

## Distribution Apparatus

# YCM6 Series MCCB



### General

YCM6, YCM6RT series circuit breaker is a new generation of breaker.

This breaker is applied for the distribution network of AC 50/60Hz, rated insulation voltage 800V, rated working current up to 800A, which is for electric energy distribution, circuit protection, protecting power supply facility from being destroyed by the fault of overloading, short circuit and undervoltage. And it is also used for protecting, over loading, short circuit and undervoltage of the motor.

This breaker has such characteristics as high short circuit interrupting capacity, shortcircuiting and etc., which is a ideal product for users. This breaker can be installed vertically or horizontally.

Standard: IEC60947-2

### Features

1. Design miniaturized  
The miniaturization of product volume can meet the individual needs of customers on installation size.
2. Size uniformed  
Completely consistent installation size with same shell level beyond different breaking capacity(S,M) and different functions(air,leakage).
3. Reasonable parameter setting  
Circuit breaker can realize long-time delay overload inverse time, short circuit instantaneous action protection functions such as parameter setting, users can set their own protective properties required, the distribution network is used in the circuit breaker on the lower level with more reasonable.

### Operating conditions

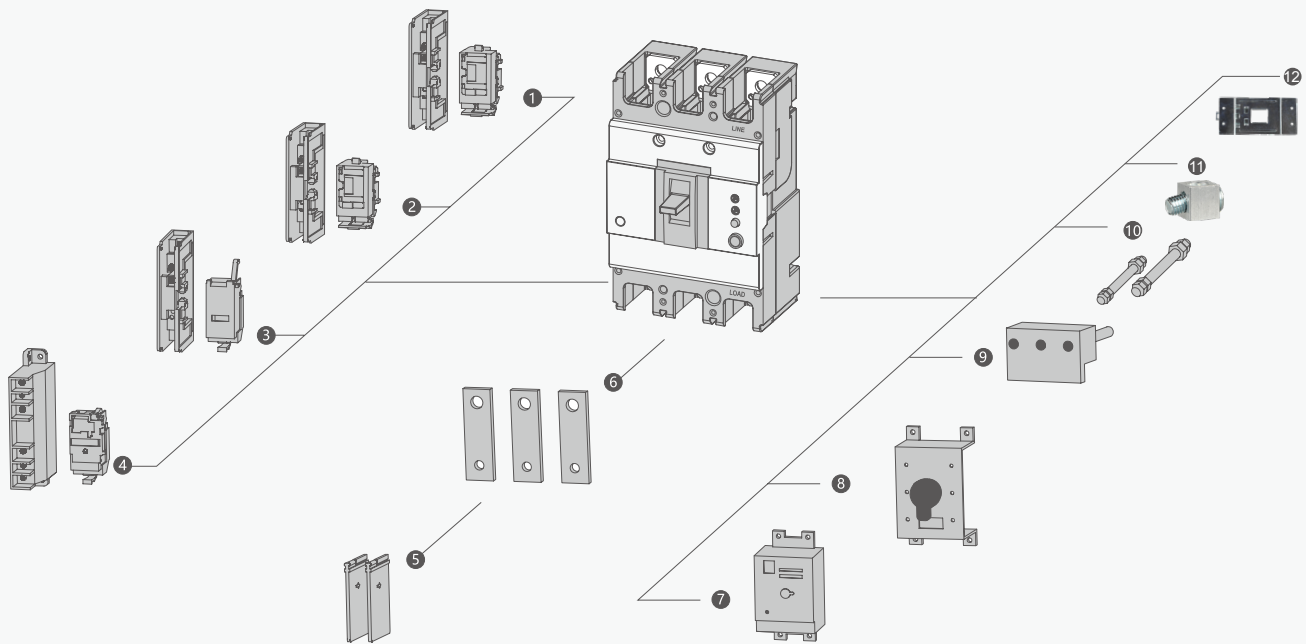
1. Altitude less than 2000m
2. Ambient medium temperature is from -5°C to +40°C (+45°C for shipping product)
3. Humidity resistance
4. Bacteria resistance
5. Nuclear radiation resistance
6. Max lean degree is 22.5 degree.
7. Can operate normally when it comes to vibration of ship.
8. Can operate normally when it comes to earthquake(4g).
9. The medium should be no risk of blasting and can't erode the metal and damage insulating gas as well as conductive dust.
10. Work in the places where is no rain and snow.

# Distribution Apparatus

## YCM6 Series MCCB

### Overview

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- 1. Auxiliary contact
- 2. Alarm contact
- 3. Shunt release
- 4. Undervoltage release

- 5. Interphase barrier
- 6. Front connection plate
- 7. Motor driven operation mechanism
- 8. Extended manual operation handle

- 9. Plug in rear connection
- 10. Rear connection plate
- 11. Connecting terminal
- 12. DIN Rail Adapter(125/160/250A)

## Distribution Apparatus

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### Thermo-magnetic release

1. The circuit breaker (for power distribution) has reverse time breaking characteristics of overcurrent release in all pole states and is energized simultaneously at room temperature 40°C.

Test current	Current time	Conventional time		Initial status
		$I_n \leq 63$	$I_n < 63$	
Conventional non-trip current	1.05	1h	2h	Cold status
Conventional trip current	1.30	<1h	<2h	Hot status

2. When ambient temperature is +40°C for electromotor protection breaker, power on for every pole, inverse time limit characteristic of no temperature compensation is in the following sheet.

