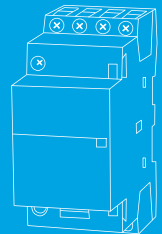
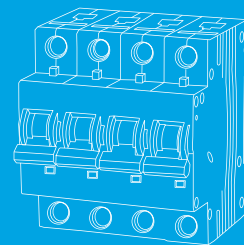
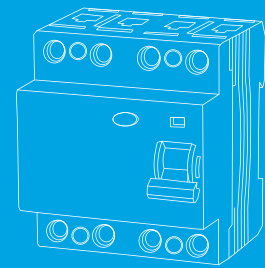


Chanan

CHANGAN ELECTRIC

>> Low Voltage Electric



CHANGAN GROUP CO.,LTD.



Yanpan factory

Changan Group Co.,Ltd is a power manufacturer and exporter of Industrial Electric Equipment. We are dedicated into improving the quality of life and the environment with professional R&D team,advance management and effective service.

Company Profile

▲ Beginning	1987 year
▲ Employee	2,500 people
▲ Register Capital	105.18 million RMB
▲ Floor Space	116,000 square meters

Branch Company

- ◆ Industrial Control Company
- ◆ Power Distribution Company
- ◆ Distribution Cabinet Company
- ◆ International Electric Manufacture Company

Award & Recognition

ISO9001/ ISO14001/ ISO45001	China Top 500 Private Enterprise
National High-tech Enterprise	China Top 500 Machinery Enterprise
China Famous Trade mark	China Top 500 Manufacture Enterprise

Company Events

- 1987** Changan Electric company was founded with national industrial products production license
- 1994** ISO9001 Quality System
- 1998** Changan Group Co., Ltd. was established
- 2000** Independent Export Right
- 2001** Production begin at Changan Qiligang Industrial Zone - Previous company address
- 2002** Set up over 500 sales agents
- 2003** Institute of Private enterprise to help the poor was established and donated 3 million RMB
- 2004** Changan Investment Co., Ltd. was established
- 2005** Changan signed a cooperation agreement with Zhejiang University
- 2006** Science and technology innovation association was formally established
- 2011** 41 patents for utility models
Madrid International Trademark Registration
Registrated Changan in Spain, Britain and other 8 countries successfully
- 2014** Production begin at the new factory located in Yanpan Industrial Zone - Latest Company address
- 2015** Changan authorized as Wenzhou Famous Export Brand
- 2016** Achieved Yueqing mayor's Quality Award
- 2017** Zhejiang Changan Transmission and Distribution Technology Co., Ltd.
- 2018** Changan Group Zhejiang Import and Export Co., Ltd. was established
- 2020** Zhejiang Changan intelligent technology Co., Ltd.

Business Scope

Product

Circuit Breaker/ Contactor/ Relay/ Distribution Box/ Pushbutton Switch/ Indicator/ Cable Accessories

Certificate

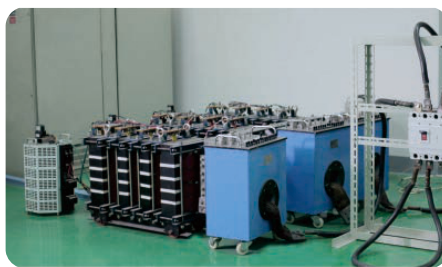
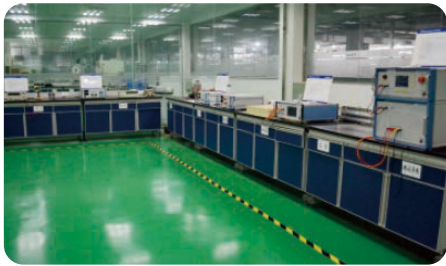
Company System:ISO9001,ISO14001,OHSAS18001

Product Quality:CE/ CB/ SEMKO/ TUV/ EAC/ PSE/IRAM/ CCC/ RoHS

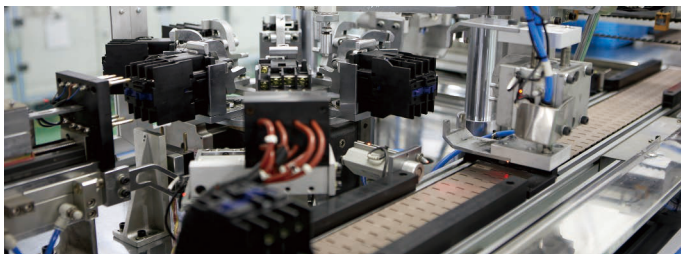
Overseas Market

Turkey/ Russia/ UK/ France/ Germany/ America/ Brazil/ Argentina/ South Africa/ Iran/ India and other 60 countries

Testing Lab



Workshops



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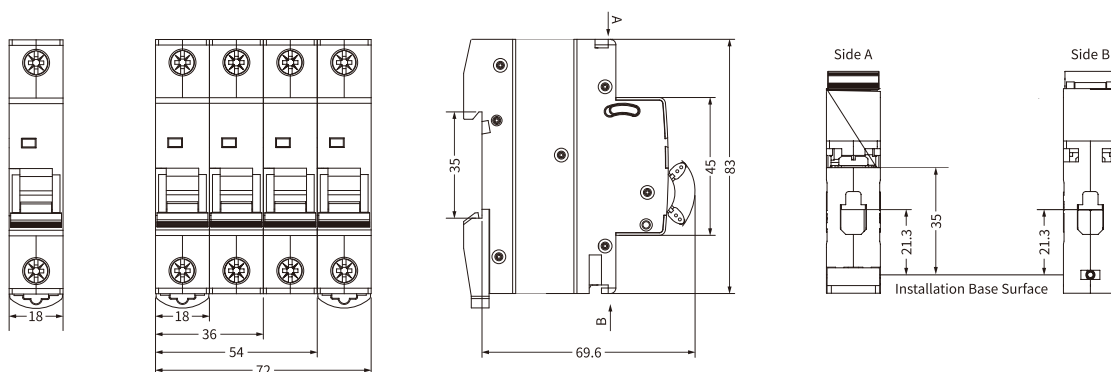
CAB2-63X 4.5kA MCB	01
CAB2-63 6kA MCB	02
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CAB2-32N 10kA MCB	04
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Technical Data

Standard	IEC/EN60898-1
Protection	Overcurrent and short circuit
Type of trip	Thermo-magnetic
No.of poles	1P,1P+N,2P,3P,3P+N,4P
Rated currents I_n	1,2,3,4,5,6,10,16,20,25,32,40,50,63A
Rated voltage U_e	240/415V~
Rated frequency	50/60Hz
Rated breaking capacity	4,500A
Rated impulse withstand voltage(1.5/50) U_{imp}	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x I_n
Magnetic release characteristic	B:(3-5) x I_n , C:(5-10) x I_n , D:(10-20) x I_n
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C Max.95%humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)

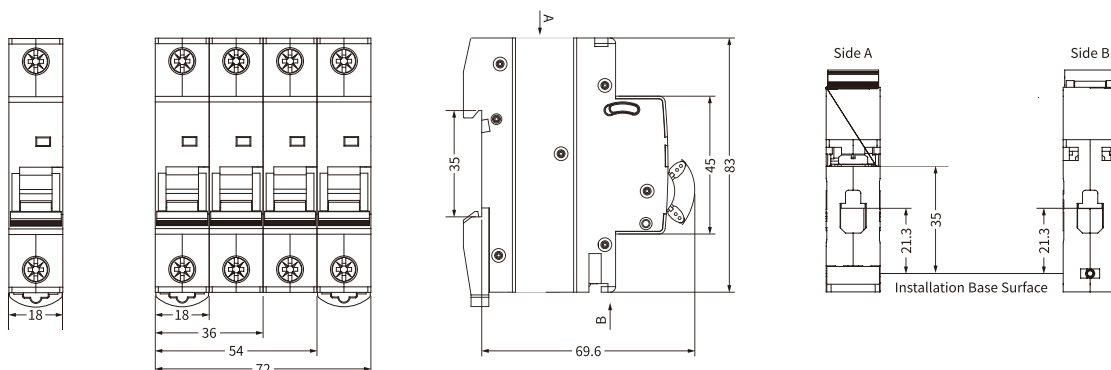




Technical Data

Standard	IEC/EN60898-1
Protection	Overcurrent and short circuit
Type of trip	Thermo-magnetic
No.of poles	1P,1P+N,2P,3P,3P+N,4P
Rated currents I_n	1,2,3,4,5,6,10,16,20,25,32,40,50,63A
Rated voltage U_e	240/415V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A
Energy Limiting Class	3
Rated impulse withstand voltage(1.5/50) U_{imp}	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	$(1.13-1.45) \times I_n$
Magnetic release characteristic	B:(3-5) $\times I_n$, C:(5-10) $\times I_n$, D:(10-20) $\times I_n$
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C Max.95%humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)

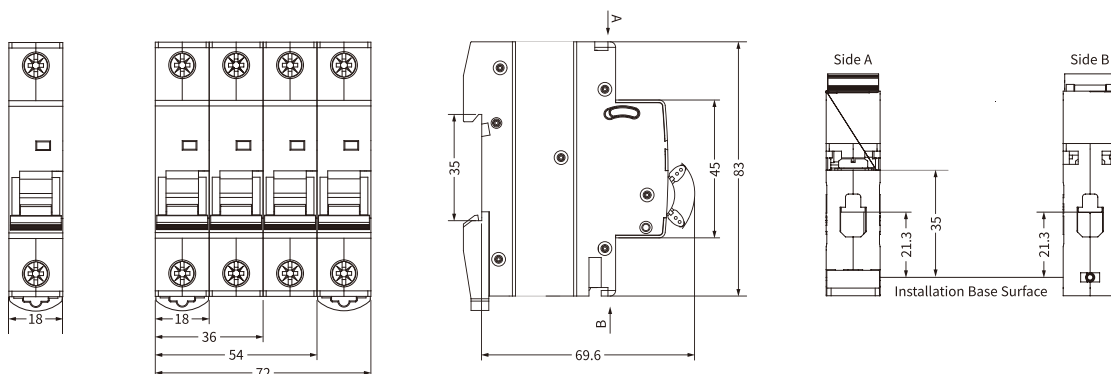




Technical Data

Standard	IEC/EN60898-1
Protection	Overcurrent and short circuit
Type of trip	Thermo-magnetic
No.of poles	1P,1P+N,2P,3P,3P+N,4P
Rated currents I_n	1,2,3,4,5,6,10,16,20,25,32,40,50,63A
Rated voltage U_e	240/415V~
Rated frequency	50/60Hz
Rated breaking capacity	10,000A
Energy Limiting Class	3
Rated impulse withstand voltage(1.5/50) U_{imp}	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	$(1.13-1.45) \times I_n$
Magnetic release characteristic	B:(3-5) $\times I_n$, C:(5-10) $\times I_n$, D:(10-20) $\times I_n$
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C Max.95%humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)

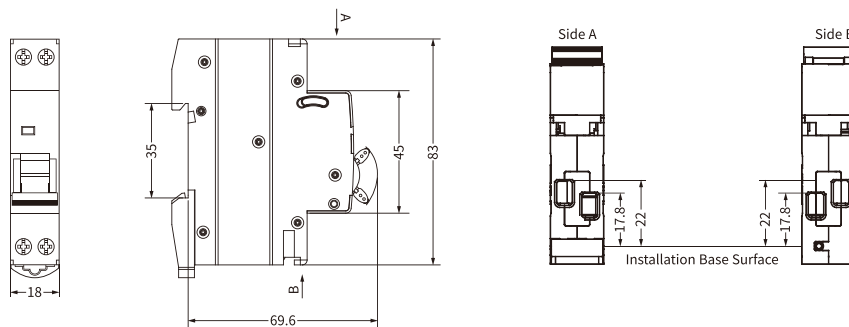




Technical Data

Standard	IEC/EN60898-1
Protection	Overcurrent and short circuit
Type of trip	Thermo-magnetic
No.of poles	1P+N
Rated currents I_n	6,10,16,20,25,32A
Rated voltage U_e	230/240V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A
Energy Limiting Class	3
Rated impulse withstand voltage(1.5/50) U_{imp}	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	$(1.13-1.45) \times I_n$
Magnetic release characteristic	B:(3-5) $\times I_n$, C:(5-10) $\times I_n$, D:(10-20) $\times I_n$
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C Max.95%humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	16mm ²
Max.tightening torque	1.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)

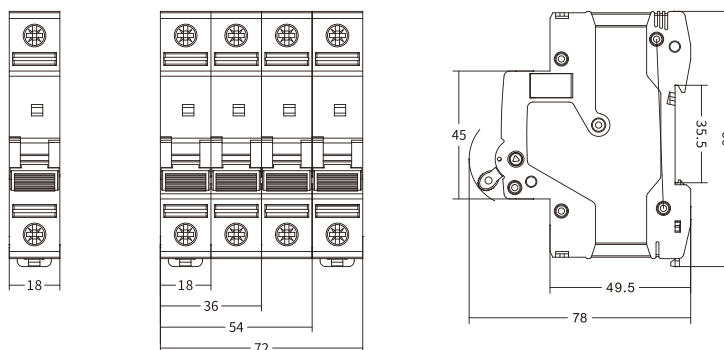




Technical Data

Standard	IEC/EN60898-1
Protection	Overcurrent and short circuit
Type of trip	Thermo-magnetic
No.of poles	1P,1P+N,2P,3P,3P+N,4P
Rated currents I_n	63,80,100,125A
Rated voltage U_e	240/415V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A
Rated impulse withstand voltage(1.5/50) U_{imp}	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	$(1.13-1.45) \times I_n$
Thermo-magnetic release characteristic	C: $(5-10) \times I_n$, D: $(10-20) \times I_n$
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C Max.95%humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	50mm ²
Max.tightening torque	3.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)



Standard_ IEC60898-1

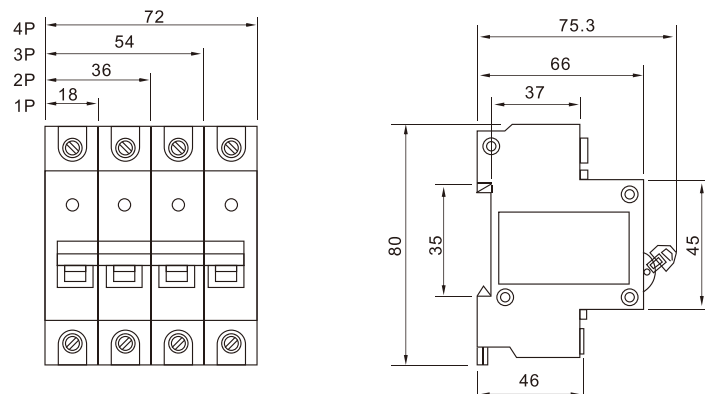
Mini Circuit Breaker



Technical Data

Standard	IEC/EN60898-1
Protection	Overcurrent and short circuit
Type of trip	Thermo-magnetic
No.of poles	1P,1P+N,2P,3P,3P+N,4P
Rated currents In	1,2,3,4,5,6,10,16,20,25,32,40,50,63A
Rated voltage Ue	240/415V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A
Energy Limiting Class	3
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In, D:(10-20) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C Max.95%humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)

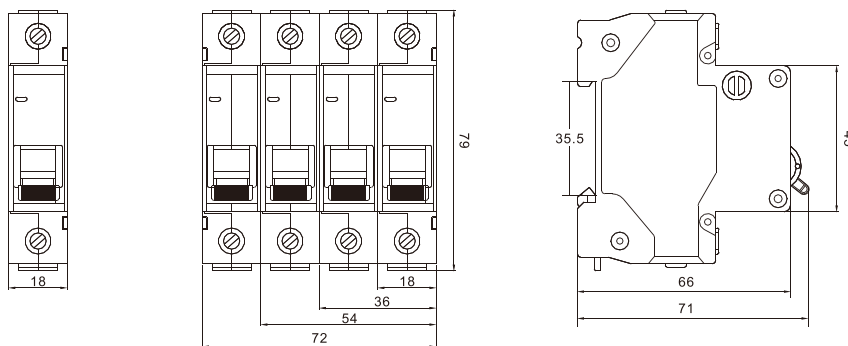


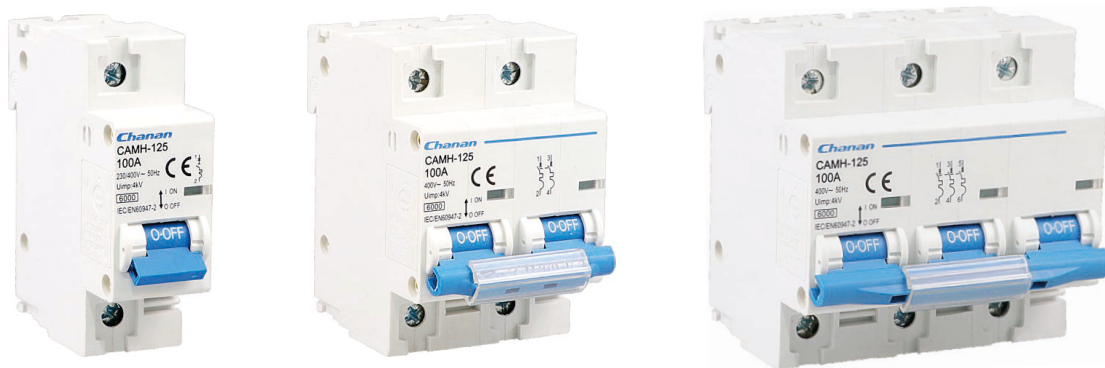


Technical Data

Standard	IEC/EN60898-1
Rated current In	1,2,3,4,5,6,8,10,13,16,20,25,32,40,50,63A
Poles	1P,1P+N,2P,3P,3P+N,4P
Rated voltage Ue	240/415V~
Insulation voltage Ui	500V
Rated frequency	50/60Hz
Rated breaking capacity	4,500A
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at ind. Freq. for 1 min	2kV
Pollution degree	2
Thermo-magnetic release characteristic	B,C,D
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature (with daily average ≤35°C)	-5°C~+40°C
Storage temperature	-25°C~+70°C
Terminal connection type	Cable/Pin-type busbar
Terminal size top/bottom for cable	25mm ² 18-3AWG
Terminal size top/bottom for busbar	25mm ² 18-3AWG
Tightening torque	2.5Nm 22In-lbs
Mounting	On DIN rail EN60715(35mm) by means of fast clip device
Connection	Power supply in both directions

Overall and Installation Dimension(mm)

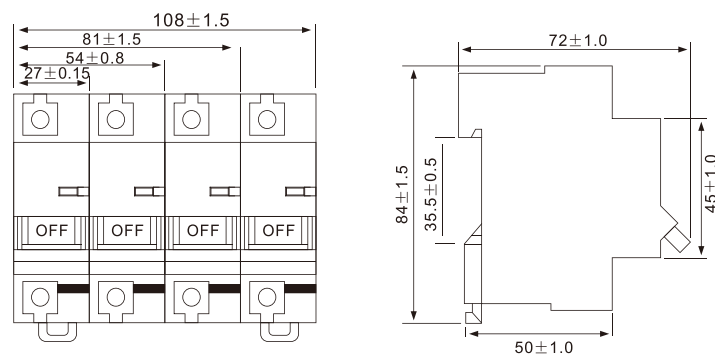




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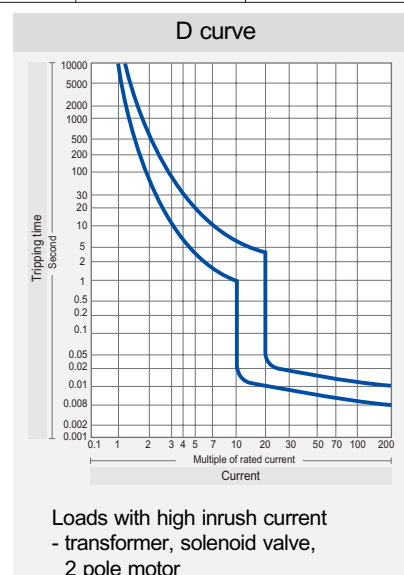
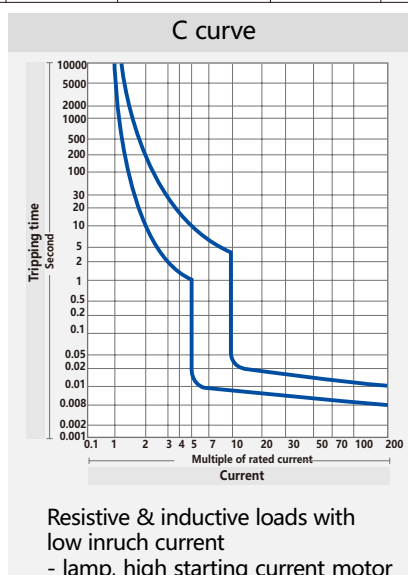
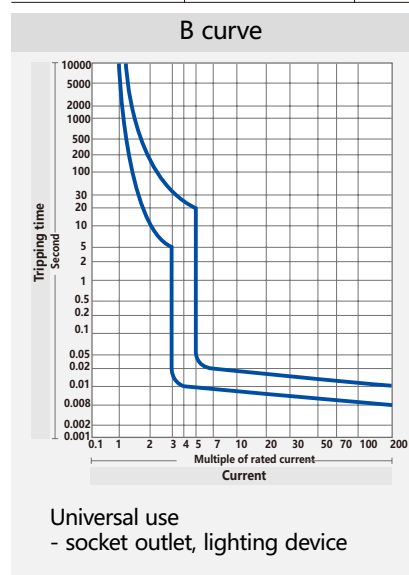
Standard	IEC/EN60898-1
Rated current In	1,2,3,4,5,6,8,10,13,16,20,25,32,40,50,63A
Poles	1P,1P+N,2P,3P,3P+N,4P
Rated voltage Ue	240/415V~
Insulation voltage Ui	500V
Rated frequency	50/60Hz
Rated breaking capacity	4,500A
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at ind. Freq. for 1 min	2kV
Pollution degree	2
Thermo-magnetic release characteristic	B,C,D
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature (with daily average ≤35°C)	-5°C~+40°C
Storage temperature	-25°C~+70°C
Terminal connection type	Cable/Pin-type busbar
Terminal size top/bottom for cable	25mm ² 18-3AWG
Terminal size top/bottom for busbar	25mm ² 18-3AWG
Tightening torque	2.5Nm 22In-lbs
Mounting	On DIN rail EN60715(35mm) by means of fast clip device
Connection	Power supply in both directions

Overall and Installation Dimension(mm)



Tripping Characteristic (IEC60898-1)

Curve	Rated current	Condition						
		Thermal release				Magnetic release		
		Non-tripping	Tripping	Non-tripping	Tripping time	Holding current	Tripping current	Tripping time
B	1-125A	1.13 × I _n		≤1h		3 × I _n		≥0.1
			1.45 × I _n		<1h		5 × I _n	<0.1
C	1-125A	1.13 × I _n		≤1h		5 × I _n		≥0.1
			1.45 × I _n		<1h		10 × I _n	<0.1
D	1-125A	1.13 × I _n		≤1h		10 × I _n		≥0.1
			1.45 × I _n		<1h		20 × I _n	<0.1

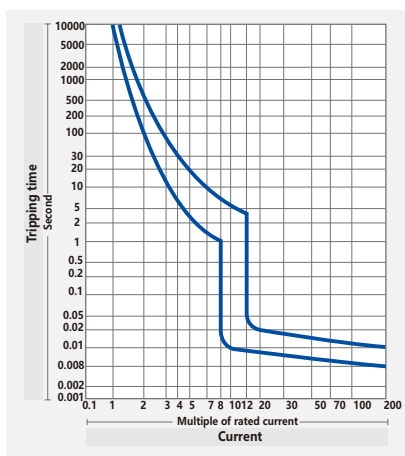
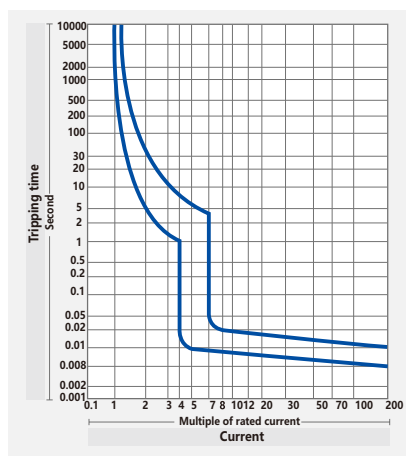


Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47
80	106.4	103.2	100	96	92	88.8	84	80	75.2	70.4	65.6	60
100	133	129	125	120	115	111	105	100	94	88	82	75
125	166.3	161.3	156.3	150	143.8	138.8	131.3	125	117.5	110	102.5	93.8

Tripping Characteristic (IEC60947-2)

Current(A)	Rated current(A)	Thermal Release				Magnetic release		
		Non-tripping current(A)	Tripping current(A)	Non-tripping time(h)	Tripping time(h)	Holding time(S)	Tripping time(S)	
10In±20%	8In 12In	1-63	1.05In	1.30In	≤1	<1	≤0.2	<0.2
			1.05In		≤2		≤0.2	
	80-125	1.05In	1.30In	≤2	<2	≤0.2	<0.2	
		1.05In		≤2		≤0.2		

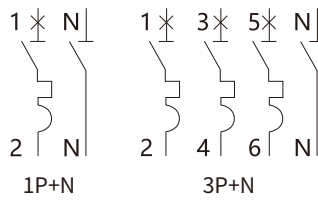
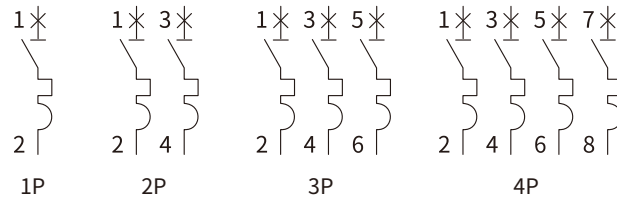


Temperature Derating Table

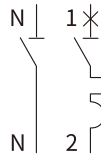
Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
1	1.33	1.29	1.25	1.2	1.15	1.11	1.05	1	0.94	0.88	0.82	0.75
2	2.67	2.58	2.49	2.4	2.31	2.21	2.11	2	1.89	1.76	1.63	1.49
3	4	3.9	3.7	3.6	3.5	3.3	3.2	3	2.8	2.6	2.4	2.2
4	5.3	5.2	5	4.8	4.6	4.4	4.2	4	3.8	3.5	3.3	3
5	6.7	6.5	6.31	6.1	5.8	5.5	5.25	5	4.7	4.3	4	3.7
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47
80	106.4	103.2	100	96	92	88.8	84	80	75.2	70.4	65.6	60
100	133	129	125	120	115	111	105	100	94	88	82	75
125	166.3	161.3	156.3	150	143.8	138.8	131.3	125	117.5	110	102.5	93.8

Circuit Diagram

- CAB2-63X
- CAB2-63
- CAB2-63H
- CAB2-125S
- CAB6-63
- DZ47-63S
- CAMH-125



- CAB2-32N

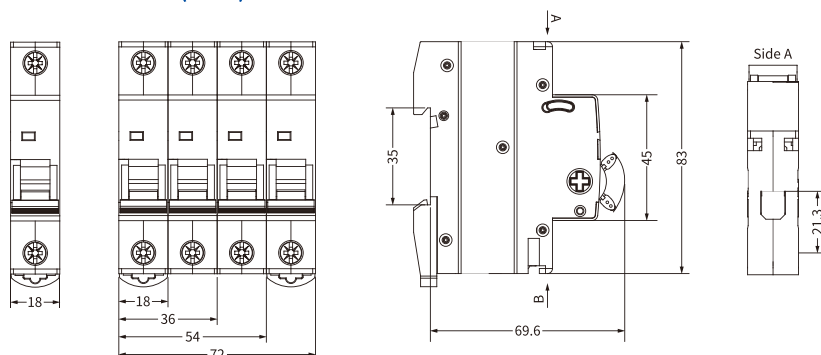




Technical Data

Standard	IEC/EN60947-3
No.of poles	1P,2P,3P,4P
Rated currents In	16,20,32,40,50,63,80,100,125A
Rated voltage Ue	240/415V~
Rated frequency	50/60Hz
Utilization category	AC-22A
Short-time withstand current Icw	12Ie, t=1s
Rated short-circuit making capacity Icm	20Ie, t=0.1s
Rated making & breaking capacity	3Ie, 1.05Ue, CosΦ=0.65
Rated impulse withstand voltage Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Rated insulation voltage Ui	690V
Electrical life	2,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C Max.95%humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	50mm ²
Max.tightening torque	3.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)



Endurance(operations)

Category	Operations	Operation frequency	Rated current
Electric endurance	1500	120/h	16~100A
Mechanical endurance	10000	120/h	16~100A

Wiring The suitable conductors should be used for connection,see table below for relative parameters.

