

## Photovoltaic AC components

### YCM8-□HU Photovoltaic AC MCCB



#### General

YCM8-□HU series AC molded case circuit breaker is suitable for AC grid circuits with rated voltage up to AC1140V and rated current of 800A. The circuit breaker has the functions of overload long-time delay protection and short-circuit instantaneous protection, and is used to distribute electric energy and protect lines and power supply equipment from overload, short circuit and other faults.

#### Features

- Ultra-wide breaking capacity: rated working voltage up to AC1140V and rated current up to 800A. Under AC800V working conditions,  $I_{cu}=I_{cs}=36.5KA$ , ensuring reliable short-circuit protection.
- Ultra-long arc-extinguishing chamber: the arc-extinguishing chamber has been improved as a whole, with more arc-extinguishing plates, greatly improving the product's breaking characteristics.
- Application of narrow-slot arc-extinguishing technology: advanced current-limiting and narrow-slot arc-extinguishing technology is applied, which enables the high voltage and high short-circuit current to be cut off very quickly, facilitating the extinguishing of the arc in the shortest possible time, effectively limiting the energy and current peak, and greatly reducing damage to cables and equipment caused by short-circuit currents.

#### Selection

YCM8	250	S	HU	/	3	125A	AC800
Model	Shell frame current	Breaking capacity	Product type	/	Number of poles	Rated current	Rated voltage
YCM8	250(63~250) 320(250~320) 400(225~400) 630(500~630) 800(700~800)	S: Standard breaking N: Higher breaking	HU: AC high voltage	/	3	63, 80, 100, 125 140, 160, 180 200, 225, 250 280, 315, 320 350, 400, 500 630, 700, 800	AC800 AC1140

#### Accessory selection rules

YCM8	MX	1	AC230V
Model	Accessories	Adapter shell frame	Accessory voltage
YCM8	OF: Auxiliary contact MX: Shunt release SD: Alarm module Z: Manual operation mechanism P: Electric operating mechanism TS2: Terminal shield 2P TS3: Terminal shield 3P	1: 250/320 2: 400/630/800	MX: AC110V AC230V AC400V DC24V P: AC400V AC230V DC220V

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#### Technical data

Model	YCM8- 250HU				YCM8- 320HU				YCM8- 400HU					
Appearance														
Shell frame current $I_{nm}(A)$	250				320				400					
Number of poles of products	3				3				3					
AC working voltage(V)	415	690	800	1140	415	690	800	1140	415	690	800	1140		
Rated insulation voltage $U_i(V)$	AC1150				AC1150				AC1150					
Rated impulse withstand voltage $U_{imp}(KV)$	8				8				12					
Rated current $I_n(A)$	63, 80, 100, 125, 140, 160, 180, 200, 225, 250				280, 315, 320				225, 250, 315, 350, 400					
Ultimate short-circuit breaking capacity $I_{cu}$ (kA)	S	85	50	36.5	10	85	50	36.5	10	85	50	36.5	10	
	N	/				/				100	60	50	15	
Running short-circuit breaking capacity $I_{cs}(kA)$	I <sub>cs</sub> =100%I <sub>cu</sub>													
Wiring method	Up in and down out, down in and up out, Down in and up out, up in and down out(3P)													
Isolation function	Yes													
Tripping type	Thermal-magnetic type													
Electrical life(time)	3000	3000	2000		3000	3000	2000		1000	1000	700			
Mechanical life(time)	20000				20000				10000					
Standard	IEC/EN60947-2													
Attached accessories	Shunt, Alarm, Auxiliary, Manual operation, Electric operation													
Certifications	CE													
Overall dimension (mm)			Width(W)				107				182			
			Height(H)				180				250			
			Depth(D)				126				126			

Note: ① 2P connection in series, ② 3P connection in series

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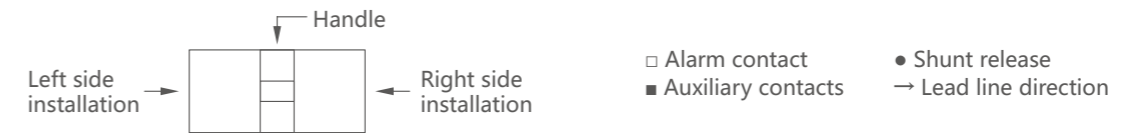
#### Technical data