Test current	Current time	Conventional time		Initial status
		$I_n \leq 800$		
Conventional non-trip current	1.0	2h		Cold status
Conventional trip current	1.2	<2h		Hot status

3. Action property of the short-circuit release of the breaker

- ◆ Instant trip (for power distribution)  $I = 10I_n$
- ◆ Instant trip (for motor protection)  $I = 12I_n$
- ◆ Current setting accuracy  $\pm 20\%$

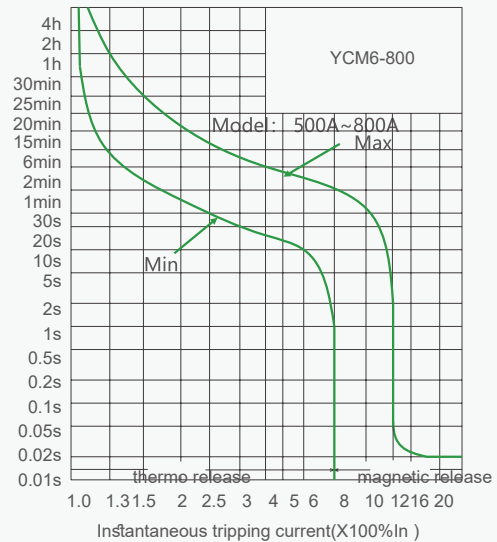
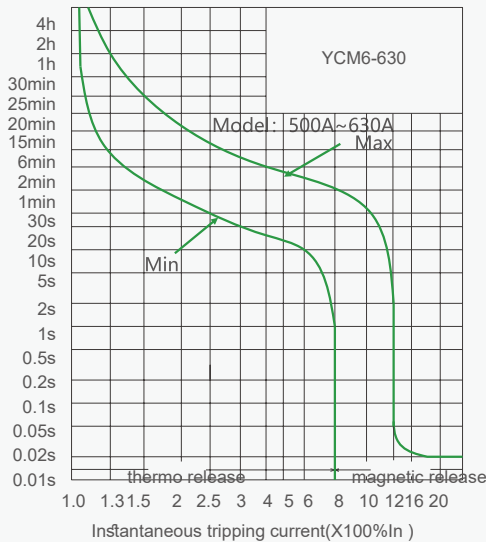
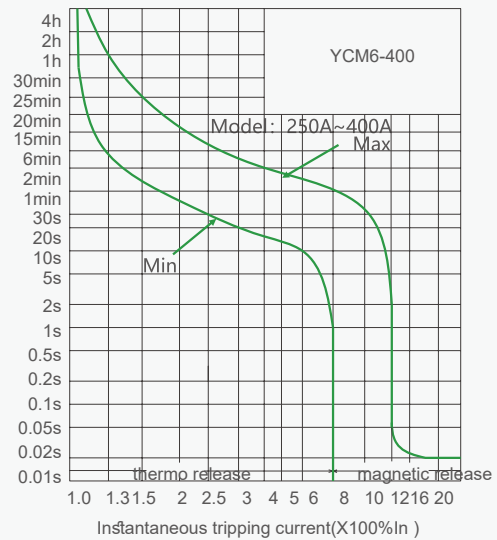
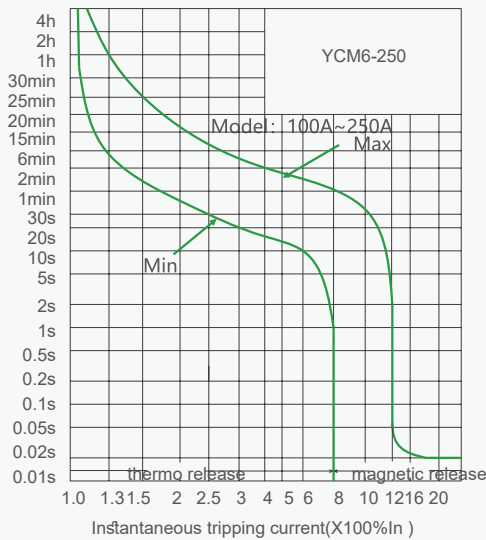
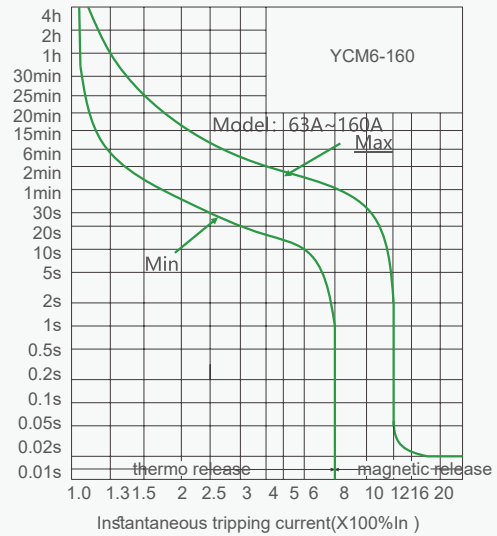
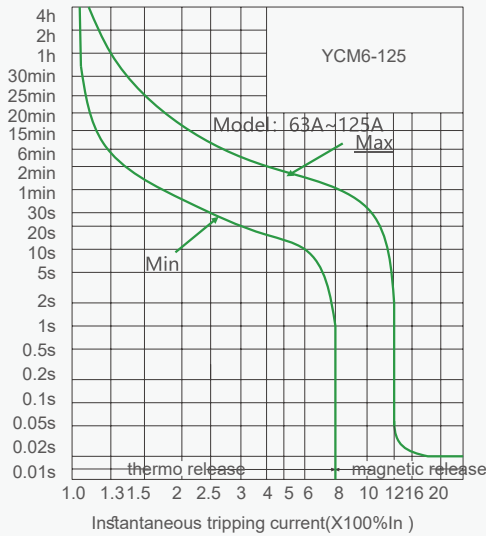
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# Distribution Apparatus