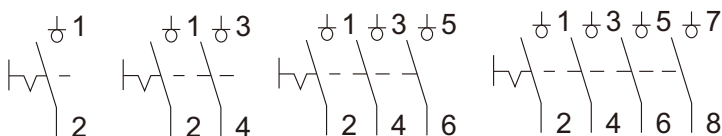
Rated current In (A)	Cross section area s (mm ²)	Tightening torque (N.m)
16	2.5	3.5
20	2.5	3.5
25	4	3.5
32	6	3.5
40	10	3.5
50	10	3.5
63	16	3.5
80	35	3.5
100	35	3.5
125	35	3.5

Features

1. Current capacity is enhanced and electric drive compensation is fully applied
2. Reliable operation thanks to special designed operating mechanism
3. Safe operation is ensured

Circuit Diagram

- CAD2-125

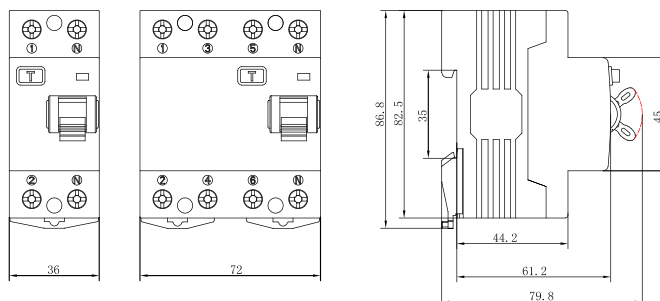




Technical Data

Standard	IEC/EN61008-1
Protection	Ground fault
Type of trip	Electro-magnetic
Type of protection (electric leakage)	AC,A,G,S
No.of poles	2P(1P+N), 4P(3P+N)
Rated currents (In)	25,40,63,80A
Rated sensitivity currents $I_{\Delta n}$	10,30,100,300mA
Residual current off-time under $I_{\Delta n}$	$\leq 0.1s$
Rated residual making and breaking capacity($I_{\Delta m}$)	500A($I_n \leq 50A$), 10In($I_n > 50A$)
Rated voltage (Ue)	1P+N: 230/240V~, 3P+N:400/415V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A, 10,000A
SCPD fuse	6000 10000
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2.5kV
Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar/U-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)

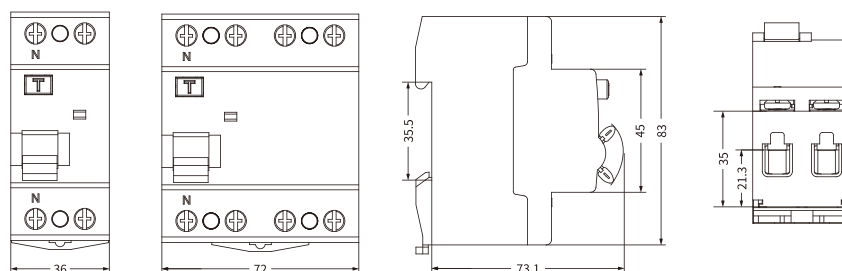




Technical Data

Standard	IEC/EN61008-1
Protection	Ground fault
Type of trip	Electro-magnetic
Type of protection (electric leakage)	AC,A,G,S
No.of poles	2P(1P+N), 4P(3P+N) , N Pole on left
Rated currents (In)	16,25,32,40,63,80,100A
Rated sensitivity currents I Δ n	10,30,100,300mA (10mA only for In=16-25A)
Residual current off-time under I Δ n	≤ 0.1s
Rated residual making and breaking capacity(I Δ m)	500A(In≤50A), 10In(In>50A)
Rated voltage (Ue)	1P+N: 230/240V~, 3P+N:400/415V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A, 10,000A
SCPD fuse	6000 10000
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Electrical life	2,000 Cycles
Mechanical life	4,000 Cycles
Contact position indicator	Yes
Ground fault indicator	Yes
Protection degree	IP20
Ambient temperature	-5°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar/Fork-type busbar
Max.terminal size for cable	35mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Overall and Installation Dimension(mm)



Life

In	Operating cycles		Operating frequency (operations/h)
	On-load operating cycles	Off-load operating cycles	
16,20,25,32	2000	2000	240
40,50,63,80,100,125	2000	1000	120

Breaking time of residual current

In(A)	I _{Δn} (A)	Max.breaking time				5A,10A,20A,50A,100A,200A,500A
		I _{Δn}	2I _{Δn}	5I _{Δn}		
16,20,25,32, 40,50,63,80,100,125	0.03,0.1,0.3	0.1s	0.08s	0.04s	0.04s	

Wiring The suitable conductors should be used for connection,see table below for relative parameters.

Rated current In (A)	Cross section area s (mm ²)	Tightening torque (N.m)
16	2.5	2.5
20	2.5	2.5
25	4	2.5
32	6	2.5
40	10	2.5
50	10	2.5
63	16	2.5
80	25	2.5
100	35	2.5
125	50	2.5

Features

When designing residual current devices, manufacturing technology and type of routine tests, the IEC / EN 61008-1 standards were considered. Important features are:

Up to date design

User-friendly connection of conductors and busbars

Resistance to current surges; unwanted tripping excluded

Simple and solid fixing to a 35 mm mounting rail in compliance with EN 60715

Additional colour display of main contacts position (red:contacts closed, green:contacts open)

Against Electrocutation

The use of exposed, substandard, badly wired, wrongly connected or damaged equipment as well as frayed or badly repaired cables reduces the safety of an installation and increases the risk of person receiving an electric shock.

Electrocutation is a passage of current through human body, which is dangerous. The flow of current through human body effects vital functions.

1. Breathing
2. Heartbeat

A correctly chosen RCCB can detect small currents flowing to earth and reduce the risk of electrocutation. Effect of electric current through human body has been well researched and following chart summarizes the results.

Effect of electric current through human body has been well researched and following chart summarizes the results:

500mA			Immediate cardiac arrest resulting in death
70-100mA			Cardiac fibrillation; the heart begins to vibrate and no longer beats at a steady rate. This situation is dangerous since it is irreversible
20-30mA			Muscle contraction can cause respiratory paralysis
10mA			Muscle contraction: the person remains stuck to the conductor
1-10mA			Prickling sensations

However, electrocutation should not be viewed in terms of 'current alone' but in terms of 'contact voltage'. A person gets electrocuted by coming in contact with an object that has a different potential from his/her own. The difference in potential causes the current to flow through the body.

The human body has known limits:

Under normal dry conditions, voltage limit=50V

in damp surroundings, voltage limit=25V

Against indirect contact

Over current protection devices like MCB are unable to act promptly on small earth leakage currents. To comply with wiring regulations the earth fault loop impedance in Ohms, multiplied by the rate tripping current of the RCD in amperes must not exceed 50.

Example

For an RCD with a rated tripping current of 30mA, the maximum permissible earth fault loop impedance is calculated as follows: $Z_s(max) = 50 / I_n = 50 / 0.03 = 1.666$



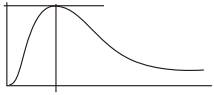
Rated tripping current of the RCD	Maximum permissible earth fault loop impedance in
10mA	5,000
30mA	1,666
100mA	500
300mA	166

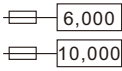
Against fire

The majority of fires which occur as result of faulty wiring are started by current flowing to earth. Fire can be started by fault current of less than lamp.

The normal domestic overload protective device such as a fuse or MCB will not detect such a small current. A correctly chosen RCD will detect this fault current and interrupt the supply, hence reducing the risk of a fire starting.

Rated current I_n	Rated Voltage U_n	Rated fault frequency f_n
<p>Maximum permissible current value determined by heat, breaking capacity and terminals an RCCB can carry.</p> <p>Preferred values: 16, 25, 40, 63, 80, 100, 125, 160A.</p>	<p>The rated operational voltage of an RCCB is the voltage value, determined by breaking capacity, clearance and creepage distance and test circuit.</p> <p>Preferred values:230/400V.</p>	<p>The frequency which the breaking characteristics of an RCCB are designed.</p> <p>Preferred values: 10-60Hz</p>

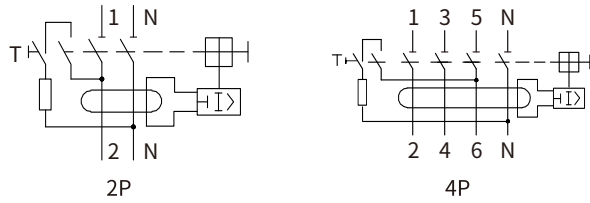
Alternative Current Sensitive	Pulsating direct current sensitive	Surge current proof
 <p>They react to AC current which, whether suddenly applied or slowly arising.</p>	 <p>They react to AC and pulsating DC fault current which reach 0 or almost 0 within one time period of the mains frequency.</p>	 <p>RCCB's surge capacity. Not tripping at standardized 8/20 μs surge-current waves acc.to VDE 0432 Part 2 with surge current values of up to 250A.</p>

Rated fault current $I_{\Delta n}$	Numbers of poles	Breaking capacity	Temperature resistance
<p>Value of a residual fault current at which the RCCB shall trip.</p> <p>Preferred values: 10, 30, 100, 300mA</p>	<p>Number of current paths which the RCCB can monitor.</p> <p>Preferred values: 2 and 4.</p>	 <p>The function of an RCCB is not impaired by short-circuit current of up to 6,000 A resp. 10,000A provided a back-up fuse is used. 2 and 4.</p>	<p>Suitable for temperatures from -25°C up to 40°C.</p>

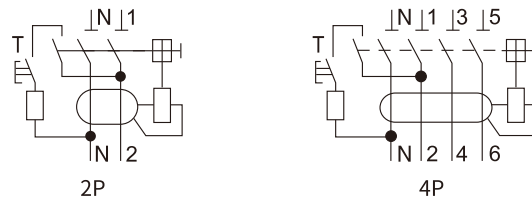
Surge capacity	Short time delay selective
<p>KV</p> <p>RCCB's surge capacity. Not tripping at standardized 8/20 μs surge-current waves acc.to VDE 0432 Part 2 with surge current values of up to 250A.</p>	<p>S</p> <p>Time Delay Type</p>

Circuit Diagram

- CAL1-80

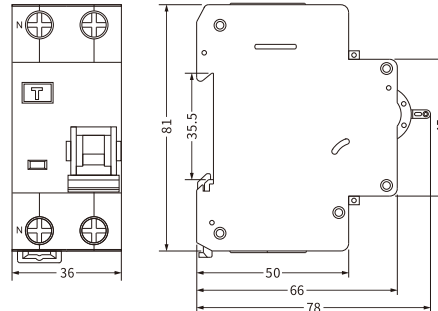


- EKL6-100H





Overall and Installation Dimension(mm)

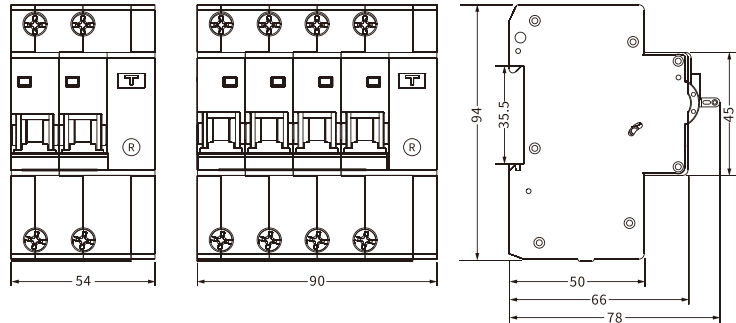


Technical Data

Standard	IEC/EN61009-1
Protection	Ground fault, Overcurrent and short circuit, Over-voltage(selectable)
Type of trip	Ground fault : Electronic Overload and short circuit :Thermo-magnetic
Type of protection (electric leakage)	AC,A
No.of poles	1P+N 2module , N line with disconnected
Rated currents (In)	6,10,16,20,25,32,40A
Rated sensitivity currents I Δ n	10,30,100,300mA
Residual current off-time under I Δ n	≤ 0.1s
Reted residual making and breaking capacity(I Δ m)	500A(In≤50A), 10In(In>50A)
Rated voltage (Ue)	230/240V~
Rated frequency	50/60Hz
Rated breaking capacity	4,500A
Rated impulse withstandard voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top



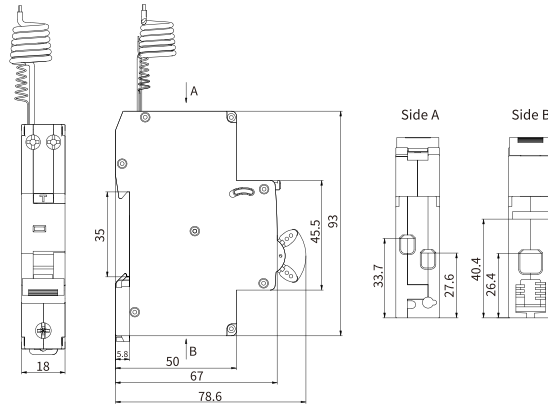
Overall and Installation Dimension(mm)



Technical Data

Standard	IEC/EN61009-1
Protection	Ground fault, Overcurrent and short circuit, Over-voltage(selectable)
Type of trip	Ground fault : Electronic Overload and short circuit :Thermo-magnetic
Type of protection (electric leakage)	AC,A,S
No.of poles	1P+N 3module , 3P+N 5module, N line with disconnected
Rated currents (In)	6,10,16,20,25,32,40,50,63A
Rated sensitivity currents I Δ n	10,30,100,300mA
Residual current off-time under I Δ n	≤ 0.1s
Rated residual making and breaking capacity(I Δ m)	500A(In≤50A), 10In(In>50A)
Rated voltage (Ue)	1P+N:230/240V~, 3P+N:400/415V~
Rated frequency	50/60Hz
Rated breaking capacity	4,500A
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In, D:(10-20) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Ground fault indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top

Overall and Installation Dimension(mm)

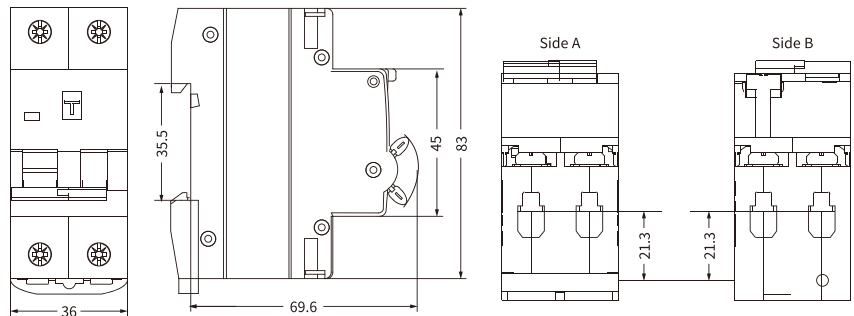


Technical Data

Standard	IEC/EN61009-1
Protection	Ground fault, Overcurrent and short circuit, Over-voltage(selectable)
Type of trip	Ground fault : Electronic Overload and short circuit :Thermo-magnetic
Type of protection (electric leakage)	AC,A
No.of poles	1P+N 1module , N line with disconnected
Rated currents (In)	6,10,16,20,25,32,40A
Rated sensitivity currents I Δ n	10,30,100,300mA
Residual current off-time under I Δ n	≤ 0.1s
Reted residual making and breaking capacity(I Δ m)	500A(In≤50A), 10In(In>50A)
Rated voltage (Ue)	230/240V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A
Energy Limiting Class	3
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	L(in):25mm ² , N/L(out) :16mm ²
Max.tightening torque	L(in):2.5N.m , N/L(out):2N.m
Installation	Mounting on 35mm DIN rail
Connection	From bottom



Overall and Installation Dimension(mm)

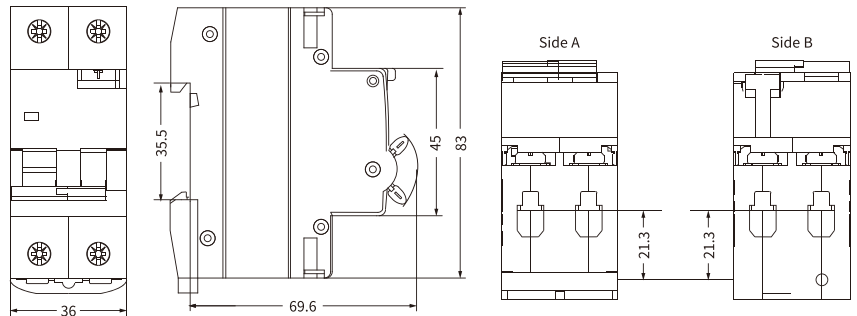


Technical Data

Standard	IEC/EN61009-1
Protection	Ground fault, Overcurrent and short circuit, Over-voltage(selectable)
Type of trip	Ground fault : Electronic Overload and short circuit :Thermo-magnetic
Type of protection (electric leakage)	AC,A
No.of poles	1P+N 2module , N line with disconnected
Rated currents (In)	6,10,16,20,25,32,40A,63A,80A
Rated sensitivity currents I Δ n	30,100,300mA
Residual current off-time under I Δ n	≤ 0.1s
Reted residual making and breaking capacity(I Δ m)	500A(In≤50A), 10In(In>50A)
Rated voltage (Ue)	230/240V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A
Energy Limiting Class	3
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Ground fault indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar/Fork-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top



Overall and Installation Dimension(mm)

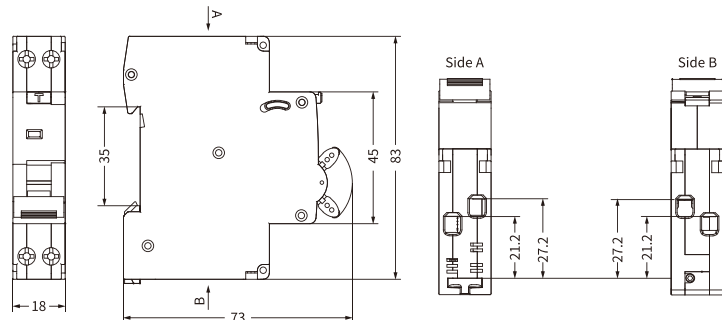


Technical Data

Standard	IEC/EN61009-1
Protection	Ground fault, Overcurrent and short circuit, Over-voltage(selectable)
Type of trip	Ground fault : Electro-magnetic Overload and short circuit :Thermo-magnetic
Type of protection (electric leakage)	AC,A
No.of poles	1P+N 2module , N line with disconnected
Rated currents (In)	6,10,16,20,25,32,40A
Rated sensitivity currents I _{Δn}	30,100,300mA
Residual current off-time under I _{Δn}	≤ 0.1s
Reted residual making and breaking capacity(I _{Δm})	500A(In≤50A), 10In(In>50A)
Rated voltage (Ue)	230/240V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A
Energy Limiting Class	3
Rated impulse withstand voltage(1.5/50) U _{imp}	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Ground fault indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar/Fork-type busbar
Max.terminal size for cable	25mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom



Overall and Installation Dimension(mm)



Technical Data

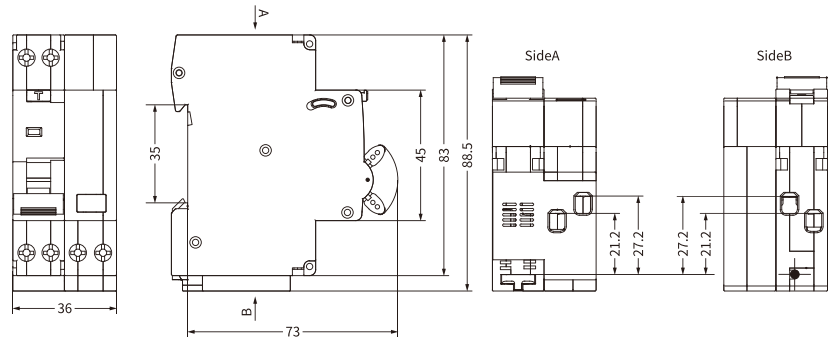
Standard	IEC/EN61009-1
Protection	Ground fault, Overcurrent and short circuit
Type of trip	Ground fault : Electronic Overload and short circuit :Thermo-magnetic
Type of protection (electric leakage)	AC,A
No.of poles	1P+N 1module , N line with disconnected
Rated currents (In)	6,10,16,20,25,32,40A
Rated sensitivity currents I Δ n	10,30,100,300mA
Residual current off-time under I Δ n	≤ 0.1s
Reted residual making and breaking capacity(I Δ m)	500A(In≤50A), 10In(In>50A)
Rated voltage (Ue)	230/240V~
Rated frequency	50/60Hz
Rated breaking capacity	6,000A
Energy Limiting Class	3
Rated impulse withstandard voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at Ind. Freq.for 1 min	2kV
Thermal release characteristic	(1.13-1.45) x In
Magnetic release characteristic	B:(3-5) x In, C:(5-10) x In
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Ambient temperature	-25°C to +40°C, Max.95% humidity
Terminal connection type	Cable/Pin-type busbar
Max.terminal size for cable	16mm ²
Max.tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Connection	From top and bottom

Standard_ IEC61009-1 IEC62606

RCBO EKL9-40 With Arc Fault Protective



Overall and Installation Dimension(mm)

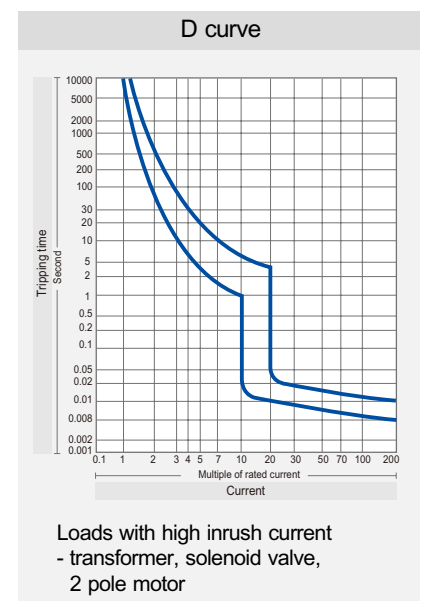
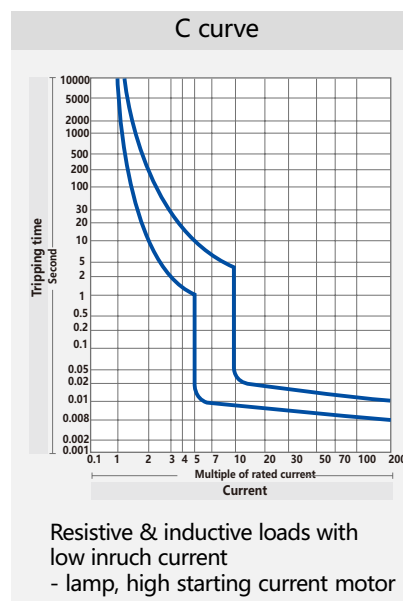
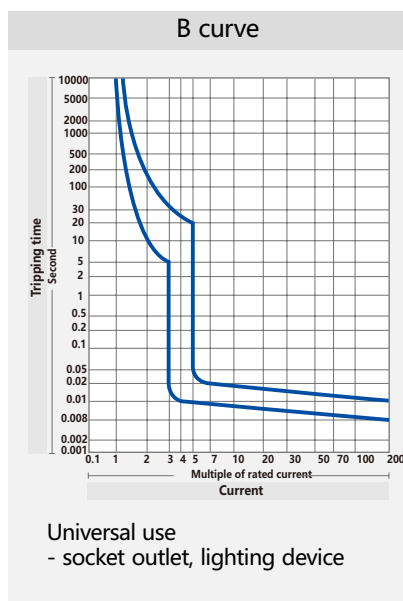


Technical Data

Mode	Electronic
Type	AC, A
Rated current In	6, 10, 16, 20, 25, 32, 40A
Poles	1P+N(Pole N could be On/Off)
Rated voltage Ue	240V~
Insulation voltage Ui	400V
Rated frequency	50Hz
Rated residual operating current(I Δ n)	10, 30, 100, 300mA
Break time under	≤0.1s
Rated breaking capacity	6,000A
Energy limiting class	3
Rated impulse withstand voltage(1.5/50) Uimp	4,000V
Dielectric test voltage at ind.Freq. for 1min	2kV
Pollution degree	2
Thermo-magnetic release characteristic	B,C
Electrical life	4,000 Cycles
Mechanical life	10,000 Cycles
Contact position indicator	Yes
Protection degree	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature (with daily average ≤35°C)	-5°C~+40°C
Storage temperature	-25°C~+70°C
Terminal connection type	Cable/Pin-type busbar
Terminal size top/bottom for cable	16mm ² 18-5AWG
Terminal size top/bottom for busbar	16mm ² 18-5AWG
Tightening torque	2.5Nm 22In-lbs
Mounting	On DIN rail EN60715(35mm) by means of fast clip device
Connection	Power supply from top

Tripping Characteristic

Curve	Rated current	Condition						
		Thermal release				Magnetic release		
		Non-tripping	Tripping	Non-tripping	Tripping time	Holding current	Tripping current	Tripping time
B	6-80A	$1.13 \times I_n$		$\leq 1h$		$3 \times I_n$		≥ 0.1
			$1.45 \times I_n$		$< 1h$		$5 \times I_n$	< 0.1
C	6-80A	$1.13 \times I_n$		$\leq 1h$		$5 \times I_n$		≥ 0.1
			$1.45 \times I_n$		$< 1h$		$10 \times I_n$	< 0.1
D	6-80A	$1.13 \times I_n$		$\leq 1h$		$10 \times I_n$		≥ 0.1
			$1.45 \times I_n$		$< 1h$		$20 \times I_n$	< 0.1





Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47
80	106.4	103.2	100	96	92	88.8	84	80	75.2	70.4	65.6	60

Types

Both RCCBs and RCBOs are divided into types depending on the operating function:

Type AC : For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.

