤0.1 sec
Type of trip unit	Thermal-magnetic for overcurrent pick-up Electronic for earthleakage pick-up
No. of poles	4pole (3pole+neutral)
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	I _{cs} =50% of I _{cu}

Type	EBS	EBH
220/240V	50kA	65kA
415/460V	25kA	35kA

Rating	for I _{Δn} =0.03A (30mA)	
	I _n	
	25kA	35kA
100A	EBS204b/100/30	EBH204b/100/30
125A	EBS204b/125/30	EBH204b/125/30
150A	EBS204b/150/30	EBH204b/150/30
175A	EBS204b/175/30	EBH204b/175/30
200A	EBS204b/200/30	EBH204b/200/30
225A	EBS204b/225/30	EBH204b/225/30
	for I _{Δn} =0.1-0.2-0.5A (100-200-500mA)	
	I _n	
	25kA	35kA
100A	EBS204b/100/100	EBH204b/100/100
125A	EBS204b/125/100	EBH204b/125/100
150A	EBS204b/150/100	EBH204b/150/100
175A	EBS204b/175/100	EBH204b/175/100
200A	EBS204b/200/100	EBH204b/200/100
225A	EBS204b/225/100	EBH204b/225/100

Optional accessories

* See page (p.81)

Auxiliary switch
Alarm switch
Manual rotary handle
Terminal shield
Rear connection unit
Insulational barrier
(standard for line side only)

Dimensions(mm)

140(W) × 185(H) × 60(D)

400AF, 4-pole



Types of the protection	Overload, short-circuit and ground fault
Rated operational voltage	176 to 510V, 50/60Hz
Rated current, I_n	250, 300, 350, 400A --- fixed
Rated residual current, I_{Δn}	0.03A --- fixed
	0.1-0.2-0.5A ---Adjustable
Residual non-operating current	0.5 x I _{Δn}
Residual current off-time at I_{Δn}	≤0.1 sec
Type of trip unit	Thermal-magnetic for overcurrent pick-up Electronic for earthleakage pick-up
No. of poles	4pole (3pole+neutral)
Connection	Front (standard) Rear (optional)
Mounting	Fixed only
Breaking capacity, I_{cu}	I _{cs} =50% of I _{cu}

Type	EBE	EBS
220/240V	50kA	65kA
415/460V	25kA	35kA

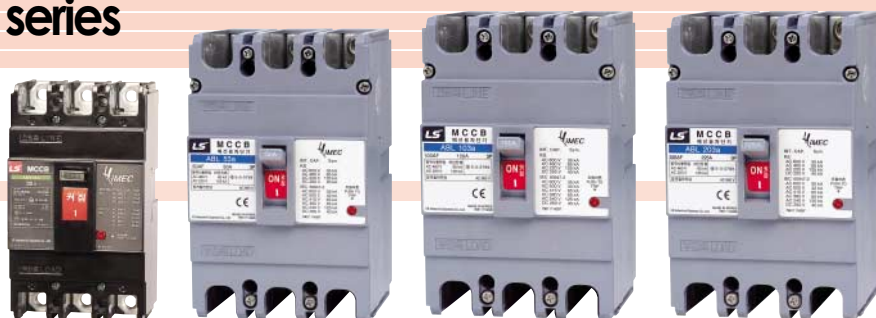
Rating	for I _{Δn} =0.03A (30mA)	
	In	
	25kA	35kA
250A	EBE404b/250/30	EBS404b/250/30
300A	EBE404b/300/30	EBS404b/300/30
350A	EBE404b/350/30	EBS404b/350/30
400A	EBE404b/400/30	EBS404b/400/30
	for I _{Δn} =0.1-0.2-0.5A (100-200-500mA)	
	25kA	35kA
250A	EBE404b/250/100	EBS404b/250/100
300A	EBE404b/300/100	EBS404b/300/100
350A	EBE404b/350/100	EBS404b/350/100
400A	EBE404b/400/100	EBS404b/400/100

Optional accessories	Auxiliary switch Alarm switch Manual rotary handle Terminal shield Rear connection unit Insulational barrier (standard for line side only)
※ See page (p.81)	

Dimensions(mm)	185(W) × 257(H) × 109(D)
-----------------------	--------------------------

Hi-MEC MCCBs

30AF to 225AF Hi-MEC series



Frame Size(AF)	30	50	100	225
Frame Type	ABE	ABL	ABL	ABL
Breaking capacity(kA), Icu at 415Vac	1.5	65	65	65
Number of poles	2, 3	2, 3, 4	2, 3, 4	2, 3, 4
Type	2 pole 3 pole 4 pole	ABE32 ABE33	ABL52a ABL53a ABL54a	ABL102a ABL103a ABL104a
Rated current (A) In at 40°C	3, 5, 10, 15, 20, 30	15, 20, 30, 40, 50	15, 20, 30, 40, 50, 60, 75, 100	100, 125, 150, 175, 200, 225
Technical data conforming to IEC/EN60947-2				
Rated operational voltage(V), Ue(50/60Hz)	460	600	600	600
Rated operational voltage(V), Ue(DC)	-	250	250	250
Rated insulation voltage(V), Ui(50/60Hz)	460	660	660	660
Rated impulse withstand voltage(kV), Uimp	6	6	6	6
Ultimate breaking capacity(kA), Icu				
AC 50/60Hz	220/240V 380/415V 440/460V 480/500V	2.5 1.5 1.5 -	100 65 65 42	100 65 65 50/42
DC	600V 125V 250V	- - -	35 60 40	35 60 40
Service breaking capacity(%Icu), Ics	50	50	50	50
Category of use	A	A	A	A
Endurance (number of operations)	Mechanical Electrical	8500 1500	8500 1500	7000 1000
Type of trip unit				
Thermal-magnetic release		fixed	fixed	fixed
Electronic release				
Pre-alarm via LED				
Hydraulic-magnetic release	fixed			
Accessories				
Electrical auxiliaries	Auxiliary switch Alarm switch Shunt release Undervoltage release	- - - -	● ● ● ●	● ● ● ●
External accessories	Direct rotary handle Terminal shield Insulation barrier Rear connection Mechanical interlock Motor operator	- - - - - -	● ● ● - - -	● ● ● - - -
Dimensions (WxHxD mm)	3 pole breaker	75 × 96 × 60	105 × 165 × 82	105 × 165 × 82
Weight(kg)	2 pole 3 pole 4 pole	0.3 0.5	1 17 2.3	1 1.7 2.3
Reference page No.		94	95	96



Certificate
CE

Rated current, In	3, 5, 10, 15, 20, 30A (Non-adjustable)
Type of trip unit	Hydraulic-magnetic
Number of poles	2, 3 pole
Connection	Front only
Mounting	Fixed only
Category of use	Type A according to IEC60947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABE
220/240V	2.5kA
380/415V	1.5kA
440/460V	1.5kA
480/500V	-
600V	-

Rating	1.5kA at 415V ... type ABE	
In	2pole	3pole
3A	ABE32/3	ABE33/3
5A	ABE32/5	ABE33/5
10A	ABE32/10	ABE33/10
15A	ABE32/15	ABE33/15
20A	ABE32/20	ABE33/20
30A	ABE32/30	ABE33/30

Dimensions(mm)	ABE type
2pole	50(W) × 96(H) × 60(D)
3pole	75(W) × 96(H) × 60(D)



Certificate
CE

Rated current, In	15, 20, 30, 40, 50A
Type of trip unit	Thermal-magnetic
Number of poles	2, 3, 4 pole
Connection	Front only
Mounting	Fixed only
Category of use	Type A according to IEC60947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABL
220/240V	100kA
380/415V	65kA
440/460V	65kA
480/500V	42kA
600V	35kA

Rating	65kA at 415V ... type ABL		
In	2pole	3pole	4pole
15A	ABL52a/15	ABL53a/15	ABL54a/15
20A	ABL52a/20	ABL53a/20	ABL54a/20
30A	ABL52a/30	ABL53a/30	ABL54a/30
40A	ABL52a/40	ABL53a/40	ABL54a/40
50A	ABL52a/50	ABL53a/50	ABL54a/50

Dimensions (mm)	2pole	3pole	4pole
	74(W) × 165(H) × 82(D)	105(W) × 165(H) × 82(D)	140(W) × 165(H) × 82(D)

Optional accessories

- Auxiliary switch
- Alarm switch
- Shunt trip
- Undervoltage trip
- Manual rotary handle
- Terminal shield
- Insulation barrier (standard for line side only)

※ See page (p.97~98)



Certificate
CE, Lloyd

Rated current, In	15, 20, 30, 40, 50, 60, 75, 100 (Non-adjustable)
Type of trip unit	Thermal-magnetic
Number of poles	2, 3, 4 pole
Connection	Front only
Mounting	Fixed only
Category of use	Type A according to IEC60947-2
Breaking capacity, Icu	Ics = 50% of Icu
	Type ABL
	220/240V 100kA
	380/415V 65kA
	440/460V 65kA
	480/500V 50/42kA
	600V 35kA

Rating	65kA at 415V ... type ABL			
	In	2pole	3pole	4pole
15A		ABL102a/15	ABL103a/15	ABL104a/15
20A		ABL102a/20	ABL103a/20	ABL104a/20
30A		ABL102a/30	ABL103a/30	ABL104a/30
40A		ABL102a/40	ABL103a/40	ABL104a/40
50A		ABL102a/50	ABL103a/50	ABL104a/50
60A		ABL102a/60	ABL103a/60	ABL104a/60
75A		ABL102a/75	ABL103a/75	ABL104a/75
100A		ABL102a/100	ABL103a/100	ABL104a/100

Optional accessories	Auxiliary switch
※ See page (p.97~98)	Alarm switch
	Shunt trip
	Undervoltage trip
	Manual rotary handle
	Terminal shield
	Insulational barrier (standard for line side only)

Dimensions (mm)	2pole	74(W) × 165(H) × 82(D)
	3pole	105(W) × 165(H) × 82(D)
	4pole	140(W) × 165(H) × 82(D)



Certificate
CE, Lloyd

Rated current, In	125, 150, 175, 200, 225A (Non-adjustable)
Type of trip unit	Thermal-magnetic
Number of poles	2, 3, 4 pole
Connection	Front only
Mounting	Fixed only
Category of use	Type A according to IEC60947-2
Breaking capacity, Icu	Ics = 50% of Icu

Type	ABL
220/240V	125kA
380/415V	65kA
440/460V	65kA
480/500V	50/42kA
600V	35kA

Rating	65kA at 415V ... type ABL			
	In	2pole	3pole	4pole
125A		ABL202a/125	ABL203a/125	ABL204a/125
150A		ABL202a/150	ABL203a/150	ABL204a/150
175A		ABL202a/175	ABL203a/175	ABL204a/175
200A		ABL202a/200	ABL203a/200	ABL204a/200
225A		ABL202a/225	ABL203a/225	ABL204a/225

Optional accessories	Auxiliary switch
※ See page (p.97-98)	Alarm switch
	Shunt trip
	Undervoltage trip
	Manual rotary handle
	Terminal shield
	Insulational barrier (standard for line side only)

Dimensions (mm)	2pole	105(W) × 165(H) × 99(D)
	3pole	105(W) × 165(H) × 99(D)
	4pole	140(W) × 165(H) × 60(D)

Electrical auxiliaries

Maximum possibilities

Left-hand seat

Option of connecting AX or AL or XL
This seat is not available for 2-pole breakers

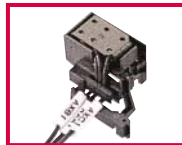
Right-hand seat

Option of connecting AX or AL or XL or SHT or UVT
This seat is not available for Earth leakage breakers

When ordering electrical auxiliaries specify followings

- (1) type of the auxiliary
- (2) type of the breaker ... catalog no.
- (3) position to install ... left or right
- (4) voltage, if necessary

Auxiliary switch, AX



Auxiliary switch, AX

Catalog No.	Model
83011116081	AX, R, LWT for ABL53a, 103a
83011116084	AX, T, LWT for ABL52a, 53a, 102a, 103a
83011116087	AX, T, LWT for ABL54a, 104a
83011116061	AX, R, LWT for ABL202a, 203a
83011116064	AX, T, LWT for ABL202a, 203a
83011116067	AX, T, LWT for ABL204a

Alarm switch, AL



Alarm switch, AL

Catalog No.	Model
83011116082	AL, R, LWT for ABL53a, 103a
83011116085	AL, T, LWT for ABL52a, 53a, 102a, 103a
83011116088	AL, T, LWT for ABL54a, 104a
83011116062	AL, R, LWT for ABL202a, ABL203a
83011116065	AL, T, LWT for ABL202a, ABL203a
83011116068	AL, T, LWT for ABL204a

Combination switch, XL

Consists auxiliary switch and a alarm switch(2NO+NC)

Catalog No.	Model
83011116083	AX+AL, R, LWT for ABL53a, L103a
83011116086	AX+AL, T, LWT for ABL52a, 53a, 102a, 103a
83011116089	AX+AL, T, LWT for ABL54a, 104a
83011116063	AX+AL, R, LWT for ABL202a, 203a
83011116066	AX+AL, T, LWT for ABL202a, 203a
83011116069	AX+AL, T, LWT for ABL204a

Electrical auxiliaries

Shunt trip, SHT



Shunt trip, SHT

Trips the breaker when any ac(dc) voltage between 85(75) and 110(125)% of nominal control voltage is applied. Each unit is fitted into the right-hand seat of a handle. Not applicable to Earth leakage breakers

Available operating voltages

- For 12V AC/DC common use
- For 24V AC/DC common use
- For 48V AC/DC common use
- For 60V AC/DC common use
- For AC100~125V/DC100~110V
- For AC200~240V/DC200~220V
- For 250V AC/DC common use
- For 380~450V AC
- For 440~480V AC
- For 500~550V AC
- For 125V DC
- For 240V DC

Under voltage trip, UVT



Under voltage trip, UVT

Trips the breaker when control voltage disappears or falls. Each unit is fitted into the right-hand seat of a handle. Not applicable to Earth leakage breakers

- For 24V AC/DC common use
- For 48V AC/DC common use
- For 100~110V AC/DC common use
- For 200~220V AC/DC common use
- For 380~440V AC
- For 440~480V AC

External accessories



Insulation barriers



Terminal shield



Manual rotary handle

Insulation barriers

These are partitions for the insulation between the phases. Barriers for the line side of the breaker are supplied as standard. Barriers for the load side are optional. When ordering specify the type of the breaker.

Terminal shields

These are applied to the line/load side of the breaker to prevent accidental contact with live parts. Long and short types are available. When ordering specify the type of the breaker.

Manual rotary handles ... Direct mounting types

Catalog No.

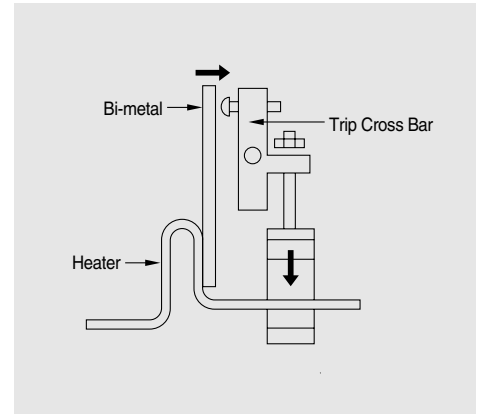
	Description	* Application to
N-55S	Vertical type	ABL53a, ABL103a
N-55L	Horizontal (ON in left-hand) type	
N-55R	Horizontal (ON in right-hand) type	
N-60S	Vertical type	ABL203a
N-60L	Horizontal (ON in left-hand) type	
N-60R	Horizontal (ON in right-hand) type	

* Note: * Applicable type names are for 3 pole MCCBs. 2 and 4 pole MCCBs use the same handles with 3 pole MCCBs.

Thermal magnetic trip

Thermal magnetic breakers are tripped by the bimetal heated by the load current. Bimetals are responsive to the heat emitted by the current flow so as to cause the operating mechanism to trip on a sustained overload. It also means to allow a long time delay on light overloads.

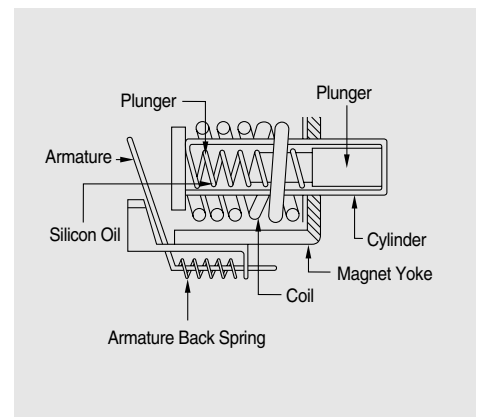
Thermal magnetic breakers are also tripped through the use of electro magnet. This provides an instantaneous tripping action when the current over the predetermined value flows.



Hydraulic magnetic Trip

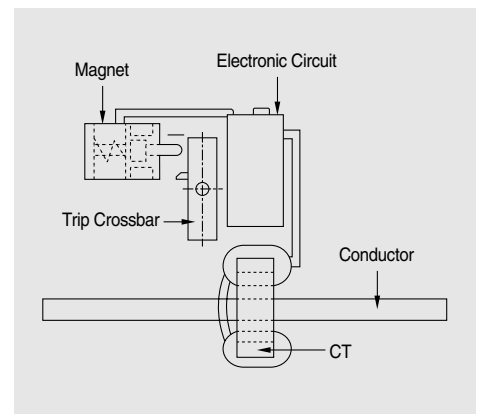
Hydraulic magnetic trip mechanism consists of cylinder assembly, current carrying coil and an armature supported on a yoke. The overcurrent flowing through the coil initiates the movement of plunger, which depends on the extent of the overload. It caused tripping of breakers.

During flow of the short circuit current, the magnetomotive force is so high that the armature is attracted without the movement of the moving core and trips the MCCB instantaneously.



Electronic trip

Electronic trip operation is caused by current transformers and solid state circuitry, which monitors the current and initiates tripping through a flux shunt trip when an overload or short circuit is present.



Technical information

Application for transformer protection

It's recommended to select proper circuit breakers according to the continuous current carrying capacity of transformer. It requires to consider separately whether transformer is single phase or three phase. The below table indicates the proper molded case circuit breaker suitable for each transformer.

● AC220V

Capacity of 3 phase transformer (kVA)		Below 30	Below 50	75~100	150~300	500~750	Below 1500			Below 2000			
Capacity of single phase transformer (kVA)		Below 16	Below 30	Below 50	Below 150	Below 300	-						
Breaking capacity (kA) (sym)		2.5		5	10	25	35	42	50	65	85	100	125
Frame (A)	30	ABE33	ABS33b	ABH33b									
	50	ABE53b			ABS53b		GBN103(Up to 50A)		GBH103(Up to 50A)		GBL103(Up to 50A)		
							ABH53b		GBH104				
	60	ABE63b			ABS63b								
	100	ABE103b				GBN103		GBH103		GBL103			
						ABS103b		ABH103b		ABL103a			
	200	ABE203b					GBN203		GBH203		GBL203		
							ABS203b		ABH203b		ABH 203a		ABL203a
	400	ABE403b					ABS403b		ABH403b		ABL403b		
600	ABE803b							ABS803b			ABL803b		
800													
1000~1200	ABS1003,		ABS1203										

● AC460V

Capacity of 3 phase transformer (kVA)		Below 30	Below 50	Below 300	Below 750	Below 1500			Below 2000		Below 3000			
Breaking capacity (kA) (sym)		1.5		5	10	18	25	35	42	50	65	85		
Frame (A)	30	ABE33	ABS33b	ABH33b										
	50	ABE53b		ABS53b		ABH53b		GBN103(Up to 50A)		GBH103(Up to 50A)		GBL103(Up to 50A)		
								ABL53a						
	60	ABE63b		ABS63b										
	100	ABE103b			ABS103b		GBN103		GBH103		GBL103			
							ABH103b		ABL103a					
	200	ABE203b				ABS203b		GBN203		GBH203		GBL203		
								ABH203b		ABH 203a		ABL203a		
	400	ABE403b					ABS403b		ABH403b		ABL403b			
600	ABE803b							ABS803b			ABL803b			
800														
1000~1200	ABS1003,		ABS1203											

Application for protection of lighting circuit

It requires to select proper circuit breakers according to short circuit breaking capacity.
It's recommended to make the maximum operating current not to exceed 80% of the rated current.

● AC220V

The maximum operating current	The rated current of MCCB	Breaking current (kA)										
		sym	2.5	5	10	25	35	50	65	85	100	125
12	15											
16	20	ABE33	ABS33b		ABH33b		GBN103 (Up to 50A)		GBH103 (Up to 50A)			GBL103 (Up to 50A)
24	30											
32	40											
40	50	ABE53b			ABS53b	ABH53b				ABL53a		
48	60	ABE63b			ABS63b							
60	75	ABE103b					GBN103	ABH103b	GBH103	ABL103a	GBL103	
80	100						ABS103b					
100	125											
120	150	ABE203b					GBN203		GBH203		GBL203	
140	175											
160	200						ABS203b	ABH203b		ABL203a		
180	225											
200	250	ABE403b					ABS403b	ABH403b		ABL403b		
240	300											
280	350											
320	400											
400	500	ABE803b						ABS803b			ABL803b	
480	600											
560	700											
640	800											
800	1000	ABS1003										
960	1200	ABS1203										

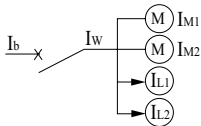
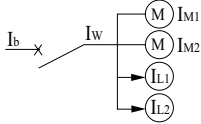
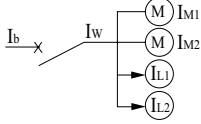
● AC460V

The maximum operating current	The rated current of MCCB	Breaking current (kA)										
		sym	1.5	5	10	18	25	35	42	50	65	85
12	15											
16	20	ABH33	ABS33b	ABH33b								
24	30											
32	40											
40	50	ABE53b			ABS53b	ABH53b		GBN103 (Up to 50A)	GBH103 (Up to 50A)	ABL53a	GBL103 (Up to 50A)	
48	60	ABE63b			ABS63b							
60	75	ABE103b				ABS103b					GBL103	
80	100									ABL103a		
100	125											
120	150	ABE203b				ABE203b	GBN203		GBH203		GBL203	
140	175											
160	200						ABH203b			ABL203a		
180	225											
200	250	ABE403b					ABS403b	ABH403b		ABL403b		
240	300											
280	350											
320	400											
400	500	ABE803b						ABS803b		ABL803b		
480	600											
560	700											
640	800											
800	1000	ABS1003										
960	1200	ABS1203										

Application for protection of several kinds of loads

It requires to select proper circuit breakers according to the characteristics of loads when they are installed to protect several kinds of loads. It's needed to consider the maximum operating current and the capacity of loads in total so as to select the rated current of breakers.

● Selection of circuit breaker protecting the several loads simultaneously

The kind of loads (I_M : motors, I_L : others)	Permissible current in cable or wire : I_w	The rated current of circuit breaker : I_b
In case of, $\Sigma I_M \leq \Sigma I_L$ 	$I_w \geq \Sigma I_M + \Sigma I_L$	Choose the low value among two formulas: $I_b \geq 3 \Sigma I_M + \Sigma I_L$ and $I_b \leq 2.5 I_w$ * It's permitted to select the above value only if I_w (above 100A) isn't subject to the rated current of circuit breaker.
In case of, $\Sigma I_M > \Sigma I_L$, $\Sigma I_M \leq 50A$ 	$I_w \geq 1.25 \Sigma I_M + \Sigma I_L$	
In case of, $\Sigma I_M > \Sigma I_L$, $\Sigma I_M > 50A$ 	$I_w \geq 1.1 \Sigma I_M + \Sigma I_L$	

● The rated current of breakers as the main circuit of 3 phase inductive loads (AC 220V)

Capacity of loads In total (below kW)	The maximum operating current (below A)	Capacity of the highest motor (kW / A)																	
		0.75 4.8	1.5 8	2.2 11.1	3.7 17.4	5.5 26	7.5 34	11 48	15 65	18.5 79	22 93	30 125	37 160	45 190	55 230	75 310	90 360	110 440	132 500
3	15	20	30	30															
4.5	20	30	30	30	50														
6.3	30	40	40	40	50	60													
8.2	40	50	50	50	50	75	100												
12	50	60	60	60	60	75	100												
15.7	75	100	100	100	100	100	100	125	150										
19.5	90	100	100	100	100	100	100	125	150	175									
23.2	100	125	125	125	125	125	125	125	150	175	200								
30	125	150	150	150	150	150	150	150	150	175	225								
37.5	150	175	175	175	175	175	175	175	175	200	225	300							
45	175	200	200	200	200	200	200	200	200	200	225	300	400						
52.5	200	225	225	225	225	225	225	225	225	225	225	300	400	500					
63.7	250	300	300	300	300	300	300	300	300	300	300	300	400	500	500				
75	300	350	350	350	350	350	350	350	350	350	350	350	400	500	500				
86.2	350	400	400	400	400	400	400	400	400	400	400	400	400	500	500				
97.5	400	500	500	500	500	500	500	500	500	500	500	500	500	500	500	600	700		
112.5	450	500	500	500	500	500	500	500	500	500	500	500	500	500	500	700	700		
125	500	600	600	600	600	600	600	600	600	600	600	600	600	600	600	700	700	1000	
150	600	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	800	1000	1000
175	700	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	1000	1000
200	800	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	1000

● The rated current of breakers as the main circuit of 3 phase inductive loads (AC 440V)

Capacity of loads In total (below kW)	The maximum operating current (below A)	Capacity of the highest motor (kW / A)																	
		0.75 4.8	1.5 8	2.2 11.1	3.7 17.4	5.5 26	7.5 34	11 48	15 65	18.5 79	22 93	30 125	37 160	45 190	55 230	75 310	90 360	110 440	132 500
3	7.5	15	15	15															
4.5	10	15	15	15	30														
6.3	15	20	20	20	30	40													
8.2	20	30	30	30	30	40	50												
12	25	30	30	30	30	40	50												
15.7	38	50	50	50	50	50	50	60	75										
19.5	45	50	50	50	50	50	50	60	75	100									
23.2	50	60	60	60	60	60	60	60	75	100	125								
30	63	75	75	75	75	75	75	75	100	100	125								
37.5	75	100	100	100	100	100	100	100	100	100	125	150							
45	88	100	100	100	100	100	100	100	100	100	125	150	175						
52.5	100	125	125	125	125	125	125	125	125	125	125	150	175	225					
63.7	125	150	150	150	150	150	150	150	150	150	150	150	200	225	250				
75	150	175	175	175	175	175	175	175	175	175	175	175	200	225	250				
86.2	175	200	200	200	200	200	200	200	200	200	200	200	200	225	300	350			
97.5	200	225	225	225	225	225	225	225	225	225	225	225	225	225	300	350	400		
112.5	225	250	250	250	250	250	250	250	250	250	250	250	250	250	300	350	400		
125	250	300	300	300	300	300	300	300	300	300	300	300	300	300	300	350	400	500	
150	300	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	400	500	500
175	350	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	500	500
200	400	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
250	500	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
300	600	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
350	700	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
400	700	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
450	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
500	1000	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200

Note) The above mentioned technical data is defined under the usage conditions as follows ;

- 1) The circuit breaker is tripped within 10 seconds in 600 % of the current of the fully operating loads.
- 2) The start-up input current is set within 1700 % of the current of the fully operating loads.
- 3) The capacity of highest motor is also applied when several loads starts up simultaneously.

Technical information

Application on resistance welding circuits

Short circuit protection for resistance welding devices can be obtained by applying molded case circuit breaker properly. These breakers permit normally high welding currents, but trip instantaneously if a short circuit develops. It's recommended to select proper circuit breaker according to the characteristics of welding devices as the follow table.

Characteristics of welding device		Applied Circuit breaker	
Capacity (kVA)	Maximum Input (kVA)	220V (Single phase)	400V (Single phase)
15	35	ABE 102b /100 A ABS 102b /100 A ABH 102b /100 A ABL 102a /100 A	ABE 52b /50A ABS 52b /50A ABH 52b /50A ABL 52a /50A
30	65	ABE 202b /125 A ABS 202b /125 A ABH 202b /125 A ABL 202a /125 A	ABE 102b /100A ABS 102b /100A ABH 102b /100A ABL 102a /100A
55	140	ABE 202b /225 A ABS 202b /225 A ABH 202b /225 A ABL 202a /225 A	ABE 202b /100A ABS 202b /100A ABH 202b /100A ABL 202a /100A

Application for protection of capacitor circuit

In normal conditions, It's recommended to set the rated current of circuit breakers as 150% of the rated current of capacitors.

Capacity of capacitor (kVA)	Rated current of breaker							
	Single phase				Three phase			
	220V		440V		220V		440V	
	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
5	60	50	30	30	40	50	30	20
10	75	60	40	40	50	50	30	30
15	100	100	60	50	60	60	40	40
20	175	175	75	60	100	75	50	40
25	200	200	100	100	100	100	50	50
30	225	225	100	100	175	150	60	60
40	400	400	150	125	200	200	100	75
50	400	400	175	175	225	225	100	100
75	600	500	300	300	400	400	150	150
100	800	800	400	400	400	400	225	225
150	1000 ^{Note)}	1000 ^{Note)}	600	500	600	600	300	300
200	-	1200 ^{Note)}	800	800	800	800	400	400
300	-	-	1000	1000	-	-	600	600
400	-	-	-	-	-	-	-	800

Note) It indicates that it's available to apply to short-circuit breaking capacity of up to 42kA.

- * The input current at capacitor's circuit making changes according to the inductive reactance of circuit.
- * It's possible to apply to short-circuit breaking capacity to the maximum of each circuit breaker.
- * Please set the rated current of MCCB around 150% of rated current of capacitor.

It's available to use some of the circuit breakers in DC circuit conditions according to the trip method.

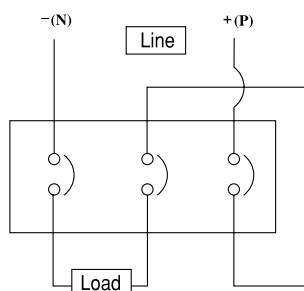
● DC250V

Type	Circuit breaker applied	Applicability	
		As standard	By special Order made
Hydraulic Magnetic Trip	ABE33	Not available	Not available
	ABE53b, ABE63b, ABE103b ABS33b, ABS53b, ABS63b ABH33b	Not available	○
Thermal Magnetic Trip	ABE203b, ABE403b, ABE803b ABS103b, ABS203b, ABS403b, ABS803b ABH53b, ABH103b, ABH203b, ABH403b, ABL53a, ABL103a, ABL203a, ABL403b, ABL803b ABS1003, <i>Note)</i> ABS1203 <i>Note)</i> GBN103, GBH103, GBL103 GBN203, GBH203, GBL203	○	Not available
Electronic Trip	ABS1203E	Not available	Not available

Note) It should be applied to only instantaneous trip type MCCBs.

● DC500V

Because there isn't the zero point in the characteristics of time-current curves of circuit breakers used in DC circuit conditions, It's more difficult to break the circuit controlled by high voltage than operating voltage should be set as DC250V to the maximum in general usage, it's possible to use breakers under DC 500V only if connecting breakers like the below figure.



Type	Poles	Rated voltage (V)	Short circuit breaking capacity (kA)
ABS53b, ABS63b ABE103b	3	DC500V	5
ABH103b ABS203b ABE403b			10
ABS403b ABE803b			20
GBN103 GBN203			35
ABL103a, ABL203a ABL403b ABL803b ABS1003 <i>Note)</i> ABS1203 <i>Note)</i>			40

Note) It's allowed to use circuit breaker in circuit operated by DC 500V especially only in instantaneous trip.

Application to 400Hz systems

When circuit breakers are used in the situation of high frequency, those breakers in many case require to be derated due to the increased resistance of the copper sections resulting from the skin effect produced by eddy currents at 400Hz.

Thermal trip characteristics

The continuous current carrying capacity and tripping current decreased due to the increased resistance of the copper sections resulting from the skin effect produced by eddy currents at 400Hz. The amount of decrease of those characteristics differs according to each molded case circuit breaker, but I²t_∞s recommended to derate as 80% in the usage of the maximum rated current and 90% in the usage of half rated current.

Instantaneous trip characteristics

In cases of instantaneous trip characteristics in 400Hz, The tripping value by overcurrent increase according to high frequency. The value in 400Hz will be generally 2 times higher than in 60Hz.

● Derating table








NO	Rated current (A) in 400 Hz	Circuit breaker applied	Rated current of circuit breaker for your ordering	
			Using in the Max.(A)	Using in the half.(A)
1	15	ABH 53b, ABH 103b ABS 103b ABL 53a, ABL103a GBN 103 GBH103 GBL103	20	20
2	20		30	30
3	30		40	40
4	40		50	50
5	50		75	60
6	60		75	75
7	75		100	100
8	100		125	125
9	125	ABE 203b, ABS 203b ABH 203b, ABL 203a GBN 203, GBH 203 GBL 203	175	150
10	150		200	175
11	175		225	200
12	200		250	225
13	225		300	250
14	300	ABE 403b, ABS 403b ABH 403b, ABL 403b ABE 803b (500, 600A only) ABS 803b (500, 600A only) ABL 803b (500, 600A only)	350	300
15	400		400	350
16	350		500	400
17	600		500	500
18	500		-	600

Technical information

Influence by mounting position

It needs to mount the circuit breakers under various conditions. In that case, It is recommended to consider the position and other factors which influence the characteristics of circuit breakers with hydraulic magnetic trip device. In especial, the characteristics of rated current might change by the installing position. It results from the gravity which influences the plunger in oil dash pot of hydraulic magnetic trip device.

It is recommendable to compensate the rated current according to the below table.

Type	Vertical	Horizontal	Reverse-horizontal	Back-biased (15°)	Back-biased (45°)	Fore-biased (15°)	Fore-biased (45°)
ABE 3□ ABH3□b ABS 5□b ABE 6□b ABS 6□b ABE 10□b							
	100%	120%	80%	105%	110%	95%	85%

Protection discrimination & Cascading

Discrimination & Cascading Protection of Circuit Breakers

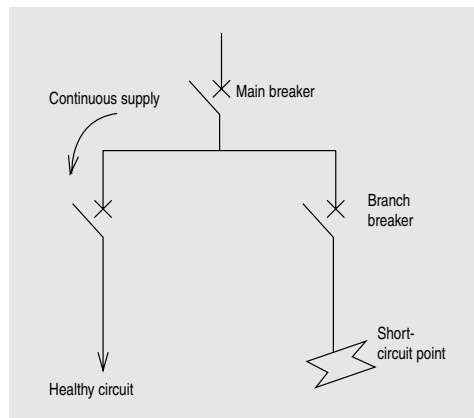
Protective coordination

The primary purpose of a circuit protection system is to prevent damage to series connected equipment and to minimize the area and duration of power loss. The first consideration is whether an air circuit breaker or molded case circuit breaker is most suitable. The next is the type of system to be used. The two major types are : Discrimination and cascading.

Type of protective coordination

1. Discrimination

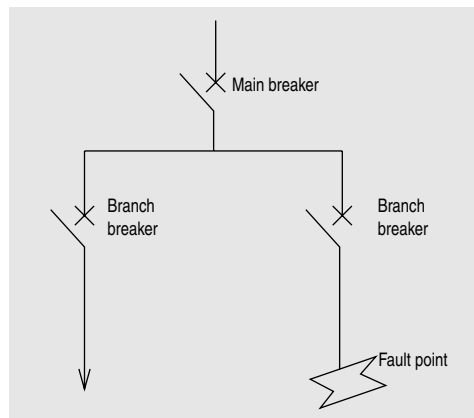
Object : Continuity of service



Discrimination, also called selectivity, is the coordination of automatic protection devices in such a manner that a fault appearing at a given point in a network is cleared by the protection device installed immediately upstream of the fault, and by that device alone.

2. Cascading

Object : Economical use of MCCBs



Cascading is the use of the current limiting capacity of circuit breakers at a given point to permit installation of lower-rated and therefore lower-cost circuit breakers on a branch. The main circuit breaker acts as a barrier against short-circuit currents. In this way, branch circuit breakers with lower breaking capacities than the prospective short-circuit (at their point of installation) operate under their normal breaking conditions. Since the current is limited throughout the circuit controlled by the limiting circuit breaker, cascading applies to all switchgear on the branch.

AC 240V

		Main breaker		A type ACB										
		Branch breaker	ICU (kA)	LBA-06	LBA-08	LBA-10	LBA-13	LBA-16	LBA-20	LBA-25	LBA-32	LBA-40	LBA-50	
				65	65	65	85	85	85	85	100	130	130	
AB□ Series	E	ABE103b	25	12.3	17	25	25	25	25	25	25	25	25	25
		ABE203b	35	12.2	22.7	35	35	35	35	35	35	35	35	35
		ABE403a	35	-	18.2	28.2	35	35	35	35	35	35	35	35
		ABE403b	35	-	18.2	28.2	35	35	35	35	35	35	35	35
		ABE803a	50	-	-	-	29.1	50	50	50	50	50	50	50
		ABE803b	50	-	-	-	29.1	50	50	50	50	50	50	50
	S	ABS103b	50	21.6	50	50	50	50	50	50	50	50	50	50
		ABS203b	50	12.2	22.7	35	50	50	50	50	50	50	50	50
		ABS403a	50	-	18.2	28.2	44	50	50	50	50	50	50	50
		ABS403b	50	-	18.2	28.2	44	50	50	50	50	50	50	50
		ABS803a	100	-	-	-	29.1	51	86.4	100	100	100	100	100
		ABS803b	100	-	-	-	29.1	51	86.4	100	100	100	100	100
	H	ABH103b	65	21.6	51.7	65	65	65	65	65	65	65	65	65
		ABH203b	65	12.2	22.7	35	65	65	65	65	65	65	65	65
		ABH403a	85	-	18.2	28.2	44	85	85	85	85	85	85	85
		ABH403b	85	-	18.2	28.2	44	85	85	85	85	85	85	85
	L	ABL103a	100	19.5	53.2	100	100	100	100	100	100	100	100	100
		ABL203a	125	14.1	30.5	51.5	125	125	125	125	125	125	125	125
		ABL403a	125	-	18.2	28.2	44	92	125	125	125	125	125	125
		ABL403b	125	-	18.2	28.2	44	92	125	125	125	125	125	125
		ABL803a	125	-	-	-	29.1	51	86.4	125	125	125	125	125
		ABL803b	125	-	-	-	29.1	51	86.4	125	125	125	125	125
	GB□ Series	GBN103	50	35.6	50	50	50	50	50	50	50	50	50	50
		GBH103	85	35.6	85	85	85	85	85	85	85	85	85	85
GBL103		125	21.4	85	125	125	125	125	125	125	125	125	125	
GBN203		50	21.4	50	50	50	50	50	50	50	50	50	50	
GBH203		85	21.4	85	85	85	85	85	85	85	85	85	85	
GBL203		125	21.4	85	125	125	125	125	125	125	125	125	125	
GB□E Series	GBL103E	125	25.8	125	125	125	125	125	125	125	125	125	125	
	GBL203E	125	25.8	125	125	125	125	125	125	125	125	125	125	
	GBN403E	50	-	10.2	22.1	33.4	50	50	50	50	50	50	50	
	GBN803E	100	-	-	-	23.4	41.6	72.6	100	100	100	100	100	

Ace-MEC

	LBA-06C	LBA-08C	LBA-10C	LBA-13C	LBA-16C	LBA-20C	LBA-25C	LBA-32C	LBA-40C	LBA-50C
	65	65	65	65	65	85	85	85	100	100
	13.2	25	25	25	25	25	25	25	25	25
	13.3	25.8	35	35	35	35	35	35	35	35
	-	20.2	31.3	35	35	35	35	35	35	35
	-	20.2	31.3	35	35	35	35	35	35	35
	-	-	-	31.6	50	50	50	50	50	50
	-	-	-	31.6	50	50	50	50	50	50
	23.8	50	50	50	50	50	50	50	50	50
	13.3	25.8	40	50	50	50	50	50	50	50
	-	20.2	31.3	50	50	50	50	50	50	50
	-	20.2	31.3	50	50	50	50	50	50	50
	-	-	-	31.6	56.7	100	100	100	100	100
	-	-	-	31.6	56.7	100	100	100	100	100
	23.8	57.8	65	65	65	65	65	65	65	65
	13.3	25.8	40	65	65	65	65	65	65	65
	-	20.2	31.3	50.8	85	85	85	85	85	85
	-	20.2	31.3	50.8	85	85	85	85	85	85
	22.3	69.6	100	100	100	100	100	100	100	100
	15.8	35.4	61.4	125	125	125	125	125	125	125
	-	20.2	31.3	50.8	104.8	125	125	125	125	125
	-	20.2	31.3	50.8	104.8	125	125	125	125	125
	-	-	21	31.6	56.7	104.2	125	125	125	125
	-	-	-	31.6	56.7	104.2	125	125	125	125
	44	50	50	50	50	50	50	50	50	50
	44	85	85	85	85	85	85	85	85	85
	24.9	104.2	125	125	125	125	125	125	125	125
	24.9	50	50	50	50	50	50	50	50	50
	24.9	85	85	85	85	85	85	85	85	85
	24.9	104.2	125	125	125	125	125	125	125	125
	31.3	125	125	125	125	125	125	125	125	125
	31.3	125	125	125	125	125	125	125	125	125
	-	17.8	24.2	37.8	50	50	50	50	50	50
	-	-	-	25.9	47	88	100	100	100	100

AC 415V

Main breaker			A type ACB											
			LBA-06	LBA-08	LBA-10	LBA-13	LBA-16	LBA-20	LBA-25	LBA-32	LBA-40	LBA-50		
Branch breaker	ICU (kA)													
		50	50	50	65	65	65	65	85	100	100			
AB□ Series	E	ABE103b	10	10	10	10	10	10	10	10	10	10	10	
		ABE203b	18	10	16.8	18	18	18	18	18	18	18	18	
		ABE403a	25	-	15.6	21.4	25	25	25	25	25	25	25	
		ABE403b	25	-	15.6	21.4	25	25	25	25	25	25	25	
		ABE803a	35	-	-	-	23	35	35	35	35	35	35	
		ABE803b	35	-	-	-	23	35	35	35	35	35	35	
	S	ABS103b	25	13	25	25	25	25	25	25	25	25	25	
		ABS203b	25	10	16.8	23.5	25	25	25	25	25	25	25	
		ABS403a	35	-	15.6	21.4	29.4	35	35	35	35	35	35	
		ABS403b	35	-	15.6	21.4	29.4	35	35	35	35	35	35	
		ABS803a	50	-	-	-	23	36.4	50	50	50	50	50	
		ABS803b	50	-	-	-	23	36.4	50	50	50	50	50	
	H	ABH103b	35	13	25.8	35	35	35	35	35	35	35	35	
		ABH203b	35	10	16.8	23.5	35	35	35	35	35	35	35	
		ABH403a	50	-	15.6	21.4	29.4	47.3	50	50	50	50	50	
		ABH403b	50	-	15.6	21.4	29.4	47.3	50	50	50	50	50	
	L	ABL103a	65	14.2	29.2	47.9	65	65	65	65	65	65	65	
		ABL203a	65	11	19.2	28.7	45.8	65	65	65	65	65	65	
		ABL403a	65	-	15.6	21.4	29.4	47.3	65	65	65	65	65	
		ABL403b	85	-	15.6	21.4	29.4	47.3	66.9	85	85	85	85	
		ABL803a	65	-	-	-	23	36.4	53	65	65	65	65	
		ABL803b	85	-	-	-	23	36.4	53	85	85	85	85	
	GB□ Series	GBN103	35	19.8	35	35	35	35	35	35	35	35	35	
		GBH103	50	19.8	50	50	50	50	50	50	50	50	50	
GBL103		85	15.8	38	66	85	85	85	85	85	85	85		
GBN203		35	15.8	35	35	35	35	35	35	35	35	35		
GBH203		50	15.8	38	50	50	50	50	50	50	50	50		
GBL203		85	15.8	38	66	85	85	85	85	85	85	85		
GB□E Series	GBL103E	85	8.1	25.5	70.8	85	85	85	85	85	85	85		
	GBL203E	85	8.1	25.5	70.8	85	85	85	85	85	85	85		
	GBN403E	35	-	10.2	17.8	25	35	35	35	35	35	35		
	GBN803E	50	-	-	-	20	30.4	50	50	50	50	50		

Ace-MEC

	LBA-06C	LBA-08C	LBA-10C	LBA-13C	LBA-16C	LBA-20C	LBA-25C	LBA-32C	LBA-40C	LBA-50C
	65	65	65	65	65	85	85	85	100	100
	10	10	10	10	10	10	10	10	10	10
	10.8	18	18	18	18	18	18	18	18	18
	-	17.2	23.4	25	25	25	25	25	25	25
	-	17.2	23.4	25	25	25	25	25	25	25
	-	-	-	25.3	35	35	35	35	35	35
	-	-	-	25.3	35	35	35	35	35	35
	14.2	25	25	25	25	25	25	25	25	25
	10.8	18.4	25	25	25	25	25	25	25	25
	-	17.2	23.4	32.6	35	35	35	35	35	35
	-	17.2	23.4	32.6	35	35	35	35	35	35
	-	-	-	25.3	40.5	50	50	50	50	50
	-	-	-	25.3	40.5	50	50	50	50	50
	14.2	30.5	35	35	35	35	35	35	35	35
	10.8	18.4	26.6	35	35	35	35	35	35	35
	-	17.2	23.4	32.6	50	50	50	50	50	50
	-	17.2	23.4	32.6	50	50	50	50	50	50
	15.6	34.2	55.2	65	65	65	65	65	65	65
	11.9	21.8	31.6	54	65	65	65	65	65	65
	-	17.2	23.4	32.6	52	65	65	65	65	65
	-	17.2	23.4	32.6	52	74.3	85	85	85	85
	-	-	-	25.3	40.5	61.4	65	65	65	65
	-	-	-	25.3	40.5	61.4	85	85	85	85
	22.3	35	35	35	35	35	35	35	35	35
	22.3	50	50	50	50	50	50	50	50	50
	17.4	44.2	85	85	85	85	85	85	85	85
	17.4	35	35	35	35	35	35	35	35	35
	17.4	44.2	50	50	50	50	50	50	50	50
	17.4	44.2	85	85	85	85	85	85	85	85
	8.6	39.5	78.1	85	85	85	85	85	85	85
	8.6	39.5	78.1	85	85	85	85	85	85	85
	-	14.2	19.4	28.1	35	35	35	35	35	35
	-	-	-	22.1	33.5	50	50	50	50	50

AC 240V

Main breaker			AB□ Series												
			E						S						
			ABE 103b	ABE 203b	ABE 403a	ABE 403b	ABE 803a	ABE 803b	ABS 103b	ABS 203b	ABS 403a	ABS 403b	ABS 803a	ABS 803b	
Branch breaker	ICU (kA)	25	35	35	35	50	50	50	50	50	100	100			
		AB□ Series	E	ABE33	2.5	0.8	1.8	2.5	2.5	2.5	2.5	0.8	1.8	2.5	2.5
ABE53b	10			0.8	1.8	4.1	4.1	10.0	10.0	0.8	1.8	4.1	4.1	10.0	10.0
ABE63b	10			0.8	1.8	4.1	4.1	10.0	10.0	0.8	1.8	4.1	4.1	10.0	10.0
ABE103b	25			-	1.8	4.1	4.1	15.0	15.0	-	1.8	4.1	4.1	15.0	15.0
ABE203b	35			-	-	3.6	3.6	10.3	10.3	-	-	3.6	3.6	10.3	10.3
ABE403a	35			-	-	-	-	8.9	8.9	-	-	-	-	8.9	8.9
ABE403b	35			-	-	-	-	8.9	8.9	-	-	-	-	8.9	8.9
S	ABS33b		10	0.8	1.8	4.1	4.1	10.0	10.0	0.8	1.8	4.1	4.1	10.0	10.0
	ABS53b		25	0.8	1.8	4.1	4.1	15.0	15.0	0.8	1.8	4.1	4.1	15.0	15.0
	ABS63b		25	0.8	1.8	4.1	4.1	15.0	15.0	0.8	1.8	4.1	4.1	15.0	15.0
	ABS103b		50	-	1.8	4.4	4.4	15.8	15.8	-	1.8	4.4	4.4	15.8	15.8
	ABS203b		50	-	-	3.6	3.6	10.3	10.3	-	-	3.6	3.6	10.3	10.3
	ABS403a		50	-	-	-	-	8.9	8.9	-	-	-	-	8.9	8.9
	ABS403b		50	-	-	-	-	8.9	8.9	-	-	-	-	8.9	8.9
H	ABH33b		25	0.8	1.8	4.1	4.1	15.0	15.0	0.8	1.8	4.1	4.1	15.0	15.0
	ABH53b		50	0.8	1.8	4.4	4.4	15.8	15.8	0.8	1.8	4.4	4.4	15.8	15.8
	ABH103b		65	-	1.8	4.4	4.4	15.8	15.8	-	1.8	4.4	4.4	15.8	15.8
	ABH203b		65	-	-	3.6	3.6	10.3	10.3	-	-	3.6	3.6	10.3	10.3
	ABH403a		85	-	-	-	-	8.9	8.9	-	-	-	-	8.9	8.9
	ABH403b		85	-	-	-	-	8.9	8.9	-	-	-	-	8.9	8.9
L	ABL53a		100	0.8	1.8	3.6	3.6	15.2	15.2	0.8	1.8	3.6	3.6	15.2	15.2
	ABL103a	100	-	1.8	3.6	3.6	15.2	15.2	-	1.8	3.6	3.6	15.2	15.2	
	ABL203a	125	-	-	3.6	3.6	11.9	11.9	-	-	3.6	3.6	11.9	11.9	
	ABL403a	125	-	-	-	-	8.9	8.9	-	-	-	-	8.9	8.9	
	ABL403b	125	-	-	-	-	8.9	8.9	-	-	-	-	8.9	8.9	
GB□ Series	*Note1)	GBN103	50	0.8	1.8	5.6	5.6	24.6	24.6	0.8	1.8	5.6	5.6	24.6	24.6
		GBH103	85	0.8	1.8	5.6	5.6	24.6	24.6	0.8	1.8	5.6	5.6	24.6	24.6
		GBL103	125	0.8	1.8	4.2	4.2	15.5	15.5	0.8	1.8	4.2	4.2	15.5	15.5
	*Note2)	GBN103	50	-	1.8	5.6	5.6	24.6	24.6	-	1.8	5.6	5.6	24.6	24.6
		GBH103	85	-	1.8	5.6	5.6	24.6	24.6	-	1.8	5.6	5.6	24.6	24.6
		GBL103	125	-	1.8	4.2	4.2	15.5	15.5	-	1.8	4.2	4.2	15.5	15.5
		GBN203	50	-	-	4.2	4.2	15.5	15.5	-	-	4.2	4.2	15.5	15.5
		GBH203	85	-	-	4.2	4.2	15.5	15.5	-	-	4.2	4.2	15.5	15.5
		GBL203	125	-	-	4.2	4.2	15.5	15.5	-	-	4.2	4.2	15.5	15.5
GB□E Series	GBL53E	125	0.8	1.8	3.6	3.6	20.0	20.0	0.8	1.8	3.6	3.6	20.0	20.0	
	GBL103E	125	-	1.8	3.6	3.6	20.0	20.0	-	1.8	3.6	3.6	20.0	20.0	
	GBL203E	125	-	-	3.6	3.6	20.0	20.0	-	-	3.6	3.6	20.0	20.0	
	GBN403E	50	-	-	-	-	7.2	7.2	-	-	-	-	7.2	7.2	

*Note1) The applied ampere ratings are 16, 20, 25, 32, 40, 50A

*Note2) The applied ampere ratings are 63, 80, 100A

AB□ Series											GB□ Series						GB□ Series					
H				L							GB□ Series						GB□ Series					
ABH 103a	ABH 203b	ABH 403a	ABH 403b	ABL 103a	ABL 203a	ABL 403a	ABL 403b	ABL 803a	ABL 803b	GBN 103	GBH 103	GBL 103	GBN 203	GBH 203	GBL 203	GBL 103E	GBL 203E	GBN 403E	GBN 803E	ABS 803E	ABS 1203E	
35	35	85	85	100	125	125	125	125	125	50	85	125	50	85	125	125	125	50	100	100	100	100
0.8	1.5	2.5	2.5	0.9	1.8	2.5	2.5	2.5	2.5	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.5	2.5	2.5	2.5	2.5	2.5
0.8	1.8	4.1	4.1	0.9	1.8	4.1	4.1	10.0	10.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.6	10.0	10.0	10.0	10.0
0.8	1.8	4.1	4.1	0.9	1.8	4.1	4.1	10.0	10.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.6	10.0	10.0	10.0	10.0
-	1.8	4.1	4.1	-	1.8	4.1	4.1	15.0	15.0	-	-	-	2.0	2.0	2.0	-	2.7	4.2	16.0	25.0	13.2	13.2
-	-	3.6	3.6	-	-	3.6	3.6	10.3	10.3	-	-	-	-	-	-	-	-	3.7	11.0	14.3	35.0	35.0
-	-	-	-	-	-	-	-	8.9	8.9	-	-	-	-	-	-	-	-	-	9.1	11.7	26.5	26.5
-	-	-	-	-	-	-	-	8.9	8.9	-	-	-	-	-	-	-	-	-	9.1	11.7	26.5	26.5
0.8	1.8	4.1	4.1	0.9	1.8	4.1	4.1	10.0	10.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.6	10.0	10.0	10.0	10.0
0.8	1.8	4.1	4.1	0.9	1.8	4.1	4.1	15.0	15.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.6	16.0	25.0	13.2	13.2
0.8	1.8	4.1	4.1	0.9	1.8	4.1	4.1	15.0	15.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.6	16.0	25.0	13.2	13.2
-	1.8	4.4	4.4	-	1.8	4.4	4.4	15.8	15.8	-	-	-	2.0	2.0	2.0	-	3.1	4.5	17.4	24.8	50.0	50.0
-	-	3.6	3.6	-	-	3.6	3.6	10.3	10.3	-	-	-	-	-	-	-	-	3.7	11.0	14.3	37.5	37.5
-	-	-	-	-	-	-	-	8.9	8.9	-	-	-	-	-	-	-	-	-	9.1	11.7	26.5	26.5
-	-	-	-	-	-	-	-	8.9	8.9	-	-	-	-	-	-	-	-	-	9.1	11.7	26.5	26.5
0.8	1.8	4.1	4.1	0.9	1.8	4.1	4.1	15.0	15.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.6	16.0	25.0	13.2	13.2
0.8	1.8	4.4	4.4	0.9	1.8	4.4	4.4	15.8	15.8	0.8	0.8	0.8	2.0	2.0	2.0	1.1	3.1	4.6	17.4	24.8	50.0	50.0
-	1.8	4.4	4.4	-	1.8	4.4	4.4	15.8	15.8	-	-	-	2.0	2.0	2.0	-	3.1	4.5	17.4	24.8	65.0	65.0
-	-	3.6	3.6	-	-	3.6	3.6	10.3	10.3	-	-	-	-	-	-	-	-	3.7	11.0	14.3	37.5	37.5
-	-	-	-	-	-	-	-	8.9	8.9	-	-	-	-	-	-	-	-	-	9.1	11.7	26.5	26.5
-	-	-	-	-	-	-	-	8.9	8.9	-	-	-	-	-	-	-	-	-	9.1	11.7	26.5	26.5
0.8	1.8	3.6	3.6	0.9	1.8	3.6	3.6	15.2	15.2	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	3.7	16.8	23.1	100.0	100.0
-	1.8	3.6	3.6	-	1.8	3.6	3.6	15.2	15.2	-	-	-	2.0	2.0	2.0	-	2.7	3.7	16.8	23.1	100.0	100.0
-	-	3.6	3.6	-	-	3.6	3.6	11.9	11.9	-	-	-	-	-	-	-	-	3.7	12.6	16.0	59.8	59.8
-	-	-	-	-	-	-	-	8.9	8.9	-	-	-	-	-	-	-	-	-	9.1	11.7	26.5	26.5
-	-	-	-	-	-	-	-	8.9	8.9	-	-	-	-	-	-	-	-	-	9.1	11.7	26.5	26.5
0.8	1.8	5.6	5.6	0.9	1.8	5.6	5.6	24.6	24.6	0.8	0.8	0.8	2.0	2.0	2.0	1.1	3.5	5.8	31.2	50.0	50.0	50.0
0.8	1.8	5.6	5.6	0.9	1.8	5.6	5.6	24.6	24.6	0.8	0.8	0.8	2.0	2.0	2.0	1.1	3.5	5.8	31.2	50.2	85.0	85.0
0.8	1.8	4.2	4.2	0.9	1.8	4.2	4.2	15.5	15.5	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.6	18.9	27.7	125.0	125.0
-	1.8	5.6	5.6	-	1.8	5.6	5.6	24.6	24.6	-	-	-	2.0	2.0	2.0	-	3.5	5.8	31.2	50.0	50.0	50.0
-	1.8	5.6	5.6	-	1.8	5.6	5.6	24.6	24.6	-	-	-	2.0	2.0	2.0	-	3.5	5.8	31.2	50.2	85.0	85.0
-	1.8	4.2	4.2	-	1.8	4.2	4.2	15.5	15.5	-	-	-	2.0	2.0	2.0	-	2.7	4.6	18.9	27.7	125.0	125.0
-	-	4.2	4.2	-	-	4.2	4.2	15.5	15.5	-	-	-	-	-	-	-	-	4.6	18.9	27.7	50.0	50.0
-	-	4.2	4.2	-	-	4.2	4.2	15.5	15.5	-	-	-	-	-	-	-	-	4.6	18.9	27.7	85.0	85.0
-	-	4.2	4.2	-	-	4.2	4.2	15.5	15.5	-	-	-	-	-	-	-	-	4.6	18.9	27.7	125.0	125.0
0.8	1.8	3.6	3.6	0.9	0.8	3.6	3.6	20.0	20.0	0.8	0.8	0.8	1.3	1.3	1.3	0.9	2.3	3.7	20.5	17.3	125.0	125.0
-	1.8	3.6	3.6	-	0.8	3.6	3.6	20.0	20.0	-	-	-	1.3	1.3	1.3	-	2.3	3.7	20.5	17.3	125.0	125.0
-	-	3.6	3.6	-	-	3.6	3.6	20.0	20.0	-	-	-	-	-	-	-	-	3.7	20.5	17.3	125.0	125.0
-	-	-	-	-	-	-	-	7.2	7.2	-	-	-	-	-	-	-	-	-	7.5	7.0	18.4	18.4

AC 415V

Main breaker			AB□ Series												
			E						S						
			ABE 103b	ABE 203b	ABE 403a	ABE 403b	ABE 803a	ABE 803b	ABS 103b	ABS 203b	ABS 403a	ABS 403b	ABS 803a	ABS 803b	
Branch breaker	ICU (kA)	10	18	25	25	35	35	25	25	35	35	50	50		
AB□ Series	E	ABE33	1.5	0.8	1.5	1.5	1.5	1.5	1.5	0.8	1.5	1.5	1.5	1.5	
		ABE53b	5	0.8	1.8	3.9	3.9	5.0	5.0	0.8	1.8	3.9	3.9	5.0	5.0
		ABE63b	5	0.8	1.8	3.9	3.9	5.0	5.0	0.8	1.8	3.9	3.9	5.0	5.0
		ABE103b	10	-	1.8	3.9	3.9	10.0	10.0	-	1.8	3.9	3.9	10.0	10.0
		ABE203b	18	-	-	3.6	3.6	8.8	8.8	-	-	3.6	3.6	8.8	8.8
		ABE403a	25	-	-	-	-	8.4	8.4	-	-	-	-	8.4	8.4
		ABE403b	25	-	-	-	-	8.4	8.4	-	-	-	-	8.4	8.4
	S	ABS33b	5	0.8	1.8	3.9	3.9	5.0	5.0	0.8	1.8	3.9	3.9	5.0	5.0
		ABS53b	10	0.8	1.8	3.9	3.9	10.0	10.0	0.8	1.8	3.9	3.9	10.0	10.0
		ABS63b	10	0.8	1.8	3.9	3.9	10.0	10.0	0.8	1.8	3.9	3.9	10.0	10.0
		ABS103b	25	-	1.8	4.0	4.0	10.9	10.9	-	1.8	4.0	4.0	10.9	10.9
		ABS203b	25	-	-	3.6	3.6	8.8	8.8	-	-	3.6	3.6	8.8	8.8
		ABS403a	35	-	-	-	-	8.4	8.4	-	-	-	-	8.4	8.4
		ABS403b	35	-	-	-	-	8.4	8.4	-	-	-	-	8.4	8.4
	H	ABH33b	10	0.8	1.8	3.9	3.9	10.0	10.0	0.8	1.8	3.9	3.9	10.0	10.0
		ABH53b	25	0.8	1.8	4.0	4.0	10.9	10.9	0.8	1.8	4.0	4.0	10.9	10.9
		ABH103b	35	-	1.8	4.0	4.0	10.9	10.9	-	1.8	4.0	4.0	10.9	10.9
		ABH203b	35	-	-	3.6	3.6	8.8	8.8	-	-	3.6	3.6	8.8	8.8
		ABH403a	50	-	-	-	-	8.4	8.4	-	-	-	-	8.4	8.4
		ABH403b	50	-	-	-	-	8.4	8.4	-	-	-	-	8.4	8.4
	L	ABL53a	65	0.8	1.8	3.6	3.6	11.5	11.5	0.8	1.8	3.6	3.6	11.5	11.5
ABL103a		65	-	1.8	3.6	3.6	11.5	11.5	-	1.8	3.6	3.6	11.5	11.5	
ABL203a		65	-	-	3.6	3.6	9.6	9.6	-	-	3.6	3.6	9.6	9.6	
ABL403a		65	-	-	-	-	8.4	8.4	-	-	-	-	8.4	8.4	
ABL403b		85	-	-	-	-	8.4	8.4	-	-	-	-	8.4	8.4	
GB□ Series	*Note1)	GBN103	35	0.8	1.8	4.4	4.4	14.8	14.8	0.8	1.8	4.4	4.4	14.8	14.8
		GBH103	50	0.8	1.8	4.4	4.4	14.8	14.8	0.8	1.8	4.4	4.4	14.8	14.8
		GBL103	85	0.8	1.8	3.8	3.8	12.6	12.6	0.8	1.8	3.8	3.8	12.6	12.6
	*Note2)	GBN103	35	-	1.8	4.4	4.4	14.8	14.8	-	1.8	4.4	4.4	14.8	14.8
		GBH103	50	-	1.8	4.4	4.4	14.8	14.8	-	1.8	4.4	4.4	14.8	14.8
		GBL103	85	-	1.8	3.8	3.8	12.6	12.6	-	1.8	3.8	3.8	12.6	12.6
		GBN203	35	-	-	3.8	3.8	12.6	12.6	-	-	3.8	3.8	12.6	12.6
		GBH203	50	-	-	3.8	3.8	12.6	12.6	-	-	3.8	3.8	12.6	12.6
		GBL203	85	-	-	3.8	3.8	12.6	12.6	-	-	3.8	3.8	12.6	12.6
GB□E Series	GBL53E	85	0.8	1.8	3.6	3.6	7.2	7.2	0.8	1.8	3.6	3.6	7.2	7.2	
	GBL103E	85	-	1.8	3.6	3.6	7.2	7.2	-	1.8	3.6	3.6	7.2	7.2	
	GBL203E	85	-	-	3.6	3.6	7.2	7.2	-	-	3.6	3.6	7.2	7.2	
	GBN403E	35	-	-	-	-	7.2	7.2	-	-	-	-	7.2	7.2	

*Note1) The applied ampere ratings are 16, 20, 25, 32, 40, 50A

*Note2) The applied ampere ratings are 63, 80, 100A

AB□ Series											GB□ Series						GB□ Series				
H				L							GB□ Series						GB□ Series				
ABH 103a	ABH 203b	ABH 403a	ABH 403b	ABL 103a	ABL 203a	ABL 403a	ABL 403b	ABL 803a	ABL 803b	GBN 103	GBH 103	GBL 103	GBN 203	GBH 203	GBL 203	GBL 103E	GBL 203E	GBN 403E	GBN 803E	ABS 1203E	
35	35	50	50	65	65	65	85	65	85	35	50	85	35	50	85	85	85	35	50	65	
0.8	1.5	1.5	1.5	0.9	1.5	1.5	1.5	1.5	1.5	0.8	0.8	0.8	1.5	1.5	1.5	1.1	1.5	1.5	1.5	1.5	
0.8	1.8	3.9	3.9	0.9	1.8	3.9	3.9	5.0	5.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.0	5.0	5.0	
0.8	1.8	3.9	3.9	0.9	1.8	3.9	3.9	5.0	5.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.0	5.0	5.0	
-	1.8	3.9	3.9	-	1.8	3.9	3.9	10.0	10.0	-	-	-	2.0	2.0	2.0	-	2.7	4.0	10.0	10.0	
-	-	3.6	3.6	-	-	3.6	3.6	8.8	8.8	-	-	-	-	-	-	-	-	3.7	9.2	18.0	
-	-	-	-	-	-	-	-	8.4	8.4	-	-	-	-	-	-	-	-	-	-	21.7	
-	-	-	-	-	-	-	-	8.4	8.4	-	-	-	-	-	-	-	-	-	-	21.7	
0.8	1.8	3.9	3.9	0.9	1.8	3.9	3.9	5.0	5.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.0	5.0	5.0	
0.8	1.8	3.9	3.9	0.9	1.8	3.9	3.9	10.0	10.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.0	10.0	10.0	
0.8	1.8	3.9	3.9	0.9	1.8	3.9	3.9	10.0	10.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.0	10.0	10.0	
-	1.8	4.0	4.0	-	1.8	4.0	4.0	10.9	10.9	-	-	-	2.0	2.0	2.0	-	2.9	4.1	11.6	25.0	
-	-	3.6	3.6	-	-	3.6	3.6	8.8	8.8	-	-	-	-	-	-	-	-	3.7	9.2	25.0	
-	-	-	-	-	-	-	-	8.4	8.4	-	-	-	-	-	-	-	-	-	-	21.7	
-	-	-	-	-	-	-	-	8.4	8.4	-	-	-	-	-	-	-	-	-	-	21.7	
0.8	1.8	3.9	3.9	0.9	1.8	3.9	3.9	10.0	10.0	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.0	10.0	10.0	
0.8	1.8	4.0	4.0	0.9	1.8	4.0	4.0	10.9	10.9	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.9	4.1	11.6	25.0	
-	1.8	4.0	4.0	-	1.8	4.0	4.0	10.9	10.9	-	-	-	2.0	2.0	2.0	-	2.9	4.1	11.6	35.0	
-	-	3.6	3.6	-	-	3.6	3.6	8.8	8.8	-	-	-	-	-	-	-	-	3.7	9.2	25.4	
-	-	-	-	-	-	-	-	8.4	8.4	-	-	-	-	-	-	-	-	-	-	21.7	
-	-	-	-	-	-	-	-	8.4	8.4	-	-	-	-	-	-	-	-	-	-	21.7	
0.8	1.8	3.6	3.6	0.9	1.8	3.6	3.6	11.5	11.5	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	3.7	11.8	55.2	
-	1.8	3.6	3.6	-	1.8	3.6	3.6	11.5	11.5	-	-	-	2.0	2.0	2.0	-	2.7	3.7	11.8	55.2	
-	-	3.6	3.6	-	-	3.6	3.6	9.6	9.6	-	-	-	-	-	-	-	-	3.7	10.0	31.8	
-	-	-	-	-	-	-	-	8.4	8.4	-	-	-	-	-	-	-	-	-	-	21.7	
-	-	-	-	-	-	-	-	8.4	8.4	-	-	-	-	-	-	-	-	-	-	21.7	
-	-	4.4	4.4	0.9	1.8	4.4	4.4	14.8	14.8	0.8	0.8	0.8	2.0	2.0	2.0	1.1	3.1	4.6	16.1	35.0	
-	-	4.4	4.4	0.9	1.8	4.4	4.4	14.8	14.8	0.8	0.8	0.8	2.0	2.0	2.0	1.1	3.1	4.6	16.1	50.0	
0.8	1.8	3.8	3.8	0.9	1.8	3.8	3.8	12.6	12.6	0.8	0.8	0.8	2.0	2.0	2.0	1.1	2.7	4.0	13.2	73.1	
0.8	1.8	4.4	4.4	-	1.8	4.4	4.4	14.8	14.8	-	-	-	2.0	2.0	2.0	-	3.1	4.6	16.1	35.0	
0.8	1.8	4.4	4.4	-	1.8	4.4	4.4	14.8	14.8	-	-	-	2.0	2.0	2.0	-	3.1	4.6	16.1	50.0	
-	1.8	3.8	3.8	-	1.8	3.8	3.8	12.6	12.6	-	-	-	2.0	2.0	2.0	-	2.7	4.0	13.2	73.1	
-	1.8	3.8	3.8	-	-	3.8	3.8	12.6	12.6	-	-	-	-	-	-	-	-	4.0	13.2	35.0	
-	1.8	3.8	3.8	-	-	3.8	3.8	12.6	12.6	-	-	-	-	-	-	-	-	4.0	13.2	50.0	
-	-	3.8	3.8	-	-	3.8	3.8	12.6	12.6	-	-	-	-	-	-	-	-	4.0	13.2	73.1	
0.8	1.8	3.6	3.6	0.9	0.8	3.6	3.6	7.2	7.2	0.8	0.8	0.8	1.3	1.3	1.3	0.9	2.3	3.7	7.5	34.2	
-	1.8	3.6	3.6	-	0.8	3.6	3.6	7.2	7.2	-	-	-	1.3	1.3	1.3	-	2.3	3.7	7.5	34.2	
-	-	3.6	3.6	-	-	3.6	3.6	7.2	7.2	-	-	-	-	-	-	-	-	3.7	7.5	34.2	
-	-	-	-	-	-	-	-	7.2	7.2	7.2	7.2	-	-	-	-	-	-	-	-	13.8	

AC 240V

Main breaker			AB□ Series														
			E									S					
			ABE 33	ABE 53b	ABE 63b	ABE 103b	ABE 203b	ABE 403a	ABE 403b	ABE 803a	ABE 803b	ABS 33b	ABS 53b	ABS 63b	ABS 103b	ABS 203b	ABS 403a
Branch breaker	ICU (kA)	2.5	10	10	25	35	35	35	125	125	10	25	25	50	50	50	
BKN C Curves	≥ 63A	4.5	-	-	-	0.8	1.8	4.5	4.5	4.5	4.5	-	-	-	0.8	1.8	4.5
	≥ 40A	6	-	-	0.5	0.8	2.3	6.0	6.0	6.0	6.0	-	-	0.5	0.8	2.3	6.0
	≥ 10A	6	0.2	0.4	0.5	0.8	3.9	6.0	6.0	6.0	6.0	0.2	0.4	0.5	0.8	3.9	6.0

Main breaker			GB□ Series									GB□E Series					
			GBN 53	GBH 53	GBL 53	GBN 103	GBH 103	GBL 103	GBN 203	GBH 203	GBL 203	GBL 53E	GBL 103E	GBL 203E	GBN 403E	GBN 803E	ABS 203E
			Branch breaker	ICU (kA)	50	85	125	50	85	125	50	85	125	125	125	125	50
BKN C Curves	≥ 63A	4.5	-	-	-	0.8	0.8	0.8	2.2	2.2	2.2	-	0.9	2.8	4.5	4.5	4.5
	≥ 40A	6	-	-	-	0.8	0.8	0.8	2.2	2.2	2.2	-	0.9	3.3	6.0	6.0	6.0
	≥ 10A	6	0.4	0.4	0.4	0.8	0.8	0.8	2.2	2.2	2.2	0.5	0.9	6.0	6.0	6.0	6.0

AC415V

Main breaker			AB□ Series														
			E									S					
			ABE 33	ABE 53b	ABE 63b	ABE 103b	ABE 203b	ABE 403a	ABE 403b	ABE 803a	ABE 803b	ABS 33b	ABS 53b	ABS 63b	ABS 103b	ABS 203b	ABS 403a
Branch breaker	ICU (kA)	2.5	10	10	25	35	35	35	125	125	10	25	25	50	50	50	
BKN C Curves	≥ 63A	4.5	-	-	-	0.8	1.8	4.5	4.5	4.5	4.5	-	-	-	0.8	1.8	4.5
	≥ 40A	6	-	-	0.5	0.8	2.0	5.0	6.0	6.0	6.0	-	-	0.5	0.8	2.3	5.0
	≥ 10A	6	0.2	0.4	0.5	0.8	2.8	6.0	6.0	6.0	6.0	0.2	0.4	0.5	0.8	3.9	6.0

Main breaker			GB□ Series									GB□E Series					
			GBN 53	GBH 53	GBL 53	GBN 103	GBH 103	GBL 103	GBN 203	GBH 203	GBL 203	GBL 53E	GBL 103E	GBL 203E	GBN 403E	GBN 803E	ABS 1203E
			Branch breaker	ICU (kA)	35	50	85	35	50	85	35	50	85	85	85	85	35
BKN C Curves	≥ 63A	4.5	-	-	-	0.8	0.8	0.8	1.3	1.3	1.3	-	0.9	2.6	4.5	4.5	4.5
	≥ 40A	6	-	-	-	0.8	0.8	0.8	1.3	1.3	1.3	-	0.9	2.9	5.2	6.0	6.0
	≥ 10A	6	0.4	0.4	0.4	0.8	0.8	0.8	1.3	1.3	1.3	0.5	0.9	4.1	6.0	6.0	6.0

AB□ Series																
S			H							L						
ABS 403b	ABS 803a	ABS 803b	ABH 33b	ABH 53b	ABH 103b	ABH 203b	ABH 403a	ABH 403b	ABL 53a	ABL 103a	ABL 203a	ABL 403a	ABL 403b	ABL 803a	ABL 803b	
50	100	100	25	50	65	65	85	85	100	100	125	125	125	125	125	
4.5	4.5	4.5	-	-	0.8	1.8	4.5	4.5	-	0.9	1.8	4.5	4.5	4.5	4.5	
6.0	6.0	6.0	-	-	0.8	2.3	6.0	6.0	-	0.9	2.3	6.0	6.0	6.0	6.0	
6.0	6.0	6.0	0.2	0.4	0.8	3.9	6.0	6.0	0.5	0.9	3.9	6.0	6.0	6.0	6.0	

AB□ Series																
S			H							L						
ABS 403b	ABS 803a	ABS 803b	ABH 33b	ABH 53b	ABH 103b	ABH 203b	ABH 403a	ABH 403b	ABL 53a	ABL 103a	ABL 203a	ABL 403a	ABL 403b	ABL 803a	ABL 803b	
35	50	50	10	25	35	35	50	50	65	65	65	65	85	65	85	
4.5	4.5	4.5	-	-	0.8	1.8	4.5	4.5	-	0.9	1.8	4.5	4.5	4.5	4.5	
5.0	6.0	6.0	-	-	0.8	2.0	5.0	5.0	-	0.9	2.0	5.0	5.0	6.0	6.0	
6.0	6.0	6.0	0.2	0.4	0.8	2.8	6.0	6.0	0.5	0.9	2.8	6.0	6.0	6.0	6.0	

