YCM7

MOULDED CASE CIRCUIT BREAKER

- High-end surface design
- Separate cover structure
- High breaking
- Super environmental adaptability
- Small size

Product overview

YCM7 series moulded case circuit breaker (hereinafter referred to as circuit breaker), suitable for AC 50/60Hz, rated insulation voltage of 1000V(125 shell frame of 800V), rated working current of 16A-800A distribution line, used to connect, break and carry the current under normal operating condition. In addition, it can cut off the power supply in the case of overload, short circuit, undervoltage and ground fault between the line and the electrical equipment, and protect the line and electrical equipment.

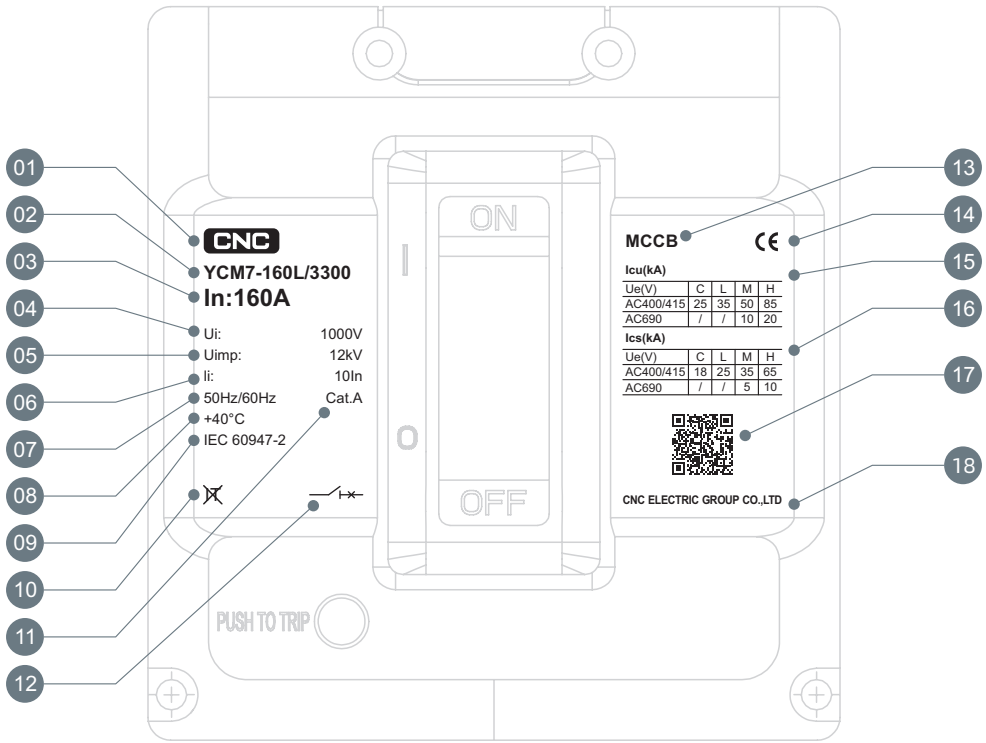
Product model and meaning

YCM7 250 L □ / 4 3 00 A 2 250A □

- Installation
- Rated current
- Protection type
- The type of 4 pole product
- Accessories
- Release method
- Pole
- Operation method
- Breaking capacity
- Frame current
- Model

Installation	Default: fixed plate front; F: Insert plate front
Operation method	Default: handle operation; P: Electric operating mechanism; Z: Manual operating mechanism.
The type of 4 pole product	A: N pole not install overcurrent release, and the N pole always connected (continuous); B: N pole not install overcurrent release, and the N pole work with other three poles; C: N pole to install overcurrent release, and the N pole work with other three poles; D: N pole to install overcurrent release, and N is always connected, not work with the other three poles.
Rated current	10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160, 180, 200, 225, 250, 320, 400, 500, 630, 800A
Protection type	Default: distribution protection AC; 2: motor protection
Accessory	00: No accessories; 08: Alarm; 10: Shunt; 20: Auxiliary; 30: Undervoltage; 40: Shunt + assist; 50: Shunt + undervoltage; 60: Two groups of auxiliary; 70: Undervoltage + auxiliary; 18: Shunt + alarm; 28: Auxiliary report; 38: Undervoltage + alarm; 48: Shunt + auxiliary report; 68: Double auxiliary + auxiliary report; 78: Undervoltage + auxiliary report
Release mode	2: magnetic release; 3: thermal magnetic release
Pole	3:3P; 4:4P
Breaking capacity	C, L, M, H
Frame current	63, 125, 160, 250, 400, 630(Capacity-increase type), 630, 800
Standard	IEC 60947-2
Certification	CE

Definition of nameplate



01	Company logo	10	Not suitable for IT system
02	Product model: Frame current+breaking capacity+pole	11	Cat A: MCB use catagory
03	In: Rated current	12	With isolation function
04	Ui: Rated insulation voltage	13	Product name
05	Uimp: Rated impact voltage	14	Certification
06	Ii: Rated instantaneous short circuit setting value	15	Icu: Rated limit short-circuit breaking capacity
07	Fre: Rated frequency	16	Ics: Rated operating short-circuit breaking capacity
08	+40°C: Fiducial temperature	17	Product manual
09	Standard	18	Manufacturer's name

▼ Operating environment and condition

Operating environment

1. Resistance to moisture and heat: the product can operate reliably in unconventional environment through dry cold, dry heat, wet heat and other ambient tests;
2. Operating environment temperature: Products through the GB/T 2423.1 (electrical and electronic products low temperature test), GB/T 2423.2 (electrical and electronic products high temperature test) test requirements, can be used in the temperature environment range of -30°C~60°C, temperature below -5°C or higher than 40°C must be used according to the ambient temperature change compensation table provided in the sample;
3. Altitude: 2000m or less for normal installation. If the altitude exceeds 2000m, the decrease of dielectric strength and air cooling should be taken into account. Please modify and use according to the table of altitude reduction coefficient provided in the sample.
4. Pollution class: The product can operate reliably in the tertiary pollution environment as defined by IEC 60947-1 and 60664-1(Industrial environment);
5. Protection class: The product meets the requirements of IEC 60529/GB 4208(shell protection class) standard. Product: Protection class IP30(except terminal);
6. Main circuit installation category: III.

Storage and transportation condition

1. Suitable for transport storage temperature range of -35°C~+70°C;
2. Relative humidity +25°C does not exceed 95%;
3. Transport the product lightly, avoid violent collision and inverted.