Type A : For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.

Tripping Sensitivity Data

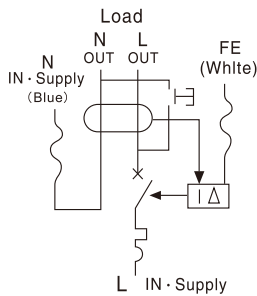
RCD with a rated residual current of maximum 30mA are used for personnel, material and fire protection, as well as for protection against direct contact.

RCD with a rated residual current of maximum 300mA are used as preventative fire protection in case of insulation faults.

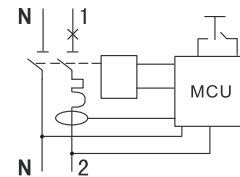
RCD with a rated residual current of 100mA co-ordinated with the earth system according to the formula $I_{\Delta n} < 50/R$, to provide protection against indirect contacts.

Circuit Diagram

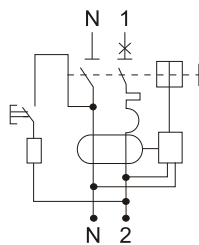
• CAL7-40



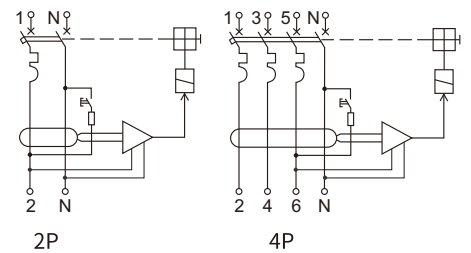
• CAL9-40AFD



• CAL3-40S

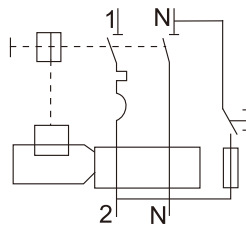


• CAL5-63S

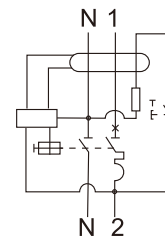


• CAL8-80S

• CAL8-40M



• CAL9-40



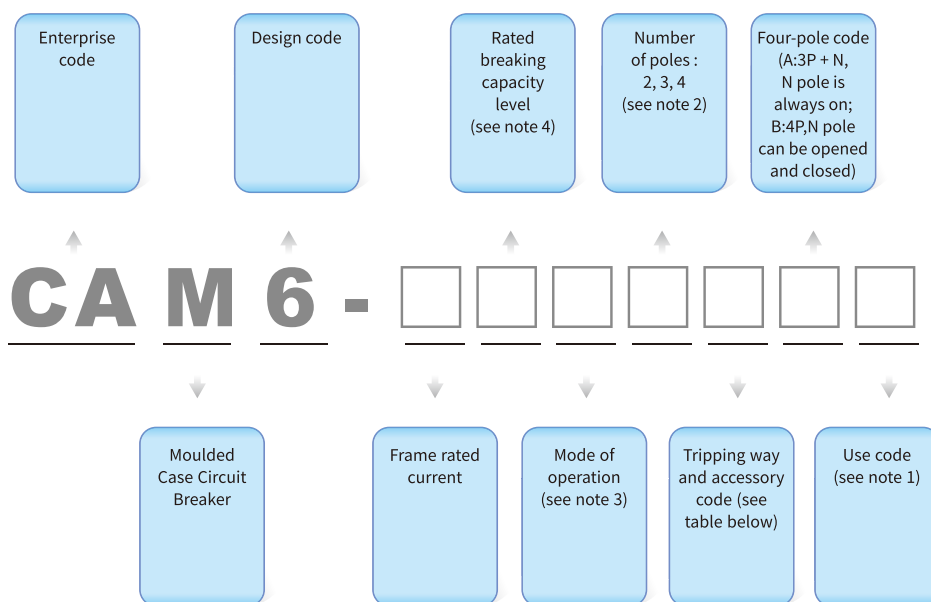


Scope Of Application

CAM6 Series Moulded Case Circuit Breaker (hereinafter as circuit breaker) is one of the latest circuit breakers developed by our company. The product has the characteristics of small size, high breaking, short arcing and high protection accuracy. It is an ideal product for power distribution and an updated product of the plastic external circuit breaker. It is suitable for infrequent conversion and infrequent motor starting in circuits with AC50Hz, rated operating voltage of 400V and below, and rated operating current to 800A use. The circuit breaker has overload, short circuit and under-voltage protection functions, which can protect the circuit and power equipment from damage.

This series of circuit breakers comply with IEC60947-2 standards.

Type Designation



Note: 1) No code for power distribution protection: circuit breaker for motor protection is indicated by 2

2) No code for three-pole products.

3) No code for handle directly operated ; the motor operation is indicated by p; the rotation of the handle operation is indicated by Z.

4) See main technical parameters.

Normal Working Condition

1. Altitude: The altitude of the installation site is 2000m and below.
2. Ambient air temperature: the ambient air temperature is not higher than +40°C (+45°C for marine products) and not lower than -5°C, and the average temperature within 24 hours does not exceed + 35°C.
3. Atmospheric conditions: when the maximum temperature is +40°C, the relative humidity of the air does not exceed 50%, and the effective high humidity can be allowed at lower temperatures; for example, RH could be 90% at 20P. Special measures should be taken for condensation that occasionally occurs on the product due to temperature changes.
4. It can work withstand the influence of humid air, the influence of salt mist and oil mist, the carving of toxin bacteria and the influence of nuclear radiation.
5. It can work reliably under normal vibration of the ship.
6. It can work reliably under the condition of a slight earthquake (level 4).
7. It can work in the medium without explosion hazard, and the medium does not have enough gas and conductive dust to corrode the metal and destroy the insulation.
8. It can work in a place free from rain and snow.
9. It can work in the maximum inclination is $\pm 22.5^\circ$.
10. Pollution degree is 3
11. Installation category: The installation category of the main circuit breaker is II, and the installation category of auxiliary circuits and control circuits not connected to the main circuit is II.

Classification

1. According to product pole number: classify into 2 poles, 3 poles and 4 poles. The forms of neutral poles (N poles) in 4-pole products are as follows:
 - ◇ N pole is not installed with overcurrent trip element, and the N pole is always connected, and it will not open and close with other three poles.
 - ◇ N pole is not installed with overcurrent trip element, and N pole is open and close with other three poles (N pole is open first and then close.)
 - ◇ N-pole installed over-current tripping components are open and close with other three poles.
 - ◇ N-pole installed overcurrent release components will not open and close together with other three poles.
2. Classify according to the rated short-circuit breaking capacity of the circuit breaker:
L: Standard type; M: Higher breaking type; H: High breaking type; R: Ultra high breaking type
3. Classify according to operation mode: handle direct operation, rotary handle operation, electric operation;
4. Classify according to the wiring method: front wiring, rear wiring, plug-in wiring;
5. Classify according to the installation method: fixed (vertical installation or horizontal installation)
6. Classify by use: power distribution and motor protection;
7. Classify according to the form of overcurrent release: electromagnetic type, thermal electromagnetic type;
8. Classify according to whether there are accessories: with accessories, without accessories; The accessories are divided into internal accessories and external accessories; internal accessories have four types: shunt release under-voltage release, auxiliary contacts and alarm contacts; external accessories have rotating handle operating mechanism, electric operating mechanism, interlock mechanism and wiring terminal block, etc. The codes of internal accessories are shown in the table below.

Standard_ IEC60947-2

Moulded Case Circuit Breaker

Accessory name	Instantaneous release	Complex trip
None	200	300
Alarm contact	208	308
Shunt release	218	310
Energy meter prepayment function	310S	310S
Auxiliary contact	220	320
Under-voltage release	230	330
Auxiliary contact and shunt release	240	340
Under-voltage release Shunt release	250	350
Two sets of auxiliary contacts	260	360
Auxiliary contact and under-voltage release	270	370
Alarm contact and shunt release	218	318
Auxiliary contact and alarm contact	228	328
Alarm contact and under-voltage release	238	338
Alarm contact Auxiliary contact and shunt release	248	348
Two sets of auxiliary contact and alarm contacts	268	368
Alarm contact Auxiliary contact and under-voltage release	278	378

Main Performance Indexes

1. Main Performance Indexes

Model	CAM6-63	CAM6-125		CAM6-250		CAM6-400		CAM6-630		CAM6-800		
Frame current	63	125		250		400		630		800		
Rated current	(6), 10, 16 20, 25, 32 40, 50, 63	80, 100, 125		100, 125, 160 180, 200, 225 250		225, 250 315, 350 400		400, 500 630		630, 700 800		
Rated insulation voltage	1000	1000		1000		1000		1000		1000		
Rated working voltage	400	400		400		400		400		400		
Rated impulse withstand voltage Uimp(KV)	8	8		8		8		8		8		
Breaking capacity code	S	S	H	S	H	S	H	S	H	S	H	
Ultimate short-circuit breaking capacity Icu(KA)	AC 415V	10	25	35	25	35	35	50	35	50	35	50
Operating short-circuit breaking capacity Ics(KA)	AC 415V	5	18	25	18	25	25	35	25	35	25	35
Arc distance (mm)	≤50	≤50				≤100						
Operating performance (times)	Times/hour	120				60				20		
	Power on	4000	3000		1500		1000		500			
	No electricity	6000	7000		6500		4000		2500			

Main Performance Indexes

2. Circuit breaker overcurrent protection characteristics

◇ Characteristics of overcurrent inverse time protection for distribution protection

Name of test current	I/h	Conventional time			Initial state	Ambient temperature
		$I_h \leq 63$	$63 < I_n \leq 250$	$I_n \geq 250$		
Conventional non - trip current	1.05	$\geq 1h$	$\geq 2h$	$\geq 2h$	Cold state	+30°C
Conventional trip current	1.30	$< 1h$	$< 2h$	$< 2h$	Thermal state	
Returnable time	3.0	5s	8s	12s	Cold state	

◇ Characteristics of overcurrent inverse time protection for motor protection

Name of test current	I/h	Conventional time		Initial state	Ambient temperature
		$10 < I_n \leq 250$	$250 \leq I_n \leq 630$		
Conventional non - trip current	1.0	$\geq 2h$		Cold state	+40°C
Conventional trip current	1.2	$< 2h$		Thermal state	
	1.5	$\leq 4min$	$\leq 8min$	Cold state	
Returnable time	7.2	$4s \leq T \leq 10s$	$6s \leq T \leq 20s$	Thermal state	

◇ Short-circuit setting value of instantaneous release

I_{nm} A	For power distribution	For motor protection
63、125、250、400	$10I_n$	$12I_n$
630	$5I_n$ and $10I_n$	
800	$10I_n$	

3. Parameters of internal accessories of circuit breaker

◇ The rated working voltage of the undervoltage release is: AC50HZ, 230V, 400V; DC110V, 220V and so on.

Undervoltage release should act when voltage drops to within 70% and 35% of the rated voltage.

The undervoltage release should not be able to prevent the circuit breaker from closing when voltage is lower than 35% of the rated voltage.

The undervoltage release should ensure to be closed and ensure reliable closing of the circuit breaker when voltage is equal to or greater than 85% of the rated voltage.

◇ Shunt release

The rated control voltage of the shunt release is: AC50HZ 230V, 400V; DC100V, 220V, etc.

Shunt release can work reliably when the rated voltage value is at 70% and 110%.

◇ The rated current of auxiliary contact and alarm contact

Classification	Frame rated current I_{nm} (A)	Conventional thermal current I_{nm} (A)	Rated working current at AC400V I_e (A)	Rated working current at DC220V I_e (A)
Auxiliary contact	≤ 250	3	0.3	0.15
	≥ 400	6	1	0.2
Alarm contact	$10 \leq I_{nm} \leq 800$	AC220V/1A, DC220V/0.15A		

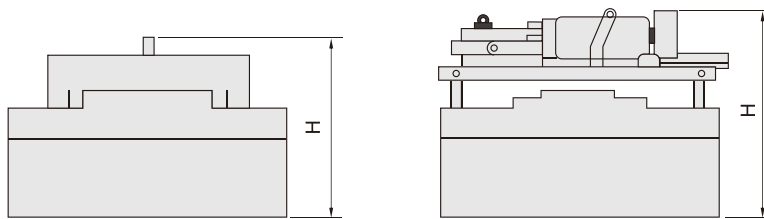
Main Performance Indexes

4. Electric operating mechanism

- ◇ The rated working voltage of the electric operating mechanism are: AC50HZ 110V, 230V; DC110V, 220V, etc.
- ◇ Motor power consumption of the electric operating mechanism is shown in the table below.

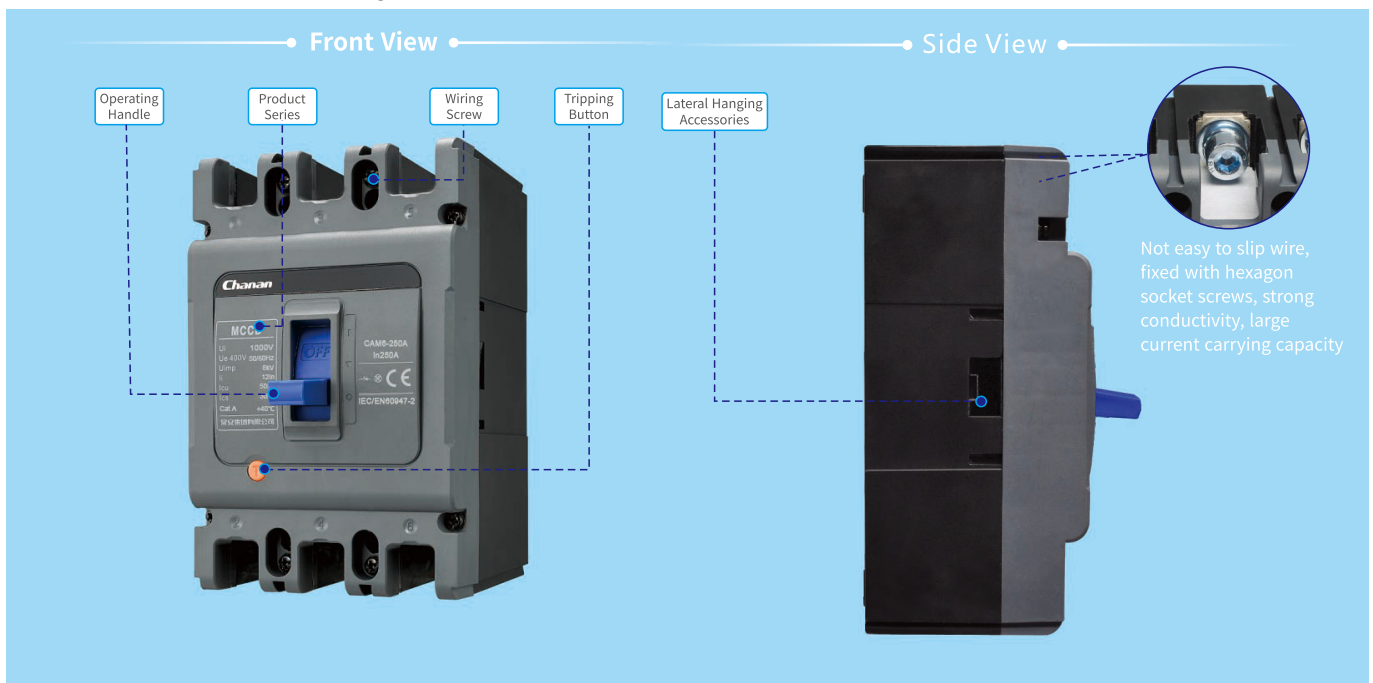
Power distribution circuit breaker	Starting current	Power consumption	Power distribution circuit breaker	Starting current	Power consumption
CAM6-63	≤5	1100	CAM6-400	≤5.7	1200
CAM6-125	≤7	1540	CAM6-630	≤5.7	1200
CAM6-250	≤8.5	1870			

- ◇ Installation height of electric operating mechanism



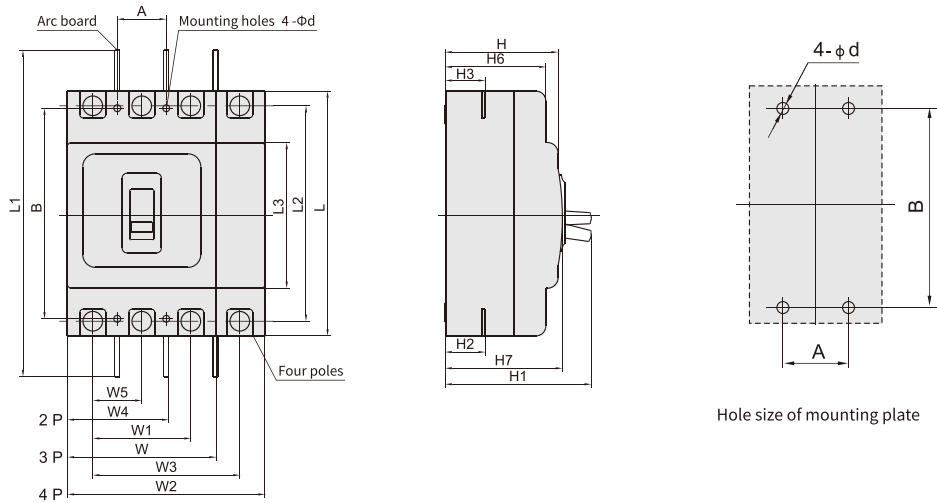
Inm	63S	125S	125H	250S	250H	400S	400H	630S	630H	800S, H
Height										
H(mm)	146	140	158	161	178	235	240	239	239	250

5. Rated impulse withstand voltage 8KV

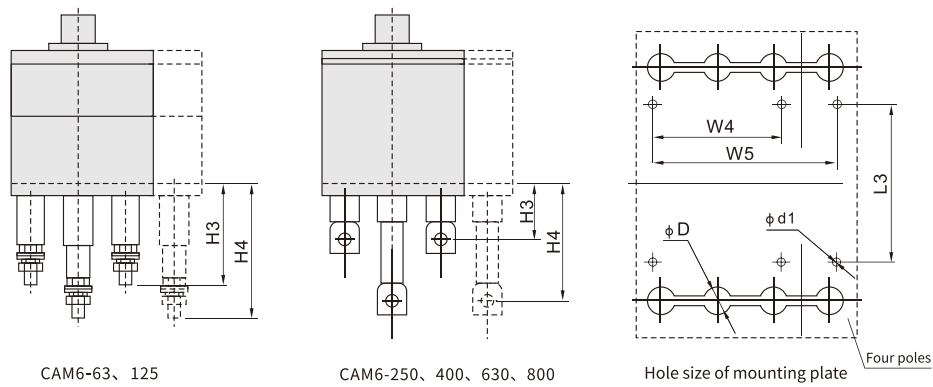


Outline And Installation Dimensions

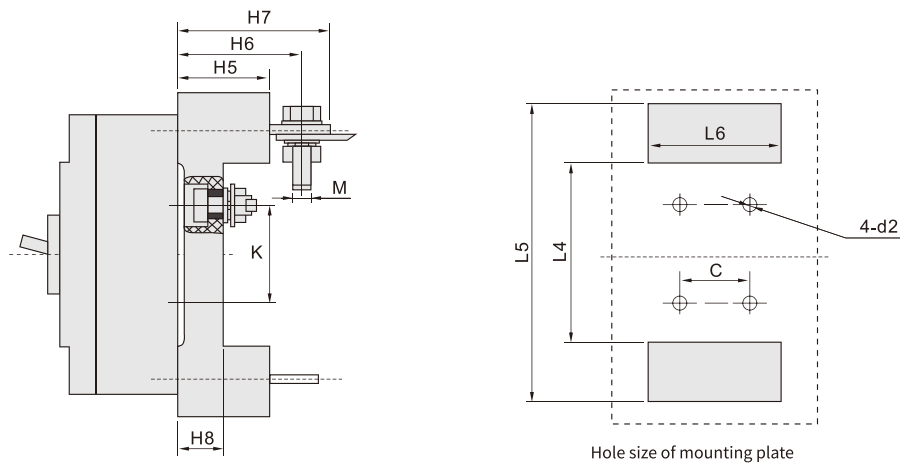
◇ Front Wiring



◇ Back-board Wiring



◇ Plug-in Type Wiring



Type		Model	CAM6-63		CAM6-125		CAM6-250		CAM6-400		CAM6-630		CAM6-800	
			S	S	H	S	H	S	H	S	H	S	H	
Dimensions	Front-board Wiring	W	78	91.5		106.5		149.5		182		210		
		W2	101	121		142		197.5		240		280		
		W4	/	64.5		74.5		/		/		280		
		L	135	150		165		257		270		280		
		H	74	69	87	86	103.5	104.5		110		116		
		H6	/	62	79.5	80.5	98.5	96.5		102		/		
		H7	/	72	90	88.5	106.5	109		114.5		/		
		W1	50	60		70		96		116		140		
		W3	75	90		105		144		174		210		
		W5	/	30		35		/		/		/		
		L1	169	220		295		476		476		490		
		H1	90.5	86	104	110	127	155		160		158		
		H2	28	24.5	23.5	23	24	37		41.5		43		
		H3	28	24.5	23.5	23	24	39		44.5		43		
		L2	117	132		144		224		234		243		
	L3	/	89		102		173.5		184		/			
	Back-board Wiring	H4	44	68		66		60		65		/		
		H5	66	108		110		120		125		/		
Installation Dimensions	A	25	30		35		44		58		70			
	B	117	129		126		194		200		243			
	φd	3.5	4.5		5		7		7		7			

Installation, Use And Maintenance

1. Close and open the circuit breaker several times to check whether the operating mechanism of the circuit breaker is stuck and whether the mechanism is reliable.
2. The "N", "1", "3" and "5" of the breaker are the input ends, and the "N", "2", "4" and "6" are the output ends, no flipping is allowed.
3. The cross-section area of the connecting wire selected when the circuit breaker is wired should be matched with the rated current. Refer to the table below for the cross-section of the main circuit wire when using copper wires and copper bars.