240V

Main breaker		E							S				
		ABE 103b	ABE 203b	ABE 403a	ABE 403b	ABE 803a	ABE 803b	ABS 103b	ABS 203b	ABS 403a	ABS 403b	ABS 803a	ABS 803b
Branch MCCB	ICU (kA)	25	35	35	35	50	50	50	50	50	50	100	100
	E	ABE 33	2.5	5	5	-	-	-	-	5	-	-	-
ABE 53b		10	25	30	30	30	-	-	35	35	35	35	-
ABE 63b		10	25	30	30	30	-	-	35	35	35	35	-
ABE 103b		25	-	35	35	35	42	42	42	42	42	42	65
ABE 203b		35	-	-	-	-	50	50	-	50	50	50	65
ABE 403a		35	-	-	-	-	50	50	-	-	50	50	65
ABE 403b		35	-	-	-	-	50	50	-	-	50	50	65
S	ABS 33b	10	25	30	30	30	-	-	35	35	35	35	-
	ABS 53b	25	-	35	35	35	42	42	42	42	42	42	65
	ABS 63b	25	-	35	35	35	42	42	42	42	42	42	65
	ABS 103b	50	-	-	-	-	-	-	-	-	-	-	85
	ABS 203b	50	-	-	-	-	-	-	-	-	-	-	85
	ABS 403a	50	-	-	-	-	-	-	-	-	-	-	85
	ABS 403b	50	-	-	-	-	-	-	-	-	-	-	85
H	ABH 33b	25	-	35	35	35	42	42	42	42	50	50	65
	ABH 53b	50	-	-	-	-	-	-	-	-	-	-	100
	ABH 103b	65	-	-	-	-	-	-	-	-	-	-	100
	ABH 203b	65	-	-	-	-	-	-	-	-	-	-	100
	ABH 403a	85	-	-	-	-	-	-	-	-	-	-	100
	ABH 403b	85	-	-	-	-	-	-	-	-	-	-	100
L	ABL 103a	100	-	-	-	-	-	-	-	-	-	-	-
	ABL 203a	125	-	-	-	-	-	-	-	-	-	-	-
	ABL 403a	125	-	-	-	-	-	-	-	-	-	-	-
	ABL 403b	125	-	-	-	-	-	-	-	-	-	-	-
GB	GBN 103	50	-	-	-	-	-	-	-	-	-	-	85
	GBH 103	85	-	-	-	-	-	-	-	-	-	-	100
	GBL 103	125	-	-	-	-	-	-	-	-	-	-	-
	GBN 203	50	-	-	-	-	-	-	-	-	-	-	85
	GBH 203	85	-	-	-	-	-	-	-	-	-	-	100
	GBL 203	125	-	-	-	-	-	-	-	-	-	-	-

H		L									GB					
ABH 103b	ABH 203b	ABH 403a	ABH 403b	ABL 103a	ABL 203a	ABL 403a	ABL 403b	ABL 803a	ABL 803b	GBN 103	GBH 103	GBL 103	GBN 203	GBH 203	GBL 203	
65	65	85	85	100	125	125	125	125	125	50	85	125	50	85	125	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42	42	50	50	50	85	85	85	-	-	42	50	85	42	50	85	
42	42	50	50	50	85	85	85	-	-	42	50	85	42	50	85	
50	50	65	65	65	85	85	85	85	85	-	50	85	50	65	85	
-	65	65	65	-	85	85	85	85	85	-	-	-	-	65	85	
-	-	65	65	-	-	85	85	85	85	-	-	-	-	-	-	
-	-	65	65	-	-	85	85	85	85	-	-	-	-	-	-	
42	42	50	50	65	85	85	85	-	-	42	50	85	42	50	85	
50	50	65	65	85	100	100	100	100	100	50	65	100	50	65	100	
50	50	65	65	85	100	100	100	100	100	50	65	100	50	65	100	
65	65	85	85	100	100	100	100	100	100	-	85	100	-	85	100	
-	65	85	85	-	100	100	100	100	100	-	-	-	-	85	100	
-	-	85	85	-	-	100	100	100	100	-	-	-	-	-	-	
-	-	85	85	-	-	100	100	100	100	-	-	-	-	-	-	
-	-	65	65	85	100	100	100	85	85	50	65	100	50	65	100	
-	-	85	85	100	125	125	125	125	125	-	85	100	-	85	125	
50	50	85	85	100	125	125	125	125	125	-	85	100	-	85	125	
65	65	85	85	-	125	125	125	125	-	-	-	-	-	85	125	
-	-	-	-	-	-	-	-	125	125	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	125	125	-	-	-	-	-	-	
-	-	-	-	-	125	125	125	125	125	-	-	-	-	-	125	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	85	85	85	100	100	100	100	100	-	85	100	-	85	100	
-	-	-	-	100	125	125	125	125	125	-	-	125	-	-	125	
65	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	85	85	-	100	100	100	100	100	-	-	-	-	85	100	
-	-	-	-	-	125	125	125	125	125	-	-	-	-	-	125	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

415V

Main breaker		E							S				
		ABE 103b	ABE 203b	ABE 403a	ABE 403b	ABE 803a	ABE 803b	ABS 103b	ABS 203b	ABS 403a	ABS 403b	ABS 803a	ABS 803b
Branch MCCB	ICU (kA)	10	18	25	25	35	35	25	25	35	35	50	50
	E	ABE 33	1.5	-	-	-	-	-	-	-	-	-	-
ABE 53b		5	10	7.5	7.5	7.5	-	-	22	10	10	10	-
ABE 63b		5	10	7.5	7.5	7.5	-	-	22	10	10	10	-
ABE 103b		10	-	14	14	14	14	14	18	18	18	18	25
ABE 203b		18	-	-	25	25	30	30	-	25	30	30	35
ABE 403a		25	-	-	-	-	35	35	-	-	35	35	42
ABE 403b		25	-	-	-	-	35	35	-	-	35	35	42
S	ABS 33b	5	10	7.5	7.5	7.5	-	-	22	10	10	10	-
	ABS 53b	10	-	14	14	14	-	-	25	18	18	18	14
	ABS 63b	10	-	14	14	14	-	-	25	18	18	18	14
	ABS 103b	25	-	-	-	-	35	35	-	-	35	35	42
	ABS 203b	25	-	-	-	-	35	35	-	-	35	35	42
	ABS 403a	35	-	-	-	-	-	-	-	-	-	-	50
	ABS 403b	35	-	-	-	-	-	-	-	-	-	-	50
H	ABH 33b	10	-	14	14	14	-	-	25	18	18	18	14
	ABH 53b	25	-	-	-	-	30	30	-	-	35	35	35
	ABH 103b	35	-	-	-	-	-	-	-	-	-	-	50
	ABH 203b	35	-	-	-	-	-	-	-	-	-	-	50
	ABH 403a	50	-	-	-	-	-	-	-	-	-	-	-
	ABH 403b	50	-	-	-	-	-	-	-	-	-	-	-
L	ABL 103a	65	-	-	-	-	-	-	-	-	-	-	-
	ABL 203a	65	-	-	-	-	-	-	-	-	-	-	-
	ABL 403a	65	-	-	-	-	-	-	-	-	-	-	-
	ABL 403b	85	-	-	-	-	-	-	-	-	-	-	-
GB	GBN 103	35	-	-	-	-	-	-	-	-	-	-	50
	GBH 103	50	-	-	-	-	-	-	-	-	-	-	-
	GBL 103	85	-	-	-	-	-	-	-	-	-	-	-
	GBN 203	35	-	-	-	-	-	-	-	-	-	-	50
	GBH 203	50	-	-	-	-	-	-	-	-	-	-	-
	GBL 203	85	-	-	-	-	-	-	-	-	-	-	-

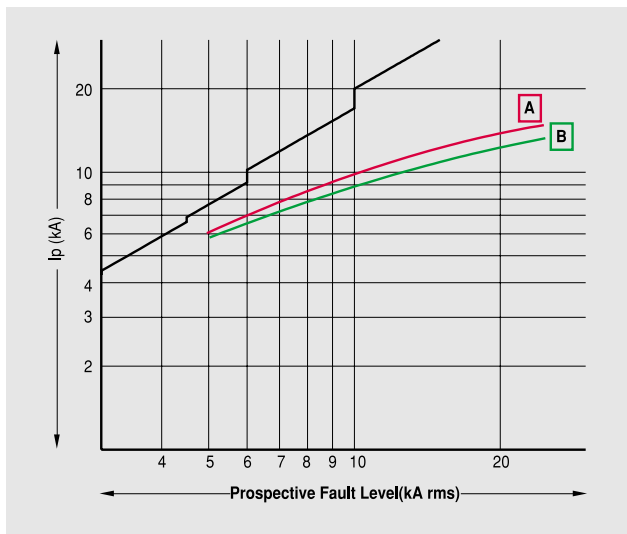
H		L									GB					
ABH 103b	ABH 203b	ABH 403a	ABH 403b	ABL 103a	ABL 203a	ABL 403a	ABL 403b	ABL 803a	ABL 803b	GBN 103	GBH 103	GBL 103	GBN 203	GBH 203	GBL 203	
35	35	50	50	65	65	65	85	65	85	35	50	85	35	50	85	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	14	14	14	35	25	18	18	-	-	25	30	35	25	30	35	
25	14	14	14	35	25	18	18	-	-	25	30	35	25	30	35	
18	18	25	25	35	35	30	30	30	30	-	30	35	25	30	35	
-	30	35	35	-	50	35	42	35	42	-	-	-	-	35	42	
-	-	42	42	-	-	42	42	50	50	-	-	-	-	-	-	
-	-	42	42	-	-	42	42	50	50	-	-	-	-	-	-	
25	14	14	14	35	25	18	18	-	-	25	30	35	25	30	35	
30	25	25	25	42	35	30	30	25	25	30	35	42	30	35	42	
30	25	25	25	42	35	30	30	25	25	30	35	42	30	35	42	
35	35	42	42	50	50	42	50	42	50	-	42	50	35	42	50	
-	35	42	42	-	65	42	50	42	50	-	-	-	-	50	65	
-	-	50	50	-	-	50	65	50	65	-	-	-	-	-	-	
-	-	50	50	-	-	50	65	50	65	-	-	-	-	-	-	
30	25	25	25	42	35	30	30	25	25	30	35	42	30	25	42	
35	35	42	42	50	50	42	42	42	42	30	42	50	30	42	50	
-	-	50	50	65	65	50	65	50	65	-	50	85	-	50	85	
-	-	50	50	-	65	50	65	50	65	-	-	-	-	50	85	
-	-	-	-	-	-	65	85	65	85	-	-	-	-	-	-	
-	-	-	-	-	-	65	85	65	85	-	-	-	-	-	-	
-	-	-	-	-	-	-	85	-	85	-	-	85	-	-	85	
-	-	-	-	-	-	-	85	-	85	-	-	-	-	-	85	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	50	50	65	65	65	65	65	65	-	50	65	-	50	65	
-	-	-	-	65	65	65	85	65	85	-	-	85	-	-	85	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	50	50	-	65	65	65	65	65	-	-	-	-	50	65	
-	-	-	-	-	65	65	85	65	85	-	-	-	-	-	85	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

AC 240V

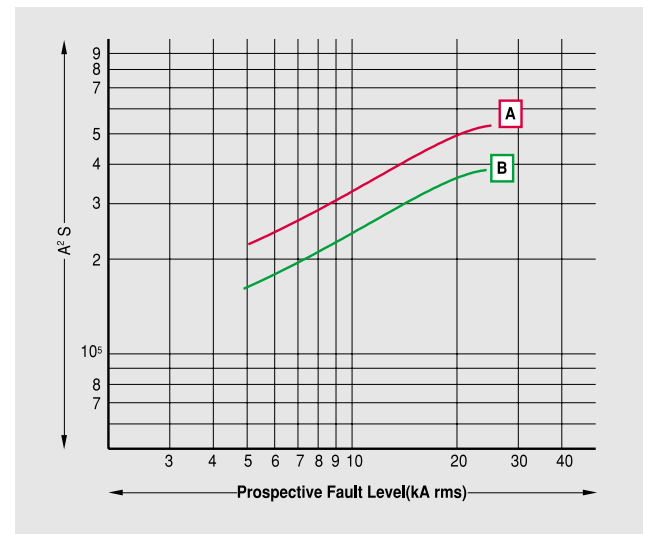
A ABE103b, ABH33b, ABS53b, ABS63b

B ABS33b, ABE53b, ABE63b

Peak current curve



Thermal stress curve

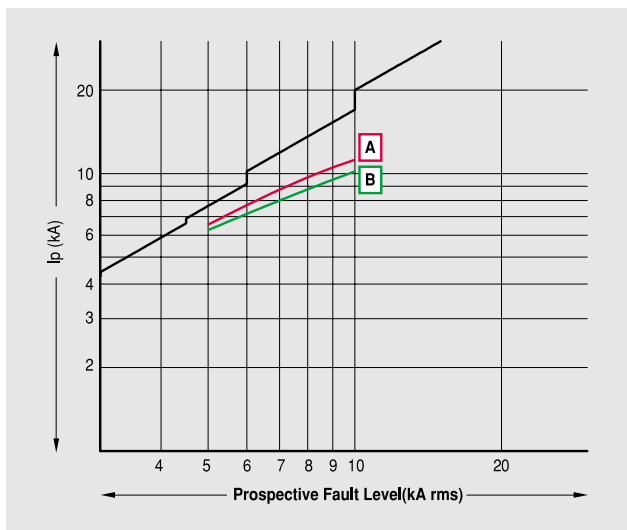


AC 415V

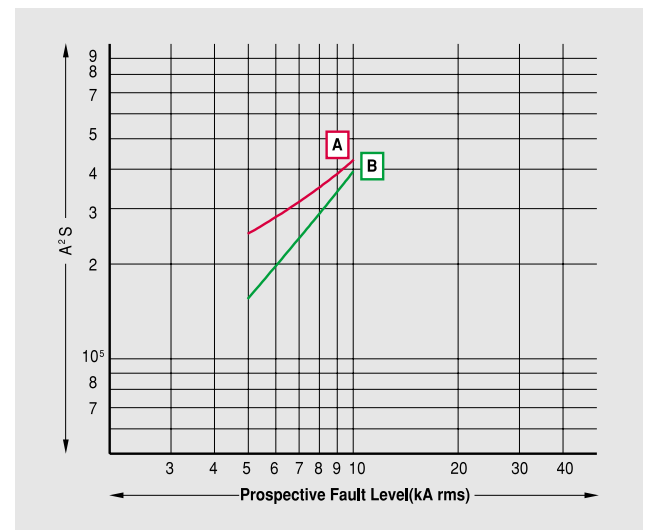
A ABE103b, ABH33b, ABS53b, ABS63b

B ABS33b, ABE53b, ABE63b

Peak current curve



Thermal stress curve

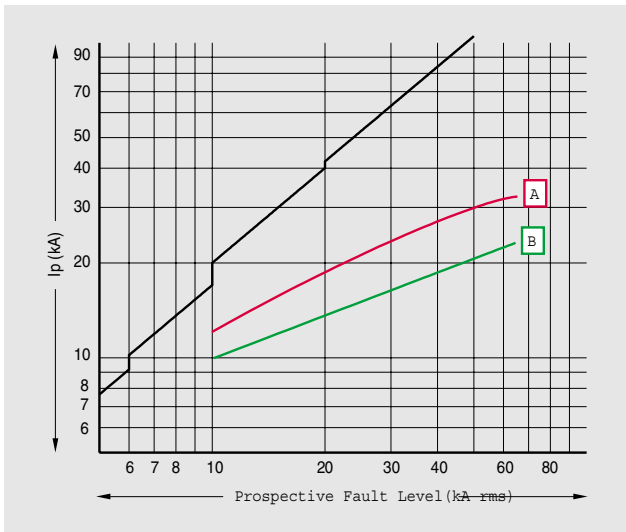


AC 240V

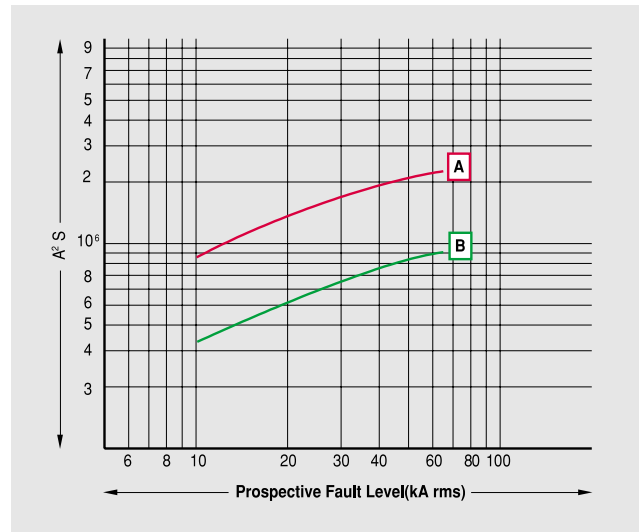
A ABE203b, ABS203b, ABH203b

B ABH53b, ABS103b, ABH103b

Peak current curve



Thermal stress curve

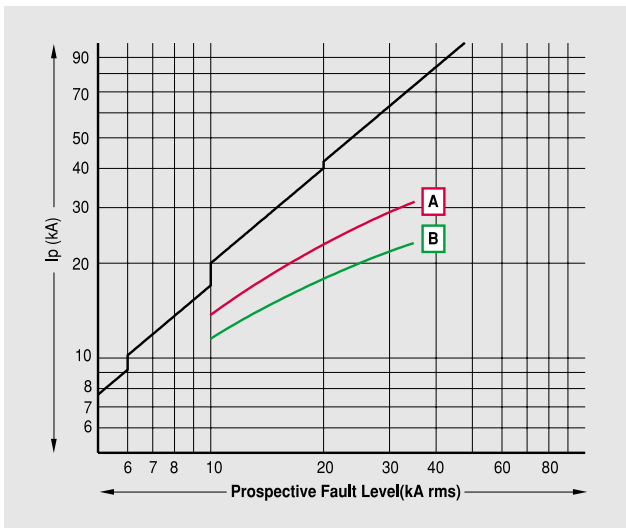


AC 415V

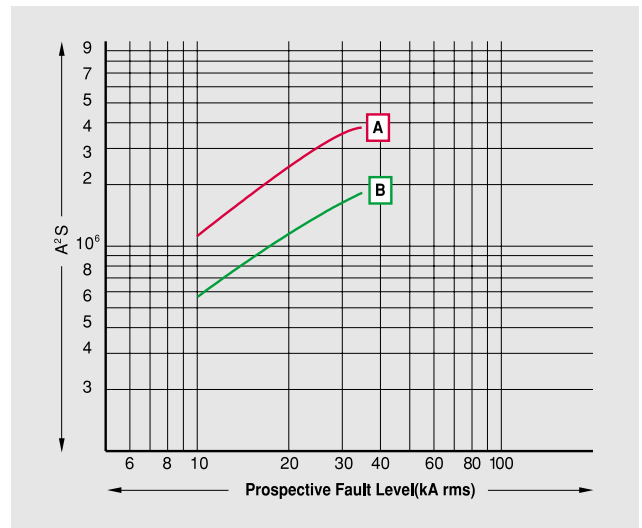
A ABE203b, ABS203b, ABH203b

B ABH53b, ABS103b, ABH103b

Peak current curve



Thermal stress curve

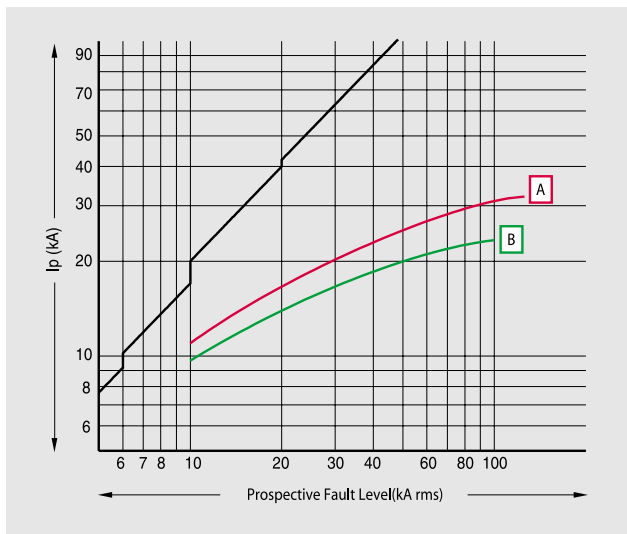


AC 240V

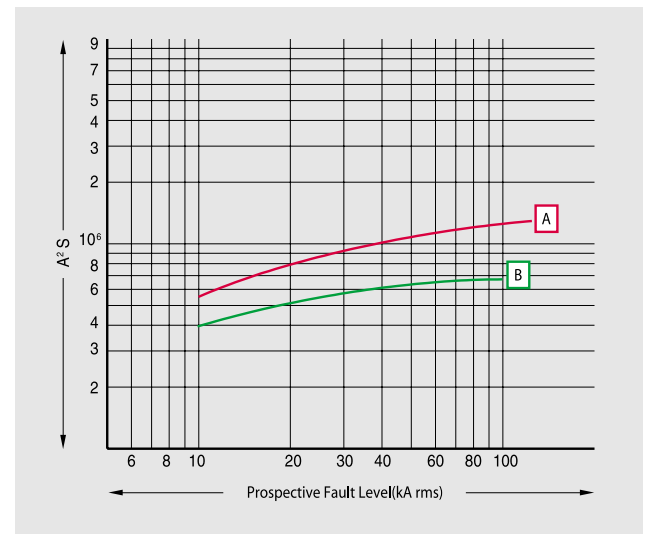
A ABL203a

B ABL53b, ABL103a

Peak current curve



Thermal stress curve

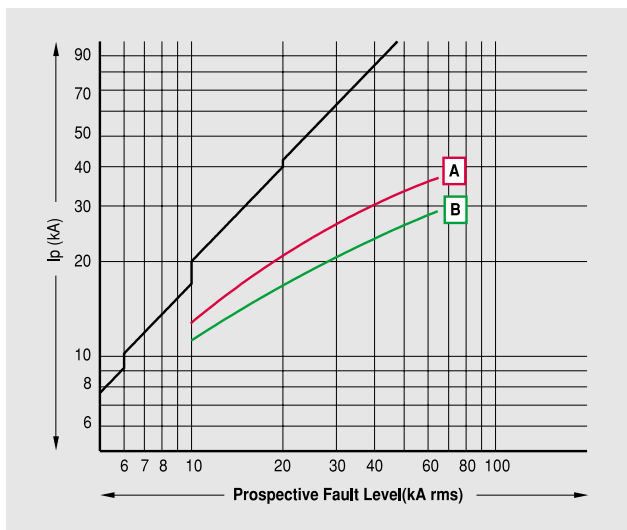


AC 415V

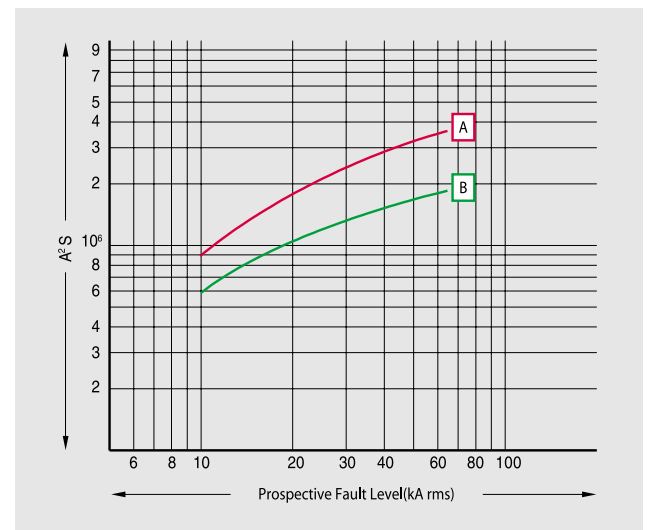
A ABL203a

B ABL53b, ABL103a

Peak current curve



Thermal stress curve

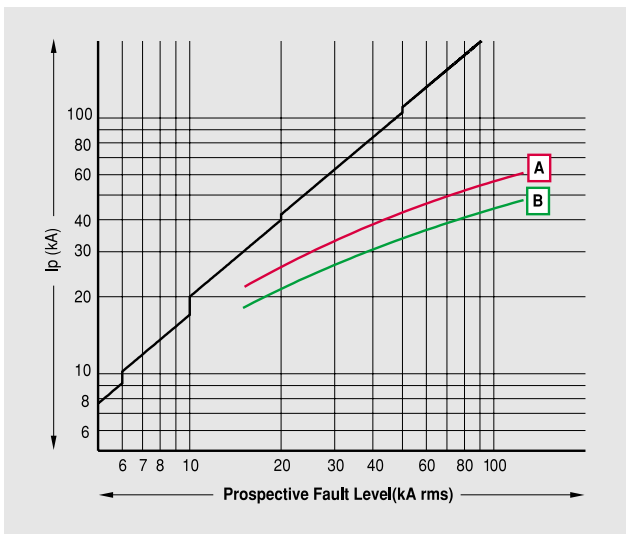


AC 240V

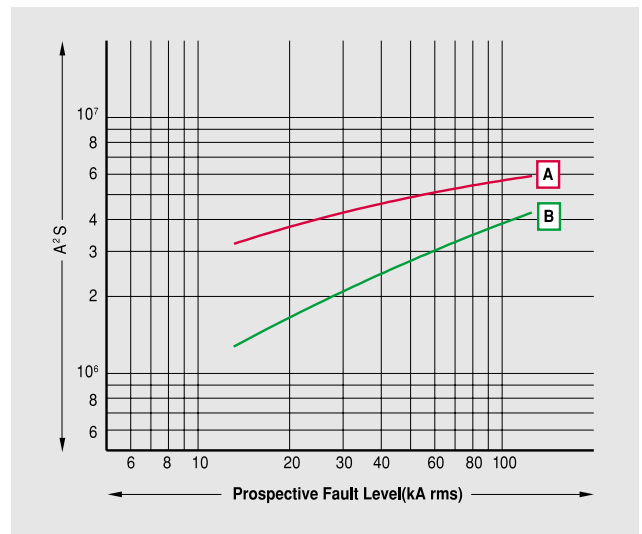
A ABE803b, ABS803b, ABL803b

B ABE403b, ABS403b, ABH403b, ABL403b

Peak current curve



Thermal stress curve

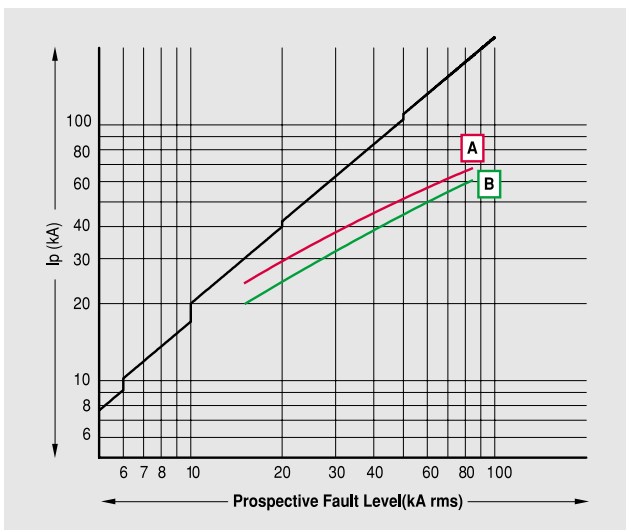


AC 415V

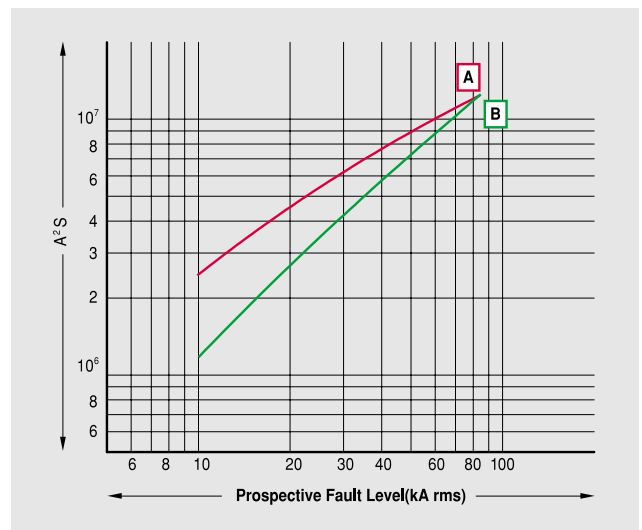
A ABE803b, ABS803b, ABL803b

B ABE403b, ABS403b, ABH403b, ABL403b

Peak current curve



Thermal stress curve

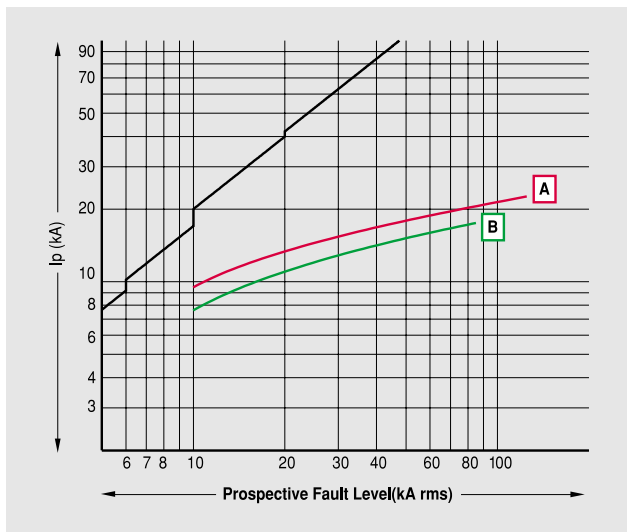


AC 240V

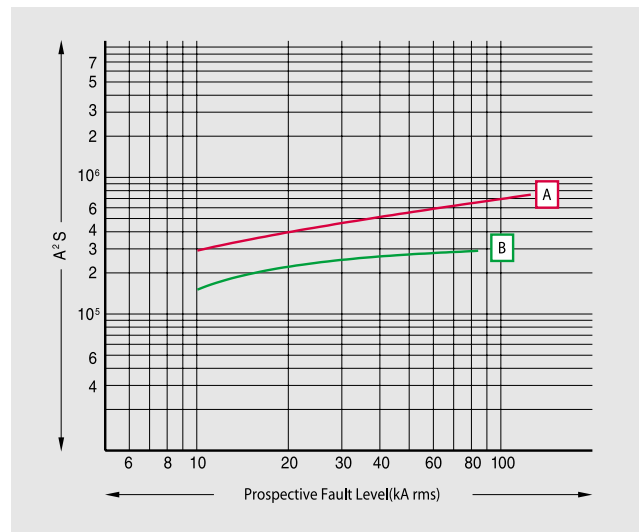
A GBL103, GBN203, GBH203, GBL203

B GBN103, GBH103

Peak current curve



Thermal stress curve

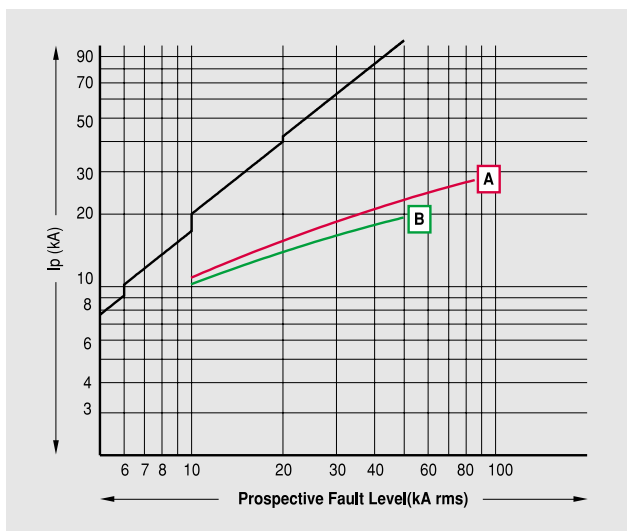


AC 415V

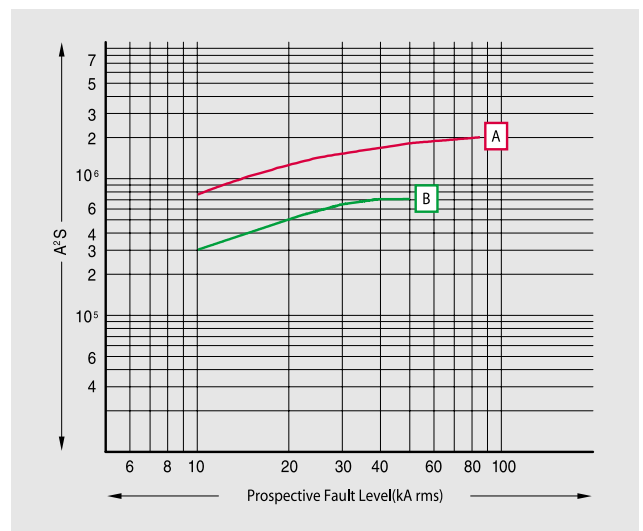
A GBL103, GBN203, GBH203, GBL203

B GBN103, GBH103

Peak current curve



Thermal stress curve



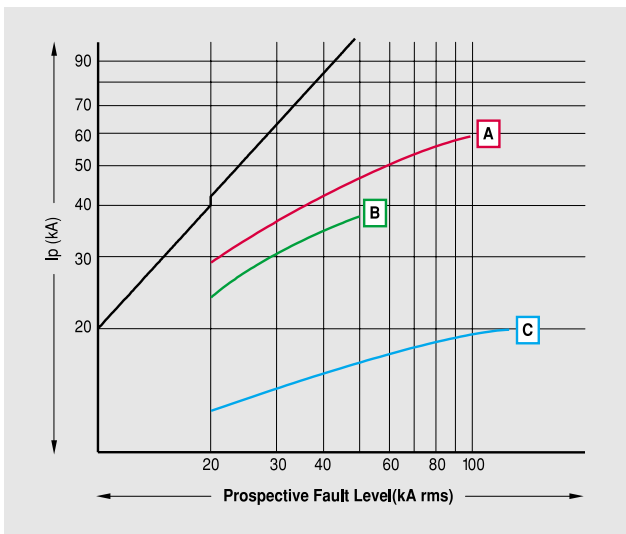
AC 240V

A GBN803E

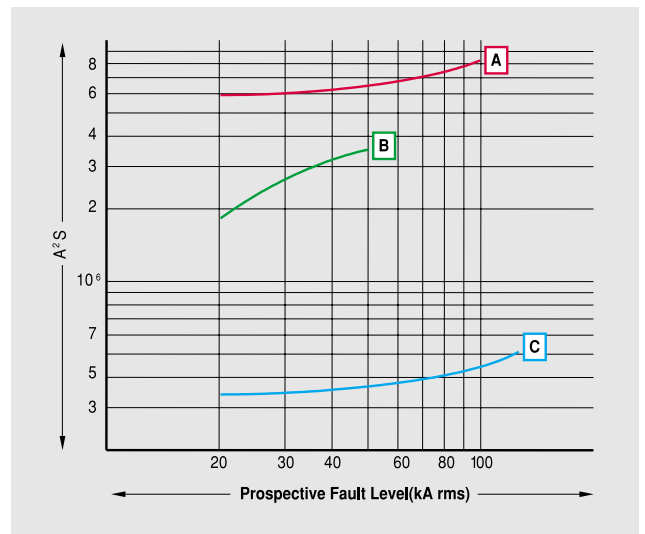
B GBN403E

C GBL203E, GBL103E, GBL53E

Peak current curve



Thermal stress curve



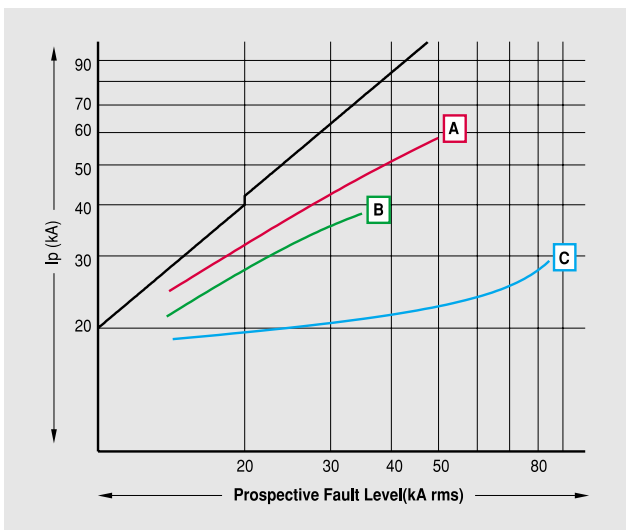
AC 415V

A GBN803E

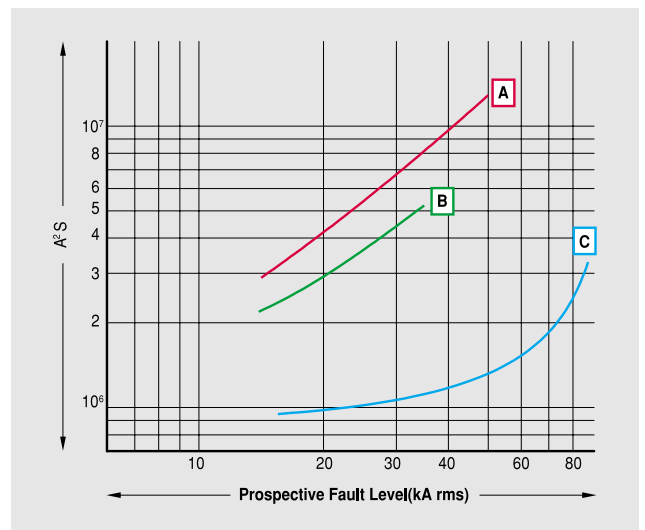
B GBN403E

C GBL203E, GBL103E, GBL53E

Peak current curve



Thermal stress curve



Technical information

Short circuit coordination

Direct starters with molded case circuit breakers (50kA-415V · IEC60947)

Motor		MCCB		Contactor	Thermal overload relay	
(kW)	440V(A)	Type	Rating I _r (A)	Type	Type	Settings range (A)
5.5	11	GBH(L)103	16	GMC-32	GTH(K)-40	9~13
7.5	15	GBH(L)103	16	GMC-32	GTH(K)-40	12~18
10	19	GBH(L)103	25	GMC-32	GTH(K)-40	18~26
11	21	GBH(L)103	25	GMC-32	GTH(K)-40	18~26
15	28	GBH(L)103	32	GMC-32	GTH(K)-40	24~36
18.5	34	GBH(L)103	40	GMC-75	GTH(K)-85	28~40
22	39	GBH(L)103	50	GMC-75	GTH(K)-85	34~50
30	54	GBH(L)103	63	GMC-75	GTH(K)-85	45~65
37	66	GBH(L)103	80	GMC-75	GTH(K)-85	54~75
45	80	GBH(L)103	100	GMC-100	GTH(K)-100	65~100
55	99	GBH(L)103	100	GMC-100	GTH(K)-100	85~125
75	135	GBH(L)203	160	GMC-150	GTH(K)-150	100~150
90	160	GBH(L)203	200	GMC-180	GTH(K)-220	120~180
110	192	GBH(L)203	200	GMC-180	GTH(K)-220	160~240
132	226	GBH(L)203	250	GMC-220	GTH(K)-220	160~240
160	265	ABH(L)403b	300	GMC-400	GTH(K)-400	200~300
200	330	ABH(L)403b	350	GMC-400	GTH(K)-400	260~400
220	353	ABH(L)403b	400	GMC-400	GTH(K)-400	260~400
250	400	ABS(L)803b	500	GMC-600	GTH(K)-600	260~400
300	480	ABS(L)803b	500	GMC-600	GTH(K)-600	400~600

* Note: Magnetic only

Direct starters with molded case circuit breakers (85kA-415V · IEC60947)

Motor		MCCB		Contactor	Thermal overload relay	
(kW)	440V(A)	Type	Rating I _r (A)	Type	Type	Settings range (A)
5.5	11	GBH(L)103	16	GMC-32	GTH(K)-40	9~13
7.5	15	GBH(L)103	16	GMC-32	GTH(K)-40	12~18
10	19	GBH(L)103	25	GMC-32	GTH(K)-40	18~26
11	21	GBH(L)103	25	GMC-32	GTH(K)-40	18~26
15	28	GBH(L)103	32	GMC-32	GTH(K)-40	24~36
18.5	34	GBH(L)103	40	GMC-75	GTH(K)-85	28~40
22	39	GBH(L)103	50	GMC-75	GTH(K)-85	34~50
30	54	GBH(L)103	63	GMC-75	GTH(K)-85	45~65
37	66	GBH(L)103	80	GMC-75	GTH(K)-85	54~75
45	80	GBH(L)103	100	GMC-100	GTH(K)-100	65~100
55	99	GBH(L)103	100	GMC-100	GTH(K)-100	85~125
75	135	GBH(L)203	160	GMC-150	GTH(K)-150	100~150
90	160	GBH(L)203	200	GMC-180	GTH(K)-220	120~180
110	192	GBH(L)203	200	GMC-180	GTH(K)-220	160~240
132	226	GBH(L)203	250	GMC-220	GTH(K)-220	160~240
160	265	ABH(L)403b	300	GMC-400	GTH(K)-400	200~300
200	330	ABH(L)403b	350	GMC-400	GTH(K)-400	260~400
220	353	ABH(L)403b	400	GMC-400	GTH(K)-400	260~400
250	400	ABS(L)803b	500	GMC-600	GTH(K)-600	260~400
300	480	ABS(L)803b	500	GMC-600	GTH(K)-600	400~600

* Note: Tables are based on a combination of tests on a previous range and technical comparison.

AX, AL



Auxiliary switch, AX



Alarm switch, AL

Auxiliary switch (AX)

It can be used to check circuit-breaker status information on On/Off. It indicates the position of the circuit-breaker contacts.

Alarm switch (AL)

When the circuit-breaker has tripped, It indicates the tripped status of the circuit-breaker. (trip indication)

Operating characteristics of AX and AL

Type	Status of MCCB handle		
	ON	OFF	Tripped
AX			
AL			

Electrical characteristics of Auxiliary Switch(AX) and Alarm Switch(AL)

AF	Applies Circuit Breakers		AC			DC		
	MCCB	ELCB	Voltage	Operating current(A)		Voltage	Operating current(A)	
			(V)	Resistance	Inductance		(V)	Resistance
30AF~225AF (Meta-MEC)	ABE50b,60b,100b,225b	EBE50b,60b,100b,225b	125	5	3	30	4	3
	ABS 30b,50b,60b,100b,225b	EBS 30b,50b,60b,100b,225b						
	ABH 30b,50b,100b,225b	EBH 30b,50b,100b,225b						
50AF~225AF (Hi-MEC)	ABL 50a,100a,225a	EBL 50,100,225	500	-	-	250	0.2	0.2
50AF~250AF (Meta-MEC)	GBN50, 100, 250		125	5	3	30	4	3
	GBH50, 100, 250		250	3	2	125	0.4	0.4
	GBL50, 100, 250		250			250	0.2	0.2
	GBL53E, GBL103E, GBL203E							
400AF~800AF (Meta-MEC)	ABE 400b,800b	EBE 400b,800b	125	5	3	30	4	3
	ABS 400b,800b	EBS 400b,800b						
	ABH 400b	EBH 400b						
	ABL 400b,800b	EBL 400b,800b						
	GBN 403E,803E							
GBH 403E,803E								
1000AF- 1200AF	ABS 1000,1200	1003SGR, 1203SGR	125	20	20	30	6	5
	ABL 1000,1200		250	20	20	125	0.4	0.05
	ABS 1200E		500	10	5	250	0.2	0.03

Shunt Trip Coil (SHT)



Shunt trip, SHT

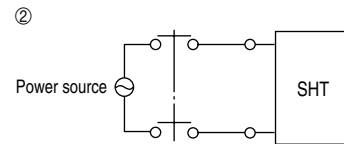
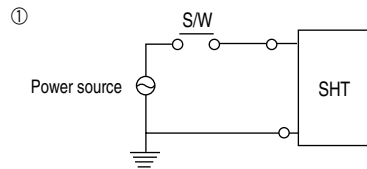
Shunt Trip Coil (SHT)

This trip coil trips the circuit breaker when the control voltage exceeds from 0.85 times to 1.1 times the rated voltage at AC and from 0.75 times to 1.25 times the rated voltage at DC.

Electrical characteristics (Consumption)

AF	Control voltage(V)	Consumption (A)	Consumption (W)	AF	Control voltage(V)	Consumption (A)	Consumption (W)
30~225AF	AC/DC 12V	2.85	34	400~800AF	24V AC	14mA	0.3
	AC/DC 24V	1.65	40		24V DC	15.4mA	0.4
	AC/DC 48V	0.75	36		48V AC	14mA	0.7
	AC/DC 60V	0.61	36		48V DC	16mA	0.8
	AC100~125V	0.37	37		110V AC	6mA	0.7
	DC100~110V				110V DC	6.6mA	0.7
	DC125V	0.3	38		220V AC	6.8mA	1.5
	AC 200~240V	0.18	35		200V DC	7.6mA	1.5
	DC 200~220V				440V AC	4.3mA	1.9
	DC 240V	0.15	36		480V AC	4.4mA	3.3
AC/DC 250V	0.14	35	550V AC	4.6mA	2.4		

Way of connection



Undervoltage Trip Coil (UVT)



Under voltage trip, UVT

Undervoltage Trip Coil (UVT)

This trip coil trips the circuit breaker when the control voltage drops below the tripping threshold.

- Tripping threshold between 0.2 and 0.7 times the rated voltage.
- The circuit-breaker closing is possible only if the voltage exceeds 0.85 times the rated voltage (AC/DC).

Technical information

Accessories

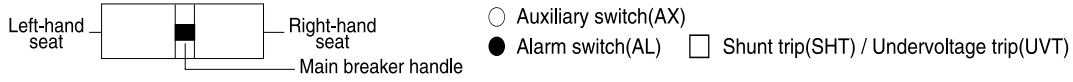
Terminal number of electrical auxiliaries

Terminal number

Type	Terminal number			
	Meta-MEC MCCB (30AF~225AF)	Meta-MEC MCCB (400AF~800AF)	MCCB (1000AF~1200AF)	
Auxiliary switch (AX)				
Alarm switch (AL)				
Shunt Trip Coil (SHT)				
Under Voltage Trip Coil (UVT)	AC			
	DC			

Maximum number of internally mounted accessories

Combinations of accessories

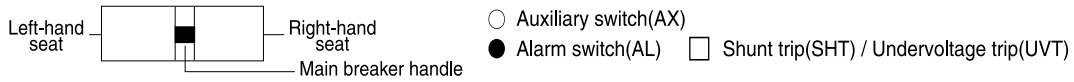


Series	Meta-MEC MCCB (30-225AF)		Adjustable (50-250AF)	Meta-MEC MCCB (400-800AF)	기존 MCCB	
Type	ABE	ABE 52b ABE 62b	ABE 53b ABE 63b ABE 103b/104b ABE 202b/203b/204b	-	ABE 402b/403b/404b ABE 802b/803b/804b	
	ABS	ABS 32b ABS 52b ABS 62b ABS 102b	ABS 33b ABS 53b/54b ABS 63b/64b ABS 103b/104b ABS 202b/203b/204b	GBN 52/53/54 GBN 102/103/104 GBN 202/203/204	ABS 402b/403b/404b ABS 802b/803b/804b	ABS 1003/1004 ABS 1203/1204 ABS 1203E
	ABH	ABH 32b ABH 52b ABH 102b	ABH 33b ABH 53b/54b ABH 103b/104b ABH 202a/203a/204a ABH202b/203b/204b	GBH 52/53/54 GBH 102/103/104 GBH 202/203/204	ABH 402b/403b/404b	
	ABL	ABL 52a ABL 102a	ABL 53a/54a ABL 103a/104a ABL 202a/203a/204a	GBL 52/53/54 GBL 102/103/104 GBL 202/203/204	ABL 402b/403b/404b ABL 802b/803b/804b	ABL 1003/1004 ABL 1203/1204
Pole	2Pole	2, 3, 4Pole		2, 3, 4Pole	3, 4Pole	
AX						
AX2						
AX3 (4)						
AL						
AL2						
AL3(4)						
SHT(UVT)						
SHT(UVT)2						
AX+AL						
AX+AL2						
AX+AL3(4)						
AX2+AL						
AX2+AL2						
AX2+AL3(4)						
AX3(4)+AL						
AX3(4)+AL2						
AX3(4)+AL3(4)						
AX+SHT(UVT)						

Technical information

Maximum number of internally mounted accessories

Combinations of accessories



Series	Meta-MEC MCCB (30~225AF)	Adjustable (50~250AF)	Meta-MEC MCCB (400~800AF)	기존 MCCB	
Type	ABE ABE 52b ABE 62b ABE 102b	ABE 53b ABE 63b ABE 103b/104b ABE 202b/203b/204b	-	ABE 402b/403b/404b ABE 802b/803b/804b	
	ABS ABS 32b ABS 52b ABS 62b ABS 102b	ABS 33b ABS 53b/54b ABS 63b/64b ABS 103b/104b ABS 202b/203b/204b	GBN 52/53/54 GBN 102/103/104 GBN 202/203/204	ABS 402b/403b/404b ABS 802b/803b/804b	ABS 1003/1004 ABS 1203/1204 ABS 1203E
	ABH ABH 32b ABH 52b ABH 102b	ABH 33b ABH 53b/54b ABH 103b/104b ABH 203a/204a ABH203b/204b	GBH 52/53/54 GBH 102/103/104 GBH 202/203/204	ABH 402b/403b/404b	
	ABL ABL 52a ABL 102a	ABL 53a/54a ABL 103a/104a ABL 202a/203a/204a	GBL 52/53/54 GBL 102/103/104 GBL 202/203/204	ABL 402b/403b/404b ABL 802b/803b/804b	ABL 1003/1004 ABL 1203/1204
Pole	2Pole	2, 3, 4Pole	2, 3, 4Pole	3, 4Pole	
AX+SHT(UVT)2					
AX2+SHT(UVT)					
AX2+SHT(UVT)2					
AX3(4)+SHT(UVT)					
AX3(4)+SHT(UVT)2					
AL+SHT(UVT)					
AL+SHT(UVT)2					
AL2+SHT(UVT)					
AL2+SHT(UVT)2					
AL3(4)+SHT(UVT)					
AL3(4)+SHT(UVT)2					
AX+AL+SHT(UVT)					
AX+AL+SHT(UVT)2					
AX2+AL2+SHT(UVT)					
AX2+AL2+SHT(UVT)2					
AX3(4)+AL3(4)+SHT(UVT)					
AX3(4)+AL3(4)+SHT(UVT)2					

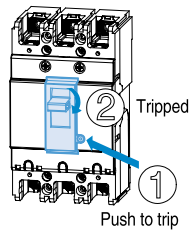
Accessories

Instruction (Internal accessories)

Installation of internal accessories

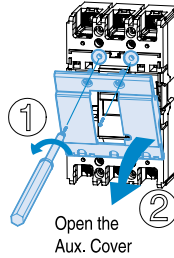
(1) Tripping the breaker

Have the breaker tripped by pushing the trip button



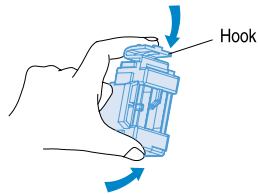
(2) Opening the cover

Open the auxiliary cover after unscrewing two screws.



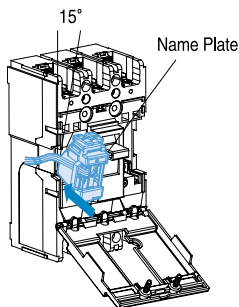
(3) How to grip the accessory

Grip the auxiliary switch as shown in the fig.

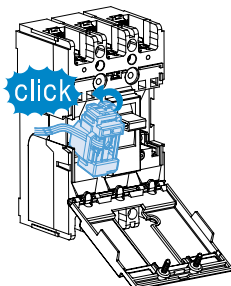


(4-1) Installing

Auxiliary switch AX,
Alarm switch AL and
Shunt trip SHT

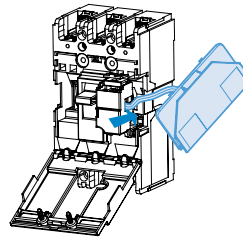


① Insert the auxiliary switch with the angle of 15° as shown in the fig.

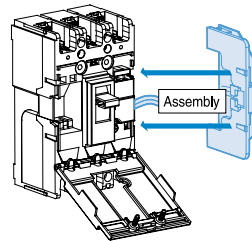


② Push the hook area until it clicks.

(4-2) Installing Undervoltage trip UVT



① Insert the UVT as shown in the fig.

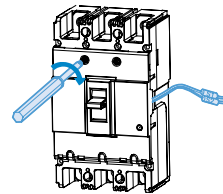


② Push the hook area until it clicks.

③ Assemble the terminal block

(5) Closing the cover

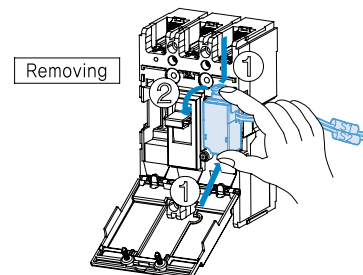
Close the auxiliary cover and fix it with the two screws.



Arrange the lead wires along the side groove.

How to remove the accessories

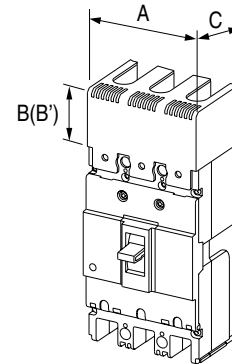
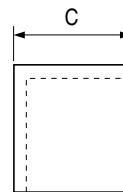
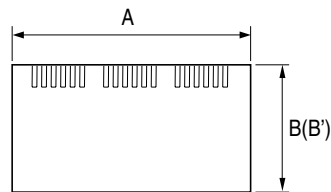
Push down the hook and pull it as shown below



Terminal shields

Terminal shields

These are insulating accessories used for protection against direct contact with power circuits and for protection against insert of a foreign body (a piece of dirt).



Type		Applied MCCBs	Applied ELCBs	Dimension(mm)		
Long type	Shprt type			A	B(B')	C
TBL-12B	TBS-12B	ABE 52b, ABE 62b, ABE 102b ABS 32b, ABS 52b, ABS 62b, ABH 32b ABE 104b, ABS 54b, ABS 64b (Use two shields for 4 pole MCCB)	-	50	30(5.5)	59
TBL-13B	TBS-13B	ABE 53b, ABE 63b, ABE 103b ABS 33b, ABS 53b, ABS 63b, ABH 33b	EBE 52b, EBE 102b, EBE 53b, EBE 63b, EBE 103b EBS 33b, EBS 53b, EBS 63b, EBH 33b	75	30(5.5)	59
TBL-22B	TBS-22B	ABS 102b, ABH 52b, ABH 102b	-	60	40(5.5)	59
TBL-23B	TBS-23B	ABS 103b, ABH 53b, ABH 103b	EBS 103b, EBH 53b, EBH 103b	90	40(5.5)	59
TBL-24B	TBS-24B	ABS 104b, ABH 54b, ABH 104b	EBS 54b, EBS 104b, EBH 54b, EBH 104b	120	40(5.5)	59
TBL-33B	TBS-33B	ABE 202b, ABS 202b, ABH 202b ABE 203b, ABS 203b, ABH 203b	EBE 203b, EBS 203b, EBH 203b	105	50(4.8)	59.3
TBL-34B	TBS-34B	ABE 204b, ABS 204b, ABH 204b	EBS 204b, EBH 204b	140	50(4.8)	59.3
TBL-43B	-	ABL 202a, ABL 203a	EBL 203	105	50	99.5
TBL-44B	-	ABL 204a	-	140	50	99.5
TBL-52B	-	ABL 52a, ABL 102a	-	74	40	81
TBL-53B	-	ABL 53a, ABL 103a	EBL 53, EBL 103	105	40	81
TBL-54B	-	ABL 54a, ABL 104a	-	140	40	81
T1-43A	-	ABE 402b, ABS 402b, ABH 402b, ABL 402b ABE 403b, ABS 403b, ABH 403b, ABL 403b	EBE 403b, EBS 403b, EBH 403b, EBL 403b	190	120	100
T1-44A	-	ABE 404b, ABS 404b, ABH 404b, ABL 404b	-	234	120	100
T1-63A	-	ABE 802b, ABS 802b, ABL 802b ABE 802b, ABS 802b, ABL 802b ABE 803b, ABS 803b, ABL 803b	EBE 803b, EBS 803b, EBL 803b	230	138.5	100
T1-64A	-	ABE 804b, ABS 804b, ABL 804b	-	300	138.5	100
TB-13T	TBS-13T	GBN 52, 102, GBH 52, 102 GBN 53, 103, GBH 53, 103	-	90	40(10)	77
TB-14T	TBS-14T	GBN 54, 104 GBH 54, 104	-	120	40(10)	77
TB-23T	TBS-23T	GBN 202, GBH 202 GBN 203, GBH 203 GBL 52, 102, 202 GBL 53, 103, 203 GBN 53E, 103E, 203E GBH 53E, 103E, 203E GBL 53E, 103E, 203E	-	105	40(10)	77
TB-24T	TBS-14T	GBN 204, GBH 204 GBL 54, 104, 204	-	140	40(10)	77

Rear connection for AB type MCCBs

Rear connection

Type	Pole	Applied MCCBs	Applied ELCBs		Quantity									
					A	B	C	D	E	F	G	H		
X-35R-52	2, 4	ABE 52b, ABE 102b, ABS 32b, ABS 52b, ABH 32b, ABE 104b, ABS 54b		Round type	2	2	2	2	2	2	2	2	2	
X-35R-53	3	ABE 53b, ABS 33b, ABS 53b, ABH 33b, ABE 103b	EBE 52b, EBE 102b, EBE 53b, EBE 103b, EBS 33b, EBS 53b, EBH 33b		4	4	4	4	2	2	2	2	2	
X-35R-102 X-35B-102	2, 4	ABE 62b, ABE 102b, ABS 62b ABE 104b, ABS 64b			2	2	2	2	2	2	2	2	2	
X-35R-103 X-35B-103	3	ABE 63b, ABS 63b, ABE 103b	EBE 102b, EBE 63b, EBE 103b		4	4	4	4	2	2	2	2	2	
X-45R-102 X-45B-102	2	ABS 102b, ABH 52b, ABH 102b			2	2	2	2	2	2	2	2	2	
X-45R-103 X-45B-103	3	ABS 103b, ABH 53b, ABH 103b	EBS 103b, EBH 53b, EBH 103b	Bar type	4	4	4	4	2	2	2	2	2	
X-45R-104 X-45B-104	4	ABS 104b, ABH 54b, ABH 104b												
X-55R-202 X-55B-202	2	ABE 202b, ABS 202b, ABH 202b			4	4	4	4	-	-	-	-	-	-
X-55R-203 X-55B-203	3	ABE 203b, ABS 203b, ABH 203b	EBE 203b, EBS 203b, EBH 203b		4	4	4	4	2	2	2	2	2	2
X-55R-204 X-55B-204	4	ABE 204b, ABS 204b, ABH 204b			4	4	4	4	4	4	4	4	4	4

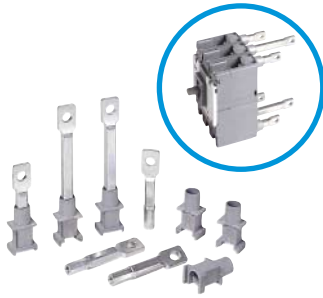
Rear connection

Type	MCCB			ELCB			Torque (kgf.cm)	
	E	S	H	E	S	H	A	B
Round type	ABE 50b	ABS 30b ABS 50b	ABH 30b	EBE 50b	EBS 30b EBS 50b	EBH 30b	M4 13~18	M6 40~50
	ABE 60b ABE 100b	ABS 60b		EBE 60b EBE 100b	EBS 60b		M6 40~50	M8 70~90
		ABS 100b	ABH 50b ABH 100b		EBS 100b	EBH 50b EBH 100b	M6 40~50	M8 120~150
Bar type	ABE 225b	ABS 225b	ABH 225b	EBE 225b	EBS 225b	EBH 225b	M6 50~65	M8 120~150

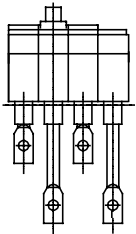
Technical information

Accessories

Rear connection for GB type MCCBs

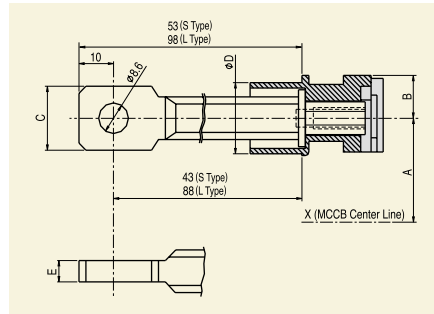


Rear connection kits



Bar type

Rear connection



(Unit: mm)

Applied MCCB	Type	A	B	C	D	E
GBN / H 100	X-10S	63	8	16	∅14	5
	X-10L					
GBN / H 250	X-20S	72	12	18	∅20	6
	X-20L					

Composition

(Unit: pcs)

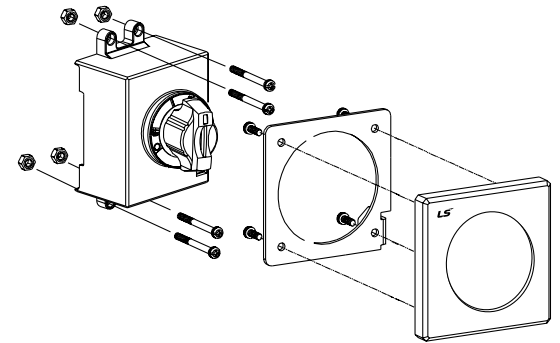
MCCB	Type	2 pole		3 pole		4 pole	
		X-102	X-202	X-103	X-203	X-104	X-204
GBN 100		X-10S : 4	-	X-10S : 4	-	X-10S : 4	-
GBH 100		X-10S : 4	-	X-10L : 2	-	X-10L : 2	-
GBN, H 250		-	X-20S : 4	-	X-20S : 4	-	X-20S : 4
GBL 50(E), 100(E), 250(E)		-	X-20S : 4	-	X-20S : 4	X-20L : 2	X-20S : 4

Rotary Handle

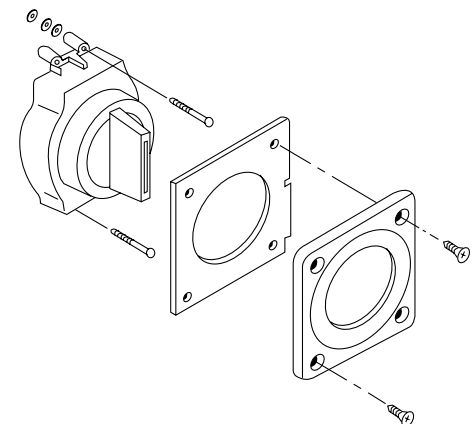
Type of rotary handle

Type		MCCB	ELCB
D, E handle	N handle		
D-30-S	-	GBN 53 GBH 53 GBN 103 GBH 103	
D-30-L			
D-30-R			
E-30-S			
E-30-L			
E-30-R			
D-35-S	N-30b-S N-30b-L N-30b-R	ABE 53b ABE 63b ABE 103b ABS 33b ABS 53b/54b ABS 63b/64b ABH 33b	EBE 52b/53b EBE 63b EBE 102b/103b EBS 33b EBS 53b EBS 63b EBH 33b
D-35-L			
D-35-R			
E-35-S			
E-35-L			
E-35-R			
D-45-S			
D-45-L			
D-45-R			
E-45-S			
E-45-L			
E-45-R			
D-55-S	N-50b-S N-50b-L N-50b-R	ABE 202b/203b/204b ABS 202b/203b/204b ABH 202b/203b/204b	EBE 203b EBS 203b EBH 203b
D-55-L			
D-55-R			
E-55-S	N-55-S N-55-L N-55-R	ABL 53a/54a ABL 103a/104a	EBL 53 EBL 103
E-55-L			
E-55-R			
D-60-S	-	GBN 203 GBH 203 GBL 53 GBL 130 GBL 203	
D-60-L			
D-60-R			
E-60-S			
E-60-L			
E-60-R			
D-60U	-	GBN 202/203/204 GBH 202/203/204 GBL 202/203/204	
E-60U			
-	N-60-S N-60-L N-60-R	ABH 203a ABL 203a	
D-70U	N-70-S N-70-L N-70-R	ABE 402b/403b/404b ABS 402b/403b/404b ABH 402b/403b/404b ABL 402b/403b/404b	EBE 403b EBS 403b EBH 403b EBL 403b
E-70U			
-			
D-80U	N-80-S N-80-L N-80-R	ABE 802b/803b/804b ABS 802b/803b/804b ABL 802b/803b/804b	EBS 803b EBL 803b
E-80U			
-			

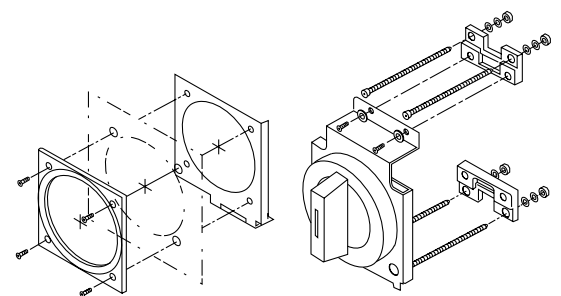
Development figure



(D-35-55)



(N-30b, 40b, 55b, N-55, N-60)

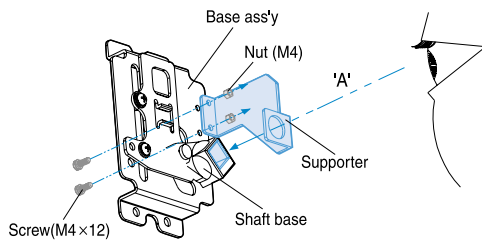


(N-70, N-80)

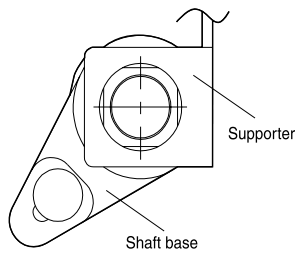
Instruction (UL handle)

Assembling procedures

- (1) Mount the supporter on BASE ASS'Y with two screws, M4 X L12 and nuts. Fig 1.
At this time, the center of supporter should be aligned to the center of groove in SHAFT BASE. Fig 2.

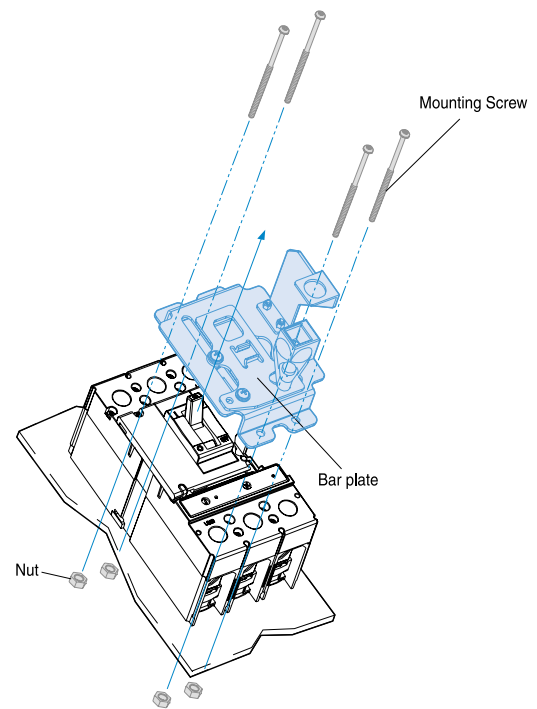


[Fig 1]



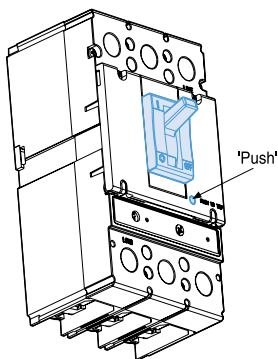
[Fig 2]

- (3) At first, Lay the BASE ASS'Y on the circuit breaker to Handle of circuit breaker project through the hole of BAR PLATE. And then, Pull the BASE ASS'Y to array mounting hole of BASE ASS'Y and circuit breaker's are on the same lines. And Tighten up mounting screws. Fig 5.

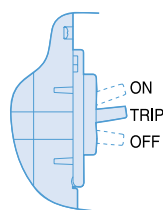


[Fig 5]

- (2) Before installation of Handle, make the circuit breaker OFF stote. Fig3,4.



[Fig 3]



[Fig 4]

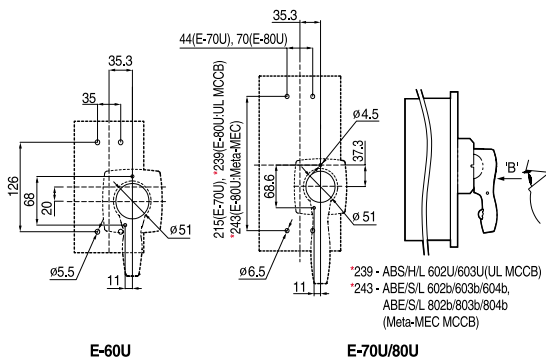
In case, you mount circuit breakers and Handle together at once, use four mounting screw of handle.

When you want to attach the new Handle on the circuit breaker in use that already mounted, remove two of four mounting screw of circuit breaker and replace two mounting screw of circuit breaker with Handle mounting screw.

In this case, remove two screw from circuit breaker on diagonal side at first and assemble the Handle right position secondary and thighten two mounting screw to empty mounting holes instead of remove old ones at last.

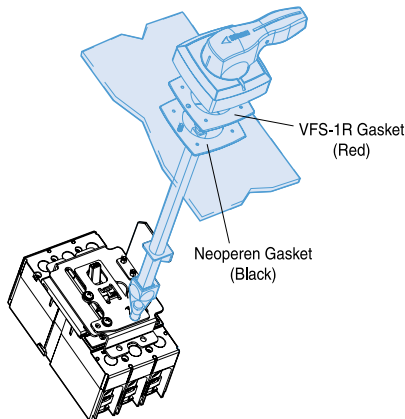
Instruction (UL handle)

(4) Assemble the HANDLE ASS'Y on the panel door.
 Before the HANDLE ASS'Y assembling, please cut holes on panel to assemble the HANDLE ASS'Y.
 And then thighten M4 X L22 two screw to assemble the HANDLE ASS'Y through holes on the door. Fig 6.



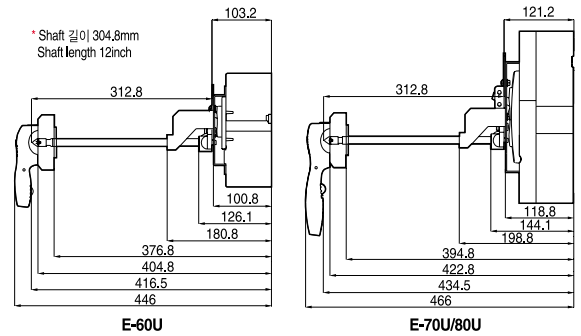
[Fig 6]

You can change operating angel, changing the HANDLE ASS'Y assembling holes position by 90 degree at same center point in clockwise dirstion only.
 In this case, please check whether the lenght of handle interfere the opening or not before change.
 You may use the ~X types(ex;E-60UX) for IP65 protection such as appling to NEMA 4 grade panel.
 It has two kinds of Gasket. one is made for anti-dust and the other used for waterroot.
 From the surface of panel, the waterroot gasket (Neoprece;BLACK) shoulde attached at first and then the other gasket shold be laid on and assembled the HANDLE ASS'Y at last. Fig 7.



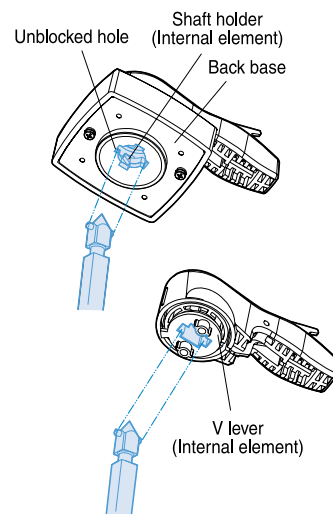
[Fig 7]

(5) If the lenght of shaft isn't fit on your panel, you can cut the shaft to use.
 Cutting should be done on bottom side that not connected to HANDLE ASS'Y.
 Connect the shaft after cutting.
 At this time, the angel of SHAFT should be settled that door can be open when HANDLE is on 'OFF' position.
 Door locked when HANDLE is on 'ON' position but just Door closing is possible. Fig 8.



[Fig 8]

And tighten the screw M5 X L14 to fix the SHAFT.
 The pin of SHAFT should be inserted to the long groove of V LEVER through the hole of BACK BASE that unblocked by SHAFT HOLDER. Fig 9.



[Fig 9]

Instruction (Plug-in mounting block)

Accessory Device of MCCB(Plug-in mounting block)

Be sure to read the instruction manual and safety precautions before use products.
This manual should be given to the person who use products and maintain them.

SAFETY PRECAUTIONS

⚠ DANGER Offending against the message can be a reason of death or serious injury.

⚠ CAUTION Incorrect handling of the device may be a cause for minor injury or physical damage.

Before installation, wiring, operation, maintenance or inspection of the device, be sure to read the warning message carefully and ensure of proper operation.

Please follow the instructions, because they are very important.

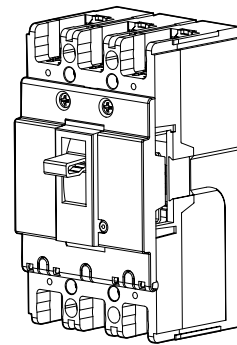
*In this instruction, level of dangerous are classified by 'DANGER' and 'CAUTION'.

⚠ DANGER

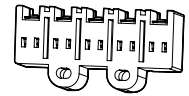
Turn off the power before mounting, dismantling, wiring, maintenance or inspection, Or it may be a cause for electrical shock or fire.

⚠ CAUTION

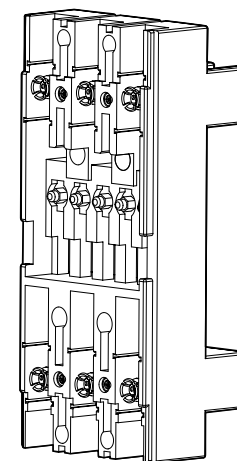
1. Do not use deformed or damaged MCCB or Mounting Block
2. Mounting, detaching, wiring, maintenance and checking should be done by authorized or certified engineer.
3. Operation handle should not be used in severe environment such as high temperature, humidity, dusty, corrosive gas, excessive vibration and impulse.
4. Mounting should be done according to the instruction manual. Mistakes on mounting may be a cause for a MCCB, ELCB and operation handle or cause an accident such as operator do himself an injury.
5. Screws and bolts should be tightened in specific torque.
6. Dust preventing measures should be done, if the MCCB and Mounting Block are used in dusty placesuch as cement plants, iron refinaries. It may result in poor contacts, defective release action or malfunction of the device.
7. Don't do reforming to the MCCB and Mounting Block without authorized permission.
8. When the MCCB and Mounting block are abolished, doing it according to the abolishing rules or regurations.