Current correction coefficients for different environment temperature

Product frame	0°C	40°C	45°C	50°C	55°C	60°C
63	1.14	1	0.96	0.89	0.83	0.75
125	1.14	1	0.96	0.89	0.83	0.75
160	1.12	1	0.93	0.86	0.81	0.73
250	1.13	1	0.92	0.85	0.79	0.71
400	1.18	1	0.94	0.87	0.81	0.73
630(Capacity-increase type)	1.13	1	0.94	0.87	0.81	0.73
630	1.15	1	0.93	0.88	0.83	0.76
800	1.18	1	0.95	0.94	0.93	0.91

Altitude reduction coefficient table

Altitude(m)	2000	3000	4000	5000
Working current correction coefficients	1In	0.94In	0.88In	0.85In
Max working voltage(V)	690	600	500	440
Isolation voltage(V)	1000	800	700	600
Power frequency voltage(V)	2000	1500	1000	800

Main technical parameters

Frame current		YCM7-63			YCM7-125			YCM7-160				YCM7-250			
Rated current In(A)		10, 16, 20, 25, 32, 40, 50, 63			10, 16, 20, 25 32, 40, 50, 63 80, 100, 125			16, 20, 25, 32, 40 50, 63, 80, 100 125, 140, 150, 160				100, 125, 160 180, 200, 225 250			
Pole		3P, 4P			3P, 4P			2P, 3P, 4P				2P, 3P, 4P			
Rated operation voltage Ue(V)		AC400/415			AC400/415			AC230/400/415/690				AC230/400/415/690			
Rated insulation voltage Ui(V)		800			800			1000				1000			
Rated impact voltage Uimp(kV)		8			8			12				12			
Short-circuit breaking capability		C	L	M	C	L	M	C	L	M	H	C	L	M	H
Rated operating short-circuit breaking capacity Ics(kA)	AC400/415V	18	25	35	18	25	35	18	25	35	65	18	25	35	65
	AC690V	/	/	/	/	/	/	/	/	5	10	/	/	5	10
Rated limit short-circuit breaking capacity Icu(kA)	AC400/415V	25	35	50	25	35	50	25	35	50	85	25	35	50	85
	AC690V	/	/	/	/	/	/	/	/	10	20	/	/	10	20
Category of use		A													
Mechanical life (times)	Be matained	40000													
	Maintenance-free	20000													
Electrical life (times)		8000													
		63			125			160				250			
Distribution protection		■			■			■				■			
Motor protection		■			■			■				■			
Thermomagnetic release		■			■			■				■			
Electromagnetic release		■			■			■				■			
Adjustable thermomagnetic release		/			/			/				/			
Fixed plate front cable		■			■			■				■			
Fixed plate rear cable		/			/			■				■			
Insert plate front wiring		/			/			/				/			
Insert plate rear wiring		■			■			■				■			
Pull out type		/			/			/				/			
Undervoltage release		■			■			■				■			
Shunt release		■			■			■				■			
Auxiliary contact		■			■			■				■			
Alarm contact		■			■			■				■			
Front connection plate		■			■			■				■			
AC electric operation CD1		/			/			/				/			
AC and DD electric operation CD2		■			■			■				■			
Circular direct hand operation		■			■			■				■			
Square direct hand operation		/			/			/				/			
Interphase barrier		■			■			■				■			
Safety lock		■			■			■				■			
Autonomous installation of accessories		■			■			■				■			
Isolation function		■			■			■				■			
Certification		CCC			CCC			CCC				CCC			

Main technical parameters

Frame current		YCM7-400				YCM7-630 (Capacity-increase type)				YCM7-630				YCM7-800		
Rated current In(A)		250, 315, 350, 400				400, 500, 630				400, 500, 630				400, 500, 600, 630, 700, 800		
Pole		3P, 4P				3P, 4P				3P, 4P				3P, 4P		
Rated operation voltage Ue(V)		AC400/415/690				AC400/415/690				AC400/415/690				AC400/415/690		
Rated insulation voltage Ui(V)		1000				1000				1000				1000		
Rated impact voltage Uimp(kV)		12				12				12				12		
Short-circuit breaking capability		C	L	M	H	C	L	M	H	C	L	M	H	L	M	H
Rated operating short-circuit breaking capacity Ics(kA)	AC400/415V	25	35	50	75	25	35	50	75	25	35	50	75	25	37.5	50
	AC690V	7.5	7.5	10	10	7.5	7.5	10	10	7.5	7.5	10	10	5	15	15
Rated limit short-circuit breaking capacity Icu(kA)	AC400/415V	35	50	70	100	35	50	70	100	35	50	70	100	50	75	100
	AC690V	10	10	20	20	10	10	20	20	10	10	20	20	10	30	30
Category of use		A														
Mechanical life (times)	Be matained	40000														
	Maintenance-free	20000														
Electrical life (times)		8000														
		400				630				630				800		
Distribution protection		■				■				■				■		
Motor protection		■				■				■				■		
Thermomagnetic release		■				■				■				■		
Electromagnetic release		■				■				■				■		
Adjustable thermomagnetic release		/				/				/				/		
Fixed plate front cable		■				■				■				■		
Fixed plate rear cable		■				■				■				■		
Insert plate front wiring		■				■				■				■		
Insert plate rear wiring		■				■				■				■		
Pull out type		/				/				/				/		
Undervoltage release		■				■				■				■		
Shunt release		■				■				■				■		
Auxiliary contact		■				■				■				■		
Alarm contact		■				■				■				■		
Front connection plate		■				■				■				■		
AC electric operation CD1		/				/				/				/		
AC and DD electric operation CD2		■				■				■				■		
Circular direct hand operation		■				■				■				■		
Square direct hand operation		/				/				/				/		
Interphase barrier		■				■				■				■		
Safety lock		■				■				■				■		
Autonomous installation of accessories		■				■				■				■		
Isolation function		■				■				■				■		
Certification		CCC				CCC				CCC				CCC		

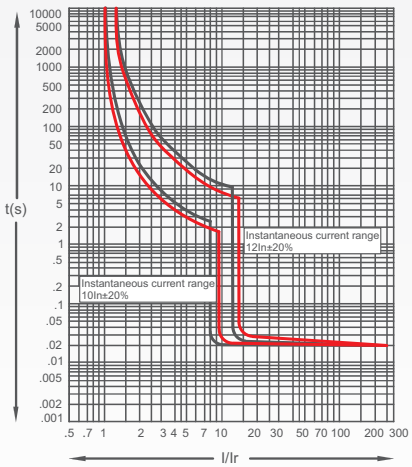
Product features

Thermomagnetic fixed release

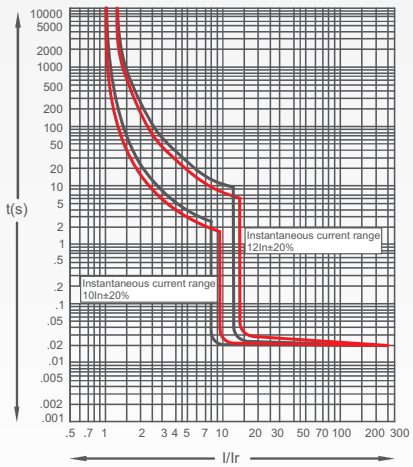
Frame current	Rated current (A)																						
	10	16	20	25	32	40	50	63	80	100	125	160	180	200	225	250	315	350	400	500	630	700	800
63	■	■	■	■	■	■	■	■															
125 (Capacity-increase type)	■	■	■	■	■	■	■	■	■	■	■												
125	■	■	■	■	■	■	■	■	■	■	■												
160	■	■	■	■	■	■	■	■	■	■	■	■											
250										■	■	■	■	■	■	■							
400																■	■	■	■				
630 (Capacity-increase type)																			■	■	■		
630																			■	■	■		
800																					■	■	■
Overload protection (thermal protection) : Based on the bimetal sheet, the inverse time curve is provided. If the limit value is exceeded, the deformation of the bimetal sheet causes the circuit breaker operating mechanism to release.																							
Release current value (A)	Fixed (1.3In)																						
Short-circuit current protection (magnetic protection) : Short-circuit protection is achieved through a magnetic release device, once the short-circuit current exceeds the set value, the circuit breaker will release instantaneously. Not adjustable.																							
Short circuit current (A)	Fixed (10In)																						

