

We touch your **electricity** everyday!

WiNbreak

CE KEMA



Moulded Case Circuit Breaker

Salient Features

- Offering economical solution with compact sizes and increased interrupting capacities.
- Current limiting design with fast opening time (<10ms) & low thermal stress
- Complete range of two, three and four pole version.
- Suitable for disconnecting function & positive isolations.
- Employing a fixed thermal and fixed magnetic release.
- Rating plugs are available for MCCB above 400A
- Flexible mounting with line-load reversibility
- Frames made of rigid materials of engineering plastics.
- MCCB with reference temperature 50°C is available
- Offering additional accessories such as rear connection and extended rotary type handles.

100AF
Up to 10kA

100AF
Up to 35kA

225AF
Up to 35kA

400AF
Up to 85kA
Rating plug type

800AF
Up to 85kA
Rating plug type

1200AF
Up to 85kA
Adjustable Magnetic Trip
(Thermal Magnetic Trip Unit)

The pairs of rating plugs interchangeable with each other

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

Offering economical solution with compact sizes Up to 225AF

225AF Max. 35kA
105x165x60mm

100AF Max. 35kA
90x155x60mm

50AF, 100AF Max. 10kA
75x130x60mm

Depth 60mm

Slot 50mm

24mm Bottom to bus

Standardization:

Three different physical frame sizes, having the same dimensions for installation.
Common depth for all three frame sizes

Easy & simple installation

Winbreak MCCBs are designed for easy installation of electrical accessories in compartments and that too accessible from the front. It is not necessary to take off the cover of the circuit breaker.

Left-hand seat (LHS)

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

Right-hand seat (RHS)

This seat is usually for shunt trip and undervoltage trip units.



Operating handle

Handle position clearly indicates the tripping of the breaker.

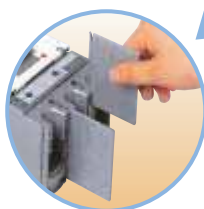


Breaker handle and face plate clearly indicates rated capacity

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

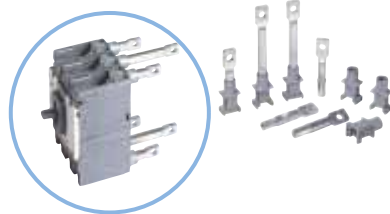
Mechanical interlock between two breakers

Key-lock built-in types are available

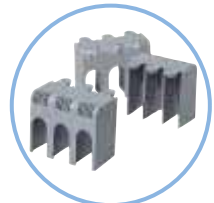


Insulation barriers
 - Supplied as standard for line side
 - Optional for load side

Rear connection kits



Terminal shields



Manual rotary handles



Direct or extensible mounting



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

Technical Data



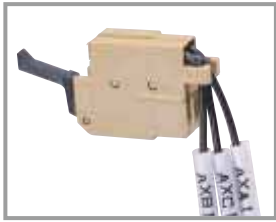
Frame sizes (AF)		50	100			125		
Frame type		CS1A	CS2A	CS2B	CS2C	CS3A	CS3B	
Breaking capacity(kA), Icu at 415VAC		5	10	25	35	18	25	
Number of poles		2, 3	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	
Type	2 Pole	CS1A2	CS2A2	CS2B2		CS3A2	CS3B2	
	3 Pole	CS1A3	CS2A3	CS2B3	CS2C3	CS3A3	CS3B3	
	4 Pole	-	CS2A4	CS2B4	CS2C4	CS3A4	CS3B4	
Rated Current In (Amp)		5, 10, 15, 20 30, 40, 50	5, 10, 15, 20 30, 40, 50, 60 75, 100	15, 20, 30, 40, 50 60,75, 100		125, 150, 175 200, 225		
Technical data conforming to IEC/EN60947-2/IS13947-2								
Rated operational voltage(V), Ue(50/60Hz)		600	600	600	600	600	600	
Rated operational voltage(V), Ue(DC)		250	250	250	250	250	250	
Rated insulation voltage(V), Ui(50/60Hz)		690	690	690	690	690	690	
Rated impulse withstand voltage(kV), Uimp		8	8	8	8	8	8	
Ultimate breaking capacity(kA), Icu								
	AC 50/60Hz	220/240V	10	25	50	65	35	50
		380V	7.5	14	25	35	18	25
		415V	5	10	25	35	18	25
		440/460V	5	10	25	35	18	25
		480/500V	2.5	7.5	14	25	10	14
		600V	2.5	5	10	18	7.5	10
	DC	125V	5	10	20	25	15	20
		250V	2.5	5	14	18	10	14
Service breaking capacity(% Icu), Ics		50	50	50	50	50	50	
Category of use		A	A	A	A	A	A	
Endurance	Mechanical	20000	20000	30000	30000	20000	20000	
(number of operations)	Electrical	20000	20000	20000	20000	10000	10000	
Type of trip unit								
Thermal- magnetic release				fixed	fixed	fixed	fixed	
Hydraulic - magnetic release		fixed	fixed					
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)	•	•	•	•	•	•	
Dimensions (W x H x Dmm)	3 pole breaker	75 x 130 x 60		90 x 155 x 60		105 x 165 x 60		
Weight(kg)	2 pole	0.45	0.45	0.7	0.7	1.1	1.1	
	3pole	0.65	0.65	1.1	1.1	1.2	1.2	
	4pole		0.85	1.2	1.2	1.5	1.5	

● Available as optional

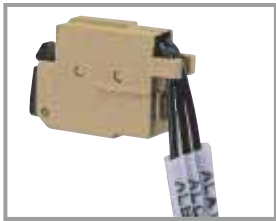


125		400				800			1200	
CS3C	CS4A	CS4B	CS4C	CS4D	CS5A	CS5B	CS5D	CS6B	CS7B	
35	25	35	50	85	35	50	85	65		
2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	3, 4		
CS3C3	CS4A3	CS4B3	CS4C3	CS4D3	CS5A3	CS5B3	CS5D3	CS6B3	CS7B3	
CS3C4	CS4A4	CS4B4	CS4C4	CS4D4	CS5A4	CS5B4	CS5D4	CS6B4	CS7B4	
125, 150, 175 200, 225	250, 300, 350, 400 Interchangeable via rating plug between 250 and 300, 350 and 400				500, 630, 700, 800 Interchangeable via rating plug between 500 and 630, 700 and 800			1000	1200	
600	600	600	600	600	600	600	600	600		
250	250	250	250	250	250	250	250	250		
690	690	690	690	690	690	690	690	690		
8	8	8	8	8	8	8	8	8		
65	35	50	85	125	50	100	125	100		
35	30	42	65	100	42	65	100	65		
35	25	35	50	85/50(lcs)	35	50	85/50(lcs)	65		
35	25	35	50	85	35	50	85	65		
25	18	25	35	65	25	45	65	50		
18	18	22	25	30	22	25	30	45		
25	20	30	50	60	30	50	60	-		
18	10	20	40	40	20	40	40	40		
50	100	100	50	50	100	50	50	50		
A	A	A	A	A	A	A	A	A		
20000	10000	10000	10000	10000	4000	4000	4000	2500		
10000	5000	5000	5000	5000	2500	2500	2500	500		
fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed	Fixed thermal, Adjustable magnetic	
•	•	•	•	•	•	•	•	•	•	
•	•	•	•	•	•	•	•	•	•	
•	•	•	•	•	•	•	•	•	•	
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-	•	•	•	•	•	•	•	•	-	
•	•	•	•	•	•	•	•	•	-	
105 x 165 x 60	140 x 257 x 113				210 x 280 x 113			220 x 400 x 105		
1.1	5.2	5.2	5.2	5.2	11	11	11	-		
1.2	6.2	6.2	6.2	6.2	11.5	11.5	11.5	19.4		
1.5	7.8	7.8	7.8	7.8	18.2	18.2	18.2	27		

Internal Accessories



Auxiliary switch, AX



Alarm switch, AL

Auxiliary switch (AX)

It indicates the position of the circuit-breaker contacts i.e ON or OFF

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	Suitable for MCCB	AC			DC		
		Voltage (V)	Operating current(A)		Voltage (V)	Operating current(A)	
			Resistance	Inductance		Resistance	Inductance
50AF~225AF	CS1A, CS2A, CS3A,	125	5	3	30	4	3
	CS2B, CS3B,	250	3	2	125	0.4	0.4
	CS2C, CS3C	500	-	-	250	0.2	0.2
400AF~800AF	CS4A, CS5A,	125	5	3	30	4	3
	CS4B, CS5B,	250	3	2	125	0.4	0.4
	CS4C, CS4D, CS5D	500	-	-	250	0.2	0.2
1000AF~1200AF	CS6B, CS7B	125	20	20	30	6	5
		250	20	20	125	0.4	0.05
		500	10	5	250	0.2	0.03



Shunt Trip, SHT

Shunt Trip Coil (SHT)

This Trip Coil opens the mechanism in response to an externally applied voltage signal.