## YCM6 Series MCCB

### Curve

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## Distribution Apparatus

# YCM6 Series MCCB

### Type designation

YCM6 - 125 L P / 4 300 2 A 125A Q1 D1 Q 2

Type	Frame Inm	Breaking capacity Icu/lcs(kA)	Operation	Poles												
YCM6	125	L	P	4												
MCCB	125, 160, 250,400,630,800	<table border="1"> <tr><td>125</td><td>18/9</td></tr> <tr><td>160</td><td>18/9</td></tr> <tr><td>250</td><td>25/18</td></tr> <tr><td>400</td><td>35/25</td></tr> <tr><td>630</td><td>35/25</td></tr> <tr><td>800</td><td>50/35</td></tr> </table>	125	18/9	160	18/9	250	25/18	400	35/25	630	35/25	800	50/35	P: Motor-driven Z: Rotary handle W: Directly	3: 3P 4: 4P
125	18/9															
160	18/9															
250	25/18															
400	35/25															
630	35/25															
800	50/35															

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Tripping mode and inner accessory	Application	Option for 4P MCCB	Rated current(A)												
300	2	A	125A												
First figure means tripping unit way 2: Only with magnetic release 3: Thermal release+,magnetic release body  Remark: The last two figures means accessory code (see accessories list)	1. Power distribution 2. Motor-protection	A: N pole without protection, N pole is always ON B: N pole without protection, N pole makes with the other three poles	<table border="1"> <tr><td>125</td><td>32, 40, 50, 63, 80, 100, 125</td></tr> <tr><td>160</td><td>40, 50, 63, 80, 100, 125, 140, 160, 100</td></tr> <tr><td>250</td><td>125, 140, 160, 180, 200, 225, 250</td></tr> <tr><td>400</td><td>250, 315, 350, 400</td></tr> <tr><td>630</td><td>500, 630</td></tr> <tr><td>800</td><td>630, 700, 800</td></tr> </table>	125	32, 40, 50, 63, 80, 100, 125	160	40, 50, 63, 80, 100, 125, 140, 160, 100	250	125, 140, 160, 180, 200, 225, 250	400	250, 315, 350, 400	630	500, 630	800	630, 700, 800
125	32, 40, 50, 63, 80, 100, 125														
160	40, 50, 63, 80, 100, 125, 140, 160, 100														
250	125, 140, 160, 180, 200, 225, 250														
400	250, 315, 350, 400														
630	500, 630														
800	630, 700, 800														

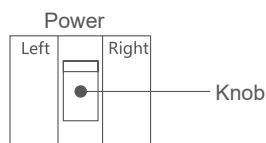
Accessory voltage	Motor-driven operation voltage	Connection	With the connection plate or not															
Q1	D1	Q	2															
<table border="1"> <tr><td>UVT</td><td>Shunt</td><td>Auxiliary</td></tr> <tr><td>Q1: AC220V</td><td>F1: AC220V</td><td>J1: AC125V</td></tr> <tr><td>Q2: AC240V</td><td>F2: AC380V</td><td>J2: AC250V</td></tr> <tr><td>Q3: AC380V</td><td>F3: DC110V</td><td>J3: DC125</td></tr> <tr><td>Q4: AC415V</td><td>F4: DC24V</td><td>J4: DC24V</td></tr> </table>	UVT	Shunt	Auxiliary	Q1: AC220V	F1: AC220V	J1: AC125V	Q2: AC240V	F2: AC380V	J2: AC250V	Q3: AC380V	F3: DC110V	J3: DC125	Q4: AC415V	F4: DC24V	J4: DC24V	DC3 D5:AC220V D6:AC110V D7:DC220V D8:DC110V D9:AC110~240V D10: DC100~220V	Q: Front H: Rear C: Plug-in	1: not 2: yes
UVT	Shunt	Auxiliary																
Q1: AC220V	F1: AC220V	J1: AC125V																
Q2: AC240V	F2: AC380V	J2: AC250V																
Q3: AC380V	F3: DC110V	J3: DC125																
Q4: AC415V	F4: DC24V	J4: DC24V																

# Distribution Apparatus

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### Inner accessories

Model		YCM6-125	YCM6-160	YCM6-250	YCM6-400/630	YCM6-800
Breaking capacity		S	S	S	S	S
No. of poles		3,4	3,4	3,4	3,4	3,4
Code	Accessory name					
208, 308	Alarm contact(SD)					
210, 310	Shunt release(MX)					
220, 320	Auxiliary contact(OF)					
230, 330	Under-voltage release(MN)					
240, 340	Shunt auxiliary contact(MX+MN)					
260, 360	Two groups auxiliary contacts(2OF)					
270, 370	Auxiliary contact UVT(OF+MN)					
218, 318	Shunt alarm contact(MX+SD)					
228, 328	Auxiliary alarm contact(OF+SD)					
238, 338	UVT alarm contact(MN+SD)					
248, 348	Shunt auxiliary alarm contact(MX+OF+SD)					
268, 368	Two groups aux alarm contact(2OF+SD)					
278, 378	Aux contact UVT alarm contact(OF+MN+SD)					
280, 380	Two groups aux contact and shunt(2OF+MX)					