Rated current (A)	10	16 20	25	32	40 50	63	80	100	125 140	160	180 200 225	250	315 350	400
Conductor cross-section area(mm ²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

Rated current value (A)	Cable		Copper bar	
	Cross-section area (mm ²)	Quantity	Size (mm×mm)	Quantity
500	150	2	30×5	2
630	185	2	40×5	2
800	240	3	50×5	2

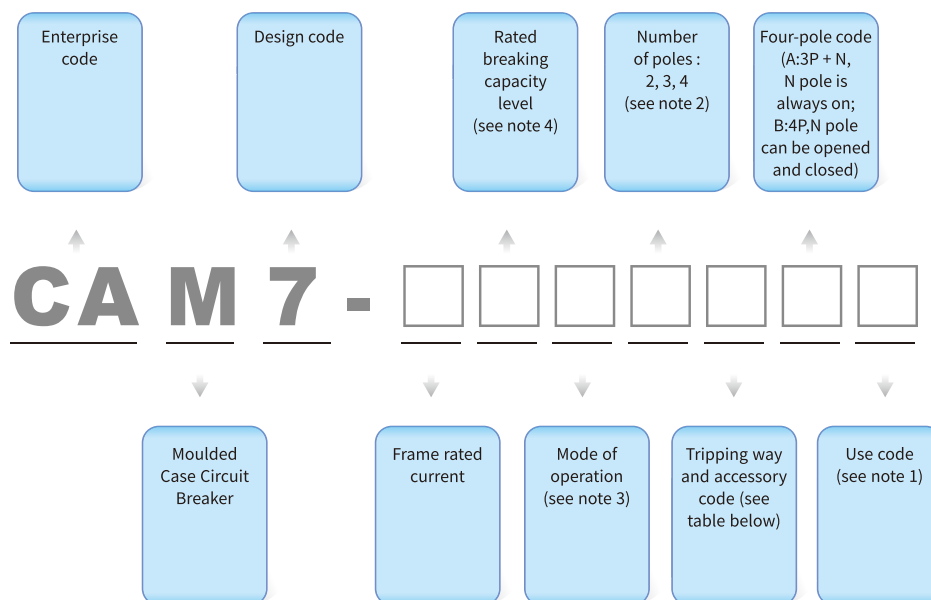
4. Confirm that all terminal connections and fixing screws should be tightened without looseness before use.
5. Install the circuit breaker separately and fix it vertically in a dry and ventilated place. It should be easy to maintain and operate, generally $1 \geq 1.5$ meters from the ground.
6. Confirm that there are no short-circuits or short-circuits to ground between the terminals or exposed live parts.
7. After the circuit breaker is overloaded, it is necessary to find out the reason and eliminate the fault. After the bimetal in the circuit breaker is reset, the circuit can be energized.



Scope Of Application

CAM7 Series Moulded Case Circuit Breaker (hereinafter as circuit breaker) is one of the latest circuit breakers developed by our company. The product has the characteristics of small size, high breaking, short arcing and high protection accuracy. It is an ideal product for power distribution and an updated product of the plastic external circuit breaker. It is suitable for infrequent conversion and infrequent motor starting in circuits with AC50Hz, rated operating voltage of 400V and below, and rated operating current to 800A use. The circuit breaker has overload, short circuit and under-voltage protection functions, which can protect the circuit and power equipment from damage. This series of circuit breakers comply with IEC60947-2 standards.

Type Designation



Note: 1) No code for power distribution protection: circuit breaker for motor protection is indicated by 2

2) No code for three-pole products.

3) No code for handle directly operated ; the motor operation is indicated by p; the rotation of the handle operation is indicated by Z.

4) See main technical parameters.

Classification

1. According to product pole number: classify into 2 poles, 3 poles and 4 poles. The forms of neutral poles (N poles) in 4-pole products are as follows:
 - ◇ N pole is not installed with overcurrent trip element, and the N pole is always connected, and it will not open and close with other three poles.
 - ◇ N pole is not installed with overcurrent trip element, and N pole is open and close with other three poles (N pole is open first and then close.)
 - ◇ N-pole installed over-current tripping components are open and close with other three poles.
 - ◇ N-pole installed overcurrent release components will not open and close together with other three poles.
2. Classify according to the rated short-circuit breaking capacity of the circuit breaker:
 - L: Standard type; M. Higher breaking type; H. High breaking type; R: Ultra high breaking type
3. Classify according to operation mode: handle direct operation, rotary handle operation, electric operation;
4. Classify according to the wiring method: front wiring, rear wiring, plug-in wiring;
5. Classify according to the installation method: fixed (vertical installation or horizontal installation)
6. Classify by use: power distribution and motor protection;
7. Classify according to the form of overcurrent release: electromagnetic type, thermal electromagnetic type;
8. Classify according to whether there are accessories: with accessories, without accessories;

The accessories are divided into internal accessories and external accessories; internal accessories have four types: shunt release under-voltage release, auxiliary contacts and alarm contacts; external accessories have rotating handle operating mechanism, electric operating mechanism, interlock mechanism and wiring terminal block, etc. The codes of internal accessories are shown in the table below.

Normal Working Condition

1. Altitude: The altitude of the installation site is 2000m and below.
2. Ambient air temperature: the ambient air temperature is not higher than + 40°C (+45°C for marine products) and not lower than -5°C, and the average temperature within 24 hours does not exceed +35°C.
3. Atmospheric conditions: when the maximum temperature is + 40°C, the relative humidity of the air does not exceed 50%, and the effective high humidity can be allowed at lower temperatures; for example, RH could be 90% at 20P. Special measures should be taken for condensation that occasionally occurs on the product due to temperature changes.
4. It can work withstand the influence of humid air, the influence of salt mist and oil mist, the carving of toxin bacteria and the influence of nuclear radiation.
5. It can work reliably under normal vibration of the ship.
6. It can work reliably under the condition of a slight earthquake (level 4).
7. It can work in the medium without explosion hazard, and the medium does not have enough gas and conductive dust to corrode the metal and destroy the insulation.
8. It can work in a place free from rain and snow.
9. It can work in the maximum inclination is ±22.5°.
10. Pollution degree is 3
11. Installation category: The installation category of the main circuit breaker is II, and the installation category of auxiliary circuits and control circuits not connected to the main circuit is II.

Accessory name	Instantaneous release	Complex trip
None	200	300
Alarm contact	208	308
Shunt release	218	310
Energy meter prepayment function	310S	310S
Auxiliary contact	220	320
Under-voltage release	230	330
Auxiliary contact and shunt release	240	340
Under-voltage release Shunt release	250	350
Two sets of auxiliary contacts	260	360
Auxiliary contact and under-voltage release	270	370
Alarm contact and shunt release	218	318
Auxiliary contact and alarm contact	228	328
Alarm contact and under-voltage release	238	338
Alarm contact Auxiliary contact and shunt release	248	348
Two sets of auxiliary contact and alarm contacts	268	368
Alarm contact Auxiliary contact and under-voltage release	278	378

Standard_ IEC60947-2

Moulded Case Circuit Breaker

Main Performance Indexes

1. Main Performance Indexes

Model	CAM7-63	CAM7-125		CAM7-250		CAM7-400		CAM7-630		CAM7-800		
Frame current	63	125		250		400		630		800		
Rated current	(6)、10、16 20、25、32 40、50、63	80、100、125		100、125、160 180、200、225 250		225、250 315、350 400		400、500 630		630、700 800		
Rated insulation voltage	1000	1000		1000		1000		1000		1000		
Rated working voltage	400	400		400		400		400		400		
Rated impulse withstand voltage Uimp(KV)	8	8		8		8		8		8		
Breaking capacity code	S	S	H	S	H	S	H	S	H	S	H	
Ultimate short-circuit breaking capacity Icu(KA)	AC 415V	10	25	35	25	35	35	50	35	50	35	50
Operating short-circuit breaking capacity Ics(KA)	AC 415V	5	18	25	18	25	25	35	25	35	25	35
Arc distance (mm)	≤50	≤50				≤100						
Operating performance (times)	Times/hour	120						60		20		
	Power on	4000	3000			1500		1000		500		
	No electricity	6000	7000			6500		4000		2500		

2. Circuit breaker overcurrent protection characteristics

◇ Characteristics of overcurrent inverse time protection for distribution protection

Name of test current	I/h	Conventional time			Initial state	Ambient temperature
		$I_h \leq 63$	$63 < I_n \leq 250$	$I_n \geq 250$		
Conventional non - trip current	1.05	≥1h	≥2h	≥2h	Cold state	+30°C
Conventional trip current	1.30	<1h	<2h	<2h	Thermal state	
Returnable time	3.0	5s	8s	12s	Cold state	

◇ Characteristics of overcurrent inverse time protection for motor protection

Name of test current	I/h	Conventional time		Initial state	Ambient temperature
		$10 < I_n \leq 250$	$250 \leq I_n \leq 630$		
Conventional non - trip current	1.0	≥2h		Cold state	+40°C
Conventional trip current	1.2	<2h		Thermal state	
	1.5	≤4min	≤8min	Cold state	
Returnable time	7.2	$4s \leq T \leq 10s$	$6s \leq T \leq 20s$	Thermal state	

◇ Short-circuit setting value of instantaneous release

Inm A	For power distribution	For motor protection
63、125、250、400	10In	12In
630	5In and 10In	
800	10In	

Standard_ IEC60947-2

Moulded Case Circuit Breaker

3. Parameters of internal accessories of circuit breaker

- ◇ The rated working voltage of the undervoltage release is: AC50HZ, 230V, 400V; DC110V, 220V and so on.
Undervoltage release should act when voltage drops to within 70% and 35% of the reated voltage.
The undervoltage release should not be able to close to prevent the circuit breaker from closing when voltage is lower than 35% of the rated voltage.
The undervoltage relase should ensure to be closed and ensure reliable closing of the circuit breaker when voltage is equal to or greater than 85% of the rated voltage.
- ◇ Shunt release
The rated control voltage of the shunt release is: AC50HZ 230V, 400V; DC100V, 220V, etc.
Shunt release can work reliably when the rated voltage value is at 70% and 110%.
- ◇ The rated current of auxiliary contact and alarm contact

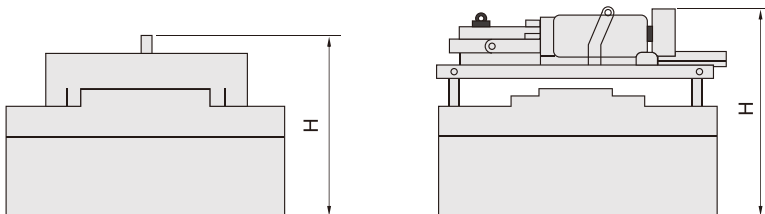
Classification	Frame rated current Inm(A)	Conventional thermal current Inm(A)	Rated working current at AC400V Ie(A)	Rated working current at DC220V Ie(A)
Auxiliary contact	≤250	3	0.3	0.15
	≥400	6	1	0.2
Alarm contact	10≤Inm≤800	AC220V/1A, DC220V/0.15A		

4. Electric operating mechanism

- ◇ The rated working voltage of the electric operating mechanism are: AC50HZ 110V, 230V; DC110V, 220V, etc.
- ◇ Motor power consumption of the electric operating mechanism is shown in the table below.

Power distribution circuit breaker	Starting current	Power consumption	Power distribution circuit breaker	Starting current	Power consumption
CAM7-63	≤5	1100	CAM6-400	≤5.7	1200
CAM7-125	≤7	1540	CAM6-630	≤5.7	1200
CAM7-250	≤8.5	1870			

- ◇ Installation height of electric operating mechanism

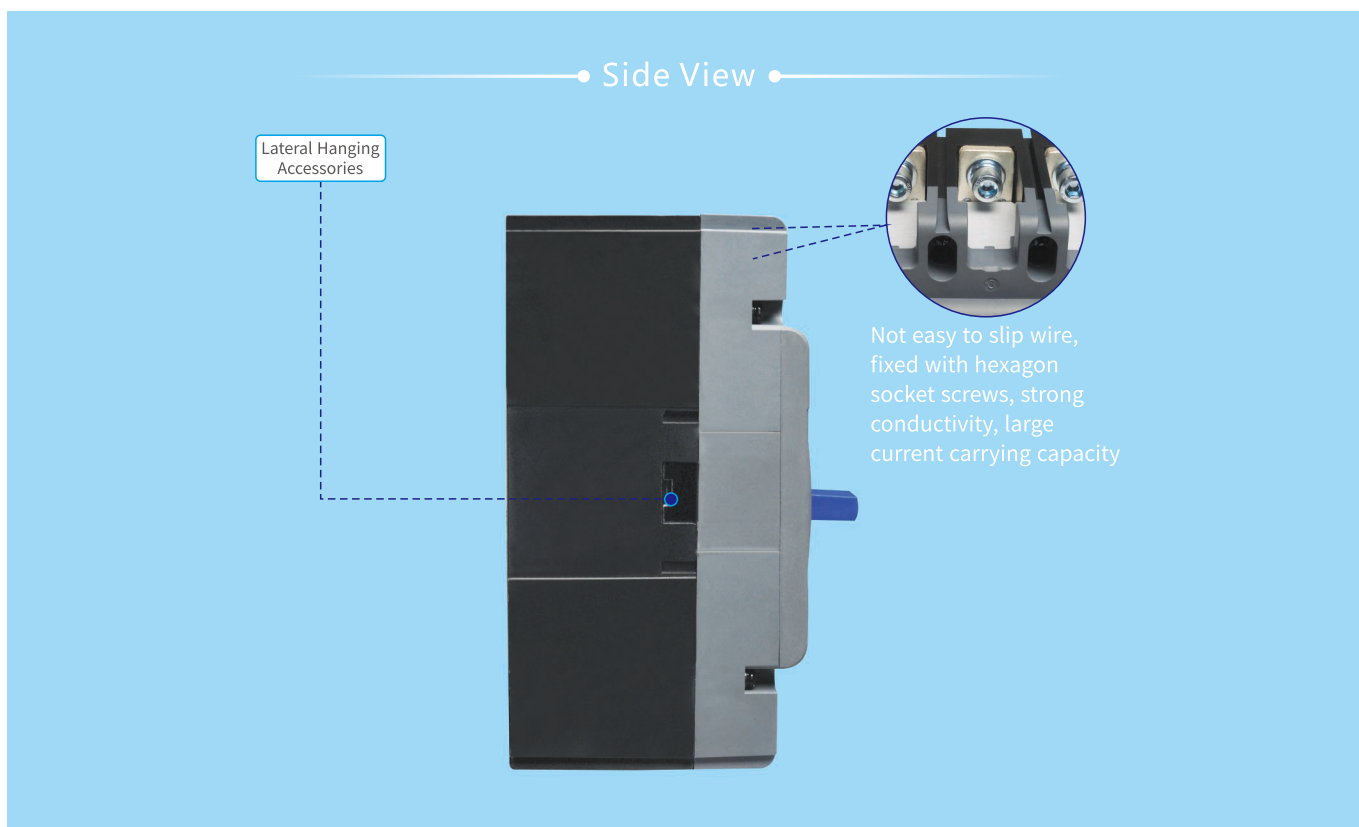


Inm Height	63S	125S	125H	250S	250H	400S	400H	630S	630H	800S、H
H(mm)	146	140	158	161	178	235	240	239	239	250

Standard_ IEC60947-2

Moulded Case Circuit Breaker

5. Rated impulse withstand voltage 8KV

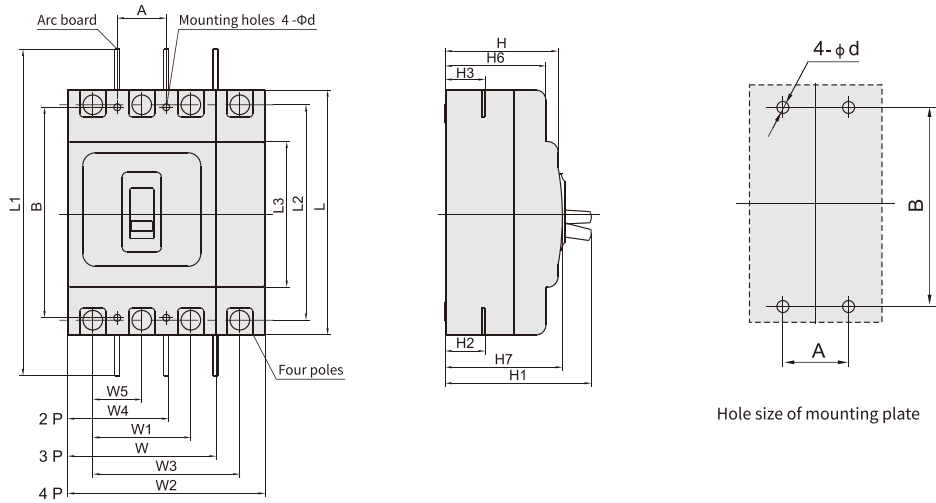


Standard_ IEC60947-2

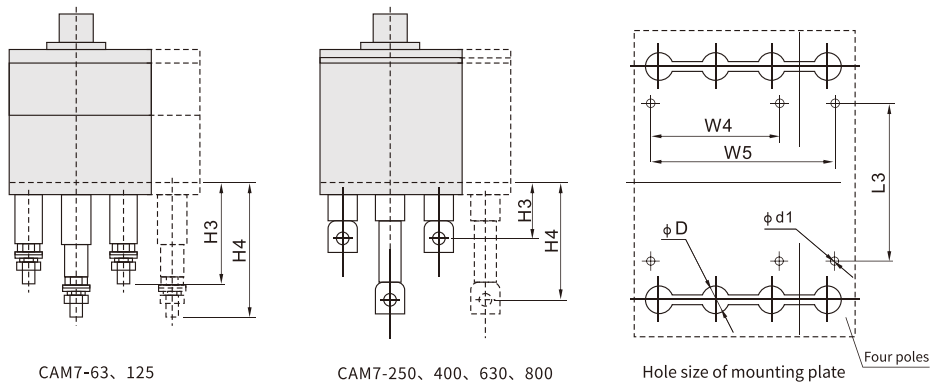
Moulded Case Circuit Breaker

Outline And Installation Dimensions

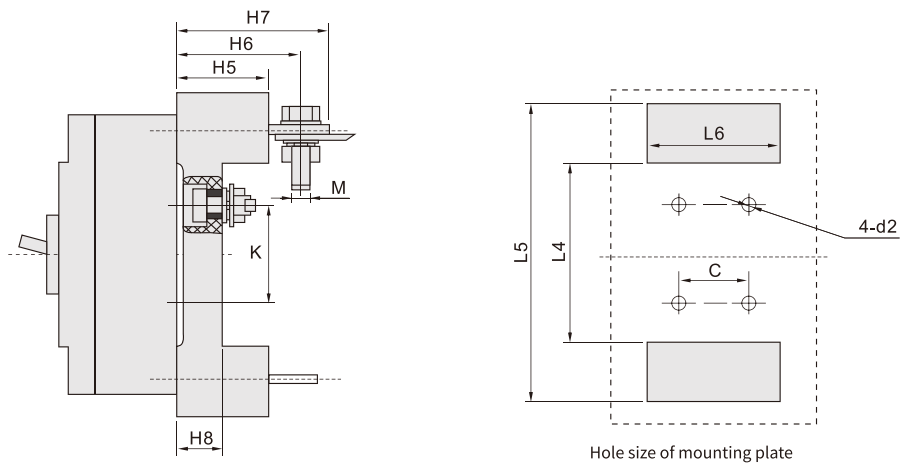
◇ Front Wiring



◇ Back-board Wiring



◇ Plug-in Type Wiring



Type		Model	CAM7-63		CAM7-125		CAM7-250		CAM7-400		CAM7-630		CAM7-800	
			S		S	H	S	H	S	H	S	H	S	H
Dimensions	Front-board Wiring	W	78		91.5		106.5		149.5		182		210	
		W2	101		121		142		197.5		240		280	
		W4	/		64.5		74.5		/		/		280	
		L	135		150		165		257		270		280	
		H	74		69	87	86	103.5	104.5		110		116	
		H6	/		62	79.5	80.5	98.5	96.5		102		/	
		H7	/		72	90	88.5	106.5	109		114.5		/	
		W1	50		60		70		96		116		140	
		W3	75		90		105		144		174		210	
		W5	/		30		35		/		/		/	
		L1	169		220		295		476		476		490	
		H1	90.5		86	104	110	127	155		160		158	
		H2	28		24.5	23.5	23	24	37		41.5		43	
		H3	28		24.5	23.5	23	24	39		44.5		43	
		L2	117		132		144		224		234		243	
	L3	/		89		102		173.5		184		/		
	Back-board Wiring	H4	44		68		66		60		65		/	
		H5	66		108		110		120		125		/	
Installation Dimensions	A	25		30		35		44		58		70		
	B	117		129		126		194		200		243		
	φd	3.5		4.5		5		7		7		7		

Installation, Use And Maintenance

1. Close and open the circuit breaker several times to check whether the operating mechanism of the circuit breaker is stuck and whether the mechanism is reliable.
2. The "N", "1", "3" and "5" of the breaker are the input ends, and the "N", "2", "4" and "6" are the output ends, no flipping is allowed.
3. The cross-section area of the connecting wire selected when the circuit breaker is wired should be matched with the rated current. Refer to the table below for the cross-section of the main circuit wire when using copper wires and copper bars.

Rated current (A)	10	16 20	25	32	40 50	63	80	100	125 140	160	180 200 225	250	315 350	400
Conductor cross-section area(mm ²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

Rated current value (A)	Cable		Copper bar	
	Cross-section area (mm ²)	Quantity	Size (mm×mm)	Quantity
500	150	2	30×5	2
630	185	2	40×5	2
800	240	3	50×5	2

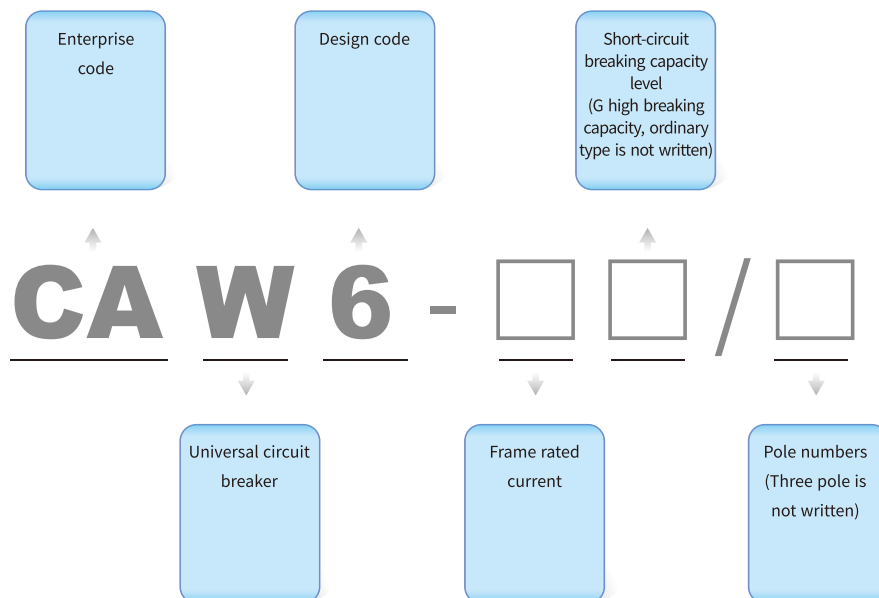
4. Confirm that all terminal connections and fixing screws should be tightened without looseness before use.
5. Install the circuit breaker separately and fix it vertically in a dry and ventilated place. It should be easy to maintain and operate, generally $1 \geq 1.5$ meters from the ground.
6. Confirm that there are no short-circuits or short-circuits to ground between the terminals or exposed live parts.
7. After the circuit breaker is overloaded, it is necessary to find out the reason and eliminate the fault. After the bimetal in the circuit breaker is reset, the circuit can be energized.