For AC supply 0.85 times to 1.1 times the rated voltage .

For DC supply 0.75 times to 1.25 times the rated voltage.

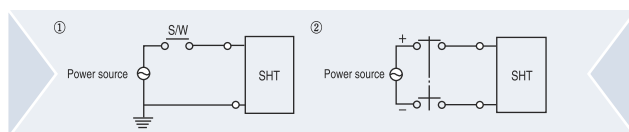
Electrical Characteristic (Consumption)

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
	AC 100~125V	0.37	37		110V AC	6mA	0.7
	DC 100~110V				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	0.18	35		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		



Under Voltage Trip, UVT

Way of Connection



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)

Internal Accessories

Terminal number

Type	Terminal Number		
	MCCB (50AF-225AF)	MCCB (400AF-800AF)	MCCB (1000AF-1200AF)
Auxiliary switch (AX)			
Alarm switch (AL)			
Shunt trip coil (SHT)			
Under voltage trip coil (UVT)	AC		
	DC		

Maximum possibilities for auxiliaries

- 100, 225AF breakers

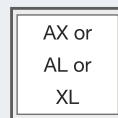
Left-hand seat



Right-hand seat

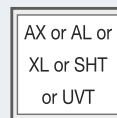
Left-hand seat

Option of connecting AX or AL or XL



Right-hand seat

Option of connecting AX or AL or XL or SHT or UVT



- 400, 800AF breakers

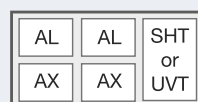
Left-hand seat



Right-hand seat

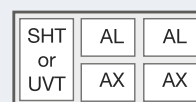
Left-hand seat

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



Right-hand seat

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

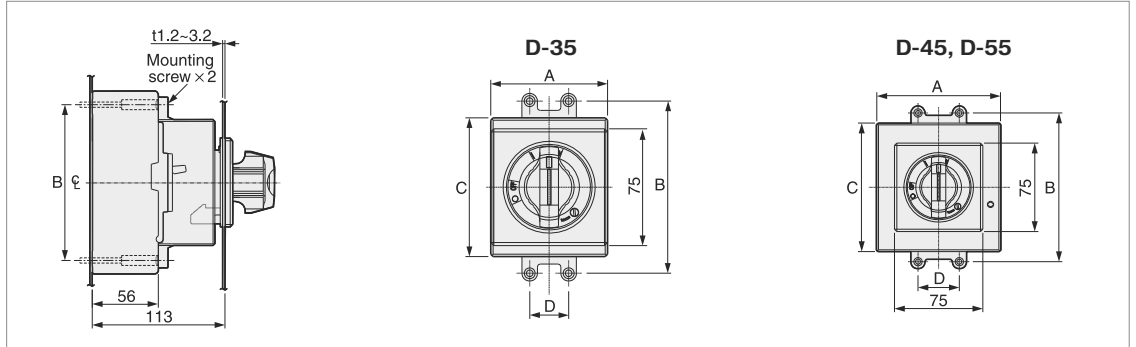


Direct Rotary Handle

D-35

D-45

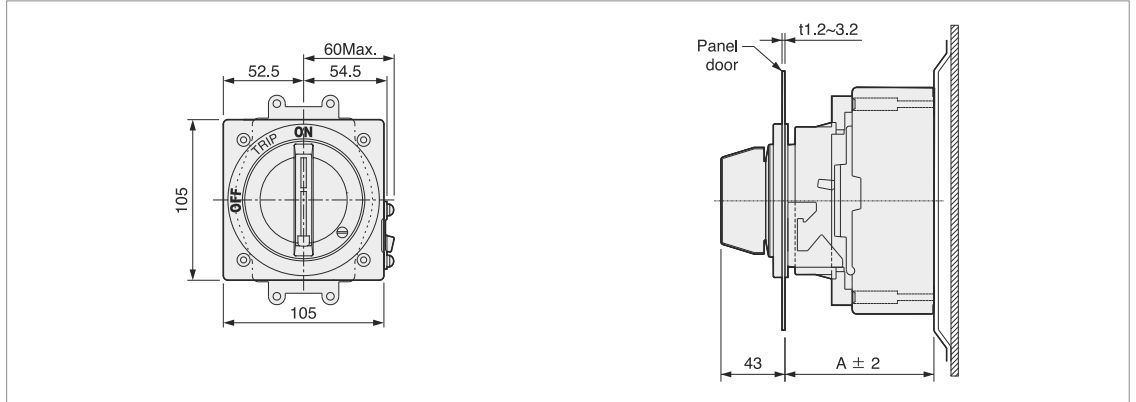
D-55



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-55

N-60

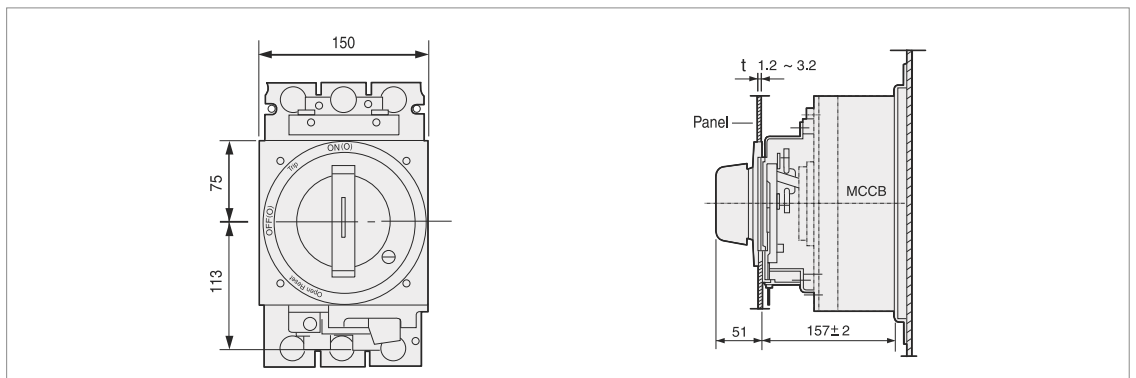


* Size "A"