● Alarm switch    ○ Auxiliary switch    □ Shunt release    ■ Undervoltage release(UVT)

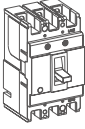
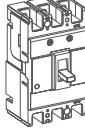
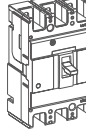
Remark: Right auxiliary, contact, left shunt, left UVT as options

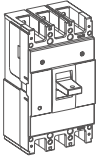
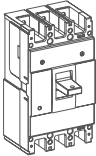
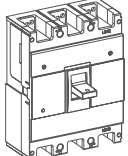
→  
Accessories connecting wire

## Distribution Apparatus

# YCM6 Series MCCB

### Technical data

Type	YCM6-125L	YCM6-160L	YCM6-250L
Frame(A)	125	160	250
Number of poles	3,4	3,4	3,4
Products			
Rated current In (A)	32,40,50,63,80,100,125	40,50,63,80,100,125,140,160	125, 140, 160, 180, 200, 225, 250
Rated voltage Ue(V)	AC230/240,380/400/415,440,690V		
Rated insulation voltage Ui(V)	AC800V	AC800V	AC800V
Short Circuit Breaking Capacity (kA) Icu/Ics	125L	160L	250L
	AC230/240V	36/18	50/25
	AC400/415V	18/9	25/18
	AC400V	14/7	20/10
Operating cycle number	Electrical life	600	3000
	Mechanical life	9000	7000
Motor-driven operation	•	•	•
External drive handle	•	•	•
Automatic release	Electronic type	Electronic type	Electronic type

Type	YCM6-400L	YCM6-630L	YCM6-800L
Frame(A)	400	630	800
Number of poles	3,4	3,4	3,4
Products			
Rated current In (A)	250, 315, 350, 400	500, 630	500, 630, 700, 800
Rated voltage Ue(V)	AC230/240,380/400/415,440,690V		
Rated insulation voltage Ui(V)	AC800V	AC800V	AC800V
Short Circuit Breaking Capacity (kA) Icu/Ics	400L	630L	800L
	AC230/240V	70/35	85/42
	AC400/415V	35/25	50/35
	AC400V	30/15	45/22
Operating cycle number	Electrical life	1000	500
	Mechanical life	4000	2500
Motor-driven operation	•	•	•
External drive handle	•	•	•
Automatic release	Electronic type	Electronic type	Electronic type

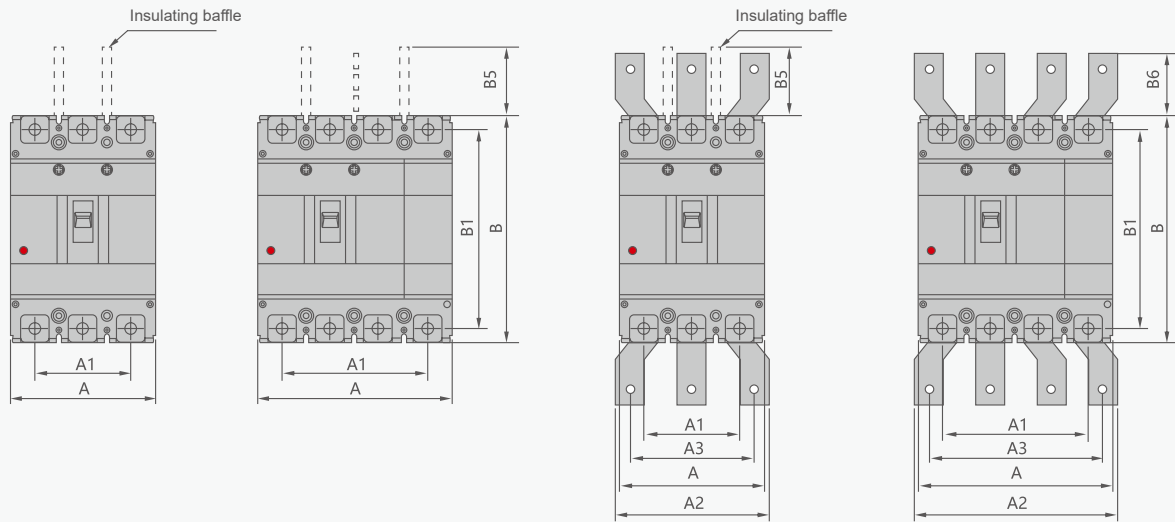
• Means accessory as option

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## Distribution Apparatus

# YCM6 Series MCCB

### Overall and mounting dimensions(mm)



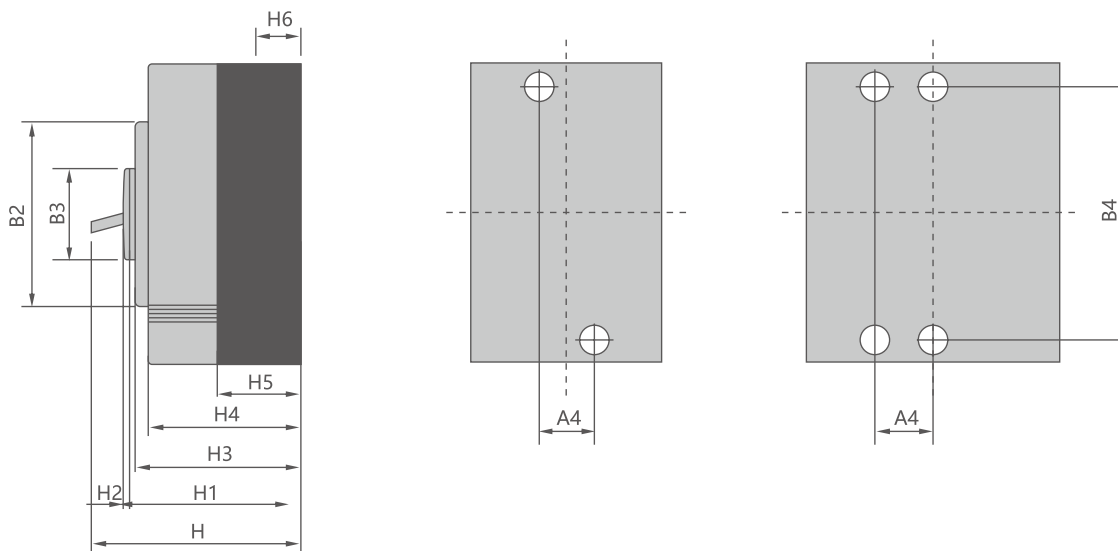
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# Distribution Apparatus