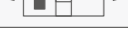




Model		YCM8-630HU				YCM8-800HU			
Appearance									
Shell frame current Inm(A)		630				800			
Number of poles of products		3				3			
AC working voltage(V)		415	690	800	1140	415	690	800	1140
Rated insulation voltageUi(V)		AC1150				AC1150			
Rated impulse withstand voltage Uimp(KV)		12				12			
Rated current In(A)		500, 630				630, 700, 800			
Ultimate short-circuit breaking capacity Icu (kA)	S	85	50	36.5	10	85	50	36.5	10
	N	100	60	50	15	100	60	50	15
Running short-circuit breaking capacity Ics(kA)		Ics=100%Icu							
Wiring method		Up in and down out, down in and up out, Down in and up out, up in and down out(3P)							
Isolation function		Yes							
Tripping type		Thermal-magnetic type							
Electrical life(time)		1000	1000	1000	700	1000	1000	1000	700
Mechanical life(time)		5000				5000			
Standard		IEC/EN60947-2							
Attached accessories		Shunt, Alarm, Auxiliary, Manual operation, Electric operation							
Certifications		CE							
Overall dimension (mm)		Width(W)				182			
		Height(H)				250			
		Depth(D)				165			

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### YCM8-□HU Photovoltaic AC MCCB

#### Accessories



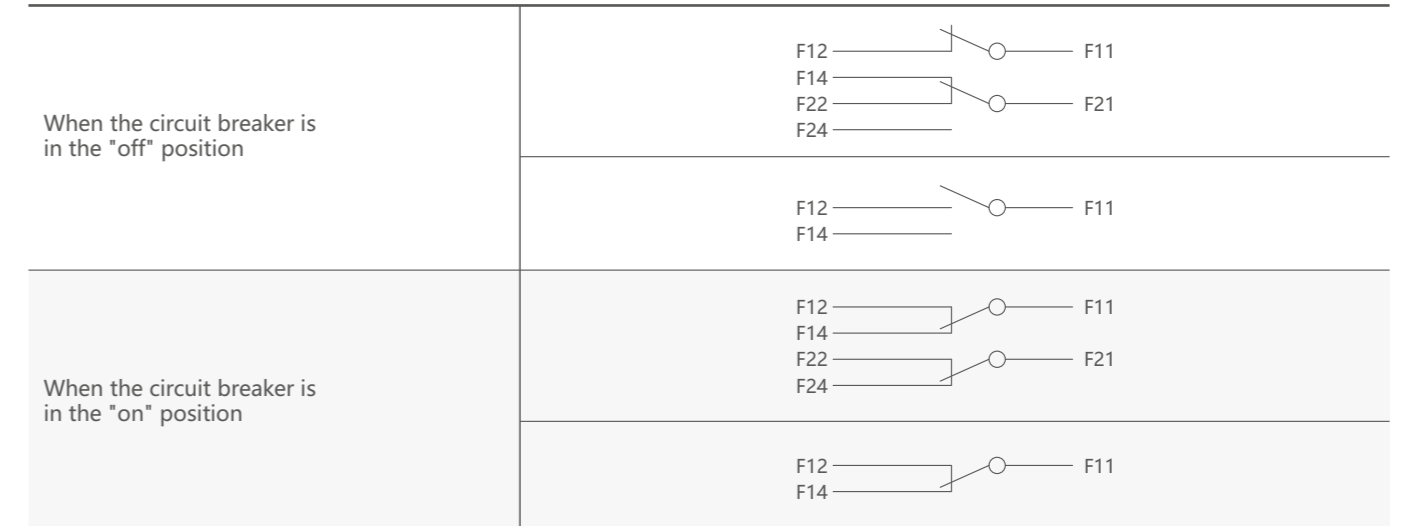
Accessory code	Accessory name	250/320HU	400/630/800HU
SD	Alarm contact		
MX	Shunt release		
OF	Auxiliary contact(1NO1NC)		
OF+OF	Auxiliary contact(2NO2NC)	—	
MX+OF	Shunt release+ Auxiliary contact(1NO1NC)		
OF+OF	2 sets of auxiliary contacts(2NO2NC)		—
MX+SD	Shunt release + Alarm contact	—	
OF+SD	Auxiliary contact + Alarm contact		
MX+OF+SD	Shunt release Auxiliary contact(1NO1NC)+ Alarm contact	—	
OF+OF+SD	2 sets of auxiliary contacts(2NO2NC)+Alarm contact		

#### Auxiliary contact

Auxiliary contact current parameters

Rated current of shell frame grade	Agreed heating current Ith	The rated working current at AC 400V
Inm < 320	3A	0.30A
Inm > 400	6A	0.40A

Auxiliary contact and its combination


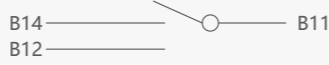


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### YCM8-□HU Photovoltaic AC MCCB

#### Alarm contact

Alarm contact and its combination

Alarm contact $U_e=220V$ , $I_{th}=3A$	
When the circuit breaker is in the "off" and "on" position	
When the circuit breaker is in the "free trip" position	

#### Shunt release

Generally installed in the Phase A of the circuit breaker, when the rated control power voltage is between 70% - 110%, the shunt release shall make the circuit breaker trip reliably under all operating conditions.