N handle	N-55	N-60
A (mm)	125	147

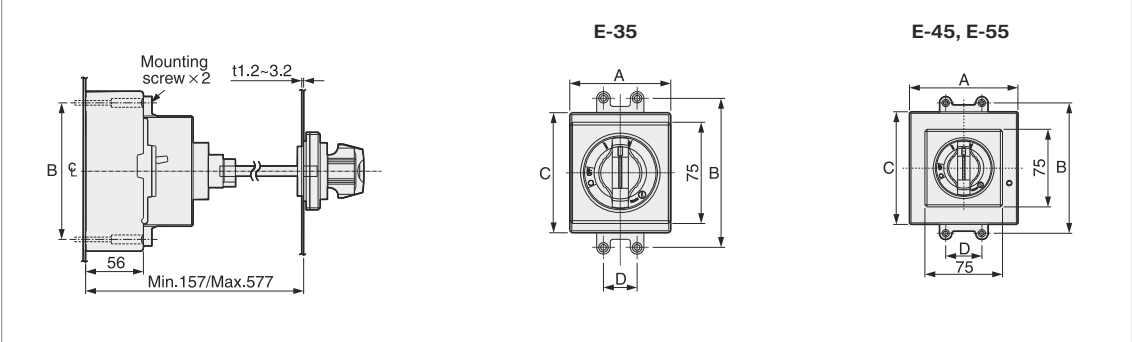
N-70

N-70M



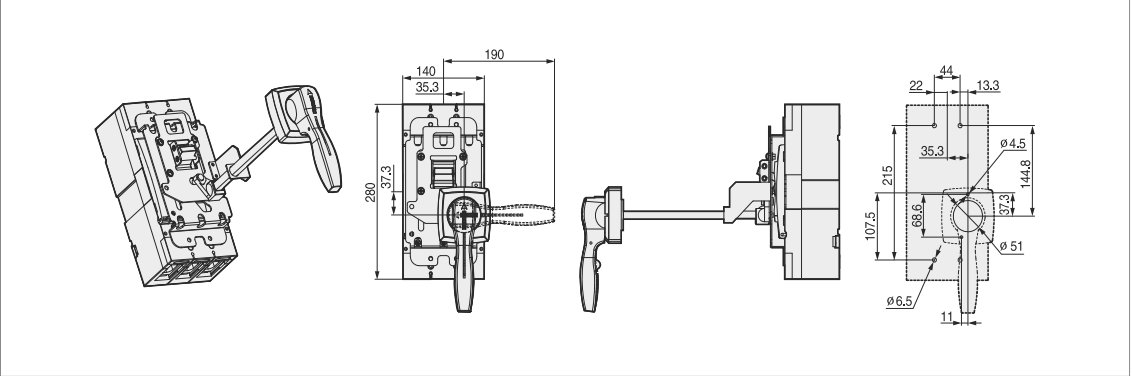
Extended Rotary Handle

- E-35
- E-45
- E-55

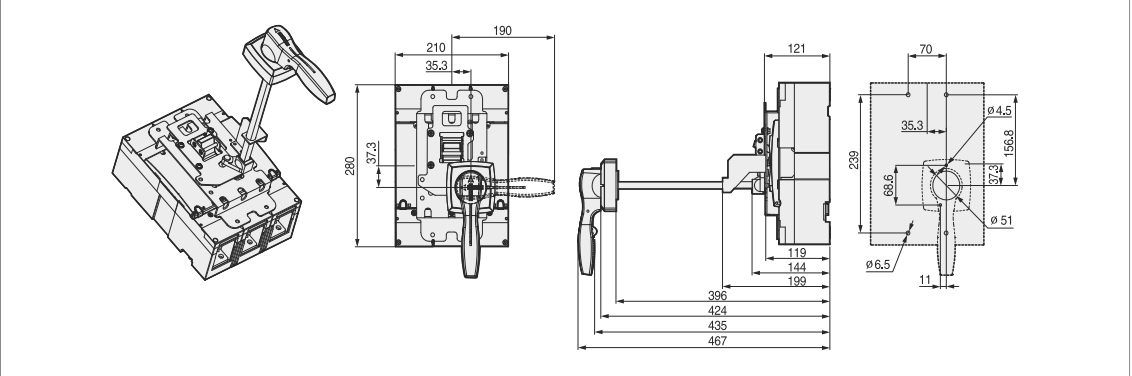


Type	E-35	E-45	E-55
A (mm)	75	90	105
B (mm)	110.5	132	126
C (mm)	89	106.8	109
D (mm)	25	30	35

E-70U



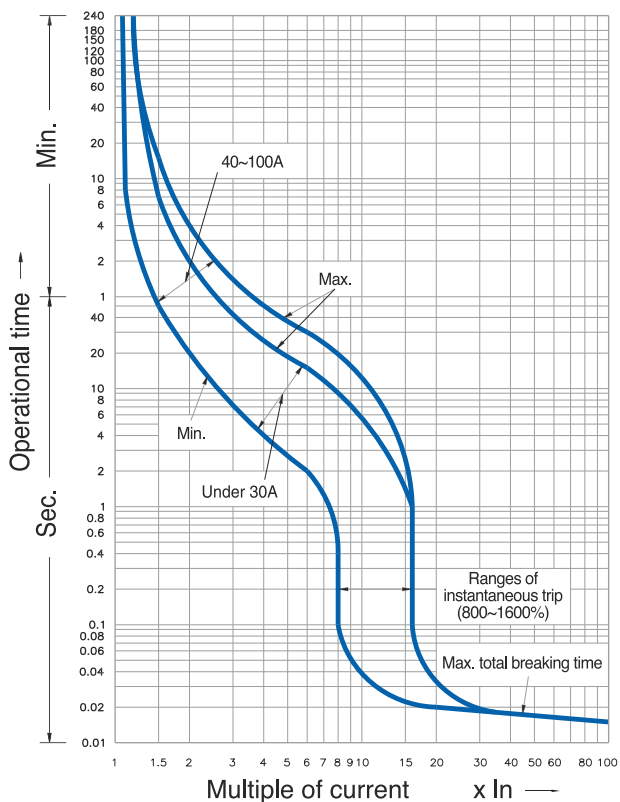
E-80U



Operating Curves

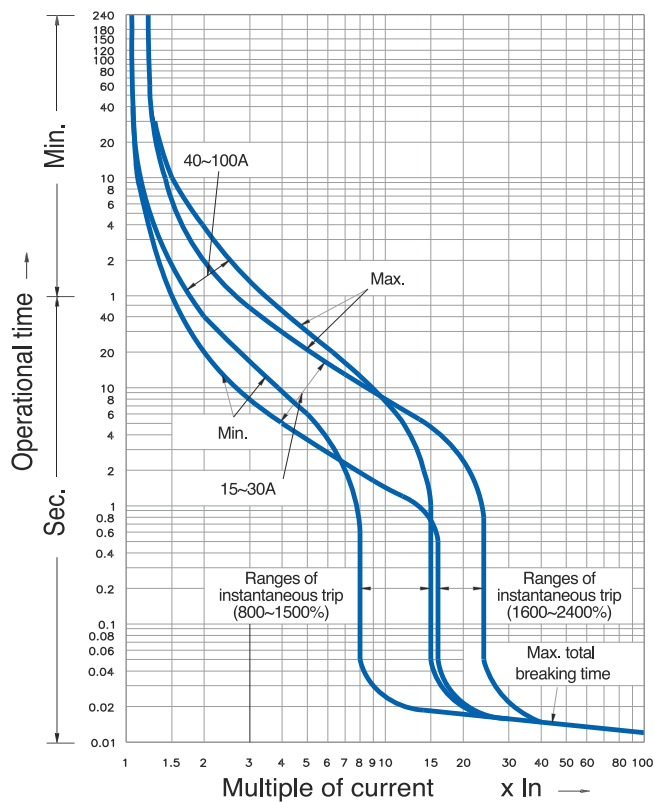
50AF / 100AF (10kA)

CS1A2, CS1A3, CS2A2, CS2A3



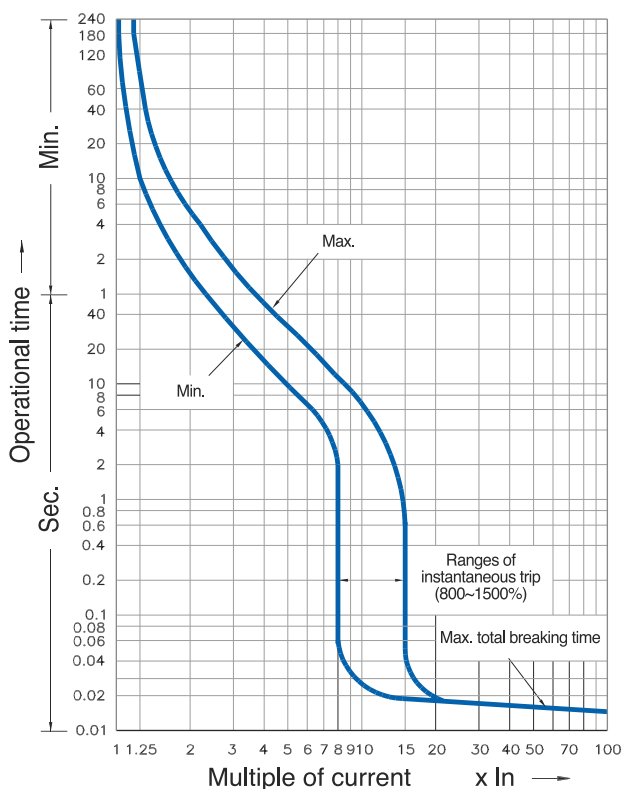
100AF (25 / 35kA)