## YCM6 Series MCCB

### Overall and mounting dimensions(mm)



**B**

Model case Circuit breaker	Overall dimensions																				Installing dimensions		Bolt	
	A		A1		A2		A3		B	B1	B2	B3	B5	B6	H	H1	H2	H3	H4	H5	H6	A4		B4
	3P	4P	3P	4P	3P	4P	3P	4P																
YCM6-125L	75	100	50	75	-	-	-	-	130	114	85	50	50	-	72	4	68	61	41	24	41	25	111	M8/M6
YCM6-160L	90	120	60	90	-	-	-	-	155	134	103	50	50	-	72	4	68	61	41	24	41	30	132	M8
YCM6-250L	105	140	70	105	-	-	-	-	165	144	103	50	100	-	72	4	68	61	46	24	46	35	126	M8
YCM6-400L	140	185	88	132	140	196	112	168	257	230	179	90	110	43	107	5	105	97	64	36	64	44	194	M10
YCM6-630L	140	185	88	132	140	196	112	168	257	230	179	90	110	42	107	5	105	97	64	36	64	44	194	M10
YCM6-800L	210	280	140	210	180	250	140	210	275	243	192	90	110	87	107	5	104	97	65	24	65	70	242.5	M12

## Distribution Apparatus

# YCM6RT Thermal Magnetic Adjustable MCCB

### Type designation

YCM6 RT - 160 L P / 3 300 2 A 160A Q1 D Q 2

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Type	The adjustable type	Frame Inm	Breaking capacity Icu/Ics(kA)	Operation	Poles										
YCM6	RT	- 160	L	Z	3										
MCCB	RT:Overload+short circuit	160, 250,400, 630,800	<table border="1"> <tr><td>160</td><td>18/9</td></tr> <tr><td>250</td><td>25/18</td></tr> <tr><td>400</td><td>35/25</td></tr> <tr><td>630</td><td>35/25</td></tr> <tr><td>800</td><td>50/35</td></tr> </table>	160	18/9	250	25/18	400	35/25	630	35/25	800	50/35	P: Motor-driven Z: Rotary handle W: Directly ① : Motor-driven operation DC3	3: 3P 4: 4P
160	18/9														
250	25/18														
400	35/25														
630	35/25														
800	50/35														

Tripping mode and inner accessory	Application	Option for 4P MCCB	Rated current(A)										
300	2	A	160										
First figure means tripping unit way 2: Only with magnetic release 3: Thermal release+,magnetic release body  Remark: The last two figures means accessory code (see accessories list)	1. Power distribution 2. Motor-protection	A: N pole without protection, N pole is always ON B: N pole without protection, N pole makes with the other three poles	<table border="1"> <tr><td>160</td><td>32-40,40-50,50-63,70-80,80-100,100-125,125-160</td></tr> <tr><td>250</td><td>100-125, 125-160,160-200, 200-250</td></tr> <tr><td>400</td><td>200-250, 250-320, 320-400</td></tr> <tr><td>630</td><td>400-500, 500-630</td></tr> <tr><td>800</td><td>500-630, 630-800</td></tr> </table>	160	32-40,40-50,50-63,70-80,80-100,100-125,125-160	250	100-125, 125-160,160-200, 200-250	400	200-250, 250-320, 320-400	630	400-500, 500-630	800	500-630, 630-800
160	32-40,40-50,50-63,70-80,80-100,100-125,125-160												
250	100-125, 125-160,160-200, 200-250												
400	200-250, 250-320, 320-400												
630	400-500, 500-630												
800	500-630, 630-800												

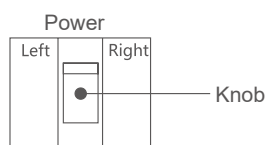
Accessory voltage	Motor-driven operation voltage	Connection	With the connection plate or not
Q1	D	Q	2
UVT Q1: AC220V Q2: AC240V Q3: AC380V Q4: AC415V  Shunt F1: AC220V F2: AC380V F3: DC110V F4: DC24V J1: AC125V J2: AC250V J3: DC125V J4: DC24V	DC3 D5:AC220V D6:AC110V D7:DC220V D8:DC110V D9:AC110~240V D10: DC100~220V	Q: Front H: Rear C: Plug-in	1: not 2: yes