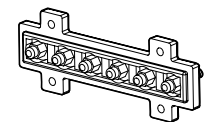
MCCB



Terminal Block of MCCB for accessories



Plug-in Mounting Block



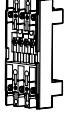
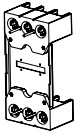
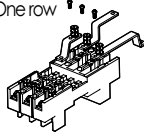
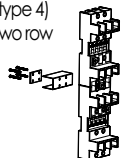


Terminal Block of Mounting Block for accessories

Instruction (Plug-in mounting block)

1. Check points before use

Check the packed parts following to Table 1 as soon as you taken.

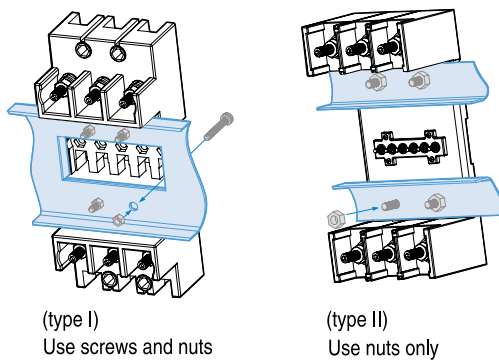
Table 1. Parts list according to the type

Classification	Type of Block Mounting	Applied MCCB	Parts list		Appendix
			Common Parts	Spare parts	
Normal Type	PB-A3-FR	ABS/H33b, ABE/S53b, ABE63b, ABE103b	1. MCCB 2. Plug-in Mounting Block 3. Instruction Manual	1. M5.L30 PH(+) P.S/W Screw : 4ea 2. M5 NUT : 4ea	(type 1) One-mold frame 
	PB-C3-FR	ABH53b, ABS/H103b			
	PB-G3-FR	GBN/H53, GBN/H103			
	PB-D3-FR	ABE/S/H203b ABH/L203a GBN/H203 GBL53, GBL103, GBL203		-	(type 2) Two-mold and plate join 
	PB-E3-FR	ABL53a, ABL103a			
	PB-I3-FR	ABE/S/H/L 403b			
	PB-J3-FR	ABE/S/L 803b			
One-Row Type	PB-A3-FR-1DB	ABS/H33b, ABE/S53b, ABE63b, ABE103b	1. M4.L30 PH(+) P.S/W Screw : 4ea 2. M4 NUT : 4ea 3. BRANCH BAR(R/S/T) : 3ea 4. M4.L10 PH(+) P.S/W : 3ea 5. BARRIER : 3ea	(type 3) One row 	
	PB-C3-FR-1DB	ABH53b, ABS/H103b			
	PB-G3-FR-1DB	GBN/H53, GBN/H103			
Twp-Row Type	PB-A3-FR-2DB	ABS/H33b, ABE/S53b, ABE63b, ABE103b	1. M5.L30 PH(+) P.S/W Screw : 4ea 2. M5 NUT : 4ea 3. INSULATION BARRIER : 1ea 4. CONNECTING PLATE : 1ea 5. M4.L35 PH(+) P.S/W : 4ea	(type 4) Two row 	
	PB-C3-FR-2DB	ABH53b, ABS/H103b			
	PB-G3-FRL	GBN/H53, GBN/H103			
Line-only Type	PB-A3-FRL	ABS/H33b, ABE/S53b, ABE63b, ABE103b	1. M4.L30 PH(+) P.S/W Screw : 3ea 2. M4 NUT : 3ea	(type 5) Line only 	
	PB-C3-FRL	ABH53b, ABS/H103b			
	PB-G3-FRL	GBN/H53, GBN/H103			
Accessories	PBA-100U (Moving/Fixed Contact)	ABS/H33b, ABE/S53b, ABE63b, ABE103b ABH53b, ABS/H103b GBN/H53, GBN/H103	4. Terminal Block of Mounting Block for accessories	1. M4.L22 Tap Screw : 2ea 2. ACCE. CONTACT : 6ea 3. M4 NUT : 12ea	OPTION 
	PBA-225U & PBA-225L (Moving/Fixed Contact)	ABE/S/H203b ABH/L203a GBN/H203 GBL53, GBL103, GBL203 ABL53a, ABL103a ABE/S/H/L 403b ABE/S/L 803b	5. Terminal Block of Mounting Block for accessories	1. M4.L22 Tap Screw : 2ea 2. M3.L8 PH(+) Screw : 4ea	

Instruction (Plug-in mounting block)

2. Installation Plug-in Mounting Block

- (1) Please cut hole on panel before installation of the Plug-in Mounting Block.
- (2) Mount the Plug-in Mounting Block with mounting screws nuts.



- (3) Please check the torque value when you tighten bolts.

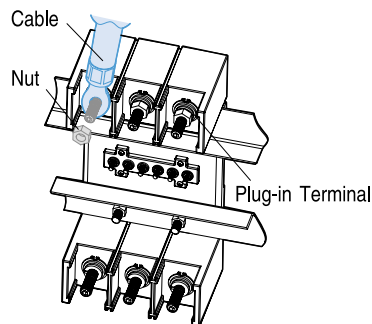
Table 3. Specific torque for screws and bolts.

Screws and Bolts	Applied MCCB/ELCB [kgf cm]
M5 Screw	23~28
M6 Screw	52~65
M6 Bolt	52~65
M8 Bolt	80~130
M10 Bolt	240 ~ 300
M16 Bolt	240 ~ 300

note2) Plug-in MCCB have a different connection way to Surface connection. So, don't apply busbars which for surface connection to Plug-in terminal.

3. Cable connection

- (1) Please remove nuts and connect cables and reassemble nuts to fix cables.
- (2) Please use the right cable belong to rating of MCCB.

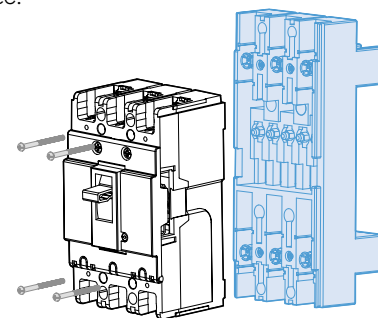


4. MCCB mounting

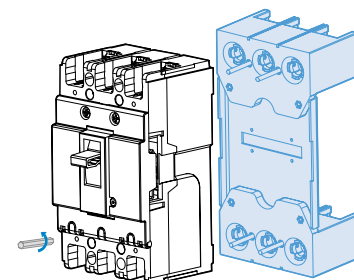
- (1) In case of 225AF or smaller size MCCB using, Assemble the MCCB on the Mounting Block and assemble mounting screws of MCCB.
- (2) Mounting Block of 400~800AF MCCB have mounting bolts in itself. use M5(4mm) wrench for 400AF MCCB, and M6(5mm) wrench for 600 and 800AF MCCB to tighten mounting bolts, the MCCB be connected with the Mounting Block automatically, and if you loosen bolts the MCCB would be moved out from Mounting Block automatically. In this case, Please tighten or loosen bolts by turns to keep the balance.

Table 2. Copper conductors for rating current of MCCB(Depend on IEC60947-2 standrad)

Rating current of MCCB [A]	Applied MCCB/ELCB [mm ²]
15 < I _n < 20 (15, 20)	2.5
25 < I _n < 32 (30)	6.0
32 < I _n < 50 (40, 50)	10
50 < I _n < 65 (60)	16
65 < I _n < 85 (75)	25
85 < I _n < 100 (100)	35
115 < I _n < 150 (125, 150)	50
150 < I _n < 175 (175)	70
175 < I _n < 225 (200, 225)	95
225 < I _n < 250 (250)	120
250 < I _n < 275	150
275 < I _n < 350 (300, 350)	185
350 < I _n < 400 (400)	240
400 < I _n < 500 (500)	150 X 2
500 < I _n < 630 (600)	185 X 2
630 < I _n < 800 (700, 800)	240 X 2



~225AF MCCB Mounting

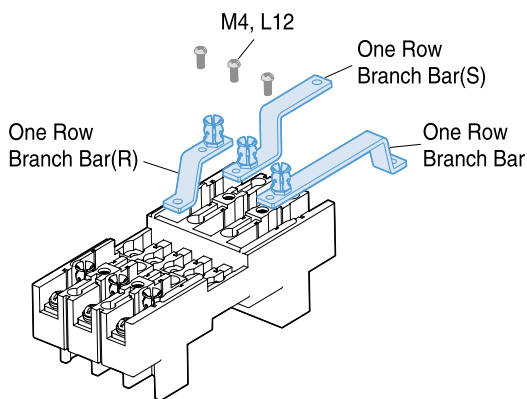


400~800AF MCCB Mounting

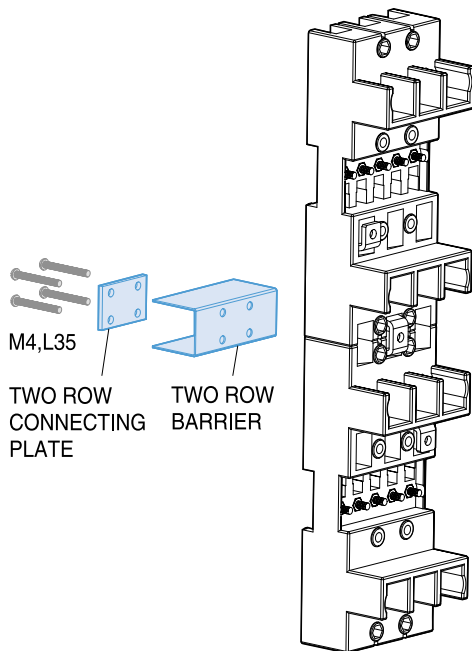
Instruction (Plug-in mounting block)

5. Assembling One Row and Two Row Mounting Block (type IV, V)

- (1) Please assemble branch bars on each phase for One Row connection.
- (2) Please assemble two Mounting Block with Connecting Plate and Barrier for Two Row connection.



One Row assembling



Two Row assembling

6. Assembling of MCCBs internal accessories

(1) Please assemble Terminal Block on MCCB and Mounting Block.

Terminal Block of MCCB should be attached to bottom of MCCB and Terminal Block of Mounting Block to rear of Mounting Block except type I Mounting Block.

Please assemble terminal to Mounting Block directly

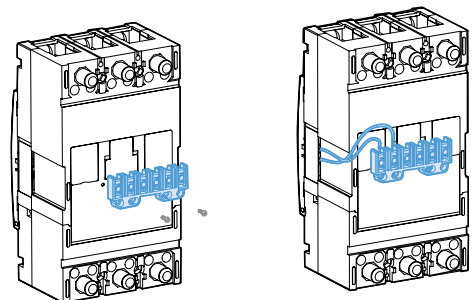
(2) Please connect accessory lead wire to terminal block following Table 4, Table 5.

Table 4. For 5 Pins

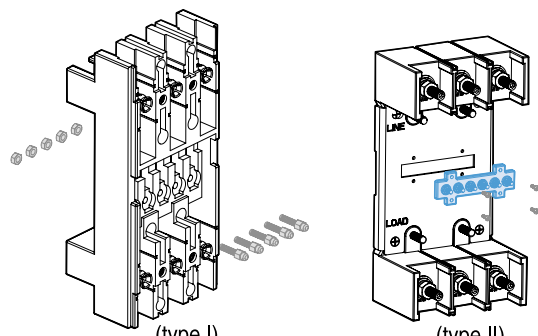
ACCESSORY	No.				
	1	2	3	4	5
UVT (SHT)	U1 (S1)	U2 (S2)			
UVT + SHT	U1	U2		S1	S2
UVT + AX (SHT) (AL)	U1 (S1)	U2 (S2)	AXa (ALa)	AXb (ALb)	AXc (ALc)

Table 5. For 6 Pins

ACCESSORY	No.					
	1	2	3	4	5	6
UVT (SHT)	U1 (S1)	U2 (S2)				
UVT + SHT	U1	U2			S1	S2
UVT + AX (SHT) (AL)	U1 (S1)	U2 (S2)		AXa (ALa)	AXb (ALb)	AXc (ALc)
AX + AL	AXa	AXb	AXc	ALa	ALb	ALc



Terminal Block of MCCB assembling



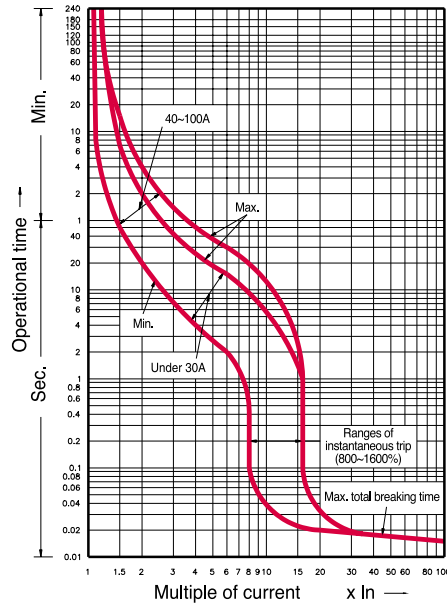
(type I) (type II)
Terminal Block of Mounting Block assembling

Operating curves & temperature compensation

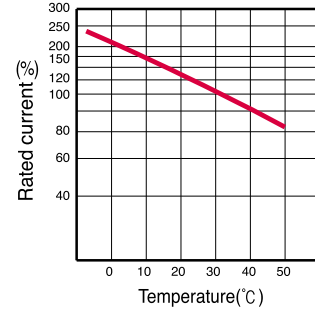
AB type MCCBs

ABE52b	ABS63b
ABE53b	ABS64b
ABE62b	ABH32b
ABE63b	ABH33b
ABS32b	EBE53b
ABS33b	EBE63b
ABE102b	EBE33b
ABE103b	EBE102b
ABS52b	EBE103b
ABS53b	EBS53b
ABS54b	EBS63b
ABS62b	EBH33b

Operating curves

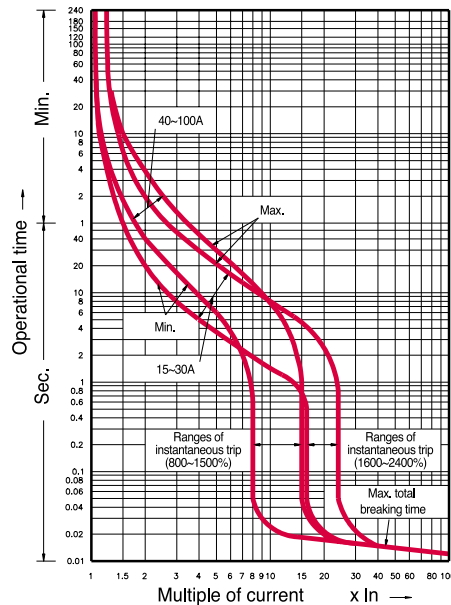


Compensation curves

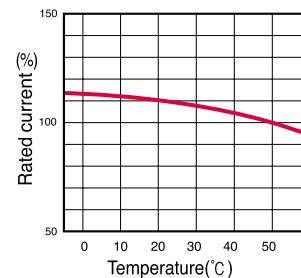


ABS102b
ABS103b
ABS104b
ABH52b
ABH53b
ABH54b
ABH102b
ABH103b
ABH104b
EBS54b
EBS103b
EBS104b
EBH54b
EBH54b
EBH104b
EBH104b

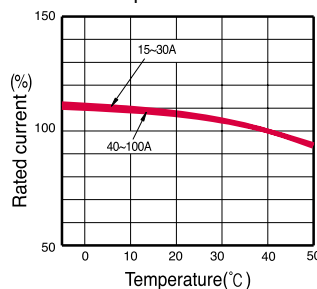
Operating curves



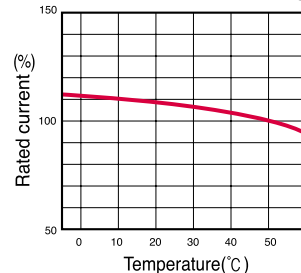
15A-30A at 50°C



Compensation curves

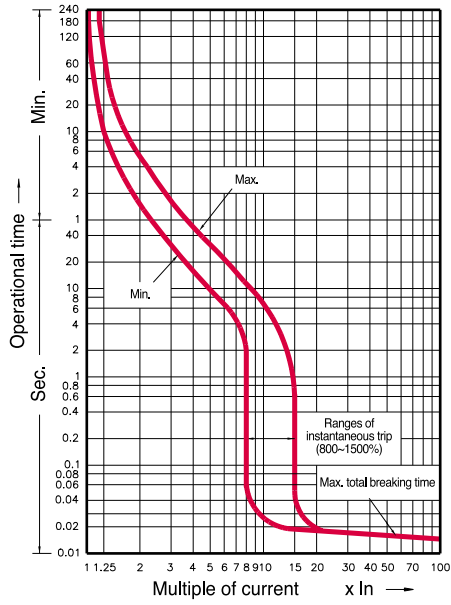


40A-100A at 50°C

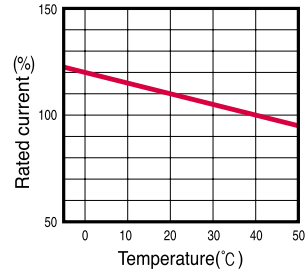


- ABE202b
- ABE203b
- ABE204b
- ABS202b
- ABS203b
- ABS204b
- ABH202b
- ABH203b
- ABH204b
- EBE203b
- EBS203b
- EBS204b
- EBH203b
- EBH204b

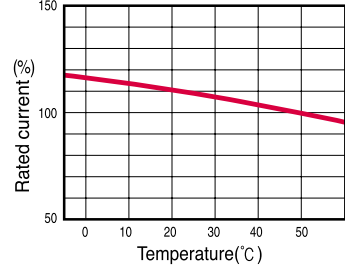
Operating curves



Compensation curves

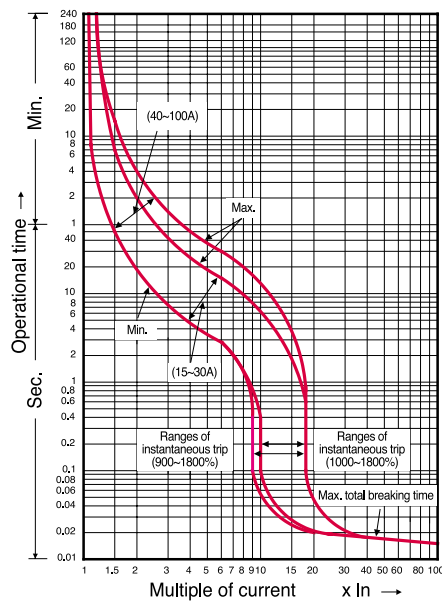


200AF at 50°C

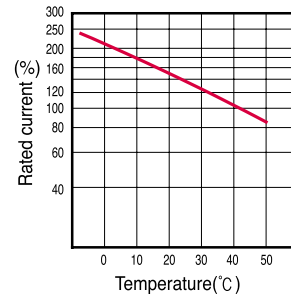


- ABE53bM
- ABE63bM
- ABE103bM
- ABS33bM
- ABS53bM
- ABS63bM

Operating curves



Compensation curves

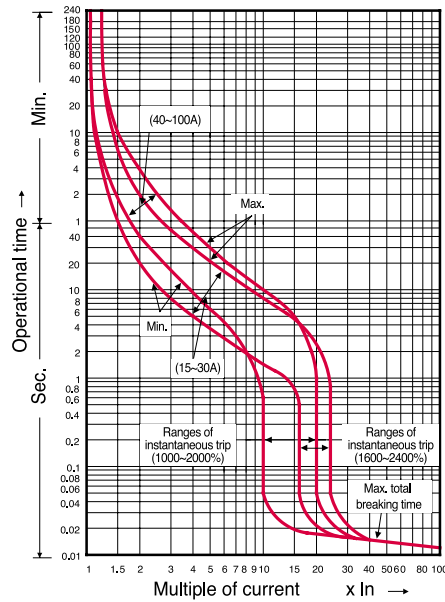


Operating curves & temperature compensation

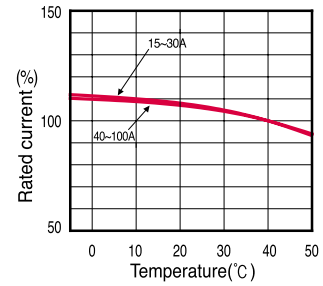
AB type MCCBs

- ABS103bM
- ABH53bM
- ABH103bM

Operating curves

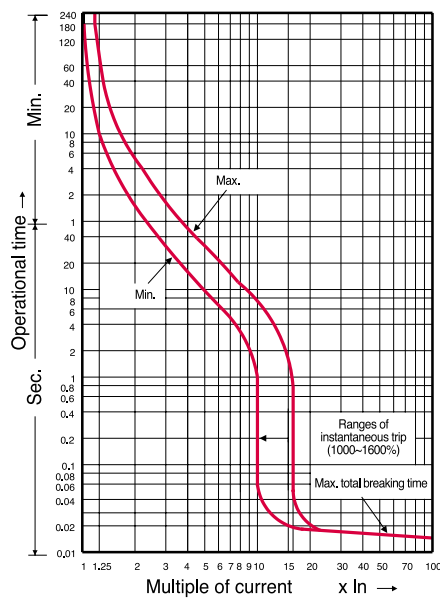


Compensation curves

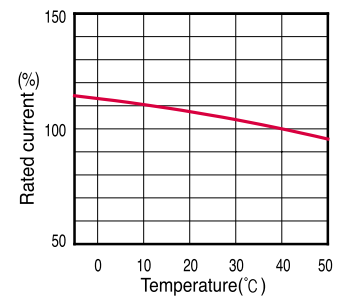


- ABE203bM
- ABS203bM

Operating curves

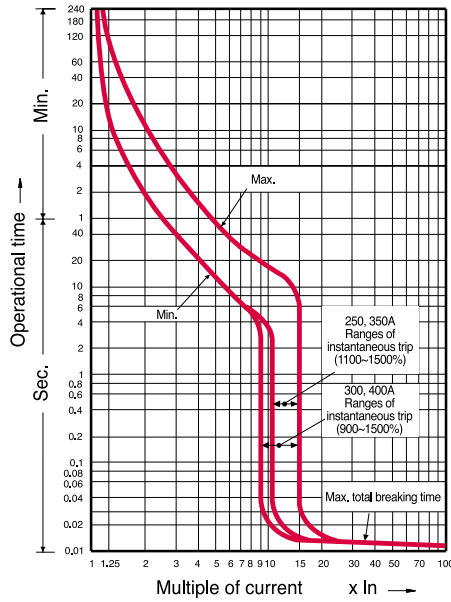


Compensation curves

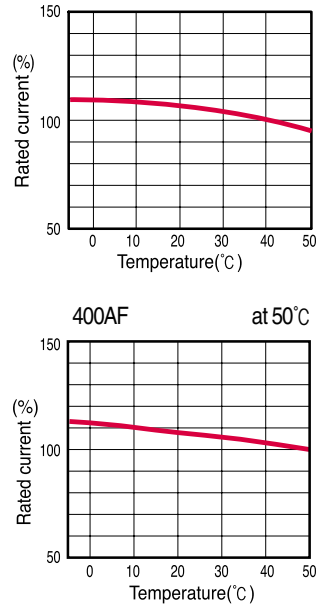


- ABE402b
- ABE403b
- ABE404b
- ABS402b
- ABS403b
- ABS404b
- ABH402b
- ABH403b
- ABH404b
- EBE403b
- EBS403b
- EBH403b
- EBL403b
- EBE404b
- EBS404b

Operating curves

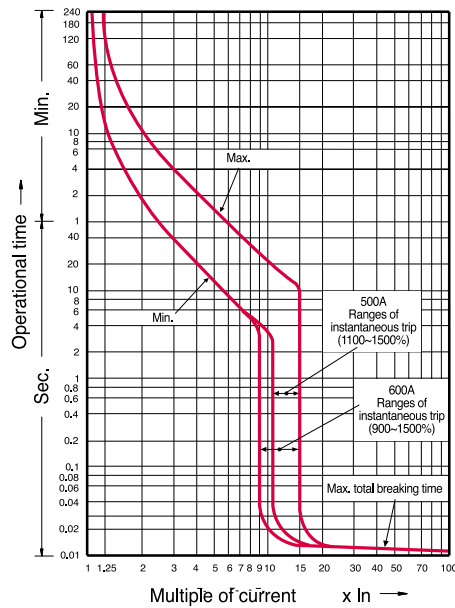


Compensation curves

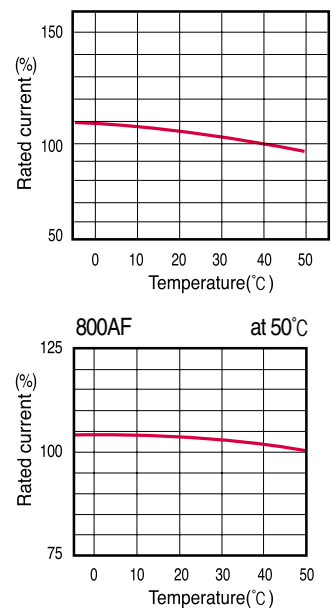


- ABE802b(500, 600A)
- ABE803b(500, 600A)
- ABE804b(500, 600A)
- ABS802b(500, 600A)
- ABS803b(500, 600A)
- ABS804b(500, 600A)
- ABL802b(500, 600A)
- ABL803b(500, 600A)
- ABL804b(500, 600A)
- EBE803b(500, 600A)
- EBS803b(500, 600A)
- EBL803b(500, 600A)

Operating curves



Compensation curves

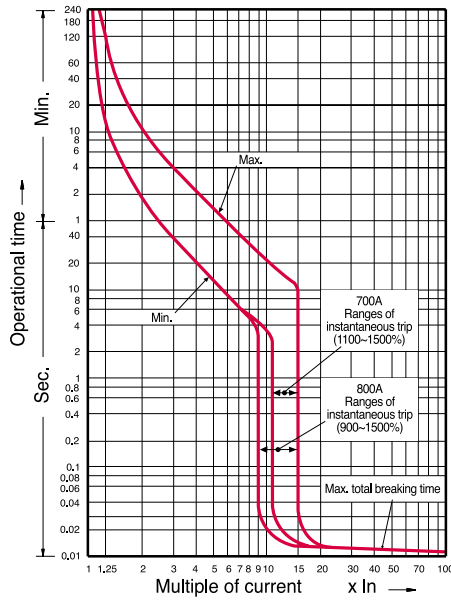


Operating curves & temperature compensation

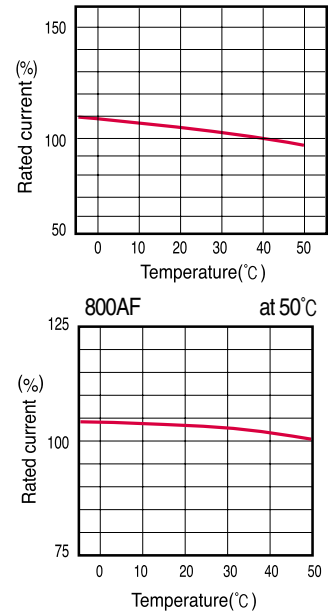
AB type MCCBs

- ABE802b(700, 800A)
- ABE803b(700, 800A)
- ABE804b(700, 800A)
- ABS802b(700, 800A)
- ABS803b(700, 800A)
- ABS804b(700, 800A)
- ABL802b(700, 800A)
- ABL803b(700, 800A)
- ABL804b(700, 800A)
- EBE803b(700, 800A)
- EBS803b(700, 800A)
- EBL803b(700, 800A)

Operating curves

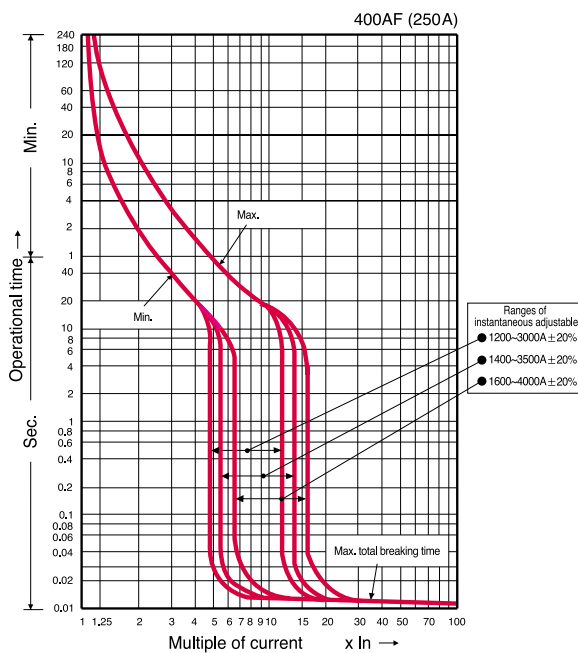


Compensation curves

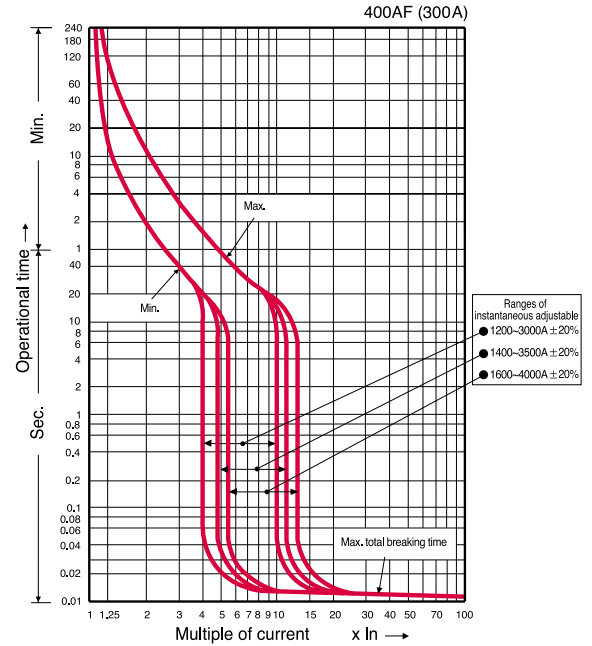


ABL403bIN

Operating curves

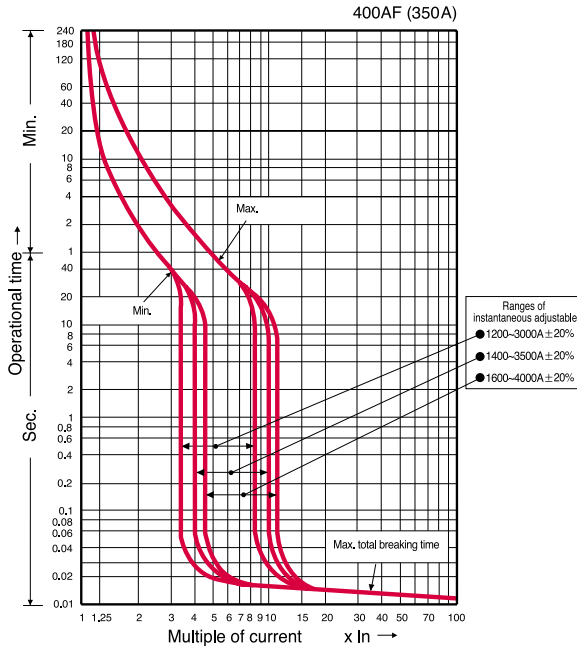


Operating curves

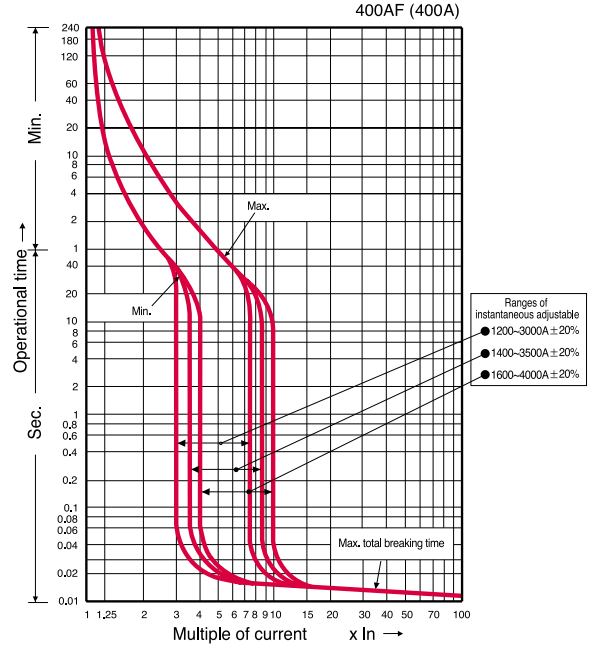


ABL403bIN

Operating curves

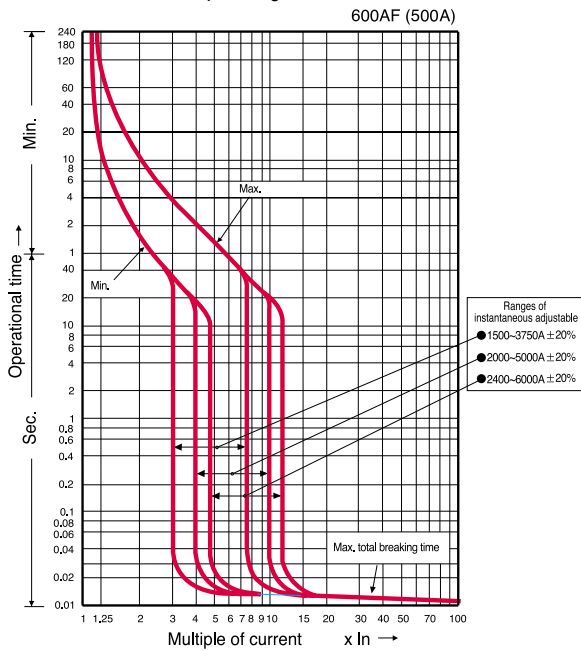


Operating curves

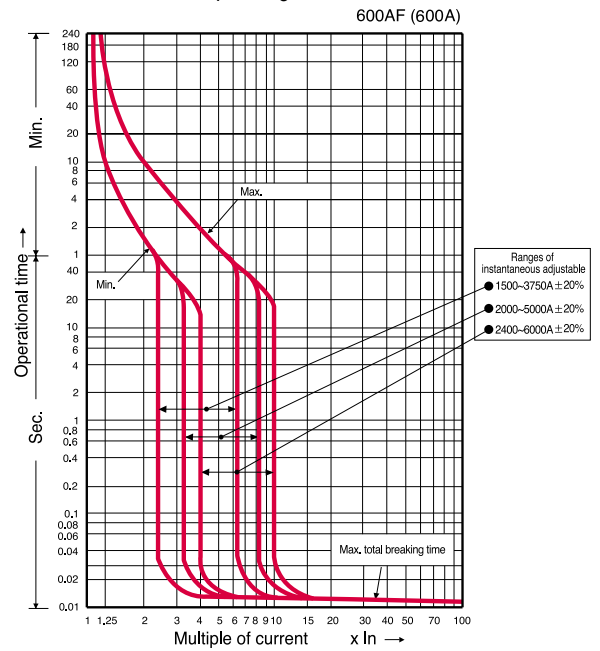


ABL803bIN(500, 600A)

Operating curves



Operating curves

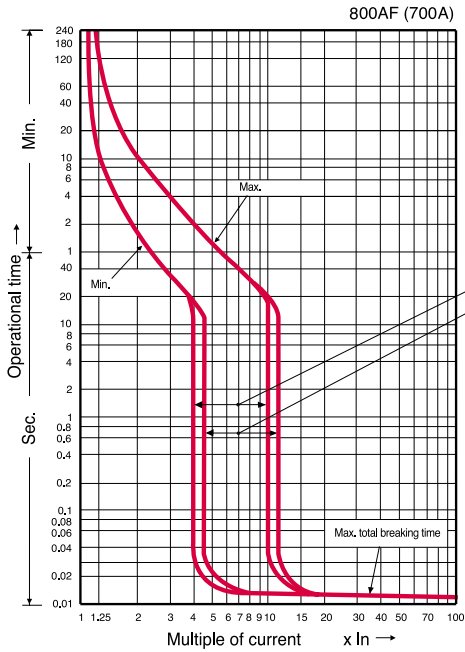


Operating curves & temperature compensation

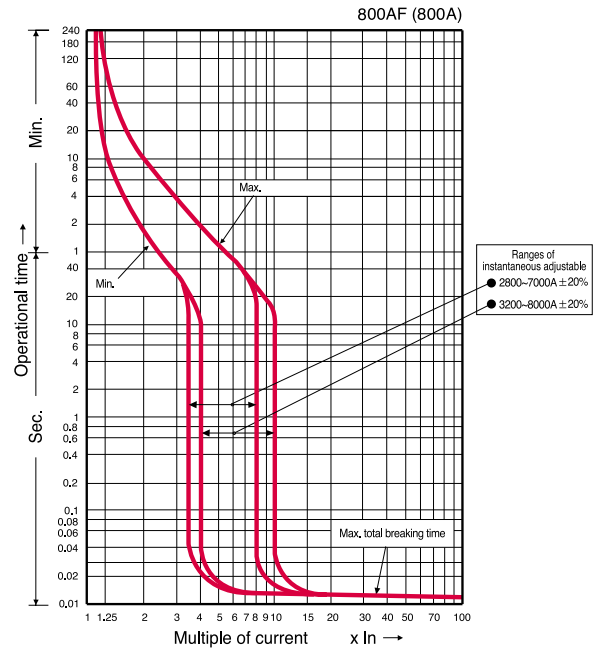
AB type MCCBs

ABL803bIN(700, 800A)

Operating curves



Operating curves



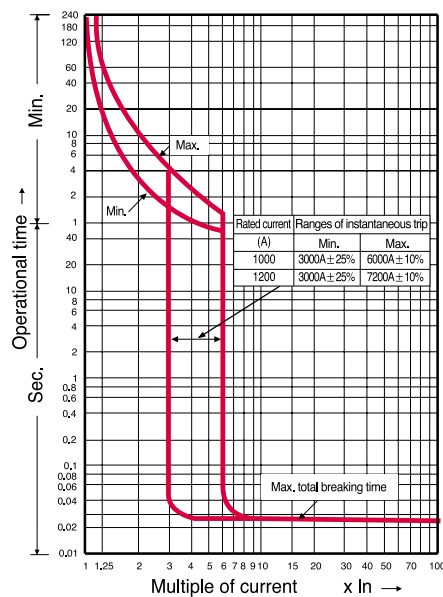
ABS1003

ABS1004

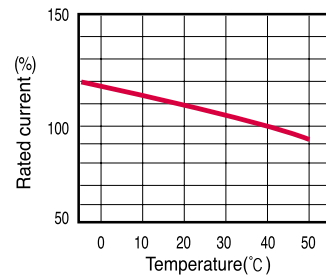
ABS1203

ABS1204

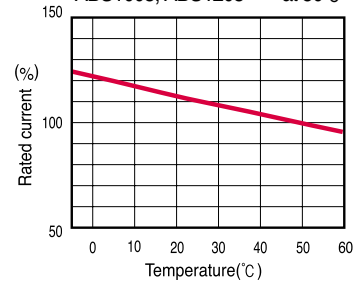
Operating curves



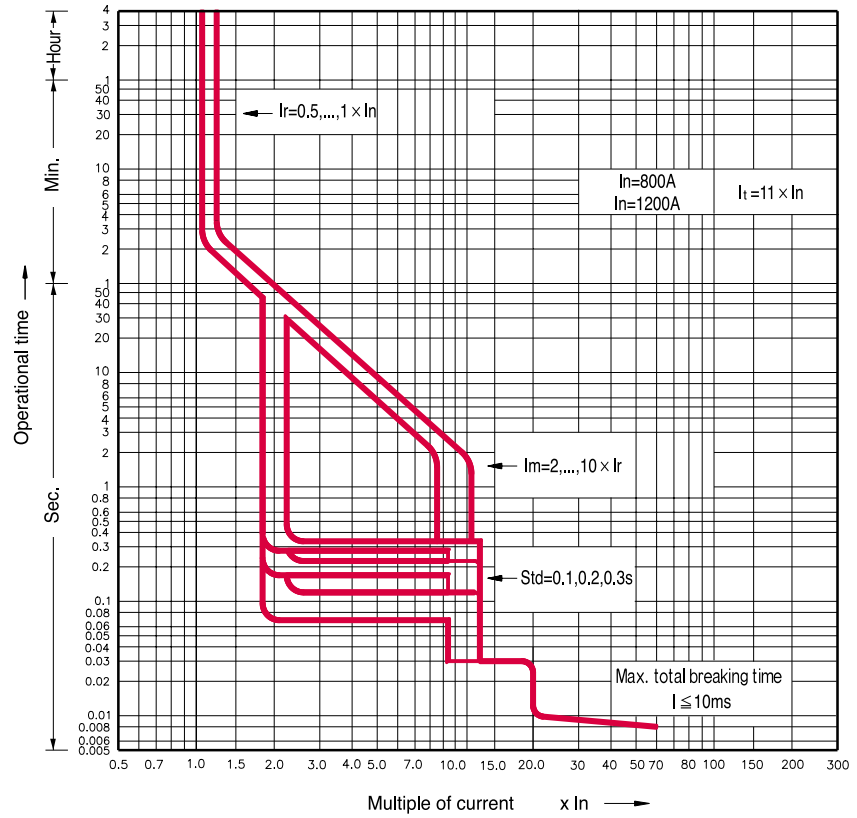
Compensation curves



ABS1003, ABS1203 at 50°C



Operating curves

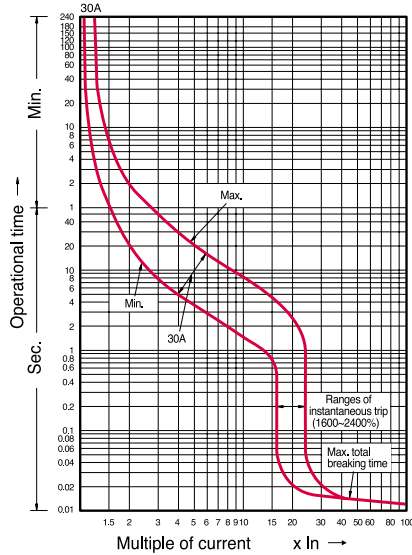


Operating curves & temperature compensation

Key lock type MCCB

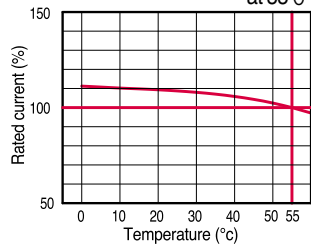
ABS103K(30A)

Operating curves



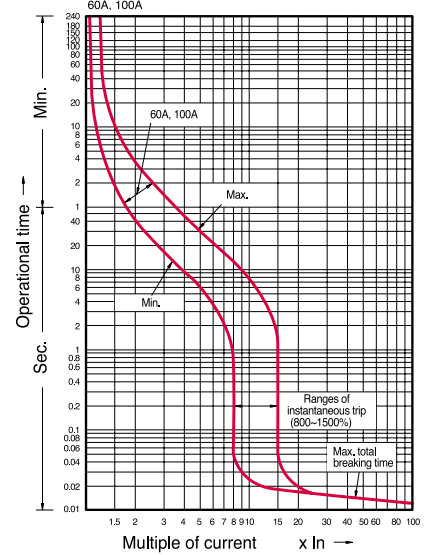
Compensation curves

at 55°C



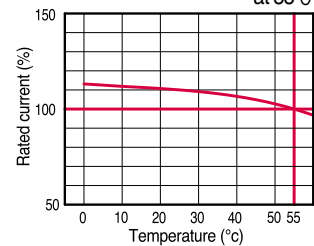
ABS103K(60, 100A)

Operating curves



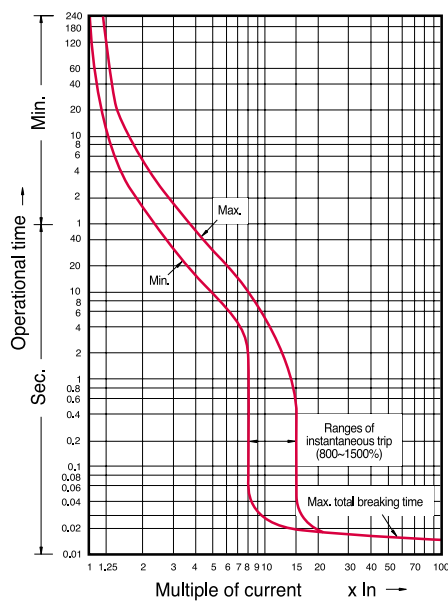
Compensation curves

at 55°C



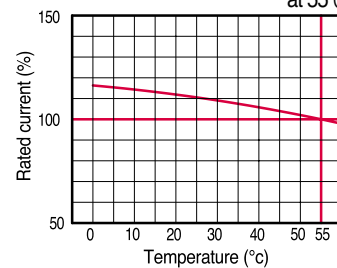
ABS203k(150A)

Operating curves



Compensation curves

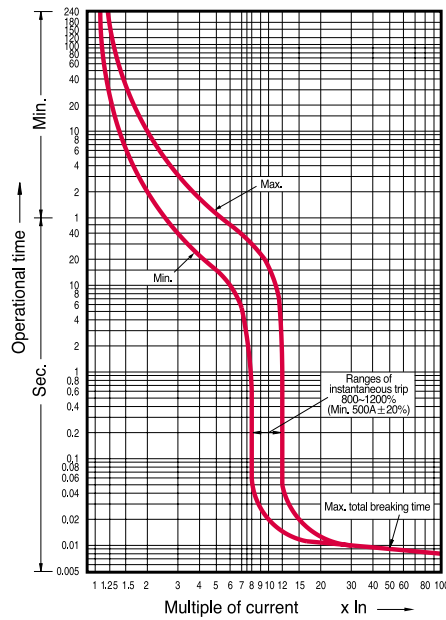
at 55°C



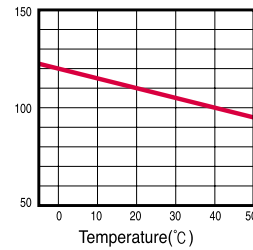
GB type adjustable MCCBs

- GBH103
- GBN103

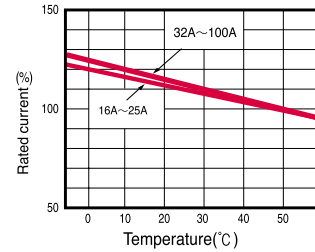
Operating curves



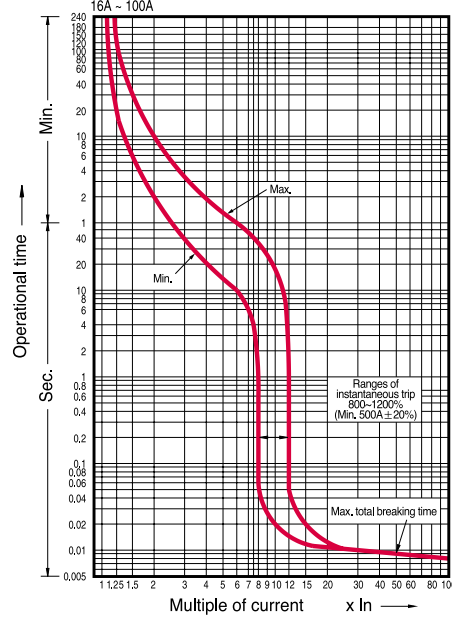
Compensation curves



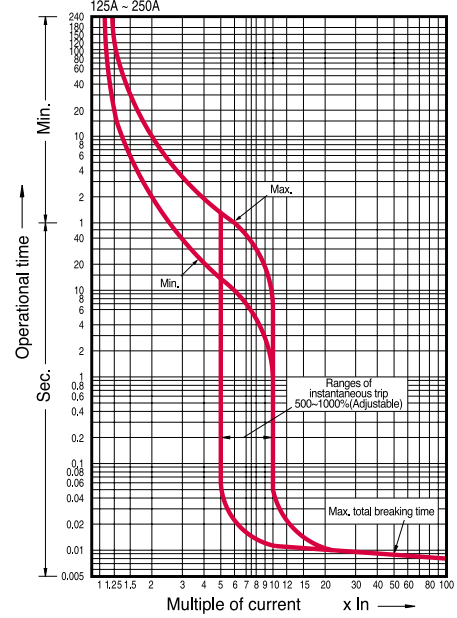
at 50°C



Operating curves

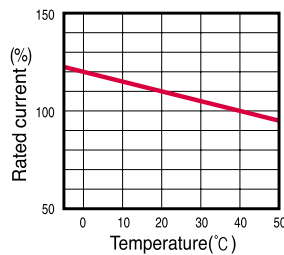


Operating curves

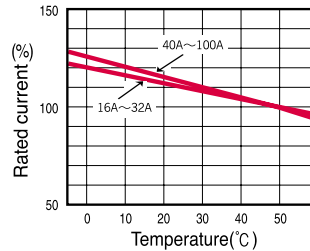


- GBH203
- GBL103
- GBL203
- GBN203

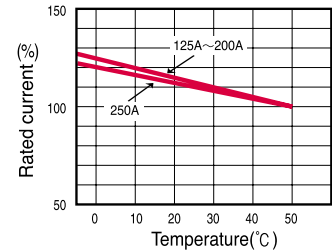
Compensation curves



16A~100A at 50°C



125A~250A at 50°C

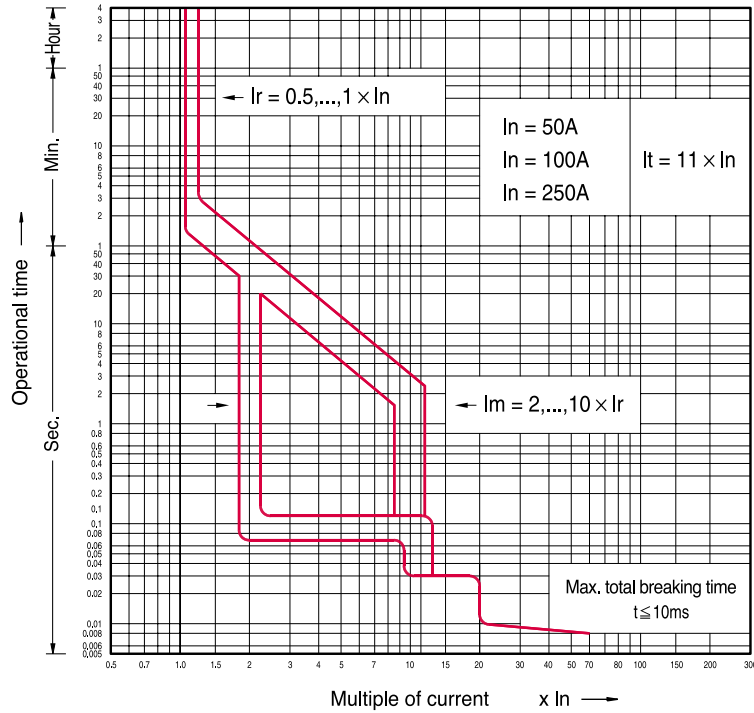


Operating curves & temperature compensation

GB type adjustable MCCBs (Electronic trip unit)

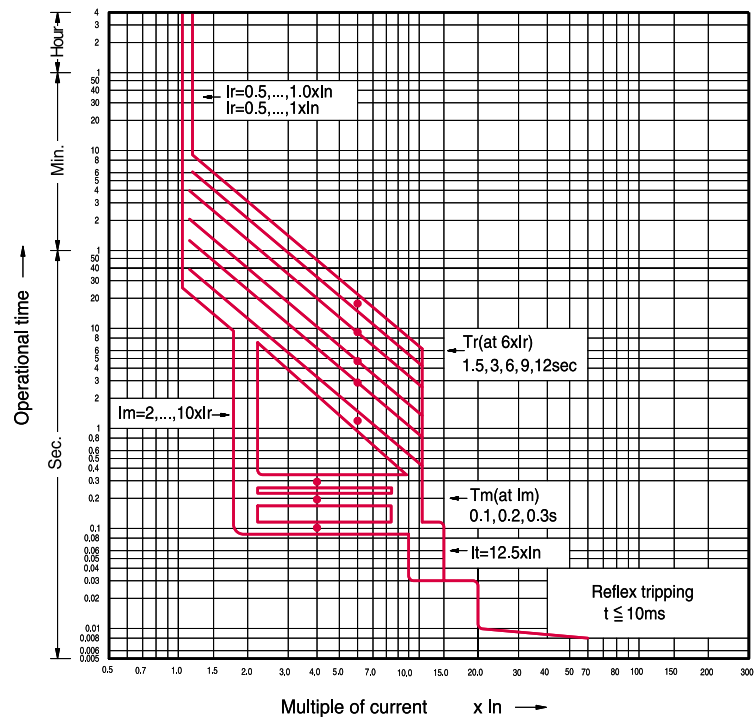
- GBL53E
- GBL103E
- GBL203E

Operating curves



- GBN403E
- GBH403E

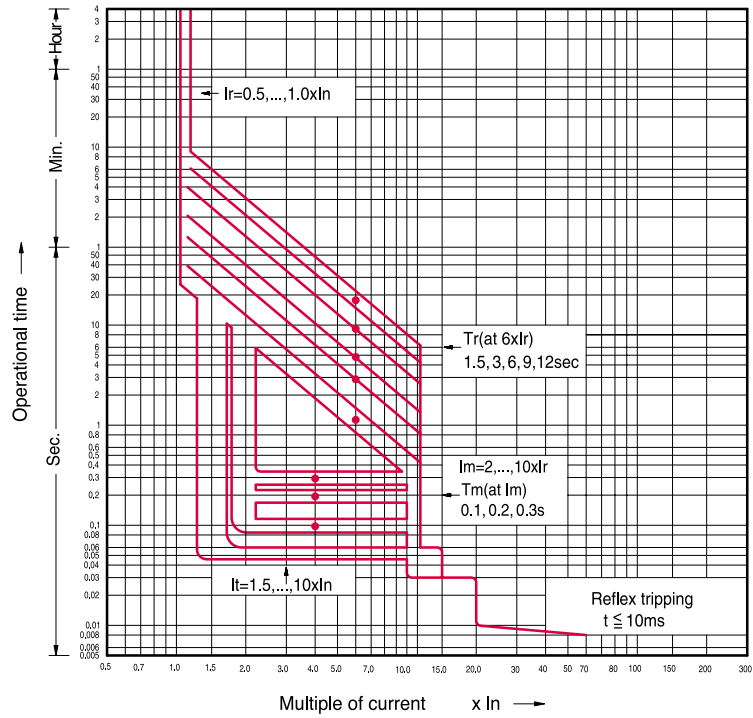
Operating curves



GBN803E

GBH803E

Operating curves

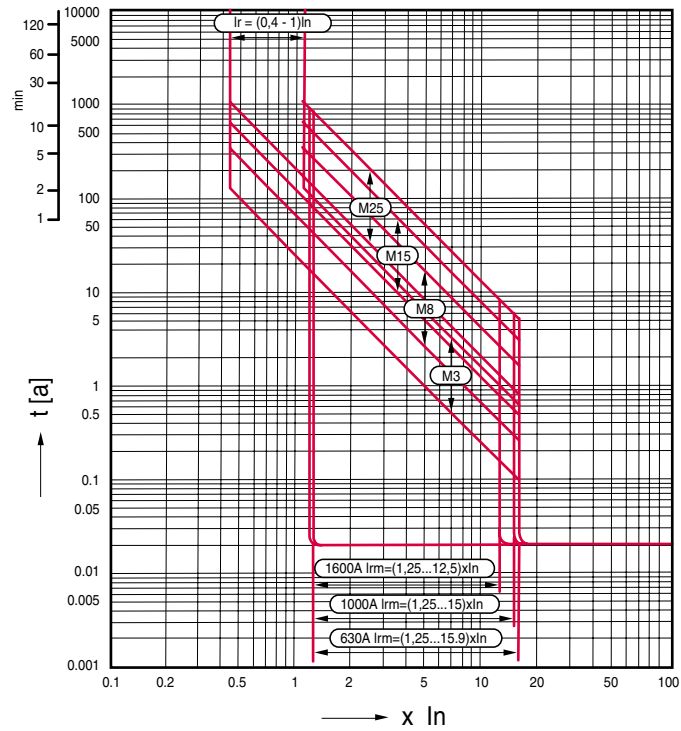


Operating curves & temperature compensation

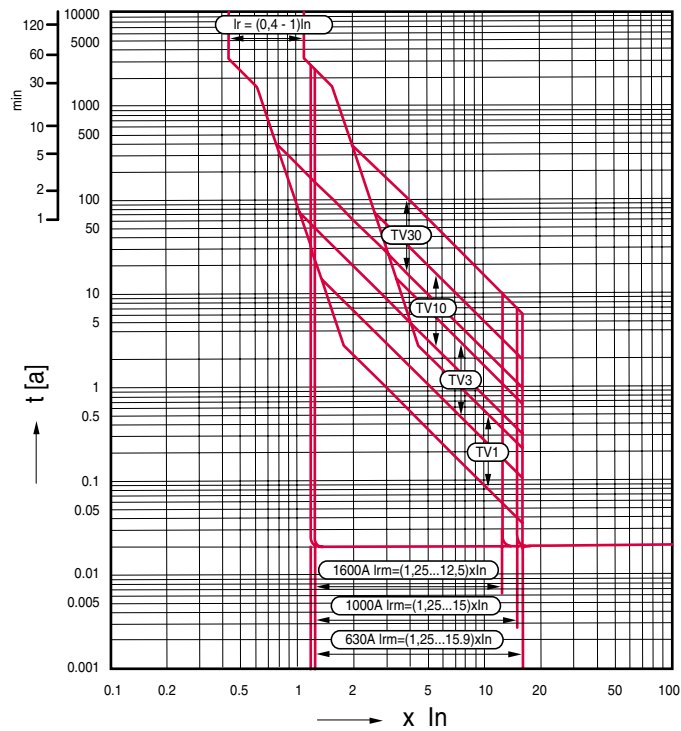
GB type adjustable MCCBs (Electronic trip unit)

GBN1603E

Operating curves (M type)



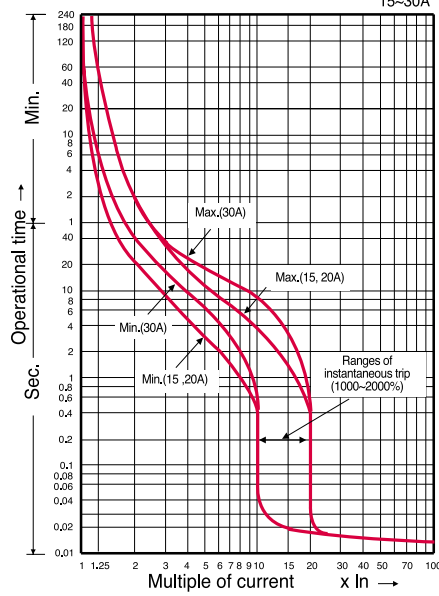
Operating curves (TV type)



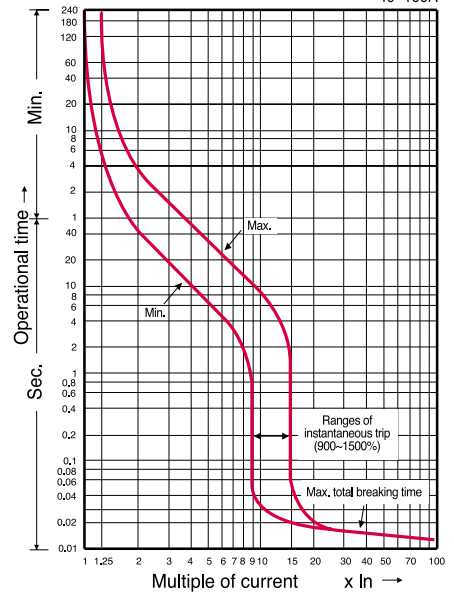
Hi-MEC MCCBs

- ABL52a
- ABL53a
- ABL54a
- ABL102a
- ABL103a
- ABL104a

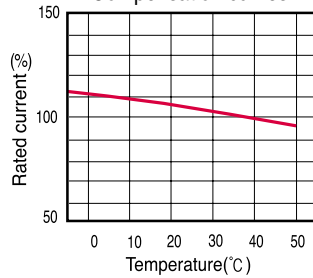
Operating curves 15-30A



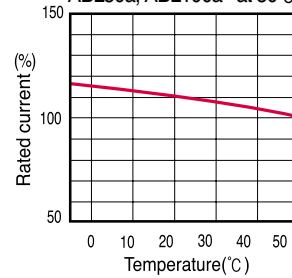
Operating curves 40-100A



Compensation curves

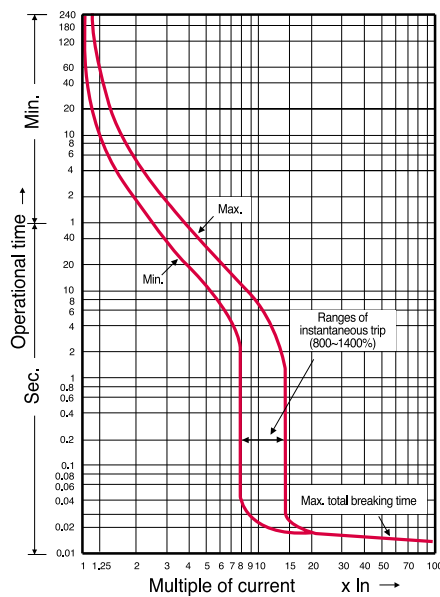


ABL50a, ABL100a at 50°C

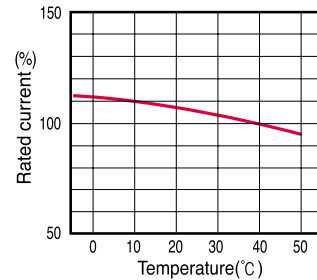


- ABL202a
- ABL203a
- ABL204a

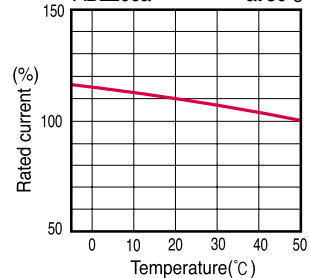
Operating curves



Compensation curves



ABL200a at 50°C

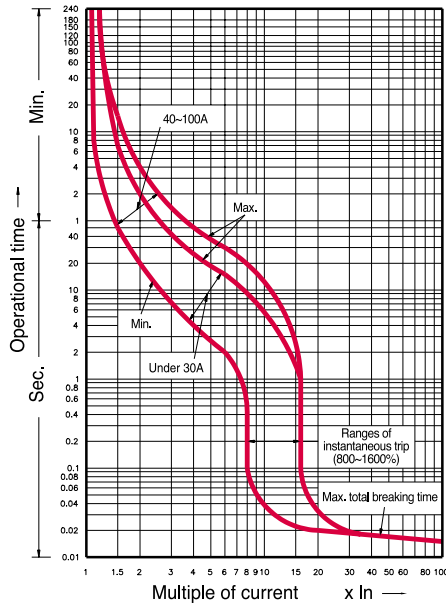


Operating curves & temperature compensation

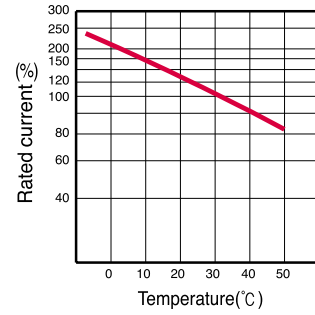
Plug-in MCCBs

- ABE53b
- ABE63b
- ABS33b
- ABE103b
- ABS53b
- ABS63b
- ABH33b

Operating curves

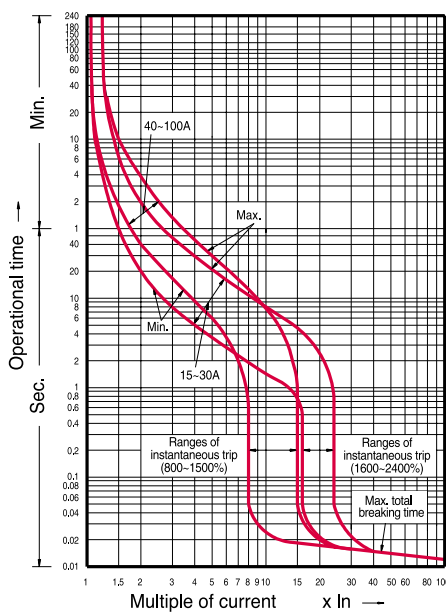


Compensation curves

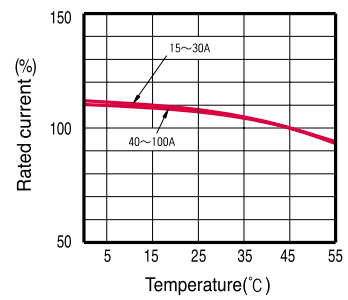


- ABS103b
- ABH53b
- ABH103b

Operating curves

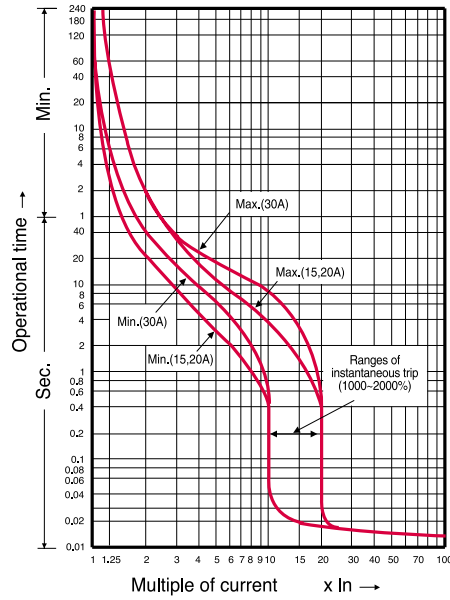


Compensation curves

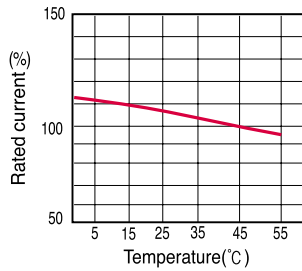
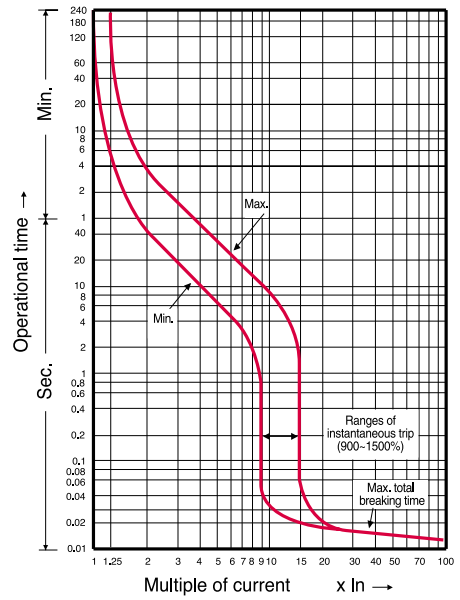


- ABL53a
- ABL103a

Operating curves

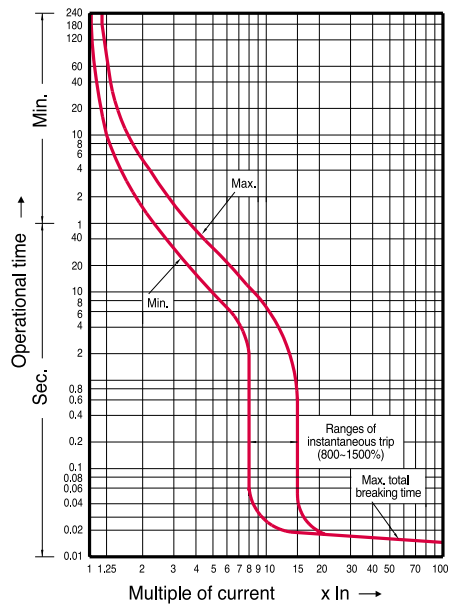


Compensation curves

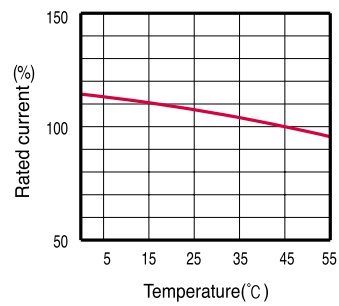


- ABE203b
- ABS203b
- ABH203b
- ABH203a
- ABL203a

Operating curves



Compensation curves

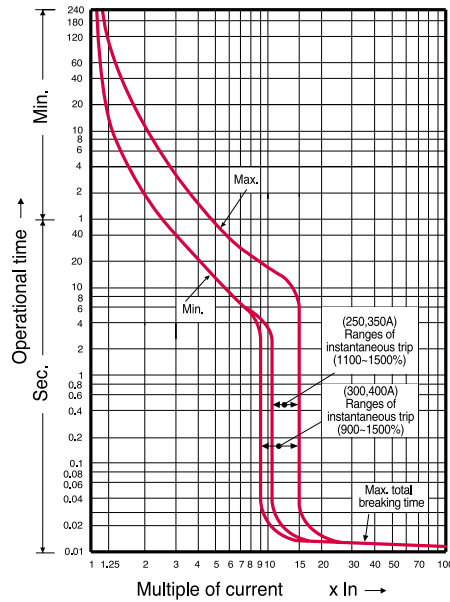


Operating curves & temperature compensation

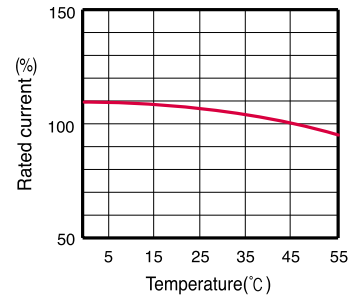
Plug-in MCCBs

- ABE403b
- ABS403
- ABH403b
- ABL403b

Operating curves

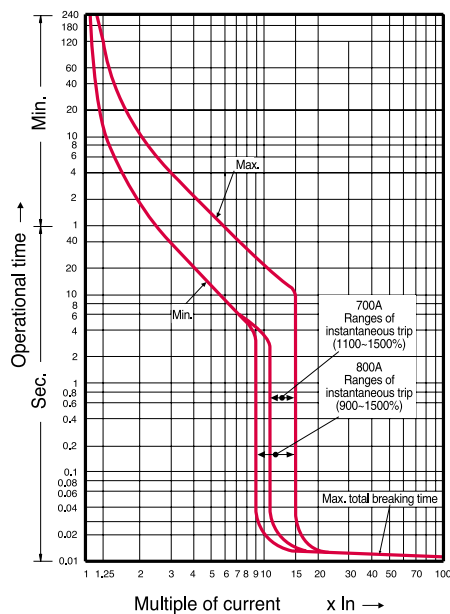


Compensation curves

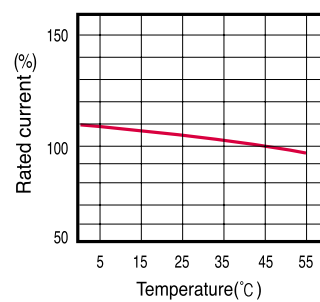


- ABE803b
- ABS803b
- ABL803b

Operating curves

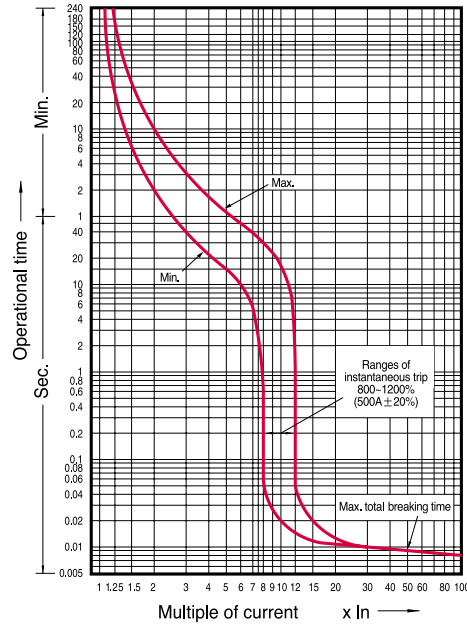


Compensation curves

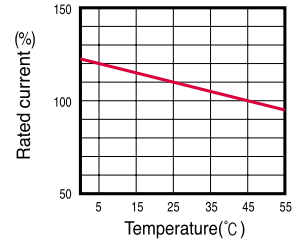


- GBN53
- GBN103
- GBH53
- GBH103

Operating curves

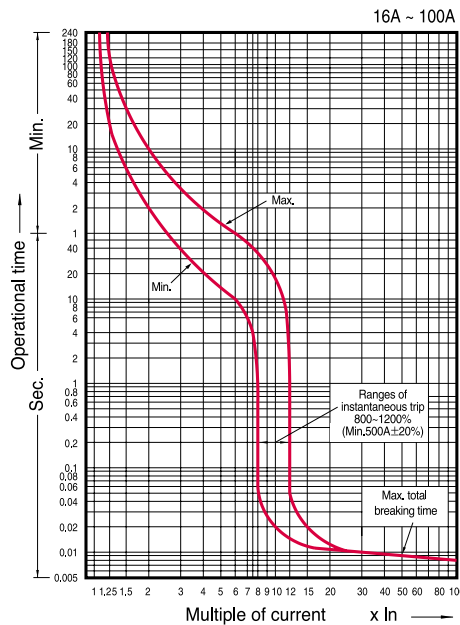


Compensation curves

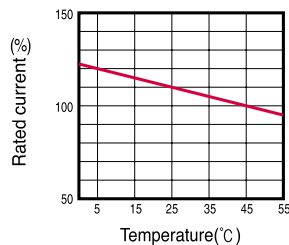
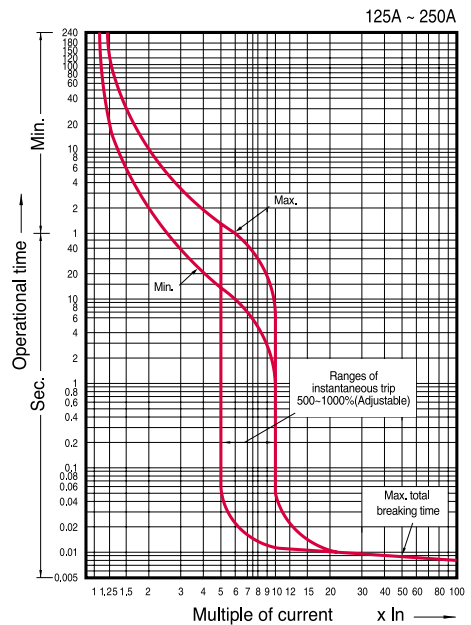