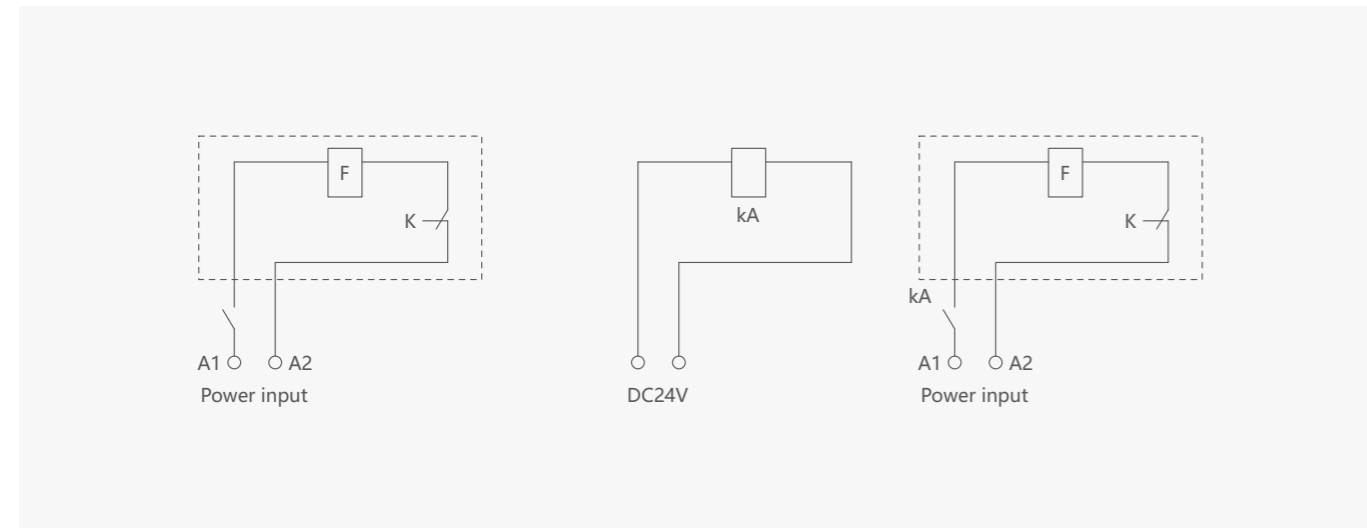
Control voltage: conventional: AC 50Hz, 110V, 230V, 400V, DC 24V.

Note: when the power supply of the control circuit is DC24V, the following figure is recommended for the design of the shunt control circuit.

KA: DC24V intermediate relay, contact current capacity is 1A

K: the microswitch in series with the coil inside the release aid is a normally closed contact. When the circuit breaker is disconnected, the contact will automatically disconnect and close when it is closed.