Release curve

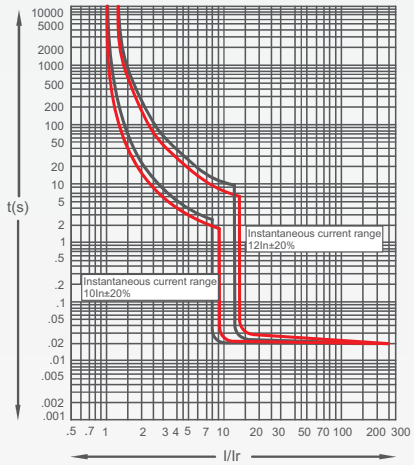
(black for distribution protection, red for motor protection, 10-32A instantaneous operating current of 400±20%)



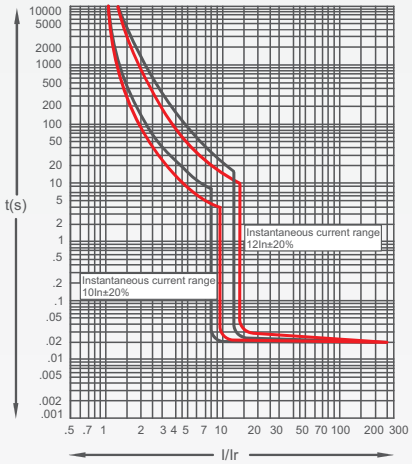
YCM7-63



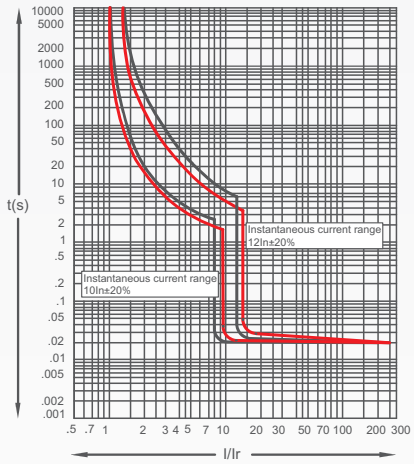
YCM7-125



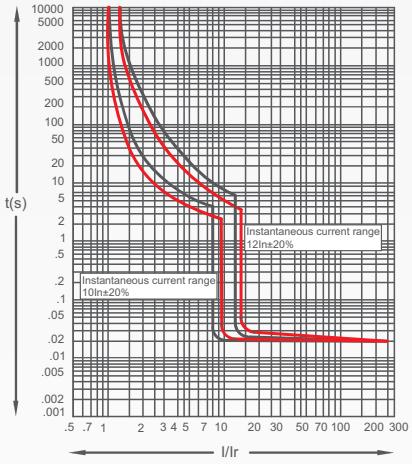
YCM7-160



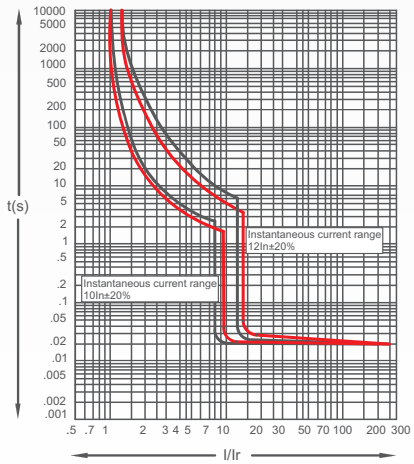
YCM7-250



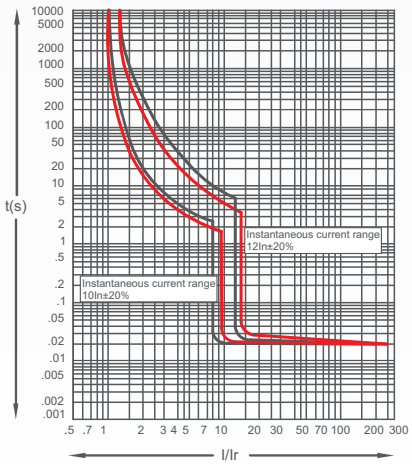
YCM7-400



YCM7-630(标准型)



YCM7-630



YCM7-800

▼ Product attachment overview

Undervoltage release

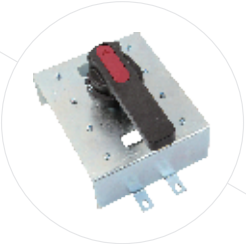
Shunt release

Auxiliary(Alarm) contact

Product body

Plug in support
(split type)

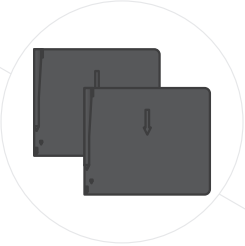
Plug in support
(integral type)



Handle
operation mechanism

Moter-driven
operation mechanism

Front connection plate



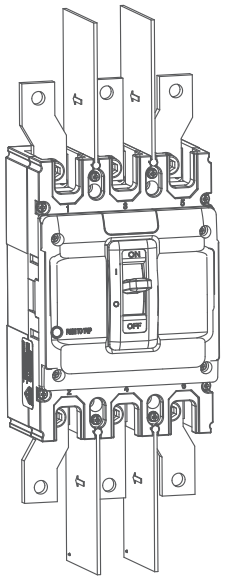
Interphase barrier

Plate rear wiring

Mechanical accessory

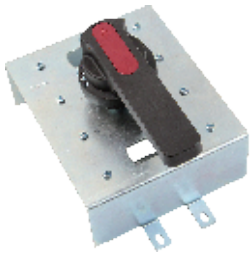
Interphase barrier

Interphase barrier is inserted directly from the front slot of the product, the function is to enhance the insulation performance between the interphase conductors, 3P circuit breaker with 4 pieces, 4P circuit breaker with 6 pieces.