CS2B2, CS2B3, CS2B4, CS2C3, CS2C4



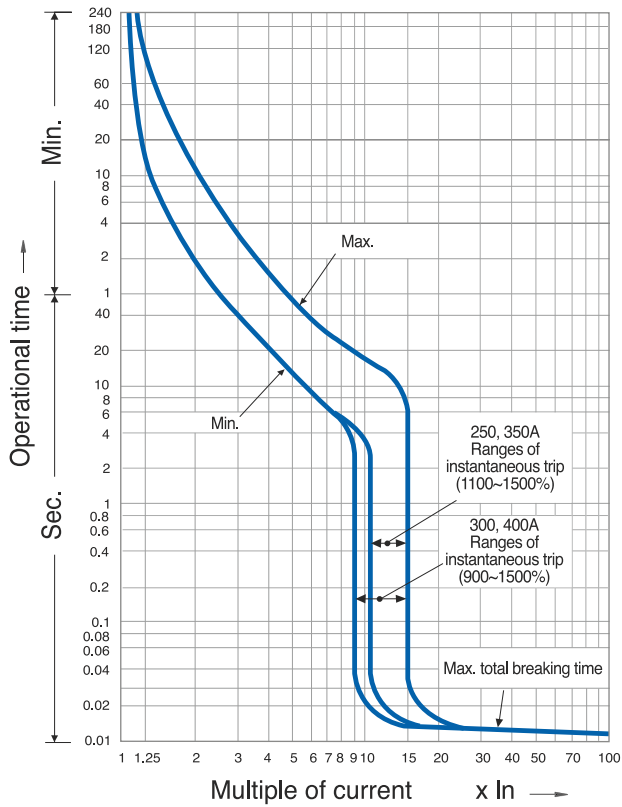
225AF (18 / 25 / 35kA)