Scope Of Application

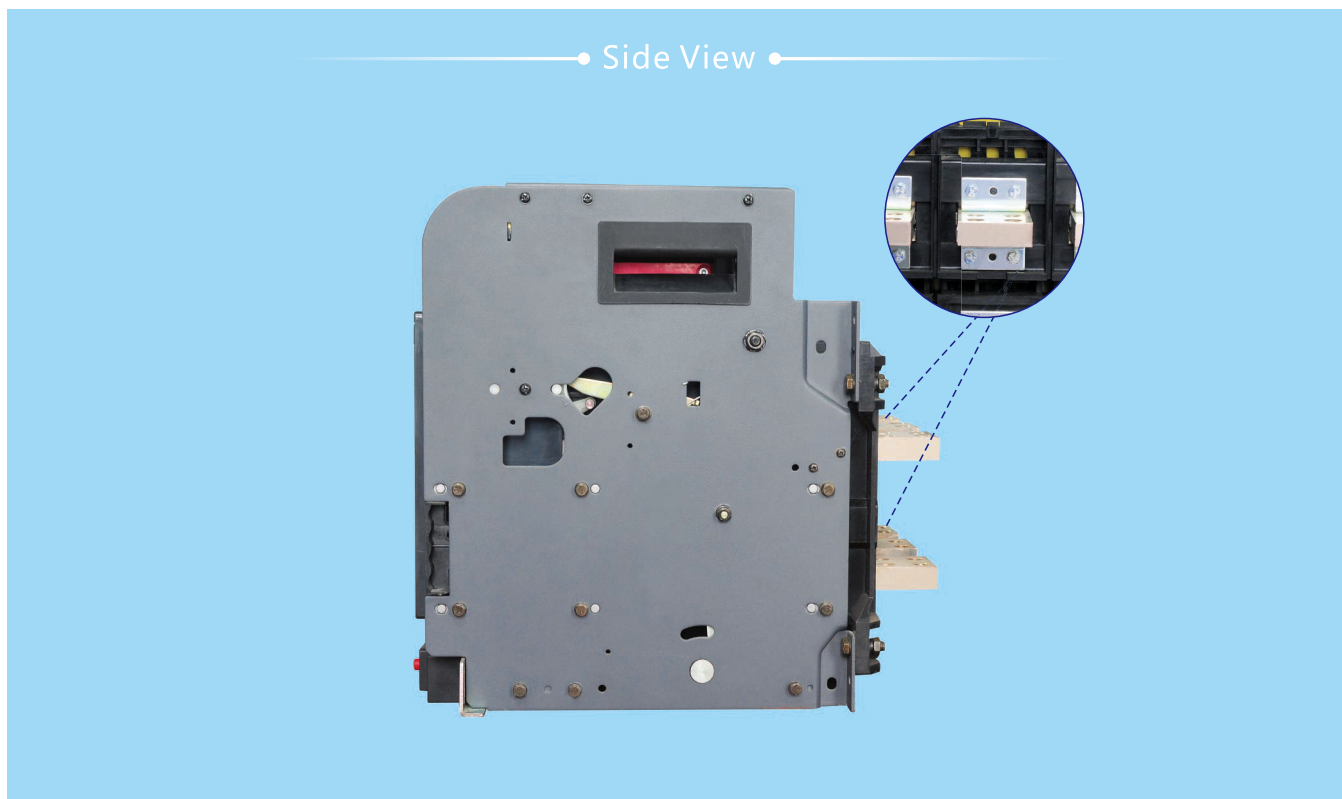
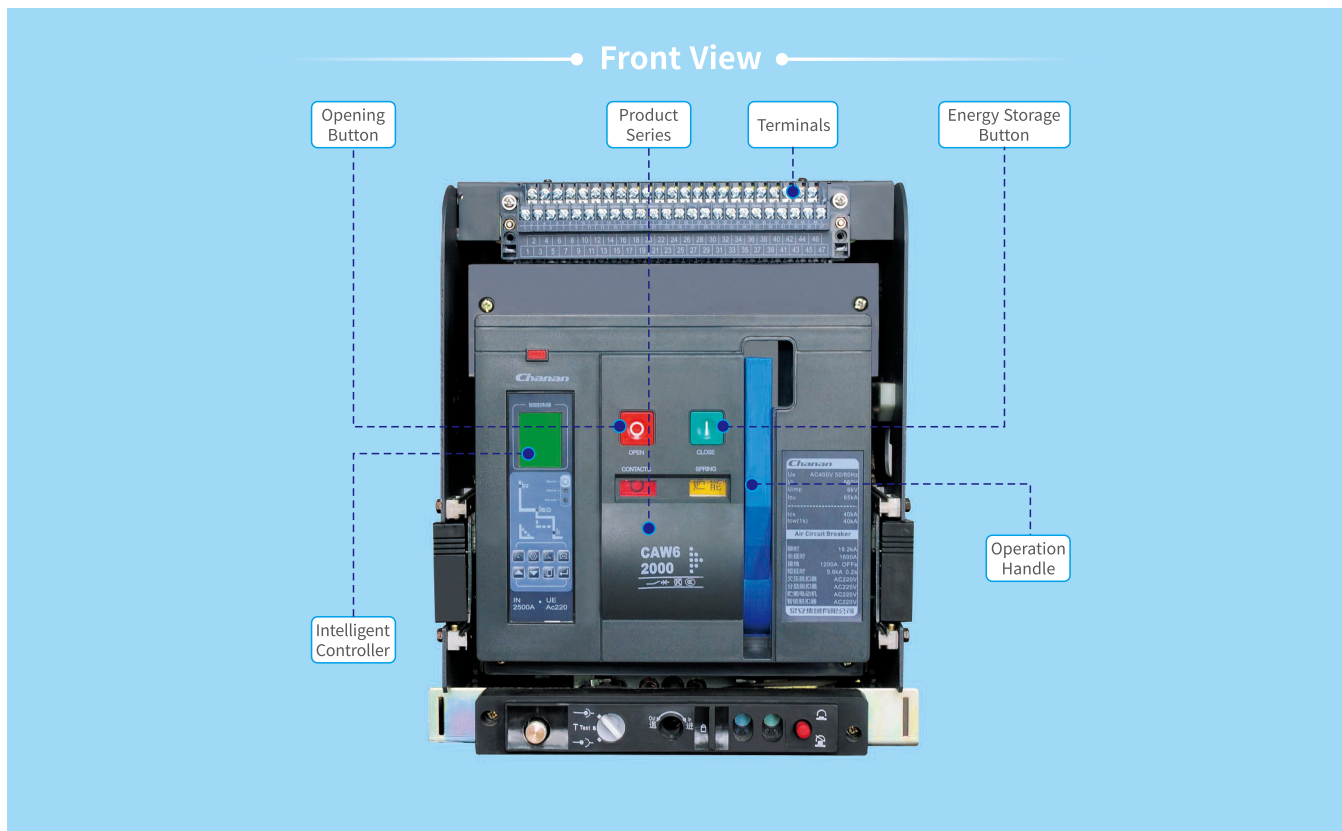
CAW6 series intelligent universal circuit breaker (hereinafter referred to as circuit breaker) is suitable for AC 50Hz, rated voltage 400V, 690V, rated current 630 ~ 6300A. It is mainly used in distribution networks to distribute electrical energy and protect circuits and power equipment from overload, under-voltage, short circuit, single-phase ground faults. The circuit breaker has a variety of intelligent protection functions, which can achieve selective protection and precise action. Its technology can reach the advanced level of similar international products, and it is equipped with a communication interface, which can carry out "four remote" to meet the control center and requirements for automated systems. Avoid unnecessary power outages and improve power supply reliability. This series of products complies with IEC60947-2 standards.

Model Meaning



Normal Working Condition

1. The ambient air temperature is $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$, and the average temperature of 24 hours does not exceed $+35^{\circ}\text{C}$.
2. The altitude of the installation site does not exceed 2000m
3. When the maximum temperature of the installation site is $+40^{\circ}\text{C}$, the relative humidity of the air shall not exceed 50%, and higher relative humidity can be allowed under lower temperature; the average maximum relative humidity of the wettest month is 90%, and the average minimum temperature of the month is $+25^{\circ}\text{C}$, taking into account the condensation on the product surface due to temperature change
4. The pollution degree is level 3
5. The installation category of the main circuit of the circuit breaker, the under-voltage controller coil and the primary coil of the power transformer is IV, and the installation category of the other auxiliary circuits and control circuits is III
6. The vertical inclination of the circuit breaker installation does not exceed 5
7. The circuit breaker is installed in the cabinet, protection level is IP40; if add door frame, the protection level can reach IP54



Classification

- The circuit breaker is divided into three poles and four poles according to the number of poles.
- The rated current of the circuit breaker is divided into 1600A, 2000A, 3200A, 4000A, 5000A (capacity increased to 6300A).
- Circuit breakers are divided according to purposes: power distribution, motor protection, generator protection.
- According to operation mode:
 - ◇ Motor operation;
 - ◇ Manual operation (for overhaul and maintenance).
- According to installation mode:
 - ◇ Fix type: horizontal connection, if add vertical bus, the cost of vertical bus will be calculated separately;
 - ◇ draw-out type: horizontal connection, if add vertical bus, the cost of vertical bus will be calculated separately.
- According to the type of tripping release:
 - Intelligent over current tripping release, Under-voltage instantaneous (or delay) release and Shunt release
- According to the type of intelligent controller:
 - ◇ M type (general intelligent type);
 - ◇ H type (communication intelligent type).

Main Technical Parameters

- The rated voltage and rated current of circuit breaker

Rated current of frame level Inm(A)	Poles numbers	Rated frequency (Hz)	Rated insulated voltage Ui(V)	Rated working voltage Ue(V)	Rated current In(A)	N pole rated current
1600	3 4	50	1000	400、690	200、400、630、800、1000、1250、1600	50%In 100%In
2000					400、630、800、1000、1250、1600、2000	
3200					2000、2500、2900、3200	
4000					3200、3600、4000	
5000					400 5000 6300 (Capacity increase)	

- The rated short-circuit breaking capacity of the circuit breaker and the withstand current during short circuit (the arcing distance of the circuit breaker is “zero”)

Rated current of frame level In(A)		1600/1600G	2000/2000G	3200	4000	5000
Rated ultimate short circuit breaking capacity Icu(kA)	400V	55/65	65/80	100	100	120
	690V	35/50	50	65	85	75
Rated short circuit breaking capacity Ics(kA)	400V	55/65	40/50	65	100	100
	690V	35/50	40	50	85	75
Rated short circuit making capacity Icm(kA)(Peak)/cosφ	400V	110/143	176/0.2	220/0.2	264	264/0.2
	690V	73.5/105	105/0.25	143/0.2	165	187/0.2
Rated short time withstand current Icw(1s)	400V	42/50	40/50	65	100	85/100(MCR)
	690V	35/42	40	50	85	65/75(MCR)

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Intelligent Universal Circuit Breaker

3. Operation performance of circuit breaker

Rated current of frame level Inm(A)		1600(G)	2000(G)	3200	4000	5000	Operating cycles per hour
Electrical life	AC690V	1000	500	500	500	500	20
	AC400V	1000	500	500	500	500	20
Mechanical life	Maintenance free	2500	2500	2500	2000	2000	20
	With maintenance	5000	10000	10000	8000	8000	20

Note:

- (1) During each power-on operation cycle, the maximum time for circuit breaker to keep on is 2s
- (2) Each operation cycle includes: closing operation followed by opening operation(mechanical life), or connecting operation followed by breaking operation (electrical life)

4. Operating voltage and required power of circuit breaker shunt release, under-voltage release, operating mechanism, intelligent controller for energy release electromagnet

Power required	Rated working voltage (V)	AC(50Hz)		DC	
		220V	380V	110V	220V
Shunt release		40VA	40VA	40W	40W
Under-voltage release		24VA	36VA	-	-
Energy release electromagnet		24VA	36VA	24W	110W
Operating mechanism motor	Inm=3200A	85VA	85VA	-	150W
	Inm=3200A, 400A	110VA	110VA	-	24W
	Inm=6300A	150VA	150VA	-	

Intelligent controller power supply voltage AC220V, AV380V, DC220V, DC110V

Note:

The reliable operating voltage range of shunt release is 70%~110%, and the release electromagne and operating mechanism are 85%~110%.

5. Performance of circuit breaker under-voltage release

category		Under-voltage delay release	Under-voltage instantaneous release
Tripping time		Delay 1, 3, 5, 10, 20s	Instantaneous
Tripping voltage value	(37~70)%Ue	Can make the circuit breaker open	
	≤35%Ue	Circuit breaker cannot be closed	
	80%Ue~110%Ue	Circuit breaker can be closed reliably	
The return time is ≥95%		Circuit breaker does not open	

Note:

The accuracy of the delay time of the under-voltage delay release is ±10%. When the voltage recovers to 85% Ue or above within 1/2 delay time, the circuit breaker will not be disconnected

6. Auxiliary contacts

- ◇ Auxiliary contact form: four sets of change-over switches (default)
- ◇ The rated working voltage of auxiliary contact of the circuit breaker, The rated control power is shown in Table 6.

Use category	Power supply type	Conventional heating current Ith(A)	Rated insulated voltage Ui(V)	Rated working voltage Ue(V)	Rated control power Pe
AC-15	AC	10	400	400, 230	300VA
AC-13	DC			200, 110	60W

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7. Circuit breaker power consumption (ambient temperature +40°C)

Current	1600(G)		2000(G)		3200		4000		5000
Pole	3	4	3	4	3	4	3	3	3
Power consumption	300VA	400VA	360VA	420VA	900VA	1200VA	1225VA	1240VA	1225VA

8. Protection performance of intelligent controller

The intelligent controller has overcurrent protection features such as overload long delay inverse time limit, short circuit short delay inverse time limit, short circuit short delay time limit, short circuit instantaneous protection, etc. It also has single-phase grounding and leakage protection, load monitoring and other characteristics.

The protection current and time parameters of overcurrent protection feature are generally set by manufacturer according to user's order requirements. The neutral line overcurrent protection of four-pole circuit breaker, the time parameter automatically tracks the phase line setting value in proportion. The proportional number is selected by user, that is, the N-pole rated current I_N is 50% I_N or 100% I_N . If the user doesn't have special requirements when ordering, then configure and adjust according to Table 8.

◇ If user doesn't have special requirements when ordering, the factory setting value of the intelligent trip controller is configured according to the following table:

Overload long delay	Current setting value I_{r1}	I_n			Delay time setting value t_1	15S
Short circuit short delay	Current setting value I_{r2}	$6I_{r1}$			Delay time setting value t_2	0.2S
Short-circuit instantaneous current setting value I_{r3}		$12I_n(I_n:2000A)$, $10I_n(I_n:2000A)$				
Grounding fault	Current setting value I_{r4}	CAW6-1600(G)	CAW6-2000(G)	CAW6-3200(4000)	CAW6-5000	
		$0.8I_n$ or 1200A(Choose the small one)	$0.8I_n$ or 1200A(Choose the small one)	$0.6I_n$ or 1600A(Choose the small one)	2000A	
	Delay time setting value t_4			OFF		
Load monitoring	Monitor current I_{c1}			I_n		
	Monitor current I_{c2}			I_n		

Functional Characteristics Of Different Types Of Intelligent Controllers

M type: In addition to the four section protection features of overload long time delay, short circuit short time delay, instantaneous and earth leakage, it also has fault status indication, fault record, test function, ammeter display, voltmeter display, various alarm signal output, etc. It has a wide range of protection characteristic area values and complete auxiliary functions. It is a multi-functional type and can be applied to most industrial applications with high requirements.

H type: It can have all the functions of M type. At the same time, this kind of controller can realize the “four remote” functions of telemetry, remote adjustment, remote control and remote signaling through the network card or interface converter. It is suitable for the network system and can be centrally monitored and controlled by the upper computer.

1. Ammeter function

The current of the main circuit can be displayed on the display screen. When the selection key is pressed, the current of the phase in which the indicator lamp is located or the maximum phase current will be displayed. If the selection key is pressed again, the current of the other phase will be displayed.

2. Self-diagnosis function

◇ The trip unit has the function of local fault diagnosis. When the computer breaks down, it can send out an error “E” display or alarm, and restart the computer at the same time, the user also can disconnect the circuit breaker when needed

◇ When the local ambient temperature reaches to 80°C or the temperature in the cabinet exceeds 80°C due to the heat of the contact, an alarm can be issued and the circuit breaker can be opened at a small current (when required by the user)

3. Setting function

Press the long delay, short delay, instantaneous, grounding setting function keys and +, - key to set the required current and delay time arbitrarily according to user requirements, and press the storage key after the required current or delay time is reached. For details, see the chapter on installation, use and maintenance. The setting of the trip unit can immediately stop executing this function when an overcurrent fault occurs.

4. Testing function

Press the setting key to make the set value current to long delay, short delay, instantaneous state, indicator shell and +, - key, select the required current value, and then press the testing key to carry out the test of release. There are two types of testing keys; one is non-tripping testing key, and the other one is tripping testing key. For details, see the tripping device test in the chapter of Installation, Use and Maintenance. The former testing function can be performed when the circuit breaker is connected to the power grid. When an overcurrent occurs in the network, the testing function can be interrupted and the overcurrent protection can be performed.

5. Load monitoring function

Set two setting values, Ic1 setting range (0.2~1) In, Ic2 setting range (0.2~1) In, Ic1 delay characteristic is inverse time limit characteristic, its delay setting value is 1/2 of long delay setting value. There are two kinds of delay characteristics of Ic2: the first kind is the inverse time limit characteristic, the time setting value is 1/4 of the long delay setting value; the second kind is the time limit characteristic, the delay time is 60s. The former is used to cut off the least important load of the lower stage when the current is close to the overload setting value, the latter is used to cut off the unimportant load of the lower stage when the current exceeds the value of Ic1, then current drops to make the main circuits and important load circuits remain powered. When the current drops to Ic2, a command is issued after a delay, and the circuit that has been cut off by the lower stage is turned on again to restore the power supply of the entire system, and the load monitoring feature.

6. Display function of the tripping unit

The tripping unit can display its operating current (ie ammeter function) during operation, display the section specified by its protection characteristics when a fault occurs, and lock the fault display and fault current after breaking the circuit, and display the current, time and section category of the setting section at the setting time. If it is a delayed action, the indicator light flashes during the action, and the indicator light changes from flashing to constant light after the circuit breaker is disconnected.

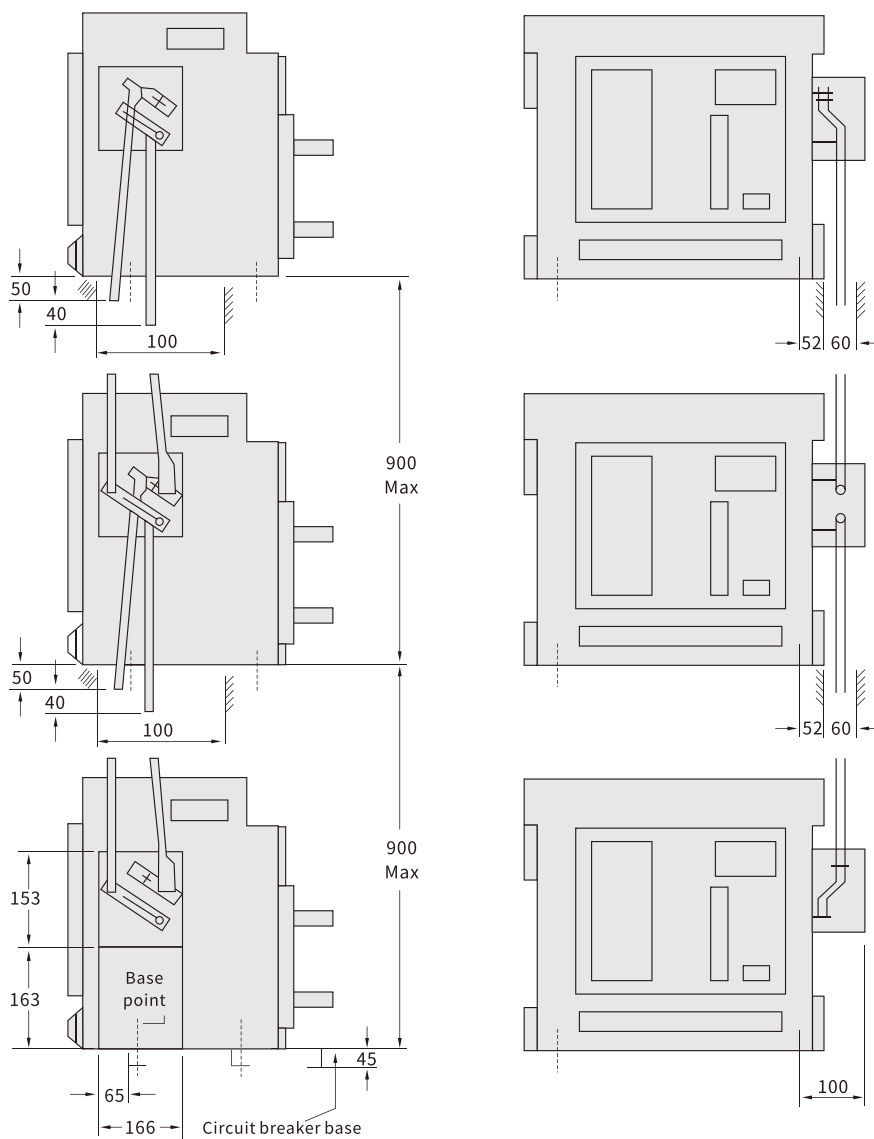
7.MCR on-off and analog tripping protection

The controller can be equipped with MCR on-off and analog tripping protection according to the user’s needs. The two modes both are instantaneous actions. The fault current signal sends action instructions directly through the hardware comparison circuit. The setting current values of the two actions are different. The setting value of the analog tripping is high, which is generally the maximum value of the instantaneous protection domain value of the controller (50ka75ka/100kA), The controller works all the time and is generally used as a backup. However, the setting value of MCR is low, generally 10kA. This function only works when the controller power on, it does not work during normal closed operation. The user can require special setting value with accuracy of ±20%.

The Mechanical Interlocking

The interlocking mechanism can interlock two or three circuit breakers for multi-channel power supply system. The mechanical interlocking device is installed on the right board of the circuit breaker. When it is installed vertically, the circuit breaker is interlocked with connecting rod; when it is installed horizontally or vertically, the circuit breaker is interlocked with steel cable, and the interlocking device is installed by the user. See Fig. 1 and Fig. 2 for the interlocking schematic diagram.

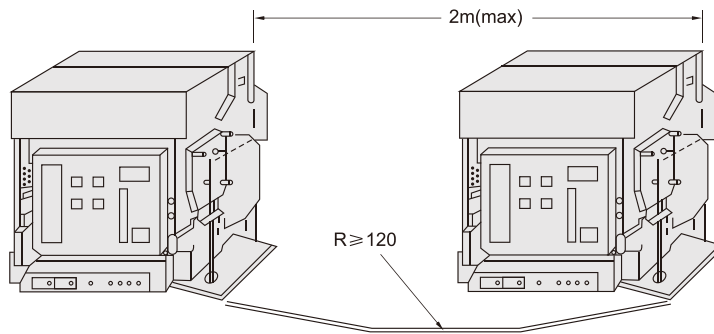
◇ Connecting rod interlocking three vertically installed circuit breakers



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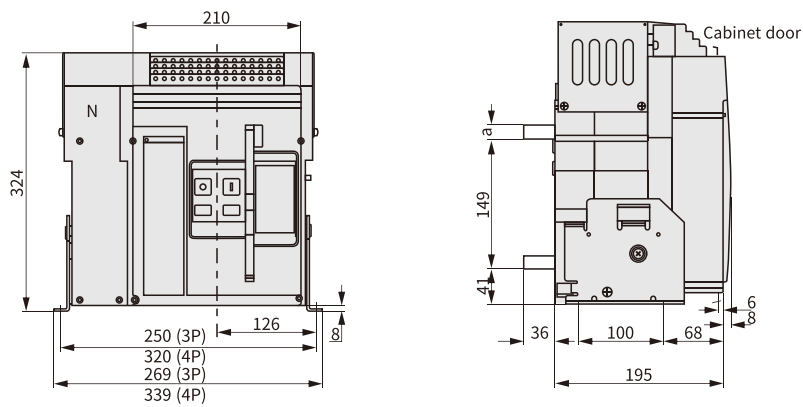
Intelligent Universal Circuit Breaker

◇ Steel cable interlock two circuit breakers installed horizontally

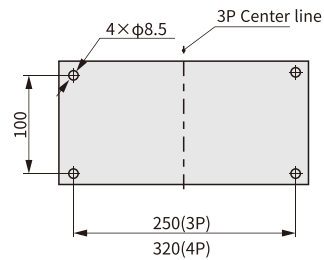
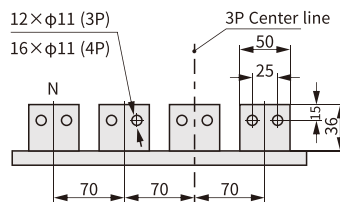


Shape And Installation Dimensions

◇ CAW6-1600(200-1600A Fixed type)



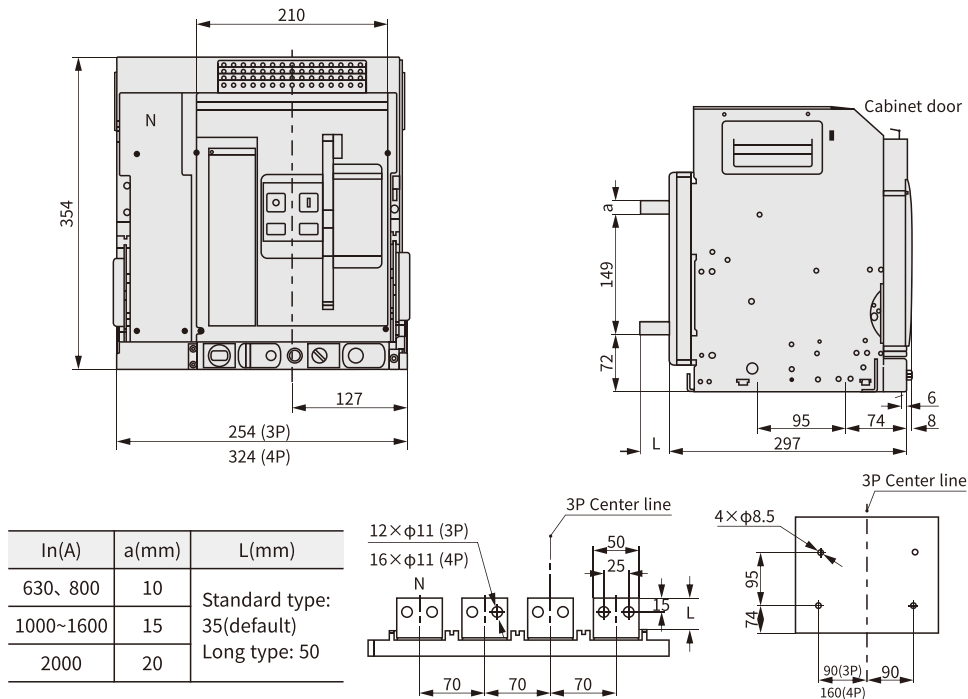
In(A)	a(mm)
200~630	5
800~1250	10
1600	16