Front connection plate

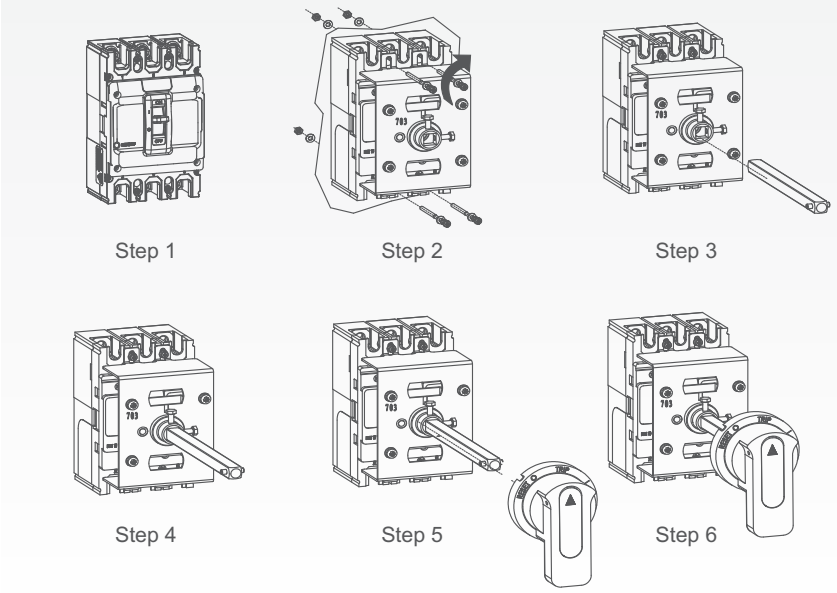
Connect with the terminal of the product, to realize a variety of wiring methods in a small space.
Note: Installation method as shown in the figure.

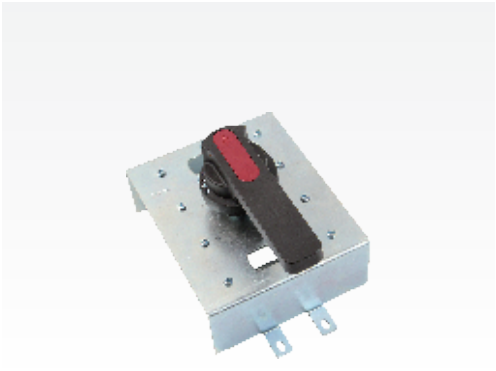


Handle operation mechanism

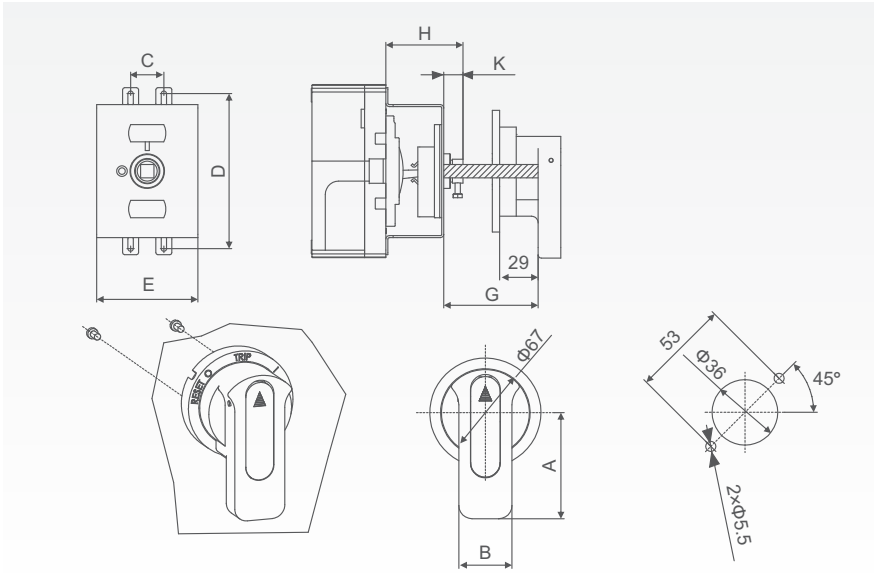
Used in the distribution box, the circuit breaker is in the box, the manual operation mechanism is installed on the panel of the box, and the circuit breaker is rotated clockwise and backwise through the connecting rod to realize open and close operation.

Installation procedure:





Overall and mounting dimensions(mm)



Note: Size of G standard configuration is 150mm, If you need special customization, please contact the manufacturer.

型号	A	B	C	D	E	H	K
YCM7-63	65	32	25	111	77	56	14
YCM7-125	65	32	25	111	77	56	14
YCM7-160	65	32	30	129	90	54	14
YCM7-250	95	32	35	143	90	59	14
YCM7-400	125	32	138	215	150	88	20
YCM7-630 (Capacity-increase type)	125	32	138	215	150	88	20
YCM7-630	125	32	170	200	181	88	20
YCM7-800	125	32	198	243	208	87	20

▼ Electrical accessory

Auxiliary contact

The accessory connected to the auxiliary circuit of the switching device, to indicate the circuit breaker is powered on or off.
The electrical wiring diagram as follows:

Accessory name	Closing	Break/ Release
Auxiliary	F12 F14 F11	F12 F14 F11

Alarm contact

The accessory connected to the auxiliary circuit of the switching device, to indicate the circuit breaker is powered on or off.
The electrical wiring diagram as follows:

Accessory name	Closeing/ Break	Break
Alarm	B12 B14 B11	B12 B14 B11

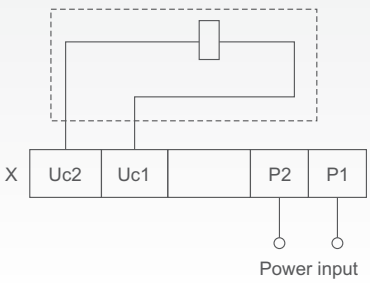
Undervoltage release

1. The undervoltage release is to disconnect the circuit breaker when the power supply voltage is too low, protect the electrical equipment, and realize the undervoltage protection function of the circuit breaker;
2. At 35%-70% of the rated operating voltage, the undervoltage release should reliably make the circuit breaker release;
3. At 85%-110% of the rated operating voltage, the undervoltage release should ensure that the release can be closed;
4. When the rated operating voltage is below 35%, the undervoltage release should prevent the circuit breaker from closing.

5. Electrical characteristic

Model	Undervoltage coil power consumption(W)	
	AC400V	AC230V
YCM7-63/125	4	3.1
YCM7-160	3.9	3.2
YCM7-250	4.3	3.3
YCM7-400	3.4	2.5
YCM7-630 (Capacity-increase type)	3.4	2.5
YCM7-630	3.6	2.5
YCM7-800	2	1.6