- GBL53
- GBL103
- GBN203
- GBH203
- GBL203

Operating curves



Compensation curves



Operating curves & temperature compensation

Table of the temperature compensation

● ABH53b, ABH63b, ABH103b, ABS103b

Ambient temperature : 40 °C				Ambient temperature : 50 °C			
Temperature	Rated current		Remark	Temperature	Rated current		Remark
	15~30A	40~100A			15~30A	40~100A	
-5 °C	111.9 %	110.2 %		-5 °C	113.1 %	111.2 %	
0 °C	111.3 %	109.8 %		0 °C	112.5 %	110.7 %	
10 °C	110.0 %	108.7 %		10 °C	111.3 %	109.8 %	
20 °C	108.0 %	107.0 %		20 °C	110.0 %	108.7 %	
25 °C	106.6 %	105.8 %		25 °C	109.1 %	108.0 %	
30 °C	104.9 %	104.3 %		30 °C	108.0 %	107.0 %	
35 °C	102.7 %	102.4 %		35 °C	106.6 %	105.8 %	
40 °C	100.0 %	100.0 %	Ambient temperature	40 °C	104.9 %	104.3 %	
45 °C	96.8 %	97.2 %		45 °C	102.7 %	102.4 %	
50 °C	93.3 %	94.0 %		50 °C	100.0 %	100.0 %	Ambient temperature

● ABE203b, ABS203b, ABH203b

Ambient temperature : 40 °C			Ambient temperature : 50 °C		
Temperature	Rated current		Temperature	Rated current	
	100~225A			100~225A	
-5 °C	114.3 %		-5 °C	116.3 %	
0 °C	113.2 %		0 °C	115.4 %	
10 °C	110.6 %		10 °C	113.2 %	
20 °C	107.5 %		20 °C	110.6 %	
25 °C	105.8 %		25 °C	109.1 %	
30 °C	104.0 %		30 °C	107.5 %	
35 °C	102.0 %		35 °C	105.8 %	
40 °C	100.0 %		40 °C	104.0 %	
45 °C	97.9 %		45 °C	102.0 %	
50 °C	95.6 %		50 °C	100.0 %	

● GB-TYPE MCCB

Ambient temperature : 40 °C							
Temperature	GBN/H/L 103 GBN/H/L 203				Remark		
10 °C	115.0 %						
15 °C	112.5 %						
20 °C	110.0 %						
25 °C	107.5 %						
30 °C	105.0 %						
35 °C	102.5 %						
36 °C	102.0 %						
37 °C	101.5 %						
38 °C	101.0 %						
39 °C	100.5 %						
40 °C	100.0 %				Ambient temperature		
Ambient temperature : 50 °C							
Temperature	GBN/H 103		GBL 103		GBN/H/ 203		Remark
	Rated current		Rated current		Rated current		
-5 °C	122 %	128 %	120 %	128 %	128 %	120 %	
0 °C	120 %	125 %	120 %	125 %	125 %	120 %	
10 °C	116 %	120 %	116 %	120 %	120 %	116 %	
20 °C	112 %	115 %	112 %	115 %	115 %	112 %	
25 °C	110 %	113 %	110 %	113 %	113 %	110 %	
30 °C	108 %	110 %	108 %	110 %	110 %	108 %	
35 °C	106 %	108 %	106 %	108 %	108 %	106 %	
40 °C	104 %	105 %	104 %	105 %	105 %	104 %	
45 °C	102 %	103 %	102 %	103 %	103 %	102 %	
50 °C	100 %	100 %	100 %	100 %	100 %	100 %	Ambient temperature

● ABE400b, ABS400b, ABH400b, ABL400b

Ambient temperature : 40 °C			Ambient temperature : 50 °C		
Temperature	Rated current	Remark	Temperature	Rated current	Remark
-5 °C	110.0 %		-5 °C	113.0 %	
0 °C	109.0 %		0 °C	112.0 %	
10 °C	107.0 %		10 °C	110.0 %	
20 °C	105.0 %		20 °C	108.0 %	
25 °C	104.0 %		25 °C	107.0 %	
30 °C	103.0 %		30 °C	106.0 %	
35 °C	101.5 %		35 °C	104.5 %	
40 °C	100.0 %	Ambient temperature	40 °C	103.0 %	
45 °C	98.5 %		45 °C	101.5 %	
50 °C	97.0 %		50 °C	100.0 %	Ambient temperature

● ABE800b, ABS800b, ABL800b

Ambient temperature : 40 °C			Ambient temperature : 50 °C		
Temperature	Rated current	Remark	Temperature	Rated current	Remark
-5 °C	110.0 %		-5 °C	113.0 %	
0 °C	109.0 %		0 °C	112.0 %	
10 °C	107.0 %		10 °C	110.0 %	
20 °C	105.0 %		20 °C	108.0 %	
25 °C	104.0 %		25 °C	107.0 %	
30 °C	103.0 %		30 °C	106.0 %	
35 °C	101.5 %		35 °C	104.5 %	
40 °C	100.0 %	Ambient temperature	40 °C	103.0 %	
45 °C	98.5 %		45 °C	101.5 %	
50 °C	97.0 %		50 °C	100.0 %	Ambient temperature

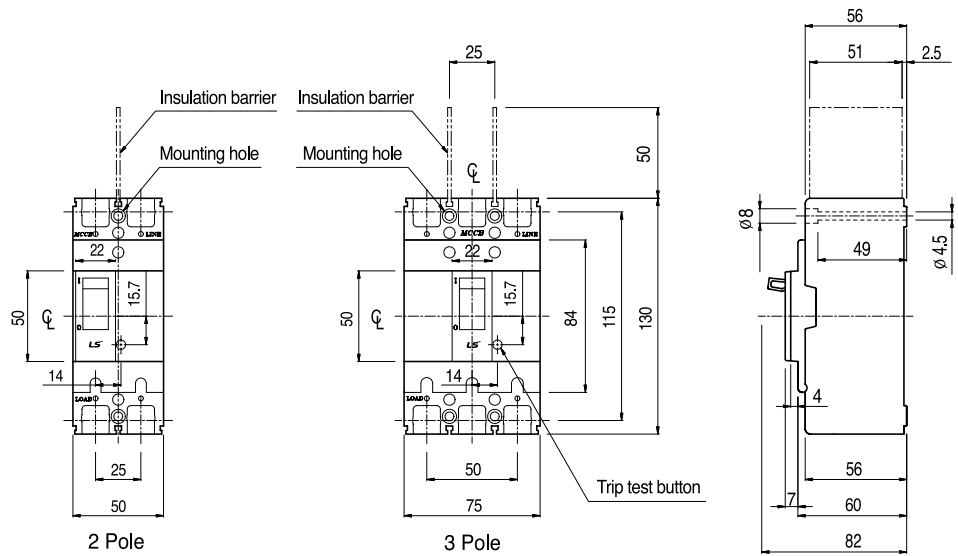
● KEY LOCK MCCB(Ambient temperature : 55°C)

Temperature	ABS103K	ABS103K	ABS203K	Remark
	30A	60A~100A	150A	
0 °C	113.1 %	111.2 %	116.3 %	
10 °C	111.9 %	110.2 %	114.3 %	
20 °C	110.7 %	109.3 %	111.9 %	
25 °C	110.0 %	108.7 %	110.6 %	
30 °C	109.1 %	108.0 %	109.1 %	
35 °C	108.0 %	107.0 %	107.5 %	
40 °C	106.6 %	105.8 %	105.8 %	
45 °C	104.9 %	104.3 %	104.0 %	
50 °C	102.7 %	102.4 %	102.0 %	
55 °C	100.0 %	100.0 %	100.0 %	Ambient temperature

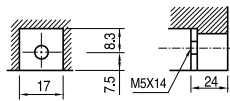
Overall dimensions

AB type MCCBs

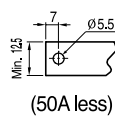
- ABE52b
- ABE53b
- ABE62b
- ABE63b
- ABS32b
- ABS33b



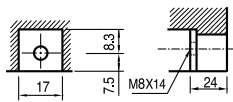
Detailed terminal



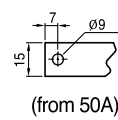
Hole size of a conductor



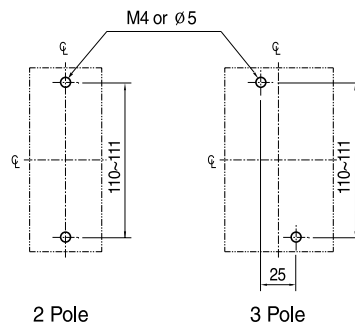
Detailed terminal



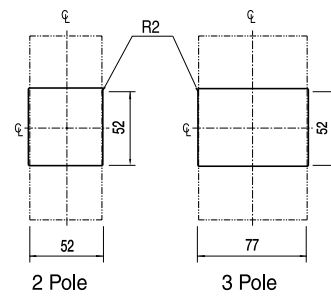
Hole size of a conductor



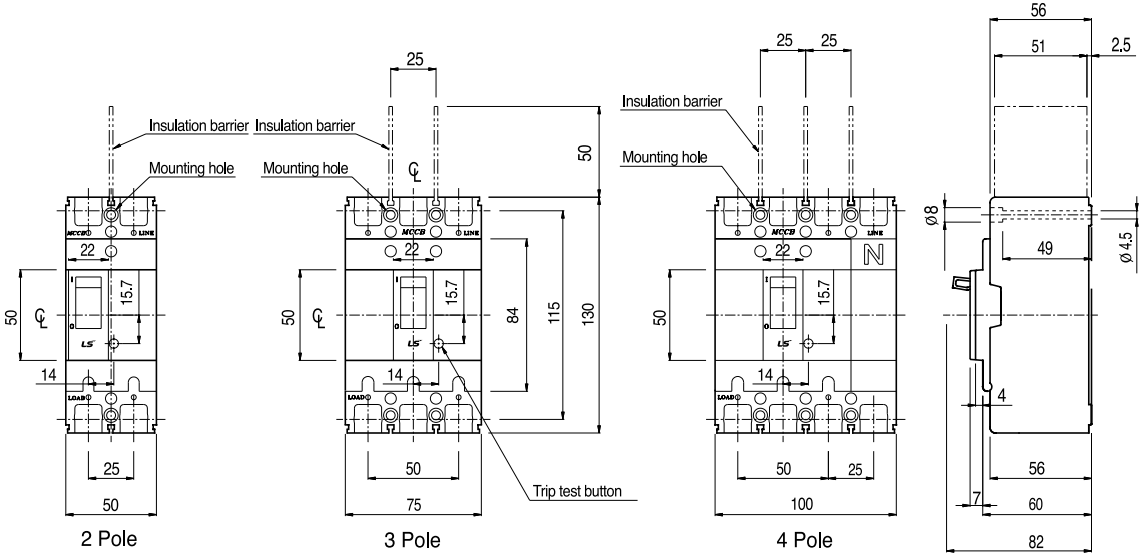
Mounting



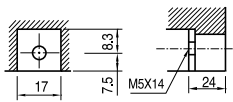
Slot



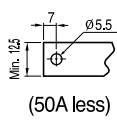
- ABE102b
- ABE103b
- ABS52b
- ABS53b
- ABS54b
- ABS62b
- ABS63b
- ABS64b
- ABH32b
- ABH33b



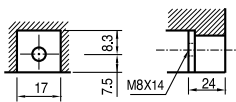
Detailed terminal



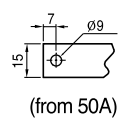
Hole size of a conductor



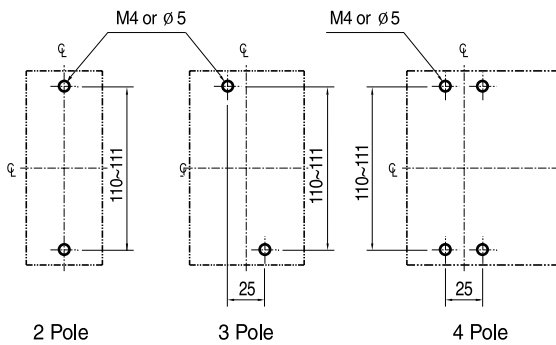
Detailed terminal



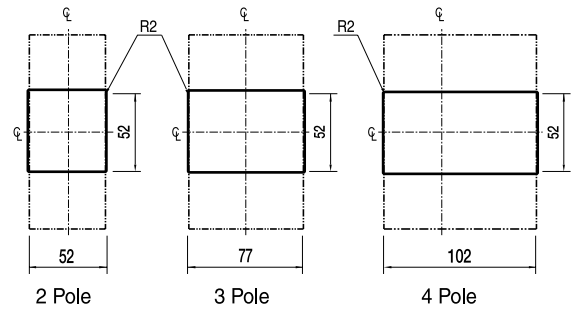
Hole size of a conductor



Mounting



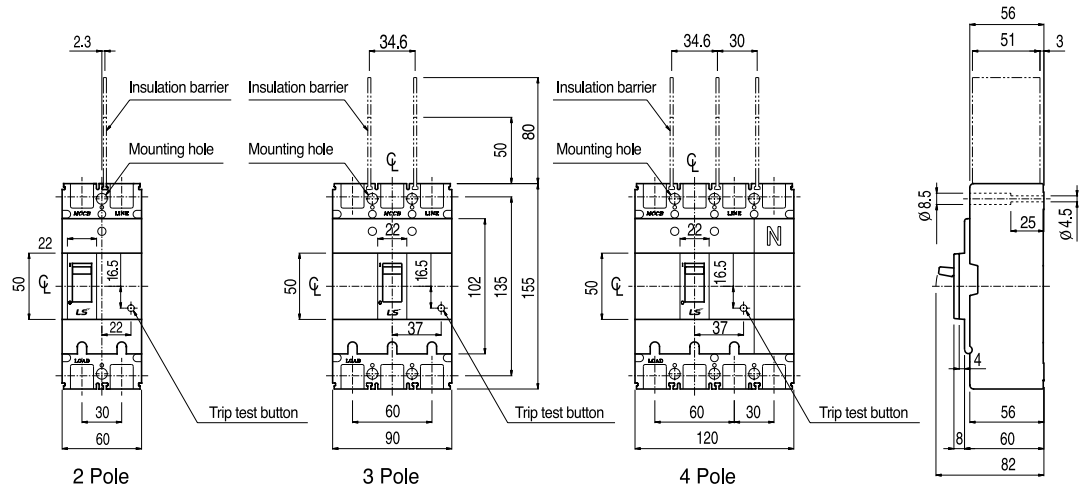
Slot



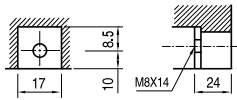
Overall dimensions

AB type MCCBs

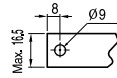
- ABS102b
- ABS103b
- ABS104b
- ABH52b
- ABH53b
- ABH102b
- ABH103b
- ABH104b



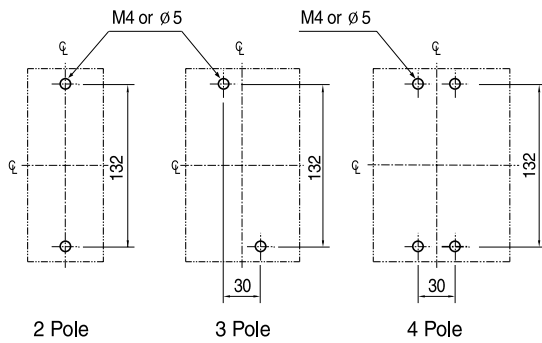
Detailed terminal



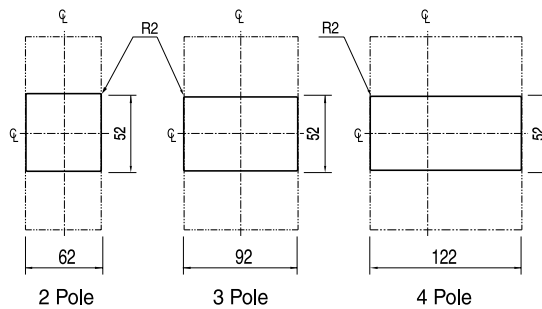
Hole size of a conductor



Mounting

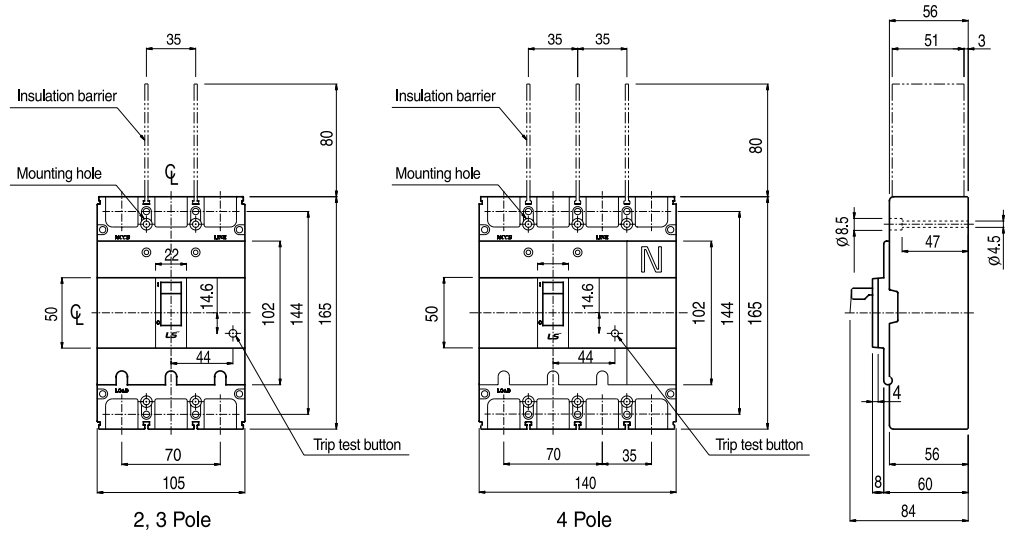


Slot

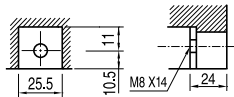


AB type adjustable MCCBs

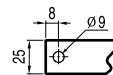
- ABE202b
- ABE203b
- ABE204b
- ABS202b
- ABS203b
- ABS204b
- ABH202b
- ABH203b
- ABH204b



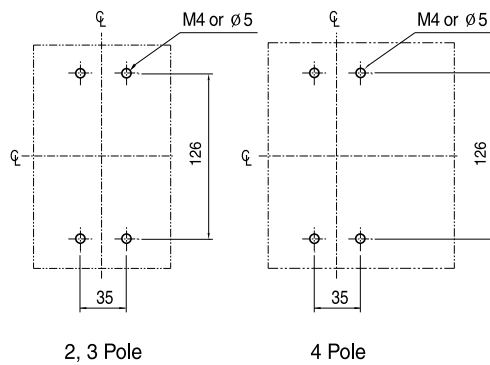
Detailed terminal



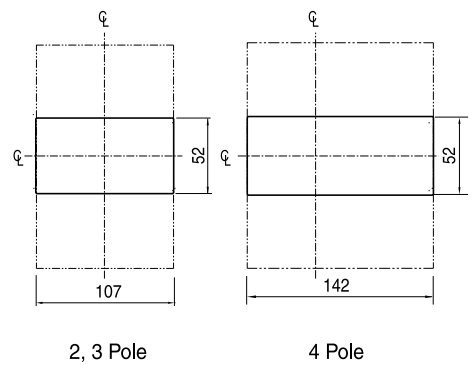
Hole size of a conductor



Mounting



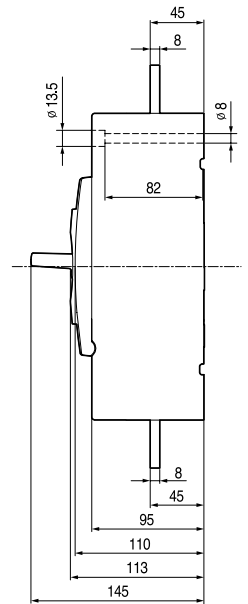
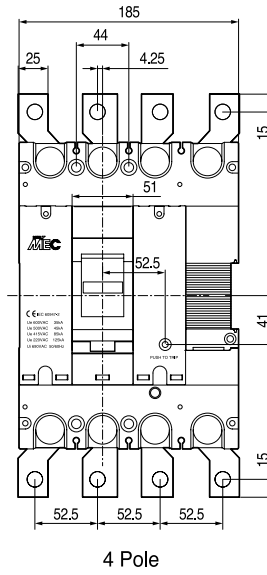
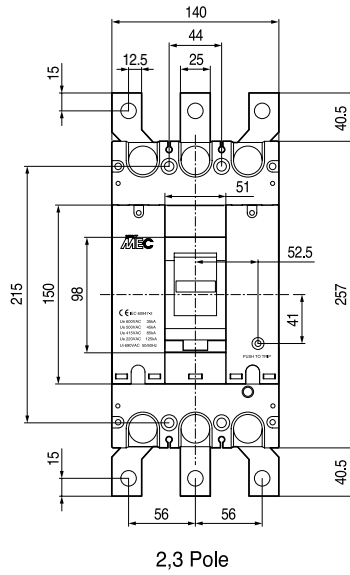
Slot



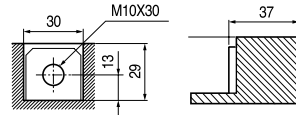
Overall dimensions

AB type adjustable MCCBs

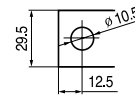
- ABE402b
- ABE403b
- ABE404b
- ABS402b
- ABS403b
- ABS404b
- ABH402b
- ABH403b
- ABH404b
- ABL402b
- ABL403b
- ABL404b



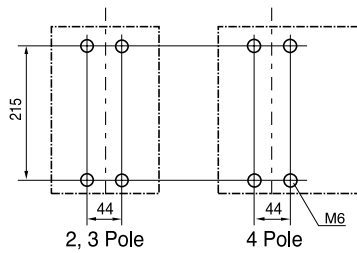
Detailed terminal



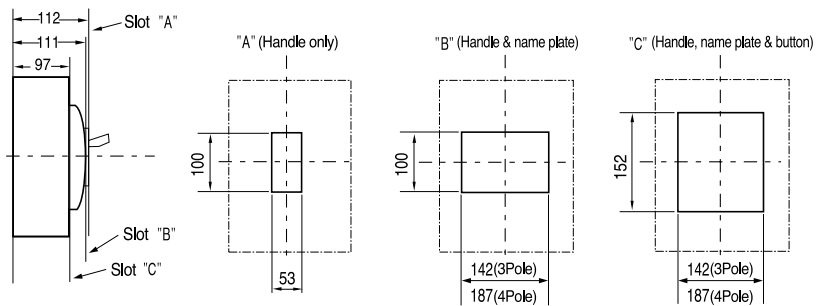
Hole size of a conductor



Mounting

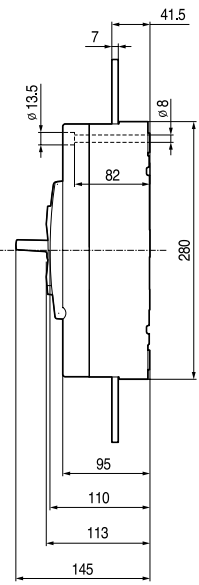
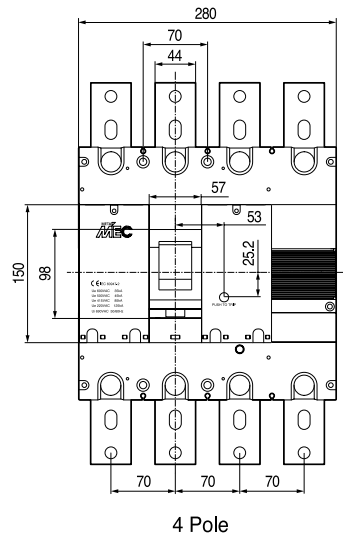
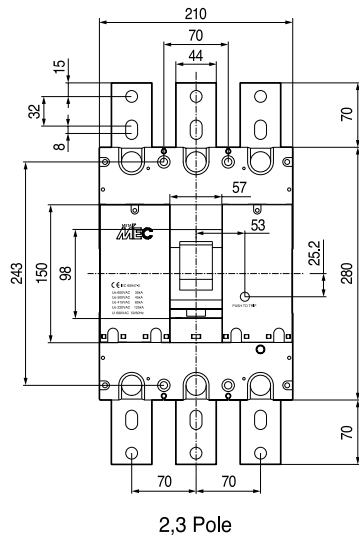


Slot

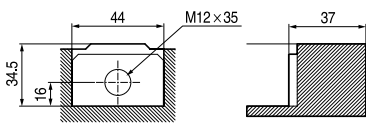


AB type MCCBs

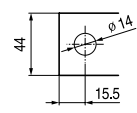
- ABE802b(500, 600A)
- ABE803b(500, 600A)
- ABE804b(500, 600A)
- ABS802b(500, 600A)
- ABS803b(500, 600A)
- ABS804b(500, 600A)
- ABL802b(500, 600A)
- ABL803b(500, 600A)
- ABL804b(500, 600A)



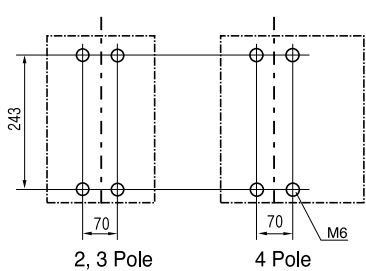
Detailed terminal



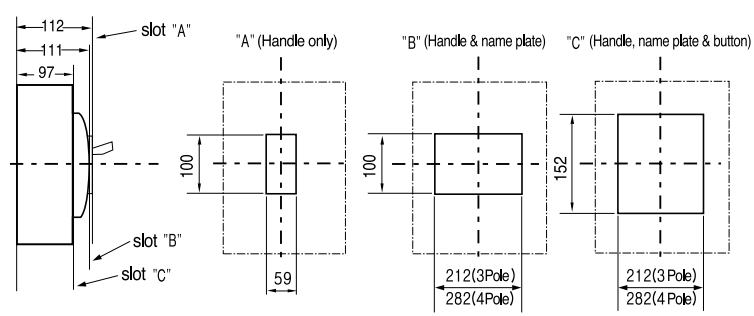
Hole size of a conductor



Mounting



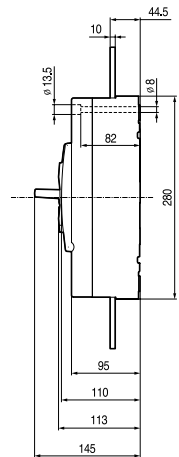
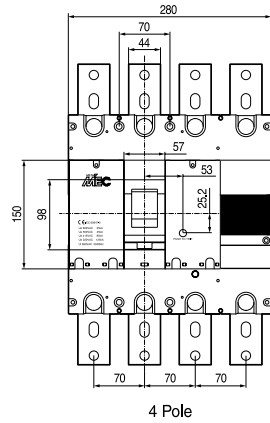
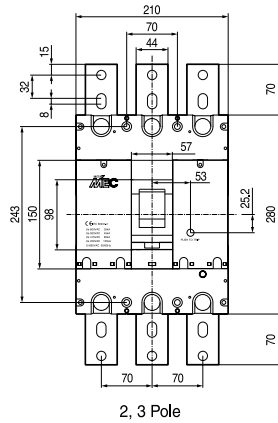
Slot



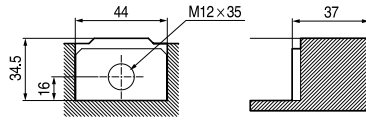
Overall dimensions

AB type MCCBs

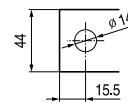
- ABE802b(700, 800A)
- ABE803b(700, 800A)
- ABE804b(700, 800A)
- ABS802b(700, 800A)
- ABS803b(700, 800A)
- ABS804b(700, 800A)
- ABL802b(700, 800A)
- ABL803b(700, 800A)
- ABL804b(700, 800A)



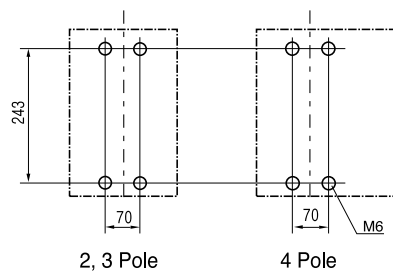
Detailed terminal



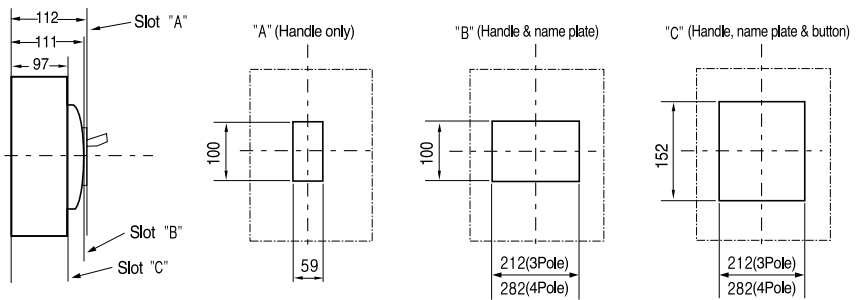
Hole size of a conductor



Mounting



Slot

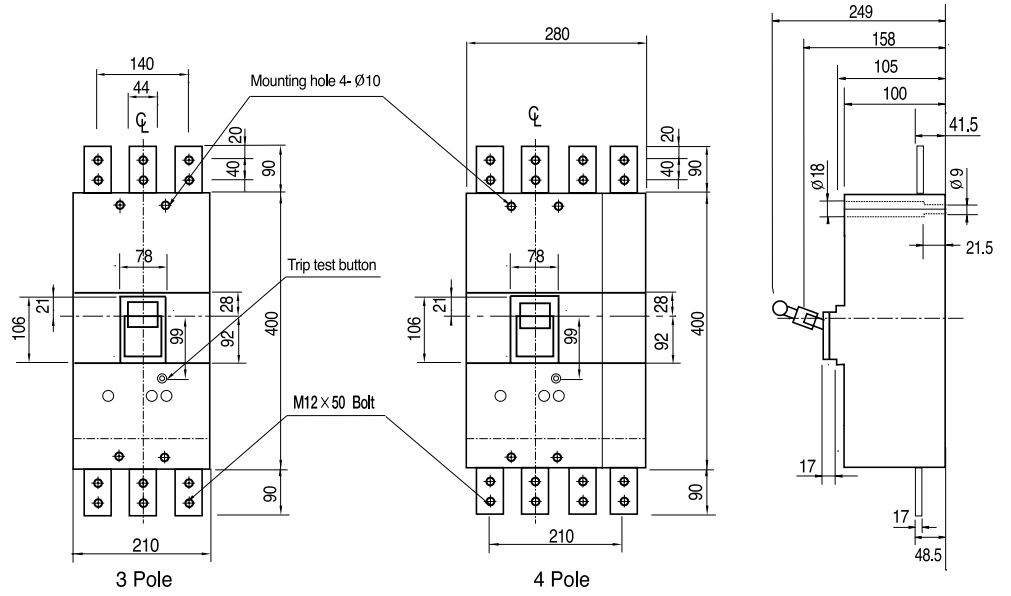


ABS1003

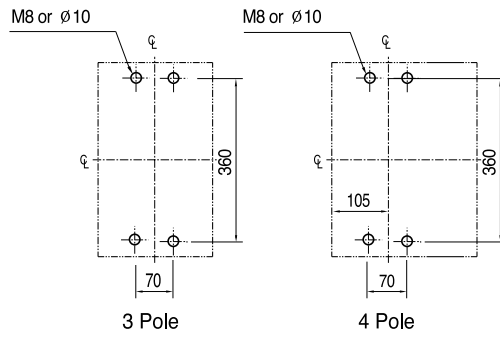
ABS1004

ABS1203

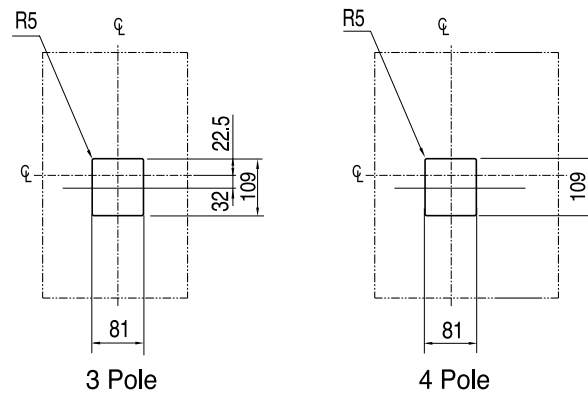
ABS1204



Mounting



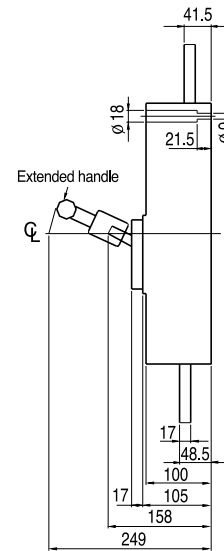
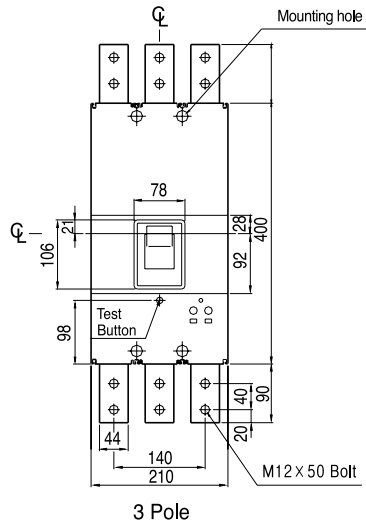
Slot



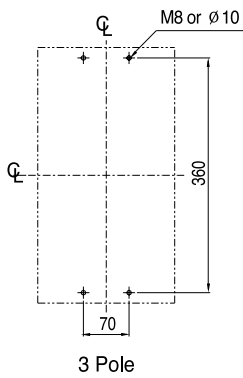
Overall dimensions

AB type MCCBs

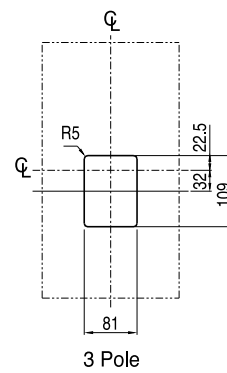
ABS1203E



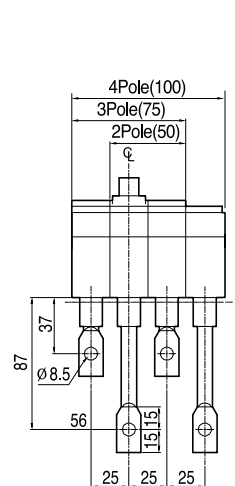
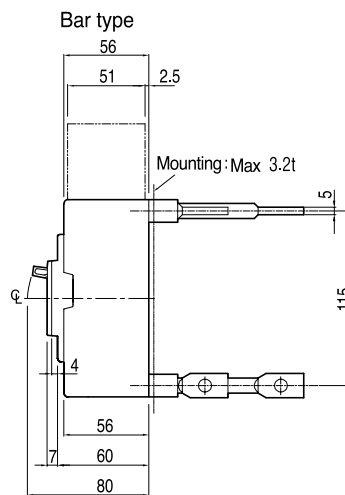
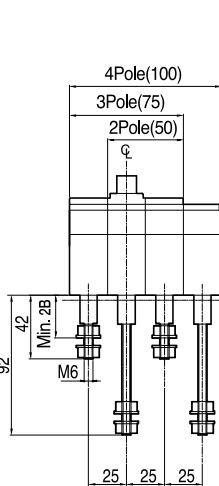
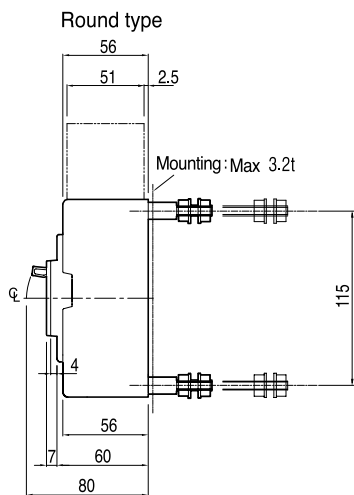
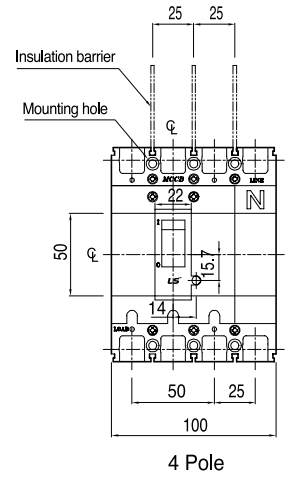
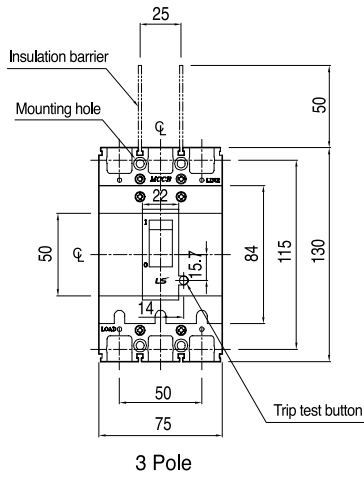
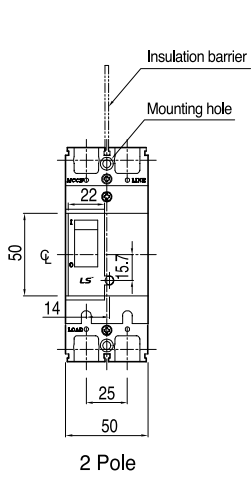
Mounting



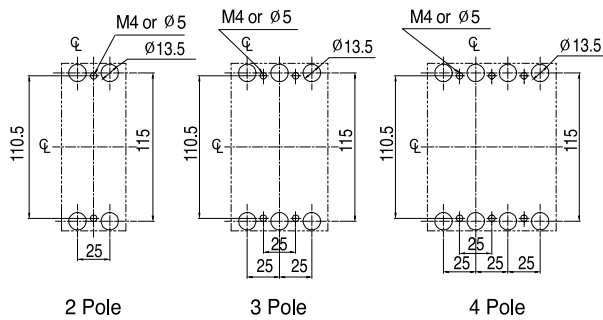
Slot



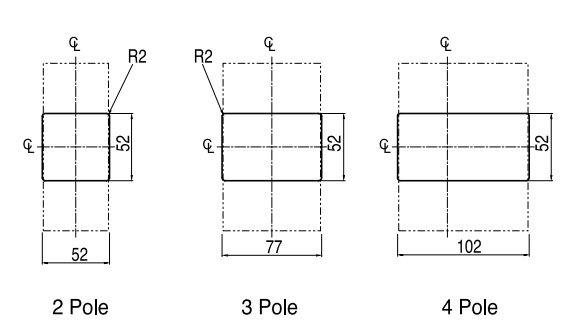
- ABS30bX
- ABH30bX
- ABE50bX
- ABS50bX
- ABE100bX(3-50A)



Mounting



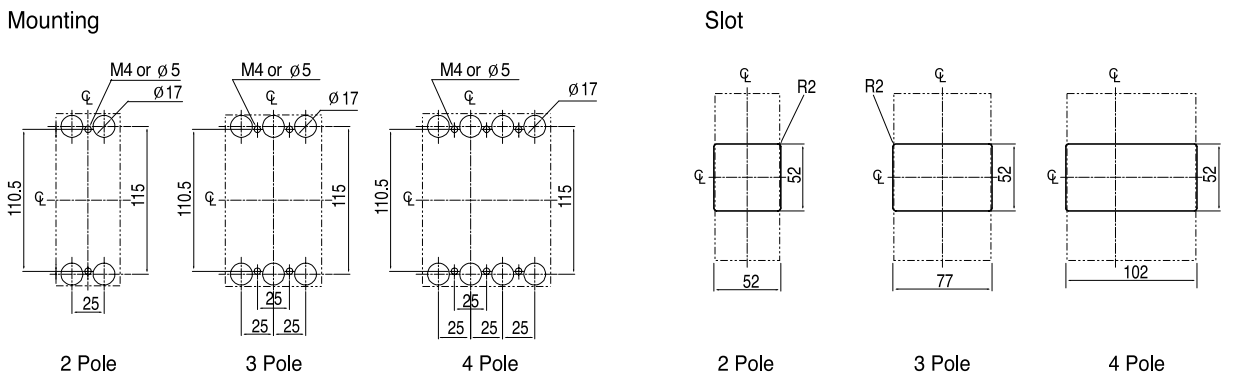
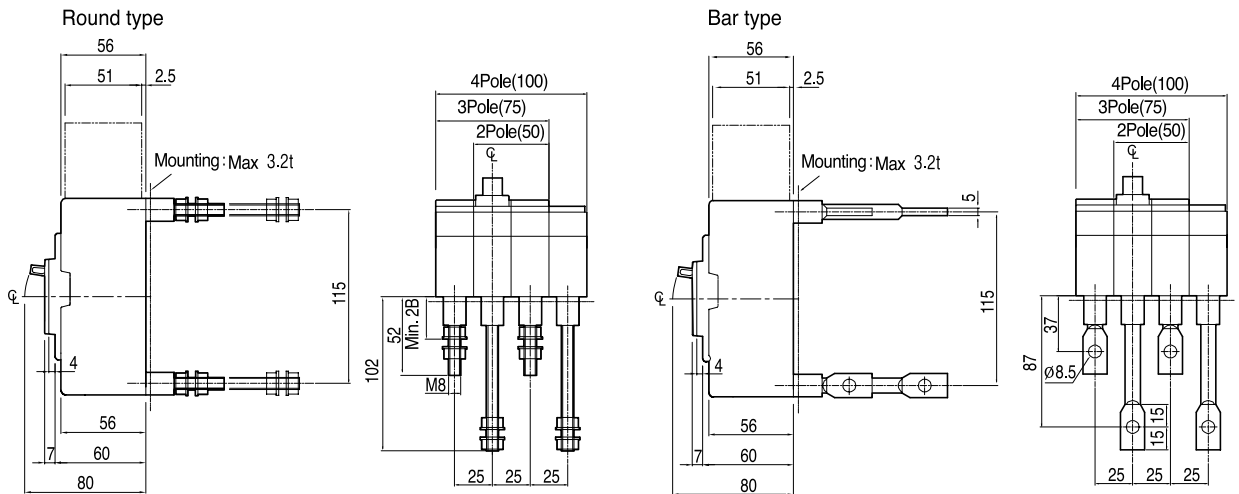
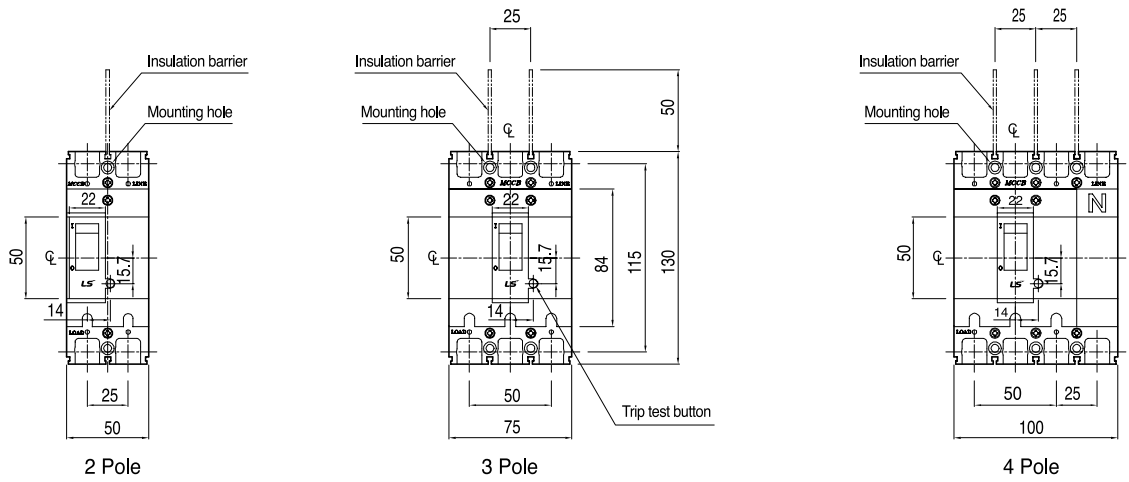
Slot



Overall dimensions

AB type MCCBs

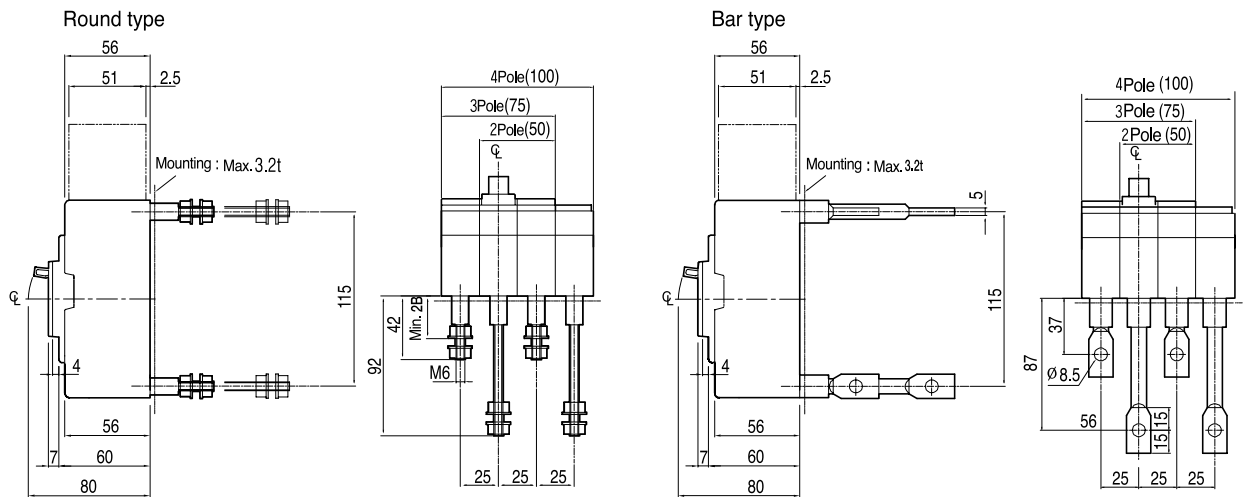
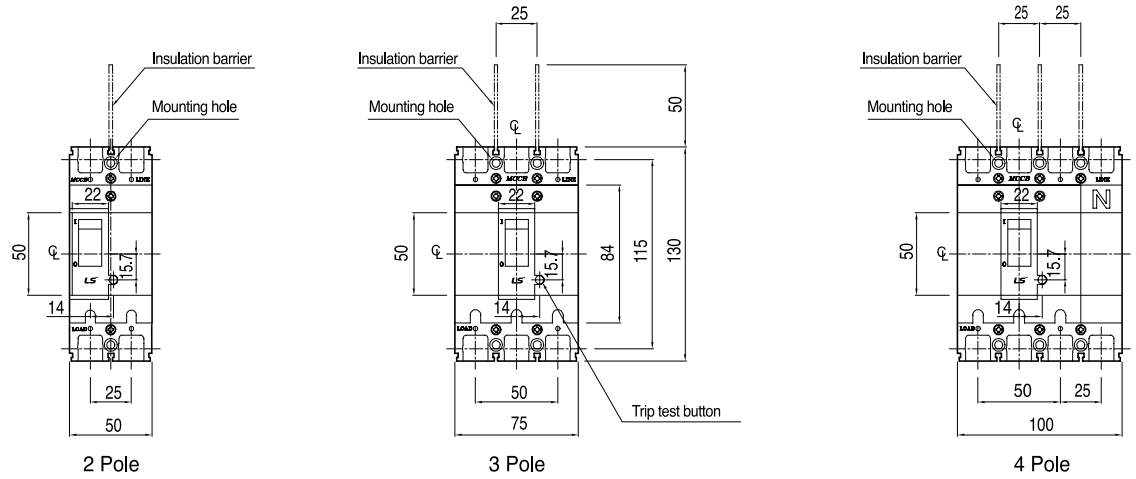
- ABE60bX
- ABS60bX
- ABE100bX(60~100A)



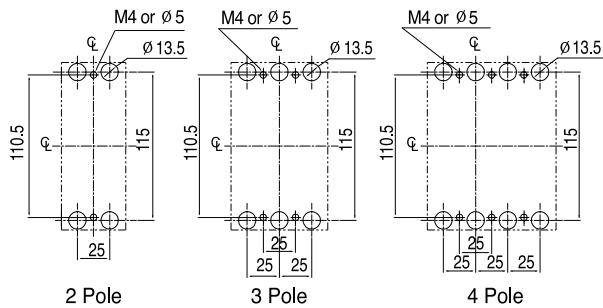
ABH50bX

ABS100bX

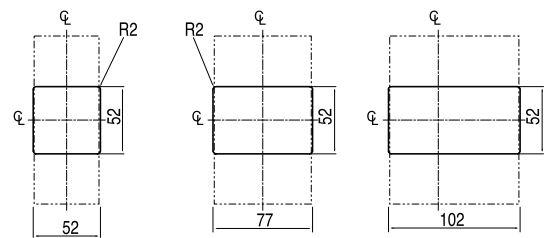
ABH100bX



Mounting



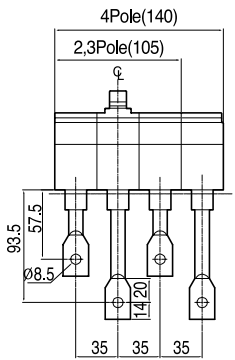
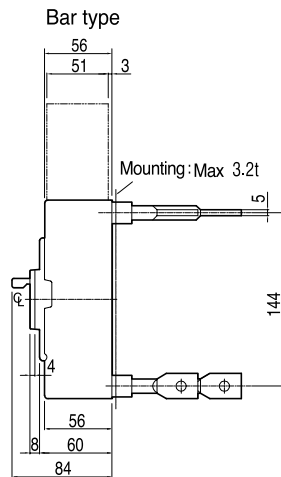
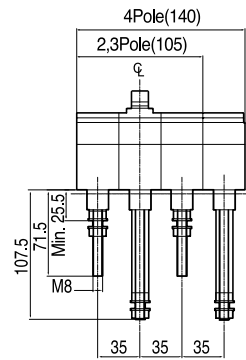
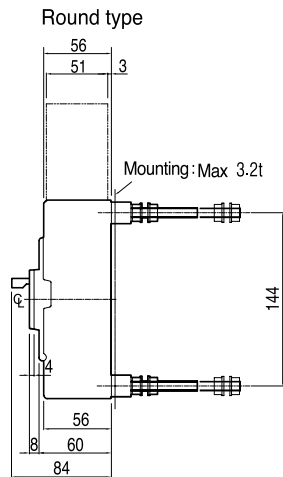
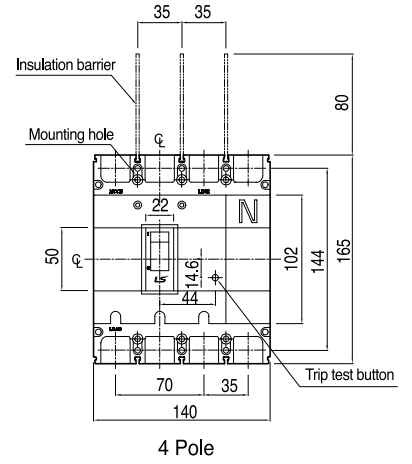
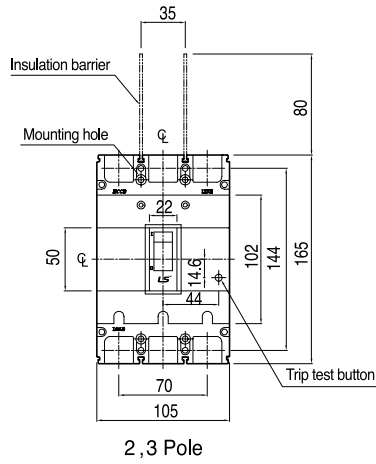
Slot



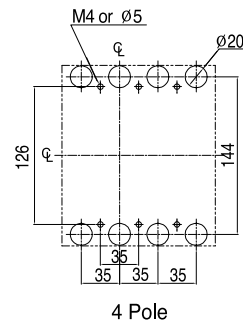
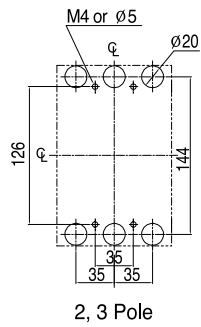
Overall dimensions

AB type MCCBs

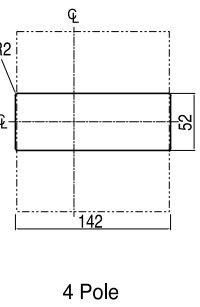
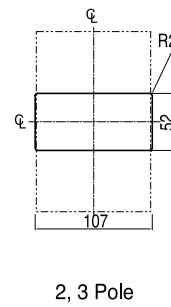
- ABE200bX
- ABS200bX
- ABH200bX



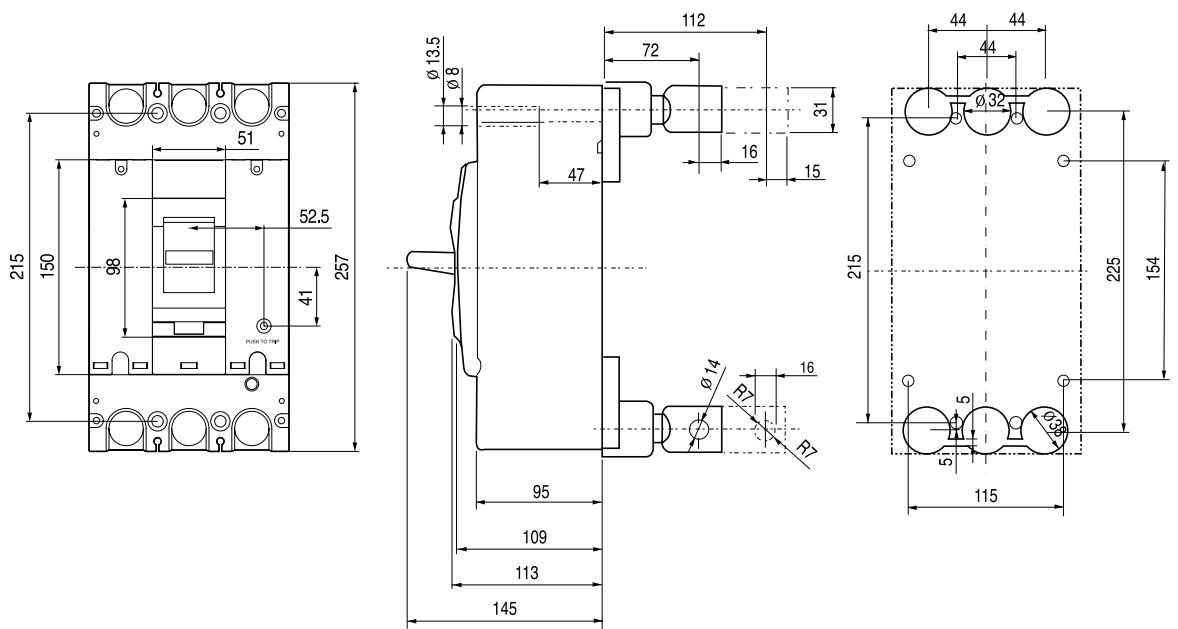
Mounting



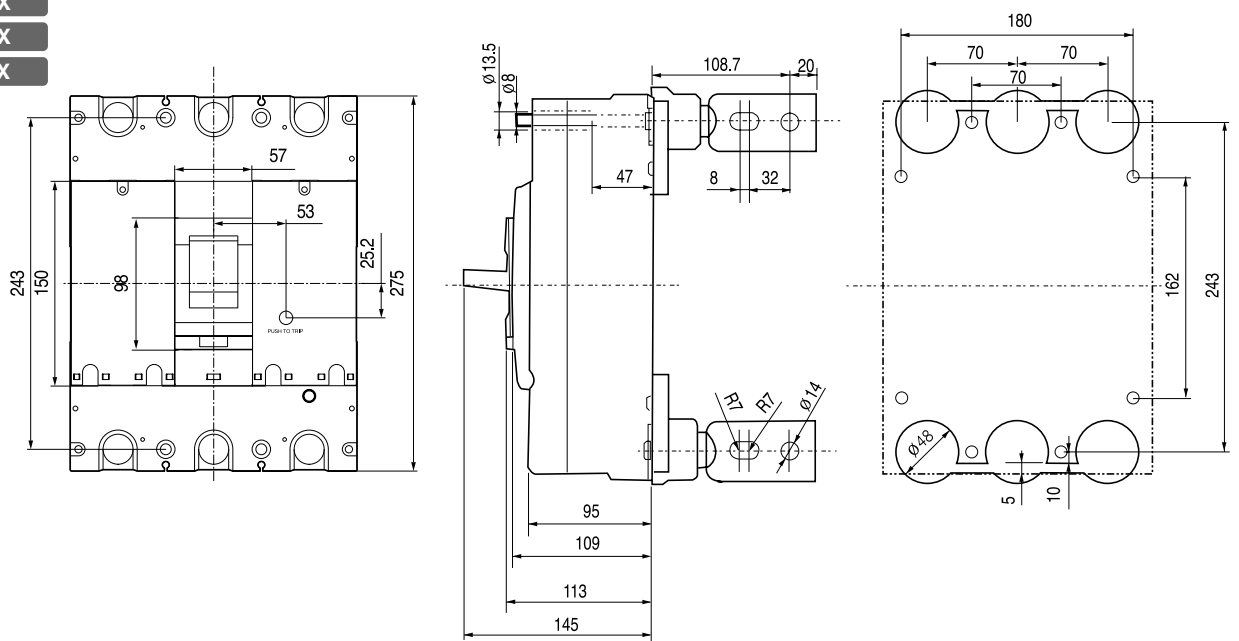
Slot



- ABE400bX**
- ABS400bX**
- ABH400bX**
- ABL400bX**



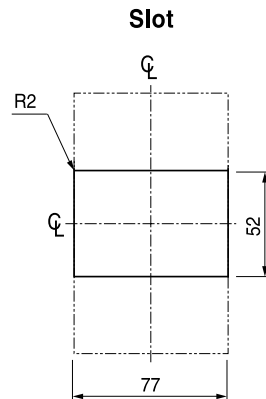
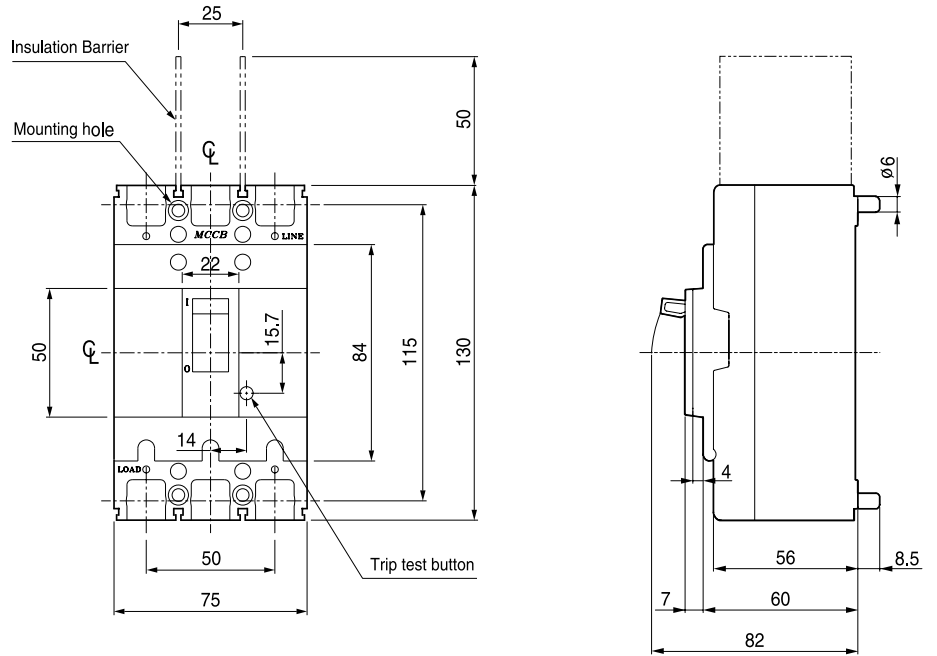
- ABE800bX**
- ABS800bX**
- ABL800bX**



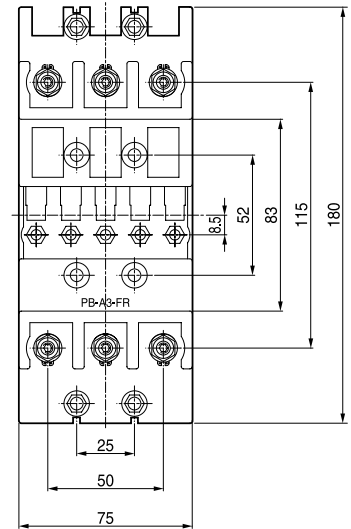
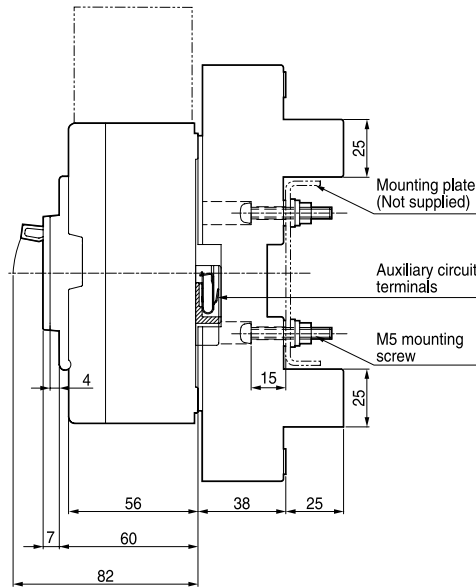
Overall dimensions

Plug-in MCCBs

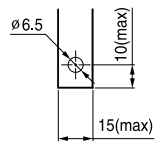
- ABE53b
- ABE63b
- ABS33b
- ABE103b
- ABS53b
- ABS63b
- ABH33b



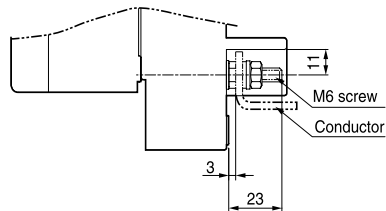
Normal type(PB-A3-FR)



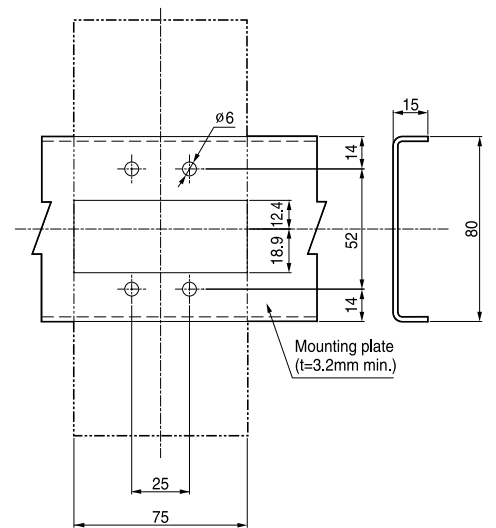
Detail for conductor



Detail for connection



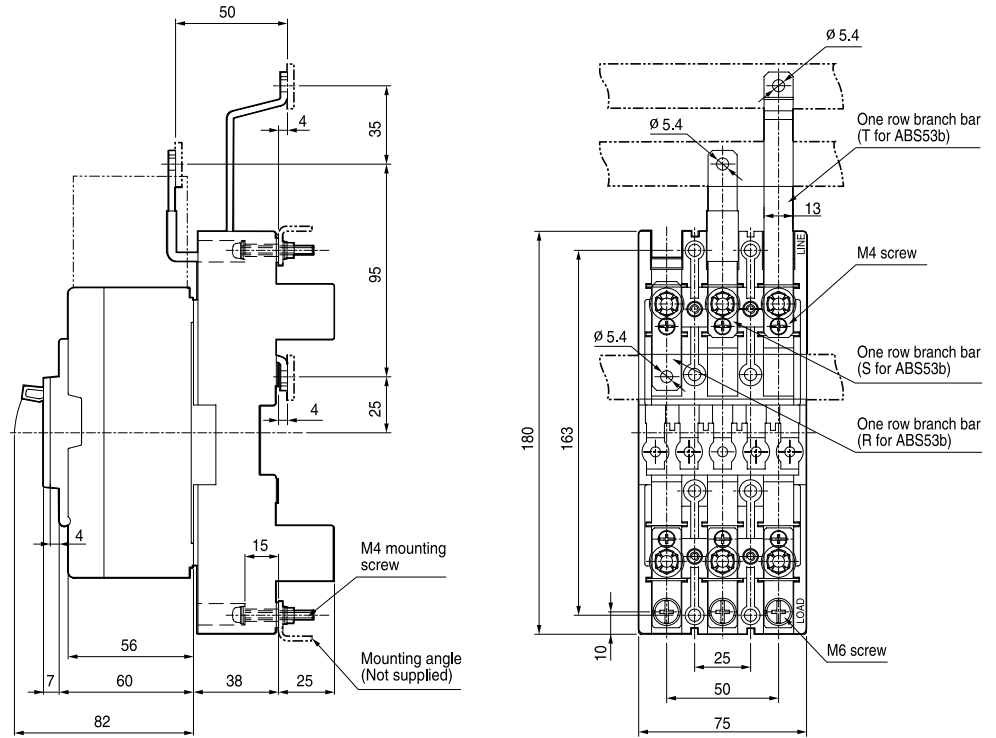
Mounting dimensions



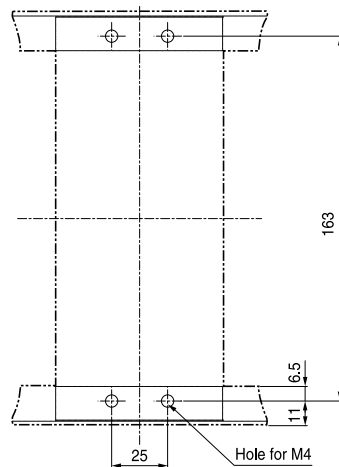
Overall dimensions

Plug-in MCCBs

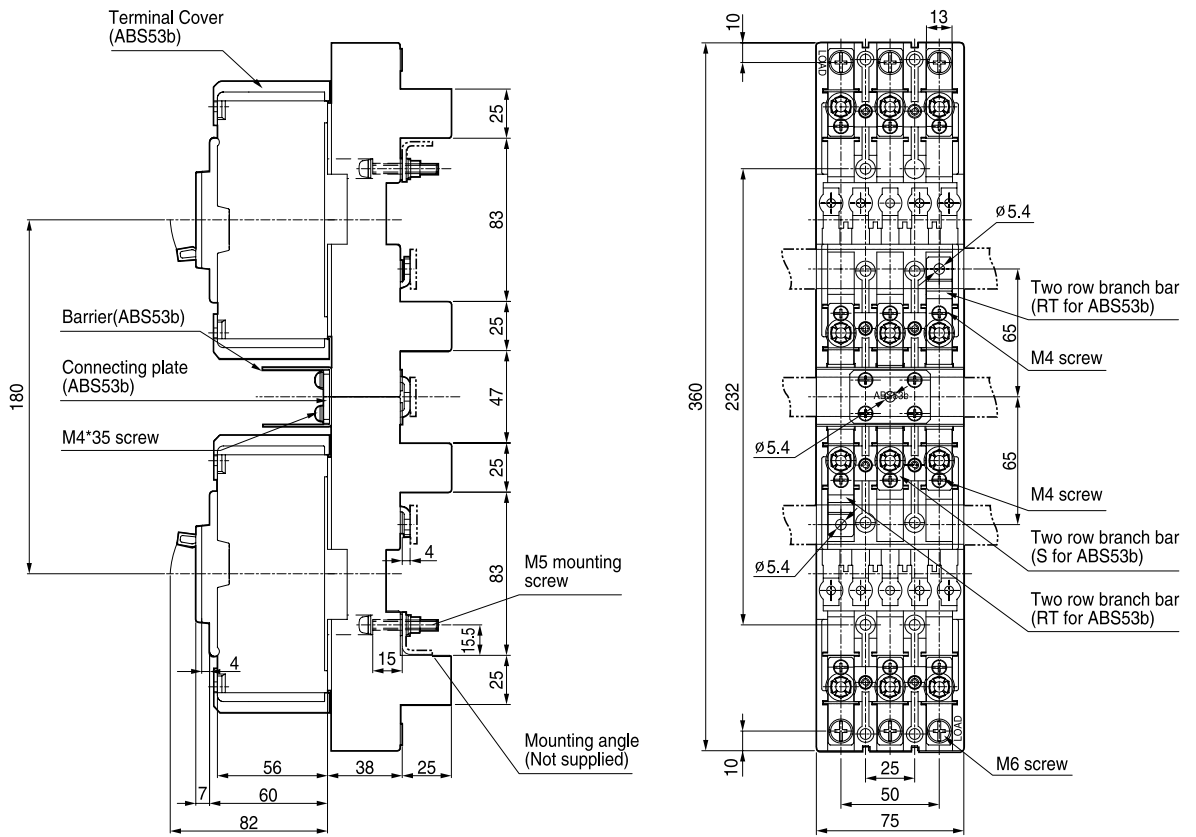
Single-row type(PB-A3-1DB)



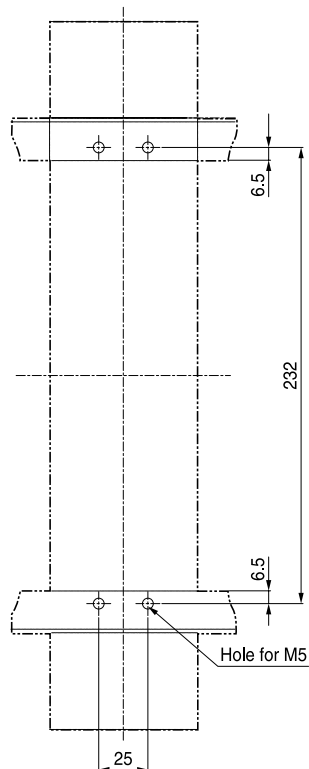
Mounting dimensions



Double-row type(PB-A3-2DB)



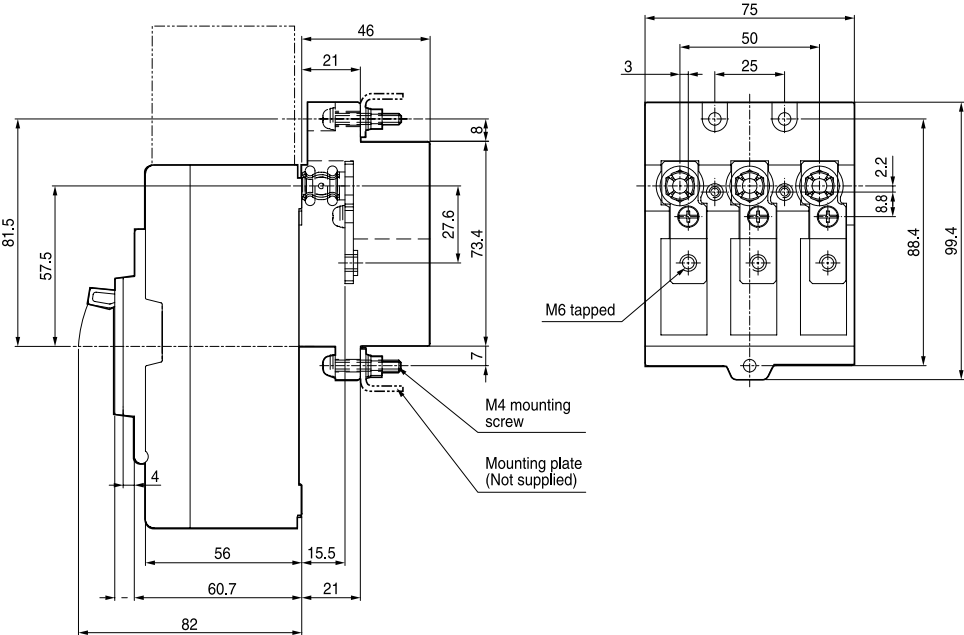
Mounting dimensions



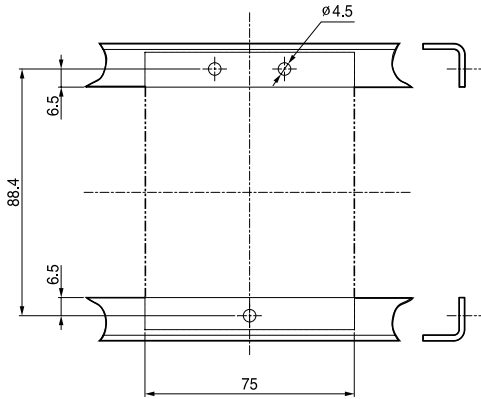
Overall dimensions

Plug-in MCCBs

Line-only type(PB-A3-FRL)



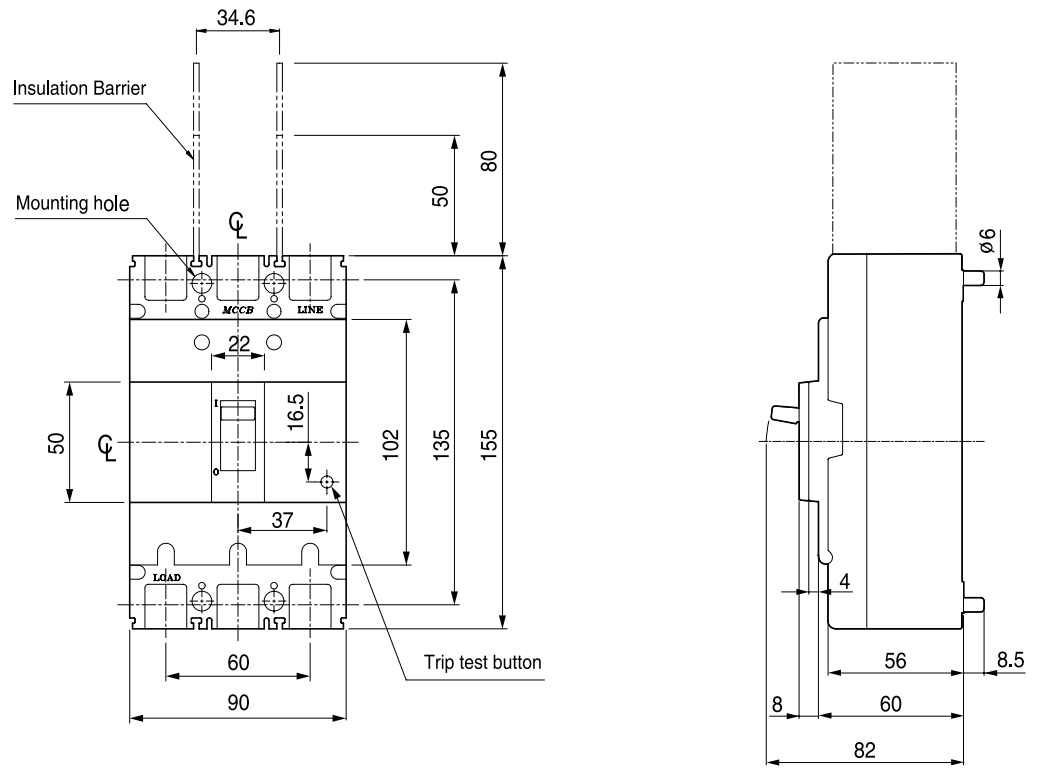
Mounting dimensions



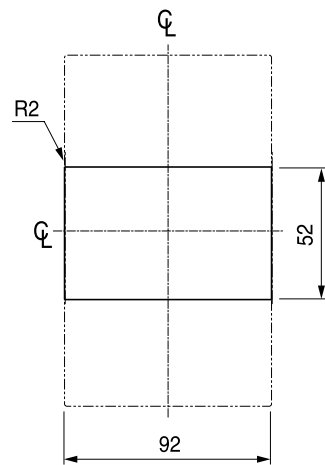
ABS103b

ABH53b

ABH103b



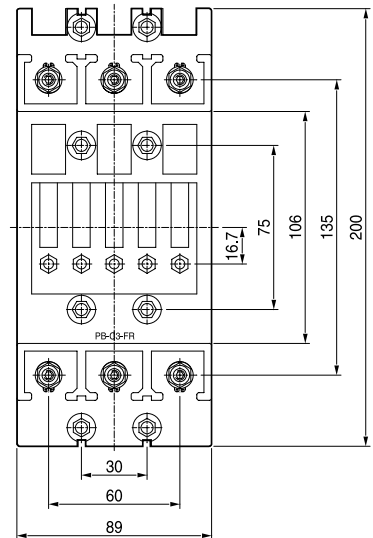
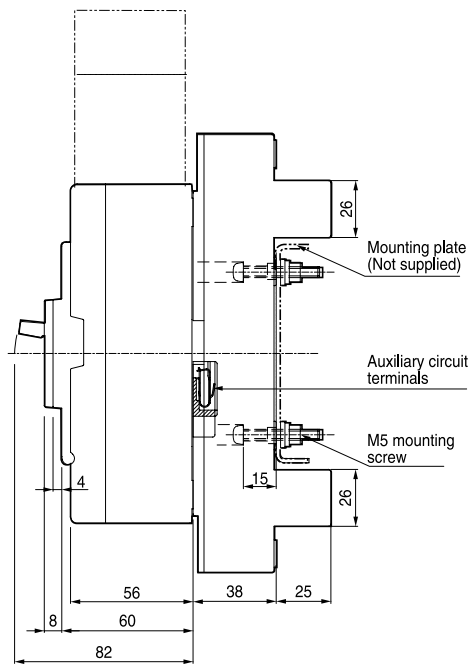
Slot