CS3A2, CS3A3, CS3A4, CS3B2, CS3B3, CS3B4, CS3C3, CS3C4



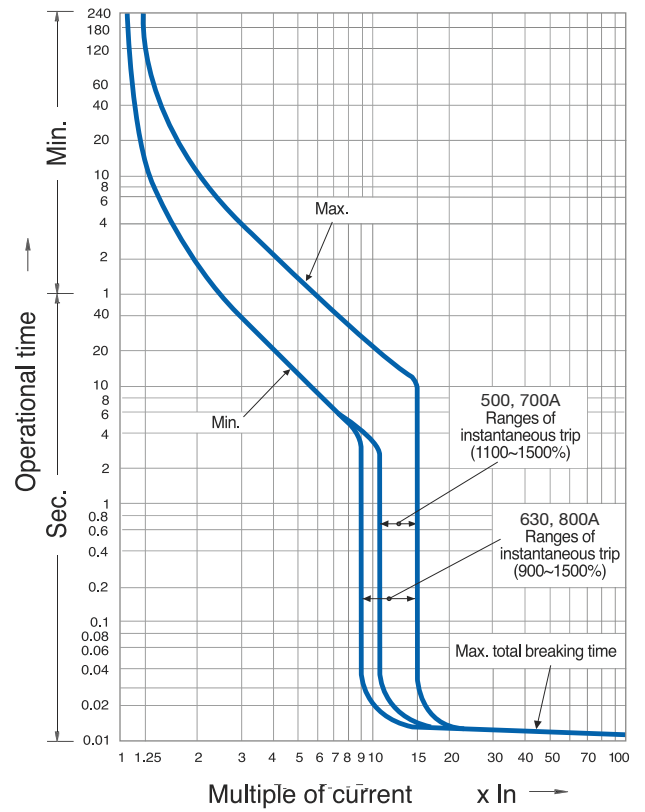
400AF

CS4A3, CS4A4, CS4B3, CS4B4, CS4C3, CS4C4, CS4D3, CS4D4



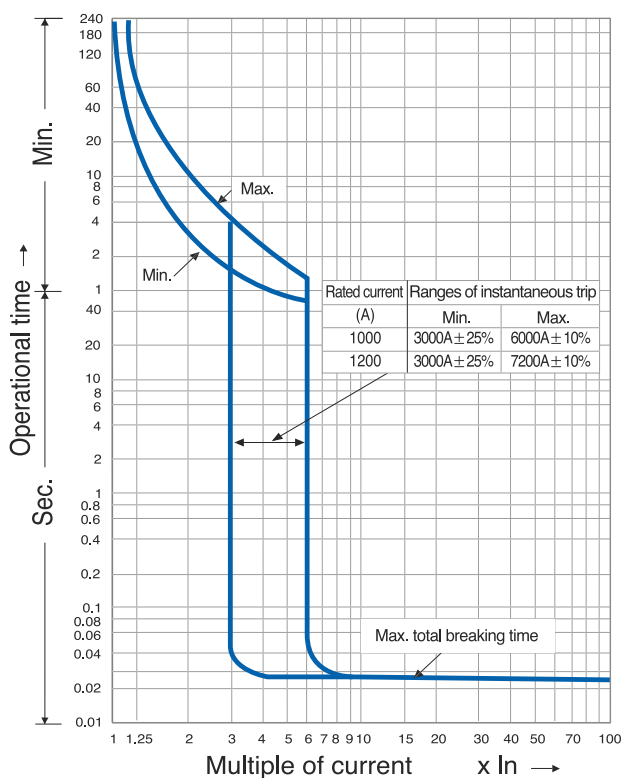
800AF

CS5A3, CS5A4, CS5B3, CS5B4, CS5D3, CS5D4



1200AF

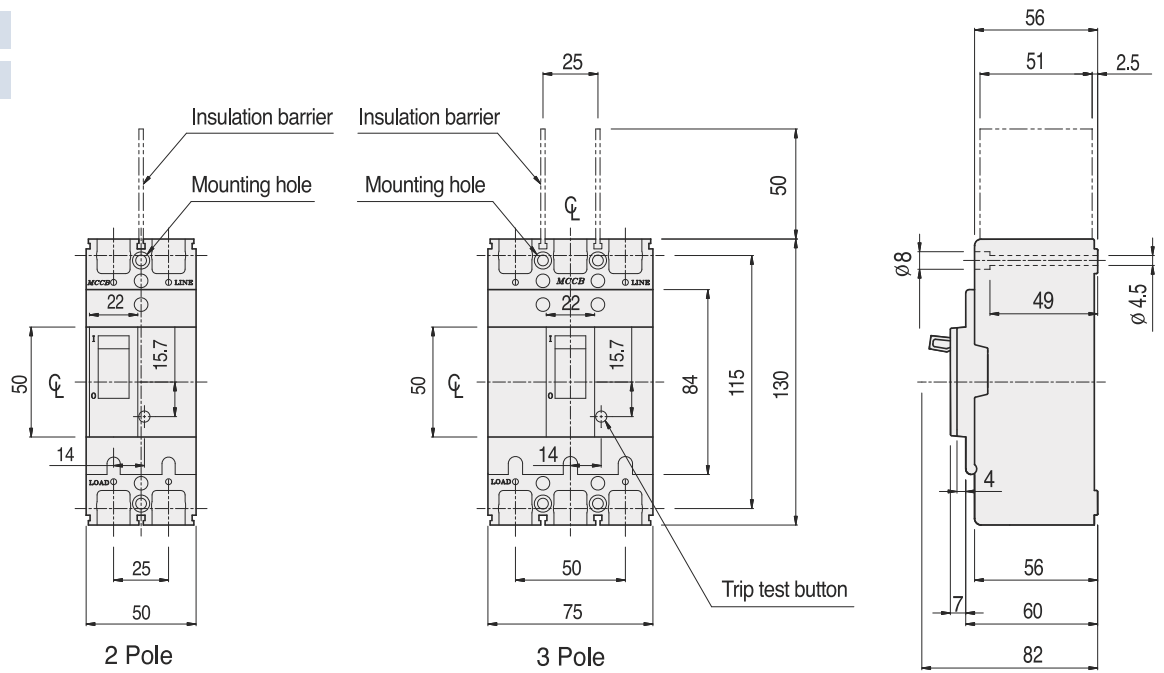
CS6B3, CS6B4, CS7B3, CS7B4



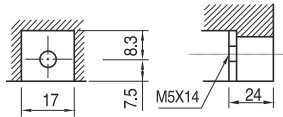
Overall Dimensions

CS1A2

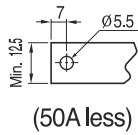
CS1A3



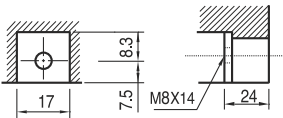
Detailed terminal



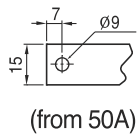
Hole size of conductor



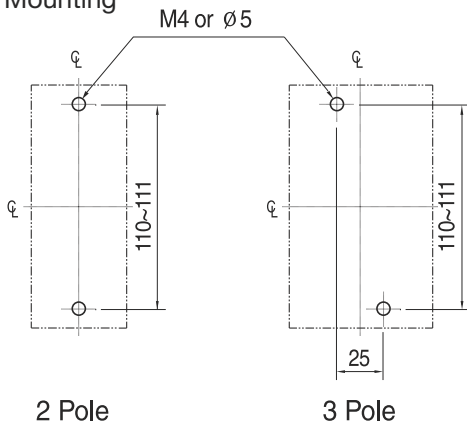
Detailed terminal



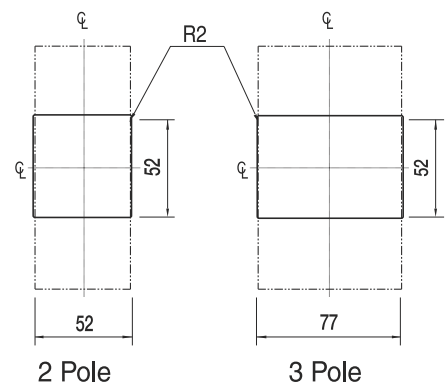
Hole size of conductor



Mounting



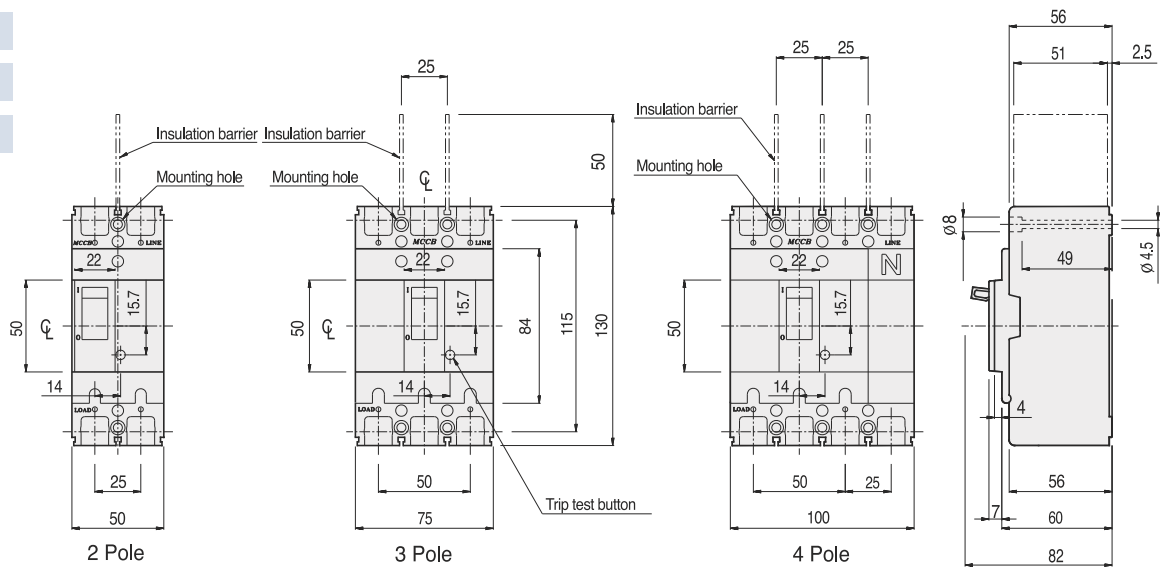
Slot



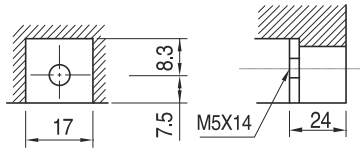
CS2A2