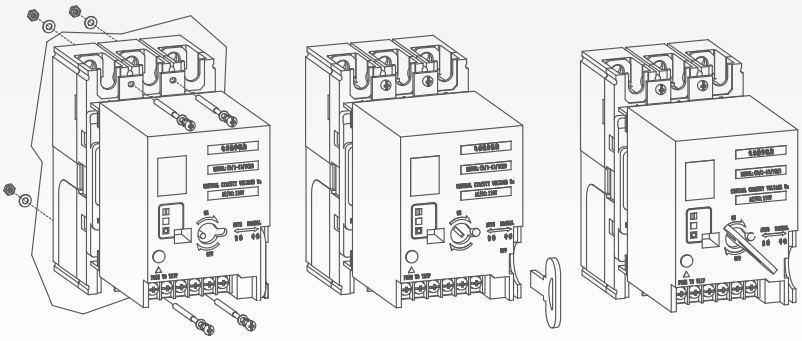
6. Wiring schematic diagram



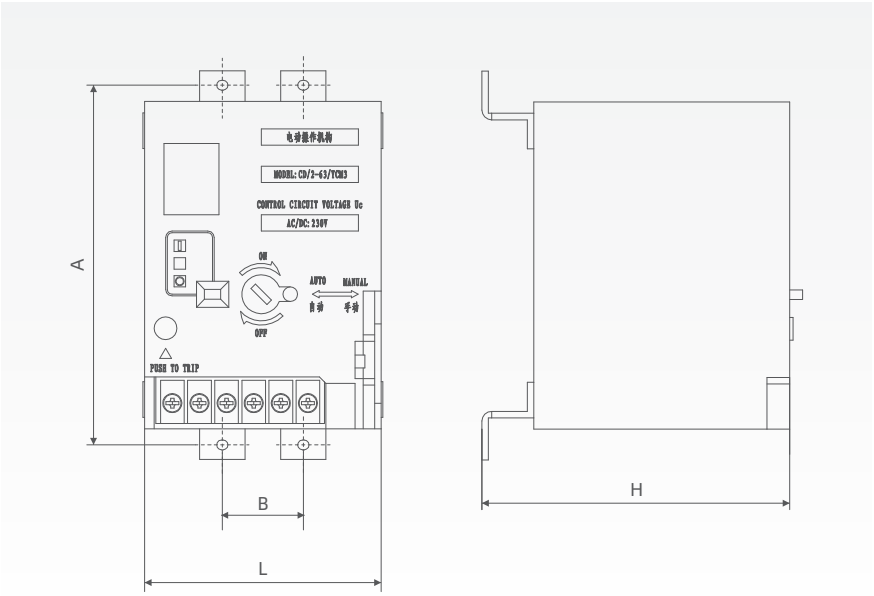
Moter-driven operation mechanism

1. Suitable for circuit breaker remote control closing, opening, and automatic control places;
2. The moter-driven operation mechanism is similar to CD2 AC-DC universal type;
3. Electric operation and manual operation schematic diagram.

4. Wiring schematic diagram

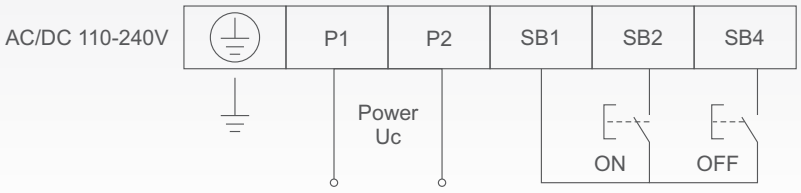


5. Overall and mounting dimensions(mm)



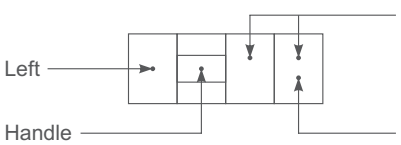
型号	A	B	E	H
YCM7-63/125	111	25	73	5
YCM7-160	129	30	90	90
YCM7-250	142	35	90	95
YCM7-400	215	44	130	146
YCM7-630 (Capacity-increase type)	215	44	130	146
YCM7-630	200	59	130	143
YCM7-800	243	70	130	145

6. Wiring schematic diagram



▼ Accessory code and mounting position

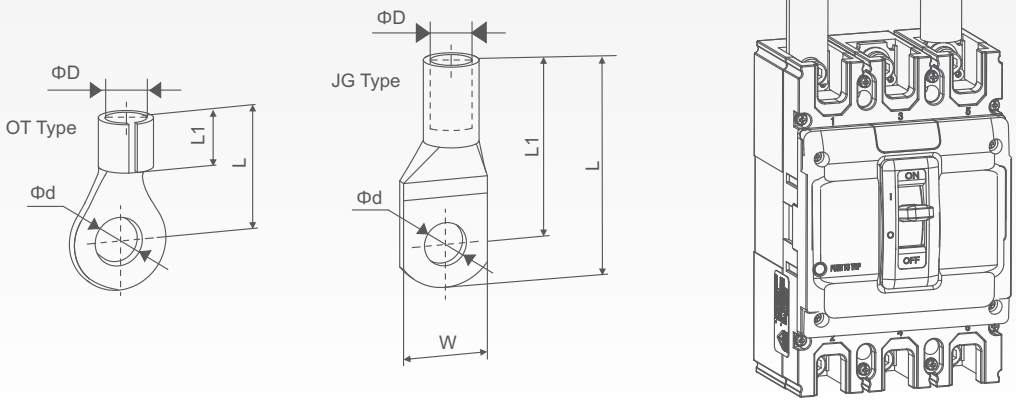
□ Alarm contact, ■ Auxiliary contact, ● Shunt release, ○ Undervoltage release



Note:
4P A type cannot install accessories here; 4P B type 125, 250 frame can install auxiliary contacts;
4P B type 400, 630, 800 frame can install auxiliary contacts, shunt release, undervoltage release

Accessories code		Accessories name	YCM7-63 YCM7-125		YCM7-125 YCM7-160 YCM7-250	YCM7-160 YCM7-250 YCM7-400	YCM7-630 YCM7-630 (Capacity-increase type) YCM7-800
Electromagnetic release	Complex release		3P	4P	2P	3P	4P
200	300	Without parts					
208	308	Alarm contact					
210	310	Shunt release					
220	320	Single/double auxiliary contact					
228	328	Integrated auxiliary alarm contact					
230	330	Undervoltage release					
240	340	Shunt release, single auxiliary contact			/		
250	350	Undervoltage release, shunt release			/		
260	360	Two sets auxiliary contact			/		
270	370	Single auxiliary contact, undervoltage release Single auxiliary contact, undervoltage release			/		
218	318	Shunt release, alarm contact			/		
238	338	Undervoltage release, alarm contact			/		
248	348	Integrated auxiliary alarm contact, alarm contact			/		
268	368	Integrated auxiliary alarm contact, two sets auxiliary contact			/		
278	378	Integrated auxiliary alarm contact, undervoltage release			/		