## Distribution Apparatus

# YCM6RT Thermal Magnetic Adjustable MCCB

### Inner accessories

Model		YCM6RT-160		YCM6RT-250		YCM6RT-400/630	YCM6RT-800
Breaking capacity		L		L		L	L
No. of poles		3	4	3	4	3,4	3,4
Code	Accessory name						
208, 308	Alarm contact(SD)						
210, 310	Shunt release(MX)						
220, 320	Auxiliary contact(OF)						
230, 330	Under-voltage release(MN)						
240, 340	Shunt auxiliary contact(MX+MN)						
260, 360	Two groups auxiliary contacts(2OF)						
270, 370	Auxiliary contact UVT(OF+MN)						
218, 318	Shunt alarm contact(MX+SD)						
228, 328	Auxiliary alarm contact(OF+SD)						
238, 338	UVT alarm contact(MN+SD)						
248, 348	Shunt auxiliary alarm contact(MX+OF+SD)						
268, 368	Two groups aux alarm contact(2OF+SD)						
278, 378	Aux contact UVT alarm contact(OF+MN+SD)						
280, 380	Two groups aux contact and shunt(2OF+MX)						



● Alarm switch    ○ Auxiliary switch    □ Shunt release    ■ Undervoltage release(UVT)

Remark: Right auxiliary, contact, left shunt, left UVT as options

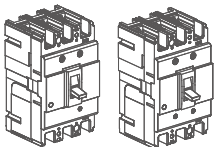
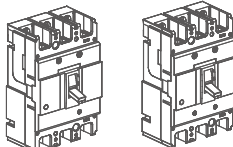
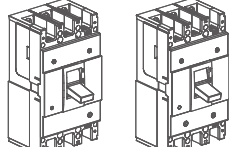
→ Accessories connecting wire

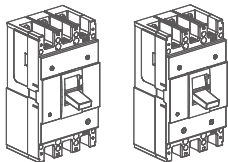
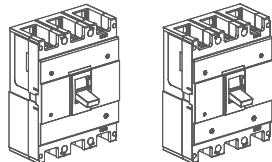
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## Distribution Apparatus

# YCM6RT Thermal Magnetic Adjustable MCCB

### Technical data

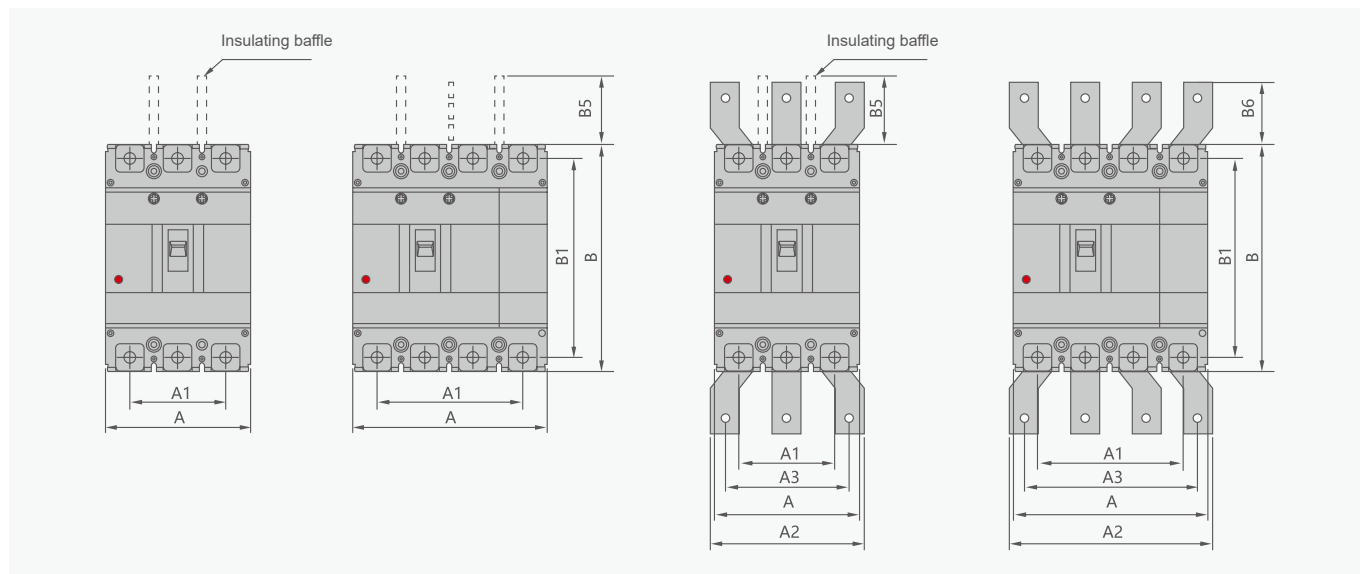
Type	YCM6RT-160L	YCM6RT-250L	YCM6RT-400L
Frame(A)	160	250	400
Number of poles	3,4	3,4	3,4
Products			
Rated current In (A)	32-40,40-50,50-63,70-80,80-100,100-125,125-160	100-125,125-160,160-200,200-250,	200-250,250-320,320-400
Rated voltage Ue(V)	AC230/240,380/400/415,440,690V		
Rated insulation voltage Ui(V)	AC800V	AC800V	AC800V
Short Circuit Breaking Capacity (kA) Icu/Ics	160L	250L	400L
	AC230/240V	36/18	50/25
	AC400/415V	18/9	25/18
	AC400V	14/7	20/10
Operation life (cycle)	AC690V	5/3	7/3
	ON	3000	3000
	OFF	7000	7000
Motor-driven operation	•	•	•
External drive handle	•	•	•
Automatic release	Electronic type	Electronic type	Electronic type