CS2A3

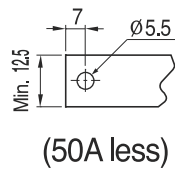
CS2A4



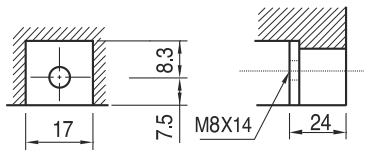
Detailed terminal



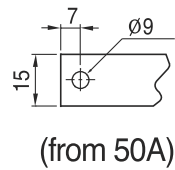
Hole size of conductor



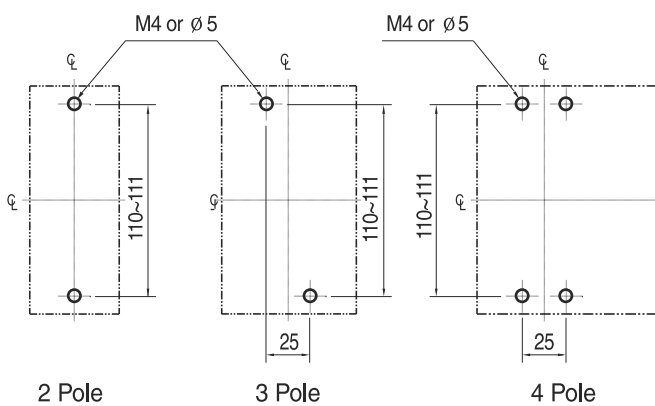
Detailed terminal



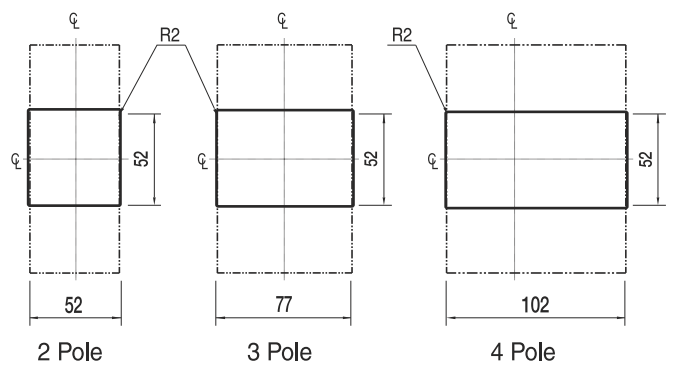
Hole size of conductor



Mounting

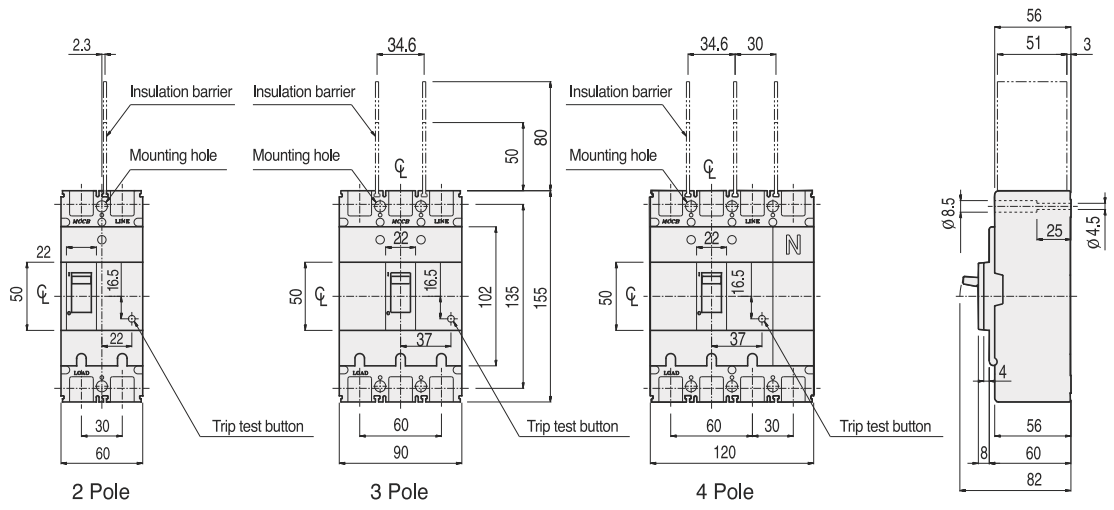


Slot

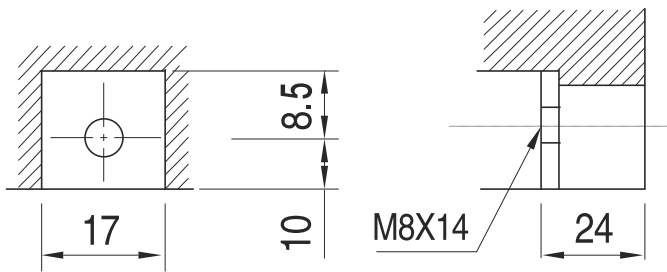


Overall Dimensions

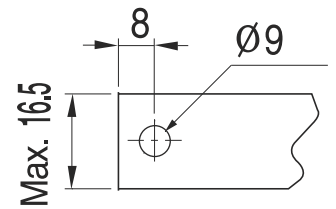
- CS2B2
- CS2B3
- CS2B4
- CS2C3
- CS2C4



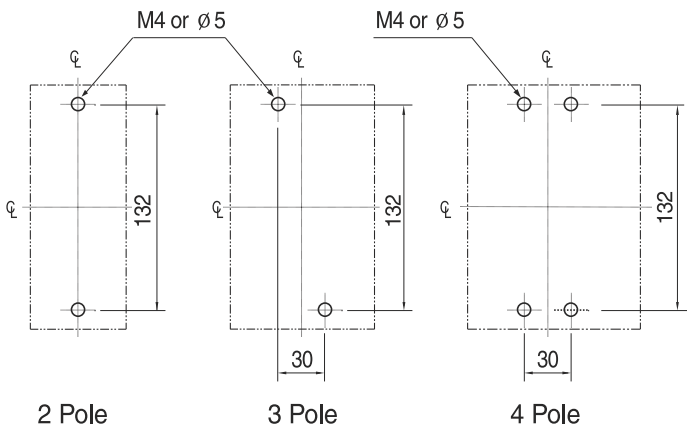
Detailed terminal



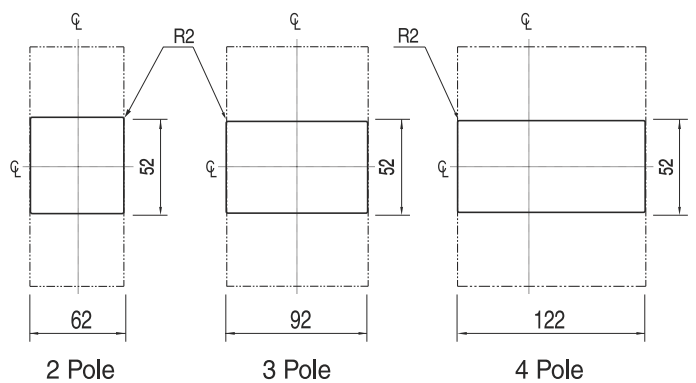
Hole size of conductor



Mounting



Slot



CS3A2

CS3A3

CS3A4

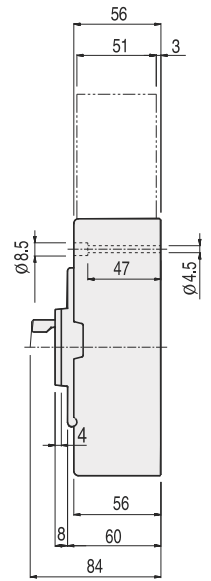
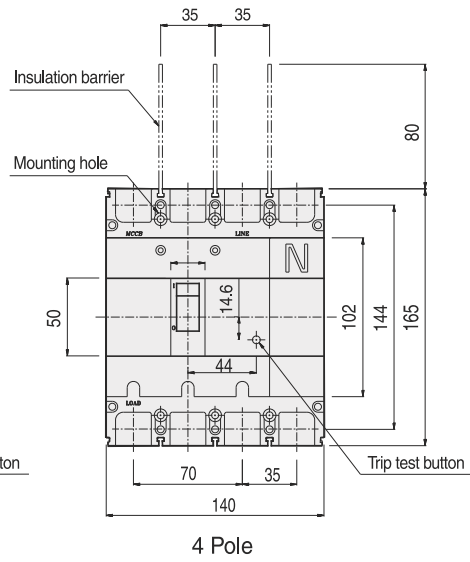
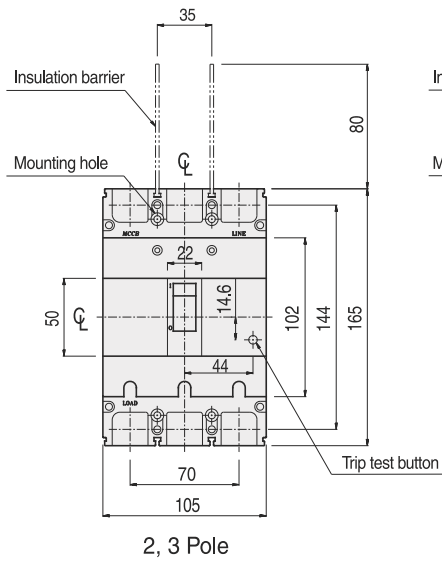
CS3B2