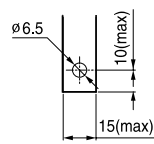
Overall dimensions

Plug-in MCCBs

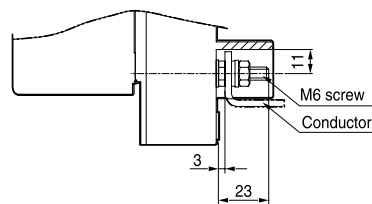
Normal type(PB-C3-FR)



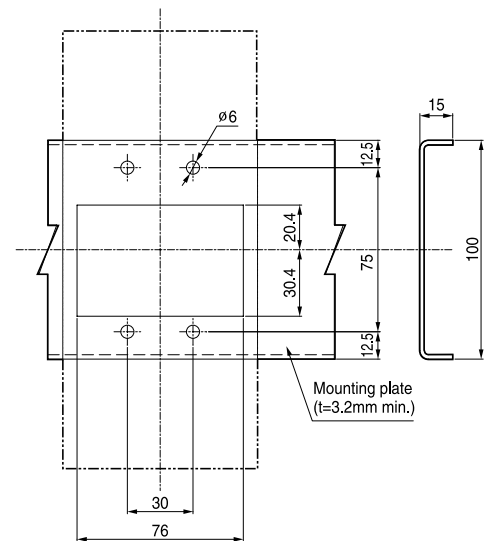
Detail for conductor



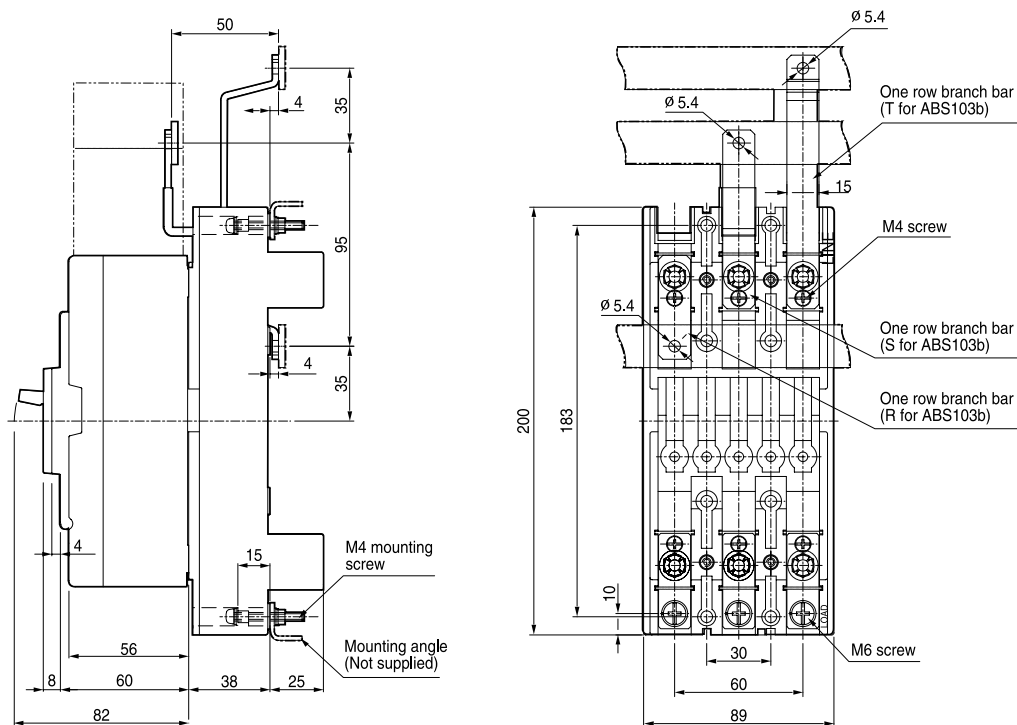
Detail for connection



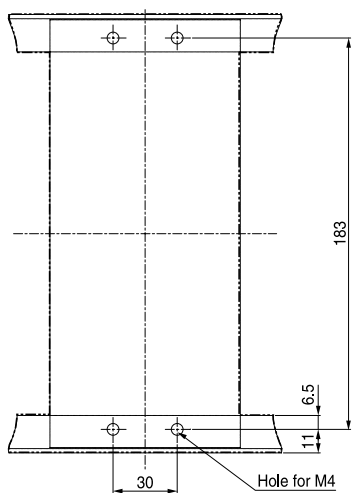
Mounting dimensions



Single-row type(PB-C3-1DB)



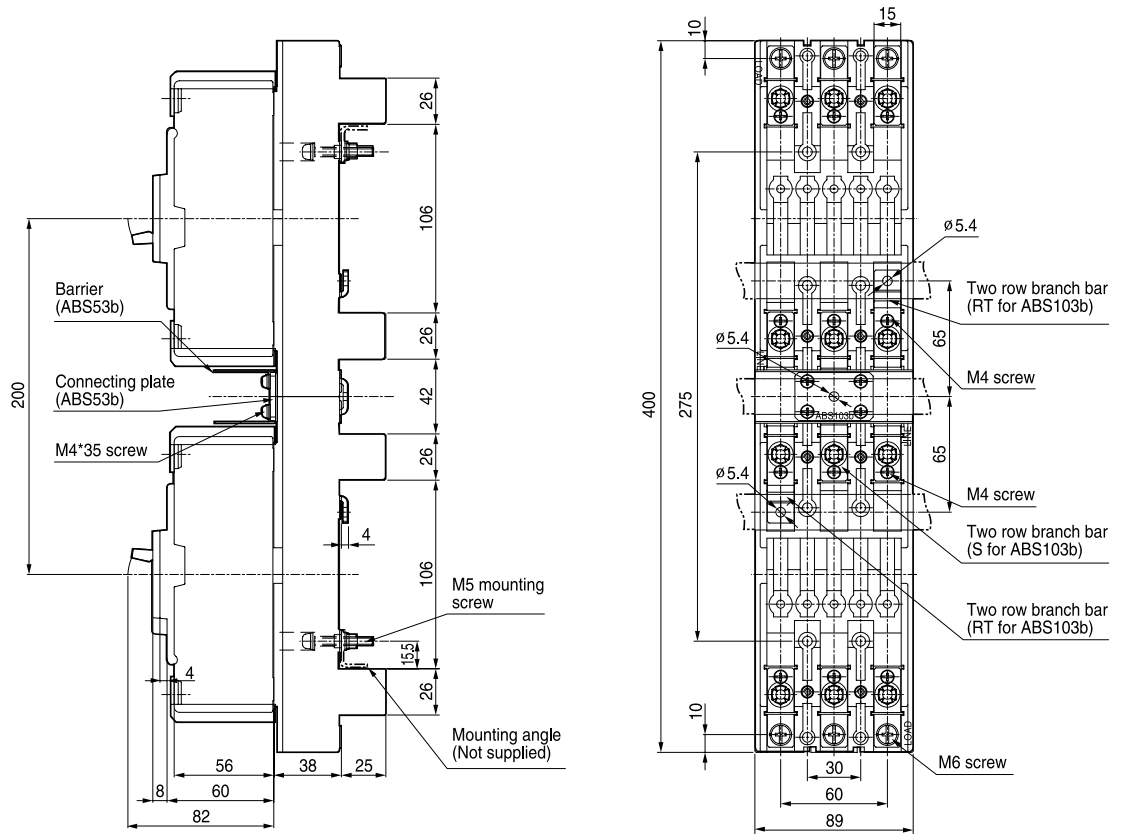
Mounting dimensions



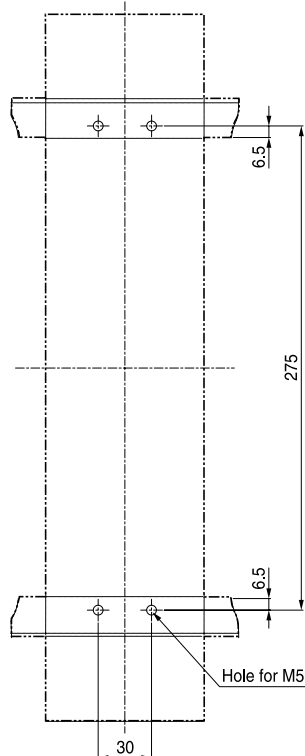
Overall dimensions

Plug-in MCCBs

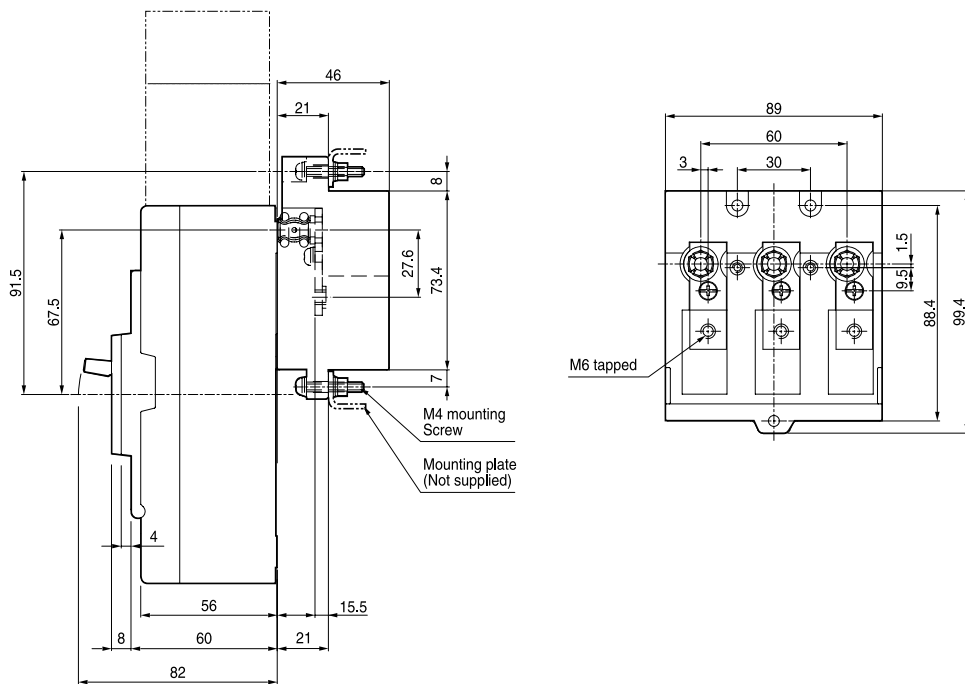
Double-row type (PB-C3-2DB)



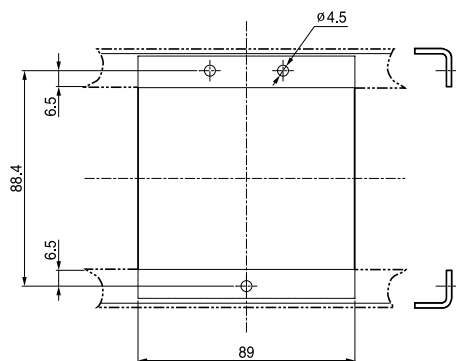
Mounting dimensions



Line-only type(PB-C3-FRL)



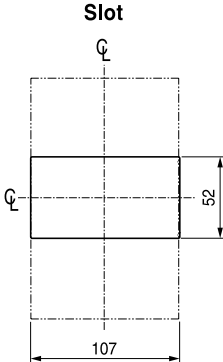
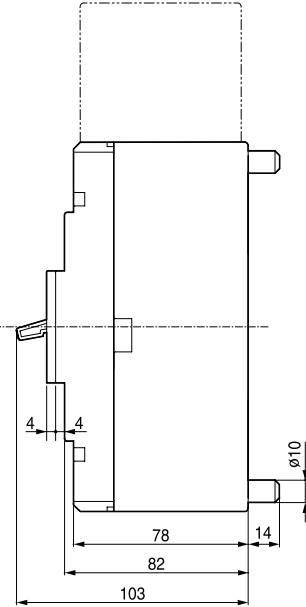
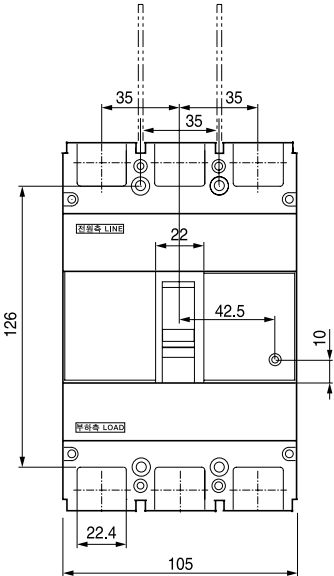
Mounting dimensions



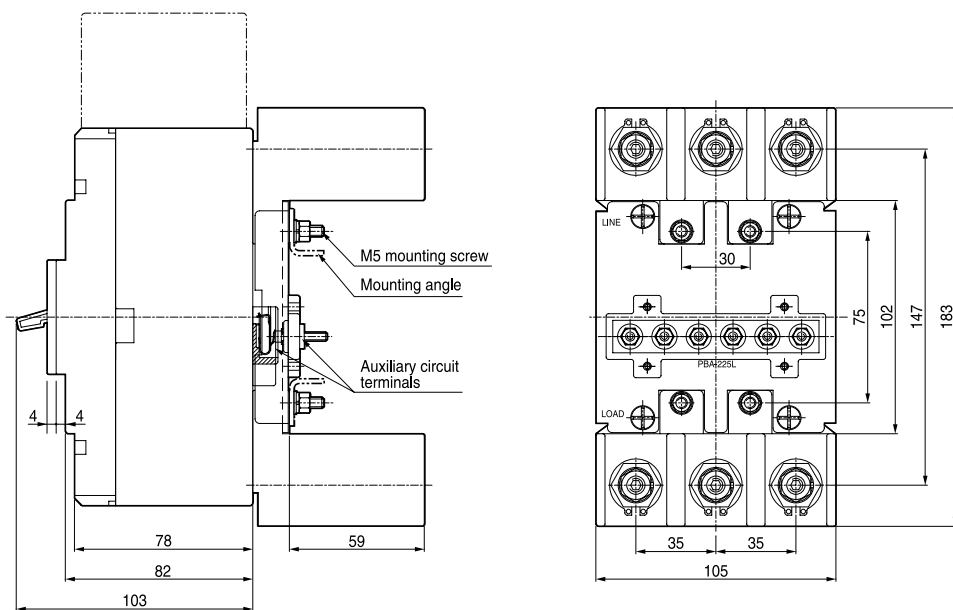
Overall dimensions

Plug-in MCCBs

- ABL53a
- ABL103a

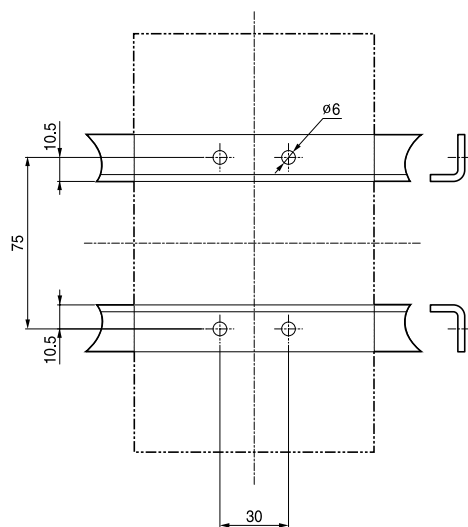
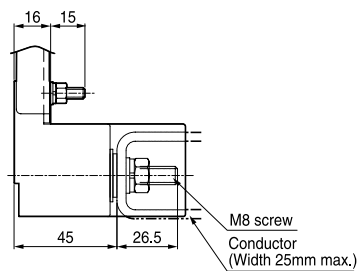


Normal type(PB-E3-FR)



Mounting dimensions

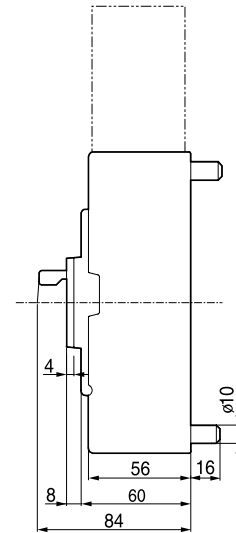
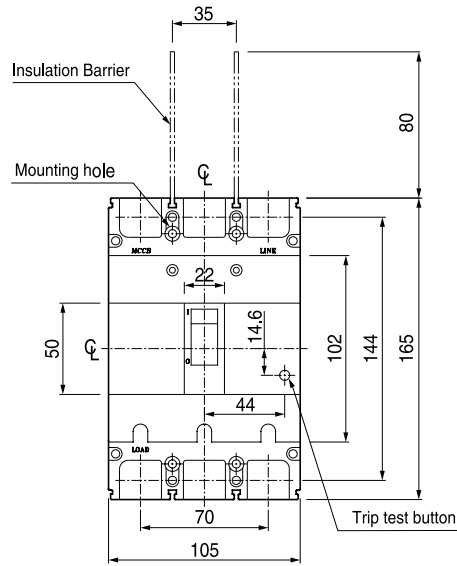
Detail for connection



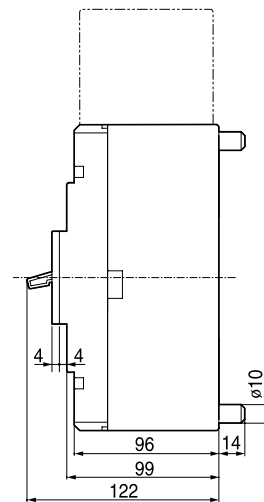
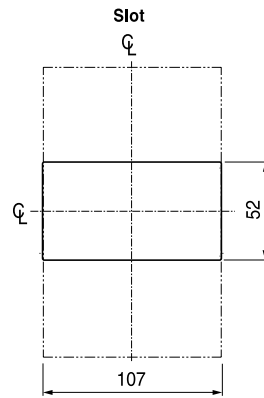
Overall dimensions

Plug-in MCCBs

- ABE203b
- ABS203b
- ABH203b
- ABH203a
- ABL203a



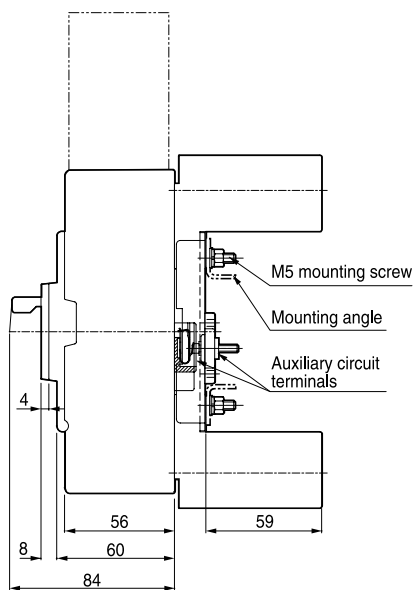
ABE/S/H 203b



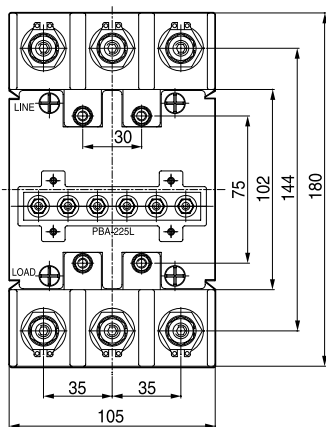
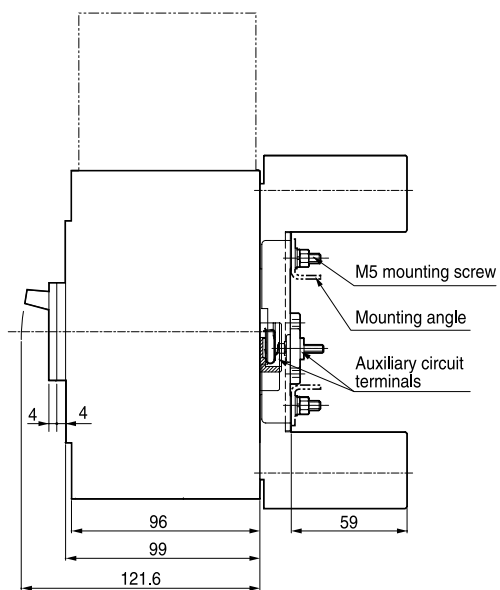
ABH/L 203a

Normal type(PB-D3-FR)

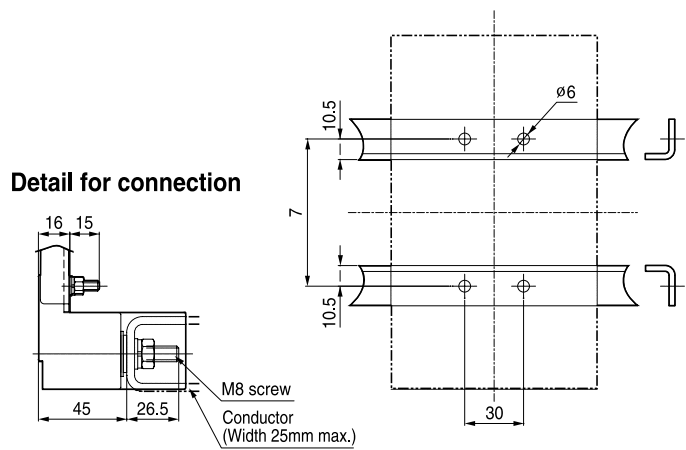
ABE203b, ABS203b, ABH203b



ABH203a, ABL203a



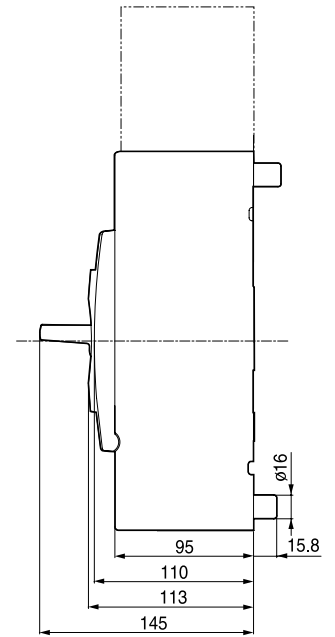
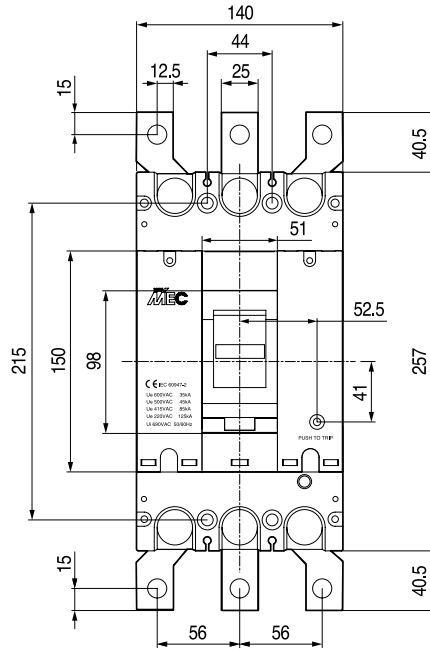
Mounting dimensions



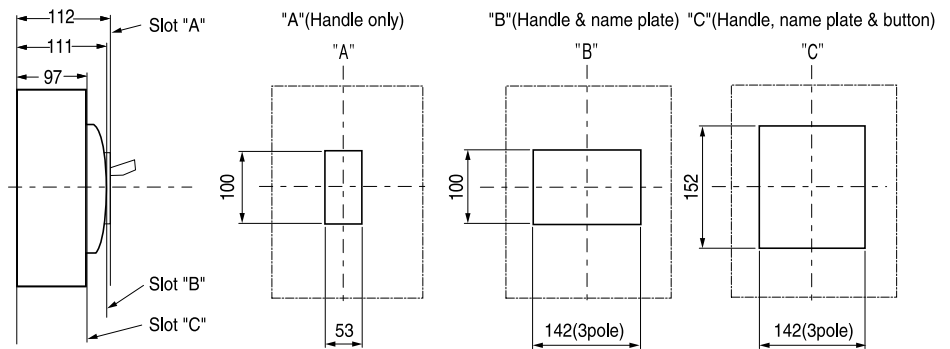
Overall dimensions

Plug-in MCCBs

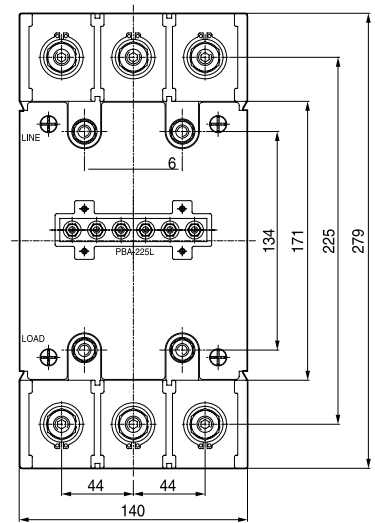
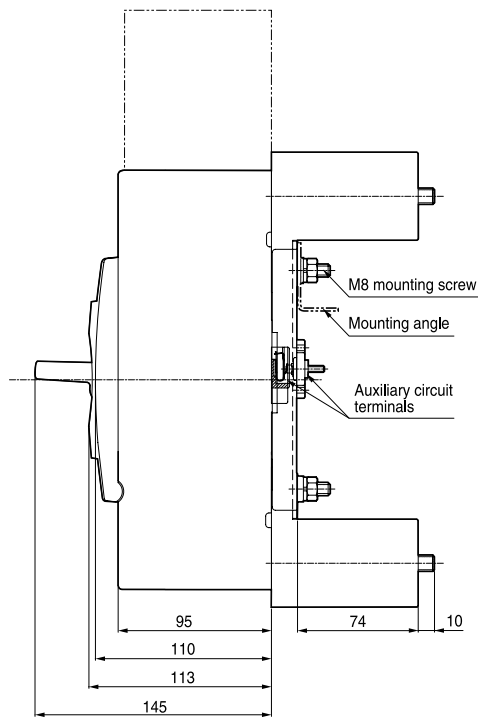
- ABE403b
- ABS403b
- ABH403b
- ABL403b



Slot

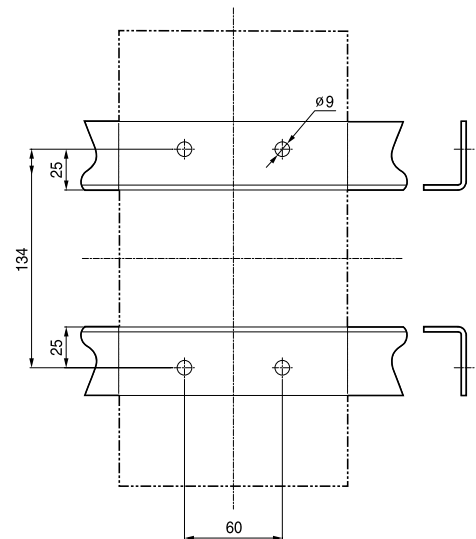
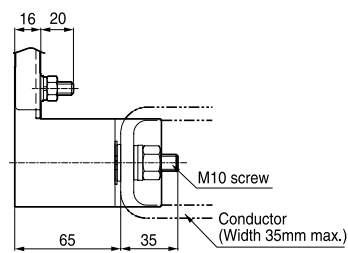


Normal type(PB-I3-FR)



Mounting dimensions

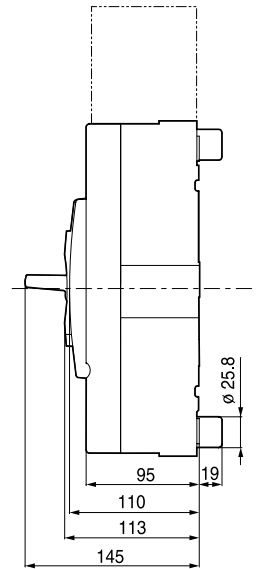
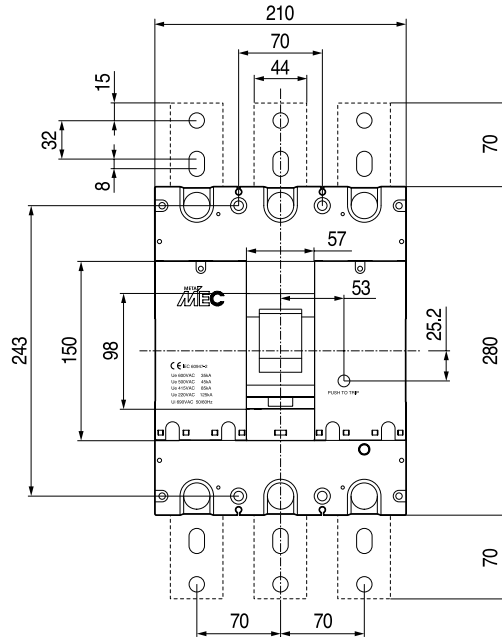
Detail for connection



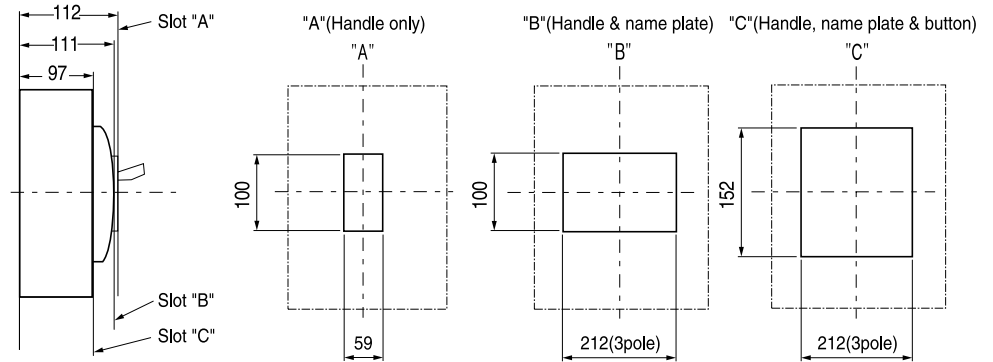
Overall dimensions

Plug-in MCCBs

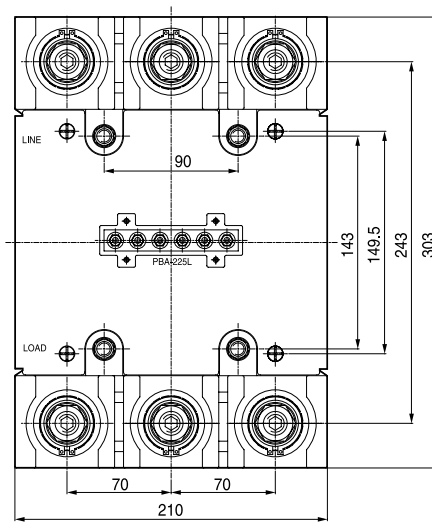
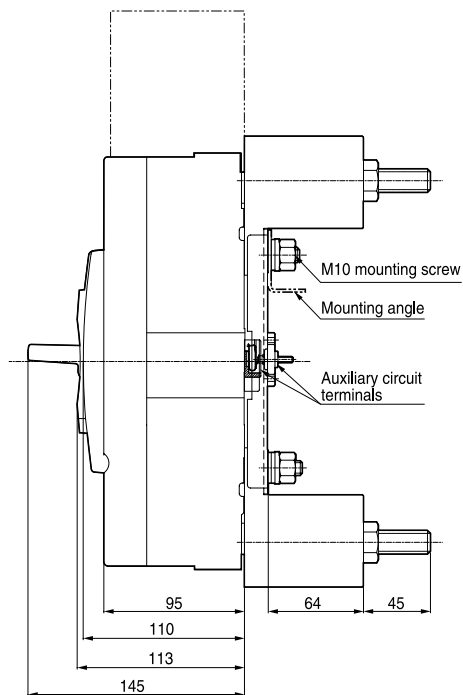
- ABE803b
- ABS803b
- ABL803b



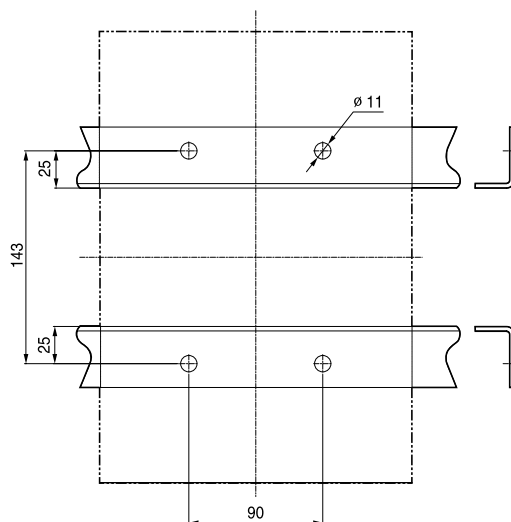
Slot



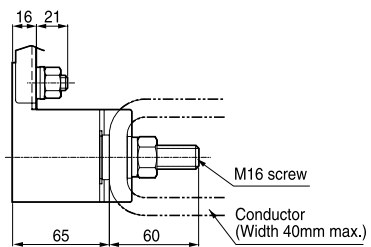
Normal type(PB-J3-FR)



Mounting dimensions



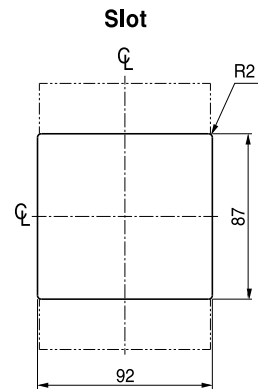
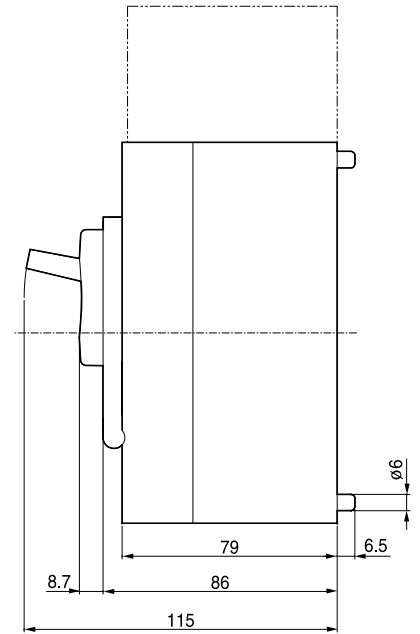
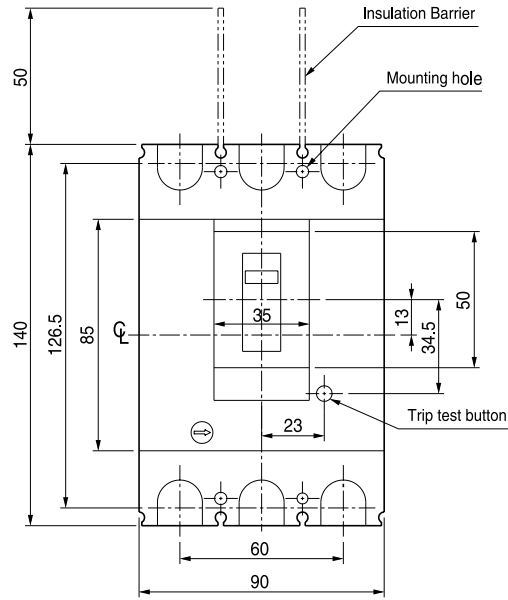
Detail for connection



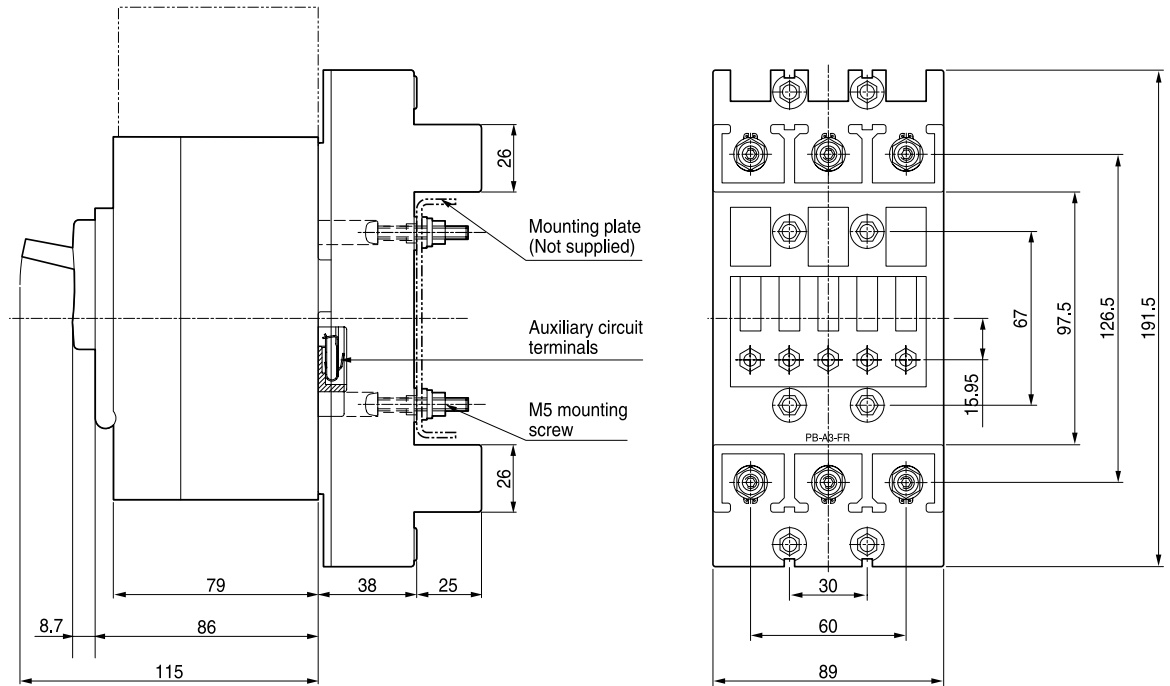
Overall dimensions

Plug-in MCCBs

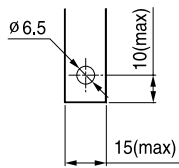
- GBN53
- GBN103
- GBH53
- GBH103



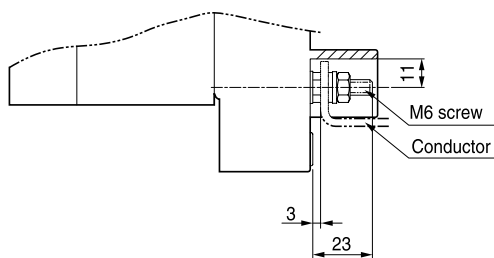
Normal type(PB-G3-FR)



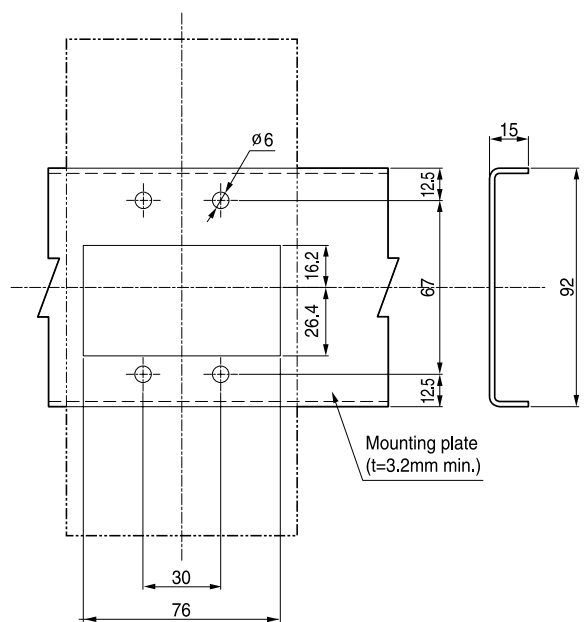
Detail for conductor



Detail for connection



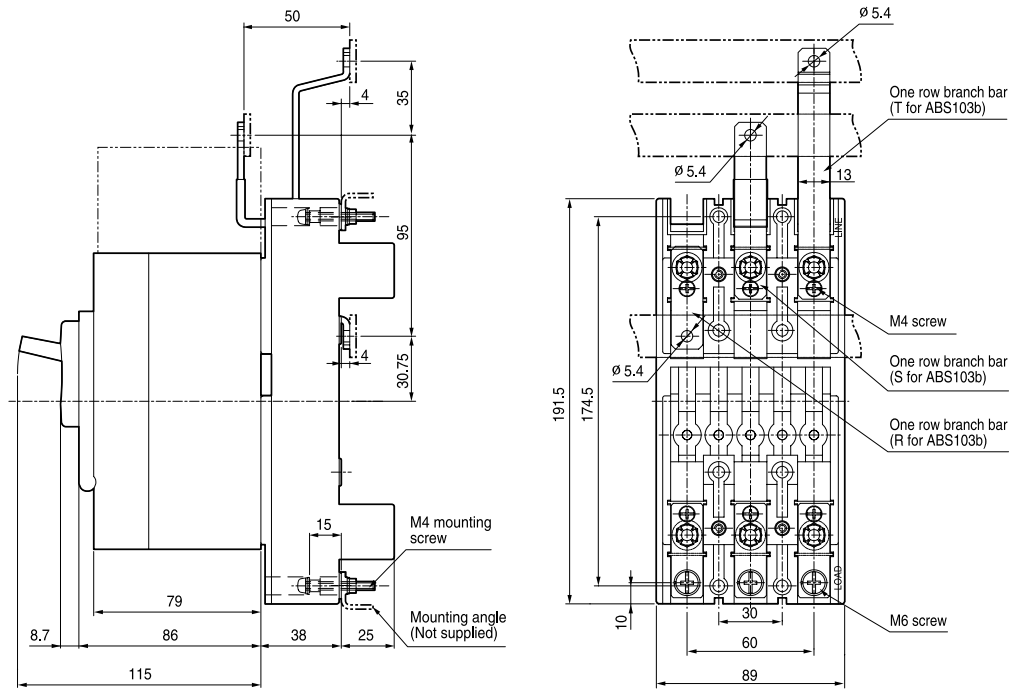
Mounting dimensions



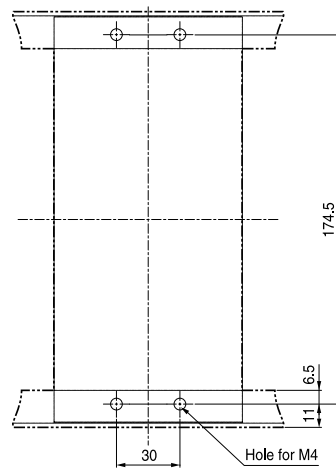
Overall dimensions

Plug-in MCCBs

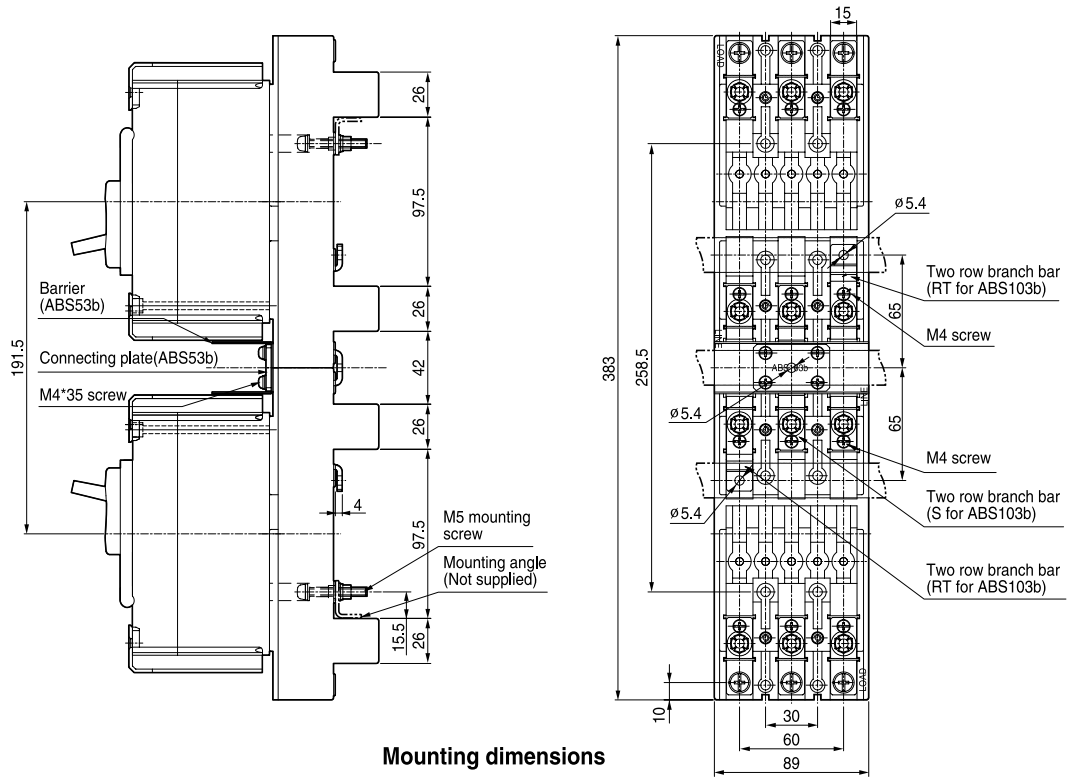
Single-row type(PB-G3-1DB)



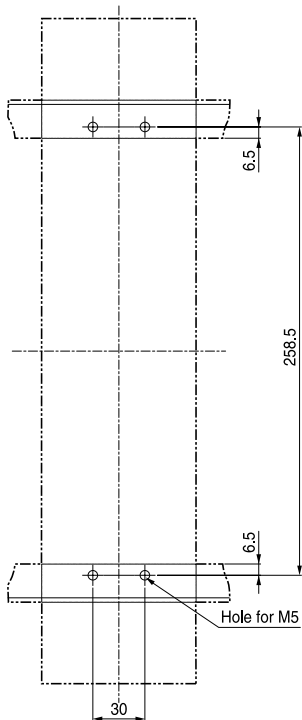
Mounting dimensions



Double-row type(PB-G3-2DB)



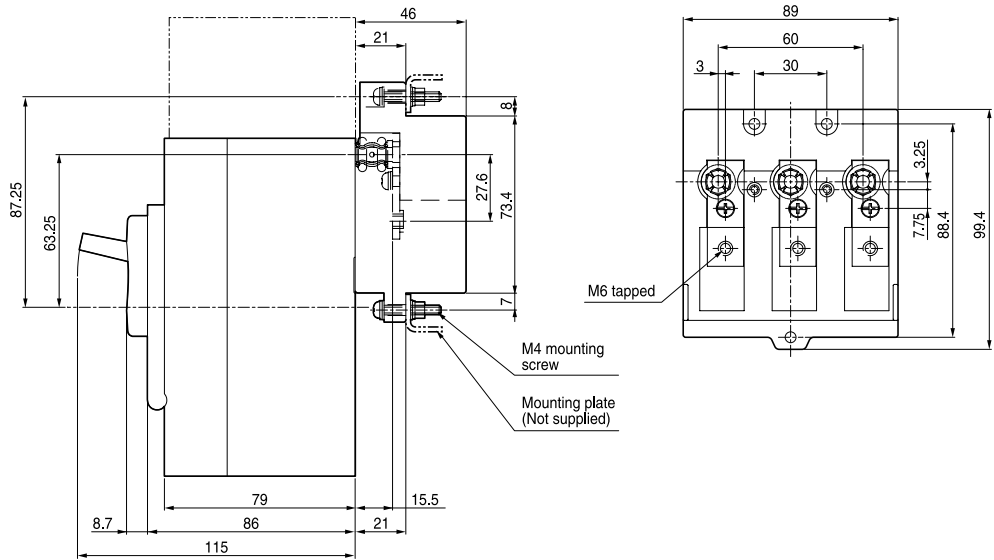
Mounting dimensions



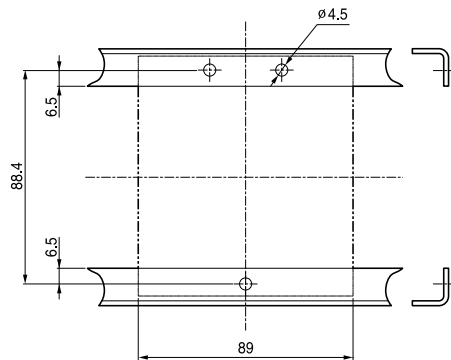
Overall dimensions

Plug-in MCCBs

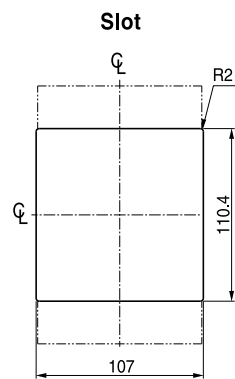
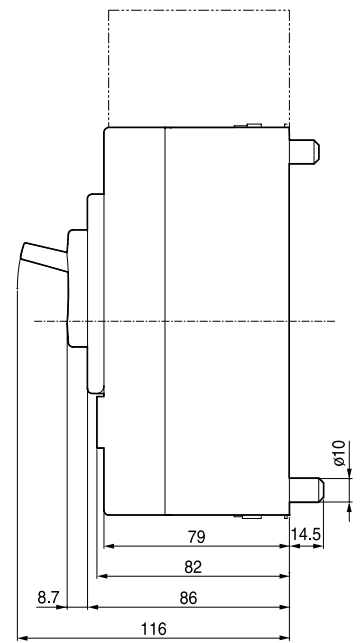
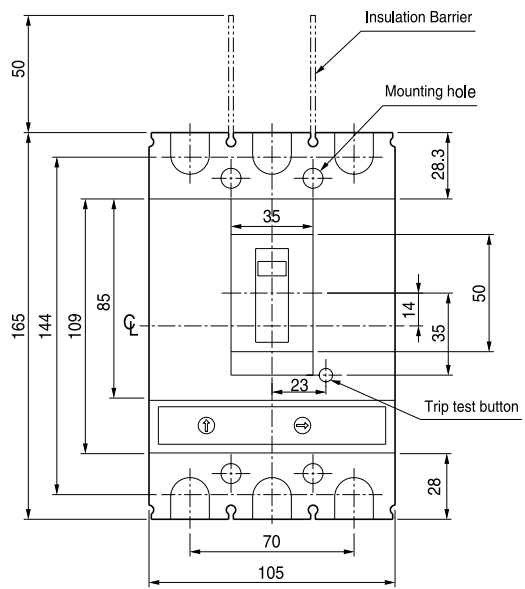
Single-row type(PB-G3-FRL)



Mounting dimensions



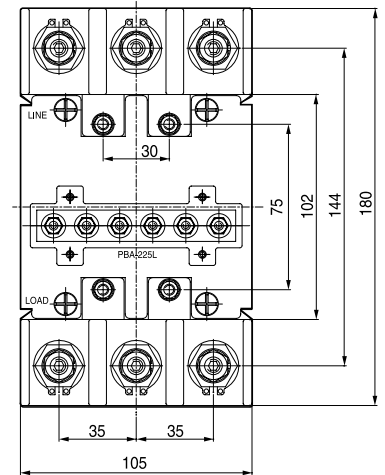
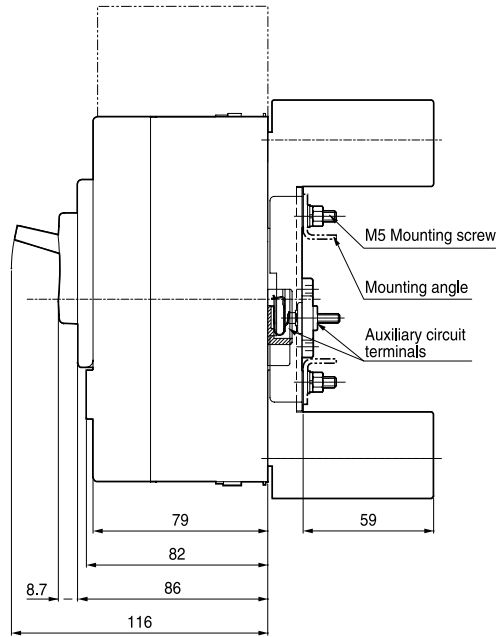
- GBL53
- GBL103
- GBN203
- GBH203
- GBL203



Overall dimensions

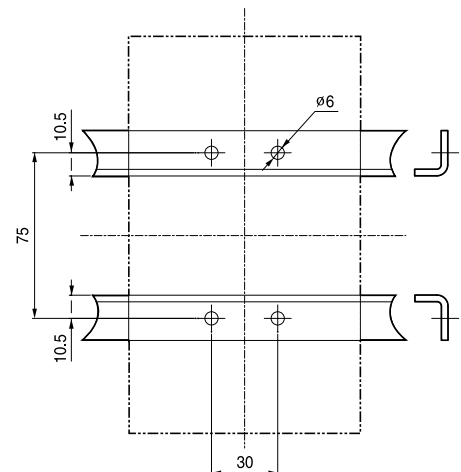
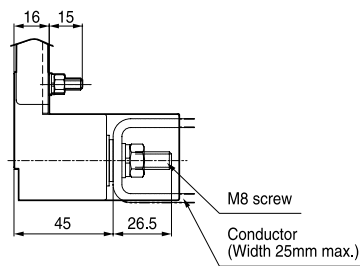
Plug-in MCCBs

Normal type(PB-D3-FR)



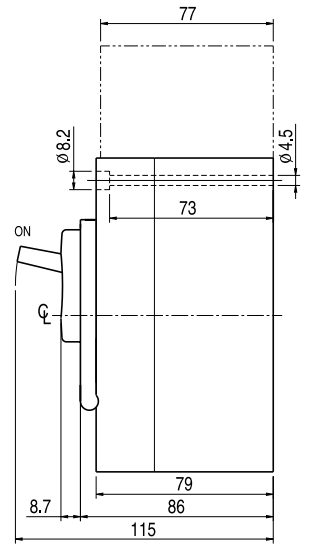
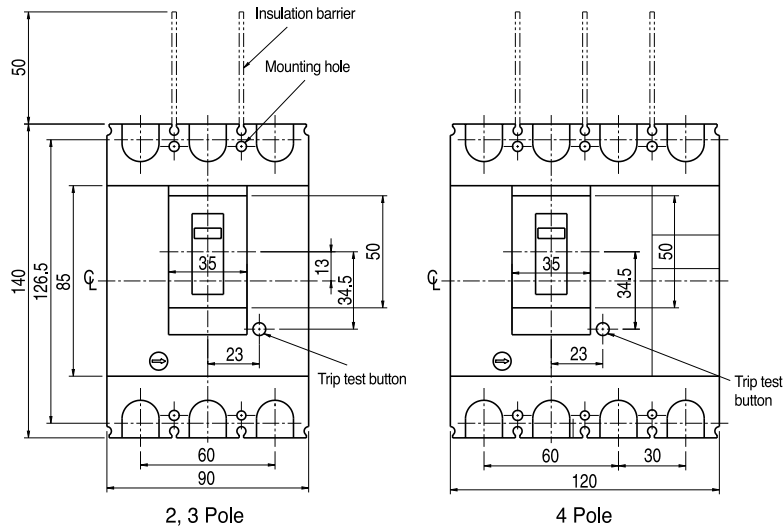
Mounting dimensions

Detail for connection

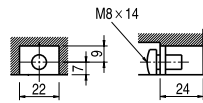


GB type adjustable MCCBs

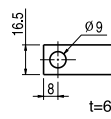
- GBN102
- GBN103
- GBN104
- GBH102
- GBH103
- GBH104



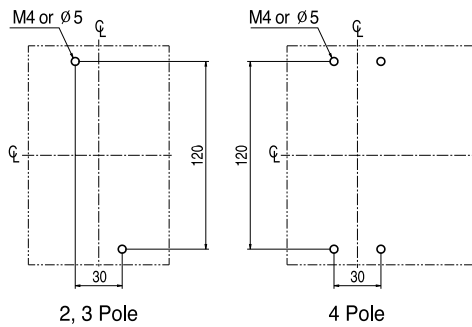
Detailed terminal



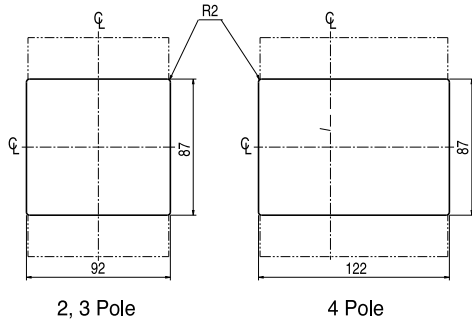
Hole size of a conductor



Mounting



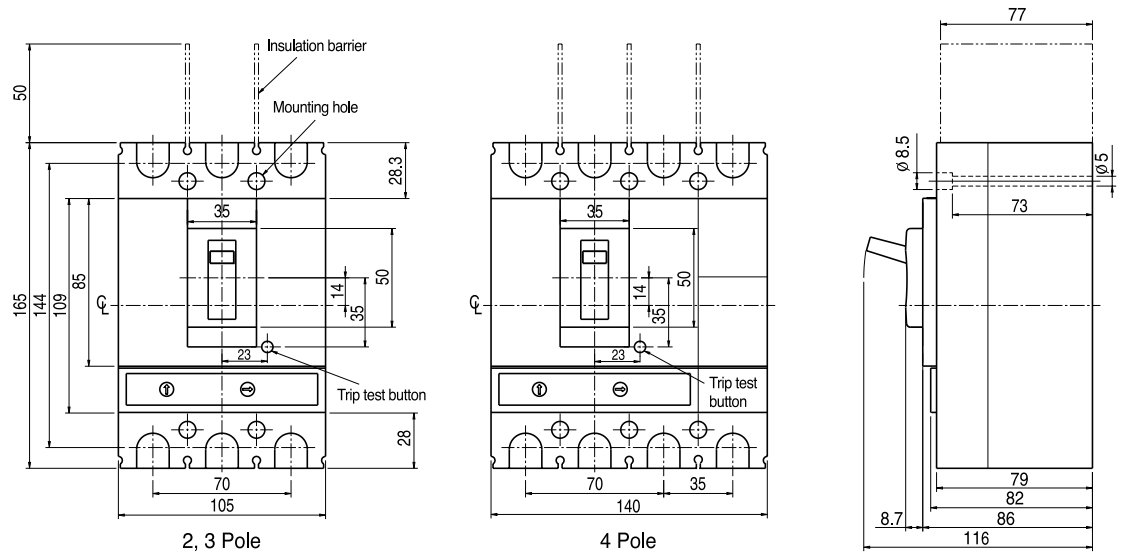
Slot



Overall dimensions

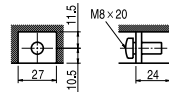
GB type adjustable MCCBs

- GBN202
- GBN203
- GBN204
- GBH202
- GBH203
- GBH204
- GBL102
- GBL103
- GBL104
- GBL202
- GBL203
- GBL204

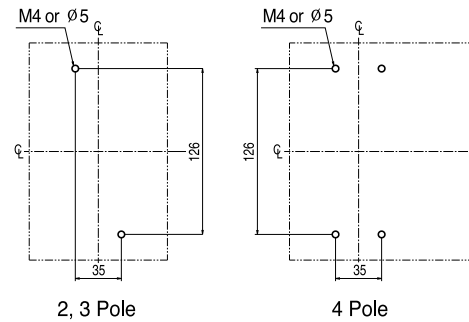


Detailed terminal

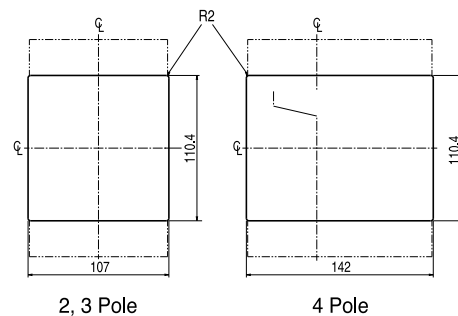
Hole size of a conductor



Mounting



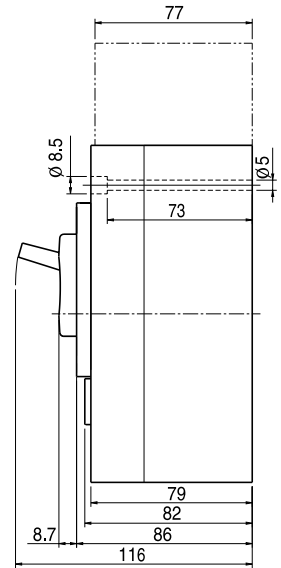
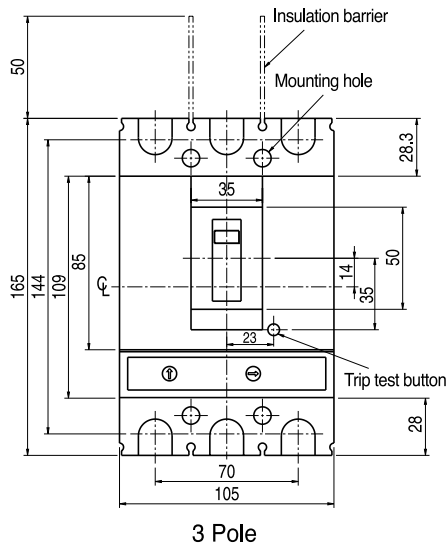
Slot



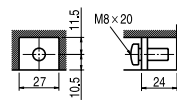
GBL53E

GBL103E

GBL203E



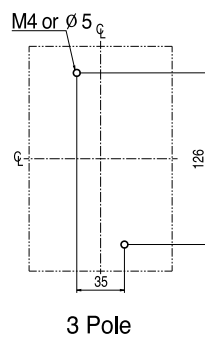
Detailed terminal



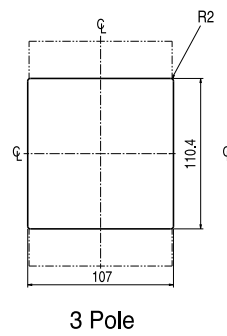
Hole size of a conductor



Mounting



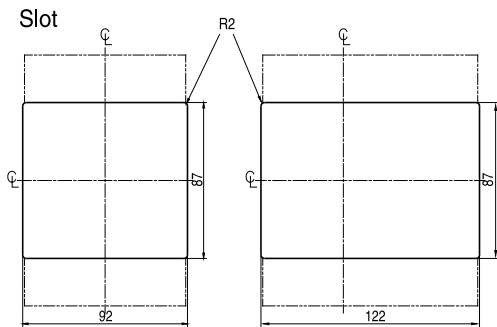
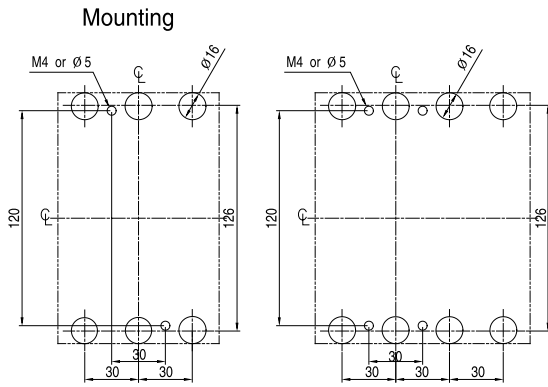
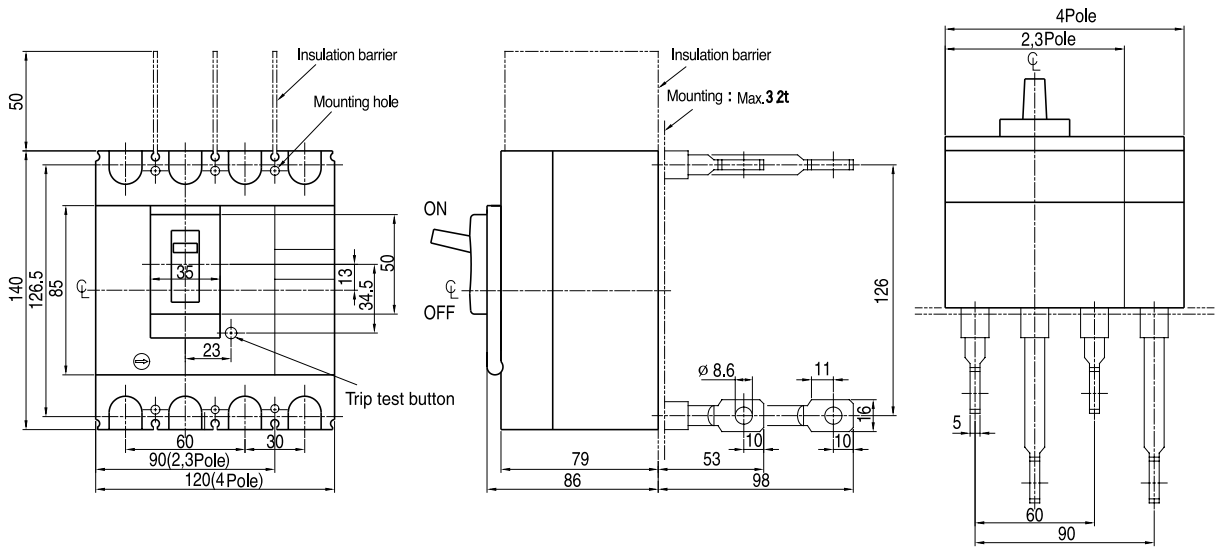
Slot



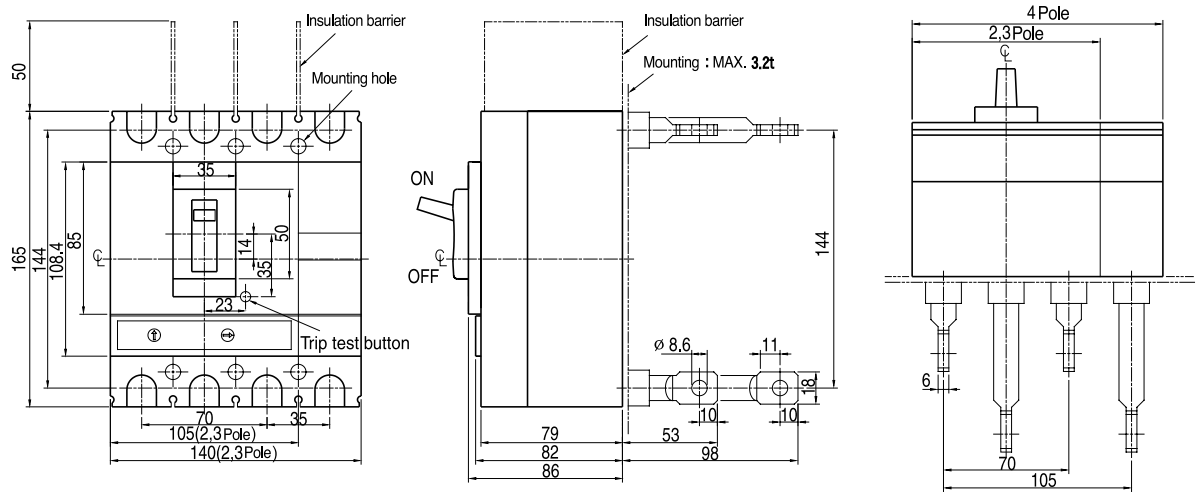
Overall dimensions

GB type adjustable MCCBs

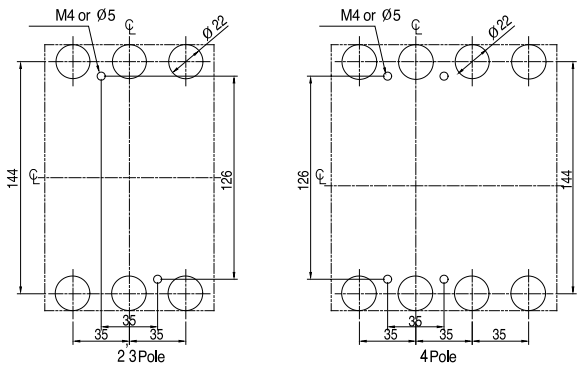
- GBH50X
- GBH100X
- GBN50X
- GBN100X



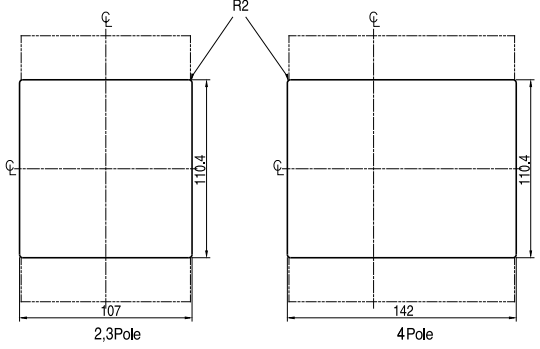
- GBH250X
- GBN250X
- GBL50X(E)
- GBL100X(E)
- GBL250X(E)



Mounting



Slot

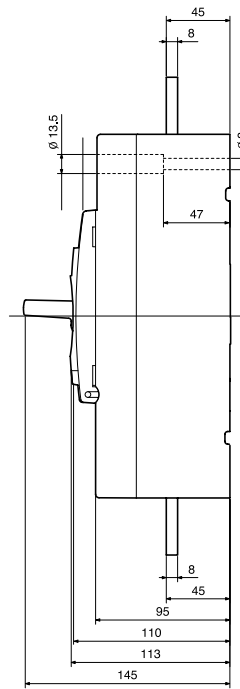
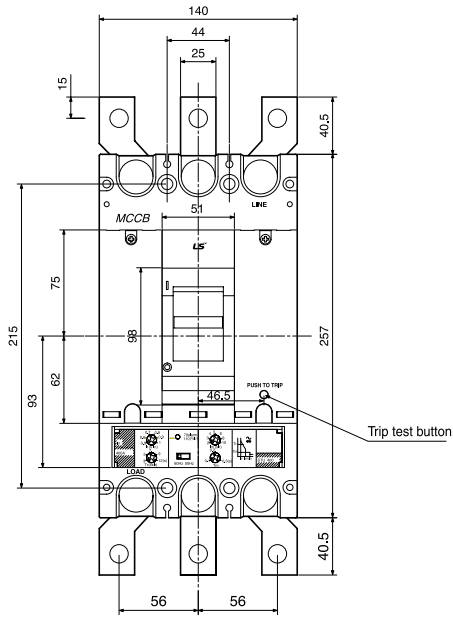


Overall dimensions

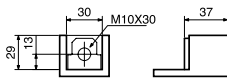
GB type adjustable MCCBs

GBN403E

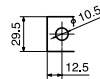
GBH403E



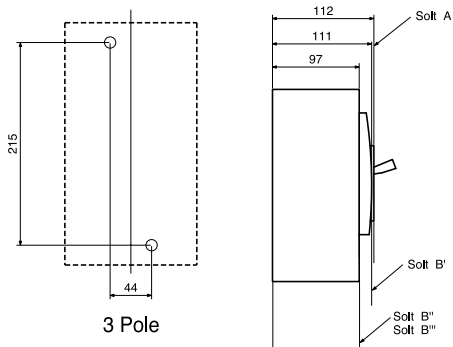
Detailed terminal



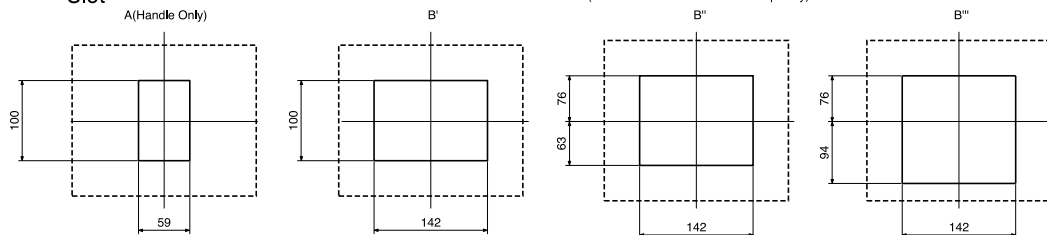
Hole size of a conductor



Mounting

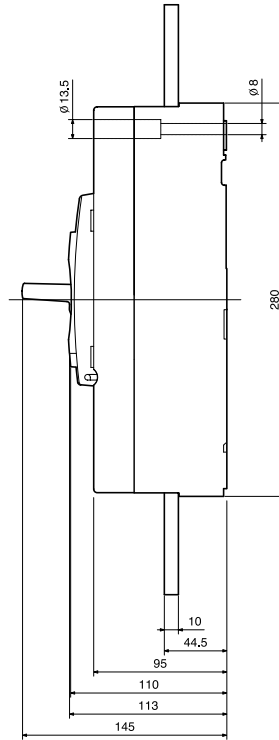
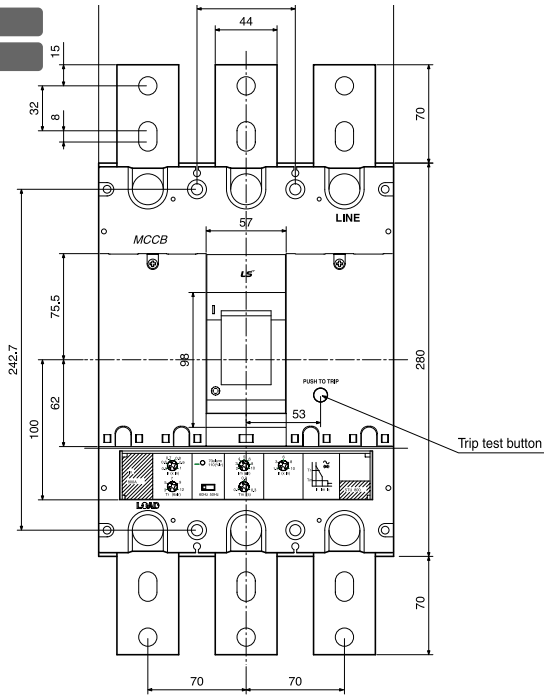