Type	YCM6RT-630L	YCM6RT-800L
Frame(A)	630	800
Number of poles	3,4	3,4
Products		
Rated current In (A)	400-500,500-630	500-630,630-800
Rated voltage Ue(V)	AC400/690V	AC400/690V
Rated insulation voltage Ui(V)	AC690V	AC690V
Short Circuit Breaking Capacity (kA) Icu/Ics	630L	800L
	AC230/240V	70/35
	AC400/415V	35/25
	AC400V	30/15
Operation life (cycle)	AC690V	8/4
	ON	2000
	OFF	4000
Motor-driven operation	•	•
External drive handle	•	•
Automatic release	Electronic type	Electronic type

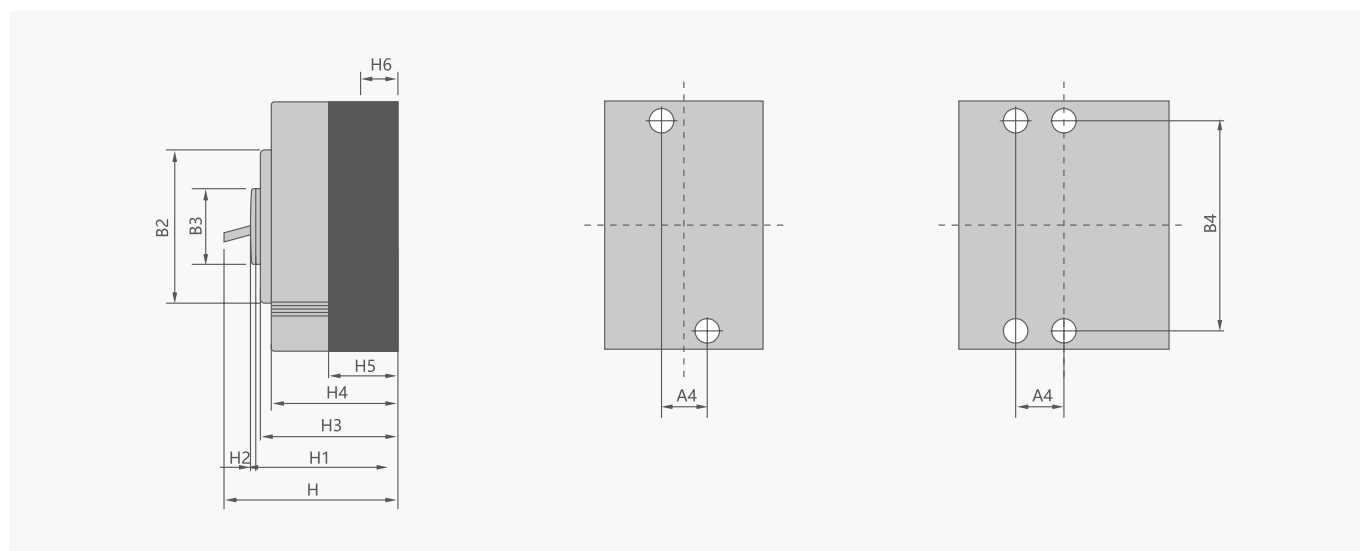
## Distribution Apparatus

# YCM6RT Thermal Magnetic Adjustable MCCB

### Overall and mounting dimensions(mm)



**B**



Thermal magnetic trip circuit breaker	Thermal adjustable circuit breaker	Overall dimensions																				Installing dimensions		Bolt	
		A		A1		A2		A3		B	B1	B2	B3	B5	B6	H	H1	H2	H3	H4	H5	H6	A4		B4
		3P	4P	3P	4P	3P	4P	3P	4P																
YCM6RT-160L	YCM6T/A-160S	90	120	60	90	-	-	-	-	155	134	103	50	50	-	94	72	4	68	61	47	24	30	132	M8
YCM6RT-250L	YCM6T/A-250S	105	140	70	105	-	-	-	-	165	144	103	50	100	-	96	72	4	68	61	46	24	35	126	M8
YCM6RT-400L	YCM6T/A-400S	140	185	88	132	140	196	112	168	257	230	179	90	110	42	155	107	5	105	97	64	36	44	194	M10
YCM6RT-630L	YCM6T/A-630M	140	185	88	132	140	196	112	168	257	230	179	90	110	42	155	107	5	105	97	64	36	44	194	M10
YCM6RT-800L	YCM6T/A-800M	210	280	140	210	180	250	140	210	175	243	192	90	110	87	155	107	5	104	97	65	24	70	242.5	M12

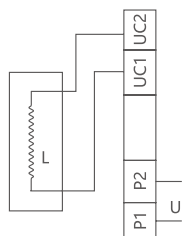
## Distribution Apparatus

# YCM6 Series MCCB Accessories

### Internal accessories

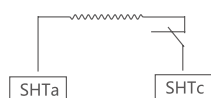
Internal accessories of YCM6, YCM6RT series include undervoltage release, shunt release and auxiliary alarm release, their main technical parameters and wiring diagram are as follows:

**B**



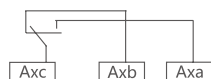
#### Undervoltage release

Rated voltage of power supply	Main features
AC220, AC240 AC380, AC415	<p>A. Undervoltage release should act when voltage drops to within 70% and 35% of the rated voltage.</p> <p>B. The undervoltage release should not be closed to prevent the circuit breaker from closing when the voltage is lower than 35% of the rated voltage.</p> <p>C. The undervoltage release should be closed to ensure reliable closing of the circuit breaker when the voltage is equal to or greater than 85% of the rated voltage.</p>



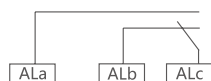
#### Shunt release

Rated voltage of power supply	Main features
AC24, DC110 AC220, AC380	Shunt release can work reliably when the rated voltage value is at 70% and 110%.