Wiring specification selection



Connecting conductor

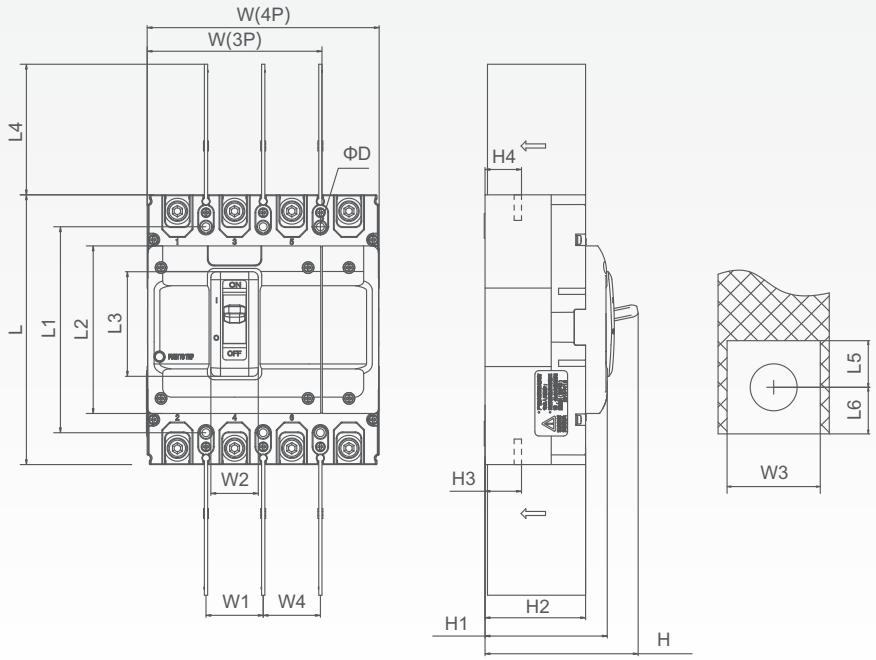
Rated current In(A)	Sectional area mm²	Terminal type	Terminal size				
			W	L	L1	D	d
20	2.5	OT-20	15	17	7.5	5	6.5
25	4	OT-25	12	18	8.5	6	6.5
32	6	OT-30	12	20	9	7	6.5
50	10	OT-50	13	22	9	7.5	6.5
63	16	OT-60	14	23	11	8	6.5
80	25	OT-80	16	25	11	9	6.5
100	35	OT-100	17	30	12	10	8.5
150	50	JG50-8	16	54	47	10.5	8.5
160	70	Enterprise customization	16	39.5	32	13.5	8.5
170	70	JG75-8	22	60	52	12	8.5
225	95	JG95-8	22	65	57	12	8.5

YCM7-160 shell frame, with a rated current of 160A. The wiring terminals are specially customized according to the dimensions listed above.

Rated current(A)	10	16 20	25	32	40 50	63	80	100	125 140	160	180 200 225	250	315 350	400
Wire sectional area(mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	185	240

Rated current(A)	Cable		Copper bar	
	Sectional area(mm²)	Quantity	Sectional area(mm²)	Quantity
500	150	2	30×5	2
630	185	2	40×5	2
700/800	240	2	50×5	2
1000	-	-	50×6	2
1250	-	-	50×8	2

Overall and mounting dimensions(mm)

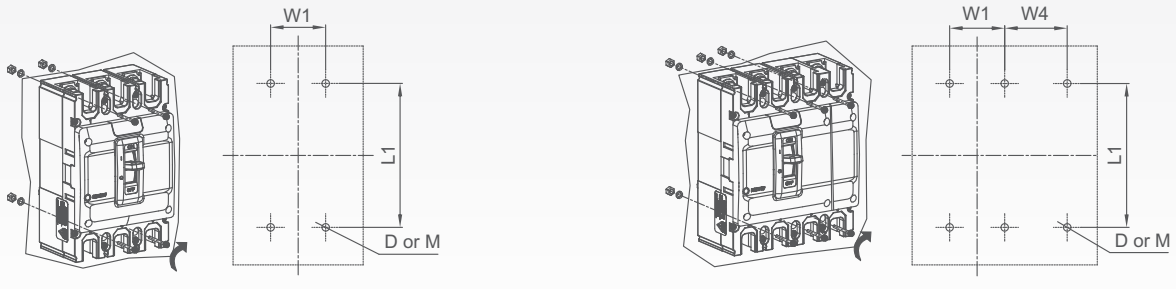


Frame current	Overall dimension												Dimensions of mounting holes			Terminal size		
	W	L	H	D	W2	L2	L3	L4	H1	H2	H3	H4	W1	L1	W4	W3	L5	L6
63/3P	75	130	81	Φ4	24	83	48.5	48	66	56	24	24	25	111	/	18	7	7
63/4P	100	130	81	Φ4	24	83	48.5	48	66	56	24	24	25	111	25	16	7	7
125/3P	75	130	81	Φ4	24	83	48.5	48	66	56	24	24	25	111	/	18	7	7
125/4P	100	130	81	Φ4	24	83	48.5	48	66	56	24	24	25	111	25	16	7	7
160/2P	65	150	89	Φ4.5	28	95	56	50	69.5	61	24	24	/	129	/	17.5	7.5	7.5
160/3P	92	150	89	Φ4.5	28	97	56	50	69.5	61	24	24	30	129	/	17.5	7.5	7.5
160/4P	122	150	89	Φ4.5	28	97	56	50	69.5	61	24	24	30	129	30	17.5	7.5	7.5
250/2P	75	165	110	Φ5	29	102.5	64	68	80	88	23	23	/	126	/	22.5	10	10.5
250/3P	106.5	165	94.5	Φ5	29	102.5	64	80	75	62	22.5	22.5	35	126	/	25.5	12	9.8
250/4P	142	165	94.5	Φ5	29	102.5	64	80	75	62	22.5	22.5	35	126	35	25.5	12	9.8
400/3P	150	257	146	Φ6	56.5	150	88	101	111	96.5	37.5	37.5	44	215	/	32	13	16
400/4P	198	257	146	Φ6	56.5	150	88	101	111	96.5	37.5	37.5	44	215	44	32	13	16
630/3P ①	150	257	146	Φ6	56.5	150	88	101	111	96.5	37.5	37.5	44	215	/	32	13	16
630/4P ①	198	257	146	Φ6	56.5	150	88	101	111	96.5	37.5	37.5	44	215	44	32	13	16
630/3P	182	270	160	Φ7	59.5	160	92.5	100	115	102	43	43	58	200	/	40	16	18
630/4P	240	270	160	Φ7	59.5	160	92.5	100	115	102	43	43	58	200	58	40	16	18
800/3P	210	280	158	Φ7.5	59	187.5	103	105	117	104.5	43.5	40.5	70	243	/	44	14	18
800/4P	280	280	158	Φ7.5	59	187.5	103	105	117	104.5	43.5	40.5	70	243	70	44	14	18

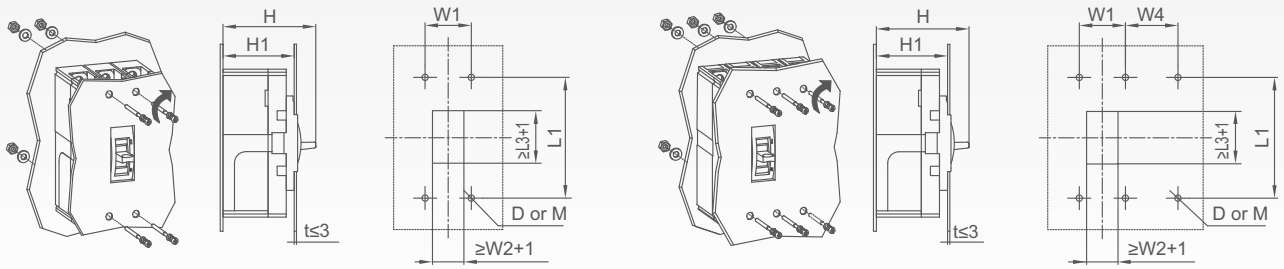
Note: The shell current marked as 1 is YCM7-630 capacity-increase type.