Slot

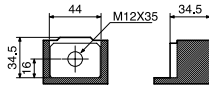


GB type adjustable MCCBs (Electronic trip unit)

GBN803E
GBH803E



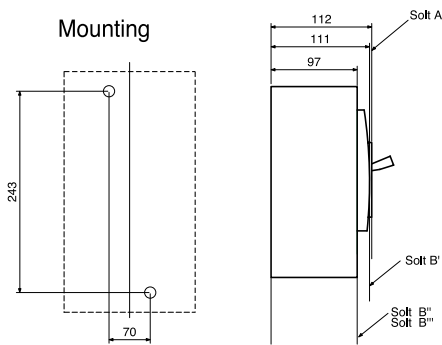
Detailed terminal



Hole size of a conductor

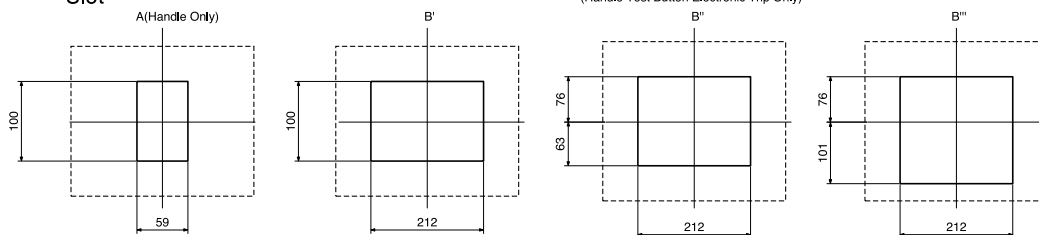


Mounting



3 Pole

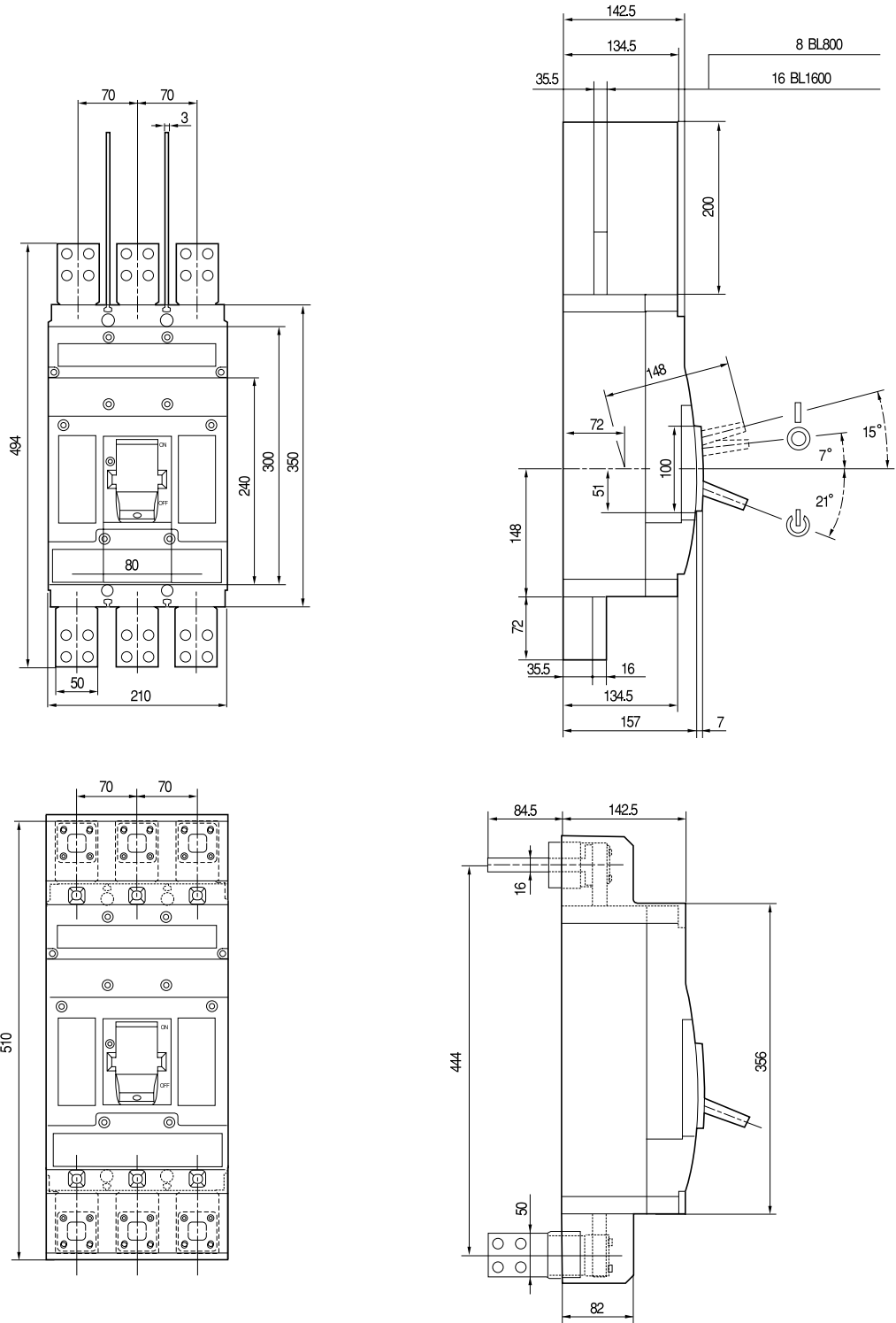
Slot



Overall dimensions

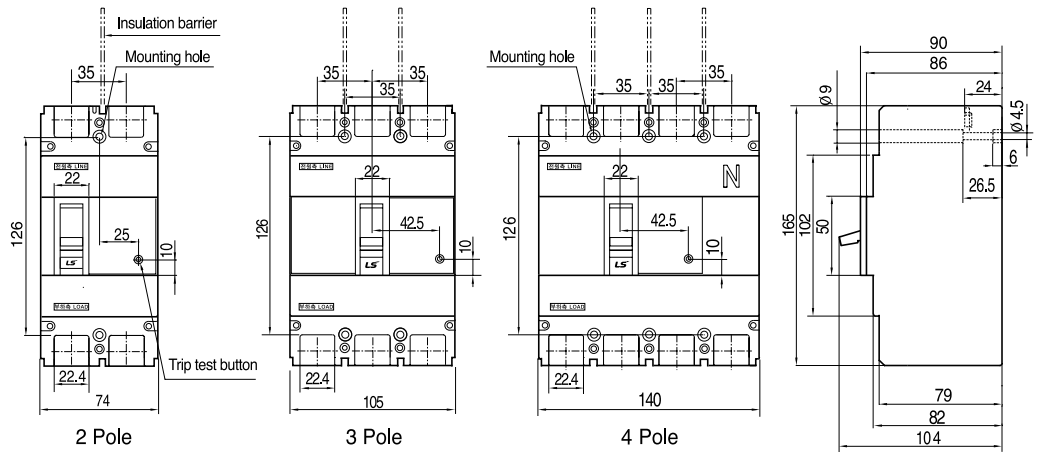
GB type adjustable MCCBs (Electronic trip unit)

GBN1603E

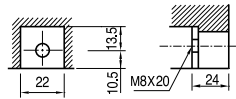


Hi-MEC MCCBs

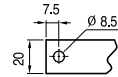
- ABL52a
- ABL53a
- ABL54a
- ABL102a
- ABL103a
- ABL104a



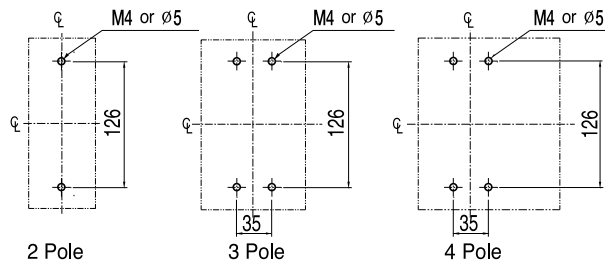
Detailed terminal



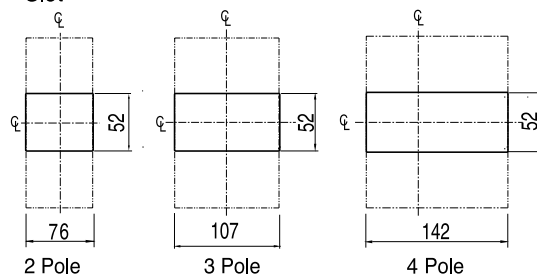
Hole size of a conductor



Mounting



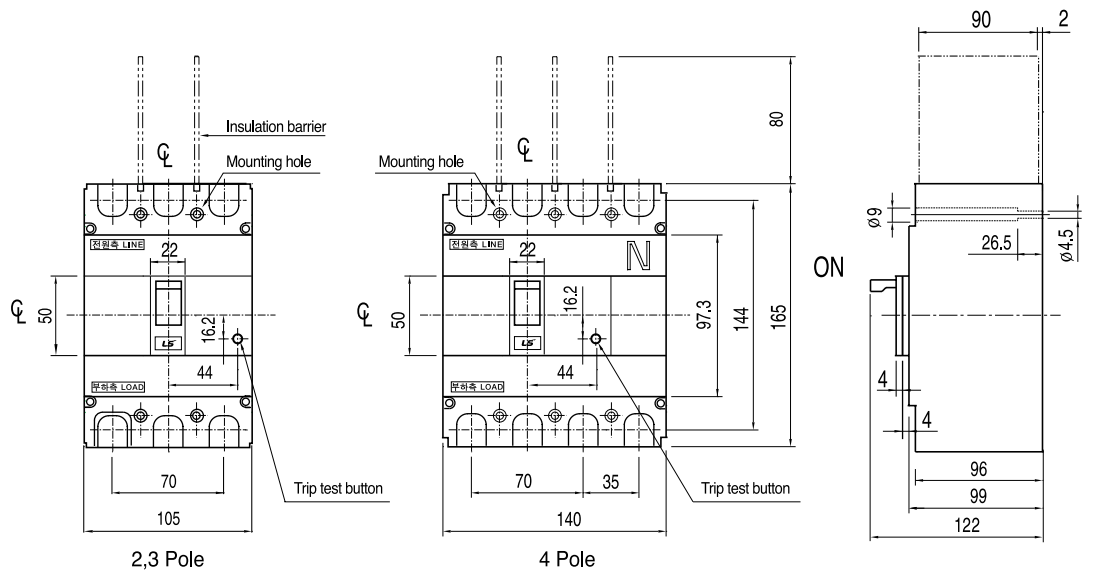
Slot



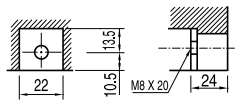
Overall dimensions

Hi-MEC MCCBs

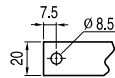
- ABL202a
- ABL203a
- ABL204a



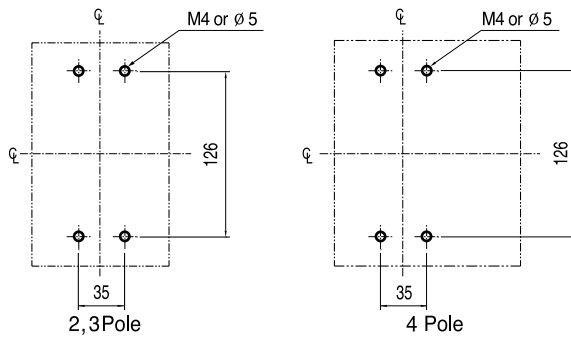
Detailed terminal



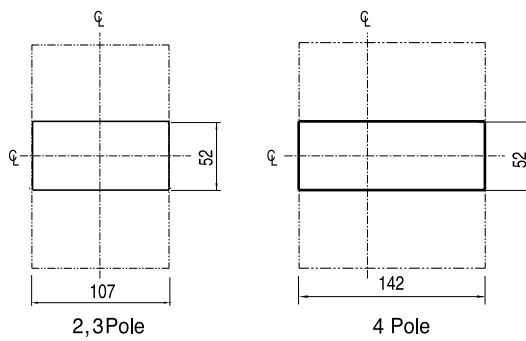
Hole size of a conductor



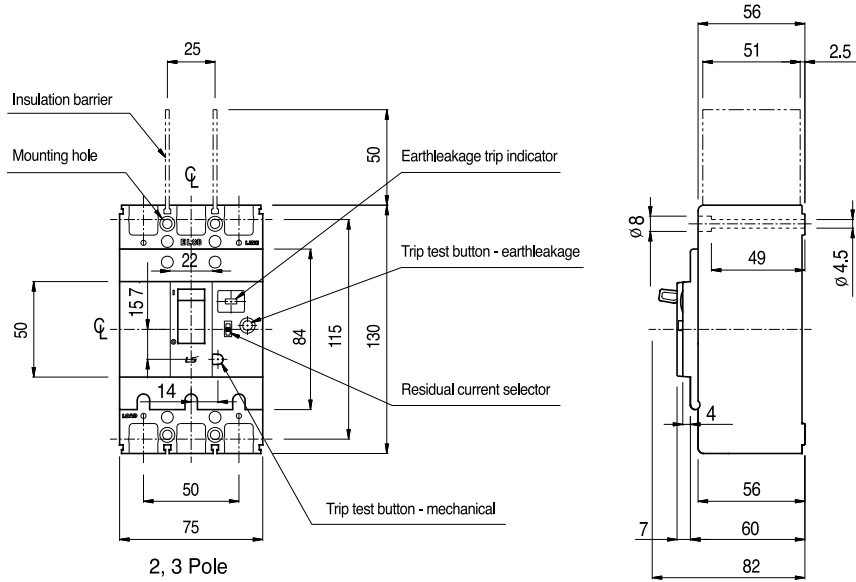
Mounting



Slot

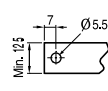
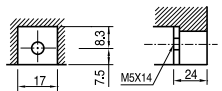


- EBE52b
- EBE53b
- EBE63b
- EBE102b
- EBE103b
- EBS33b
- EBS53b
- EBS63b
- EBH33b



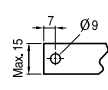
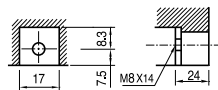
Detailed terminal (50A less)

Hole size of a conductor



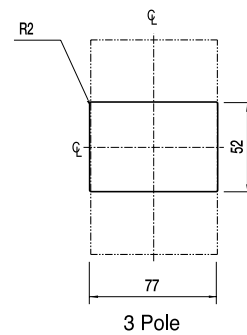
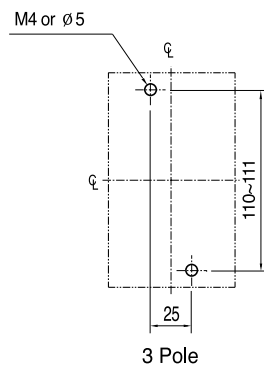
Detailed terminal (from 50A)

Hole size of a conductor



Mounting

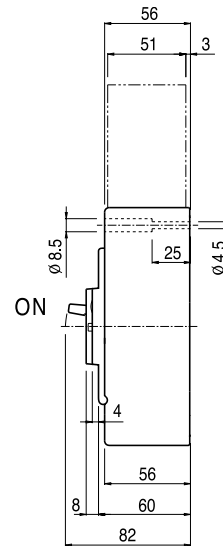
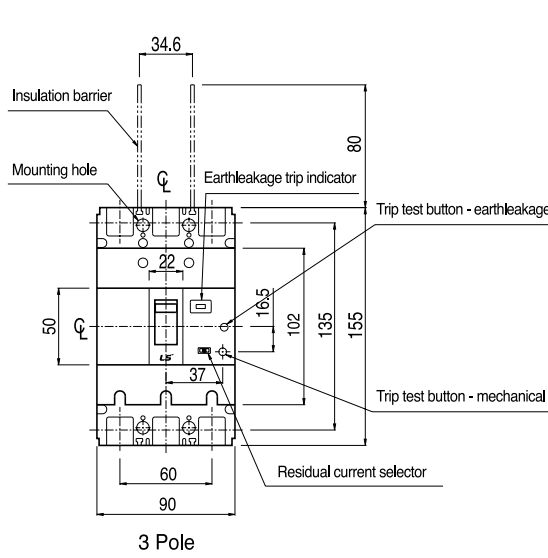
Slot



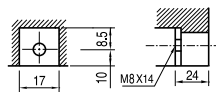
Overall dimensions

ELCBs

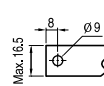
- EBS103b
- EBH53b
- EBH103b



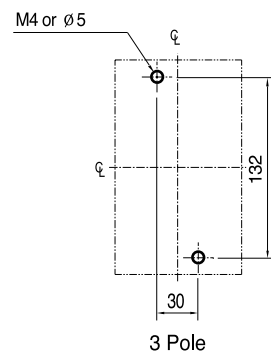
Detailed terminal



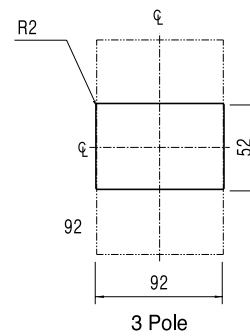
Hole size of a conductor



Mounting



Slot

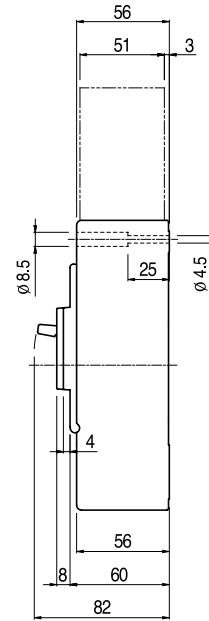
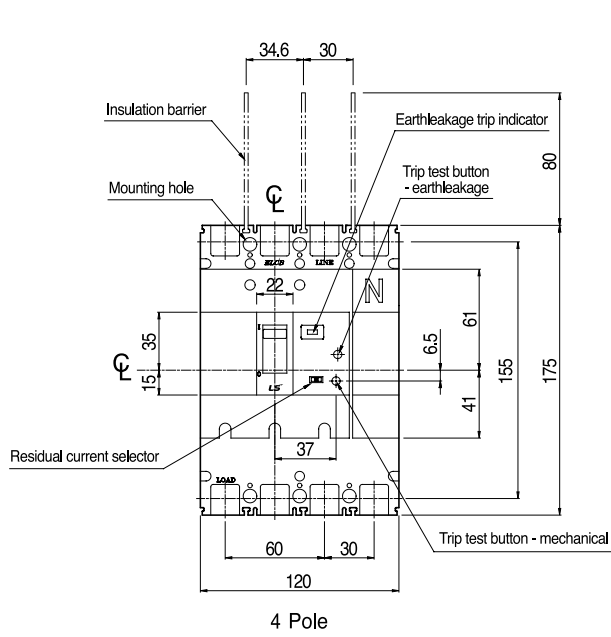


EBS 54b

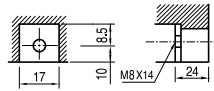
EBS104b

EBH 54b

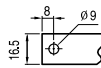
EBH104b



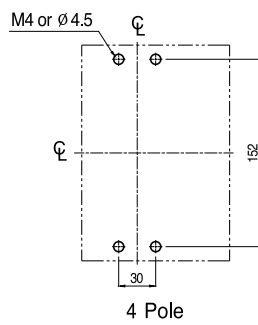
Detailed terminal



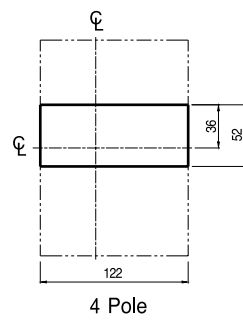
Hole size of a conductor



Mounting



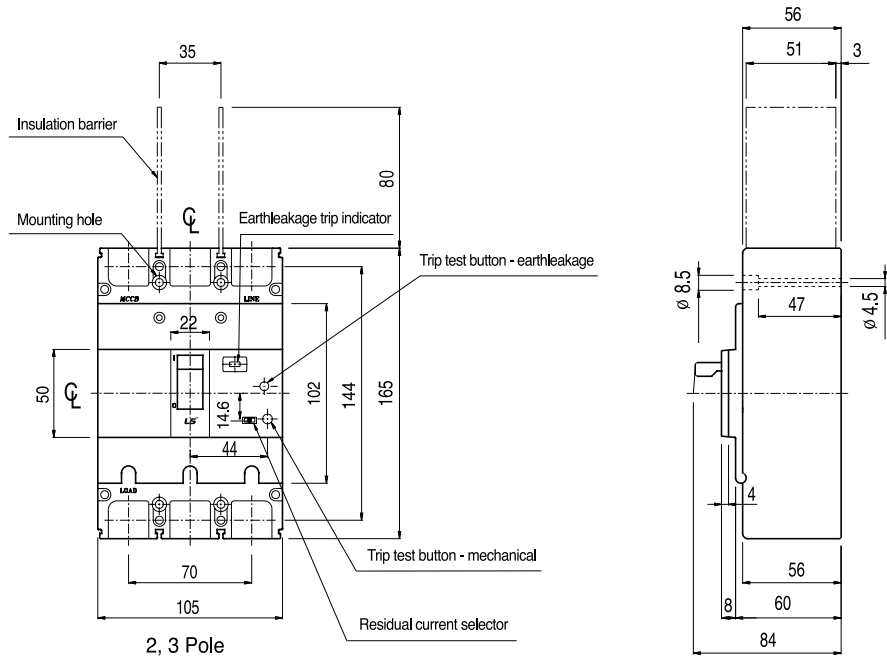
Slot



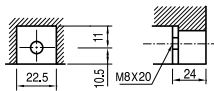
Overall dimensions

ELCBs

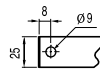
- EBE203b
- EBH203b
- EBS203b



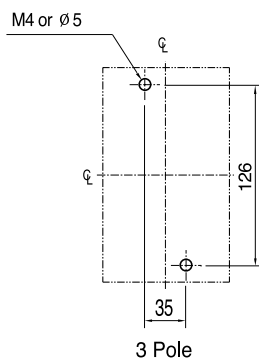
Detailed terminal



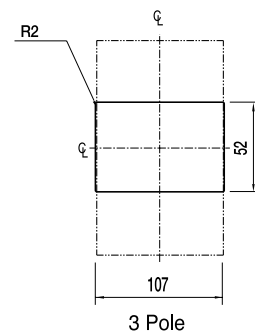
Hole size of a conductor



Mounting

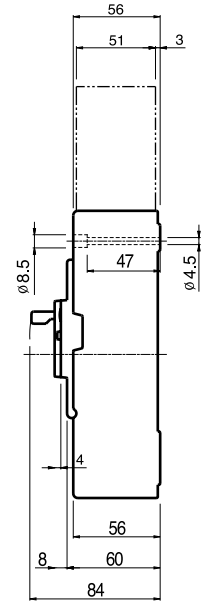
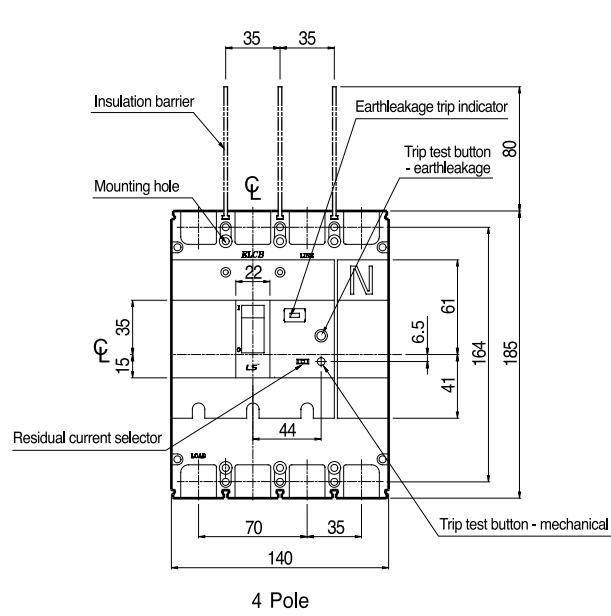


Slot

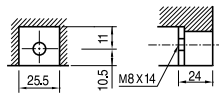


EBS204b

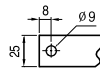
EBH204b



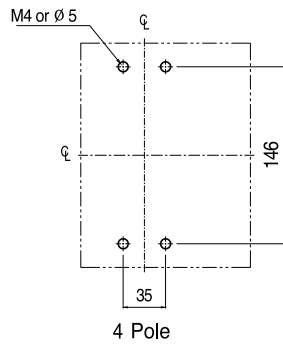
Detailed terminal



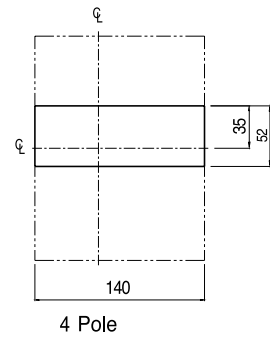
Hole size of a conductor



Mounting



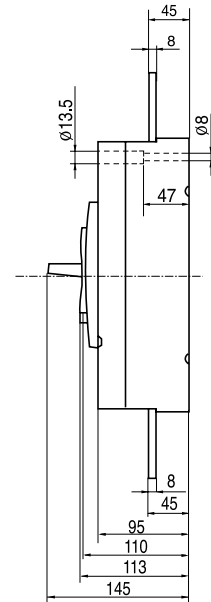
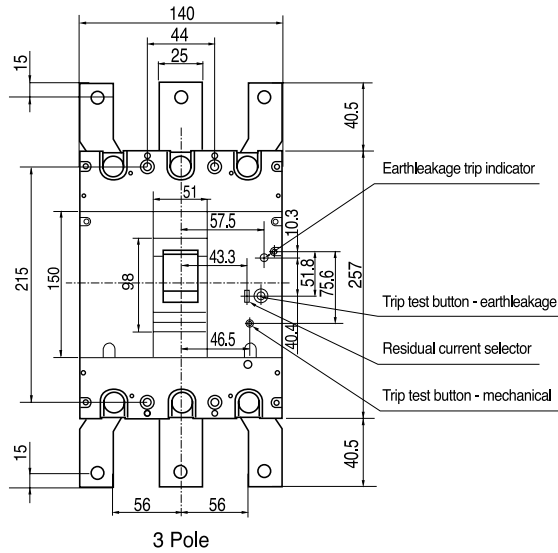
Slot



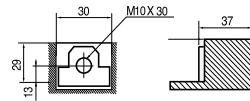
Overall dimensions

ELCBs

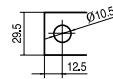
- EBE403b
- EBE404b
- EBS403b
- EBS404b
- EBH403b
- EBL403b



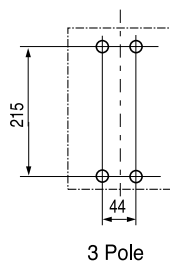
Detailed terminal



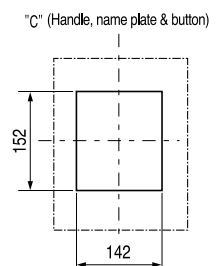
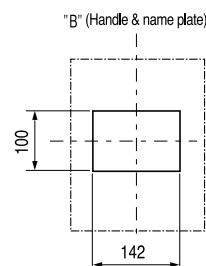
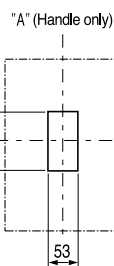
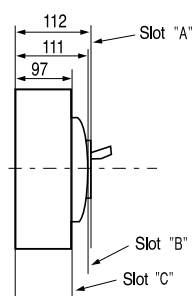
Hole size of a conductor



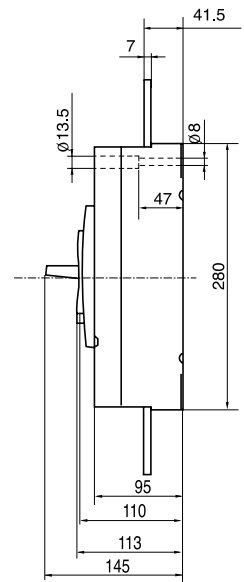
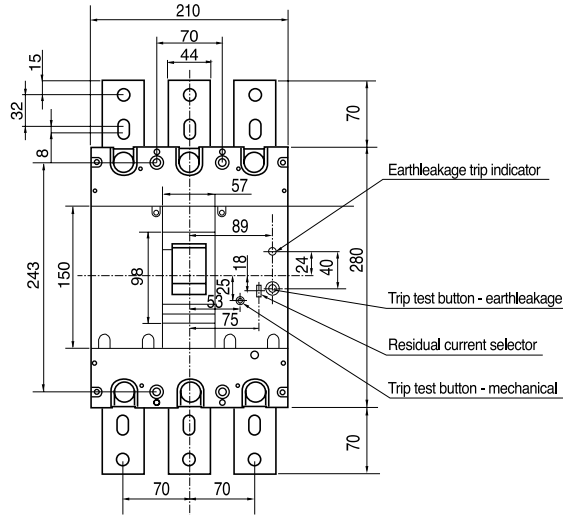
Mounting



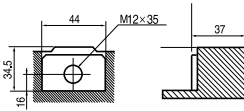
Slot



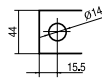
EBE803b(500, 600A)
 EBS803b(500, 600A)
 EBL803b(500, 600A)



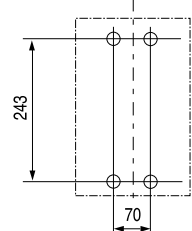
Detailed terminal



Hole size of a conductor

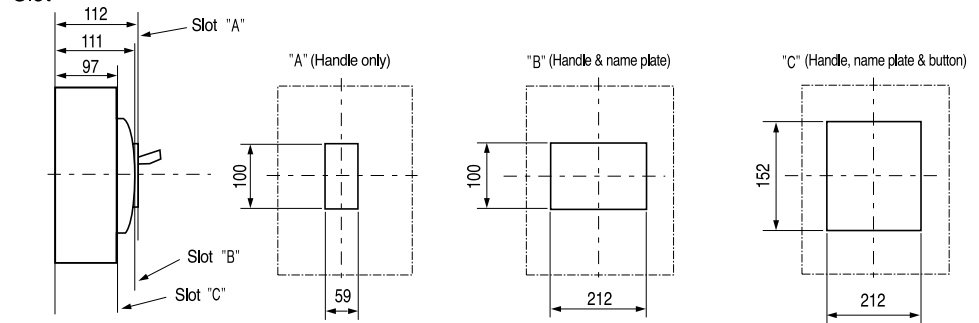


Mounting



3 Pole

Slot



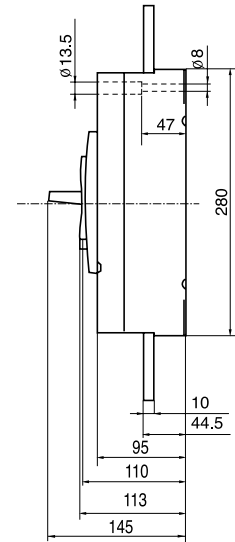
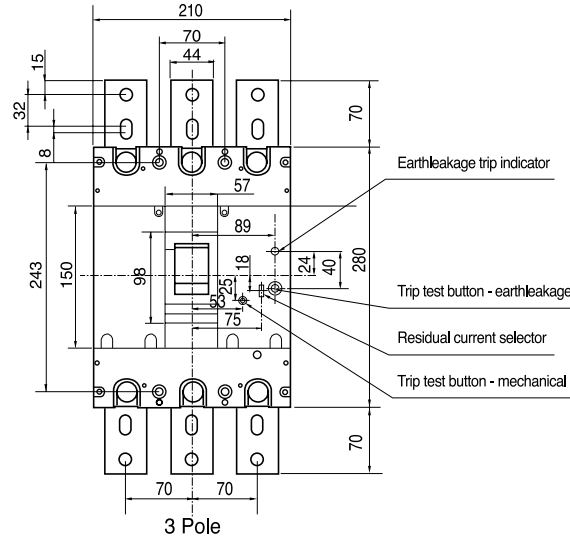
Overall dimensions

ELCBs

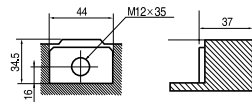
EBE803b(700, 800A)

EBL803b(700, 800A)

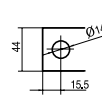
EBS803b(700, 800A)



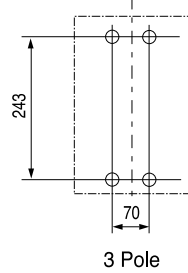
Detailed terminal



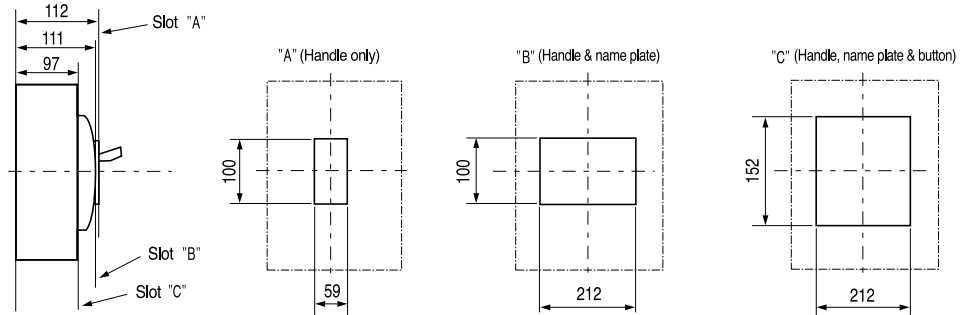
Hole size of a conductor



Mounting



Slot



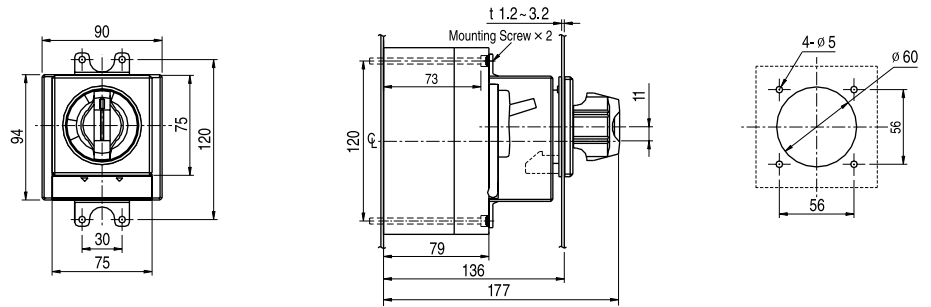
Rotary Handle

D-30S

D-30L

D-30R

D-30S, 30L, 30R type

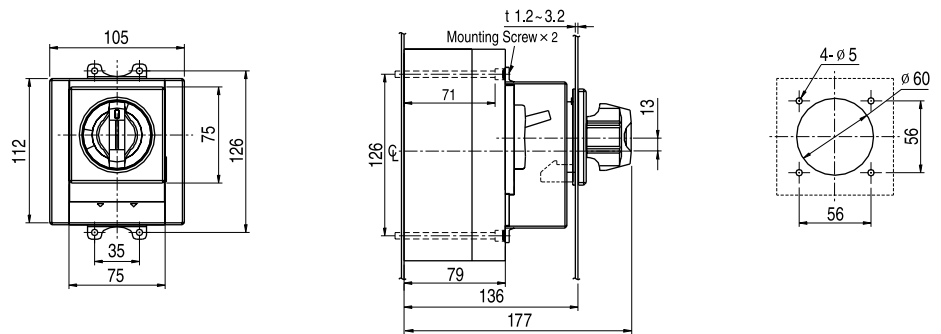


D-60S

D-60L

D-60R

D-60S, 60L, 60R type

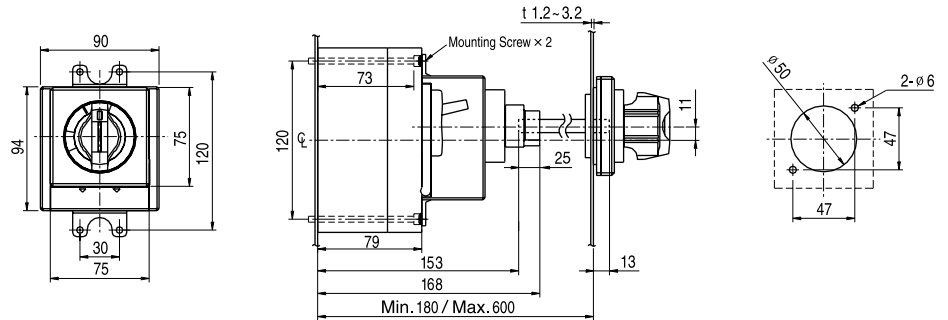


E-30S

E-30L

E-30R

E-30S, 30L, 30R type

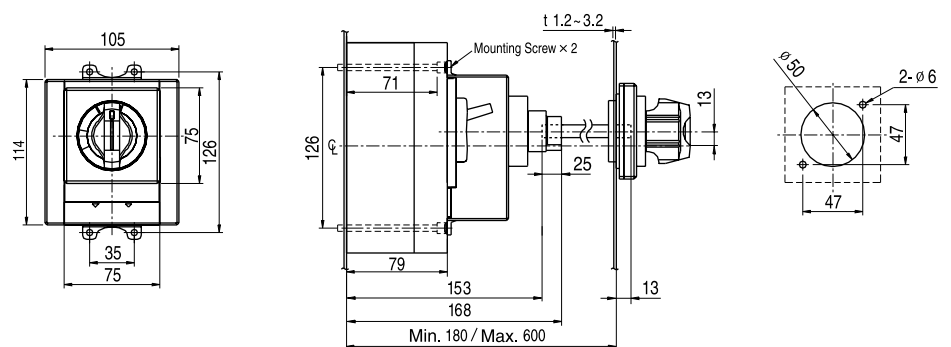


E-60S

E-60L

E-60R

E-60S, 60L, 60R type



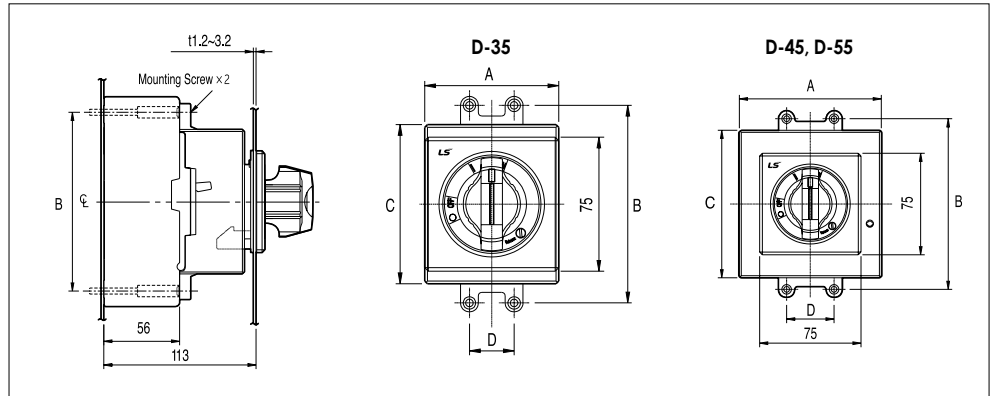
Overall dimensions

Rotary Handle

D-35

D-45

D-55



Type	D-35	D-45	D-55
A (mm)	75	90	105
B (mm)	110.5	132	126
C (mm)	89	106.8	109
D (mm)	25	30	35

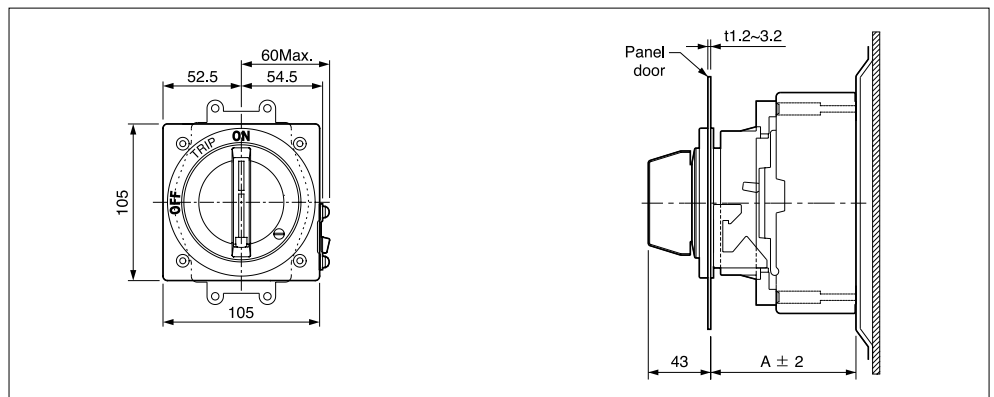
N-30b

N-40b

N-50b

N-55

N-60

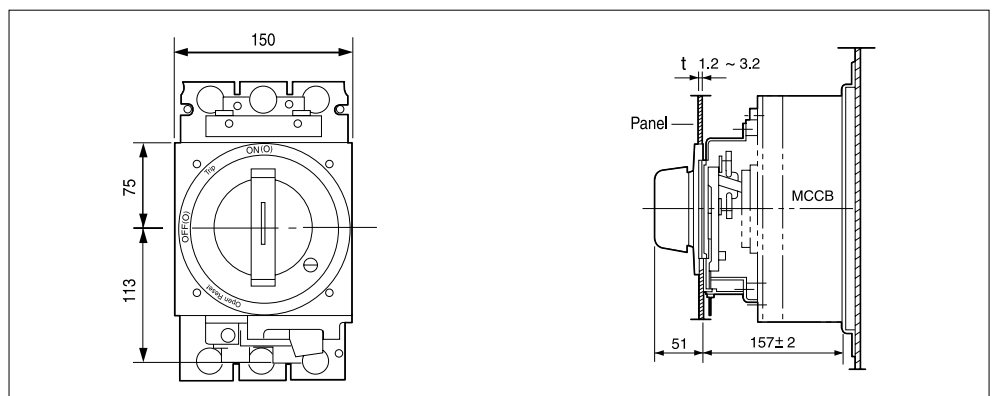


• Size "A"

N handle	N-30b	N-40b	N-50b	N-55	N-60
A (mm)	103	103	103	125	147

N-70

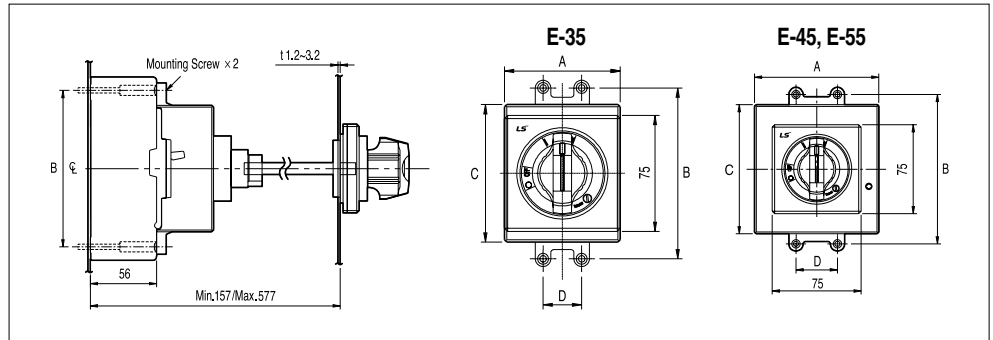
N-80



E-35

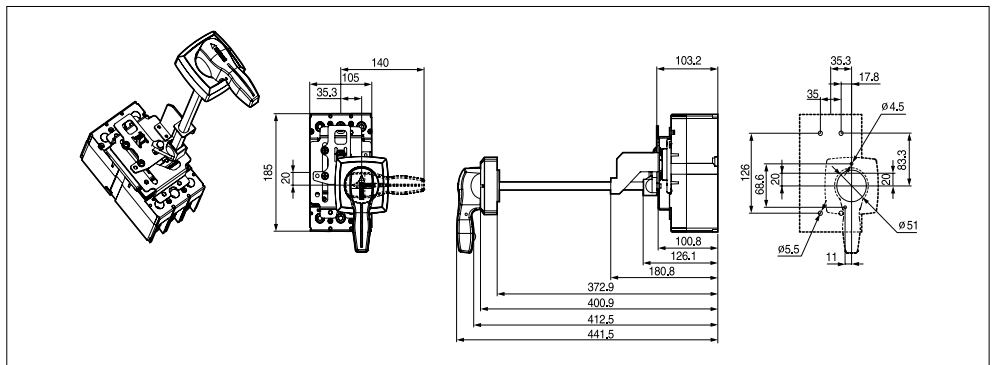
E-45

E-55

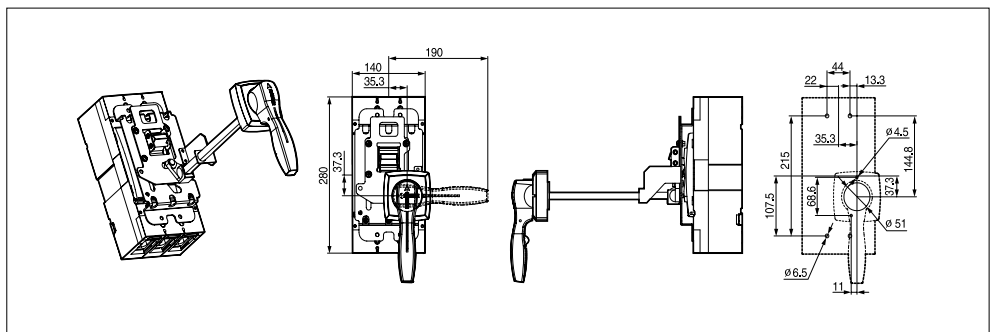


Type	E-35	E-45	E-55
A (mm)	75	90	105
B (mm)	110.5	132	126
C (mm)	89	106.8	109
D (mm)	25	30	35

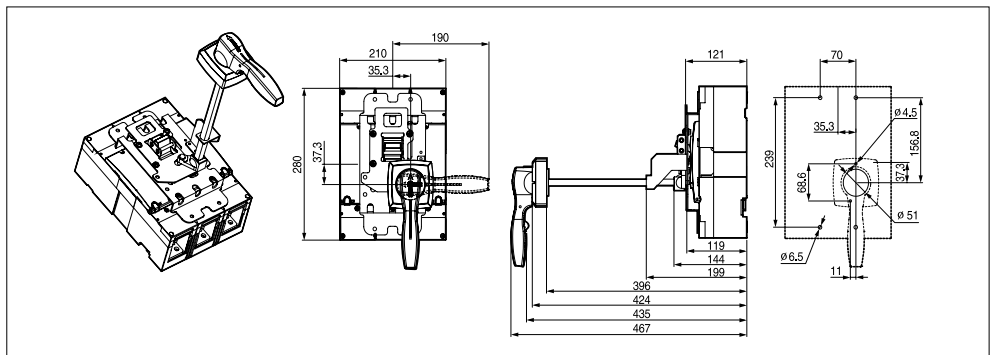
D-60U, E-60U



D-70U, E-70U



D-80U, E-80U



Catalogue numbers

AB-Type MCCB

Hi-MEC ABE 30AF 2P/3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
3A	2	ABE32 3A	0004000100	1.5
5A	2	ABE32 5A	0004000200	1.5
10A	2	ABE32 10A	0004000300	1.5
15A	2	ABE32 15A	0004000400	1.5
20A	2	ABE32 20A	0004000500	1.5
30A	2	ABE32 30A	0004000600	1.5

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
3A	3	ABE33 3A	0005000100	1.5
5A	3	ABE33 5A	0005000200	1.5
10A	3	ABE33 10A	0005000400	1.5
15A	3	ABE33 15A	0005000600	1.5
20A	3	ABE33 20A	0005000800	1.5
30A	3	ABE33 30A	0005001000	1.5

Meta-MEC ABS 30AF 2P/3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
3A	2	ABS32b 3A	0047000900	2.5
5A	2	ABS32b 5A	0047001000	5
10A	2	ABS32b 10A	0047001100	5
15A	2	ABS32b 15A	0047001200	5
20A	2	ABS32b 20A	0047001300	5
30A	2	ABS32b 30A	0047001400	5

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
3A	3	ABS33b 3A	0048000900	2.5
5A	3	ABS33b 5A	0048001000	5
10A	3	ABS33b 10A	0048001100	5
15A	3	ABS33b 15A	0048001200	5
20A	3	ABS33b 20A	0048001300	5
30A	3	ABS33b 30A	0048001400	5

Meta-MEC ABH 30AF 2P/3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	2	ABH32b 5A	0049002000	10
10A	2	ABH32b 10A	0049002100	10
15A	2	ABH32b 15A	0049002200	10
20A	2	ABH32b 20A	0049002300	10
30A	2	ABH32b 30A	0049002400	10

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	ABH33b 5A	0050002000	10
10A	3	ABH33b 10A	0050002100	10
15A	3	ABH33b 15A	0050002200	10
20A	3	ABH33b 20A	0050002300	10
30A	3	ABH33b 30A	0050002400	10

Meta-MEC ABE 50AF 2P/3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	2	ABE52b 5A	0047000100	5
10A	2	ABE52b 10A	0047000200	5
15A	2	ABE52b 15A	0047000300	5
20A	2	ABE52b 20A	0047000400	5
30A	2	ABE52b 30A	0047000500	5
40A	2	ABE52b 40A	0047000600	5
50A	2	ABE52b 50A	0047000700	5



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	ABE53b 5A	0048000100	5
10A	3	ABE53b 10A	0048000200	5
15A	3	ABE53b 15A	0048000300	5
20A	3	ABE53b 20A	0048000400	5
30A	3	ABE53b 30A	0048000500	5
40A	3	ABE53b 40A	0048000600	5
50A	3	ABE53b 50A	0048000700	5

Meta-MEC ABS 50AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	2	ABS52b 5A	0049001100	10
10A	2	ABS52b 10A	0049001200	10
15A	2	ABS52b 15A	0049001300	10
20A	2	ABS52b 20A	0049001400	10
30A	2	ABS52b 30A	0049001500	10
40A	2	ABS52b 40A	0049001600	10
50A	2	ABS52b 50A	0049001700	10



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	ABS53b 5A	0050001100	10
10A	3	ABS53b 10A	0050001200	10
15A	3	ABS53b 15A	0050001300	10
20A	3	ABS53b 20A	0050001400	10
30A	3	ABS53b 30A	0050001500	10
40A	3	ABS53b 40A	0050001600	10
50A	3	ABS53b 50A	0050001700	10



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	4	ABS54b 5A	0051001100	10
10A	4	ABS54b 10A	0051001200	10
15A	4	ABS54b 15A	0051001300	10
20A	4	ABS54b 20A	0051001400	10
30A	4	ABS54b 30A	0051001500	10
40A	4	ABS54b 40A	0051001600	10
50A	4	ABS54b 50A	0051001700	10

Catalogue numbers

AB-Type MCCB

Meta-MEC ABH 50AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	2	ABH52b 15A	0052000900	25
20A	2	ABH52b 20A	0052001000	25
30A	2	ABH52b 30A	0052001100	25
40A	2	ABH52b 40A	0052001200	25
50A	2	ABH52b 50A	0052001300	25



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	3	ABH53b 15A	0053000900	25
20A	3	ABH53b 20A	0053001000	25
30A	3	ABH53b 30A	0053001100	25
40A	3	ABH53b 40A	0053001200	25
50A	3	ABH53b 50A	0053001300	25



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	4	ABH54b 15A	0054000900	25
20A	4	ABH54b 20A	0054001000	25
30A	4	ABH54b 30A	0054001100	25
40A	4	ABH54b 40A	0054001200	25
50A	4	ABH54b 50A	0054001300	25

Meta-MEC ABE 60AF 2P/3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	2	ABE62b 60A	0047000800	5



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	ABE63b 60A	0048000800	5

Meta-MEC ABS 60AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	2	ABS62b 60A	0049001800	10



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	ABS63b 60A	0050001800	10



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	4	ABS64b 60A	0051001800	10

Catalogue numbers

AB-Type MCCB

Meta-MEC ABE 100AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	2	ABE102b 5A	0049000100	10
10A	2	ABE102b 10A	0049000200	10
15A	2	ABE102b 15A	0049000300	10
20A	2	ABE102b 20A	0049000400	10
30A	2	ABE102b 30A	0049000500	10
40A	2	ABE102b 40A	0049000600	10
50A	2	ABE102b 50A	0049000700	10
60A	2	ABE102b 60A	0049000800	10
75A	2	ABE102b 75A	0049000900	10
100A	2	ABE102b 100A	0049001000	10



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	ABE103b 5A	0050000100	10
10A	3	ABE103b 10A	0050000200	10
15A	3	ABE103b 15A	0050000300	10
20A	3	ABE103b 20A	0050000400	10
30A	3	ABE103b 30A	0050000500	10
40A	3	ABE103b 40A	0050000600	10
50A	3	ABE103b 50A	0050000700	10
60A	3	ABE103b 60A	0050000800	10
75A	3	ABE103b 75A	0050000900	10
100A	3	ABE103b 100A	0050001000	10



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	4	ABE104b 5A	0051000100	10
10A	4	ABE104b 10A	0051000200	10
15A	4	ABE104b 15A	0051000300	10
20A	4	ABE104b 20A	0051000400	10
30A	4	ABE104b 30A	0051000500	10
40A	4	ABE104b 40A	0051000600	10
50A	4	ABE104b 50A	0051000700	10
60A	4	ABE104b 60A	0051000800	10
75A	4	ABE104b 75A	0051000900	10
100A	4	ABE104b 100A	0051001000	10

Meta-MEC ABS 100AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	2	ABS102b 15A	0052000100	25
20A	2	ABS102b 20A	0052000200	25
30A	2	ABS102b 30A	0052000300	25
40A	2	ABS102b 40A	0052000400	25
50A	2	ABS102b 50A	0052000500	25
60A	2	ABS102b 60A	0052000600	25
75A	2	ABS102b 75A	0052000700	25
100A	2	ABS102b 100A	0052000800	25



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	3	ABS103b 15A	0053000100	25
20A	3	ABS103b 20A	0053000200	25
30A	3	ABS103b 30A	0053000300	25
40A	3	ABS103b 40A	0053000400	25
50A	3	ABS103b 50A	0053000500	25
60A	3	ABS103b 60A	0053000600	25
75A	3	ABS103b 75A	0053000700	25
100A	3	ABS103b 100A	0053000800	25



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	4	ABS104b 15A	0054000100	25
20A	4	ABS104b 20A	0054000200	25
30A	4	ABS104b 30A	0054000300	25
40A	4	ABS104b 40A	0054000400	25
50A	4	ABS104b 50A	0054000500	25
60A	4	ABS104b 60A	0054000600	25
75A	4	ABS104b 75A	0054000700	25
100A	4	ABS104b 100A	0054000800	25

Catalogue numbers

AB-Type MCCB

Meta-MEC ABH 100AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	2	ABH102b 15A	0052002000	35
20A	2	ABH102b 20A	0052002100	35
30A	2	ABH102b 30A	0052002200	35
40A	2	ABH102b 40A	0052002300	35
50A	2	ABH102b 50A	0052002400	35
60A	2	ABH102b 60A	0052002500	35
75A	2	ABH102b 75A	0052002600	35
100A	2	ABH102b 100A	0052002700	35



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	3	ABH103b 15A	0053002000	35
20A	3	ABH103b 20A	0053002100	35
30A	3	ABH103b 30A	0053002200	35
40A	3	ABH103b 40A	0053002300	35
50A	3	ABH103b 50A	0053002400	35
60A	3	ABH103b 60A	0053002500	35
75A	3	ABH103b 75A	0053002600	35
100A	3	ABH103b 100A	0053002700	35



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	4	ABH104b 15A	0054002000	35
20A	4	ABH104b 20A	0054002100	35
30A	4	ABH104b 30A	0054002200	35
40A	4	ABH104b 40A	0054002300	35
50A	4	ABH104b 50A	0054002400	35
60A	4	ABH104b 60A	0054002500	35
75A	4	ABH104b 75A	0054002600	35
100A	4	ABH104b 100A	0054002700	35

Meta-MEC ABE 225AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	2	ABE202b 100A	0055000100	18
125A	2	ABE202b 125A	0055000200	18
150A	2	ABE202b 150A	0055000300	18
175A	2	ABE202b 175A	0055000400	18
200A	2	ABE202b 200A	0055000500	18
225A	2	ABE202b 225A	0055000600	18



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	3	ABE203b 100A	0056000100	18
125A	3	ABE203b 125A	0056000200	18
150A	3	ABE203b 150A	0056000300	18
175A	3	ABE203b 175A	0056000400	18
200A	3	ABE203b 200A	0056000500	18
225A	3	ABE203b 225A	0056000600	18



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	4	ABE204b 100A	0057000100	18
125A	4	ABE204b 125A	0057000200	18
150A	4	ABE204b 150A	0057000300	18
175A	4	ABE204b 175A	0057000400	18
200A	4	ABE204b 200A	0057000500	18
225A	4	ABE204b 225A	0057000600	18

Catalogue numbers

AB-Type MCCB

Meta-MEC ABS 225AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	2	ABS202b 100A	0055000700	25
125A	2	ABS202b 125A	0055000800	25
150A	2	ABS202b 150A	0055000900	25
175A	2	ABS202b 175A	0055001000	25
200A	2	ABS202b 200A	0055001100	25
225A	2	ABS202b 225A	0055001200	25



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	3	ABS203b 100A	0056000700	25
125A	3	ABS203b 125A	0056000800	25
150A	3	ABS203b 150A	0056000900	25
175A	3	ABS203b 175A	0056001000	25
200A	3	ABS203b 200A	0056001100	25
225A	3	ABS203b 225A	0056001200	25



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	4	ABS204b 100A	0057000700	25
125A	4	ABS204b 125A	0057000800	25
150A	4	ABS204b 150A	0057000900	25
175A	4	ABS204b 175A	0057001000	25
200A	4	ABS204b 200A	0057001100	25
225A	4	ABS204b 225A	0057001200	25

Meta-MEC ABH 225AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	2	ABH202b 100A	0058000100	35
125A	2	ABH202b 125A	0058000200	35
150A	2	ABH202b 150A	0058000300	35
175A	2	ABH202b 175A	0058000400	35
200A	2	ABH202b 200A	0058000500	35
225A	2	ABH202b 225A	0058000600	35



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	3	ABH203b 100A	0059000100	35
125A	3	ABH203b 125A	0059000200	35
150A	3	ABH203b 150A	0059000300	35
175A	3	ABH203b 175A	0059000400	35
200A	3	ABH203b 200A	0059000500	35
225A	3	ABH203b 225A	0059000600	35



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	4	ABH204b 100A	0060000100	35
125A	4	ABH204b 125A	0060000200	35
150A	4	ABH204b 150A	0060000300	35
175A	4	ABH204b 175A	0060000400	35
200A	4	ABH204b 200A	0060000500	35
225A	4	ABH204b 225A	0060000600	35

Catalogue numbers

AB-Type MCCB

Meta-MEC ABE 400AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	2	ABE402b 250A	0088000100	25
300A	2	ABE402b 300A	0088000200	25
350A	2	ABE402b 350A	0088000300	25
400A	2	ABE402b 400A	0088000400	25

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	ABE403b 250A	0087000200	25
300A	3	ABE403b 300A	0087000300	25
350A	3	ABE403b 350A	0087000400	25
400A	3	ABE403b 400A	0087000500	25

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	4	ABE404b 250A	0086000200	25
300A	4	ABE404b 300A	0086000300	25
350A	4	ABE404b 350A	0086000400	25
400A	4	ABE404b 400A	0086000500	25

Meta-MEC ABS 400AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	2	ABS402b 250A	0088000500	35
300A	2	ABS402b 300A	0088000600	35
350A	2	ABS402b 350A	0088000700	35
400A	2	ABS402b 400A	0088000800	35

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	ABS403b 250A	0087000600	35
300A	3	ABS403b 300A	0087000700	35
350A	3	ABS403b 350A	0087000800	35
400A	3	ABS403b 400A	0087000900	35

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	4	ABS404b 250A	0086000600	35
300A	4	ABS404b 300A	0086000700	35
350A	4	ABS404b 350A	0086000800	35
400A	4	ABS404b 400A	0086000900	35

Meta-MEC ABH 400AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	2	ABH402b 250A	0088000900	50
300A	2	ABH402b 300A	0088001000	50
350A	2	ABH402b 350A	0088001100	50
400A	2	ABH402b 400A	0088001200	50

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	ABH403b 250A	0087001000	50
300A	3	ABH403b 300A	0087001100	50
350A	3	ABH403b 350A	0087001200	50
400A	3	ABH403b 400A	0087001300	50

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	4	ABH404b 250A	0086001000	50
300A	4	ABH404b 300A	0086001100	50
350A	4	ABH404b 350A	0086001200	50
400A	4	ABH404b 400A	0086001300	50

Meta-MEC ABL 400AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	2	ABL402b 250A	0088001300	85
300A	2	ABL402b 300A	0088001400	85
350A	2	ABL402b 350A	0088001500	85
400A	2	ABL402b 400A	0088001600	85

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	ABL403b 250A	0087001400	85
300A	3	ABL403b 300A	0087001500	85
350A	3	ABL403b 350A	0087001600	85
400A	3	ABL403b 400A	0087000100	85

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	4	ABL404b 250A	0086001400	85
300A	4	ABL404b 300A	0086001500	85
350A	4	ABL404b 350A	0086001600	85
400A	4	ABL404b 400A	0086000100	85

Catalogue numbers

AB-Type MCCB

Meta-MEC ABE 800AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	2	ABE802b 500A	0092000100	35
600A	2	ABE802b 600A	0092000200	35
630A	2			35
700A	2	ABE802b 700A	0092000300	35
800A	2	ABE802b 800A	0092000400	35

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	ABE803b 500A	0093000100	35
600A	3	ABE803b 600A	0093000200	35
630A	3	ABE803b 630A	0093001300	35
700A	3	ABE803b 700A	0093000300	35
800A	3	ABE803b 800A	0093000400	35

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	4	ABE804b 500A	0085000200	35
600A	4	ABE804b 600A	0085000300	35
630A	4	ABE804b 630A	0085001300	35
700A	4	ABE804b 700A	0085000400	35
800A	4	ABE804b 800A	0085000500	35

Meta-MEC ABS 800AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	2	ABS802b 500A	0092000500	50
600A	2	ABS802b 600A	0092000600	50
630A	2			50
700A	2	ABS802b 700A	0092000700	50
800A	2	ABS802b 800A	0092000800	50

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	ABS803b 500A	0093000500	50
600A	3	ABS803b 600A	0093000600	50
630A	3	ABS803b 630A	0093001400	50
700A	3	ABS803b 700A	0093000700	50
800A	3	ABS803b 800A	0093000800	50

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	4	ABS804b 500A	0085000600	50
600A	4	ABS804b 600A	0085000700	50
630A	4	ABS804b 630A	0085000800	50
700A	4	ABS804b 700A	0085000900	50
800A	4	ABS804b 800A	0085001400	50

Meta-MEC ABL 800AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	2	ABL802b 500A	0092000900	85
600A	2	ABL802b 600A	0092001000	85
630A	2	ABL802b 630A		85
700A	2	ABL802b 700A	0092001100	85
800A	2	ABL802b 800A	0092001200	85

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	ABL803b 500A	0093000900	85
600A	3	ABL803b 600A	0093001000	85
630A	3	ABL803b 630A	0093001500	85
700A	3	ABL803b 700A	0093001100	85
800A	3	ABL803b 800A	0093001200	85

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	4	ABL804b 500A	0085001000	85
600A	4	ABL804b 600A	0085000100	85
630A	4	ABL804b 630A	0085001500	85
700A	4	ABL804b 700A	0085001100	85
800A	4	ABL804b 800A	0085001200	85

Catalogue numbers

AB-Type MCCB

Meta-MEC ABS 1000AF 3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
1000A	3	ABS1003 1000A 50Hz	0041007600	65
1000A	3	ABS1003 1000A 60Hz	0041009200	65

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
1000A	4	ABS1004 1000A 50Hz	0042002300	65
1000A	4	ABS1004 1000A 60Hz	0042002400	65

Meta-MEC ABS 1200AF 3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
1200A	3	ABS1203 1200A 50Hz	0041011200	65
1200A	3	ABS1203 1200A 60Hz	0041011300	65

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
1200A	4	ABS1204 1200A 50Hz	0042003300	65
1200A	4	ABS1204 1200A 60Hz		65

Meta-MEC ABS1203E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
1200A	3	ABS1203E 600-1200A	0041013900	65

Catalogue numbers

GB-Type MCCB

Meta-MEC GBN 100AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
16A	2	GBN102 16A	0024004900	35
20A	2	GBN102 20A	0024005500	35
25A	2	GBN102 25A	0024000700	35
32A	2	GBN102 32A	0024000800	35
40A	2	GBN102 40A	0024005600	35
50A	2	GBN102 50A	0024004100	35
63A	2	GBN102 63A	0024000900	35
80A	2	GBN102 80A	0024001000	35
100A	2	GBN102 100A	0024001100	35

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
16A	3	GBN103 16A	0025000700	35
20A	3	GBN103 20A	0025000800	35
25A	3	GBN103 25A	0025000900	35
32A	3	GBN103 32A	0025001000	35
40A	3	GBN103 40A	0025001100	35
50A	3	GBN103 50A	0025001200	35
63A	3	GBN103 63A	0025001300	35
80A	3	GBN103 80A	0025001400	35
100A	3	GBN103 100A	0025001500	35

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
6A	4	GBN104 16A	0026000300	35
20A	4	GBN104 20A	0026000400	35
25A	4	GBN104 25A	0026000500	35
32A	4	GBN104 32A	0026000600	35
40A	4	GBN104 40A	0026000700	35
50A	4	GBN104 50A	0026000800	35
63A	4	GBN104 63A	0026000900	35
80A	4	GBN104 80A	0026001000	35
100A	4	GBN104 100A	0026000100	35

Meta-MEC GBH 100AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
16A	2	GBH102 16A	0024005000	50
20A	2	GBH102 20A	0024005100	50
25A	2	GBH102 25A	0024005200	50
32A	2	GBH102 32A	0024005300	50
40A	2	GBH102 40A	0024005400	50
50A	2	GBH102 50A	0024001800	50
63A	2	GBH102 63A	0024001900	50
80A	2	GBH102 80A	0024002000	50
100A	2	GBH102 100A	0024002100	50

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
16A	3	GBH103 16A	0025009200	50
20A	3	GBH103 20A	0025010100	50
25A	3	GBH103 25A	0025002200	50
32A	3	GBH103 32A	0025002300	50
40A	3	GBH103 40A	0025002400	50
50A	3	GBH103 50A	0025002500	50
63A	3	GBH103 63A	0025002600	50
80A	3	GBH103 80A	0025002700	50
100A	3	GBH103 100A	0025002800	50

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
16A	4	GBH104 16A	0026003400	50
20A	4	GBH104 20A	0026004100	50
25A	4	GBH104 25A	0026004200	50
32A	4	GBH104 32A	0026004300	50
40A	4	GBH104 40A	0026004400	50
50A	4	GBH104 50A	0026004500	50
63A	4	GBH104 63A	0026001200	50
80A	4	GBH104 80A	0026002700	50
100A	4	GBH104 100A	0026000200	50

Catalogue numbers

GB-Type MCCB

Meta-MEC GBL 100AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
16A	2	GBL102 16A		85
20A	2	GBL102 20A		85
25A	2	GBL102 25A		85
32A	2	GBL102 32A		85
40A	2	GBL102 40A		85
50A	2	GBL102 50A		85
63A	2	GBL102 63A	0024002800	85
80A	2	GBL102 80A	0024002900	85
100A	2	GBL102 100A	0024003000	85

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
16A	3	GBL103 16A	0025003600	85
20A	3	GBL103 20A	0025003700	85
25A	3	GBL103 25A	0025003800	85
32A	3	GBL103 32A	0025003900	85
40A	3	GBL103 40A	0025004000	85
50A	3	GBL103 50A	0025004100	85
63A	3	GBL103 63A	0025004200	85
80A	3	GBL103 80A	0025004300	85
100A	3	GBL103 100A	0025004400	85

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
16A	4	GBL104 16A	0026001300	85
20A	4	GBL104 20A	0026001400	85
25A	4	GBL104 25A	0026001500	85
32A	4	GBL104 32A	0026001600	85
40A	4	GBL104 40A	0026001700	85
50A	4	GBL104 50A	0026001800	85
63A	4	GBL104 63A	0026001900	85
80A	4	GBL104 80A	0026002000	85
100A	4	GBL104 100A	0026002100	85

Meta-MEC GBN 250AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	2	GBN202 125A	0027000100	35
160A	2	GBN202 160A	0027000200	35
200A	2	GBN202 200A	0027000300	35
250A	2	GBN202 250A	0027000400	35
Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	GBN203 125A	0028000100	35
150A	3	GBN203 150A	0028003800	35
160A	3	GBN203 160A	0028000200	35
200A	3	GBN203 200A	0028000300	35
250A	3	GBN203 250A	0028000400	35
Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	4	GBN204 125A	0029000700	35
160A	4	GBN204 160A	0029000800	35
200A	4	GBN204 200A	0029000100	35
250A	4	GBN204 250A	0029000200	35

Meta-MEC GBH 250AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	2	GBH202 125A	0027000500	50
160A	2	GBH202 160A	0027000600	50
200A	2	GBH202 200A	0027000700	50
250A	2	GBH202 250A	0027000800	50
Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	GBH203 125A	0028000600	50
160A	3	GBH203 160A	0028000700	50
200A	3	GBH203 200A	0028000800	50
250A	3	GBH203 250A	0028000900	50
Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	4	GBH204 125A	0029000900	50
160A	4	GBH204 160A	0029001200	50
200A	4	GBH204 200A	0029000300	50
250A	4	GBH204 250A	0029000400	50

Meta-MEC GBL 250AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	2	GBL202 125A	0027000900	85
160A	2	GBL202 160A	0027001000	85
200A	2	GBL202 200A	0027001100	85
250A	2	GBL202 250A	0027001200	85
Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	GBL203 125A	0028001000	85
160A	3	GBL203 160A	0028003000	85
200A	3	GBL203 200A	0028001200	85
250A	3	GBL203 250A	0028001300	85
Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	4	GBL204 125A	0029001000	85
160A	4	GBL204 160A	0029001100	85
200A	4	GBL204 200A	0029000500	85
250A	4	GBL204 250A	0029000600	85

Catalogue numbers

GB-Type MCCB

Meta-MEC GBL 53E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
50A	3	GBL53E 50A	0025008700	85

Meta-MEC GBL 103E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	3	GBL103E 100A	0025009100	85

Meta-MEC GBL 203E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	GBL203E 250A	0028002900	85

Meta-MEC GBN 403E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
400A	3	GBN403E 400A	0031018100	35

Meta-MEC GBH 403E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
400A	3	GBH403E 400A	0031019300	50

Meta-MEC GBN 803E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
800A	3	GBN803E 800A	0039007000	35

Meta-MEC GBH 803E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
800A	3	GBH803E 800A	0039007300	50

Catalogue numbers

GB-Type MCCB

Meta-MEC GBN1603E 3P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
1600A	3	GBN1603E 1600A	0100000100	65
1600A	3	GBN1603EX 1600A	0100000200	65
1600A	3	GBN1603E 1600A WITH AX-LWT	0100000300	65

Hi-MEC ABL 50AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	2	ABL52a 15A	0020007500	65
20A	2	ABL52a 20A	0020007600	65
30A	2	ABL52a 30A	0020007700	65
40A	2	ABL52a 40A	0020007800	65
50A	2	ABL52a 50A	0020007900	65

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	3	ABL53a 15A	0021030600	65
20A	3	ABL53a 20A	0021030700	65
30A	3	ABL53a 30A	0021030800	65
40A	3	ABL53a 40A	0021030900	65
50A	3	ABL53a 50A	0021031000	65

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	4	ABL54a 15A	0022009800	65
20A	4	ABL54a 20A	0022009900	65
30A	4	ABL54a 30A	0022010000	65
40A	4	ABL54a 40A	0022010100	65
50A	4	ABL54a 50A	0022010200	65

Catalogue numbers

AB-Type MCCB

Hi-MEC ABL 100AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	2	ABL102a 15A	0020009800	65
20A	2	ABL102a 20A	0020009900	65
30A	2	ABL102a 30A	0020010000	65
40A	2	ABL102a 40A	0020010100	65
50A	2	ABL102a 50A	0020010200	65
60A	2	ABL102a 60A	0020010300	65
75A	2	ABL102a 75A	0020010400	65
100A	2	ABL102a 100A	0020010500	65

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	3	ABL103a 15A	0021036300	65
20A	3	ABL103a 20A	0021036400	65
30A	3	ABL103a 30A	0021036500	65
40A	3	ABL103a 40A	0021036600	65
50A	3	ABL103a 50A	0021036700	65
60A	3	ABL103a 60A	0021036800	65
75A	3	ABL103a 75A	0021036900	65
100A	3	ABL103a 100A	0021037000	65

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
15A	4	ABL104a 15A	0022013200	65
20A	4	ABL104a 20A	0022013300	65
30A	4	ABL104a 30A	0022013400	65
40A	4	ABL104a 40A	0022013500	65
50A	4	ABL104a 50A	0022013600	65
60A	4	ABL104a 60A	0022013700	65
75A	4	ABL104a 75A	0022013800	65
100A	4	ABL104a 100A	0022013900	65

Hi-MEC ABL 225AF 2P/3P/4P



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	2	ABL202a 125A	0017007700	65
150A	2	ABL202a 150A	0017007800	65
175A	2	ABL202a 175A	0017007900	65
200A	2	ABL202a 200A	0017008000	65
225A	2	ABL202a 225A	0017008100	65

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	ABL203a 125A	0018028500	65
150A	3	ABL203a 150A	0018028600	65
175A	3	ABL203a 175A	0018028700	65
200A	3	ABL203a 200A	0018028800	65
225A	3	ABL203a 225A	0018028900	65

Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	4	ABL204a 125A	0019014400	65
150A	4	ABL204a 150A	0019014500	65
175A	4	ABL204a 175A	0019014600	65
200A	4	ABL204a 200A	0019014700	65
225A	4	ABL204a 225A	0019014800	65

Catalogue numbers

AB-Type MCCB

Motor protection Meta-MEC Series ABE53bM 3P Thermal magnetic type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
10A	3	ABE53bM 10A	0048002300	5
12A	3	ABE53bM 12A	0048002400	5
16A	3	ABE53bM 16A	0048002500	5
24A	3	ABE53bM 24A	0048002600	5
32A	3	ABE53bM 32A	0048002700	5
45A	3	ABE53bM 45A	0048002900	5
60A	3	ABE63bM 60A	0048003000	5

Motor protection Meta-MEC Series ABS53bM 3P Thermal magnetic type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
10A	3	ABS53bM 10A	0050004700	10
12A	3	ABS53bM 12A	0050004800	10
16A	3	ABS53bM 16A	0050004900	10
24A	3	ABS53bM 24A	0050005000	10
32A	3	ABS53bM 32A	0050005100	10
40A	3	ABS53bM 40A	0050005200	10
45A	3	ABS53bM 45A	0050005300	10

Motor protection Meta-MEC Series ABS63bM 3P Thermal magnetic type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	ABS63bM 60A	0050005400	10

Motor protection Meta-MEC Series ABE103bM 3P Thermal magnetic type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
75A	3	ABE103bM 75A	0050005600	10
90A	3	ABE103bM 90A	0050005700	10