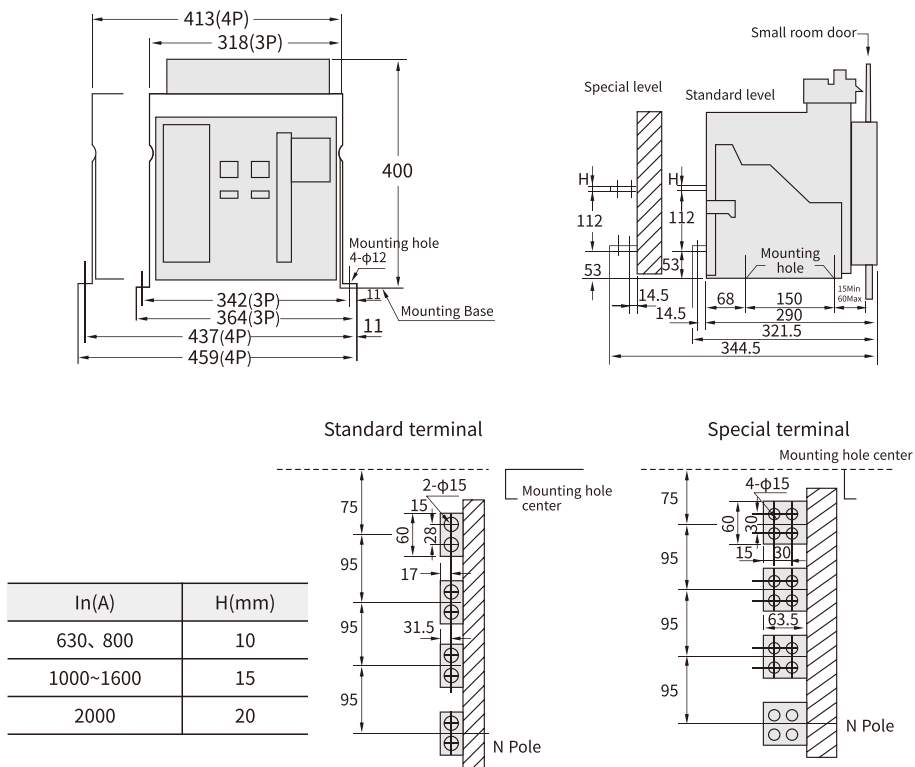
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◇ CAW6-1600(200~1600A Drawer type)



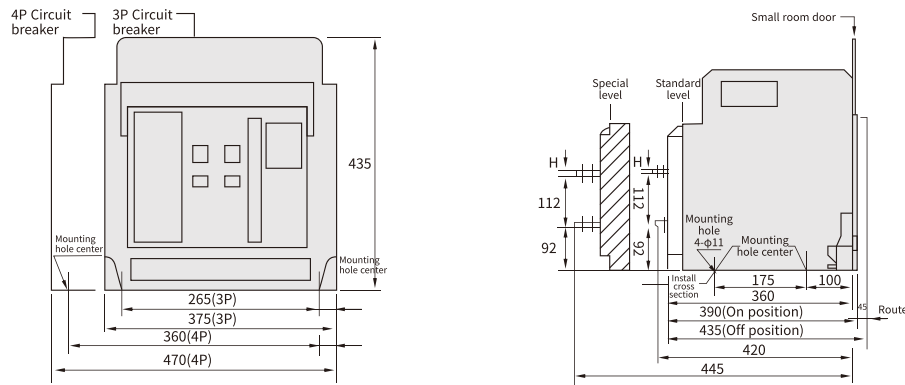
◇ CAW6-2000(630~2000A Fixed type)



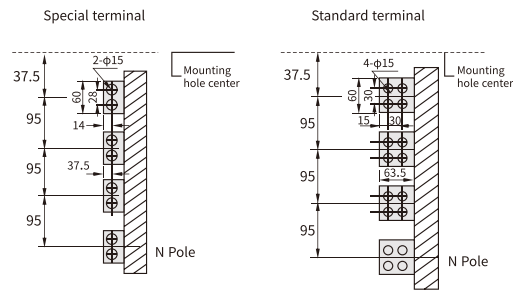
Standard_ IEC60947-2

Intelligent Universal Circuit Breaker

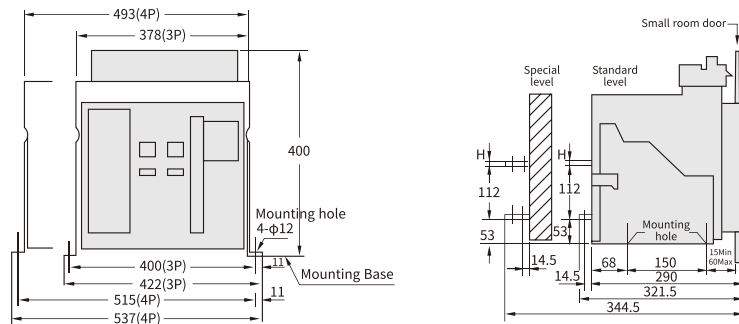
◇ CAW6-2000(630~2000A Drawer type)



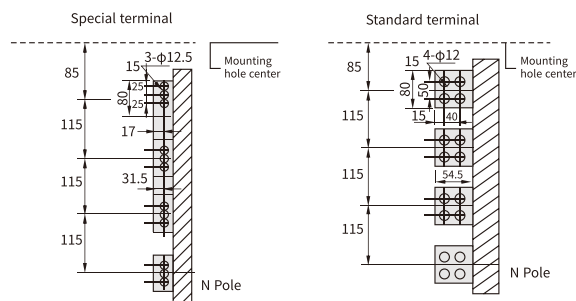
In(A)	H(mm)
630、800	10
1000~1600	15
2000	20



◇ CAW6-3200(2000~2500A Fixed type)



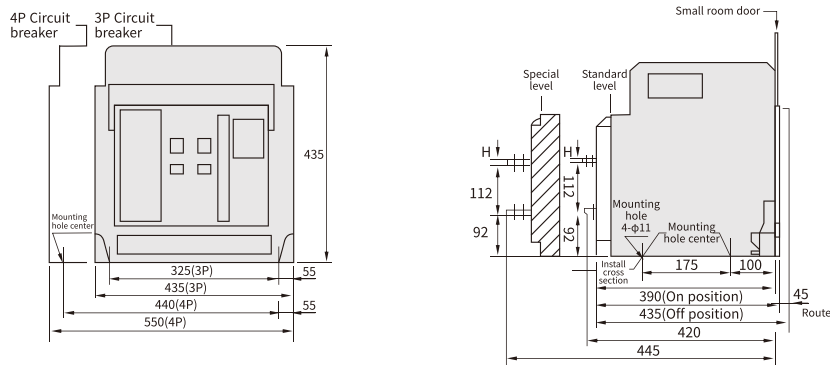
In(A)	H(mm)
2000~2500	20
3200	30



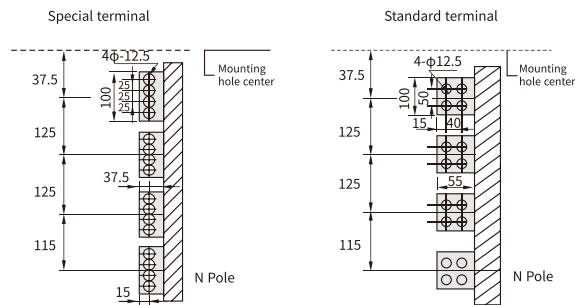
Standard_ IEC60947-2

Intelligent Universal Circuit Breaker

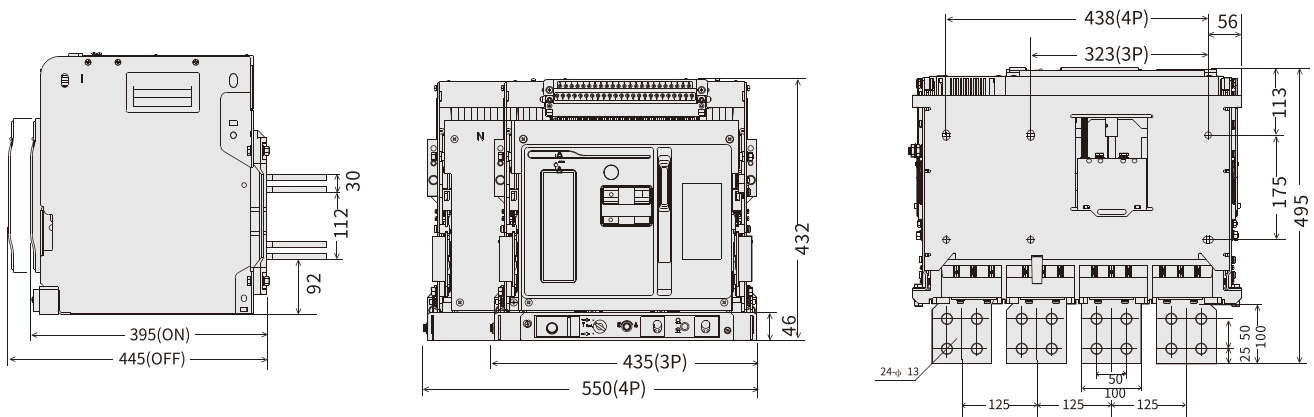
◇ CAW6-3200(2000~3200A Drawer typ)



In(A)	H(mm)
2000~2500	20
3200	30



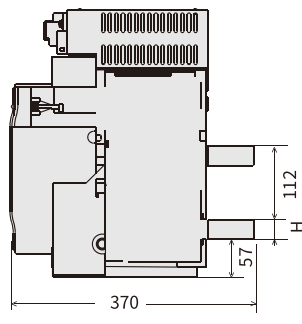
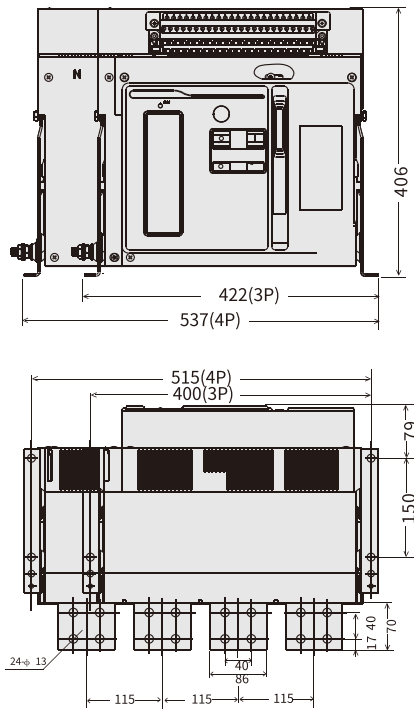
◇ CAW6-4000 Drawer type and fixed type



Standard_ IEC60947-2

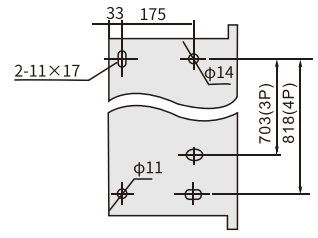
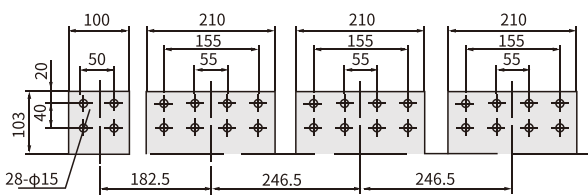
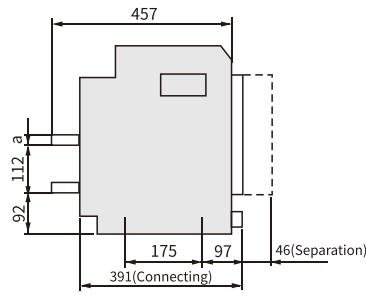
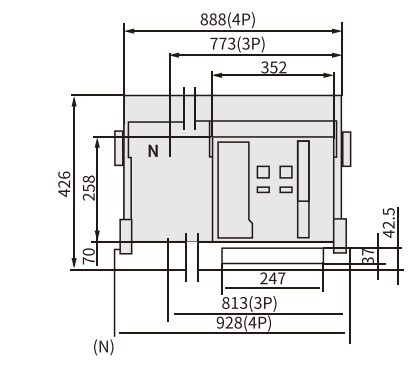
Intelligent Universal Circuit Breaker

◇ CAW6-4000 Fixed type



In(A)	H(mm)
2000~2500	20
2900~4000	30

◇ CAW6-5000(4000~5000A) Drawer type

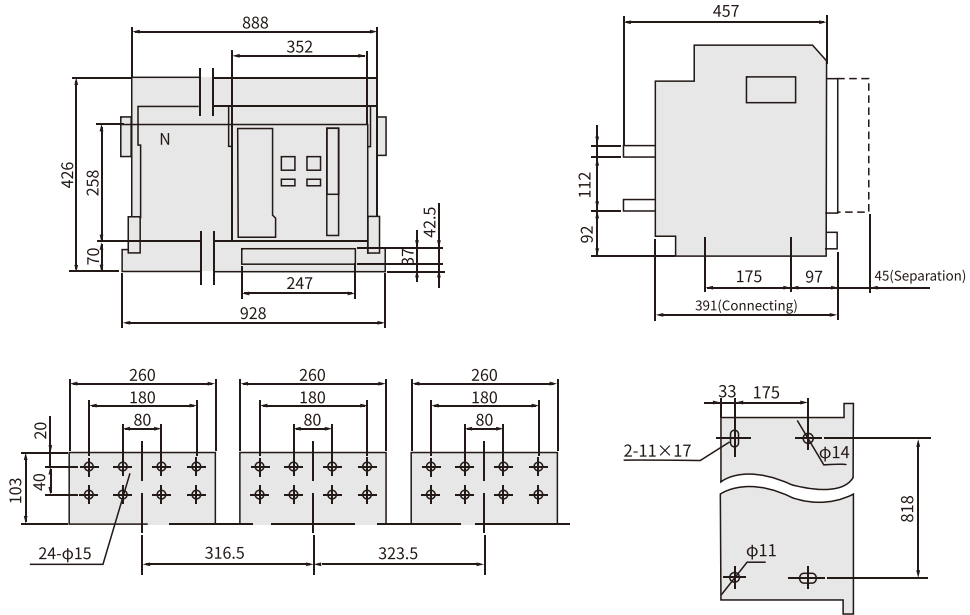


In(A)	a(mm)
4000	20
5000	30

Standard_ IEC60947-2

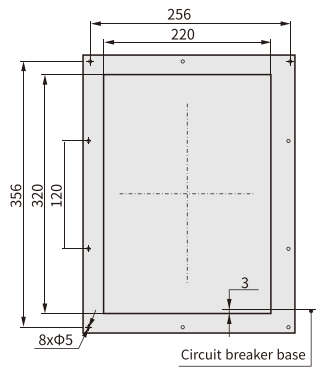
Intelligent Universal Circuit Breaker

◇ CAW6-5000(6300A Drawer type)

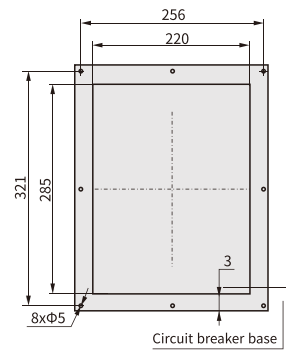


◇ CAW6-1600 cabinet door frame opening size

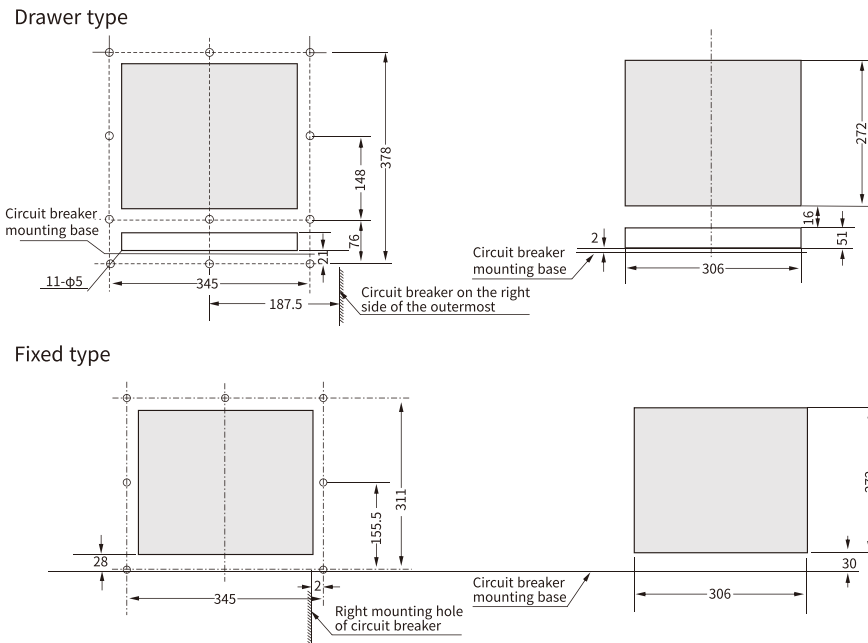
Drawer type



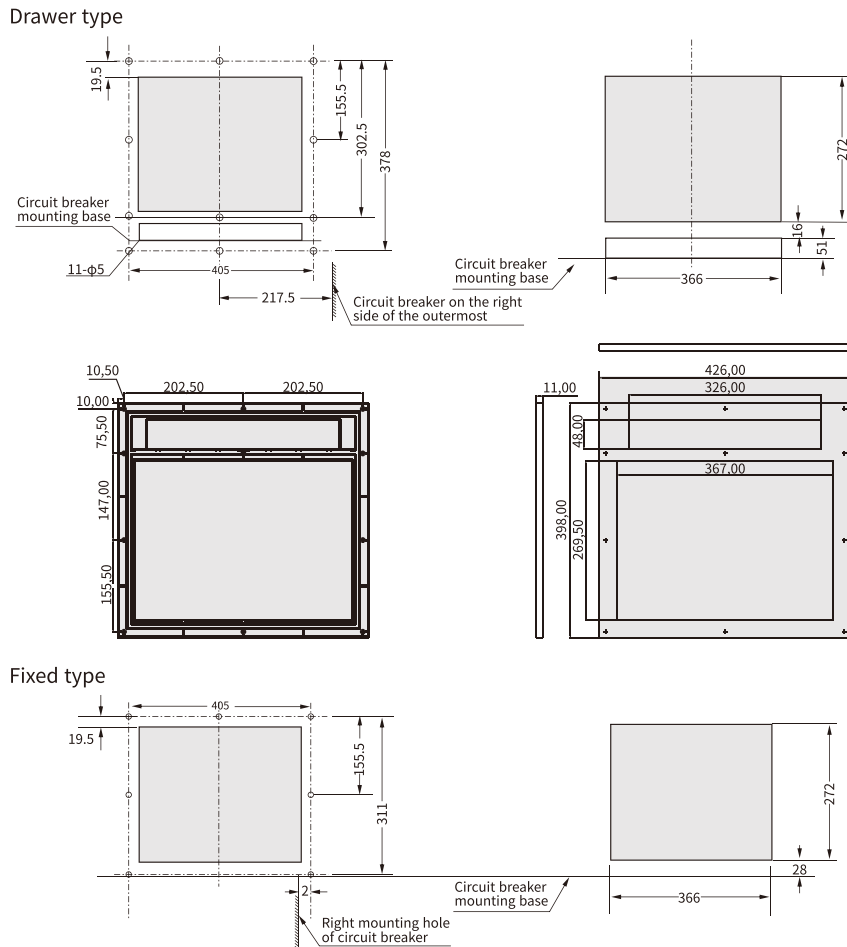
Fixed type



◇ CAW6-2000 cabinet small room door frame opening size

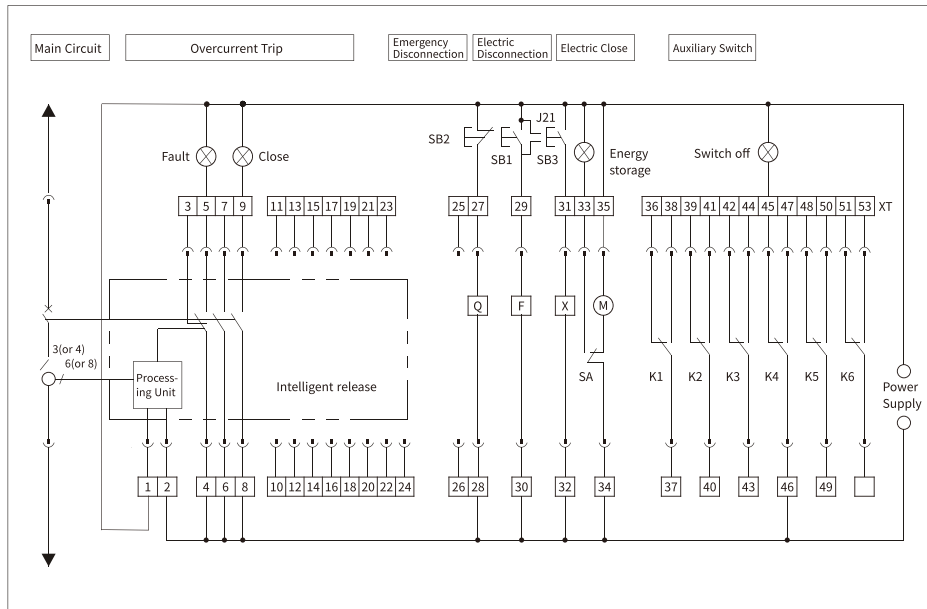


◇ CAW6-3200-5000 cabinet door frame opening size



◇ Wiring Diagram Of Secondary Circuit Of M-type Terminal

There are 47 (or 53) general terminals of M-type circuit breaker, which are simple to connect and convenient for users, Wiring diagram.



- SB1 Shunt release button
- SB2 Under-voltage button
- SB3 Closing button
- Q Under-voltage release or under-voltage delay release
- F Shunt release
- X Closing electromagnet
- M Energy storage motor
- XT terminal block
- SA Limit switch
- K1, K2, K3, K4, K5 and K6 are auxiliary switches

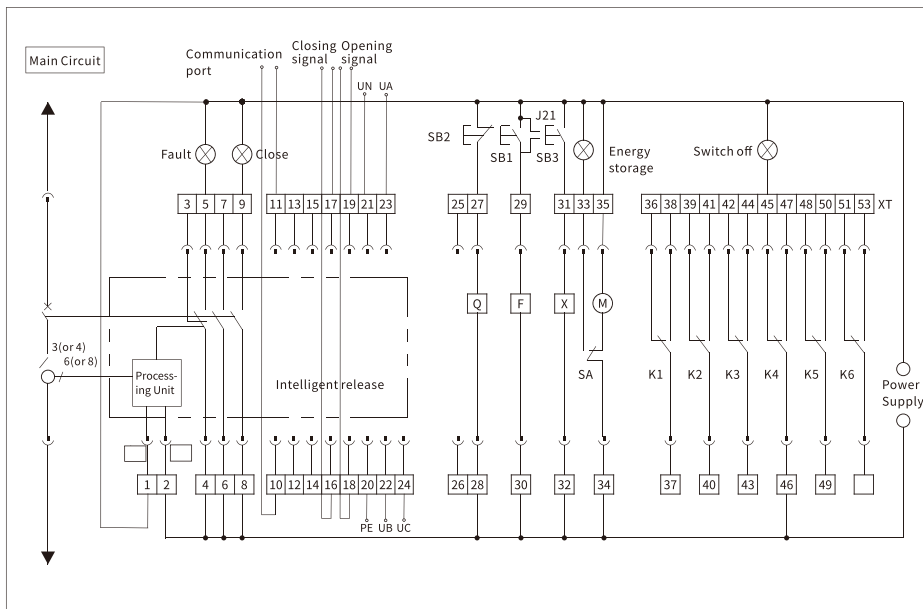
Note: When the control power supply voltage of Q.F.X is different, it can be connected to different power supply separately, and the terminal number of the external transformer is connected to 25,26.

Signal output circuit description

1. The dotted line is provided by the user
2. If the user proposes, terminals #6~#7 can output normally closed contacts
3. Terminal #35 can be directly connected to the power supply (automatic pre-storage), or can be connected in series with the normally open button and then connected to the power supply (manually pre-storage)

◇ Wiring Diagram Of Secondary Circuit Of H-type Terminal

There are 47 (or 53) general terminals of H-type circuit breaker, which are simple to connect and convenient for users, Wiring diagram.



- | | |
|--------------------------|--|
| SB1 Shunt release button | SB2 Under-voltage button |
| SB3 Closing button | Q Under-voltage release or under-voltage delay release |
| F Shunt release | X Closing electromagnet |
| M Energy storage motor | XT terminal block |
| SA Limit switch | K1, K2, K3, K4, K5 and K6 are auxiliary switches |

Note: When the control power supply voltage of Q.F.X is different, it can be connected to different power supply separately, and the terminal number of the external transformer is connected to 25,26.