▼ Fixed plate front cable

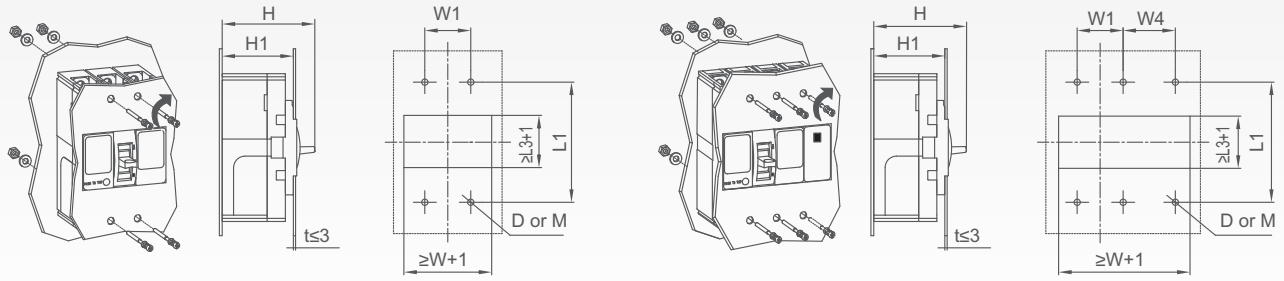
Fixed type 1



Fixed type 2



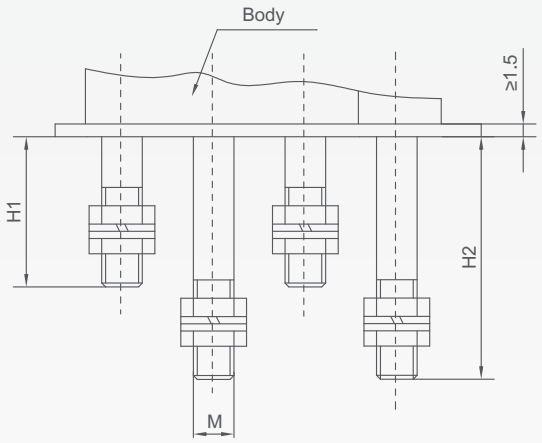
Fixed type 3



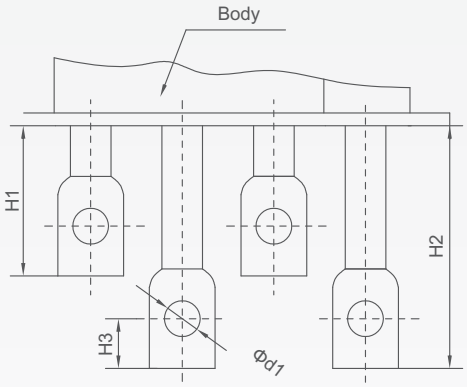
Note: Refer to Table on the previous page for reference dimensions.
The installation screws for fixed type 2 and fixed type 3 need to be customized.