Motor protection Meta-MEC Series ABH53bM 3P Thermal magnetic type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
6A	3	ABH53bM 16A	0053003400	25
24A	3	ABH53bM 24A	0053003500	25
32A	3	ABH53bM 32A	0053003600	25
45A	3	ABH53bM 45A	0053003800	25

Motor protection Meta-MEC Series ABS103bM 3P Thermal magnetic type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	ABS103bM 60A	0053003100	25
75A	3	ABS103bM 75A	0053003200	25
90A	3	ABS103bM 90A	0053003300	25

Motor protection Meta-MEC Series ABH103bM 3P Thermal magnetic type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	ABH103bM 60A	0053004400	35
75A	3	ABH103bM 75A	0053004500	35
90A	3	ABH103bM 90A	0053004600	35

Catalogue numbers

AB-Type MCCB

Motor protection Meta-MEC Series ABE203bM 3P Thermal magnetic type



Rated current(I _n)	Pole	Model	Catalogue No.	I _{cu} at 415VAC (kA)
125A	3	ABE203bM 125A	0056001300	18
150A	3	ABE203bM 150A	0056001400	18
175A	3	ABE203bM 175A	0056001500	18
225A	3	ABE203bM 225A	0056001600	18

Motor protection Meta-MEC Series ABS203bM 3P Thermal magnetic type



Rated current(I _n)	Pole	Model	Catalogue No.	I _{cu} at 415VAC (kA)
125A	3	ABS203bM 125A	0056001700	25
150A	3	ABS203bM 150A	0056001800	25
175A	3	ABS203bM 175A	0056001900	25
225A	3	ABS203bM 225A	0056002000	25

Motor protection Meta-MEC Series ABH203bM 3P Thermal magnetic type



Rated current(I _n)	Pole	Model	Catalogue No.	I _{cu} at 415VAC (kA)
125A	3	ABH203bM 125A	0059000700	35
150A	3	ABH203bM 150A	0059000800	35
175A	3	ABH203bM 175A	0059000900	35
225A	3	ABH203bM 225A	0059001000	35

Motor protection Meta-MEC Series GBL103IN 3P Magnetic only type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
1.6A	3	GBL103IN 1.6A (TC10-20)	0025005600	85
3.2A	3	GBL103IN 3.2A (TC20-40)	0025005700	85
6.3A	3	GBL103IN 6.3A (TC40-80)	0025005800	85
12A	3	GBL103IN 12A (TC70-140)	0025005900	85
20A	3	GBL103IN 20A (TC120-240)	0025006000	85
32A	3	GBL103IN 32A (TC180-360)	0025006100	85
50A	3	GBL103IN 50A (TC300-600)	0025006200	85
63A	3	GBL103IN 63A (TC400-800)	0025006300	85
100A	3	GBL103IN 100A (TC625-1250)	0025006400	85

Motor protection Meta-MEC Series GBL203IN 3P Magnetic only type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
63A	3	GBL203IN 63A (TC400-800)		85
100A	3	GBL203IN 100A (TC625-1250)	0028003200	85
160A	3	GBL203IN 160A (TC1000-2000)	0028002100	85
200A	3	GBL203IN 200A (TC1250-2500)	0028002200	85
250A	3	GBL203IN 250A (TC2000-3250)	0028002300	85

Catalogue numbers

IN type MCCB

Motor protection Meta-MEC Series ABL403bIN 3P Magnetic only type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
300A	3	ABL403bIN 300A (TC1200-3000)	0087016100	65
350A	3	ABL403bIN 350A (TC1400-3500)	0087016500	65
400A	3	ABL403bIN 400A (TC1600-4000)	0087016200	65

Motor protection Meta-MEC Series ABL803bIN 3P Magnetic only type



Rated current(In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
400A	3	ABL803bIN 400A (TC1500-3750)		65
500A	3	ABL803bIN 400A (TC2000-5000)		65
600A	3	ABL803bIN 600A (TC2400-6000)		65
700A	3	ABL803bIN 700A (TC2800-7000)	0093008000	65
800A	3	ABL803bIN 800A (TC3200-8000)		65

Key-locking Type MCCB

Meta-MEC Series Key-locking breakers



Rated current(In)	Pole	Model	Catalogue No.	Icu at 380VAC (kA)
30A	3	ABS103K/30		20
60A	3	ABS103K/60		20
100A	3	ABS103K/100		20



Rated current(In)	Pole	Model	Catalogue No.	Icu at 380VAC (kA)
150A	3	ABS203K/150		20

Catalogue numbers

Plug-in MCCB

Plug-in MCCB without mounting block

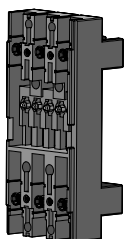


Plug-in MCCB without mounting block which can be assembled with

- PB-A3-FR (Standard mounting block)
- PB-A3-1DB (Single row type mounting block)
- PB-A3-2DB (Double row type mounting block)

Rated current(In)	Pole	Model	Catalogue No.
5A	3	Plug-in MCCB ABE53b 5A	0048150400
10A	3	Plug-in MCCB ABE53b 10A	0048150500
15A	3	Plug-in MCCB ABE53b 15A	0048150600
20A	3	Plug-in MCCB ABE53b 20A	0048150700
30A	3	Plug-in MCCB ABE53b 30A	0048150800
40A	3	Plug-in MCCB ABE53b 40A	0048150900
50A	3	Plug-in MCCB ABE53b 50A	0048151000
60A	3	Plug-in MCCB ABE63b 60A	0048151100
5A	3	Plug-in MCCB ABE103b 5A	0050241000
10A	3	Plug-in MCCB ABE103b 10A	0050241100
15A	3	Plug-in MCCB ABE103b 15A	0050241200
20A	3	Plug-in MCCB ABE103b 20A	0050241300
30A	3	Plug-in MCCB ABE103b 30A	0050241400
40A	3	Plug-in MCCB ABE103b 40A	0050241500
50A	3	Plug-in MCCB ABE103b 50A	0050241600
60A	3	Plug-in MCCB ABE103b 60A	0050241700
75A	3	Plug-in MCCB ABE103b 75A	0050241800
100A	3	Plug-in MCCB ABE103b 100A	0050241900
3A	3	Plug-in MCCB ABS33b 3A	0048151200
5A	3	Plug-in MCCB ABS33b 5A	0048151300
10A	3	Plug-in MCCB ABS33b 10A	0048151400
15A	3	Plug-in MCCB ABS33b 15A	0048151500
20A	3	Plug-in MCCB ABS33b 20A	0048151600
30A	3	Plug-in MCCB ABS33b 30A	0048151700
5A	3	Plug-in MCCB ABS53b 5A	0050242000
10A	3	Plug-in MCCB ABS53b 10A	0050242100
15A	3	Plug-in MCCB ABS53b 15A	0050242200
20A	3	Plug-in MCCB ABS53b 20A	0050242300
30A	3	Plug-in MCCB ABS53b 30A	0050242400
40A	3	Plug-in MCCB ABS53b 40A	0050242600
50A	3	Plug-in MCCB ABS53b 50A	0050242700
60A	3	Plug-in MCCB ABS63b 60A	0050242800
5A	3	Plug-in MCCB ABH33b 5A	0050242900
10A	3	Plug-in MCCB ABH33b 10A	0050243000
15A	3	Plug-in MCCB ABH33b 15A	0050243100
20A	3	Plug-in MCCB ABH33b 20A	0050243200
30A	3	Plug-in MCCB ABH33b 30A	0050243300

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-A3-FR (Standard mounting block)	54621151101
PB-A3-1DB (Single row type mounting block)	54621151103
PB-A3-2DB (Double row type mounting block)	54621151104

Plug-in MCCB without mounting block

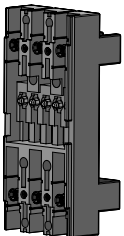


Plug-in MCCB without mounting block which can be assembled with

- PB-C3-FR (Standard mounting block)
- PB-C3-1DB (Single row type mounting block)
- PB-C3-2DB (Double row type mounting block)

Rated current(In)	Pole	Model	Catalogue No.
15A	3	Plug-in MCCB ABS103b 15A	0053222100
20A	3	Plug-in MCCB ABS103b 20A	0053222200
30A	3	Plug-in MCCB ABS103b 30A	0053222300
40A	3	Plug-in MCCB ABS103b 40A	0053222400
50A	3	Plug-in MCCB ABS103b 50A	0053222500
60A	3	Plug-in MCCB ABS103b 60A	0053222600
75A	3	Plug-in MCCB ABS103b 75A	0053222700
100A	3	Plug-in MCCB ABS103b 100A	0053222800
15A	3	Plug-in MCCB ABH53b 15A	0053222900
20A	3	Plug-in MCCB ABH53b 20A	0053223000
30A	3	Plug-in MCCB ABH53b 30A	0053223100
40A	3	Plug-in MCCB ABH53b 40A	0053223200
50A	3	Plug-in MCCB ABH53b 50A	0053223300
15A	3	Plug-in MCCB ABH103b 15A	0053224000
20A	3	Plug-in MCCB ABH103b 20A	0053224100
30A	3	Plug-in MCCB ABH103b 30A	0053224200
40A	3	Plug-in MCCB ABH103b 40A	0053224300
50A	3	Plug-in MCCB ABH103b 50A	0053224400
60A	3	Plug-in MCCB ABH103b 60A	0053224500
75A	3	Plug-in MCCB ABH103b 75A	0053224600
100A	3	Plug-in MCCB ABH103b 100A	0053224700

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-C3-FR (Standard mounting block)	54621152101
PB-C3-1DB (Single row type mounting block)	54621152103
PB-C3-2DB (Double row type mounting block)	54621152104

Catalogue numbers

Plug-in MCCB

Plug-in MCCB without mounting block

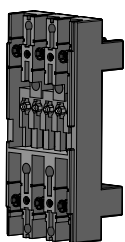


Plug-in MCCB without mounting block which can be assembled with

- PB-G3-FR (Standard mounting block)
- PB-G3-1DB (Single row type mounting block)
- PB-G3-2DB (Double row type mounting block)

Rated current(In)	Pole	Model	Catalogue No.
16A	3	Plug-in MCCB GBN53 16A	0025012900
20A	3	Plug-in MCCB GBN53 20A	0025013000
25A	3	Plug-in MCCB GBN53 25A	0025013100
32A	3	Plug-in MCCB GBN53 32A	0025013200
40A	3	Plug-in MCCB GBN53 40A	0025013300
50A	3	Plug-in MCCB GBN53 50A	0025013400
63A	3	Plug-in MCCB GBN103 63A	0025013500
80A	3	Plug-in MCCB GBN103 80A	0025013600
100A	3	Plug-in MCCB GBN103 100A	0025013700
16A	3	Plug-in MCCB GBH53 16A	0025013800
20A	3	Plug-in MCCB GBH53 20A	0025013900
25A	3	Plug-in MCCB GBH53 25A	0025014000
32A	3	Plug-in MCCB GBH53 32A	0025014100
40A	3	Plug-in MCCB GBH53 40A	0025014200
50A	3	Plug-in MCCB GBH53 50A	0025014300
63A	3	Plug-in MCCB GBH103 63A	0025014400
80A	3	Plug-in MCCB GBH103 80A	0025014500
100A	3	Plug-in MCCB GBH103 100A	0025014600

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-G3-FR (Standard mounting block)	54621141101
PB-G3-1DB (Single row type mounting block)	54621141103
PB-G3-2DB (Double row type mounting block)	54621141104

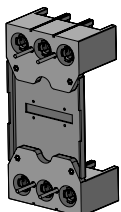
Plug-in MCCB without mounting block



Plug-in MCCB without mounting block which can be assembled with
 • PB-D3-FR (Standard mounting block)

Rated current(In)	Pole	Model	Catalogue No.
100A	3	Plug-in MCCB ABE203b 100A	0056126200
125A	3	Plug-in MCCB ABE203b 125A	0056126300
150A	3	Plug-in MCCB ABE203b 150A	0056126400
175A	3	Plug-in MCCB ABE203b 175A	0056126500
200A	3	Plug-in MCCB ABE203b 200A	0056126600
225A	3	Plug-in MCCB ABE203b 225A	0056126700
100A	3	Plug-in MCCB ABS203b 100A	0056126800
125A	3	Plug-in MCCB ABS203b 125A	0056126900
150A	3	Plug-in MCCB ABS203b 150A	0056127000
175A	3	Plug-in MCCB ABS203b 175A	0056127100
200A	3	Plug-in MCCB ABS203b 200A	0056127200
225A	3	Plug-in MCCB ABS203b 225A	0056127300
125A	3	Plug-in MCCB ABH203a 125A	0018041800
150A	3	Plug-in MCCB ABH203a 150A	0018041900
175A	3	Plug-in MCCB ABH203a 175A	0018042000
200A	3	Plug-in MCCB ABH203a 200A	0018042100
225A	3	Plug-in MCCB ABH203a 225A	0018042200
100A	3	Plug-in MCCB ABH203b 100A	0059062300
125A	3	Plug-in MCCB ABH203b 125A	0059062400
150A	3	Plug-in MCCB ABH203b 150A	0059062500
175A	3	Plug-in MCCB ABH203b 175A	0059062600
200A	3	Plug-in MCCB ABH203b 200A	0059062700
225A	3	Plug-in MCCB ABH203b 225A	0059062800
125A	3	Plug-in MCCB ABL203a 125A	0018041300
150A	3	Plug-in MCCB ABL203a 150A	0018041400
175A	3	Plug-in MCCB ABL203a 175A	0018041500
200A	3	Plug-in MCCB ABL203a 200A	0018041600
225A	3	Plug-in MCCB ABL203a 225A	0018041700
125A	3	Plug-in MCCB GBN203 125A	0028004400
160A	3	Plug-in MCCB GBN203 160A	0028004500
200A	3	Plug-in MCCB GBN203 200A	0028004600
250A	3	Plug-in MCCB GBN203 250A	0028004700
125A	3	Plug-in MCCB GBH203 125A	0028004800
160A	3	Plug-in MCCB GBH203 160A	0028004900
200A	3	Plug-in MCCB GBH203 200A	0028005000
250A	3	Plug-in MCCB GBH203 250A	0028005100
63A	3	Plug-in MCCB GBL103 63A	0025017300
80A	3	Plug-in MCCB GBL103 80A	0025017400
100A	3	Plug-in MCCB GBL103 100A	0025017500
125A	3	Plug-in MCCB GBL203 125A	0028005200
160A	3	Plug-in MCCB GBL203 160A	0028005300
200A	3	Plug-in MCCB GBL203 200A	0028005400
250A	3	Plug-in MCCB GBL203 250A	0028005500

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-D3-FR (Standard mounting block)	54621153102

Catalogue numbers

Plug-in MCCB

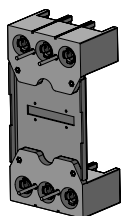
Plug-in MCCB without mounting block



Plug-in MCCB without mounting block which can be assembled with
• PB-E3-FR (Standard mounting block)

Rated current(In)	Pole	Model	Catalogue No.
15A	3	Plug-in MCCB ABL53a 15A	0021060100
20A	3	Plug-in MCCB ABL53a 20A	0021060200
30A	3	Plug-in MCCB ABL53a 30A	0021060300
40A	3	Plug-in MCCB ABL53a 40A	0021060400
50A	3	Plug-in MCCB ABL53a 50A	0021060500
15A	3	Plug-in MCCB ABL103a 15A	0021060600
20A	3	Plug-in MCCB ABL103a 20A	0021060700
30A	3	Plug-in MCCB ABL103a 30A	0021060800
40A	3	Plug-in MCCB ABL103a 40A	0021060900
50A	3	Plug-in MCCB ABL103a 50A	0021061000
60A	3	Plug-in MCCB ABL103a 60A	0021061100
75A	3	Plug-in MCCB ABL103a 75A	0021061200
100A	3	Plug-in MCCB ABL103a 100A	0021061300

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-E3-FR (Standard mounting block)	54621115102

Plug-in MCCB without mounting block

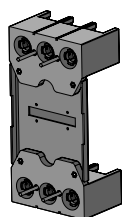


Plug-in MCCB without mounting block which can be assembled with

- PB-I3-FR (Standard mounting block)

Rated current(In)	Pole	Model	Catalogue No.
250A	3	Plug-in MCCB ABE403b 250A	0087018100
300A	3	Plug-in MCCB ABE403b 300A	0087018200
350A	3	Plug-in MCCB ABE403b 350A	0087018300
400A	3	Plug-in MCCB ABE403b 400A	0087018400
250A	3	Plug-in MCCB ABS403b 250A	0087018500
300A	3	Plug-in MCCB ABS403b 300A	0087018600
350A	3	Plug-in MCCB ABS403b 350A	0087018700
400A	3	Plug-in MCCB ABS403b 400A	0087018800
250A	3	Plug-in MCCB ABH403b 250A	0087018900
300A	3	Plug-in MCCB ABH403b 300A	0087019000
350A	3	Plug-in MCCB ABH403b 350A	0087019100
400A	3	Plug-in MCCB ABH403b 400A	0087019200
250A	3	Plug-in MCCB ABL403b 250A	0087019300
300A	3	Plug-in MCCB ABL403b 300A	0087019400
350A	3	Plug-in MCCB ABL403b 350A	0087019500
400A	3	Plug-in MCCB ABL403b 400A	0087019600

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-I3-FR (Standard mounting block)	54621131102

Catalogue numbers

Plug-in MCCB

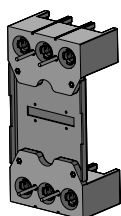
Plug-in MCCB without mounting block



Plug-in MCCB without mounting block which can be assembled with
• PB-J3-FR (Standard mounting block)

Rated current(In)	Pole	Model	Catalogue No.
500A		Plug-in MCCB ABE803b 500A	0093009200
600A		Plug-in MCCB ABE803b 600A	0093009300
630A		Plug-in MCCB ABE803b 630A	0093009400
700A		Plug-in MCCB ABE803b 700A	0093009500
800A		Plug-in MCCB ABE803b 800A	0093009600
500A		Plug-in MCCB ABS803b 500A	0093009700
600A		Plug-in MCCB ABS803b 600A	0093009800
630A		Plug-in MCCB ABS803b 630A	0093009900
700A		Plug-in MCCB ABS803b 700A	0093010000
800A		Plug-in MCCB ABS803b 800A	0093010100
500A		Plug-in MCCB ABL803b 500A	0093010200
600A		Plug-in MCCB ABL803b 600A	0093010300
630A		Plug-in MCCB ABL803b 630A	0093010400
700A		Plug-in MCCB ABL803b 700A	0093010500
800A		Plug-in MCCB ABL803b 800A	0093010600

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-J3-FR (Standard mounting block)	54621132102

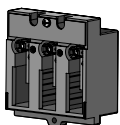
Plug-in MCCB without mounting block



Plug-in MCCB without mounting block which can be assembled with
 • PB-A3-FRL (Line only type mounting block)

Rated current(In)	Pole	Model	Catalogue No.
5A	3	Plug-in MCCB ABE53b 5A,LINE ONLY	0048151800
10A	3	Plug-in MCCB ABE53b 10A,LINE ONLY	0048151900
15A	3	Plug-in MCCB ABE53b 15A,LINE ONLY	0048152000
20A	3	Plug-in MCCB ABE53b 20A,LINE ONLY	0048152100
30A	3	Plug-in MCCB ABE53b 30A,LINE ONLY	0048152200
40A	3	Plug-in MCCB ABE53b 40A,LINE ONLY	0048152300
50A	3	Plug-in MCCB ABE53b 50A,LINE ONLY	0048152400
60A	3	Plug-in MCCB ABE63b 60A,LINE ONLY	0048152500
5A	3	Plug-in MCCB ABE103b 5A,LINE ONLY	0050243400
10A	3	Plug-in MCCB ABE103b 10A,LINE ONLY	0050243500
15A	3	Plug-in MCCB ABE103b 15A,LINE ONLY	0050243600
20A	3	Plug-in MCCB ABE103b 20A,LINE ONLY	0050243700
30A	3	Plug-in MCCB ABE103b 30A,LINE ONLY	0050243800
40A	3	Plug-in MCCB ABE103b 40A,LINE ONLY	0050243900
50A	3	Plug-in MCCB ABE103b 50A,LINE ONLY	0050244000
60A	3	Plug-in MCCB ABE103b 60A,LINE ONLY	0050244100
75A	3	Plug-in MCCB ABE103b 75A,LINE ONLY	0050244200
100A	3	Plug-in MCCB ABE103b 100A,LINE ONLY	0050244300
3A	3	Plug-in MCCB ABS33b 3A,LINE ONLY	0048152600
5A	3	Plug-in MCCB ABS33b 5A,LINE ONLY	0048152700
10A	3	Plug-in MCCB ABS33b 10A,LINE ONLY	0048152800
15A	3	Plug-in MCCB ABS33b 15A,LINE ONLY	0048152900
20A	3	Plug-in MCCB ABS33b 20A,LINE ONLY	0048153000
30A	3	Plug-in MCCB ABS33b 30A,LINE ONLY	0048153100
5A	3	Plug-in MCCB ABS53b 5A,LINE ONLY	0050244400
10A	3	Plug-in MCCB ABS53b 10A,LINE ONLY	0050244500
15A	3	Plug-in MCCB ABS53b 15A,LINE ONLY	0050244600
20A	3	Plug-in MCCB ABS53b 20A,LINE ONLY	0050244700
30A	3	Plug-in MCCB ABS53b 30A,LINE ONLY	0050244800
40A	3	Plug-in MCCB ABS53b 40A,LINE ONLY	0050244900
50A	3	Plug-in MCCB ABS53b 50A,LINE ONLY	0050245000
60A	3	Plug-in MCCB ABS63b 60A,LINE ONLY	0050245100
5A	3	Plug-in MCCB ABH33b 5A,LINE ONLY	0050245200
10A	3	Plug-in MCCB ABH33b 10A,LINE ONLY	0050245300
15A	3	Plug-in MCCB ABH33b 15A,LINE ONLY	0050245400
20A	3	Plug-in MCCB ABH33b 20A,LINE ONLY	0050245500
30A	3	Plug-in MCCB ABH33b 30A,LINE ONLY	0050245600

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-A3-FRL (Line only type mounting block)	54621151102

Catalogue numbers

Plug-in MCCB

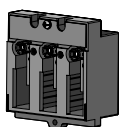
Plug-in MCCB without mounting block



Plug-in MCCB without mounting block which can be assembled with
• PB-C3-FRL (Line only type mounting block)

Rated current(In)	Pole	Model	Catalogue No.
15A	3	Plug-in MCCB ABS103b 15A,LINE ONLY	0053224800
20A	3	Plug-in MCCB ABS103b 20A,LINE ONLY	0053224900
30A	3	Plug-in MCCB ABS103b 30A,LINE ONLY	0053225000
40A	3	Plug-in MCCB ABS103b 40A,LINE ONLY	0053225100
50A	3	Plug-in MCCB ABS103b 50A,LINE ONLY	0053225200
60A	3	Plug-in MCCB ABS103b 60A,LINE ONLY	0053225300
75A	3	Plug-in MCCB ABS103b 75A,LINE ONLY	0053225400
100A	3	Plug-in MCCB ABS103b 100A,LINE ONLY	0053225500
15A	3	Plug-in MCCB ABH 53b 15A,LINE ONLY	0053225600
20A	3	Plug-in MCCB ABH 53b 20A,LINE ONLY	0053225700
30A	3	Plug-in MCCB ABH 53b 30A,LINE ONLY	0053225800
40A	3	Plug-in MCCB ABH 53b 40A,LINE ONLY	0053225900
50A	3	Plug-in MCCB ABH 53b 50A,LINE ONLY	0053226000
15A	3	Plug-in MCCB ABH 103b 15A,LINE ONLY	0053226700
20A	3	Plug-in MCCB ABH 103b 20A,LINE ONLY	0053226800
30A	3	Plug-in MCCB ABH 103b 30A,LINE ONLY	0053226900
40A	3	Plug-in MCCB ABH 103b 40A,LINE ONLY	0053227000
50A	3	Plug-in MCCB ABH 103b 50A,LINE ONLY	0053227100
60A	3	Plug-in MCCB ABH 103b 60A,LINE ONLY	0053227200
75A	3	Plug-in MCCB ABH 103b 75A,LINE ONLY	0053227300
100A	3	Plug-in MCCB ABH 103b 100A,LINE ONLY	0053227400

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-C3-FRL (Line only type mounting block)	54621152102

Plug-in MCCB without mounting block

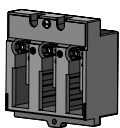


Plug-in MCCB without mounting block which can be assembled with

- PB-G3-FRL (Line only type mounting block)

Rated current(In)	Pole	Model	Catalogue No.
16A	3	Plug-in MCCB GBN53 16A,LINE ONLY	0025014700
20A	3	Plug-in MCCB GBN53 20A,LINE ONLY	0025014800
25A	3	Plug-in MCCB GBN53 25A,LINE ONLY	0025014900
32A	3	Plug-in MCCB GBN53 32A,LINE ONLY	0025015000
40A	3	Plug-in MCCB GBN53 40A,LINE ONLY	0025015100
50A	3	Plug-in MCCB GBN53 50A,LINE ONLY	0025015200
63a	3	Plug-in MCCB GBN53 63A,LINE ONLY	0025015300
63a	3	Plug-in MCCB GBN103 63A,LINE ONLY	0025015400
80A	3	Plug-in MCCB GBN103 80A,LINE ONLY	0025015500
100A	3	Plug-in MCCB GBN103 100A,LINE ONLY	0025015600
16A	3	Plug-in MCCB GBH53 16A,LINE ONLY	0025015700
20A	3	Plug-in MCCB GBH53 20A,LINE ONLY	0025015800
25A	3	Plug-in MCCB GBH53 25A,LINE ONLY	0025015900
32A	3	Plug-in MCCB GBH53 32A,LINE ONLY	0025016000
40A	3	Plug-in MCCB GBH53 40A,LINE ONLY	0025016100
50A	3	Plug-in MCCB GBH53 50A,LINE ONLY	0025016200
63a	3	Plug-in MCCB GBH103 63A,LINE ONLY	0025016300
80A	3	Plug-in MCCB GBH103 80A,LINE ONLY	0025016400
100A	3	Plug-in MCCB GBH103 100A,LINE ONLY	0025016500

Mounting block for Plug-in MCCB



Model	Catalogue No.
PB-G3-FRL (Line only type mounting block)	54621141102

Catalogue numbers

ELCB

Meta-MEC EBS 30AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	EBS33b 5A 30mA	0770003100	5
10A	3	EBS33b 10A 30mA	0770003200	5
15A	3	EBS33b 15A 30mA	0770003300	5
20A	3	EBS33b 20A 30mA	0770003400	5
30A	3	EBS33b 30A 30mA	0770003500	5

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	EBS33b 5A 100/200/500mA	0770003600	5
10A	3	EBS33b 10A 100/200/500mA	0770003700	5
15A	3	EBS33b 15A 100/200/500mA	0770003800	5
20A	3	EBS33b 20A 100/200/500mA	0770003900	5
30A	3	EBS33b 30A 100/200/500mA	0770004000	5

Meta-MEC EBH 30AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	2	EBH33b 5A 30mA	0771002900	10
10A	2	EBH33b 10A 30mA	0771003000	10
15A	2	EBH33b 15A 30mA	0771003100	10
20A	2	EBH33b 20A 30mA	0771003200	10
30A	2	EBH33b 30A 30mA	0771003300	10

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	EBH33b 5A 100/200/500mA	0771003400	10
10A	3	EBH33b 10A 100/200/500mA	0771003500	10
15A	3	EBH33b 15A 100/200/500mA	0771003600	10
20A	3	EBH33b 20A 100/200/500mA	0771003700	10
30A	3	EBH33b 30A 100/200/500mA	0771003300	10

Meta-MEC EBE 50AF 2P/3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	2	EBE52b 5A 30mA	0770000100	5
10A	2	EBE52b 10A 30mA	0770000200	5
15A	2	EBE52b 15A 30mA	0770000300	5
20A	2	EBE52b 20A 30mA	0770000400	5
30A	2	EBE52b 30A 30mA	0770000500	5
40A	2	EBE52b 40A 30mA	0770000600	5
50A	2	EBE52b 50A 30mA	0770000700	5

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	2	EBE52b 5A 100/200/500mA	0770000800	5
10A	2	EBE52b 10A 100/200/500mA	0770000900	5
15A	2	EBE52b 15A 100/200/500mA	0770001000	5
20A	2	EBE52b 20A 100/200/500mA	0770001100	5
30A	2	EBE52b 30A 100/200/500mA	0770001200	5
40A	2	EBE52b 40A 100/200/500mA	0770001300	5
50A	2	EBE52b 50A 100/200/500mA	0770001400	5

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	EBE53b 5A 30mA	0770001500	5
10A	3	EBE53b 10A 30mA	0770001600	5
15A	3	EBE53b 15A 30mA	0770001700	5
20A	3	EBE53b 20A 30mA	0770001800	5
30A	3	EBE53b 30A 30mA	0770001900	5
40A	3	EBE53b 40A 30mA	0770002000	5
50A	3	EBE53b 50A 30mA	0770002100	5

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	EBE53b 5A 100/200/500mA	0770002200	5
10A	3	EBE53b 10A 100/200/500mA	0770002300	5
15A	3	EBE53b 15A 100/200/500mA	0770002400	5
20A	3	EBE53b 20A 100/200/500mA	0770002500	5
30A	3	EBE53b 30A 100/200/500mA	0770002600	5
40A	3	EBE53b 40A 100/200/500mA	0770002700	5
50A	3	EBE53b 50A 100/200/500mA	0770002800	5

Meta-MEC EBE 60AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	EBE63b 60A 30mA	0771002900	5
60A	3	EBE63b 60A 100/200/500mA	0771003000	5

Catalogue numbers

ELCB

Meta-MEC EBS 50AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	EBS53b 5A 30mA	0771001300	10
10A	3	EBS53b 10A 30mA	0771001400	10
15A	3	EBS53b 15A 30mA	0771001500	10
20A	3	EBS53b 20A 30mA	0771001600	10
30A	3	EBS53b 30A 30mA	0771001700	10
40A	3	EBS53b 40A 30mA	0771001800	10
50A	3	EBS53b 50A 30mA	0771001900	10

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
5A	3	EBS53b 5A 100/200/500mA	0771002000	10
10A	3	EBS53b 10A 100/200/500mA	0771002100	10
15A	3	EBS53b 15A 100/200/500mA	0771002200	10
20A	3	EBS53b 20A 100/200/500mA	0771002300	10
30A	3	EBS53b 30A 100/200/500mA	0771002400	10
40A	3	EBS53b 40A 100/200/500mA	0771002500	10
50A	3	EBS53b 50A 100/200/500mA	0771002600	10

Meta-MEC EBS 60AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	EBS63b 60A 30mA	0771002700	10
60A	3	EBS63b 60A 100/200/500mA	0771002800	10

Meta-MEC EBH 50AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
40A	3	EBH53b 40A 30mA	0772001100	25
50A	3	EBH53b 50A 30mA	0772001200	25
40A	3	EBH53b 40A 100/200/500mA	0772001300	25
50A	3	EBH53b 50A 100/200/500mA	0772001400	25

Meta-MEC EBE 100AF 2P/3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	2	EBE102b 60A 30mA	0771000100	10
75A	2	EBE102b 75A 30mA	0771000200	10
100A	2	EBE102b 100A 30mA	0771000300	10
Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	2	EBE102b 60A 100/200/500mA	0771000400	10
75A	2	EBE102b 75A 100/200/500mA	0771000500	10
100A	2	EBE102b 100A 100/200/500mA	0771000600	10
Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	EBE103b 60A 30mA	0771000700	10
75A	3	EBE103b 75A 30mA	0771000800	10
100A	3	EBE103b 100A 30mA	0771000900	10
Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	EBE103b 60A 100/200/500mA	0771001000	10
75A	3	EBE103b 75A 100/200/500mA	0771001100	10
100A	3	EBE103b 100A 100/200/500mA	0771001200	10

Meta-MEC EBS 100AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
40A	3	EBS103b 40A 30mA	0772001500	25
50A	3	EBS103b 50A 30mA	0772001600	25
60A	3	EBS103b 60A 30mA	0772001700	25
75A	3	EBS103b 75A 30mA	0772001800	25
100A	3	EBS103b 100A 30mA	0772001900	25
Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
40A	3	EBS103b 40A 100/200/500mA	0772002000	25
50A	3	EBS103b 50A 100/200/500mA	0772002100	25
60A	3	EBS103b 60A 100/200/500mA	0772002200	25
75A	3	EBS103b 75A 100/200/500mA	0772002300	25
100A	3	EBS103b 100A 100/200/500mA	0772002400	25

Meta-MEC EBH 100AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	EBH103b 60A 30mA	0772000300	35
75A	3	EBH103b 75A 30mA	0772000400	35
100A	3	EBH103b 100A 30mA	0772000500	35
Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
60A	3	EBH103b 60A 100/200/500mA	0772000800	35
75A	3	EBH103b 75A 100/200/500mA	0772000900	35
100A	3	EBH103b 100A 100/200/500mA	0772001000	35

Catalogue numbers

ELCB

Meta-MEC EBE 225AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	EBE203b 125A 30mA	0773000200	18
150A	3	EBE203b 150A 30mA	0773000300	18
175A	3	EBE203b 175A 30mA	0773000400	18
200A	3	EBE203b 200A 30mA	0773000500	18
225A	3	EBE203b 225A 30mA	0773000600	18

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	EBE203b 125A 100/200/500mA	0773000800	18
150A	3	EBE203b 150A 100/200/500mA	0773000900	18
175A	3	EBE203b 175A 100/200/500mA	0773001000	18
200A	3	EBE203b 200A 100/200/500mA	0773001100	18
225A	3	EBE203b 225A 100/200/500mA	0773001200	18

Meta-MEC EBS 225AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	EBS203b 125A 30mA		25
150A	3	EBS203b 150A 30mA	0773001500	25
175A	3	EBS203b 175A 30mA		25
200A	3	EBS203b 200A 30mA		25
225A	3	EBS203b 225A 30mA	0773001800	25

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
100A	3	EBS203b 100A 100/200/500mA	0773001900	25
125A	3	EBS203b 125A 100/200/500mA	0773002000	25
150A	3	EBS203b 150A 100/200/500mA	0773002100	25
175A	3	EBS203b 175A 100/200/500mA	0773002200	25
200A	3	EBS203b 200A 100/200/500mA	0773002300	25
225A	3	EBS203b 225A 100/200/500mA	0773002400	25

Meta-MEC EBH 225AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	EBH203b 125A 30mA		35
150A	3	EBH203b 150A 30mA	0774000300	35
175A	3	EBH203b 175A 30mA		35
200A	3	EBH203b 200A 30mA		35
225A	3	EBH203b 225A 30mA	0774000600	35

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
125A	3	EBH203b 125A 100/200/500mA	0774000800	35
150A	3	EBH203b 150A 100/200/500mA	0774000900	35
175A	3	EBH203b 175A 100/200/500mA	0774001000	35
200A	3	EBH203b 200A 100/200/500mA	0774001100	35
225A	3	EBH203b 225A 100/200/500mA	0774001200	35

Meta-MEC EBE 400AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	EBE403b 250A 30mA 0.1S		25
300A	3	EBE403b 300A 30mA 0.1S		25
350A	3	EBE403b 350A 30mA 0.1S		25
400A	3	EBE403b 400A 30mA 0.1S		25

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	EBE403b 250A 100/200/500mA 0.1S	0778000100	25
300A	3	EBE403b 300A 100/200/500mA 0.1S	0778000300	25
350A	3	EBE403b 350A 100/200/500mA 0.1S		25
400A	3	EBE403b 400A 100/200/500mA 0.1S	0778000700	25

Meta-MEC EBS 400AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	EBS403b 250A 30mA 0.1S		35
300A	3	EBS403b 300A 30mA 0.1S		35
350A	3	EBS403b 350A 30mA 0.1S		35
400A	3	EBS403b 400A 30mA 0.1S		35

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	EBS403b 250A 100/200/500mA 0.1S		35
300A	3	EBS403b 300A 100/200/500mA 0.1S		35
350A	3	EBS403b 350A 100/200/500mA 0.1S	0778001300	35
400A	3	EBS403b 400A 100/200/500mA 0.1S	0778001500	35

Catalogue numbers

ELCB

Meta-MEC EBH 400AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	EBH403b 250A 30mA 0.1S	0778001800	50
300A	3	EBH403b 300A 30mA 0.1S	0778002000	50
350A	3	EBH403b 350A 30mA 0.1S	0778002200	50
400A	3	EBH403b 400A 30mA 0.1S	0778002400	50

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	EBH403b 250A 100/200/500mA 0.1S	0778001700	50
300A	3	EBH403b 300A 100/200/500mA 0.1S	0778001900	50
350A	3	EBH403b 350A 100/200/500mA 0.1S	0778002100	50
400A	3	EBH403b 400A 100/200/500mA 0.1S	0778002300	50

Meta-MEC EBL 400AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	EBL403b 250A 30mA 0.1S	0778002600	85
300A	3	EBL403b 300A 30mA 0.1S	0778002800	85
350A	3	EBL403b 350A 30mA 0.1S	0778003000	85
400A	3	EBL403b 400A 30mA 0.1S	0778003200	85

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
250A	3	EBL403b 250A 100/200/500mA 0.1S	0778002500	85
300A	3	EBL403b 300A 100/200/500mA 0.1S	0778002700	85
350A	3	EBL403b 350A 100/200/500mA 0.1S	0778002900	85
400A	3	EBL403b 400A 100/200/500mA 0.1S	0778003100	85

Meta-MEC EBE 800AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	EBE803b 500A 30mA 0.1S		35
600A	3	EBE803b 600A 30mA 0.1S		35
700A	3	EBE803b 700A 30mA 0.1S		35
800A	3	EBE803b 800A 30mA 0.1S		35

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	EBE803b 500A 100/200/500mA 0.1S		35
600A	3	EBE803b 600A 100/200/500mA 0.1S		35
700A	3	EBE803b 700A 100/200/500mA 0.1S	0780000100	35
800A	3	EBE803b 800A 100/200/500mA 0.1S		35

Meta-MEC EBS 800AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	EBS803b 500A 30mA 0.1S		50
600A	3	EBS803b 600A 30mA 0.1S		50
700A	3	EBS803b 700A 30mA 0.1S	0780000500	50
800A	3	EBS803b 800A 30mA 0.1S	0780000700	50

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	EBS803b 500A 100/200/500mA 0.1S	0778002500	50
600A	3	EBS803b 600A 100/200/500mA 0.1S	0778002700	50
700A	3	EBS803b 700A 100/200/500mA 0.1S	0778002900	50
800A	3	EBS803b 800A 100/200/500mA 0.1S	0778003100	50

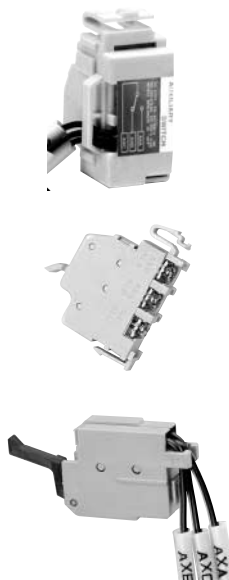
Meta-MEC EBL 800AF 3P



Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	EBL803b 500A 30mA 0.1S		85
600A	3	EBL803b 600A 30mA 0.1S		85
700A	3	EBL803b 700A 30mA 0.1S	0780001000	85
800A	3	EBL803b 800A 30mA 0.1S	0780001200	85

Rated current (In)	Pole	Model	Catalogue No.	Icu at 415VAC (kA)
500A	3	EBL803b 500A 100/200/500mA 0.1S		85
600A	3	EBL803b 600A 100/200/500mA 0.1S		85
700A	3	EBL803b 700A 100/200/500mA 0.1S	0780000900	85
800A	3	EBL803b 800A 100/200/500mA 0.1S	0780001100	85

Electrical auxiliaries for Meta-MEC series MCCBs



Auxiliary switch, AX	Description	Catalogue No.
AX1E100R-LWT	1 auxiliary switch fit for the left-hand seat of a handle(LWT)	83011156101
AX1E100T-LWT	1 auxiliary switch fit for the right-hand seat of a handle(LWT)	83011156104
AX1E100R-TBT	1 auxiliary switch fit for the left-hand seat of a handle(TBT)	83011156107
AX1E100T-TBT	1 auxiliary switch fit for the right-hand seat of a handle(TBT)	83011156110
AX1H100R-LWT	1 auxiliary switch fit for the left-hand seat of a handle(LWT)	83011156113
AX1H100T-LWT	1 auxiliary switch fit for the right-hand seat of a handle(LWT)	83011156116
AX1H100R-TBT	1 auxiliary switch fit for the left-hand seat of a handle(TBT)	83011156119
AX1H100T-TBT	1 auxiliary switch fit for the right-hand seat of a handle(TBT)	83011156122
AX1H200R-LWT	1 auxiliary switch fit for the left-hand seat of a handle(LWT)	83011156125
AX1H200T-LWT	1 auxiliary switch fit for the right-hand seat of a handle(LWT)	83011156128
AX1H200R-TBT	1 auxiliary switch fit for the left-hand seat of a handle(TBT)	83011156131
AX1H200T-TBT	1 auxiliary switch fit for the right-hand seat of a handle(TBT)	83011156134
AX1G250	1 auxiliary switch (1NO+NC)	83011146001
AX1L800	1 auxiliary switch (1NO+NC)	83011136002
AX2L800	2 auxiliary switch (2NO+NC)	83011136003
AX1S1200	1 auxiliary switch (1NO+NC)	83011126001
AX2S1200	2 auxiliary switch (2NO+NC)	83011126006

Electrical auxiliaries for Meta-MEC series MCCBs

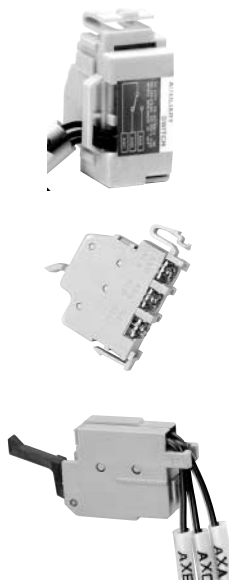


Alarm switch, AL	Description	Catalogue No.
AL1E100R-LWT	1 alarm switch fit for the left-hand seat of a handle(LWT)	83011156102
AL1E100T-LWT	1 alarm switch fit for the right-hand seat of a handle(LWT)	83011156105
AL1E100R-TBT	1 alarm switch fit for the left-hand seat of a handle(TBT)	83011156108
AL1E100T-TBT	1 alarm switch fit for the right-hand seat of a handle(TBT)	83011156111
AL1H100R-LWT	1 alarm switch fit for the left-hand seat of a handle(LWT)	83011156114
AL1H100T-LWT	1 alarm switch fit for the right-hand seat of a handle(LWT)	83011156117
AL1H100R-TBT	1 alarm switch fit for the left-hand seat of a handle(TBT)	83011156120
AL1H100T-TBT	1 alarm switch fit for the right-hand seat of a handle(TBT)	83011156123
AL1H200R-LWT	1 alarm switch fit for the left-hand seat of a handle(LWT)	83011156126
AL1H200T-LWT	1 alarm switch fit for the right-hand seat of a handle(LWT)	83011156129
AL1H200R-TBT	1 alarm switch fit for the left-hand seat of a handle(TBT)	83011156132
AL1H200T-TBT	1 alarm switch fit for the right-hand seat of a handle(TBT)	83011156135
AL1G250	1 alarm switch (1NO+NC)	83011146002
AL1L800	1 alarm switch (1NO+NC)	83011136004
AL2L800	2 alarm switch (2NO+NC)	83011136001
AL1S1200	1 alarm switch (1NO+NC)	83011126002

Catalogue numbers

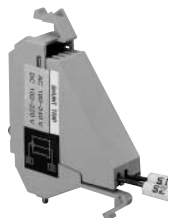
Accessories

Electrical auxiliaries for Meta-MEC series MCCBs



Combination switch, XL	Description	Catalogue No.
XL1E100R-LWT	1 combination switch fit for the left-hand seat of a handle(LWT)	83011156103
XL1E100T-LWT	1 combination switch fit for the right-hand seat of a handle(LWT)	83011156106
XL1E100R-TBT	1 combination switch fit for the left-hand seat of a handle(TBT)	83011156109
XL1E100T-TBT	1 combination switch fit for the right-hand seat of a handle(TBT)	83011156112
XL1H100R-LWT	1 combination switch fit for the left-hand seat of a handle(LWT)	83011156115
XL1H100T-LWT	1 combination switch fit for the right-hand seat of a handle(LWT)	83011156118
XL1H100R-TBT	1 combination switch fit for the left-hand seat of a handle(TBT)	83011156121
XL1H100T-TBT	1 combination switch fit for the right-hand seat of a handle(TBT)	83011156124
XL1H200R-LWT	1 combination switch fit for the left-hand seat of a handle(LWT)	83011156127
XL1H200T-LWT	1 combination switch fit for the right-hand seat of a handle(LWT)	83011156130
XL1H200R-TBT	1 combination switch fit for the left-hand seat of a handle(TBT)	83011156133
XL1H200T-TBT	1 combination switch fit for the right-hand seat of a handle(TBT)	83011156136
XL1L800	1 combination switch fit for the right-hand seat of a handle(LWT)	83011136015
XL2L800	2 combination switch fit for the right-hand seat of a handle(LWT)	83011137001
XL1S1200	1 aux. Switch and 1 alarm switch (1NO+NC)	83011126007
XL2S1200	2 aux. switch and 1 alarm switch (2NO+NC)	83011126008

Electrical auxiliaries for Meta-MEC series MCCBs



Shunt trip, SHT	Description	Catalogue No.
ST12CE100	For 12V AC/DC common use	83211157101
ST24CE100	For 24V AC/DC common use	83211157102
ST48CE100	For 48V AC/DC common use	83211157103
ST60CE100	For 60V AC/DC common use	83211157104
ST110CE100	For 110V AC/DC common use	83211157105
ST220CE100	For 220V AC/DC common use	83211157107
ST250CE100	For 250V AC/DC common use	83211157109
ST380AE100	For 380~450V AC	83211157110
ST440AE100	For 440~480V AC	83211157111
ST500AE100	For 500~550V AC	83211157112
ST125DE100	For 125V DC	83211157106
ST240DE100	For 240V DC	83211157108
ST12CH100	For 12V AC/DC common use	83211157113
ST24CH100	For 24V AC/DC common use	83211157114
ST48CH100	For 48V AC/DC common use	83211157115
ST60CH100	For 60V AC/DC common use	83211157116
ST110CH100	For 110V AC/DC common use	83211157117
ST220CH100	For 220V AC/DC common use	83211157119
ST250CH100	For 250V AC/DC common use	83211157121
ST380AH100	For 380~450V AC	83211157122
ST440AH100	For 440~480V AC	83211157123
ST500AH100	For 500~550V AC	83211157124
ST125DH100	For 125V DC	83211157118
ST240DH100	For 240V DC	83211157120
ST12CH200	For 12V AC/DC common use	83211157125
ST24CH200	For 24V AC/DC common use	83211157126
ST48CH200	For 48V AC/DC common use	83211157127
ST60CH200	For 60V AC/DC common use	83211157128
ST110CH200	For 110V AC/DC common use	83211157129
ST220CH200	For 220V AC/DC common use	83211157131
ST250CH200	For 250V AC/DC common use	83211157133
ST380AH200	For 380~450V AC	83211157134
ST440AH200	For 440~480V AC	83211157135
ST500AH200	For 500~550V AC	83211157136
ST125DH200	For 125V DC	83211157130
ST240DH200	For 240V DC	83211157132
ST12CG250	For 12V AC/DC common use	83211146011
ST24CG250	For 24V AC/DC common use	83211146012
ST48CG250	For 48V AC/DC common use	83211146013
ST60CG250	For 60V AC/DC common use	83211146014
ST100CG250	For 100~125VAC / 100~110VDC	83211146015
ST200CG250	For 200~240VAC / 200~220VDC	83211146017
ST250CG250	For 250V AC/DC common use	83211146019
ST380AG250	For 380~450V AC	83211146020
ST440AG250	For 440~480V AC	83211146021
ST500AG250	For 500~550V AC	83211146022
ST125DG250	For 125V DC	83211146016
ST240DG250	For 240V DC	83211146018
ST48CL800LWT	For 24~48V AC/DC common use LWT	83211137001
ST240CL800LWT	For 100~240VAC / 100~220VDC LWT	83211137002
ST550AL800LWT	For 380~550VAC LWT	83211137003
ST48CL800TBT	For 24~48V AC/DC common use TBT(2pole, 3pole)	83211137004
ST240CL800TBT	For 100~240VAC / 100~220VDC TBT(2pole, 3pole)	83211137005
ST550AL800TBT	For 380~550VAC TBT(2pole, 3pole)	83211137006
ST48CL804TBT	For 24~48V AC/DC common use TBT (4pole)	83211137007
ST240CL804TBT	For 100~240VAC / 100~220VDC TBT (4pole)	83211137008
ST550AL804TBT	For 380~550VAC TBT(4pole)	83211137009
ST100AS1200	For AC100V	83211126001
ST125AS1200	For AC125V	83211126002
ST200AS1200	For AC200~220V	83211126003
ST380AS1200	For AC380~440V	83211126004
ST480AS1200	For AC480~550V	83211126005
ST24DS1200	For DC24V	83211126006
ST48DS1200	For DC48V	83211126007
ST100DS1200	For DC100~110V	83211126008
ST125DS1200	For DC125V	83211126009
ST200DS1200	For DC200V	83211126010

Electrical auxiliaries for Meta-MEC series MCCBs



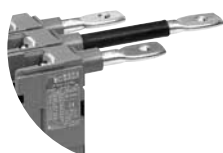
Under voltage trip, UVT	Description	Catalogue No.
UV24CE100	For 24V AC/DC common use	83211157137
UV48CE100	For 48V AC/DC common use	83211157138
UV110CE100	For 110V AC/DC common use	83211157139
UV220CE100	For 220V AC/DC common use	83211157140
UV380AE100	For 380~440V AC	83211157141
UV440AE100	For 440~480V AC	83211157142
UV24CH100	For 24V AC/DC common use	83211157143
UV48CH100	For 48V AC/DC common use	83211157144
UV110CH100	For 110V AC/DC common use	83211157145
UV220CH100	For 220V AC/DC common use	83211157146
UV380AH100	For 380~440V AC	83211157147
UV440AH100	For 440~480V AC	83211157148
UV24CH200	For 24V AC/DC common use	83211157149
UV48CH200	For 48V AC/DC common use	83211157150
UV110CH200	For 110V AC/DC common use	83211157151
UV220CH200	For 220V AC/DC common use	83211157152
UV380AH200	For 380~440V AC	83211157153
UV440AH200	For 440~480V AC	83211157154
UV24CG250	For 24V AC/DC common use	83211146051
UV48CG250	For 48V AC/DC common use	83211146052
UV100CG250	For 100~110V AC/DC common use	83211146053
UV200CG250	For 200~220V AC/DC common use	83211146054
UV380AG250	For 380~440V AC	83211146055
UV440AG250	For 440~480V AC	83211146056
UV48CL800	For 48V AC/DC common use	83211137021
UV100CL800	For 100~125VAC/100~110VDC	83211137022
UV200CL800	For 200~240VAC/200~220VDC	83211137023
UV380AL800	For 380~440V AC	83211137024
UV440AL800	For 440~480V AC	83211137025

External accessories for Meta-MEC series MCCBs

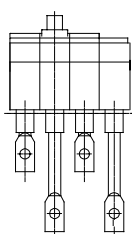


Terminal shields	Description	Catalogue No.
TBL-13B	3 pole shield	64621151202
TBL-12B	2 pole shield (use 2 ea for 4 pole)	64621151201
TBS-13B	3 pole shield	64621151204
TBS-12B	2 pole shield (use 2 ea for 4 pole)	64621151203
TBL-22B	2 pole shield	64621152201
TBL-23B	3 pole shield	64621152202
TBL-24B	4 pole shield	64621152203
TBS-22B	2 pole shield	64621152204
TBS-23B	3 pole shield	64621152205
TBS-24B	4 pole shield	64621152206
TBL-33B	2, 3 pole shield	64621153201
TBL-34B	4 pole shield	64621153202
TBS-33B	2, 3 pole shield	64621153203
TBS-34B	4 pole shield	64621153204
TB-13T	3 pole shield for GBN/GBH103	64621141101
TB-14T	4 pole shield for GBN/GBH104	64621141102
TBS-13T	3 pole shield for GBN/GBH103	64621141103
TBS-14T	4 pole shield for GBN/GBH104	64621141104
TB-23T	3 pole shield for GBN/GBH203, GBL103/203(E)	64621142301
TB-24T	4 pole shield for GBN/GBH204, GBL104/204	64621142302
TBS-23T	3 pole shield for GBN/GBH203, GBL103/203(E)	64621142303
TBS-24T	4 pole shield for GBN/GBH204, GBL104/204	64621142304
T1-43A	for 3 pole AB 400AF (250 to 400A)	64621131201
T1-44A	for 4 pole AB 400AF (250 to 400A)	64621131204
T1-63A	for 3 pole AB 800AF (500 to 800A)	64621131202
T1-64A	for 4 pole AB 800AF (500 to 800A)	64621131205
TBS-13BL	3 pole shield for ABS103bL	64611152020
TBS-23BL	3 pole shield for ABS203bL	64611153015

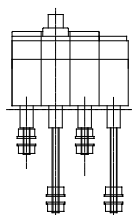
External accessories for Meta-MEC series MCCBs



Rear connection

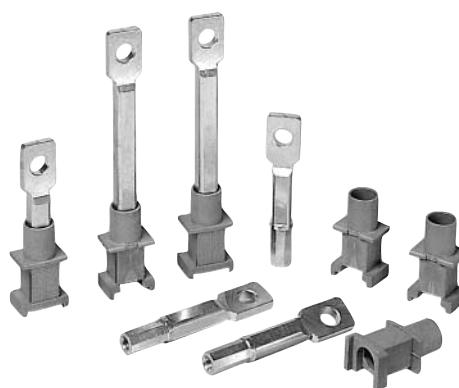


Bar type



Round type

Rear Connection Kits	Description	Catalogue No.
X-35R-52	a set of the ROUND type for a 2-pole MCCB	83161159109
X-35R-53	a set of the ROUND type for a 3-pole MCCB	83161159110
X-35B-102	a set of the BAR type for a 2-pole MCCB	83161159101
X-35B-103	a set of the BAR type for a 3-pole MCCB	83161159102
X-35R-102	a set of the ROUND type for a 2-pole MCCB	83161159111
X-35R-103	a set of the ROUND type for a 3-pole MCCB	83161159112
X-45B-102	a set of the BAR type for a 2-pole MCCB	83161159103
X-45B-103	a set of the BAR type for a 3-pole MCCB	83161159104
X-45B-104	a set of the BAR type for a 4-pole MCCB	83161159105
X-45R-102	a set of the ROUND type for a 2-pole MCCB	83161159113
X-45R-103	a set of the ROUND type for a 3-pole MCCB	83161159114
X-45R-104	a set of the ROUND type for a 4-pole MCCB	83161159115
X-55B-202	a set of the BAR type for a 2-pole MCCB	83161159106
X-55B-203	a set of the BAR type for a 3-pole MCCB	83161159107
X-55B-204	a set of the BAR type for a 4-pole MCCB	83161159108
X-55R-202	a set of the ROUND type for a 2-pole MCCB	83161159116
X-55R-203	a set of the ROUND type for a 3-pole MCCB	83161159117
X-55R-204	a set of the ROUND type for a 4-pole MCCB	83161159118
X-102	a set for 2 pole MCCBs of GBN/GBH102	72311141291
X-103	a set for 3 pole MCCBs of GBN/GBH103	72311141292
X-104	a set for 4 pole MCCBs of GBN/GBH104	72311141293
X-202	a set for 2 pole MCCBs of GBN/GBH202,GBL102/202	72311142291
X-203	a set for 3 pole MCCBs of GBN/GBH203,GBL103/203(E)	72311142292
X-204	a set for 4 pole MCCBs of GBN/GBH204,GBL104/204	72311142293



External accessories for Meta-MEC series MCCBs



Vertical type



Horizontal type
ON in right-hand



Horizontal type
ON in left-hand



Direct Mounting Handle	Description	Catalogue No.
D-35S	Vertical type	83111158101
D-35L	Horizontal (ON in left-hand) type	83111158102
D-35R	Horizontal (ON in right-hand) type	83111158103
D-45S	Vertical type	83111158104
D-45L	Horizontal (ON in left-hand) type	83111158105
D-45R	Horizontal (ON in right-hand) type	83111158106
D-55S	Vertical type	83111158107
D-55L	Horizontal (ON in left-hand) type	83111158108
D-55R	Horizontal (ON in right-hand) type	83111158109
D-30S	Vertical type	83111147101
D-30L	Horizontal (ON in left-hand) type	83111147102
D-30R	Horizontal (ON in right-hand) type	83111147103
D-60S	Vertical type	83111147111
D-60L	Horizontal (ON in left-hand) type	83111147112
D-60R	Horizontal (ON in right-hand) type	83111147113
N-70S	Vertical type	83111138101
N-70L	Horizontal (ON in left-hand) type	83111138102
N-70R	Horizontal (ON in right-hand) type	83111138103
N-80S	Vertical type	83111138111
N-80L	Horizontal (ON in left-hand) type	83111138112
N-80R	Horizontal (ON in right-hand) type	83111138113
N-55S	Vertical type	8311118019
N-55L	Horizontal (ON in left-hand) type	8311118020
N-55R	Horizontal (ON in right-hand) type	8311118021
N-60S	Vertical type	8311118016
N-60L	Horizontal (ON in left-hand) type	8311118017
N-60R	Horizontal (ON in right-hand) type	8311118018

External accessories for Meta-MEC series MCCBs



Vertical type



Horizontal type
ON in right-hand



Horizontal type
ON in left-hand

Extensible Mounting Handle	Description	Catalogue No.
E-35S	Vertical type	83111158110
E-35L	Horizontal (ON in left-hand) type	83111158111
E-35R	Horizontal (ON in right-hand) type	83111158112
E-45S	Vertical type	83111158113
E-45L	Horizontal (ON in left-hand) type	83111158114
E-45R	Horizontal (ON in right-hand) type	83111158115
E-55S	Vertical type	83111158116
E-55L	Horizontal (ON in left-hand) type	83111158117
E-55R	Horizontal (ON in right-hand) type	83111158118
E-30S	Vertical type	83111147151
E-30L	Horizontal (ON in left-hand) type	83111147152
E-30R	Horizontal (ON in right-hand) type	83111147153
E-60S	Vertical type	83111147161
E-60L	Horizontal (ON in left-hand) type	83111147162
E-60R	Horizontal (ON in right-hand) type	83111147163

External accessories for Meta-MEC series MCCBs

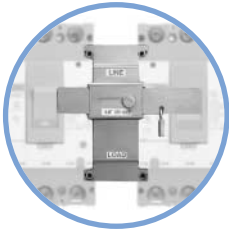


Rating plug	Description	Catalogue No.
RP250	RATING PLUG 250A	73261132111
RP300	RATING PLUG 300A	73261132112
RP350	RATING PLUG 350A	73261132113
RP400	RATING PLUG 400A	73261132114
RP500	RATING PLUG 500A	73261132115
RP600	RATING PLUG 600A	73261132116
RP630	RATING PLUG 630A	73261132117
RP700	RATING PLUG 700A	73261132118
RP800	RATING PLUG 800A	73261132119

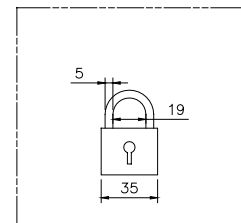
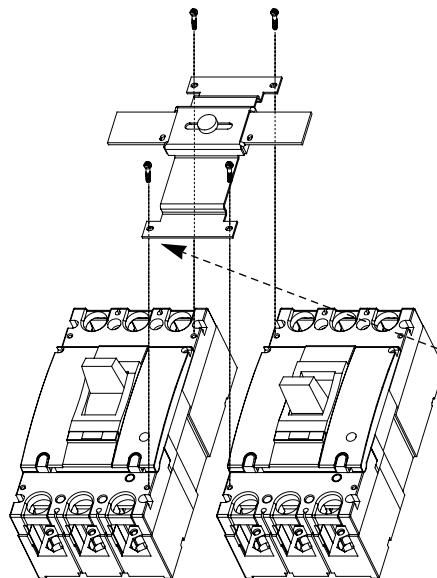
Catalogue numbers

Accessories

External accessories for Meta-MEC series MCCBs



Mechanical Interlock	Description	Catalogue No.
MI - 43S	for 3 pole AB400AF (250 to 400A)	56121138005
MI - 44S	for 4 pole AB400AF (250 to 400A)	56121138007
MI - 83S	for 3 pole AB800AF (500 to 800A)	56121138006
MI - 84S	for 4 pole AB400AF (500 to 800A)	56121138008



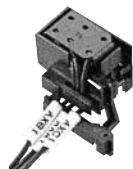
Applicable lock if necessary
(not supplied)

External accessories for Meta-MEC series MCCBs



Insulation barrier	Description	Catalogue No.
IB50	50mm length (Set quantity: 500pcs)	67721152001
IB80	80mm length (Set quantity: 500pcs)	67721152002
IBG250		
IBL400	One(1) barrier for AB400AF	67211132003
IBL800	One(1) barrier for AB800AF	67211132003
IB1200	One(1) barrier for ABS1200AF	67211123005

Electrical auxiliaries for Hi-MEC series MCCBs



Maximum possibilities

Left-hand seat

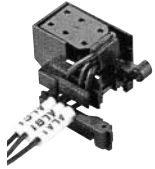
Option of connecting AX or AL or XL
This seat is not available for 2-pole breakers

Right-hand seat

Option of connecting AX or AL or XL
or SHT or UVT
This seat is not available for Earth leakage breakers

Auxiliary switch, AX	Description	Catalogue No.
AX1L50R	AX,R,LWT for ABL53a, 103a	83011116081
AX1L50T	AX,T,LWT for ABL52a, 53a, 102a, 103a	83011116084
AX1L54T	AX,T,LWT for ABL54a, 104a	83011116087
AX1L200R	AX,R,LWT for ABL202a, 203a	83011116061
AX1L200T	AX,T,LWT for ABL202a, 203a	83011116064
AX1L204T	AX,T,LWT for ABL204a	83011116067

Electrical auxiliaries for Hi-MEC series MCCBs



Alarm switch, AL	Description	Catalogue No.
AL1L50R	AL,R,LWT for ABL53a, 103a	83011116082
AL1L50T	AL,T,LWT for ABL52a, 53a, 102a, 103a	83011116085
AL1L54T	AL,T,LWT for ABL54a, 104a	83011116088
AL1L200R	AL,R,LWT for ABL202a, ABL203a	83011116062
AL1L200T	AL,T,LWT for ABL202a, ABL203a	83011116065
AL1L204T	AL,T,LWT for ABL204a	83011116068

Combination switch, XL	Description	Catalogue No.
XL1L50R	AX+AL,R,LWT for ABL53a, L103a	83011116083
XL1L50T	AX+AL,T,LWT for ABL52a, 53a, 102a, 103a	83011116086
XL1L54T	AX+AL,T,LWT for ABL54a, 104a	83011116089
XL1L200R	AX+AL,R,LWT for ABL202a, 203a	83011116063
XL1L200T	AX+AL,T,LWT for ABL202a, 203a	83011116066
XL1L204T	AX+AL,T,LWT for ABL204a	83011116069

Maximum possibilities

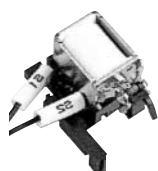
Left-hand seat

Option of connecting AX or AL or XL
This seat is not available for 2-pole breakers

Right-hand seat

Option of connecting AX or AL or XL or SHT or UVT
This seat is not available for Earth leakage breakers

Electrical auxiliaries for Hi-MEC series MCCBs



Shunt trip, SHT	Description	Catalogue No.
ST12CL50	For 12V AC/DC common use	83211117231
ST24CL50	For 24V AC/DC common use	83211117232
ST48CL50	For 48V AC/DC common use	83211117233
ST60CL50	For 60V AC/DC common use	83211117234
ST100CL50	For AC100~125V/DC100~110V	83211117235
ST200CL50	For AC200~240V/DC200~220V	83211117237
ST250CL50	For 250V AC/DC common use	83211117239
ST380AL50	For 380~450V AC	83211117240
ST440AL50	For 440~480V AC	83211117241
ST500AL50	For 500~550V AC	83211117242
ST125DL50	For 125V DC	83211117236
ST240DL50	For 240V DC	83211117238
ST12CL54	For 12V AC/DC common use	83211117243
ST24CL54	For 24V AC/DC common use	83211117244
ST48CL54	For 48V AC/DC common use	83211117245
ST60CL54	For 60V AC/DC common use	83211117246
ST100CL54	For AC100~125V/DC100~110V	83211117247
ST200CL54	For AC200~240V/DC200~220V	83211117249
ST250CL54	For 250V AC/DC common use	83211117251
ST380AL54	For 380~450V AC	83211117252
ST440AL54	For 440~480V AC	83211117253
ST500AL54	For 500~550V AC	83211117254
ST125DL54	For 125V DC	83211117248
ST240DL54	For 240V DC	83211117250
ST12CL200	For 12V AC/DC common use	83211117201
ST24CL200	For 24V AC/DC common use	83211117202
ST48CL200	For 48V AC/DC common use	83211117203
ST60CL200	For 60V AC/DC common use	83211117204
ST100CL200	For AC100~125V/DC100~110V	83211117205
ST200CL200	For AC200~240V/DC200~220V	83211117207
ST250CL200	For 250V AC/DC common use	83211117209
ST380AL200	For 380~450V AC	83211117210
ST440AL200	For 440~480V AC	83211117211
ST500AL200	For 500~550V AC	83211117212
ST125DL200	For 125V DC	83211117206
ST240DL200	For 240V DC	83211117208
ST12CL204	For 12V AC/DC common use	83211117213
ST24CL204	For 24V AC/DC common use	83211117214
ST48CL204	For 48V AC/DC common use	83211117215
ST60CL204	For 60V AC/DC common use	83211117216
ST100CL204	For AC100~125V/DC100~110V	83211117217
ST200CL204	For AC200~240V/DC200~220V	83211117219
ST250CL204	For 250V AC/DC common use	83211117221
ST380AL204	For 380~450V AC	83211117222
ST440AL204	For 440~480V AC	83211117223
ST500AL204	For 500~550V AC	83211117224
ST125DL204	For 125V DC	83211117218
ST240DL204	For 240V DC	83211117220

Maximum possibilities

Left-hand seat

Option of connecting AX or AL or XL
This seat is not available for 2-pole breakers

Right-hand seat

Option of connecting AX or AL or XL or SHT or UVT
This seat is not available for Earth leakage breakers

Electrical auxiliaries for Hi-MEC series MCCBs



Alarm switch, AL	Description	Catalogue No.
UV12CL50	For 12V AC/DC common use	83211117663
UV24CL50	For 24V AC/DC common use	83211117664
UV100CL50	For 100~110V AC/DC common use	83211117665
UV200CL50	For 200~220V AC/DC common use	83211117666
UV380AL50	For 380~440V AC	83211117667
UV440AL50	For 440~480V AC	83211117668
UV12CL54	For 12V AC/DC common use	83211117669
UV24CL54	For 24V AC/DC common use	83211117670
UV100CL54	For 100~110V AC/DC common use	83211117671
UV200CL54	For 200~220V AC/DC common use	83211117672
UV380AL54	For 380~440V AC	83211117673
UV440AL54	For 440~480V AC	83211117674
UV12CL200	For 12V AC/DC common use	83211117651
UV24CL200	For 24V AC/DC common use	83211117652
UV100CL200	For 100~110V AC/DC common use	83211117653
UV200CL200	For 200~220V AC/DC common use	83211117654
UV380AL200	For 380~440V AC	83211117655
UV440AL200	For 440~480V AC	83211117656
UV12CL204	For 12V AC/DC common use	83211117657
UV24CL204	For 24V AC/DC common use	83211117658
UV100CL204	For 100~110V AC/DC common use	83211117659
UV200CL204	For 200~220V AC/DC common use	83211117660
UV380AL204	For 380~440V AC	83211117661
UV440AL204	For 440~480V AC	83211117662

Maximum possibilities

Left-hand seat

Option of connecting AX or AL or XL
This seat is not available for 2-pole breakers

Right-hand seat

Option of connecting AX or AL or XL or SHT or UVT
This seat is not available for Earth leakage breakers

Catalogue numbers index

Molded Case Circuit Breaker

Catalog No.	Description	Page
0004000100	ABE32 3A	94
0004000200	ABE32 5A	94
0004000300	ABE32 10A	94
0004000400	ABE32 15A	94
0004000500	ABE32 20A	94
0004000600	ABE32 30A	94
0005000100	ABE33 3A	94
0005000200	ABE33 5A	94
0005000400	ABE33 10A	94
0005000600	ABE33 15A	94
0005000800	ABE33 20A	94
0005001000	ABE33 30A	94
0047000100	ABE52b 5A	32
0047000200	ABE52b 10A	32
0047000300	ABE52b 15A	32
0047000400	ABE52b 20A	32
0047000500	ABE52b 30A	32
0047000600	ABE52b 40A	32
0047000700	ABE52b 50A	32
0048000100	ABE53b 5A	32
0048000200	ABE53b 10A	32
0048000300	ABE53b 15A	32
0048000400	ABE53b 20A	32
0048000500	ABE53b 30A	32
0048000600	ABE53b 40A	32
0048000700	ABE53b 50A	32
0047000800	ABE62b 60A	32
0048000800	ABE63b 60A	32
0049000100	ABE102b 5A	33
0049000200	ABE102b 10A	33
0049000300	ABE102b 15A	33
0049000400	ABE102b 20A	33
0049000500	ABE102b 30A	33
0049000600	ABE102b 40A	33
0049000700	ABE102b 50A	33
0049000800	ABE102b 60A	33
0049000900	ABE102b 75A	33
0049001000	ABE102b 100A	33
0050000100	ABE103b 5A	33
0050000200	ABE103b 10A	33
0050000300	ABE103b 15A	33
0050000400	ABE103b 20A	33
0050000500	ABE103b 30A	33
0050000600	ABE103b 40A	33
0050000700	ABE103b 50A	33
0050000800	ABE103b 60A	33
0050000900	ABE103b 75A	33
0050001000	ABE103b 100A	33
0051000100	ABE104b 5A	33
0051000200	ABE104b 10A	33
0051000300	ABE104b 15A	33
0051000400	ABE104b 20A	33
0051000500	ABE104b 30A	33
0051000600	ABE104b 40A	33
0051000700	ABE104b 50A	33

Catalog No.	Description	Page
0051000800	ABE104b 60A	33
0051000900	ABE104b 75A	33
0051001000	ABE104b 100A	33
0055000100	ABE202b 100A	34
0055000200	ABE202b 125A	34
0055000300	ABE202b 150A	34
0055000400	ABE202b 175A	34
0055000500	ABE202b 200A	34
0055000600	ABE202b 225A	34
0056000100	ABE203b 100A	34
0056000200	ABE203b 125A	34
0056000300	ABE203b 150A	34
0056000400	ABE203b 175A	34
0056000500	ABE203b 200A	34
0056000600	ABE203b 225A	34
0057000100	ABE204b 100A	34
0057000200	ABE204b 125A	34
0057000300	ABE204b 150A	34
0057000400	ABE204b 175A	34
0057000500	ABE204b 200A	34
0057000600	ABE204b 225A	34
0047000900	ABS32b 3A	31
0047001000	ABS32b 5A	31
0047001100	ABS32b 10A	31
0047001200	ABS32b 15A	31
0047001300	ABS32b 20A	31
0047001400	ABS32b 30A	31
0048000900	ABS33b 3A	31
0048001000	ABS33b 5A	31
0048001100	ABS33b 10A	31
0048001200	ABS33b 15A	31
0048001300	ABS33b 20A	31
0048001400	ABS33b 30A	31
0049001100	ABS52b 5A	32
0049001200	ABS52b 10A	32
0049001300	ABS52b 15A	32
0049001400	ABS52b 20A	32
0049001500	ABS52b 30A	32
0049001600	ABS52b 40A	32
0049001700	ABS52b 50A	32
0050001100	ABS53b 5A	32
0050001200	ABS53b 10A	32
0050001300	ABS53b 15A	32
0050001400	ABS53b 20A	32
0050001500	ABS53b 30A	32
0050001600	ABS53b 40A	32
0050001700	ABS53b 50A	32
0051001100	ABS54b 5A	32
0051001200	ABS54b 10A	32
0051001300	ABS54b 15A	32
0051001400	ABS54b 20A	32
0051001500	ABS54b 30A	32
0051001600	ABS54b 40A	32
0051001700	ABS54b 50A	32
0049001800	ABS62b 60A	32

Catalog No.	Description	Page
0050001800	ABS63b 60A	32
0051001800	ABS64b 60A	32
0052000100	ABS102b 15A	33
0052000200	ABS102b 20A	33
0052000300	ABS102b 30A	33
0052000400	ABS102b 40A	33
0052000500	ABS102b 50A	33
0052000600	ABS102b 60A	33
0052000700	ABS102b 75A	33
0052000800	ABS102b 100A	33
0053000100	ABS103b 15A	33
0053000200	ABS103b 20A	33
0053000300	ABS103b 30A	33
0053000400	ABS103b 40A	33
0053000500	ABS103b 50A	33
0053000600	ABS103b 60A	33
0053000700	ABS103b 75A	33
0053000800	ABS103b 100A	33
0054000100	ABS104b 15A	33
0054000200	ABS104b 20A	33
0054000300	ABS104b 30A	33
0054000400	ABS104b 40A	33
0054000500	ABS104b 50A	33
0054000600	ABS104b 60A	33
0054000700	ABS104b 75A	33
0054000800	ABS104b 100A	33
0055000700	ABS202b 100A	34
0055000800	ABS202b 125A	34
0055000900	ABS202b 150A	34
0055001000	ABS202b 175A	34
0055001100	ABS202b 200A	34
0055001200	ABS202b 225A	34
0056000700	ABS203b 100A	34
0056000800	ABS203b 125A	34
0056000900	ABS203b 150A	34
0056001000	ABS203b 175A	34
0056001100	ABS203b 200A	34
0056001200	ABS203b 225A	34
0057000700	ABS204b 100A	34
0057000800	ABS204b 125A	34
0057000900	ABS204b 150A	34
0057001000	ABS204b 175A	34
0057001100	ABS204b 200A	34
0057001200	ABS204b 225A	34
0049002000	ABH32b 5A	31
0049002100	ABH32b 10A	31
0049002200	ABH32b 15A	31
0049002300	ABH32b 20A	31
0049002400	ABH32b 30A	31
0050002000	ABH33b 5A	31
0050002100	ABH33b 10A	31
0050002200	ABH33b 15A	31
0050002300	ABH33b 20A	31
0050002400	ABH33b 30A	31
0052000900	ABH52b 15A	32