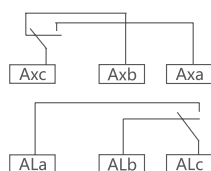


#### Auxiliary alarm contact

Rated voltage of power supply	Main features
Auxiliary switch AC 125V 5A, AC 250V 3A DC 125V0.4A, DC 125V0.2A	Shunt release can work reliably when the rated voltage value is at 70% and 110%.



Alarm switch AC 125 5A, AC 250V 3A DC 125V0.4A, DC 125V 0.2A	Provide differentiated signals for the circuit breaker at "normal work" and "fault free trip" positions.
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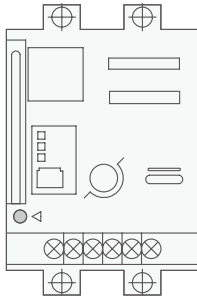
Auxiliary alarm switch AC 125V 5A, AC 250V 3A DC 125V0.4A, DC125V0.2A	Provide differentiated signals for the circuit breaker at "close", "open" and "fault free trip" positions.
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# Distribution Apparatus

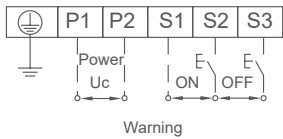
## YCM6 Series MCCB Accessories

### External accessories

The main technical parameters, dimensions and installation diagrams of external accessories for YCM7, YCM7RT and YCM7E series are as follows:  
DC3 electric operating mechanism.

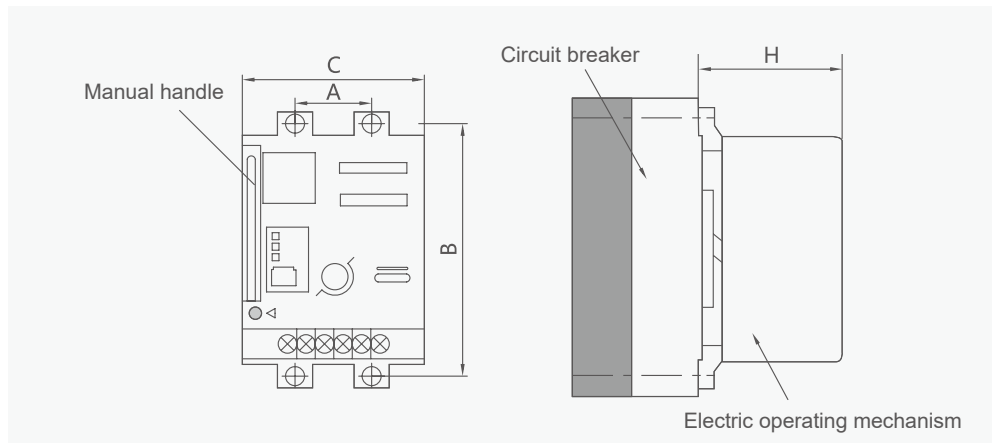


### Wiring diagram



1. Counterclockwise manual operation is prohibited
2. When under manual operation, insert the handle at the starting point and rotate it 180 clockwise

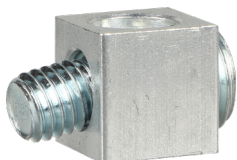
Model & Spec.		DC3-63/30	DC3-100/30	DC3-250/30	DC3-400/30	DC3-630/30
Applicable model		YCM6-125	YCM6-160 YCM6RT-160	YCM6-250 YCM6RT-250	YCM6-400 YCM6RT-400 YCM6-630 YCM6RT-630	YCM6-800 YCM6RT-800
Outline dim.	A	25	30	35	44	70
	B	117	132	126	194	243
	C	73	90	90	130	130
	H	98	98(89.5)	102(92)	152	153
Rated voltage (V)		AC-110-24, DC100-220, C24			AC230, DC220 or AC110, DC110, DC24	
Starting current (A)		≤0.5			≤2	
Mechanical life (times)		14000		10000	5000	
Power (W)		14			35	



DIN Rail Adapter	Applicable frame	Rated thermal current I <sub>th</sub>
	YCM6-125	3P
	YCM6-160	
	YCM6-250	

**B**

**B**



**Aluminum terminal block**

Built-in type

Frame	Maximum rated current	Number of holes	Wide	Wiring aperture	Maximum wiring
400A	400A	1	30mm	Φ24	250 mm <sup>2</sup>
250A	250A	1	23mm	Φ16	180mm <sup>2</sup>
160A	160A	1	17.8mm	Φ14	125mm <sup>2</sup>
125A	125A	1	15.9mm	Φ10	78mm <sup>2</sup>

External type



Frame	Maximum rated current	Number of holes	Wide	Wiring aperture	Maximum wiring
800A	800A	2	38mm	Φ24	325mm <sup>2</sup>
		1	44mm	Φ27	480mm <sup>2</sup>
630A	630A	2(short)	30mm	Φ22	250mm <sup>2</sup>
		2(long)	30mm	Φ20	250mm <sup>2</sup>
400A	400A	1	30mm	Φ19.5	250mm <sup>2</sup>
250A	250A	2	23mm	Φ16	180mm <sup>2</sup>
		1	23mm	Φ16	180mm <sup>2</sup>
160A	160A	1	17mm	Φ13.5	125mm <sup>2</sup>
125A	125A	1	15.9mm	Φ11	80mm <sup>2</sup>