CS3B3

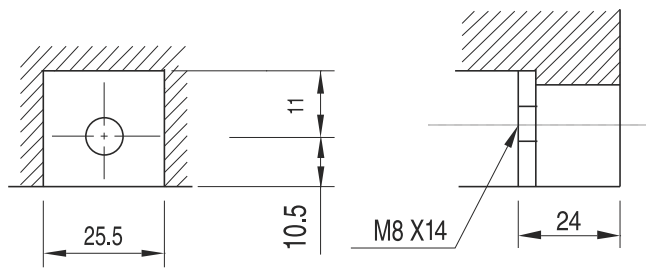
CS3B4

CS3C3

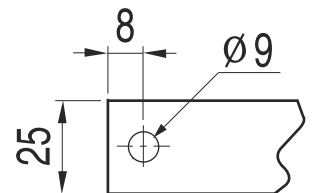
CS3C4



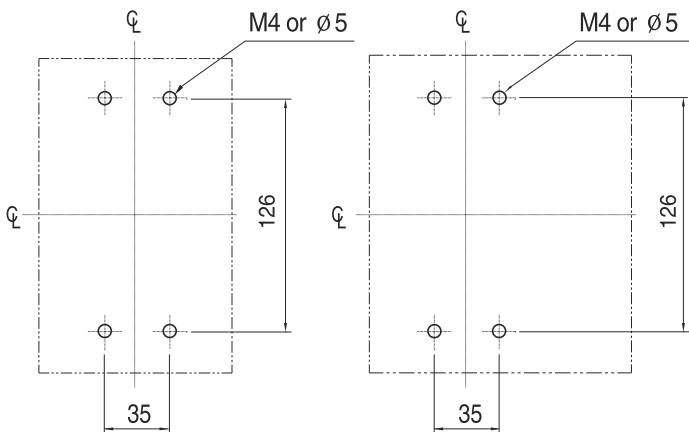
Detailed terminal



Hole size of conductor



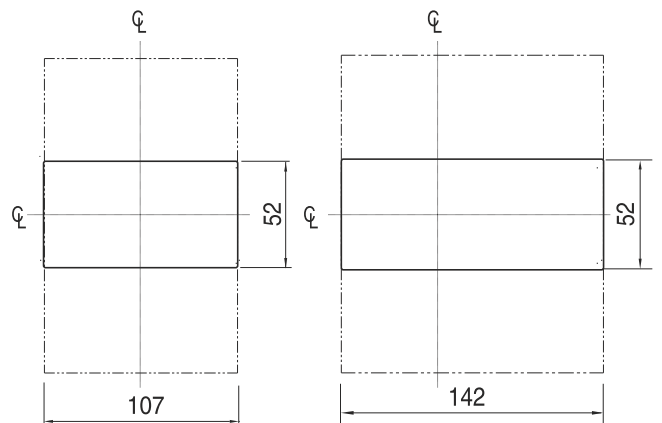
Detailed terminal



2, 3 Pole

4 Pole

Slot

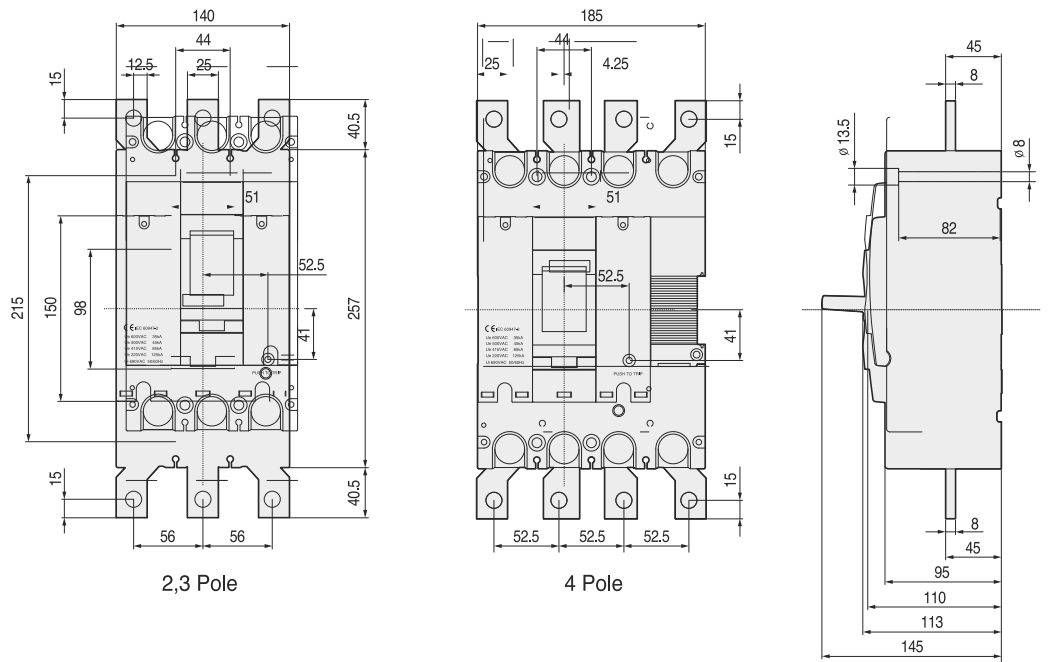


2, 3 Pole

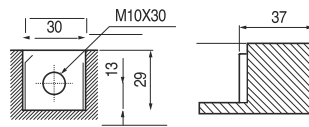
4 Pole

Overall Dimensions

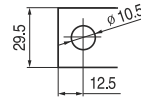
- CS4A3
- CS4A4
- CS4B3
- CS4B4
- CS4C3
- CS4C4
- CS4D3
- CS4D4



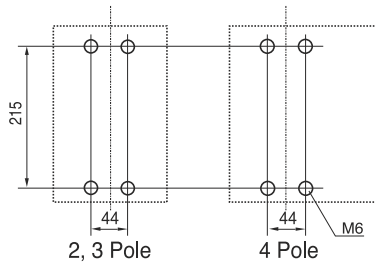
Detailed terminal



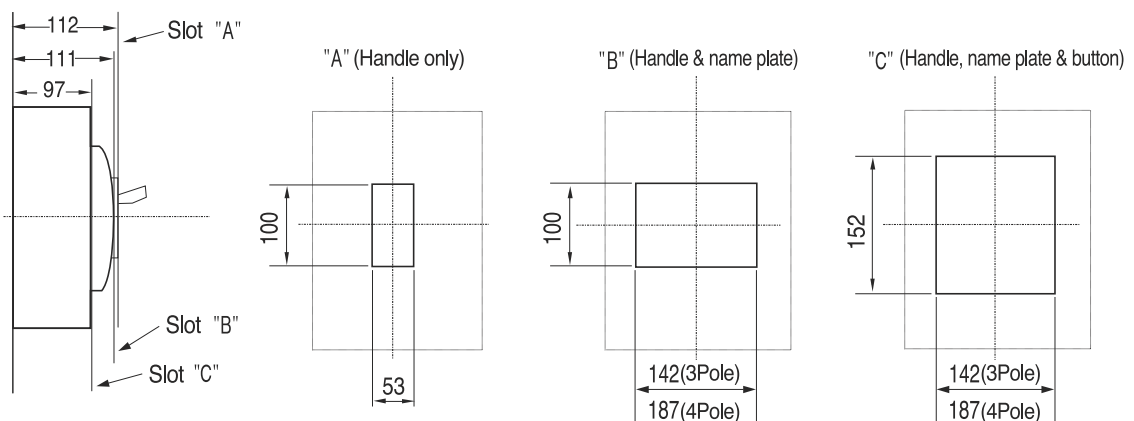
Hole size of a conductor



Mounting



Slot



CS5A3 (500, 630A)

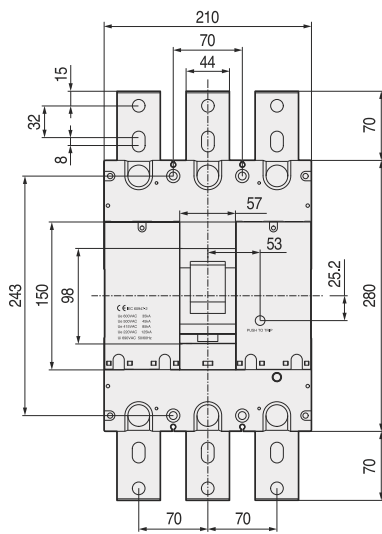
CS5A4 (500, 630A)

CS5B3 (500, 630A)

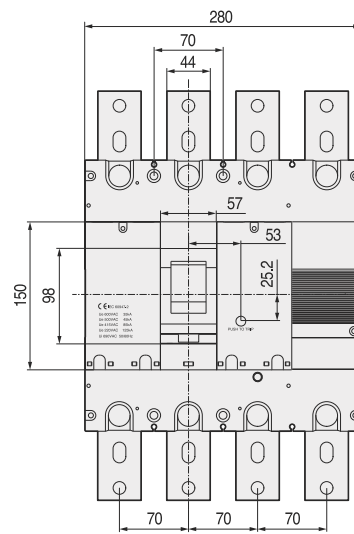
CS5B4 (500, 630A)

CS5D3 (500, 630A)

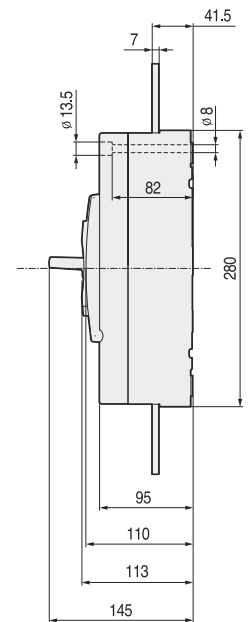
CS5D4 (500, 630A)



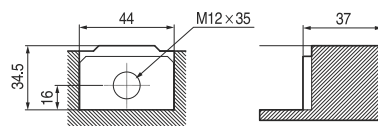
2,3 Pole



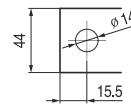
4 Pole



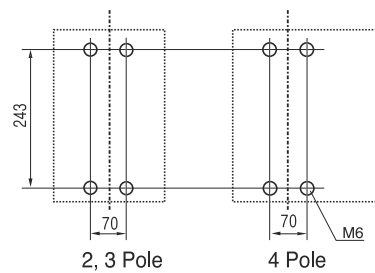
Detailed terminal



Hole size of a conductor



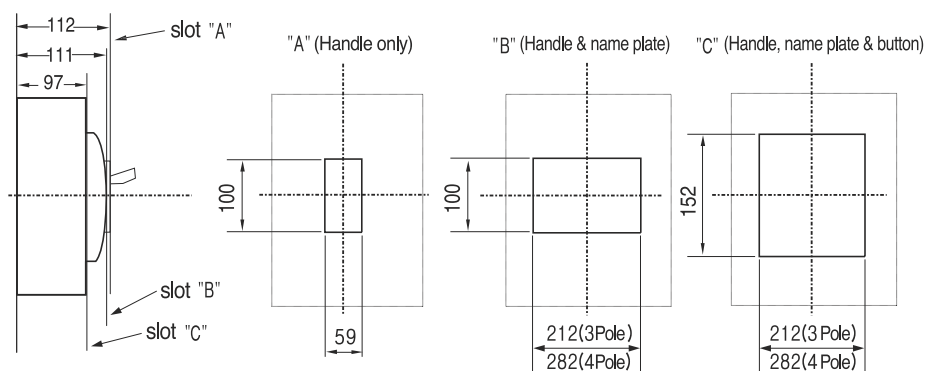
Mounting



2, 3 Pole

4 Pole

Slot



Overall Dimensions

CS5A3 (700, 800A)