Catalog No.	Description	Page
0052001000	ABH52b 20A	32
0052001100	ABH52b 30A	32
0052001200	ABH52b 40A	32
0052001300	ABH52b 50A	32
0053000900	ABH53b 15A	32
0053001000	ABH53b 20A	32
0053001100	ABH53b 30A	32
0053001200	ABH53b 40A	32
0053001300	ABH53b 50A	32
0054000900	ABH54b 15A	32
0054001000	ABH54b 20A	32
0054001100	ABH54b 30A	32
0054001200	ABH54b 40A	32
0054001300	ABH54b 50A	32
0052002000	ABH102b 15A	33
0052002100	ABH102b 20A	33
0052002200	ABH102b 30A	33
0052002300	ABH102b 40A	33
0052002400	ABH102b 50A	33
0052002500	ABH102b 60A	33
0052002600	ABH102b 75A	33
0052002700	ABH102b 100A	33
0053002000	ABH103b 15A	33
0053002100	ABH103b 20A	33
0053002200	ABH103b 30A	33
0053002300	ABH103b 40A	33
0053002400	ABH103b 50A	33
0053002500	ABH103b 60A	33
0053002600	ABH103b 75A	33
0053002700	ABH103b 100A	33
0054002000	ABH104b 15A	33
0054002100	ABH104b 20A	33
0054002200	ABH104b 30A	33
0054002300	ABH104b 40A	33
0054002400	ABH104b 50A	33
0054002500	ABH104b 60A	33
0054002600	ABH104b 75A	33
0054002700	ABH104b 100A	33
0058000100	ABH202b 100A	34
0058000200	ABH202b 125A	34
0058000300	ABH202b 150A	34
0058000400	ABH202b 175A	34
0058000500	ABH202b 200A	34
0058000600	ABH202b 225A	34
0059000100	ABH203b 100A	34
0059000200	ABH203b 125A	34
0059000300	ABH203b 150A	34
0059000400	ABH203b 175A	34
0059000500	ABH203b 200A	34
0059000600	ABH203b 225A	34
0060000100	ABH204b 100A	34
0060000200	ABH204b 125A	34
0060000300	ABH204b 150A	34
0060000400	ABH204b 175A	34
0060000500	ABH204b 200A	34

Catalogue numbers index

Molded Case Circuit Breaker

Catalog No.	Description	Page
0060000600	ABH204b 225A	34
0020007500	ABL52a 15A	94
0020007600	ABL52a 20A	94
0020007700	ABL52a 30A	94
0020007800	ABL52a 40A	94
0020007900	ABL52a 50A	94
0021030600	ABL53a 15A	94
0021030700	ABL53a 20A	94
0021030800	ABL53a 30A	94
0021030900	ABL53a 40A	94
0021031000	ABL53a 50A	94
0022009800	ABL54a 15A	94
0022009900	ABL54a 20A	94
0022010000	ABL54a 30A	94
0022010100	ABL54a 40A	94
0022010200	ABL54a 50A	94
0020009800	ABL102a 15A	95
0020009900	ABL102a 20A	95
0020010000	ABL102a 30A	95
0020010100	ABL102a 40A	95
0020010200	ABL102a 50A	95
0020010300	ABL102a 60A	95
0020010400	ABL102a 75A	95
0020010500	ABL102a 100A	95
0021036300	ABL103a 15A	95
0021036400	ABL103a 20A	95
0021036500	ABL103a 30A	95
0021036600	ABL103a 40A	95
0021036700	ABL103a 50A	95
0021036800	ABL103a 60A	95
0021036900	ABL103a 75A	95
0021037000	ABL103a 100A	95
0022013200	ABL104a 15A	95
0022013300	ABL104a 20A	95
0022013400	ABL104a 30A	95
0022013500	ABL104a 40A	95
0022013600	ABL104a 50A	95
0022013700	ABL104a 60A	95
0022013800	ABL104a 75A	95
0022013900	ABL104a 100A	95
0017007700	ABL202a 125A	96
0017007800	ABL202a 150A	96
0017007900	ABL202a 175A	96
0017008000	ABL202a 200A	96
0017008100	ABL202a 225A	96
0018028500	ABL203a 125A	96
0018028600	ABL203a 150A	96
0018028700	ABL203a 175A	96
0018028800	ABL203a 200A	96
0018028900	ABL203a 225A	96
0019014400	ABL204a 125A	96
0019014500	ABL204a 150A	96
0019014600	ABL204a 175A	96
0019014700	ABL204a 200A	96
0019014800	ABL204a 225A	96

Catalog No.	Description	Page
0021046800	ABL103aIN 1.6A(TC10-20)	
0021046900	ABL103aIN 3.2A(TC20-40)	
0021047000	ABL103aIN 6.3A(TC40-80)	
0021047100	ABL103aIN 12A(TC70-140)	
0021047200	ABL103aIN 20A(TC120-240)	
0021047300	ABL103aIN 32A(TC180-360)	
0021047400	ABL103aIN 50A(TC300-600)	
0021047500	ABL103aIN 63A(TC400-800)	
0021047600	ABL103aIN 100A(TC650-1300)	
0018035600	ABL203aIN 100A(TC650-1300)	
0088000100	ABE402b 250A	52
0088000200	ABE402b 300A	52
0088000300	ABE402b 350A	52
0088000400	ABE402b 400A	52
0087000200	ABE403b 250A	52
0087000300	ABE403b 300A	52
0087000400	ABE403b 350A	52
0087000500	ABE403b 400A	52
0086000200	ABE404b 250A	52
0086000300	ABE404b 300A	52
0086000400	ABE404b 350A	52
0086000500	ABE404b 400A	52
0088000500	ABS402b 250A	52
0088000600	ABS402b 300A	52
0088000700	ABS402b 350A	52
0088000800	ABS402b 400A	52
0087000600	ABS403b 250A	52
0087000700	ABS403b 300A	52
0087000800	ABS403b 350A	52
0087000900	ABS403b 400A	52
0086000600	ABS404b 250A	52
0086000700	ABS404b 300A	52
0086000800	ABS404b 350A	52
0086000900	ABS404b 400A	52
0088000900	ABH402b 250A	52
0088001000	ABH402b 300A	52
0088001100	ABH402b 350A	52
0088001200	ABH402b 400A	52
0087001000	ABH403b 250A	52
0087001100	ABH403b 300A	52
0087001200	ABH403b 350A	52
0087001300	ABH403b 400A	52
0086001000	ABH404b 250A	52
0086001100	ABH404b 300A	52
0086001200	ABH404b 350A	52
0086001300	ABH404b 400A	52
0088001300	ABL402b 250A	52
0088001400	ABL402b 300A	52
0088001500	ABL402b 350A	52
0088001600	ABL402b 400A	52
0087001400	ABL403b 250A	52
0087001500	ABL403b 300A	52
0087001600	ABL403b 350A	52
0087000100	ABL403b 400A	52
0086001400	ABL404b 250A	52

Catalog No.	Description	Page
0086001500	ABL404b 300A	52
0086001600	ABL404b 350A	52
0086000100	ABL404b 400A	52
0092000100	ABE802b 500A	53
0092000200	ABE802b 600A	53
0092001300	ABE802b 630A	53
0092000300	ABE802b 700A	53
0092000400	ABE802b 800A	53
0093000100	ABE803b 500A	53
0093000200	ABE803b 600A	53
0093001300	ABE803b 630A	53
0093000300	ABE803b 700A	53
0093000400	ABE803b 800A	53
0085000200	ABE804b 500A	53
0085000300	ABE804b 600A	53
0085001300	ABE804b 630A	53
0085000400	ABE804b 700A	53
0085000500	ABE804b 800A	53
0092000500	ABS802b 500A	53
0092000600	ABS802b 600A	53
0092001400	ABS802b 630A	53
0092000700	ABS802b 700A	53
0092000800	ABS802b 800A	53
0093000500	ABS803b 500A	53
0093000600	ABS803b 600A	53
0093001400	ABS803b 630A	53
0093000700	ABS803b 700A	53
0093000800	ABS803b 800A	53
0085000600	ABS804b 500A	53
0085000700	ABS804b 600A	53
0085000800	ABS804b 630A	53
0085000900	ABS804b 700A	53
0085001400	ABS804b 800A	53
0092000900	ABL802b 500A	53
0092001000	ABL802b 600A	53
0092001500	ABL802b 630A	53
0092001100	ABL802b 700A	53
0092001200	ABL802b 800A	53
0093000900	ABL803b 500A	53
0093001000	ABL803b 600A	53
0093001500	ABL803b 630A	53
0093001100	ABL803b 700A	53
0093001200	ABL803b 800A	53
0085001000	ABL804b 500A	53
0085000100	ABL804b 600A	53
0085001500	ABL804b 630A	53
0085001100	ABL804b 700A	53
0085001200	ABL804b 800A	53
0041007600	ABS1003 1000A 50Hz	62
0041009200	ABS1003 1000A 60Hz	62
0042002300	ABS1004 1000A 50Hz	62
0042002400	ABS1004 1000A 60Hz	62
0041011200	ABS1203 1200A 50Hz	62
0041011300	ABS1203 1200A 60Hz	62
0042003300	ABS1204 1200A 50Hz	62

Catalog No.	Description	Page
0042003400	ABS1204 1200A 60Hz	62
0041013900	ABS1203E 600-1200A	63
0024004900	GBN102 16A	45
0024005500	GBN102 20A	45
0024000700	GBN102 25A	45
0024000800	GBN102 32A	45
0024005600	GBN102 40A	45
0024004100	GBN102 50A	45
0024000900	GBN102 63A	45
0024001000	GBN102 80A	45
0024001100	GBN102 100A	45
0025000700	GBN103 16A	45
0025000800	GBN103 20A	45
0025000900	GBN103 25A	45
0025001000	GBN103 32A	45
0025001100	GBN103 40A	45
0025001200	GBN103 50A	45
0025001300	GBN103 63A	45
0025001400	GBN103 80A	45
0025001500	GBN103 100A	45
0026000300	GBN104 16A	45
0026000400	GBN104 20A	45
0026000500	GBN104 25A	45
0026000600	GBN104 32A	45
0026000700	GBN104 40A	45
0026000800	GBN104 50A	45
0026000900	GBN104 63A	45
0026001000	GBN104 80A	45
0026000100	GBN104 100A	45
0024005000	GBH102 16A	45
0024005100	GBH102 20A	45
0024005200	GBH102 25A	45
0024005300	GBH102 32A	45
0024005400	GBH102 40A	45
0024001800	GBH102 50A	45
0024001900	GBH102 63A	45
0024002000	GBH102 80A	45
0024002100	GBH102 100A	45
0025009200	GBH103 16A	45
0025010100	GBH103 20A	45
0025002200	GBH103 25A	45
0025002300	GBH103 32A	45
0025002400	GBH103 40A	45
0025002500	GBH103 50A	45
0025002600	GBH103 63A	45
0025002700	GBH103 80A	45
0025002800	GBH103 100A	45
0026003400	GBH104 16A	45
0026004100	GBH104 20A	45
0026004200	GBH104 25A	45
0026004300	GBH104 32A	45
0026004400	GBH104 40A	45
0026004500	GBH104 50A	45
0026001200	GBH104 63A	45
0026002700	GBH104 80A	45

Catalogue numbers index

Molded Case Circuit Breaker

Catalog No.	Description	Page
0026000200	GBH104 100A	45
0024005700	GBL102 16A	46
0024005800	GBL102 20A	46
0024005900	GBL102 25A	46
0024006000	GBL102 32A	46
0024006100	GBL102 40A	46
0024006200	GBL102 50A	46
0024002800	GBL102 63A	46
0024002900	GBL102 80A	46
0024003000	GBL102 100A	46
0025003600	GBL103 16A	46
0025003700	GBL103 20A	46
0025003800	GBL103 25A	46
0025003900	GBL103 32A	46
0025004000	GBL103 40A	46
0025004100	GBL103 50A	46
0025004200	GBL103 63A	46
0025004300	GBL103 80A	46
0025004400	GBL103 100A	46
0026001300	GBL104 16A	46
0026001400	GBL104 20A	46
0026001500	GBL104 25A	46
0026001600	GBL104 32A	46
0026001700	GBL104 40A	46
0026001800	GBL104 50A	46
0026001900	GBL104 63A	46
0026002000	GBL104 80A	46
0026002100	GBL104 100A	46
0027000100	GBN202 125A	46
0027000200	GBN202 160A	46
0027000300	GBN202 200A	46
0027000400	GBN202 250A	46
0028000100	GBN203 125A	46
0028000200	GBN203 160A	46
0028000300	GBN203 200A	46
0028000400	GBN203 250A	46
0029000700	GBN204 125A	46
0029000800	GBN204 160A	46
0029000100	GBN204 200A	46
0029000200	GBN204 250A	46
0027000500	GBH202 125A	46
0027000600	GBH202 160A	46
0027000700	GBH202 200A	46
0027000800	GBH202 250A	46
0028000600	GBH203 125A	46
0028000700	GBH203 160A	46
0028000800	GBH203 200A	46
0028000900	GBH203 250A	46
0029000900	GBH204 125A	46
0029001200	GBH204 160A	46
0029000300	GBH204 200A	46
0029000400	GBH204 250A	46
0027000900	GBL202 125A	46
0027001000	GBL202 160A	46
0027001100	GBL202 200A	46

Catalog No.	Description	Page
0027001200	GBL202 250A	46
0028001000	GBL203 125A	46
0028003000	GBL203 160A	46
0028001200	GBL203 200A	46
0028001300	GBL203 250A	46
0029001000	GBL204 125A	46
0029001100	GBL204 160A	46
0029000500	GBL204 200A	46
0029000600	GBL204 250A	46
0025005600	GBL103IN 1.6A(TC10-20)	67
0025005700	GBL103IN 3.2A(TC20-40)	67
0025005800	GBL103IN 6.3A(TC(40-80)	67
0025005900	GBL103IN 12A(TC70-140)	67
0025006000	GBL103IN 20A(TC120-240)	67
0025006100	GBL103IN 32A(TC180-360)	67
0025006200	GBL103IN 50A(TC300-600)	67
0025006300	GBL103IN 63A(TC400-800)	67
0025006400	GBL103IN 100A(TC625-1250)	67
	GBL203IN 63A(TC400-800)	67
0028003200	GBL203IN 100A(TC625-1250)	67
0028002100	GBL203IN 160A(TC1000-2000)	67
0028002200	GBL203IN 200A(TC1250-2500)	67
0028002300	GBL203IN 250A(TC2000-3250)	67
0087016100	ABL403bIN 300A(TC1200-3000)	68
0087016500	ABL403bIN 350A(TC1400-3500)	68
0087016200	ABL403bIN 400A(TC1600-4000)	68
	ABL803bIN 400A(TC1500-3750)	68
	ABL803bIN 500A(TC2000-5000)	68
	ABL803bIN 600A(TC2400-6000)	68
0093008000	ABL803bIN 700A(TC2800-7000)	68
	ABL803bIN 800A(TC3200-8000)	68
0048002300	ABE53bM 10A	69
0048002400	ABE53bM 12A	69
0048002500	ABE53bM 16A	69
0048002600	ABE53bM 24A	69
0048002700	ABE53bM 32A	69
0048002900	ABE53bM 45A	69
0048003000	ABE63bM 60A	69
0050004700	ABS53bM 10A	69
0050004800	ABS53bM 12A	69
0050004900	ABS53bM 16A	69
0050005000	ABS53bM 24A	69
0050005100	ABS53bM 32A	69
0050005200	ABS53bM 40A	69
0050005300	ABS53bM 45A	69
0050005400	ABS63bM 60A	69
0053003400	ABH53bM 16A	69
0053003500	ABH53bM 24A	69
0053003600	ABH53bM 32A	69
0053003800	ABH53bM 45A	69
0050005600	ABE103bM 75A	69
0050005700	ABE103bM 90A	69
0053003100	ABS103bM 60A	69
0053003200	ABS103bM 75A	69
0053003300	ABS103bM 90A	69

Molded Case Circuit Breaker & Plug-in MCCB without mounting block

Catalog No.	Description	Page
0053004400	ABH103bM 60A	69
0053004500	ABH103bM 75A	69
0053004600	ABH103bM 90A	69
0056001300	ABE203bM 125A	70
0056001400	ABE203bM 150A	70
0056001500	ABE203bM 175A	70
0056001600	ABE203bM 225A	70
0056001700	ABS203bM 125A	70
0056001800	ABS203bM 150A	70
0056001900	ABS203bM 175A	70
0056002000	ABS203bM 225A	70
0059000700	ABH203bM 125A	70
0059000800	ABH203bM 150A	70
0059000900	ABH203bM 175A	70
0059001000	ABH203bM 225A	70
	ABS103K/30	71
	ABS103K/60	71
	ABS103K/100	71
	ABS203K/150	71
0025008700	GBL53E 50A	47
0025009100	GBL103E 100A	47
0028002900	GBL203E 250A	47
0031018100	GBN403E 400A	58
0031019300	GBH403E 400A	58
0039007000	GBN803E 800A	59
0039007300	GBH803E 800A	59
0100000100	GBN1603E 1600A	65
0048150400	Plug-in MCCB ABE53b 5A	72~79
0048150500	Plug-in MCCB ABE53b 10A	72~79
0048150600	Plug-in MCCB ABE53b 15A	72~79
0048150700	Plug-in MCCB ABE53b 20A	72~79
0048150800	Plug-in MCCB ABE53b 30A	72~79
0048150900	Plug-in MCCB ABE53b 40A	72~79
0048151000	Plug-in MCCB ABE53b 50A	72~79
0048151100	Plug-in MCCB ABE63b 60A	72~79
0050241000	Plug-in MCCB ABE103b 5A	72~79
0050241100	Plug-in MCCB ABE103b 10A	72~79
0050241200	Plug-in MCCB ABE103b 15A	72~79
0050241300	Plug-in MCCB ABE103b 20A	72~79
0050241400	Plug-in MCCB ABE103b 30A	72~79
0050241500	Plug-in MCCB ABE103b 40A	72~79
0050241600	Plug-in MCCB ABE103b 50A	72~79
0050241700	Plug-in MCCB ABE103b 60A	72~79
0050241800	Plug-in MCCB ABE103b 75A	72~79
0050241900	Plug-in MCCB ABE103b 100A	72~79
0048151200	Plug-in MCCB ABS33b 3A	72~79
0048151300	Plug-in MCCB ABS33b 5A	72~79
0048151400	Plug-in MCCB ABS33b 10A	72~79
0048151500	Plug-in MCCB ABS33b 15A	72~79
0048151600	Plug-in MCCB ABS33b 20A	72~79
0048151700	Plug-in MCCB ABS33b 30A	72~79
0050242000	Plug-in MCCB ABS53b 5A	72~79
0050242100	Plug-in MCCB ABS53b 10A	72~79
0050242200	Plug-in MCCB ABS53b 15A	72~79
0050242300	Plug-in MCCB ABS53b 20A	72~79

Catalog No.	Description	Page
0050242400	Plug-in MCCB ABS53b 30A	72~79
0050242600	Plug-in MCCB ABS53b 40A	72~79
0050242700	Plug-in MCCB ABS53b 50A	72~79
0050242800	Plug-in MCCB ABS63b 60A	72~79
0050242900	Plug-in MCCB ABH33b 5A	72~79
0050243000	Plug-in MCCB ABH33b 10A	72~79
0050243100	Plug-in MCCB ABH33b 15A	72~79
0050243200	Plug-in MCCB ABH33b 20A	72~79
0050243300	Plug-in MCCB ABH33b 30A	72~79
0053222100	Plug-in MCCB ABS103b 15A	72~79
0053222200	Plug-in MCCB ABS103b 20A	72~79
0053222300	Plug-in MCCB ABS103b 30A	72~79
0053222400	Plug-in MCCB ABS103b 40A	72~79
0053222500	Plug-in MCCB ABS103b 50A	72~79
0053222600	Plug-in MCCB ABS103b 60A	72~79
0053222700	Plug-in MCCB ABS103b 75A	72~79
0053222800	Plug-in MCCB ABS103b 100A	72~79
0053222900	Plug-in MCCB ABH53b 15A	72~79
0053223000	Plug-in MCCB ABH53b 20A	72~79
0053223100	Plug-in MCCB ABH53b 30A	72~79
0053223200	Plug-in MCCB ABH53b 40A	72~79
0053223300	Plug-in MCCB ABH53b 50A	72~79
0053224000	Plug-in MCCB ABH103b 15A	72~79
0053224100	Plug-in MCCB ABH103b 20A	72~79
0053224200	Plug-in MCCB ABH103b 30A	72~79
0053224300	Plug-in MCCB ABH103b 40A	72~79
0053224400	Plug-in MCCB ABH103b 50A	72~79
0053224500	Plug-in MCCB ABH103b 60A	72~79
0053224600	Plug-in MCCB ABH103b 75A	72~79
0053224700	Plug-in MCCB ABH103b 100A	72~79
0025012900	Plug-in MCCB GBN53 16A	72~79
0025013000	Plug-in MCCB GBN53 20A	72~79
0025013100	Plug-in MCCB GBN53 25A	72~79
0025013200	Plug-in MCCB GBN53 32A	72~79
0025013300	Plug-in MCCB GBN53 40A	72~79
0025013400	Plug-in MCCB GBN53 50A	72~79
0025013500	Plug-in MCCB GBN103 63A	72~79
0025013600	Plug-in MCCB GBN103 80A	72~79
0025013700	Plug-in MCCB GBN103 100A	72~79
0025013800	Plug-in MCCB GBH53 16A	72~79
0025013900	Plug-in MCCB GBH53 20A	72~79
0025014000	Plug-in MCCB GBH53 25A	72~79
0025014100	Plug-in MCCB GBH53 32A	72~79
0025014200	Plug-in MCCB GBH53 40A	72~79
0025014300	Plug-in MCCB GBH53 50A	72~79
0025014400	Plug-in MCCB GBH103 63A	72~79
0025014500	Plug-in MCCB GBH103 80A	72~79
0025014600	Plug-in MCCB GBH103 100A	72~79
0056126200	Plug-in MCCB ABE203b 100A	72~79
0056126300	Plug-in MCCB ABE203b 125A	72~79
0056126400	Plug-in MCCB ABE203b 150A	72~79
0056126500	Plug-in MCCB ABE203b 175A	72~79
0056126600	Plug-in MCCB ABE203b 200A	72~79
0056126700	Plug-in MCCB ABE203b 225A	72~79
0056126800	Plug-in MCCB ABS203b 100A	72~79

Catalogue numbers index

Plug-in MCCB without mounting block

Catalog No.	Description	Page
0056126900	Plug-in MCCB ABS203b 125A	72~79
0056127000	Plug-in MCCB ABS203b 150A	72~79
0056127100	Plug-in MCCB ABS203b 175A	72~79
0056127200	Plug-in MCCB ABS203b 200A	72~79
0056127300	Plug-in MCCB ABS203b 225A	72~79
0018041800	Plug-in MCCB ABH203a 125A	72~79
0018041900	Plug-in MCCB ABH203a 150A	72~79
0018042000	Plug-in MCCB ABH203a 175A	72~79
0018042100	Plug-in MCCB ABH203a 200A	72~79
0018042200	Plug-in MCCB ABH203a 225A	72~79
0059062300	Plug-in MCCB ABH203b 100A	72~79
0059062400	Plug-in MCCB ABH203b 125A	72~79
0059062500	Plug-in MCCB ABH203b 150A	72~79
0059062600	Plug-in MCCB ABH203b 175A	72~79
0059062700	Plug-in MCCB ABH203b 200A	72~79
0059062800	Plug-in MCCB ABH203b 225A	72~79
0018041300	Plug-in MCCB ABL203a 125A	72~79
0018041400	Plug-in MCCB ABL203a 150A	72~79
0018041500	Plug-in MCCB ABL203a 175A	72~79
0018041600	Plug-in MCCB ABL203a 200A	72~79
0018041700	Plug-in MCCB ABL203a 225A	72~79
0028004400	Plug-in MCCB GBN203 125A	72~79
0028004500	Plug-in MCCB GBN203 160A	72~79
0028004600	Plug-in MCCB GBN203 200A	72~79
0028004700	Plug-in MCCB GBN203 250A	72~79
0028004800	Plug-in MCCB GBH203 125A	72~79
0028004900	Plug-in MCCB GBH203 160A	72~79
0028005000	Plug-in MCCB GBH203 200A	72~79
0028005100	Plug-in MCCB GBH203 250A	72~79
0025017300	Plug-in MCCB GBL103 63A	72~79
0025017400	Plug-in MCCB GBL103 80A	72~79
0025017500	Plug-in MCCB GBL103 100A	72~79
0028005200	Plug-in MCCB GBL203 125A	72~79
0028005300	Plug-in MCCB GBL203 160A	72~79
0028005400	Plug-in MCCB GBL203 200A	72~79
0028005500	Plug-in MCCB GBL203 250A	72~79
0021060100	Plug-in MCCB ABL53a 15A	72~79
0021060200	Plug-in MCCB ABL53a 20A	72~79
0021060300	Plug-in MCCB ABL53a 30A	72~79
0021060400	Plug-in MCCB ABL53a 40A	72~79
0021060500	Plug-in MCCB ABL53a 50A	72~79
0021060600	Plug-in MCCB ABL103a 15A	72~79
0021060700	Plug-in MCCB ABL103a 20A	72~79
0021060800	Plug-in MCCB ABL103a 30A	72~79
0021060900	Plug-in MCCB ABL103a 40A	72~79
0021061000	Plug-in MCCB ABL103a 50A	72~79
0021061100	Plug-in MCCB ABL103a 60A	72~79
0021061200	Plug-in MCCB ABL103a 75A	72~79
0021061300	Plug-in MCCB ABL103a 100A	72~79
0087018100	Plug-in MCCB ABE403b 250A	72~79
0087018200	Plug-in MCCB ABE403b 300A	72~79
0087018300	Plug-in MCCB ABE403b 350A	72~79
0087018400	Plug-in MCCB ABE403b 400A	72~79
0087018500	Plug-in MCCB ABS403b 250A	72~79
0087018600	Plug-in MCCB ABS403b 300A	72~79

Catalog No.	Description	Page
0087018700	Plug-in MCCB ABS403b 350A	72~79
0087018800	Plug-in MCCB ABS403b 400A	72~79
0087018900	Plug-in MCCB ABH403b 250A	72~79
0087019000	Plug-in MCCB ABH403b 300A	72~79
0087019100	Plug-in MCCB ABH403b 350A	72~79
0087019200	Plug-in MCCB ABH403b 400A	72~79
0087019300	Plug-in MCCB ABL403b 250A	72~79
0087019400	Plug-in MCCB ABL403b 300A	72~79
0087019500	Plug-in MCCB ABL403b 350A	72~79
0087019600	Plug-in MCCB ABL403b 400A	72~79
0093009200	Plug-in MCCB ABE803b 500A	72~79
0093009300	Plug-in MCCB ABE803b 600A	72~79
0093009400	Plug-in MCCB ABE803b 630A	72~79
0093009500	Plug-in MCCB ABE803b 700A	72~79
0093009600	Plug-in MCCB ABE803b 800A	72~79
0093009700	Plug-in MCCB ABS803b 500A	72~79
0093009800	Plug-in MCCB ABS803b 600A	72~79
0093009900	Plug-in MCCB ABS803b 630A	72~79
0093010000	Plug-in MCCB ABS803b 700A	72~79
0093010100	Plug-in MCCB ABS803b 800A	72~79
0093010200	Plug-in MCCB ABL803b 500A	72~79
0093010300	Plug-in MCCB ABL803b 600A	72~79
0093010400	Plug-in MCCB ABL803b 630A	72~79
0093010500	Plug-in MCCB ABL803b 700A	72~79
0093010600	Plug-in MCCB ABL803b 800A	72~79
0048151800	Plug-in MCCB ABE53b 5A,LINE ONLY	72~79
0048151900	Plug-in MCCB ABE53b 10A,LINE ONLY	72~79
0048152000	Plug-in MCCB ABE53b 15A,LINE ONLY	72~79
0048152100	Plug-in MCCB ABE53b 20A,LINE ONLY	72~79
0048152200	Plug-in MCCB ABE53b 30A,LINE ONLY	72~79
0048152300	Plug-in MCCB ABE53b 40A,LINE ONLY	72~79
0048152400	Plug-in MCCB ABE53b 50A,LINE ONLY	72~79
0048152500	Plug-in MCCB ABE63b 60A,LINE ONLY	72~79
0050243400	Plug-in MCCB ABE103b 5A,LINE ONLY	72~79
0050243500	Plug-in MCCB ABE103b 10A,LINE ONLY	72~79
0050243600	Plug-in MCCB ABE103b 15A,LINE ONLY	72~79
0050243700	Plug-in MCCB ABE103b 20A,LINE ONLY	72~79
0050243800	Plug-in MCCB ABE103b 30A,LINE ONLY	72~79
0050243900	Plug-in MCCB ABE103b 40A,LINE ONLY	72~79
0050244000	Plug-in MCCB ABE103b 50A,LINE ONLY	72~79
0050244100	Plug-in MCCB ABE103b 60A,LINE ONLY	72~79
0050244200	Plug-in MCCB ABE103b 75A,LINE ONLY	72~79
0050244300	Plug-in MCCB ABE103b 100A,LINE ONLY	72~79
0048152600	Plug-in MCCB ABS33b 3A,LINE ONLY	72~79
0048152700	Plug-in MCCB ABS33b 5A,LINE ONLY	72~79
0048152800	Plug-in MCCB ABS33b 10A,LINE ONLY	72~79
0048152900	Plug-in MCCB ABS33b 15A,LINE ONLY	72~79
0048153000	Plug-in MCCB ABS33b 20A,LINE ONLY	72~79
0048153100	Plug-in MCCB ABS33b 30A,LINE ONLY	72~79
0050244400	Plug-in MCCB ABS53b 5A,LINE ONLY	72~79
0050244500	Plug-in MCCB ABS53b 10A,LINE ONLY	72~79
0050244600	Plug-in MCCB ABS53b 15A,LINE ONLY	72~79
0050244700	Plug-in MCCB ABS53b 20A,LINE ONLY	72~79
0050244800	Plug-in MCCB ABS53b 30A,LINE ONLY	72~79
0050244900	Plug-in MCCB ABS53b 40A,LINE ONLY	72~79

Mounting block for Plug-in MCCB & Earth Leakage Circuit Breaker

Catalog No.	Description	Page
0050245000	Plug-in MCCB ABS53b 50A,LINE ONLY	72~79
0050245100	Plug-in MCCB ABS63b 60A,LINE ONLY	72~79
0050245200	Plug-in MCCB ABH33b 5A,LINE ONLY	72~79
0050245300	Plug-in MCCB ABH33b 10A,LINE ONLY	72~79
0050245400	Plug-in MCCB ABH33b 15A,LINE ONLY	72~79
0050245500	Plug-in MCCB ABH33b 20A,LINE ONLY	72~79
0050245600	Plug-in MCCB ABH33b 30A,LINE ONLY	72~79
0053224800	Plug-in MCCB ABS103b 15A,LINE ONLY	72~79
0053224900	Plug-in MCCB ABS103b 20A,LINE ONLY	72~79
0053225000	Plug-in MCCB ABS103b 30A,LINE ONLY	72~79
0053225100	Plug-in MCCB ABS103b 40A,LINE ONLY	72~79
0053225200	Plug-in MCCB ABS103b 50A,LINE ONLY	72~79
0053225300	Plug-in MCCB ABS103b 60A,LINE ONLY	72~79
0053225400	Plug-in MCCB ABS103b 75A,LINE ONLY	72~79
0053225500	Plug-in MCCB ABS103b 100A,LINE ONLY	72~79
0053225600	Plug-in MCCB ABH 53b 15A,LINE ONLY	72~79
0053225700	Plug-in MCCB ABH 53b 20A,LINE ONLY	72~79
0053225800	Plug-in MCCB ABH 53b 30A,LINE ONLY	72~79
0053225900	Plug-in MCCB ABH 53b 40A,LINE ONLY	72~79
0053226000	Plug-in MCCB ABH 53b 50A,LINE ONLY	72~79
0053226700	Plug-in MCCB ABH 103b 15A,LINE ONLY	72~79
0053226800	Plug-in MCCB ABH 103b 20A,LINE ONLY	72~79
0053226900	Plug-in MCCB ABH 103b 30A,LINE ONLY	72~79
0053227000	Plug-in MCCB ABH 103b 40A,LINE ONLY	72~79
0053227100	Plug-in MCCB ABH 103b 50A,LINE ONLY	72~79
0053227200	Plug-in MCCB ABH 103b 60A,LINE ONLY	72~79
0053227300	Plug-in MCCB ABH 103b 75A,LINE ONLY	72~79
0053227400	Plug-in MCCB ABH 103b 100A,LINE ONLY	72~79
0025014700	Plug-in MCCB GBN53 16A,LINE ONLY	72~79
0025014800	Plug-in MCCB GBN53 20A,LINE ONLY	72~79
0025014900	Plug-in MCCB GBN53 25A,LINE ONLY	72~79
0025015000	Plug-in MCCB GBN53 32A,LINE ONLY	72~79
0025015100	Plug-in MCCB GBN53 40A,LINE ONLY	72~79
0025015200	Plug-in MCCB GBN53 50A,LINE ONLY	72~79
0025015300	Plug-in MCCB GBN53 63A,LINE ONLY	72~79
0025015400	Plug-in MCCB GBN103 63A,LINE ONLY	72~79
0025015500	Plug-in MCCB GBN103 80A,LINE ONLY	72~79
0025015600	Plug-in MCCB GBN103 100A,LINE ONLY	72~79
0025015700	Plug-in MCCB GBH53 16A,LINE ONLY	72~79
0025015800	Plug-in MCCB GBH53 20A,LINE ONLY	72~79
0025015900	Plug-in MCCB GBH53 25A,LINE ONLY	72~79
0025016000	Plug-in MCCB GBH53 32A,LINE ONLY	72~79
0025016100	Plug-in MCCB GBH53 40A,LINE ONLY	72~79
0025016200	Plug-in MCCB GBH53 50A,LINE ONLY	72~79
0025016300	Plug-in MCCB GBH103 63A,LINE ONLY	72~79
0025016400	Plug-in MCCB GBH103 80A,LINE ONLY	72~79
0025016500	Plug-in MCCB GBH103 100A,LINE ONLY	72~79
54621151101	PB-A3-FR	72~79
54621152101	PB-C3-FR	72~79
54621141101	PB-G3-FR	72~79
54621153102	PB-D3-FR	72~79
54621115102	PB-E3-FR	72~79
54621131102	PB-I3-FR	72~79
54621132102	PB-J3-FR	72~79
54621151102	PB-A3-FRL	72~79

Catalog No.	Description	Page
54621152102	PB-C3-FRL	72~79
54621141102	PB-G3-FRL	72~79
54621151103	PB-A3-1DB	72~79
54621152103	PB-C3-1DB	72~79
54621141103	PB-G3-1DB	72~79
54621151104	PB-A3-2DB	72~79
54621152104	PB-C3-2DB	72~79
54621141104	PB-G3-2DB	72~79
0770003100	EBS33b 5A 30mA	81
0770003200	EBS33b 10A 30mA	81
0770003300	EBS33b 15A 30mA	81
0770003400	EBS33b 20A 30mA	81
0770003500	EBS33b 30A 30mA	81
0770003600	EBS33b 5A 100/200/500mA	81
0770003700	EBS33b 10A 100/200/500mA	81
0770003800	EBS33b 15A 100/200/500mA	81
0770003900	EBS33b 20A 100/200/500mA	81
0770004000	EBS33b 30A 100/200/500mA	81
0771002900	EBH33b 5A 30mA	81
0771003000	EBH33b 10A 30mA	81
0771003100	EBH33b 15A 30mA	81
0771003200	EBH33b 20A 30mA	81
0771003300	EBH33b 30A 30mA	81
0771003400	EBH33b 5A 100/200/500mA	81
0771003500	EBH33b 10A 100/200/500mA	81
0771003600	EBH33b 15A 100/200/500mA	81
0771003700	EBH33b 20A 100/200/500mA	81
0771003300	EBH33b 30A 100/200/500mA	81
0770000100	EBE52b 5A 30mA	82
0770000200	EBE52b 10A 30mA	82
0770000300	EBE52b 15A 30mA	82
0770000400	EBE52b 20A 30mA	82
0770000500	EBE52b 30A 30mA	82
0770000600	EBE52b 40A 30mA	82
0770000700	EBE52b 50A 30mA	82
0770000800	EBE52b 5A 100/200/500mA	82
0770000900	EBE52b 10A 100/200/500mA	82
0770001000	EBE52b 15A 100/200/500mA	82
0770001100	EBE52b 20A 100/200/500mA	82
0770001200	EBE52b 30A 100/200/500mA	82
0770001300	EBE52b 40A 100/200/500mA	82
0770001400	EBE52b 50A 100/200/500mA	82
0770001500	EBE53b 5A 30mA	82
0770001600	EBE53b 10A 30mA	82
0770001700	EBE53b 15A 30mA	82
0770001800	EBE53b 20A 30mA	82
0770001900	EBE53b 30A 30mA	82
0770002000	EBE53b 40A 30mA	82
0770002100	EBE53b 50A 30mA	82
0770002200	EBE53b 5A 100/200/500mA	82
0770002300	EBE53b 10A 100/200/500mA	82
0770002400	EBE53b 15A 100/200/500mA	82
0770002500	EBE53b 20A 100/200/500mA	82
0770002600	EBE53b 30A 100/200/500mA	82
0770002700	EBE53b 40A 100/200/500mA	82

Catalogue numbers index

Earth Leakage Circuit Breaker

Catalog No.	Description	Page
0770002800	EBE53b 50A 100/200/500mA	82
0771001300	EBS53b 5A 30mA	82
0771001400	EBS53b 10A 30mA	82
0771001500	EBS53b 15A 30mA	82
0771001600	EBS53b 20A 30mA	82
0771001700	EBS53b 30A 30mA	82
0771001800	EBS53b 40A 30mA	82
0771001900	EBS53b 50A 30mA	82
0771002000	EBS53b 5A 100/200/500mA	82
0771002100	EBS53b 10A 100/200/500mA	82
0771002200	EBS53b 15A 100/200/500mA	82
0771002300	EBS53b 20A 100/200/500mA	82
0771002400	EBS53b 30A 100/200/500mA	82
0771002500	EBS53b 40A 100/200/500mA	82
0771002600	EBS53b 50A 100/200/500mA	82
0772001100	EBH53b 40A 30mA	82
0772001200	EBH53b 50A 30mA	82
0772001300	EBH53b 40A 100/200/500mA	82
0772001400	EBH53b 50A 100/200/500mA	82
0771002900	EBE63b 60A 30mA	82
0771003000	EBE63b 60A 100/200/500mA	82
0771002700	EBS63b 60A 30mA	82
0771002800	EBS63b 60A 100/200/500mA	82
0771000100	EBE102b 60A 30mA	83
0771000200	EBE102b 75A 30mA	83
0771000300	EBE102b 100A 30mA	83
0771000400	EBE102b 60A 100/200/500mA	83
0771000500	EBE102b 75A 100/200/500mA	83
0771000600	EBE102b 100A 100/200/500mA	83
0771000700	EBE103b 60A 30mA	83
0771000800	EBE103b 75A 30mA	83
0771000900	EBE103b 100A 30mA	83
0771001000	EBE103b 60A 100/200/500mA	83
0771001100	EBE103b 75A 100/200/500mA	83
0771001200	EBE103b 100A 100/200/500mA	83
0772001500	EBS103b 40A 30mA	83
0772001600	EBS103b 50A 30mA	83
0772001700	EBS103b 60A 30mA	83
0772001800	EBS103b 75A 30mA	83
0772001900	EBS103b 100A 30mA	83
0772002000	EBS103b 40A 100/200/500mA	83
0772002100	EBS103b 50A 100/200/500mA	83
0772002200	EBS103b 60A 100/200/500mA	83
0772002300	EBS103b 75A 100/200/500mA	83
0772002400	EBS103b 100A 100/200/500mA	83
0772000300	EBH103b 60A 30mA	83
0772000400	EBH103b 75A 30mA	83
0772000500	EBH103b 100A 30mA	83
0772000800	EBH103b 60A 100/200/500mA	83
0772000900	EBH103b 75A 100/200/500mA	83
0772001000	EBH103b 100A 100/200/500mA	83
0773000200	EBE203b 125A 30mA	84
0773000300	EBE203b 150A 30mA	84
0773000400	EBE203b 175A 30mA	84
0773000500	EBE203b 200A 30mA	84

Catalog No.	Description	Page
0773000600	EBE203b 225A 30mA	84
0773000800	EBE203b 125A 100/200/500mA	84
0773000900	EBE203b 150A 100/200/500mA	84
0773001000	EBE203b 175A 100/200/500mA	84
0773001100	EBE203b 200A 100/200/500mA	84
0773001200	EBE203b 225A 100/200/500mA	84
	EBS203b 125A 30mA	84
0773001500	EBS203b 150A 30mA	84
	EBS203b 175A 30mA	84
	EBS203b 200A 30mA	84
0773001800	EBS203b 225A 30mA	84
0773002000	EBS203b 125A 100/200/500mA	84
0773002100	EBS203b 150A 100/200/500mA	84
0773002200	EBS203b 175A 100/200/500mA	84
0773002300	EBS203b 200A 100/200/500mA	84
0773002400	EBS203b 225A 100/200/500mA	84
	EBH203b 125A 30mA	84
0774000300	EBH203b 150A 30mA	84
	EBH203b 175A 30mA	84
	EBH203b 200A 30mA	84
0774000600	EBH203b 225A 30mA	84
0774000800	EBH203b 125A 100/200/500mA	84
0774000900	EBH203b 150A 100/200/500mA	84
0774001000	EBH203b 175A 100/200/500mA	84
0774001100	EBH203b 200A 100/200/500mA	84
0774001200	EBH203b 225A 100/200/500mA	84
	EBE403b 250A 30mA 0.1S	85
	EBE403b 300A 30mA 0.1S	85
	EBE403b 350A 30mA 0.1S	85
	EBE403b 400A 30mA 0.1S	85
0778000100	EBE403b 250A 100/200/500mA 0.1S	85
0778000300	EBE403b 300A 100/200/500mA 0.1S	85
	EBE403b 350A 100/200/500mA 0.1S	85
0778000700	EBE403b 400A 100/200/500mA 0.1S	85
	EBS403b 250A 30mA 0.1S	85
	EBS403b 300A 30mA 0.1S	85
	EBS403b 350A 30mA 0.1S	85
	EBS403b 400A 30mA 0.1S	85
	EBS403b 250A 100/200/500mA 0.1S	85
	EBS403b 300A 100/200/500mA 0.1S	85
0778001300	EBS403b 350A 100/200/500mA 0.1S	85
0778001500	EBS403b 400A 100/200/500mA 0.1S	85
0778001800	EBH403b 250A 30mA 0.1S	85
0778002000	EBH403b 300A 30mA 0.1S	85
0778002200	EBH403b 350A 30mA 0.1S	85
0778002400	EBH403b 400A 30mA 0.1S	85
0778001700	EBH403b 250A 100/200/500mA 0.1S	85
0778001900	EBH403b 300A 100/200/500mA 0.1S	85
0778002100	EBH403b 350A 100/200/500mA 0.1S	85
0778002300	EBH403b 400A 100/200/500mA 0.1S	85
0778002600	EBL403b 250A 30mA 0.1S	85
0778002800	EBL403b 300A 30mA 0.1S	85
0778003000	EBL403b 350A 30mA 0.1S	85
0778003200	EBL403b 400A 30mA 0.1S	85
0778002500	EBL403b 250A 100/200/500mA 0.1S	85

Catalog No.	Description	Page
0778002700	EBL403b 300A 100/200/500mA 0.1S	85
0778002900	EBL403b 350A 100/200/500mA 0.1S	85
0778003100	EBL403b 400A 100/200/500mA 0.1S	85
	EBE803b 500A 30mA 0.1S	86
	EBE803b 600A 30mA 0.1S	86
	EBE803b 700A 30mA 0.1S	86
	EBE803b 800A 30mA 0.1S	86
	EBE803b 500A 100/200/500mA 0.1S	86
	EBE803b 600A 100/200/500mA 0.1S	86
0780000100	EBE803b 700A 100/200/500mA 0.1S	86
	EBE803b 800A 100/200/500mA 0.1S	86
	EBS803b 500A 30mA 0.1S	86
	EBS803b 600A 30mA 0.1S	86
0780000500	EBS803b 700A 30mA 0.1S	86
0780000700	EBS803b 800A 30mA 0.1S	86
	EBS803b 500A 100/200/500mA 0.1S	86
	EBS803b 600A 100/200/500mA 0.1S	86
	EBS803b 700A 100/200/500mA 0.1S	86
	EBS803b 800A 100/200/500mA 0.1S	86
0778002500	EBL803b 500A 30mA 0.1S	86
0778002700	EBL803b 600A 30mA 0.1S	86
0780001000	EBL803b 700A 30mA 0.1S	86
0780001200	EBL803b 800A 30mA 0.1S	86
0778002900	EBL803b 500A 100/200/500mA 0.1S	86
0778003100	EBL803b 600A 100/200/500mA 0.1S	86
0780000900	EBL803b 700A 100/200/500mA 0.1S	86
0780001100	EBL803b 800A 100/200/500mA 0.1S	86
0772005100	EBS104b 15A 30mA	
0772005200	EBS104b 20A 30mA	
0772005300	EBS104b 30A 30mA	
0772005400	EBS104b 40A 30mA	
0772005500	EBS104b 50A 30mA	
0772005600	EBS104b 60A 30mA	
0772005700	EBS104b 75A 30mA	
0772005800	EBS104b 100A 30mA	
0772005900	EBS104b 15A 100/200/500mA	
0772006000	EBS104b 20A 100/200/500mA	
0772006100	EBS104b 30A 100/200/500mA	
0772006200	EBS104b 40A 100/200/500mA	
0772006300	EBS104b 50A 100/200/500mA	
0772006400	EBS104b 60A 100/200/500mA	
0772006500	EBS104b 75A 100/200/500mA	
0772006600	EBS104b 100A 100/200/500mA	
0772007700	EBH104b 15A 30mA	
0772007800	EBH104b 20A 30mA	
0772007900	EBH104b 30A 30mA	
0772008000	EBH104b 40A 30mA	
0772008100	EBH104b 50A 30mA	
0772008200	EBH104b 60A 30mA	
0772008300	EBH104b 75A 30mA	
0772008400	EBH104b 100A 30mA	
0772008500	EBH104b 15A 100/200/500mA	
0772008600	EBH104b 20A 100/200/500mA	
0772008700	EBH104b 30A 100/200/500mA	
0772008800	EBH104b 40A 100/200/500mA	

Catalog No.	Description	Page
0772008900	EBH104b 50A 100/200/500mA	
0772009000	EBH104b 60A 100/200/500mA	
0772009100	EBH104b 75A 100/200/500mA	
0772009200	EBH104b 100A 100/200/500mA	
0773002600	EBS204b 100A 30mA	
0773002700	EBS204b 125A 30mA	
0773002800	EBS204b 150A 30mA	
0773002900	EBS204b 175A 30mA	
0773003000	EBS204b 200A 30mA	
0773003100	EBS204b 225A 30mA	
0773003200	EBS204b 100A 100/200/500mA	
0773003300	EBS204b 125A 100/200/500mA	
0773003400	EBS204b 150A 100/200/500mA	
0773003500	EBS204b 175A 100/200/500mA	
0773003600	EBS204b 200A 100/200/500mA	
0773003700	EBS204b 225A 100/200/500mA	
0774001300	EBH204b 100A 30mA	
0774001400	EBH204b 125A 30mA	
0774001500	EBH204b 150A 30mA	
0774001600	EBH204b 175A 30mA	
0774001700	EBH204b 200A 30mA	
0774001800	EBH204b 225A 30mA	
0774001900	EBH204b 100A 100/200/500mA	
0774002000	EBH204b 125A 100/200/500mA	
0774002100	EBH204b 150A 100/200/500mA	
0774002200	EBH204b 175A 100/200/500mA	
0774002300	EBH204b 200A 100/200/500mA	
0774002400	EBH204b 225A 100/200/500mA	
0778003400	EBE404b 250A 30mA 0.1S	
0778003500	EBE404b 300A 30mA 0.1S	
0778003600	EBE404b 350A 30mA 0.1S	
0778003700	EBE404b 400A 30mA 0.1S	
0778004600	EBE404b 250A 100/300/500mA 0.1S	
0778004700	EBE404b 300A 100/300/500mA 0.1S	
0778004800	EBE404b 350A 100/300/500mA 0.1S	
0778004900	EBE404b 400A 100/300/500mA 0.1S	
0778008700	EBE404b 250A 30mA 0.1S	
0778008800	EBE404b 300A 30mA 0.1S	
0778008900	EBE404b 350A 30mA 0.1S	
0778009000	EBE404b 400A 30mA 0.1S	
0778009500	EBE404b 250A 100/200/500mA 0.1S	
0778009600	EBE404b 300A 100/200/500mA 0.1S	
0778009700	EBE404b 350A 100/200/500mA 0.1S	
0778009800	EBE404b 400A 100/200/500mA 0.1S	
0778009800	EBE404b 400A 100/200/500mA 0.1S	
0778003800	EBS404b 250A 30mA 0.1S	
0778003900	EBS404b 300A 30mA 0.1S	
0778004000	EBS404b 350A 30mA 0.1S	
0778004100	EBS404b 400A 30mA 0.1S	
0778005000	EBS404b 250A 100/300/500mA 0.1S	
0778005100	EBS404b 300A 100/300/500mA 0.1S	
0778005200	EBS404b 350A 100/300/500mA 0.1S	
0778005300	EBS404b 400A 100/300/500mA 0.1S	
0778009100	EBS404b 250A 30mA 0.1S	
0778009200	EBS404b 300A 30mA 0.1S	

Catalogue numbers index

Catalog No.	Description	Page
0778009300	EBS404b 350A 30mA 0.1S	
0778009400	EBS404b 400A 30mA 0.1S	
0778009900	EBS404b 250A 100/200/500mA 0.1S	
0778010000	EBS404b 300A 100/200/500mA 0.1S	
0778010100	EBS404b 350A 100/200/500mA 0.1S	
0778010200	EBS404b 400A 100/200/500mA 0.1S	
0778004200	EBH404b 250A 30mA 0.1S	
0778004300	EBH404b 300A 30mA 0.1S	
0778004400	EBH404b 350A 30mA 0.1S	
0778004500	EBH404b 400A 30mA 0.1S	
0778005400	EBH404b 250A 100/300/500mA 0.1S	
0778005500	EBH404b 300A 100/300/500mA 0.1S	
0778005600	EBH404b 350A 100/300/500mA 0.1S	
0778005700	EBH404b 400A 100/300/500mA 0.1S	
83011156101	AX1E100R-LWT	31
83011156104	AX1E100T-LWT	31
83011156107	AX1E100R-TBT	31
83011156110	AX1E100T-TBT	31
83011156102	AL1E100R-LWT	31
83011156105	AL1E100T-LWT	31
83011156108	AL1E100R-TBT	31
83011156111	AL1E100T-TBT	31
83011156103	XL1E100R-LWT	31
83011156106	XL1E100T-LWT	31
83011156109	XL1E100R-TBT	31
83011156112	XL1E100T-TBT	31
83211157101	ST12CE100	31
83211157102	ST24CE100	31
83211157103	ST48CE100	31
83211157104	ST60CE100	31
83211157105	ST110CE100	31
83211157107	ST220CE100	31
83211157109	ST250CE100	31
83211157110	ST380AE100	31
83211157111	ST440AE100	31
83211157112	ST500AE100	31
83211157106	ST125DE100	31
83211157108	ST240DE100	31
83211157137	UV24CE100	31
83211157138	UV48CE100	31
83211157139	UV110CE100	31
83211157140	UV220CE100	31
83211157141	UV380AE100	31
83211157142	V440AE100	31
83011156113	AX1H100R-LWT	38
83011156116	AX1H100T-LWT	38
83011156119	AX1H100R-TBT	38
83011156122	AX1H100T-TBT	38
83011156114	AL1H100R-LWT	38
83011156117	AL1H100T-LWT	38
83011156120	AL1H100R-TBT	38
83011156123	AL1H100T-TBT	38
83011156115	XL1H100R-LWT	38
83011156118	XL1H100T-LWT	38
83011156121	XL1H100R-TBT	38

Catalog No.	Description	Page
83011156124	XL1H100T-TBT	38
83211157113	ST12CH100	38
83211157114	ST24CH100	38
83211157115	ST48CH100	38
83211157116	ST60CH100	38
83211157117	ST110CH100	38
83211157119	ST220CH100	38
83211157121	ST250CH100	38
83211157122	ST380AH100	38
83211157123	ST440AH100	38
83211157124	ST500AH100	38
83211157118	ST120DH100	38
83211157120	ST240DH100	38
83211157143	UV24CH100	38
83211157144	UV48CH100	38
83211157145	UV110CH100	38
83211157146	UV220CH100	38
83211157147	UV380AH100	38
83211157148	UV440AH100	38
83011156125	AX1H200R-LWT	41
83011156128	AX1H200T-LWT	41
83011156131	AX1H200R-TBT	41
83011156134	AX1H200T-TBT	41
83011156126	AL1H200R-LWT	41
83011156129	AL1H200T-LWT	41
83011156132	AL1H200R-TBT	41
83011156135	AL1H200T-TBT	41
83011156127	XL1H200R-LWT	41
83011156130	XL1H200T-LWT	41
83011156133	XL1H200R-TBT	41
83011156136	XL1H200T-TBT	41
83211157125	ST12CH200	41
83211157126	ST24CH200	41
83211157127	ST48CH200	41
83211157128	ST60CH200	41
83211157129	ST110CH200	41
83211157131	ST220CH200	41
83211157133	ST250CH200	41
83211157134	ST380AH200	41
83211157135	ST440AH200	41
83211157136	ST500AH200	41
83211157130	ST125DH200	41
83211157132	ST240DH200	41
83211157149	UV24CH200	41
83211157150	UV48CH200	41
83211157151	UV110CH200	41
83211157152	UV220CH200	41
83211157153	UV380AH200	41
83211157154	UV440AH200	41
83011146001	AX1G250	48
83011146002	AL1G250	48
83211146011	ST12CG250	48
83211146012	ST24CG250	48
83211146013	ST48CG250	48
83211146014	ST60CG250	48

Catalog No.	Description	Page
83211146015	ST100CG250	48
83211146017	ST200CG250	48
83211146019	ST250CG250	48
83211146020	ST380AG250	48
83211146021	ST440AG250	48
83211146022	ST500AG250	48
83211146016	ST125DG250	48
83211146018	ST240DG250	48
83211146051	UV24CG250	48
83211146052	UV48CG250	48
83211146053	UV100CG250	48
83211146054	UV200CG250	48
83211146055	UV380AG250	48
83211146056	UV440AG250	48
83011136002	AX1L800	54,60
83011136003	AX2L800	54,60
83011136004	AL1L800	54,60
83011136001	AL2L800	54,60
83011137001	XL2L800	54,60
83211137001	ST48CL800LWT	54,60
83211137002	ST240CL800LWT	54,60
83211137003	ST550AL800LWT	54,60
83211137004	ST48CL800TBT	54,60
83211137005	ST240CL800TBT	54,60
83211137006	ST550AL800TBT	54,60
83211137007	ST48CL804TBT	54
83211137008	ST240CL804TBT	54
83211137009	ST550AL804TBT	54
83211137021	UV48CL800	54,60
83211137022	UV100CL800	54,60
83211137023	UV200CL800	54,60
83211137024	UV380AL800	54,60
83211137025	UV440AL800	54,60
83011136002	AX1L800	56
83011136003	AX2L800	56
83011136004	AL1L800	56
83011136001	AL2L800	56
83011136015	XL1L800	56
83011137001	XL2L800	56
83211137001	ST48CL800LWT	56
83211137002	ST240CL800LWT	56
83211137003	ST550AL800LWT	56
83211137004	ST48CL800TBT	56
83211137005	ST240CL800TBT	56
83211137006	ST550AL800TBT	56
83211137021	UV48CL800	56
83211137022	UV100CL800	56
83211137023	UV200CL800	56
83211137024	UV380AL800	56
83211137025	UV440AL800	56
83011126001	AX1S1200	64
83011126006	AX2S1200	64
83011126002	AL1S1200	64
83011126007	XL1S1200	64
83011126008	XL2S1200	64

Catalog No.	Description	Page
83211126001	ST100AS1200	64
83211126002	ST125AS1200	64
83211126003	ST200AS1200	64
83211126004	ST380AS1200	64
83211126005	ST480AS1200	64
83211126006	ST24DS1200	64
83211126007	ST48DS1200	64
83211126008	ST100DS1200	64
83211126009	ST125DS1200	64
83211126010	ST200DS1200	64
67211123005	IB1200	64
83261132011	BUSBAR,ABE/S/L802a (500, 600, 630A)	52
83261132012	BUSBAR,ABE/S/L802a (700, 800A)	52
83261132013	BUSBAR,ABE/S/L803a (500, 600, 630A)	52
83261132014	BUSBAR,ABE/S/L803a (700, 800A)	52
83261132015	BUSBAR,ABE/S/L804a (500, 600, 630A)	52
83261132016	BUSBAR,ABE/S/L804a (700, 800A)	52
67221152001	IB50	36
64621151202	TBL-13B	36
64621151201	TBL-12B	36
64621151204	TBS-13B	36
64621151203	TBS-12B	36
83161159109	X-35R-52	36
83161159110	X-35R-53	36
83161159101	X-35B-102	36
83161159102	X-35B-103	36
83161159111	X-35R-102	36
83161159112	X-35R-103	36
83111158101	D-35S	37
83111158102	D-35L	37
83111158103	D-35R	37
83111158110	E-35S	37
83111158111	E-35L	37
83111158112	E-35R	37
67221152001	IB50	39
67221152002	IB80	39
64621152201	TBL-22B	39
64621152202	TBL-23B	39
64621152203	TBL-24B	39
64621152204	TBS-22B	39
64621152205	TBS-23B	39
64621152206	TBS-24B	39
83161159103	X-45B-102	39
83161159104	X-45B-103	39
83161159105	X-45B-104	39
83161159113	X-45R-102	39
83161159114	X-45R-103	39
83161159115	X-45R-104	39
83111158104	D-45S	40
83111158105	D-45L	40
83111158106	D-45R	40
83111158113	E-45S	40
83111158114	E-45L	40
83111158115	E-45R	40
67221152002	IB80	42











Catalogue numbers index

Catalog No.	Description	Page
64621153201	TBL-33B	42
64621153202	TBL-34B	42
64621153203	TBS-33B	42
64621153204	TBS-34B	42
83161159106	X-55B-202	42
83161159107	X-55B-203	42
83161159108	X-55B-204	42
83161159116	X-55R-202	42
83161159117	X-55R-203	42
83161159118	X-55R-204	42
83111158107	D-55S	43
83111158108	D-55L	43
83111158109	D-55R	43
83111158116	E-55S	43
83111158117	E-55L	43
83111158118	E-55R	43
	IBG250	49
64621141101	TB-13T	49
64621141102	TB-14T	49
64621141103	TBS-13T	49
64621141104	TBS-14T	49
64621142301	TB-23T	49
64621142302	TB-24T	49
64621142303	TBS-23T	49
64621142304	TBS-24T	49
72311141291	X-102	49
72311141292	X-103	49
72311141293	X-104	49
72311142291	X-202	49
72311142292	X-203	49
72311142293	X-204	49
83111147101	D-30S	50
83111147102	D-30L	50
83111147103	D-30R	50
83111147111	D-60S	50
83111147112	D-60L	50
83111147113	D-60R	50
83111147151	E-30S	50
83111147152	E-30L	50
83111147153	E-30R	50
83111147161	E-60S	50

Catalog No.	Description	Page
83111147162	E-60L	50
83111147163	E-60R	50
67211132003	IBL400	55,61
67211132003	IBL800	55,61
64621131201	T1-43A	55,61
64621131204	T1-44A	55
64621131202	T1-63A	55,61
64621131205	T1-64A	55
56121138005	MI - 43S	55
56121138007	MI - 44S	55
56121138006	MI - 83S	55,61
56121138008	MI - 84S	55
83111138101	N-70S	56, 61
83111138102	N-70L	56, 61
83111138103	N-70R	56, 61
83111138111	N-80S	56, 61
83111138112	N-80L	56, 61
83111138113	N-80R	56, 61
	X-402	56
	X-403	56,61
	X-404	56
	X-802	56
	X-803	56,61
	X-804	56
73261132111	RP250	56
73261132112	RP300	56
73261132113	RP350	56
73261132114	RP400	56
73261132115	RP500	56
73261132116	RP600	56
73261132117	RP630	56
73261132118	RP700	56
73261132119	RP800	56
83261132011	BB062	56
83261132012	BB802	56
83261132013	BB603	56,61
83261132014	BB803	56,61
83261132015	BB604	56
83261132016	BB804	56
64611152020	3 pole shield for ABS103bL	
64611153015	3 pole shield for ABS203bL	

Certification










MCCB (Mold Case Circuit Breaker)

A Species of Certification A Species of Standard		Domesitic Approval		Approval						Certificates	
		KS	Safety certi	IEC	Gosstandart	IEC	Japan safety certi	GB	NEMA	IEC	
Type	Country										
		KS	Korea	CE	GOST	SASO	PSE	CCC	KERI	KEMA	TUV
		Korea	Korea	Europe	Russia	Saudi Arabia	Japan	China	Korea	Netherlands	Germany
MCCB ECONOMIC	ABE 32	●	●		●			●			
	ABE 33	●	●		●			●			
	ABE 52b	●	●	●	●		●	●		●	
	ABE 53b	●	●	●	●	●	●	●		●	
	ABE 62b	●	●	●	●		●	●		●	
	ABE 63b	●	●	●	●		●	●		●	
	ABE 102b	●	●	●	●		●	●		●	
	ABE 103b	●	●	●	●		●	●		●	
	ABE 104b	●	●	●	●		●	●		●	
	ABE 202b	●	●		●			▲			
	ABE 203b	●	●	●	●			●		●	
	ABE 204b	●	●		●			●			
	ABE 402b	●	●		●			●		●	
	ABE 403b	●	●	●	●			●		●	
	ABE 404b	●	●	●	●			●		●	
	ABE 802b				●			●			
ABE 803b			●	●			●				
ABE 804b			●	●			●				
MCCB STANDARD	ABS 32b	●	●	●	●		●	●		●	
	ABS 33b	●	●	●	●	●	●	●		●	
	ABS 52b	●	●	●	●		●	●		●	
	ABS 53b	●	●	●	●	●	●	●		●	
	ABS 54b	●	●	●	●		●	●		●	
	ABS 62b	●	●	●	●		●	●		●	
	ABS 63b	●	●	●	●		●	●		●	
	ABS 64b	●	●	●	●		●	●		●	
	ABS 102b	●	●	●	●		●	●		●	
	ABS 103b	●	●	●	●		●	●		●	
	ABS 104b	●	●	●	●		●	●		●	
	ABS 202b	●	●		●			▲			
	ABS 203b	●	●	●	●			●		●	
	ABS 204b	●	●		●			●			
	ABS 402b	●	●		●			●		●	
	ABS 403b	●	●	●	●			●		●	
	ABS 404b	●	●	●	●			●		●	
	ABS 802b				●			●			
	ABS 803b			●	●			●		●	
	ABS 804b			●	●			●		●	
	ABS 1002				●						
ABS 1003			●	●			●		●		
ABS 1004				●							
ABS 1202				●							
ABS 1203			●	●			●		●		
ABS 1204				●							
ABS 1203E				●							
MCCB High Interrupting Capacity	ABH 32b	●	●	●	●		●	●		●	
	ABH 33b	●	●	●	●		●	●		●	
	ABH 52b	●	●	●	●		●	●		●	
	ABH 53b	●	●	●	●		●	●		●	
	ABH 54b	●	●	●	●		●	●		●	
	ABH 62b		●	●	●			●		●	
	ABH 63b		●	●	●			●		●	
	ABH 102b	●	●	●	●		●	●		●	
	ABH 103b	●	●	●	●		●	●		●	
	ABH 104b	●	●		●			●			
	ABH 202a		●		●						
	ABH 202b	●	●		●			▲			
	ABH 203a		●	●	●			●			●
	ABH 203b	●	●	●	●			●		●	
	ABH 204a		●		●			●			
	ABH 204b	●	●		●			●			
ABH 402b		●		●			●				
ABH 403b		●	●	●			●		●		
ABH 404b		●	●	●			●		●		






Note : ●(Completion),▲(in progress)

Certification

MCCB (Mold Case Circuit Breaker)

A Species of Certification		Domesitic Approval		Approval				Certificates		
A Species of Standard		KS	Safety certi	IEC	Gosstandart	UL	GB	NEMA	IEC	
Mark or certification										
Type	Country	Korea	Korea	Europe	Russia	U.S.A	China	Korea	Netherlands	Germany
MCCB Current Limit	ABL 52a	●	●		●					
	ABL 53a	●	●	●	●		●			●
	ABL 54a	●	●		●					
	ABL 102a	●	●		●					
	ABL 103a	●	●	●	●		●	●		●
	ABL 103aIN		●		●					
	ABL 104a	●	●		●					
	ABL 202a		●		●					
	ABL 203a		●	●	●		●	●		●
	ABL 203aIN		●		●					
	ABL 204a		●		●					
	ABL 402b		●		●		●			
	ABL 403b		●	●	●		●		●	
	ABL 403bIN		●		●					
	ABL 404b		●	●	●		●		●	
ABL 802b						●				
ABL 803b				●		●		●		
ABL 803bIN				●		●				
ABL 804b				●	●		●		●	
UL Type MCCB STANDARD	ABS 102U					●				
	ABS 103U					●				
	ABS 202U					●				
	ABS 203U					●				
	ABS 402U					●				
	ABS 403U					●				
	ABS 602U					●				
UL Type MCCB High Interrupting Capacity	ABS 603U					●				
	ABH 102U					●				
	ABH 103U					●				
	ABH 202U					●				
	ABH 203U					●				
	ABH 402U					●				
	ABH 403U					●				
UL Type MCCB Current Limit	ABH 602U					●				
	ABH 603U					●				
	ABL 102U					●				
	ABL 103U					●				
	ABL 202U					●				
	ABL 203U					●				
	ABL 402U					●				
MCCB Adjustable Type	ABL 403U					●				
	ABL 602U					●				
	ABL 603U					●				
	GBN 102		●		●	●	▲		●	
	GBN 103		●	●	●	●				
	GBN 104		●		●					
	GBN 202		●		●					
	GBN 203		●	●	●	●	▲		●	
	GBN 204		●		●					
	GBH 102		●		●					
	GBH 103		●	●	●	●	▲		●	
	GBH 104		●		●					
	GBL 102		●		●					
	GBL 103		●	●	●	●	▲		●	
	GBL 104		●		●					
	GBL 202		●		●					
	GBL 203		●	●	●	●	▲	●	●	
	GBL 204		●		●					
	GBL 53E		●		●					
	GBL 103E		●		●					
GBL 203E				●						
GBN 403E			●	●		●		●		
GBH 403E			●	●		●		●		
GBN 803E			●	●		●		●		
GBH 803E			●	●		●		●		
GBN 1603E			●	●		●		●		









Note : ●(Completion),▲(in progress)

A Species of Certification A Species of Standard		Approvals Marine Classification				
Type	Mark or certification Country					
		KR Korea	LR U.K	BV France	GL Germany	ABS U.S.A
MCCB Current Limit	ABE 52b	●				
	ABE 53b	●	●	●	●	●
	ABE 62b	●				
	ABE 63b	●	●	●	●	●
	ABE 102b	●				
	ABE 103b	●	●	●	●	●
	ABE 202b	●				
	ABE 203b	●	●	●	●	●
	ABE 403b	●	●	●	●	●
ABE 803b	●	●	●	●	●	
MCCB STANDARD DARD	ABS 32b	●				
	ABS 33b	●	●	●	●	●
	ABS 52b	●				
	ABS 53b	●	●	●	●	●
	ABS 62b	●				
	ABS 63b	●	●	●	●	●
	ABS 102b	●				
	ABS 103b	●	●	●	●	●
	ABS 202b	●				
ABS 203b	●	●	●	●	●	
ABS 403b	●	●	●	●	●	
ABS 803b	●	●	●	●	●	
MCCB High Interrupting Capacity	ABH 32b	●				
	ABH 33b	●	●	●	●	●
	ABH 52b	●				
	ABH 53b	●	●	●	●	●
	ABH 102b	●				
	ABH 103b	●	●	●	●	●
	ABH 202a	●				
	ABH 202b	●				
	ABH 203a	●				
ABH 203b	●	●	●	●	●	
ABH 403b	●	●	●	●	●	
MCCB Current Limit	ABL 52a	●				
	ABL 53a	●				
	ABL 102a	●				
	ABL 103a	●				
	ABL 202a	●				
	ABL 203a	●				
	ABL 403b	●	●	●	●	●
	ABL 803b	●	●	●	●	●
	ABL 1003	●				
ABL 1004	●					
ABL 1203	●					
ABL 1204	●					
MCCB Adjustable Type	GBN 53	●	●	●	●	●
	GBN 103	●	●	●	●	●
	GBN 203	●	●	●	●	●
	GBH 53	●	●	●	●	●
	GBH 103	●	●	●	●	●
	GBH 203	●	●	●	●	●
	GBL 53	●	●	●	●	●
	GBL 103	●	●	●	●	●
GBL 203	●	●	●	●	●	

Note : ●(Completion),▲(in progress)

Certification

ELCB (Earth Leakage Circuit Breaker)

A Species of Certification A Species of Standard		Approvals							
		IEC	KS	Safety certi	Gosstandart	IEC	JIS	Japan safety cert	GB
Mark or certification									
Country		Europe	Korea	Korea	Russia	Saudi Arabia	Japan	Japan	China
ELCB ECONOMIC	EBE 52b		●	●	●		●		
	EBE 53b		●	●	●		●	●	●
	EBE 63b		●	●	●		●	●	●
	EBE 102b		●	●	●		●		
	EBE 103b		●	●	●		●	●	●
	EBE 203b		●	●	●		●		▲
	EBE 403b		●	●	●		●		●
	EBE 404b				●		●		●
ELCB STANDARD	EBE 803b				●		●		
	EBS 33b		●	●	●		●	●	●
	EBS 53b		●	●	●		●	●	●
	EBS 54b		●	●	●		●		●
	EBS 63b		●	●	●		●	●	●
	EBS 103b		●	●	●		●	●	●
	EBS 104b		●	●	●		●		●
	EBS 203b		●	●	●		●		▲
	EBS 204b		●	●	●		●		▲
	EBS 403b		●	●	●		●		●
ELCB High Interrupting Capacity	EBS 404b			●	●		●		●
	EBS 803b				●		●		
	EBH 33b		●	●	●		●		●
	EBH 53b		●	●	●		●		●
	EBH 54b		●	●	●		●		●
	EBH 103b		●	●	●		●		●
	EBH 104b		●	●	●		●		●
	EBH 203		●	●	●		●		
ELCB Current Limit	EBH 203b		●	●	●		●		▲
	EBH 204b		●	▲	●		●		▲
	EBH 403b		●	●	●		●		●
	EBH 404b				●		●		●
	EBL 53		●	●	●				
	EBL 103		●	●	●				
	EBL 203		●	●	●		●		
	EBL 403		●	●	●		●		
ELCB RK Type	EBL 403b				●		●		
	EBL 803b				●		●		
	RKP 1P+N	●			●				●
	RKN 2P	●			●	●			●
	RKN 4P	●			●	●			●

Note : ●(Completion),▲(in progress)

MEMO

A large, empty, rounded rectangular box with a light beige background and a thin orange border, intended for writing a memo.

Leader in Electrics & Automation



Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact a qualified service technician when you need maintenance. Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.

LS Industrial Systems Co., Ltd.

www.lsis.biz

■ HEAD OFFICE

Yonsei Jaedan Severance Bldg. 84-11, 5ga, Namdaemun-ro,
Jung-gu, Seoul 100-753, Korea

Tel. (82-2)2034-4870 Fax. (82-2)2034-4713

<http://www.lsis.biz>

■ CHEONG-JU PLANT

Cheong-Ju Plant #1, Song Jung Dong, Hung Duk Ku,
Cheong Ju, 361-720, Korea

Tel. (82-43)261-6001 Fax. (82-43)261-6410

■ Global Network

- **LS Industrial Systems Tokyo Office Japan**
Address: 16F, Higashi-Kan, Akasaka Twin Towers 17-22, 2-chome,
Akasaka, Minato-ku Tokyo 107-8470, Japan
Tel: 81-3-3582-9128 Fax: 81-3-3582-0065 e-mail: dongjins@lsis.biz
- **LS Industrial Systems Dubai Office UAE**
Address: P.O.Box-114216, API World Tower, 303B, Sheikh Zayed road, Dubai, UAE.
Tel: 971-4-3328289 Fax: 971-4-3329444 e-mail: hwyim@lsis.biz
- **LS-VINA Industrial Systems Co., Ltd Vietnam**
Address: LSIS VINA Congty che tao may dien Viet-Hung Dong Anh Hanoi, Vietnam
Tel: 84-4-882-0222 Fax: 84-4-882-0220 e-mail: srjo@hn.vnn.vn
- **LS Industrial Systems Hanoi Office Vietnam**
Address: Room C21, 5Th Floor, Horison Hotel, 40 Cat Linh, Hanoi, Vietnam
Tel: 84-4-736-6270/1 Fax: 84-4-736-6269
- **Dalian LS Industrial Systems Co., Ltd China**
Address: No. 15 Liaohexi 3 Road, economic and technical
development zone, Dalian, China
Tel: 86-411-8731-8210 Fax: 86-411-8730-7560 e-mail: youngeel@lsis.biz
- **LS Industrial Trading (Shanghai) Co., Ltd China**
Address: Room 1705-1707, 17th Floor Xinda Commercial Building No 322,
Xian Xia Road Shanahai, China
Tel: 86-21-6252-4291 Fax: 86-21-6278-4372 e-mail: hgseo@lsis.biz
- **LS Industrial Systems Beijing Office China**
Address: Room 303, 3F North B/D, EAS 21 XIAO YUN ROAD,
Dong San Huan Bei Road, Chao Yang District, Beijing, China
Tel: 86-10-6462-3259/4 Fax: 86-10-6462-3236 e-mail: sclim@mx.cei.gov.cn
- **LS Industrial Systems Shanghai Office China**
Address: Room 1705-1707, 17th Floor Xinda Commercial Building
No 318, Xian Xia Road Shanahai, China
Tel: 86-21-6278-4370 Fax: 86-21-6278-4301 e-mail: sdhwang@lsis.biz
- **LS Industrial Systems Guangzhou Office China**
Address: Room 303, 3F, Zheng Sheng Building, No 5-6, Tian He
Bei Road, Guangzhou, China
Tel: 86-20-8755-3410 Fax: 86-20-8755-3408
e-mail: lsisgz@public1.guangzhou.gd.cn

Specifications in this catalog are subject to change without notice due to continuous product development and improvement.