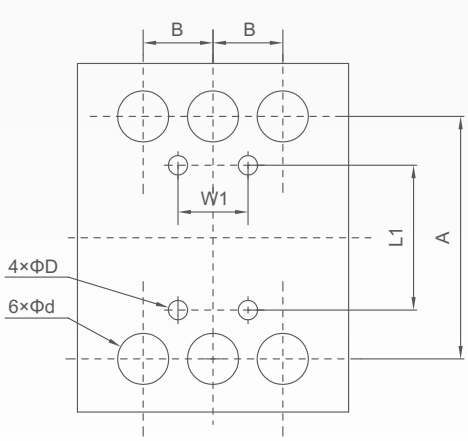
Fixed plate rear cable

YCM7-63~250
Fixed plate rear cable

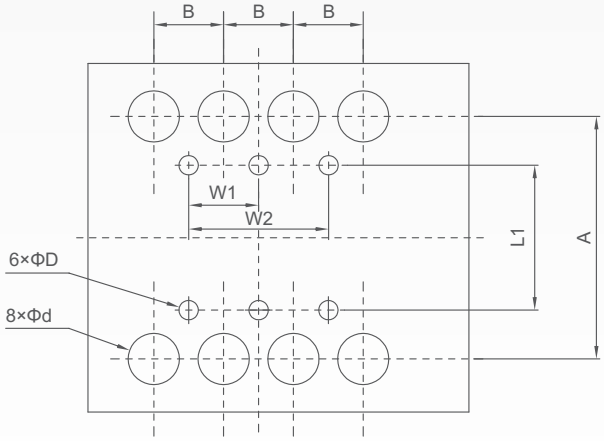


YCM7-400~800
Fixed plate rear cable





3P

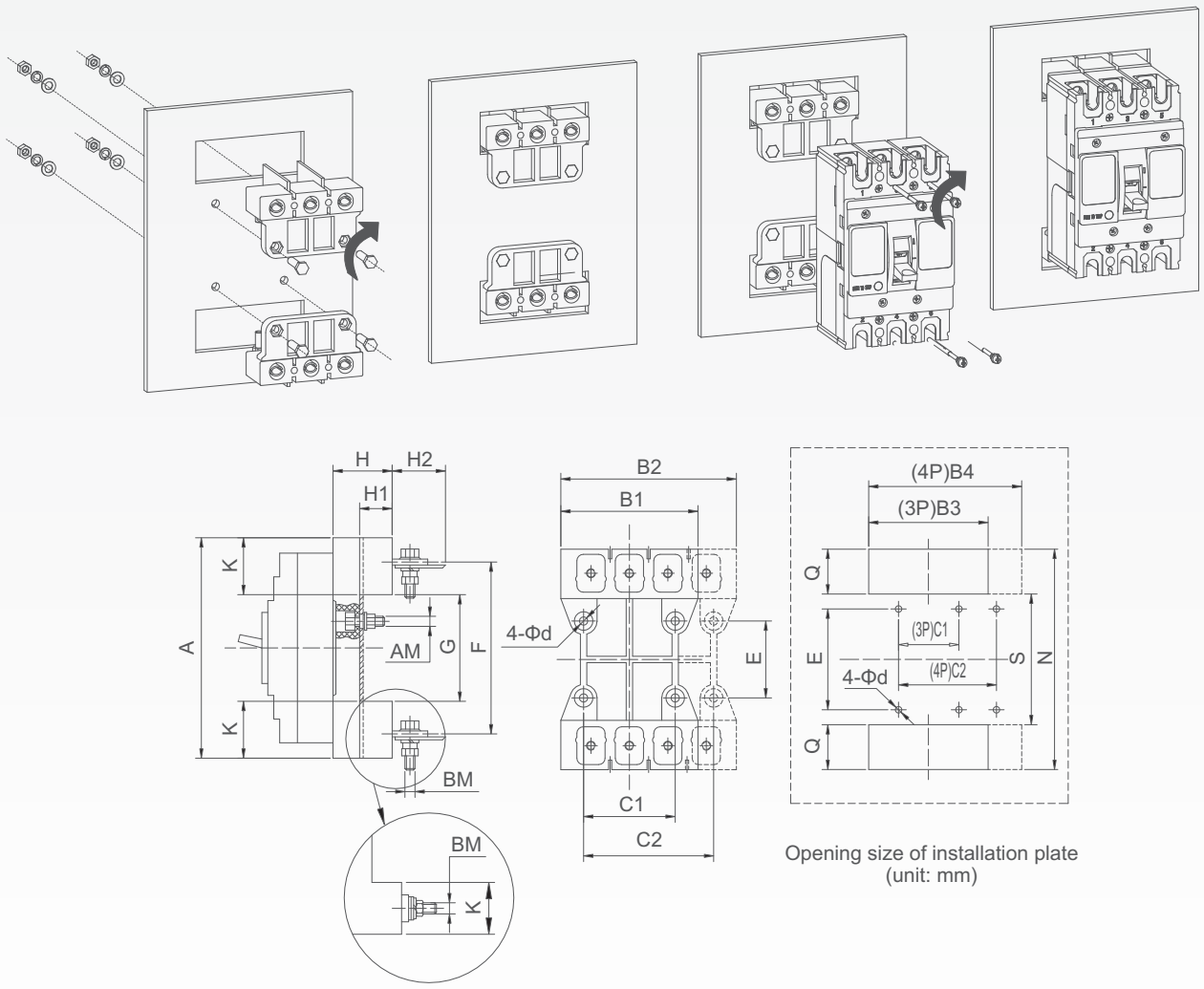


4P

Fixed plate rear cable overall and mounting dimensions

Model	Size code											
	H1	H2	H3	Φd1	M	B	A	Φd	ΦD	W1	W2	L1
YCM7-63/125	44	66	/	/	8	25	115	18	4	25	50	111
YCM7-160	58	89	/	/	8	30	132	18	4.5	30	60	129
YCM7-250	60	93	14	8.5	/	35	145.5	24	4.5	35	70	126
YCM7-400	53	89	20	12.5	/	48	225	33	6	44	88	215
YCM7-630 (Capacity-increase type)	53	89	20	12.5	/	48	225	33	6	44	88	215
YCM7-630	72	106	22	16	/	58	234	40	7	58	116	200
YCM7-800	75	111	22	16	/	70	243	40	7.5	70	140	243

Insert type overall and mounting dimensions



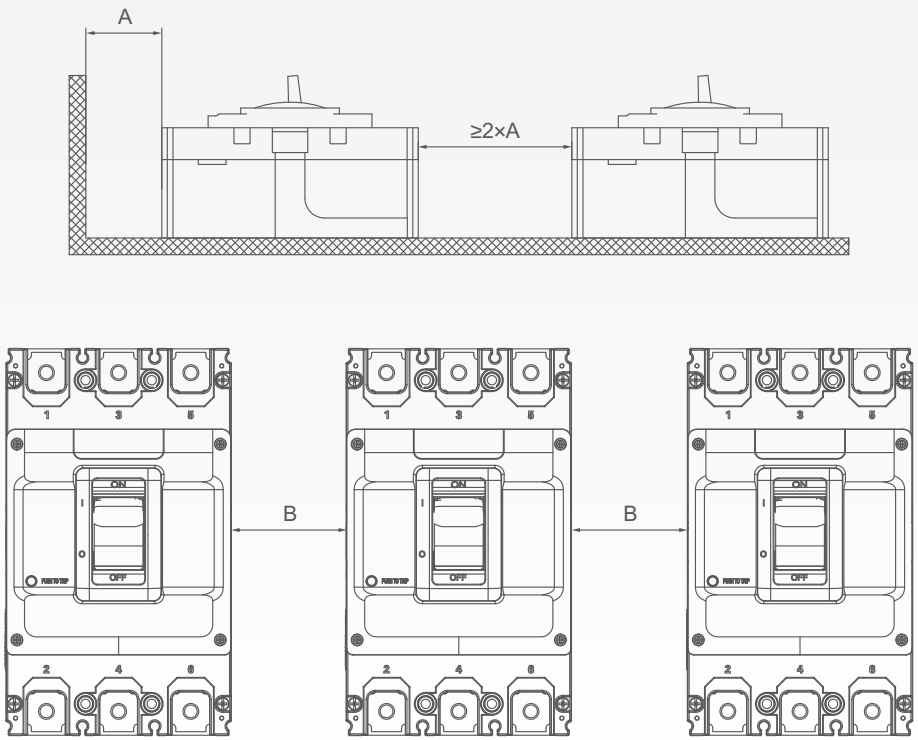
Opening size of installation plate (unit: mm)

Note: The 800 type wiring method is shown in the figure

Insert type cable overall and mounting dimensions

Model	Size code																		
	A	B1	B2	C1	C2	E	F	G	K	H	H1	H2	N	S	Q	B3	B4	AM	BM	4-d
YCM7-63/125	129	75	100	50	/	58	110	95	18	28	18	16	139	83	28	85	/	M5	M5	Φ5.5
YCM7-160	168	91	125	60	90	56	132	92	38	50	33	28	178	82	48	101	135	M6	M8	Φ6.5
YCM7-250	186	107	145	70	105	54	145	94	46	50	33	37	196	84	56	117	155	M6	M8	Φ6.5
YCM7-400	278	152	200	88	132	146	192	171	54	80	60	48	288	161	64	162	210	M8	M10	Φ8.5
YCM7-630 (Capacity-increase type)	278	152	200	88	132	146	192	171	54	80	60	48	288	161	64	162	210	M8	M10	Φ8.5
YCM7-630	300	182	242	100	158	123	234	170	65	60	40	50	310	160	75	192	252	M8	M12	Φ8.5
YCM7-800	305	210	280	90	162	146	242	181	62	87	60	22	315	171	72	220	290	M10	M14	Φ11

Safety distance



Frame current	A	B
63	60	30
125	60	30
160	60	30
250	60	30
400	110	70
630(Capacity-increase type)	110	70
630	110	70
800	110	70

Order instruction

1. When ordering, please provide the following information: name, telephone number, detailed address of the unit to receive the goods, invoice title, product model, specification, quantity, and other requirements.
2. Due to the production of raw materials from time to time adjustment factors, the transaction price please contact the company to confirm;
3. Purchase product model must be complete and correct;
4. When the customer receives the goods, please carefully check the relevant model, quantity, price and whether there is any damage. If the above problems are found within three days of receiving the goods, please submit in writing,no processing will be done after the deadline.
5. After receiving the goods, the customer shall store them properly according to the requirements of the product storage condition.
6. Product model example: YCM7-400L/4320B 315A 100pcs
   Description: The purchased model is YCM7 series 400 shell frame;
   Breaking capacity: L-type; Number of poles: 4; Release method: thermal magnetic release; With auxiliary contact function;
   Class 4 type: Type B; Rated current: 315A; Quantity: 100pcs.