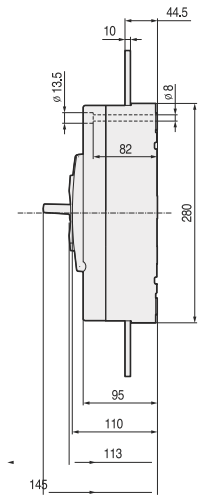
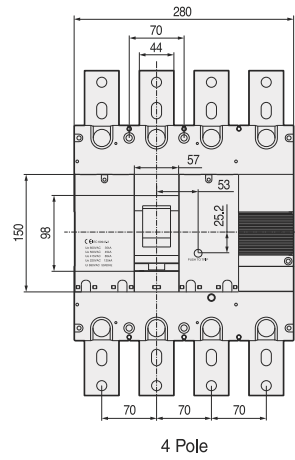
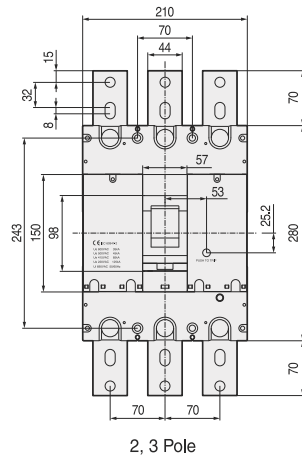
CS5A4 (700, 800A)

CS5B3 (700, 800A)

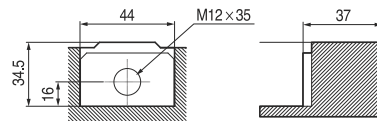
CS5B4 (700, 800A)

CS5D3 (700, 800A)

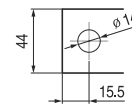
CS5D4 (700, 800A)



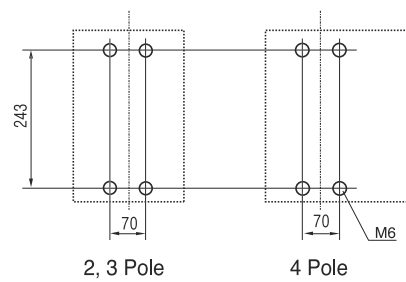
Detailed terminal



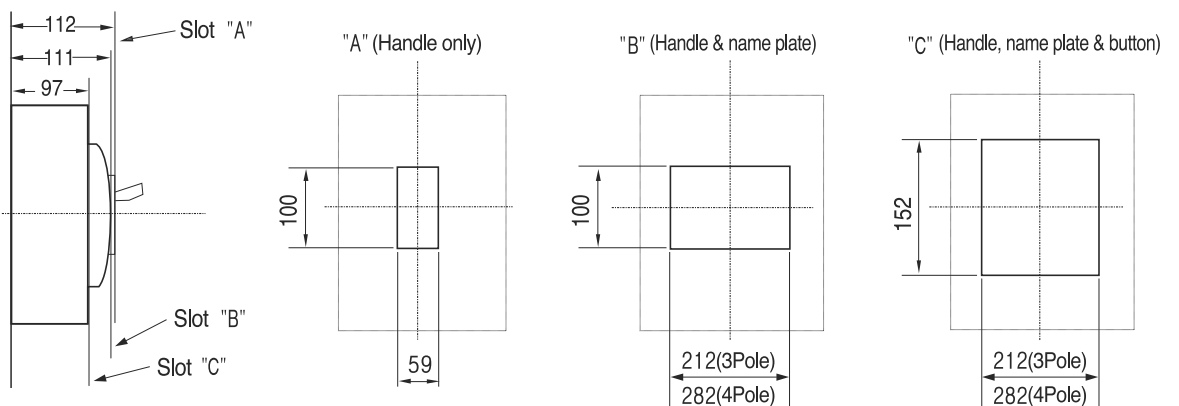
Hole size of a conductor



Mounting



Slot

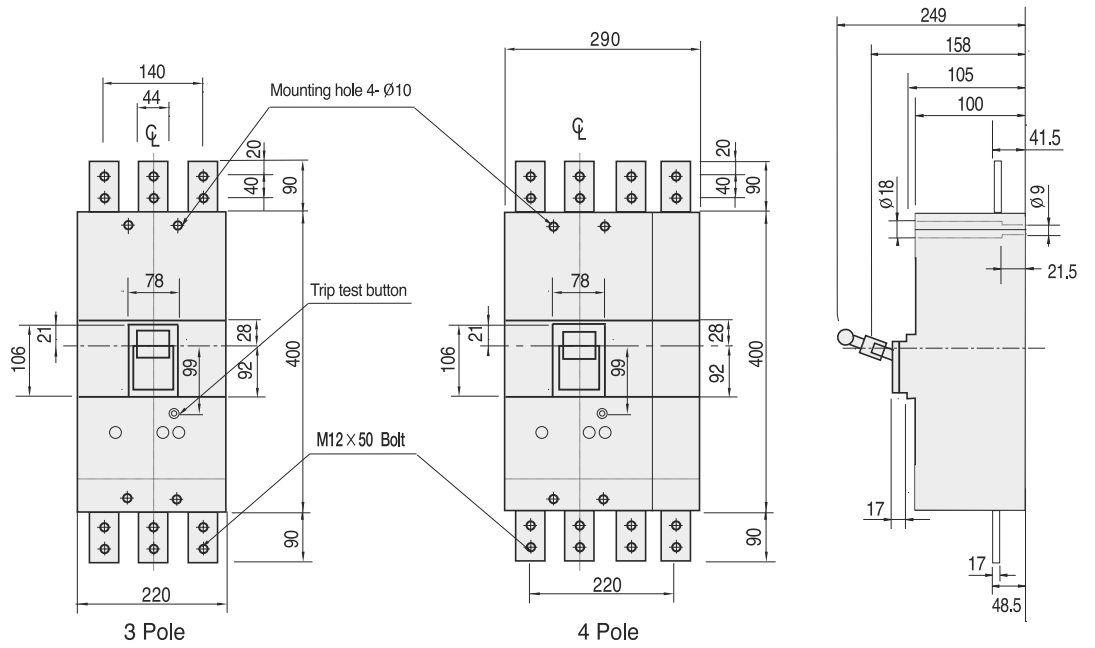


CS6B3

CS6B4

CS7B3

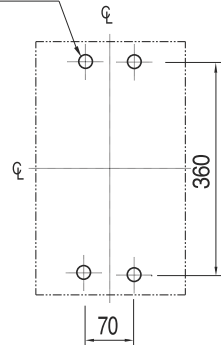
CS7B4



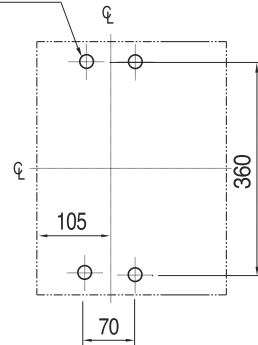
Mounting

M8 or Ø10

M8 or Ø10

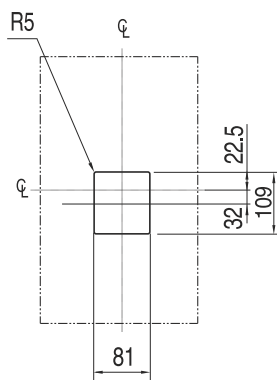


3 Pole

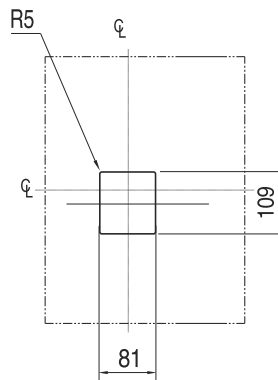


4 Pole

Slot



3 Pole



4 Pole

State of the art Manufacturing Facilities



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