Signal output circuit description

1. The dotted line is provided by the user
2. If the user proposes, terminals #6~#7 can output normally closed contacts
3. Terminal #35 can be directly connected to the power supply (automatic pre-storage), or can be connected in series with the normally open button and then connected to the power supply (manually pre-storage)

Instructions for ordering

1. Drawer type or fixed type
2. Rated current and rated voltage
3. Working voltage of shunt release, under-voltage release, energy release electromagnet and motor
4. Type of intelligent controller: L type, M type and H type.
5. Overcurrent long delay, short circuit delay, short circuit instantaneous, current setting value of ground protection and corresponding setting time

Standard_ IEC60947-4-1

Contactor 9~95A



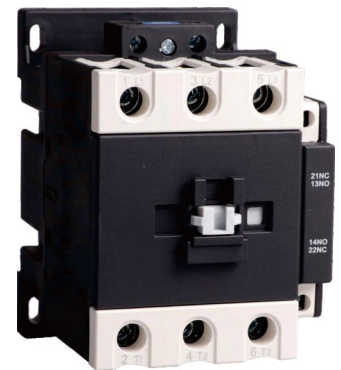
CAC2-0911



CAC2-3211



CAC2-6511



CAC2-9511

Technical Data

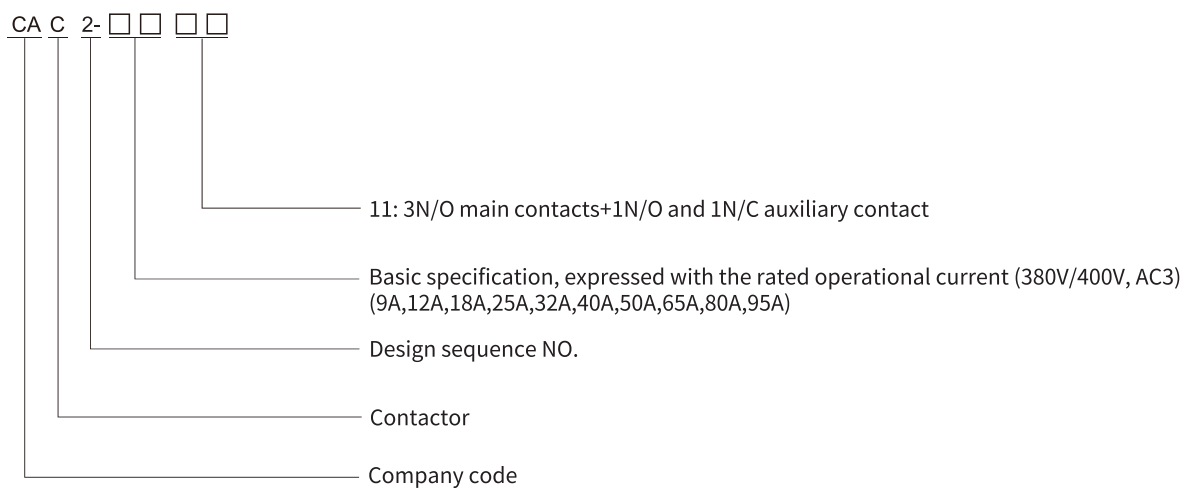
Description

Application	Remote making & breaking circuits Protect circuit from over-load when assembling with thermal over-load relay Frequent start-up and control of AC contactor
Electric value	AC50/60Hz, 690V, up to 95A
Utilization category	AC-3, AC-4
Altitude	≤2000m
Ambient temperature	-5°C~+40°C
Mounting category	III
Mounting conditions	Inclination between the mounting plane and the vertical plane should not exceed ±5°
Standard	IEC/EN 60947-4-1. IEC/EN 60947-5-1.

AC Coil Operation

Volts(VAC)	24	36	42	48	110	127	220	230	240	380	415	440	480	500	600
50Hz	B5	C5	D5	E5	F5	G5	M5	P5	U5	Q5	N5	R5	-	S5	Y5
60Hz	B6	-	D6	E6	F6	G6	M6	-	U6	Q6	-	R6	T6	-	-
50/60Hz	B7	-	D7	E7	F7	-	M7	P7	-	Q7	N7	R7	-	-	-

Type Designation



Technical Data

Technical Specification

Standard	Model No.	IEC/EN60947-4-1 IEC/EN60947-5-1				
		CAC2-09	CAC2-12	CAC2-18	CAC2-25	CAC2-32
Rated Conventional Heating Current	Ith(A)	20	20	32	40	50
Rated Voltage Ui(V)	Ui(V)	690	690	690	690	690
Rated Operation Current Ue=380/415V	AC-3 Ie(A)	9	12	18	25	32
	AC-4 Ie(A)	3.5	5	7.7	8.5	12
Power Controlled	220/240V KW	2.2	3	4	5.5	7.5
3ph cage Motor	380/415V KW	4	5.5	7.5	11	15
AC-3	660/690V KW	5.5	7.5	10	15	18.5
Electrial life(x10 ³ operations)	AC-3	1000	1000	1000	1000	800
	AC-4	200	200	200	200	200
Mechanical life(x10 ⁵ operations)		10	10	10	10	8
Matched Fuse	Size	RT16-00	RT16-00	RT16-00	RT16-00	RT16-00
	A	20	20	32	40	50
Main circuit		3P or 4P				
Auxiliary circuit Cat.:AC-15,Ue=415V Ie=0.95A Ith=10A		1NO + 1NC				

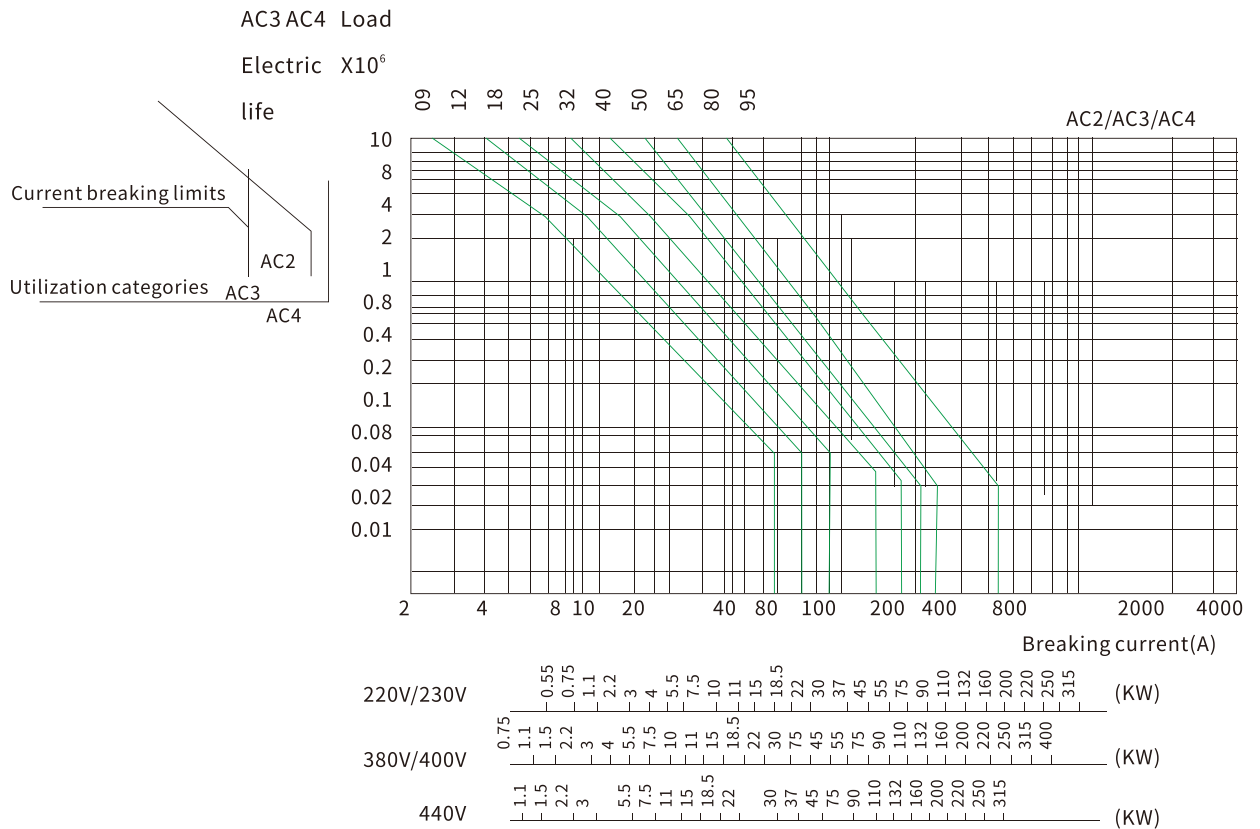
Standard	Model No.	IEC/EN60947-4-1 IEC/EN60947-5-1				
		CAC2-40	CAC2-50	CAC2-65	CAC2-80	CAC2-95
Rated Conventional Heating Current	Ith(A)	60	80	80	100	125
Rated Voltage Ui(V)	Ui(V)	690	690	690	690	690
Rated Operation Current Ue=380/415V	AC-3 Ie(A)	40	50	65	80	95
	AC-4 Ie(A)	18.5	24	28	37	44
Power Controlled	220/240V KW	11	15	18.5	22	25
3ph cage Motor	380/415V KW	18.5	22	30	37	45
AC-3	660/690V KW	30	33	37	45	45
Electrial life(x10 ³ operations)	AC-3	800	600	600	600	600
	AC-4	150	150	150	100	100
Mechanical life(x10 ⁶ operations)		8	8	8	6	6
Matched Fuse	Size	RT16-00	RT16-00	RT16-00	RT16-00	RT16-00
	A	63	80	80	100	125
Main circuit		3P or 4P				
Auxiliary circuit Cat.:AC-15,Ue=415V Ie=0.95A Ith=10A		1NO + 1NC				

Technical Information

Terminal Connection

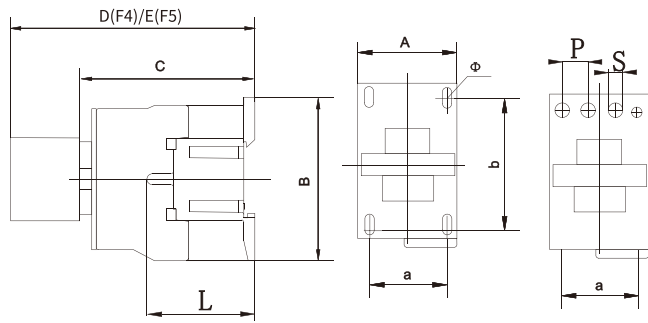
Model	Cabling cross section(Cu)			Screw size	Tightening torque(N.m)
	Number of piece	Flexible cable with cold-pressed socket(mm ²)	Flexible cable without cold-pressed socket(mm ²)		
CAC2-09	1~2	2.5	4	4	0.8
CAC2-12	1~2	2.5	4	4	0.8
CAC2-18	1~2	4	6	6	0.8
CAC2-25	1	4	10	6	1.2
	2	4	6	6	1.2
CAC2-32	1	4	10	6	1.2
	2	4	6	6	1.2
CAC2-40	1	10	16	10	3.5
	2	10	10	10	3.5
CAC2-50	1	16	25	25	3.5
	2	16	16	-	3.5
CAC2-65	1	16	25	25	3.5
	2	16	16	-	3.5
CAC2-80	1	50	50	50	3.5
	2	25	35	-	4.0
CAC2-95	1	50	50	50	4.0
	2	25	35	-	4.0

Curve

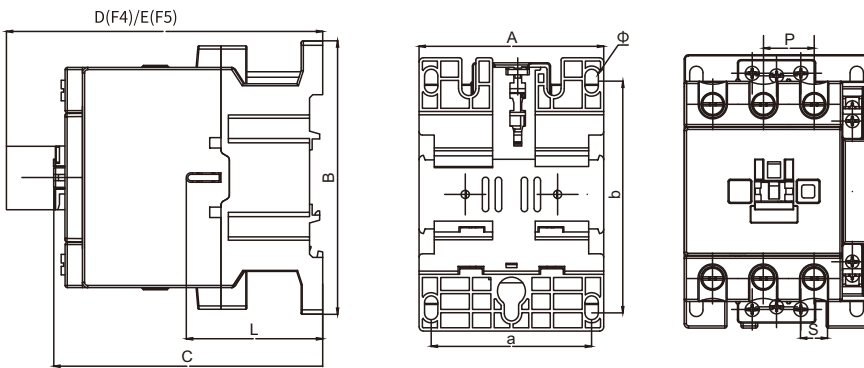
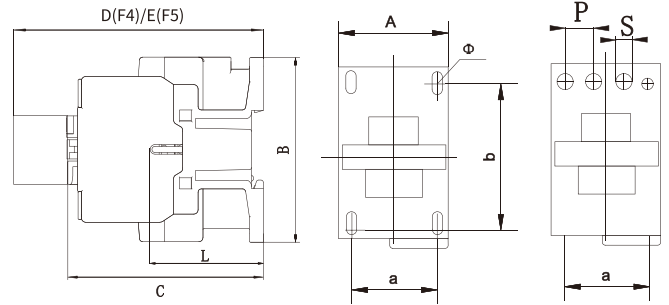


Overall and Installation Dimension(mm)

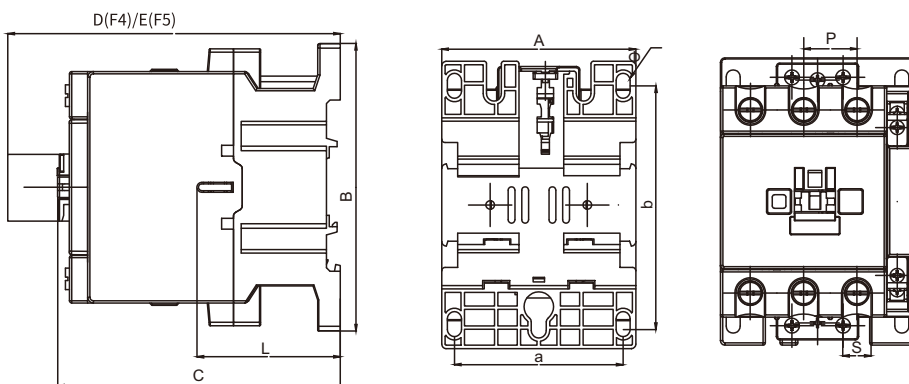
CAC2-09~18



CAC2-25~32



CAC2-40~65

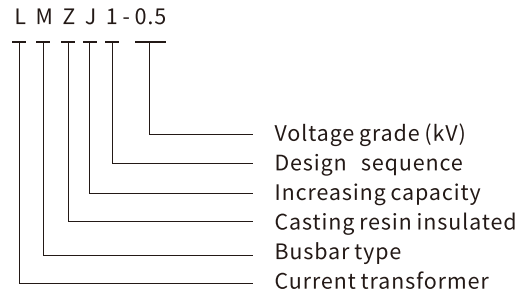


CAC2-80~95

Model	A Max	B Max	C Max	D Max	E Max	a	b	φ	L	P	S
CAC2-09~18	45	74.5	87	120	124	34.5	50/60	4.5	51	11	10.5
CAC2-25~32	56	87	98.6	132	136	40	61.5	4.5	59.3	14.2	13
CAC2-40~65	75	127	118	151.1	155	63.5	105	6.0	63.2	20	14
CAC2-80~95	86	126.5	126.5	158.5	162.5	74.5	105	6.0	63.2	23.5	17.5



Type designation



Summary

The current transformer of the type LMZJ1-0.5 is casting unsaturated resin busbar type product. It is used for metering current and electric energy, relay protection in the electrical system of rated frequency 50Hz or 60Hz and rated voltage 0.5kV. The current transformer has the character of small volume, lightweight, superior insulation and so on. The transformer can be executed according to the standards IEC44-1:1996(Current transformer).

Construction

The current transformer is full enclosed busbar type structure. The primary and secondary windings and iron core are insulated by epoxy resin. The middle hole is used for busbar going through. The secondary outlet is wrapped by outlet box, which can prevent from stealing electricity

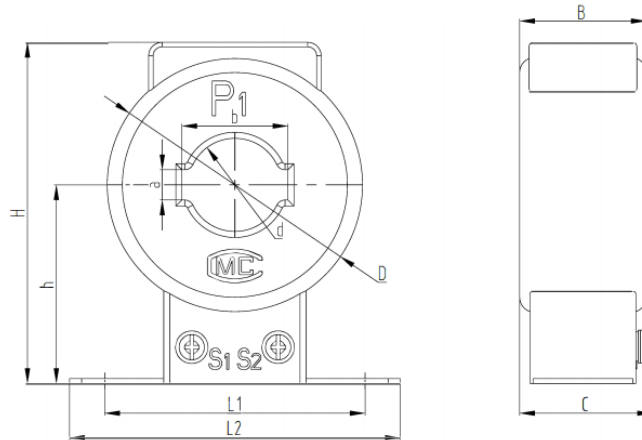
Technical data

- Rated insulation level: the secondary winding is able to withstand the power frequency test voltage of 3 kV to ground.)
- Rated secondary current): 5A, 1A ■ Power factor of load): $\cos\Phi=0.8$ (lagging)
- We can make high precision current transformer of class 0.2S or 0.5S for measuring).

Type	Rated primary current (A)	Primary ampere-turn	Rated output(VA)				Dimension of hole (mm)
			0.5				
LMZJ1-0.5	125	125	5				Φ29
	150	150					
	200	200					
	250	250					
	300	300					
LMZJ1-0.5	400	400	5				Φ45
	500	500					
	600	600					
	800	800					
	1000	1000	10				103x50
	1200	1200					
	1500	1500					
	1600	1600					
	2000	2000					
	2500	2500					
3000	3000					123x50	

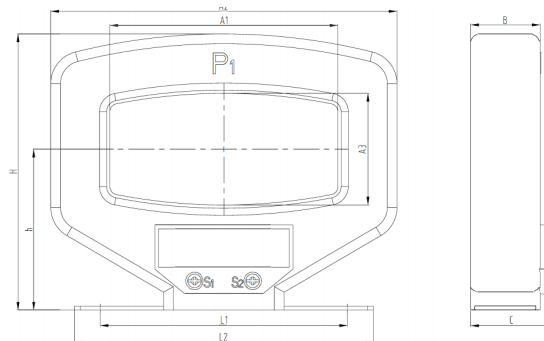
Outline and dimensions of installation

LMZJ1-0.5 125-800/5A



NO.		Product Dimension MM							Iron Core Dimension MM		
		D	d	H	b	L1	L2	B	Width	Outer diameter	Inner diameter
1	125/5	90	29	115	32	85	110	46	37	68	42
2	150/5	90	29	115	32	85	110	46	37	68	42
3	200/5	87	29	115	32	85	110	46	37	65	42
4	250/5	87	29	115	32	85	110	46	37	65	42
5	300/5	87	29	115	32	85	110	46	37	65	42
6	400/5	94	45	121	52	85	110	46	26	80	58
7	500/5	94	45	121	52	85	110	46	26	80	58
8	600/5	94	45	121	52	85	110	46	26	80	58
9	800/5	115	56	140	62	85	110	46	26	100	68

LMZJ1-0.5 1000-3000/5A

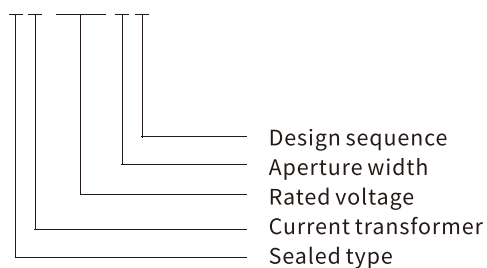


NO.		A1	A2	A3	H	L1	L2	B	Width	Inner Width/Inner Height	Outer Width/Outer Height
1	1000/5A	103	172	51	142	120	150	40	26	125/75	140/92
2	1600/5A	103	172	51	142	120	150	40	26	125/75	140/92
3	2000/5A	123	198	60	156	153	185	43	26	135/80	170/100
4	2500/5A	123	198	60	156	153	185	43	26	135/80	170/100
5	3000/5A	123	198	60	156	153	185	43	26	135/80	170/100



Type designation

BH - 0.66 □ I



Technical data

Type	Rated current ratio	Rated secondary output				Cross-core turn number	Notes
		level 1	level 0.5	level 0.5S	level 0.2(S)		
BH-0.66 I (Solid)	5/5	5	2.5	/	/	/	Figure 1
	10/5	5	2.5	/	/	/	
	15/5	5	2.5	/	/	/	
	20/5	5	2.5	/	/	/	
	25/5	5	2.5	/	/	/	
	30/5	5	2.5	/	/	/	
	40/5	5	2.5	/	/	/	
	50/5	5	2.5	/	/	/	
BH-0.66 30 I	75/5	5	2.5	/	/	/	Figure 2
	30/5	5	2.5	/	/	5	
	40/5	5	2.5	/	/	3	
	50/5	5	2.5	/	/	2	
	75/5	2.5	2.5	/	/	1	
	75/5	2.5	/	/	/	1	
	100/5	5	/	/	/	2	
	100/5	5	5	/	/	1	
	120/5	5	5	/	/	1	
	150/5	5	2.5	/	/	1	
	160/5	5	2.5	/	/	1	
	200/5	5	5	/	/	1	
250/5	5	5	/	/	1		
300/5	5	5	/	/	1		
400/5	5	5	/	/	1		

Low Voltage Current Transformer

Technical data

Type	Rated current ratio	Rated secondary output				Cross-core turn number	Notes
		level 1	level 0.5	level 0.5S	level 0.2(S)		
BH-0.66 30 I B	30/5	/	/	2.5	2.5	5	Figure 3
	50/5	/	/	2.5	2.5	3	
	75/5	/	/	2.5	2.5	2	
	75/5	5	2.5	/	/	1	
	100/5	5	2.5	/	/	1	
	100/5	/	/	5	5	2	
	120/5	/	/	2.5	2.5	1	
	150/5	/	/	2.5	2.5	1	
	160/5	/	/	2.5	2.5	1	
	200/5	/	/	5	5	1	
	250/5	/	/	5	5	1	
	300/5	/	/	5	5	1	
BH-0.66 40 I	30/5	5	2.5	/	/	5	Figure 4
	50/5	5	2.5	/	/	3	
	75/5	5	2.5	/	/	2	
	75/5	2.5	/	/	/	1	
	100/5	2.5	/	/	/	1	
	100/5	5	5	/	/	2	
	150/5	5	2.5	/	/	1	
	200/5	5	5	/	/	1	
	250/5	5	5	/	/	1	
	300/5	5	5	/	/	1	
	400/5	5	5	/	/	1	
	500/5	10	10	5	5	1	
600/5	10	10	5	5	1		
BH-0.66 50 I	150/5	2.5	/	/	/	1	Figure 5
	200/5	5	2.5	/	/	1	
	250/5	5	5	/	/	1	
	300/5	5	5	/	/	1	
	400/5	5	5	/	/	1	
	500/5	10	10	5	5	1	
	600/5	10	10	5	5	1	
	750/5	10	10	10	10	1	
	800/5	10	10	10	10	1	
	1000/5	10	10	10	10	1	
1200/5	20	20	20	20	1		

Low Voltage Current Transformer

Technical data

Type	Rated current ratio	Rated secondary output				Cross-core turn number	Notes
		level 1	level 0.5	level 0.5S	level 0.2(S)		
BH-0.66 60 I	250/5	5	5	/	/	1	Figure 6
	300/5	5	5	/	/	1	
	400/5	5	5	/	/	1	
	500/5	10	10	5	5	1	
	600/5	10	10	5	5	1	
	750/5	10	10	10	10	1	
	800/5	10	10	10	10	1	
	1000/5	10	10	10	10	1	
	1200/5	20	20	20	20	1	
	1500/5	20	20	20	20	1	
BH-0.66 80 I	300/5	5	5	/	/	1	Figure 7
	400/5	5	5	/	/	1	
	500/5	10	10	/	/	1	
	600/5	10	10	/	/	1	
	750/5	10	10	10	10	1	
	800/5	10	10	10	10	1	
	1000/5	10	10	10	10	1	
	1200/5	20	20	20	20	1	
	1500/5	20	20	20	20	1	
	2000/5	20	20	20	20	1	
BH-0.66 100 I	600/5	10	10	10	10	1	Figure 8
	750/5	10	10	10	10	1	
	800/5	10	10	10	10	1	
	1000/5	10	10	10	10	1	
	1200/5	20	20	20	20	1	
	1500/5	20	20	20	20	1	
	2000/5	20	20	20	20	1	
	2500/5	40	40	40	40	1	
BH-0.66 120 I	1000/5	10	10	10	10	1	Figure 9
	1200/5	20	20	20	20	1	
	1500/5	20	20	20	20	1	
	2000/5	20	20	20	20	1	
	2500/5	40	40	40	40	1	
	3000/5	40	40	40	40	1	
	4000/5	40	40	40	40	1	

Outline and Dimensions of Installation

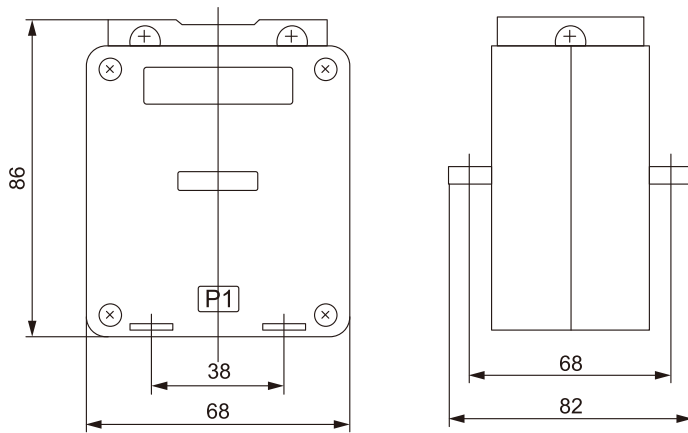


Figure 1

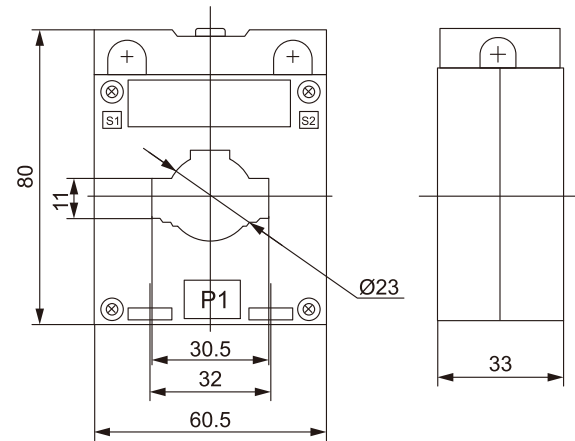


Figure 2

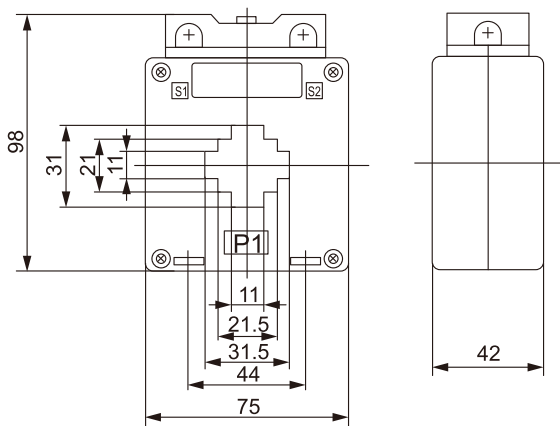


Figure 3

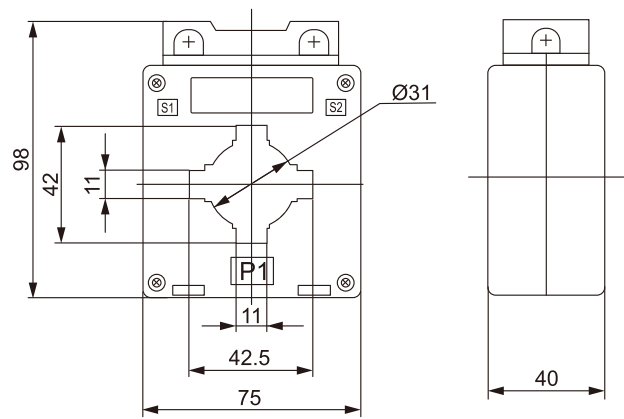


Figure 4

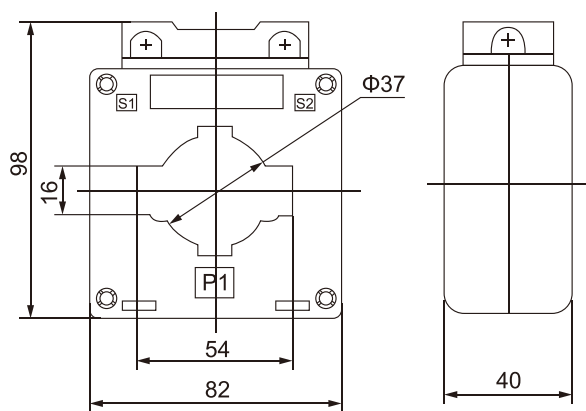


Figure 5

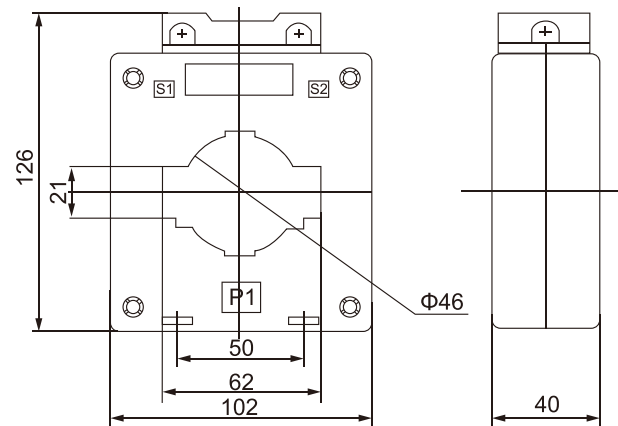


Figure 6

Outline and Dimensions of Installation

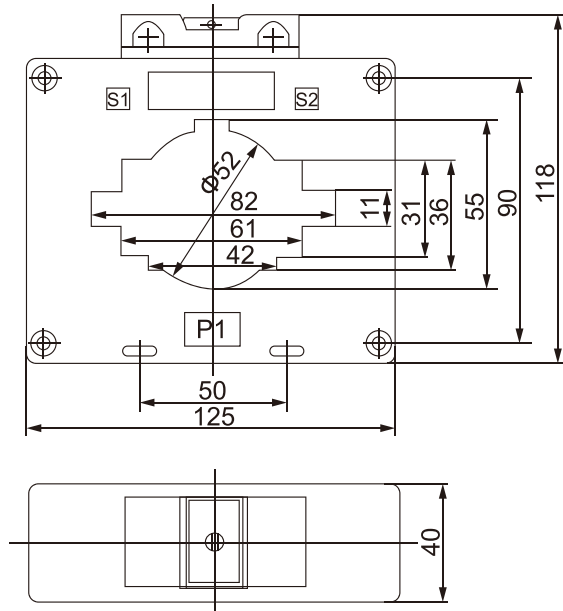


Figure 7

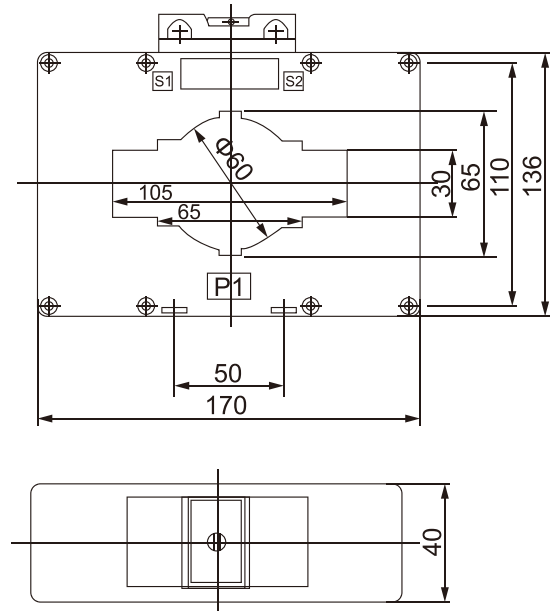


Figure 8

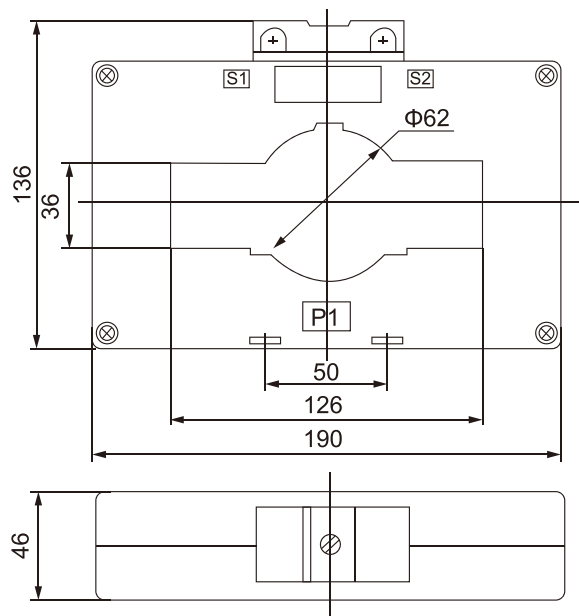
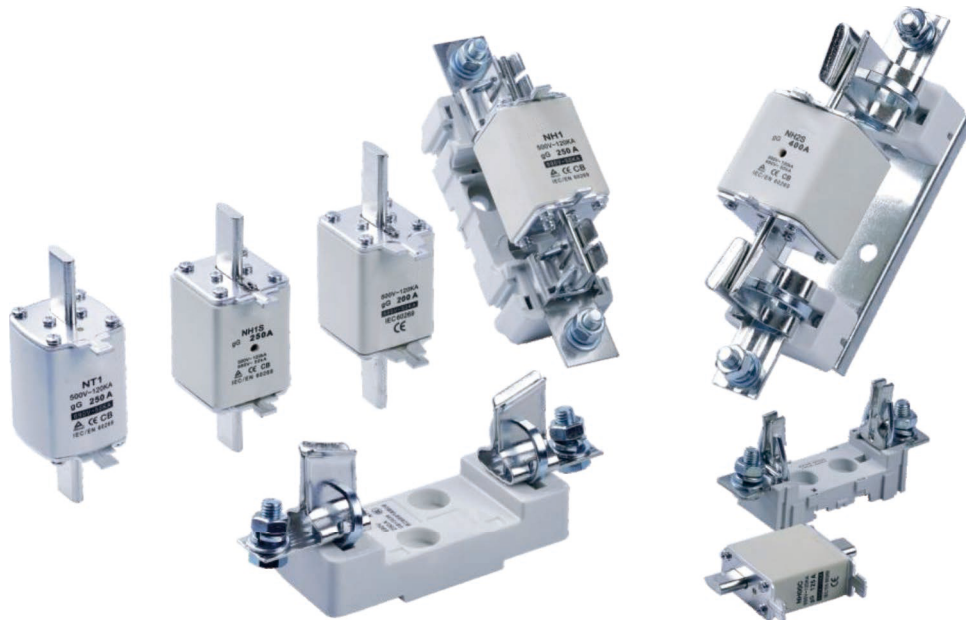


Figure 9

Standard_ IEC60269



Applications

This series of fuse links is mainly used in AC 50Hz, rated voltage up to 1140V, rated current up to 1250A and for protecting electric equipment from overload and short-circuit. It can reliably break the min. fusion current to any current within 120KA.

It is also available for the protection of semiconductor parts and equipments against short-circuit (type aR) and protection of motors (type aM). This series of fuse links conforms to IEC60269 standards.

Design Features

It adopts the material with high quality. The arc-extinguishing medium is quartz sand and fuse tube is high strength ceramic. The advanced manufacturing craft work ensures the performance of small power waste, stable characteristic for the product. The outline structure and installation dimension joints the advanced similar products from domestic and abroad.

Basic Data

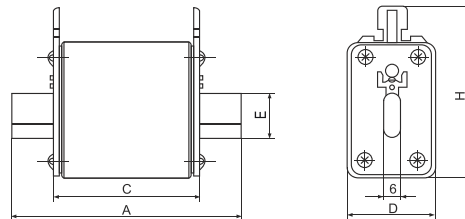
The model, outline dimension, rated voltage and rated current are shown in Figures.

Standard_ IEC60269

Basic Data



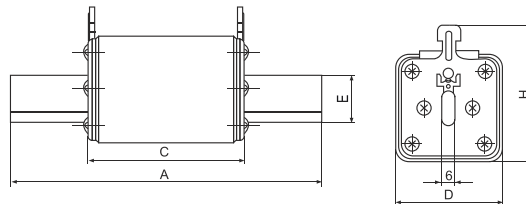
No.	Product model	Domestic and overseas similar products		Rated Voltage (V)	Rated current (A)	Overall dimension (mm)				
		gG	aR			A	C	D	E	H
18001	NH00C	NH00C	RS30C	500/690	4-100	78.5	49.5	21	15	52.5
18002	NH00	NH00	RS31	500/690	10-160	78	50.5	30	15	60
18003	NH0	NH0		500/690	6-160	125	67	30	15	60



Basic Data



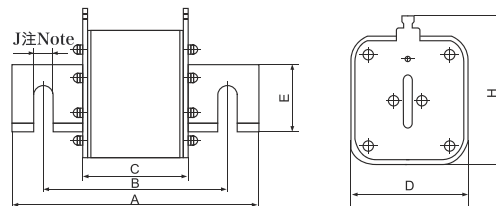
No.	Product model	Domestic and overseas similar products		Rated Voltage (V)	Rated current (A)	Overall dimension (mm)				
		gG	aR			A	C	D	E	H
18004	NH1	NH1	RS32	500/690	32-250	135	68	46	20	58.5
18005	NH2	NH2	RS33	500/690	80-400	150	68	58	25	68.5
18006	NH3	NH3	RS34	500/690	160-630	150	68	70	32	82



Basic Data



No.	Product model	Domestic and overseas similar products		Rated Voltage (V)	Rated current (A)	Overall dimension (mm)					
		gG	aR			A	B	C	D	H	J
18007	NH4	NH4	RS39	500/690	500-1250	200	150	90	97	113	16.5



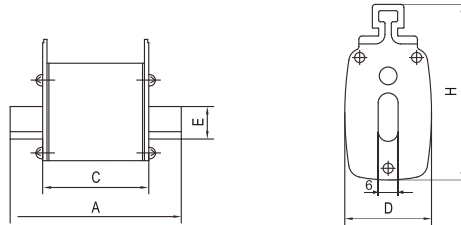
Note: It is allowable to change the double-transverse type wiring hole into one-transverse one-straight or double-straight type structure

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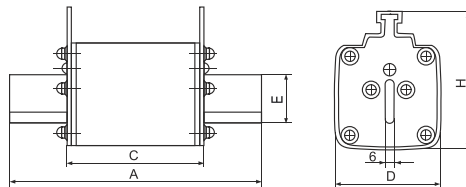
Basic Data

No.	Product model	Domestic and overseas similar products		Rated Voltage (V)	Rated current (A)	Overall dimension (mm)				
		gG	aR			A	C	D	E	H
18008	RO30A	NH00C		500/690	4-125	78	49	21	15	48
18009	RT16-000	NT00C NH00C	RS30C	500/690	4-125	78	49	21	15	52
18010	RT16-00	NT00 NH00 RT20-00 3NA	RS31	500/690	4-160	78	49	29	15	56
18011	RT16-0	NT0 NH0		500/690	4-160	125	68	29	15	56



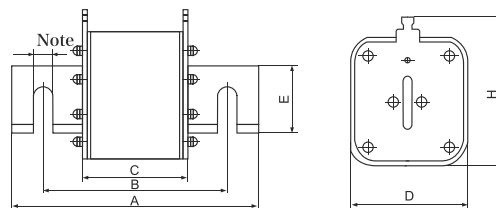
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No.	Product model	Domestic and overseas similar products		Rated Voltage (V)	Rated current (A)	Overall dimension (mm)				
		gG	aR			A	C	D	E	H
18012	RT16-1	NT1 NH1	RS32	500/690	32-250	135	68	48	20	60
18013	RT16-2	NT2 NH2	RS33	500/690	80-400	150	68	58	25	72
18014	RT16-3	NT3 NH3	RS34	500/690	160-630	150	68	68	32	84



Basic Data

No.	Product model	Domestic and overseas similar products		Rated Voltage (V)	Rated current (A)	Overall dimension (mm)					
		gG	aR			A	B	C	D	H	J
18015	RT16-4	NT4 RT17	RS39	500/690	500-1250	200	150	90	97	113	16.5



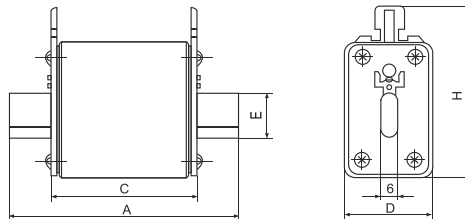
Note: It is allowable to change the double-transverse type wiring hole into one-transverse one-straight or double-straight type structure

Standard_ IEC60269



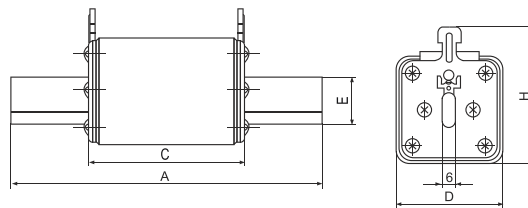
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No.	Product model	Domestic and overseas similar products	Rated Voltage (V)	Rated current (A)	Overall dimension (mm)				
					A	C	D	E	H
18016	NH000S	NH000S	500/690	4-100	78.5	49.5	21	15	52.5
18017	NH00S	NH00S	500/690	10-160	78	50.5	30	15	60
18018	NH0S	NH0S	500/690	6-160	125	67	30	15	60



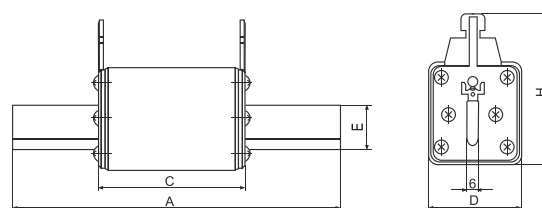
Basic Data

No.	Product model	Domestic and overseas similar products	Rated Voltage (V)	Rated current (A)	Overall dimension (mm)				
					A	C	D	E	H
18019	NH1S	NH1S	500/690	32-250	135	68	46	20	58
18020	NH2S	NH2S	500/690	80-400	150	68	58	25	68
18021	NH3S	NH3S	500/690	160-630	150	68	80	32	82



Basic Data

No.	Product model	Domestic and overseas similar products	Rated Voltage (V)	Rated current (A)	Overall dimension (mm)				
					A	C	E	D	H
18022	NH1C	NH1C Small capacity	500/690	16-160	136	68	15	30	67
18023	NH2C	NH2C Small capacity	500/690	35-250	150	67	20	46	67
18024	NH3C	NH3C Small capacity	500/690	200-400	151	67	25	58.5	81.5

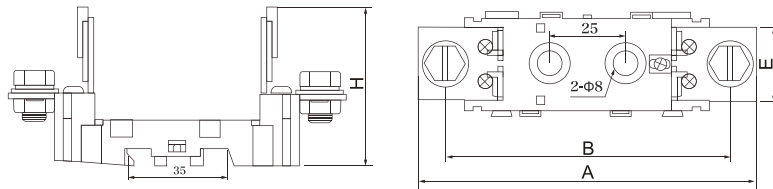


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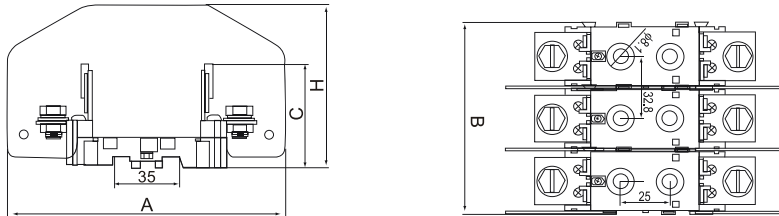
No.	Product model	Model,size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)			
					A	B	E	H
18025	NH00	NH00 NT00C (RT16-00 RT16-000 NH00)	690	160	119	100	23	57



Basic Data



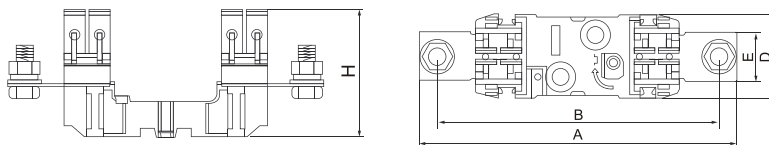
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					A	B	C	H
18026	NH00-3P	NH000 NH00 RT16-000/00 NT00C/00	690	160	146	101	54.5	68



Basic Data



No.	Product model	Model,size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)				
					A	B	D	E	H
18027	NH1	RT16-1 NT1 NH1	690	250	208	176	58	32	82
18028	NH2	RT16-2 NT2 NH2	690	400	224	192	58	35	89
18029	NH3	RT16-3 NT3 NH3	690	630	239	207	58	40	106

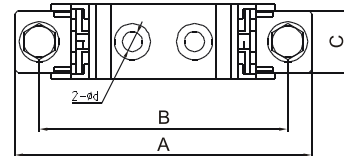
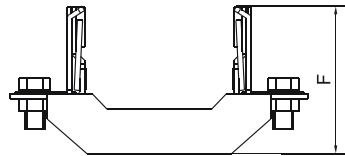


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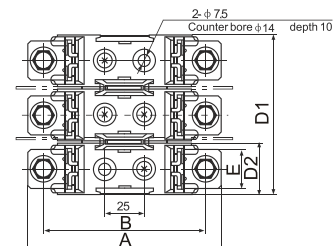
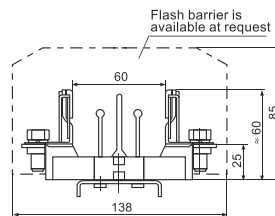
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No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)			
					A	B	C	F
18030	RT16-00	NH000 NH00 RT16-000/00 NT00C/00	690	160	120	100	30	60



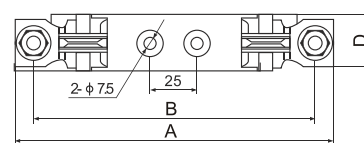
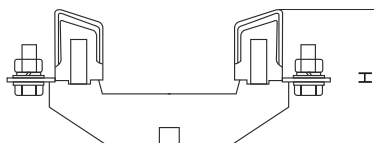
Basic Data

No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)				
					A	B	D1	D2	E
18031	NH00-3P	NH000 NH00 RT16-000/00 NT00C/00	690	160	123	103	103.5	33.5	25



Basic Data

No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)			
					A	B	D	H
18032	RT16-0	NT0 NH0	690	160	170	150	30	72

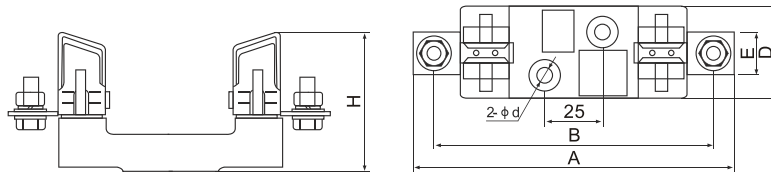


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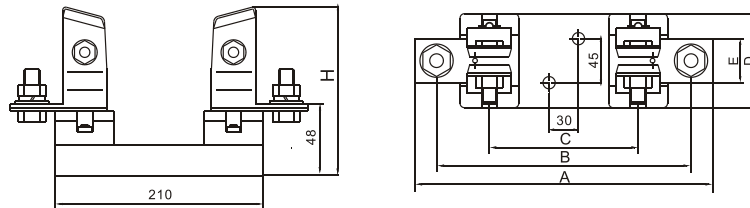
Basic Data

No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)					
					A	B	D	E	H	Φd
18033	RT16-1	RT16-1 NT1 NH1	690	250	200	175	58	30	84	10.5
18034	RT16-2	RT16-2 NT2 NH2	690	400	225	200	60	30	100	10.5
18035	RT16-3	RT16-3 NT3 NH3	690	630	250	210	60	30	105	10.5



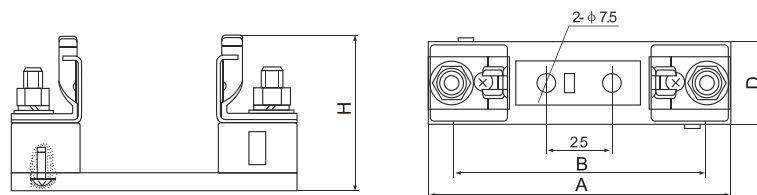
Basic Data

No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)					
					A	B	C	D	E	H
18036	RT16-4	RT16-4 NT4 NH4	690	1250	305	260	150	95	45	148



Basic Data

No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)			
					A	B	D	H
18037	NT00	RT16-000/00 NT00C/00	690	160	120	100	32	61
18037-1	NT0	RT16-0 NT0	690	160	120	150	32	71

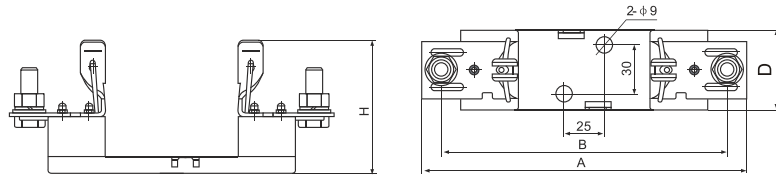


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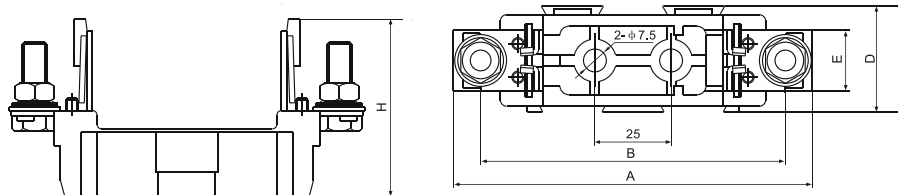
No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)				
					A	B	D	E	H
18038	NT1	RT16-1 NT1 NH1	690	250	175	200	50	30	82
18039	NT2	RT16-2 NT2 NH2	690	400	200	230	64	30	104
18040	NT3	RT16-3 NT3 NH3	690	630	210	250	64	30	120



Basic Data



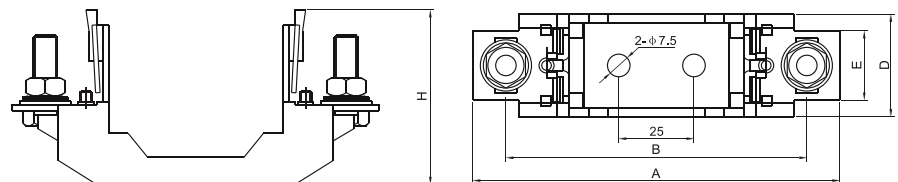
No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)				
					A	B	D	E	H
18041	NH00	NH00C NH00	690	160	117	100	35	20	58



Basic Data



No.	Product model	Model, size and specification of applicable fuse link	Rated insulation Voltage (V)	Rated current (A)	Overall dimension (mm)				
					A	B	D	E	H
18042	NH00	NH00C NH00	690	160	122	100	34	23	58



The logo for Chanan, featuring the word "Chanan" in a white, italicized, sans-serif font, centered within a solid blue square.

Chanan

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