#### Wiring diagram



## Photovoltaic AC Components

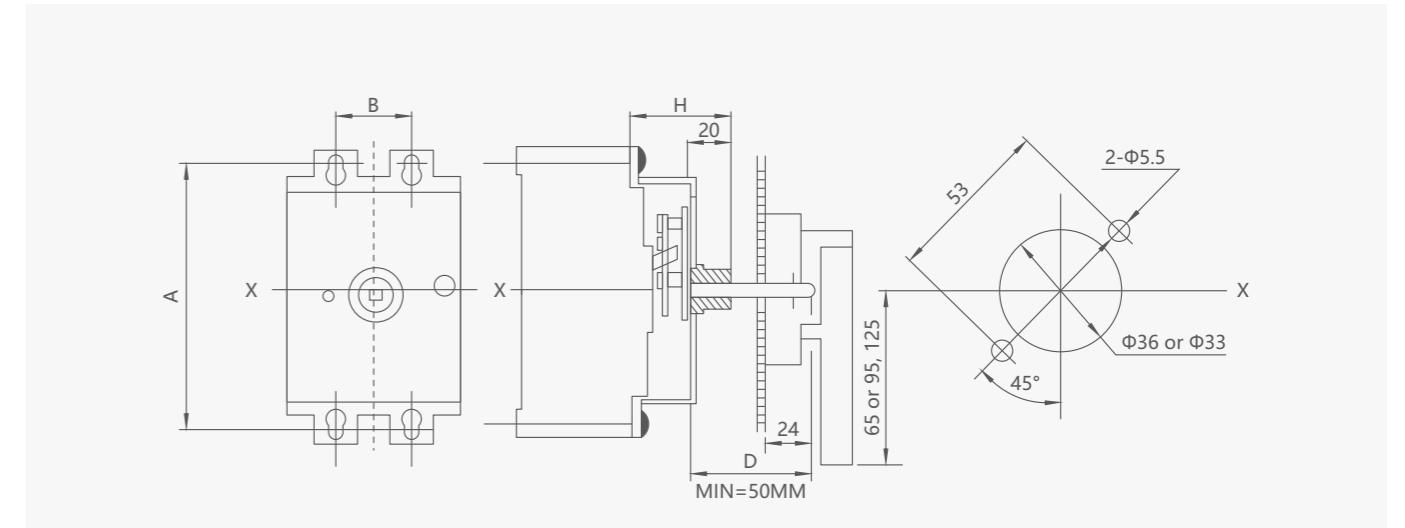
### YCM8-□HU Photovoltaic AC MCCB

#### Installation method and overall dimension of external accessories

Model and specification of rotating operating handle mechanism

Model	Installation dimension(mm)				Central value of the operating handle relative to the circuit breaker(mm)
	A	B	H	D	
YCM8-250/320HU	157	35	55	50-150	0
YCM8-400/630/800HU	224	48	78	50-150	±5

Schematic diagram of hole opening of rotating operating handle

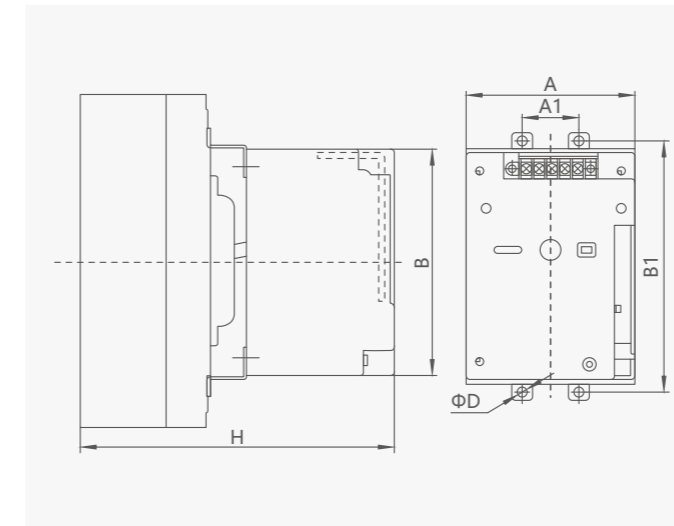


#### Overall and mounting dimension of external accessories

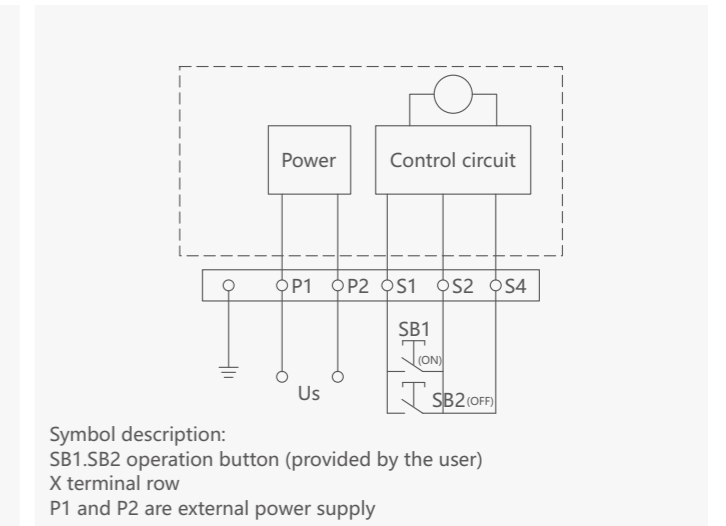
Model and specification of rotating operating handle mechanism

Model	H	B	B1	A	A1	D
YCM8-250/320HU	188.5	116	126	90	35	4.2
YCM8-400/630/800HU	244	176	194	130	48	6.5

Outline and installation dimension diagram of CD2

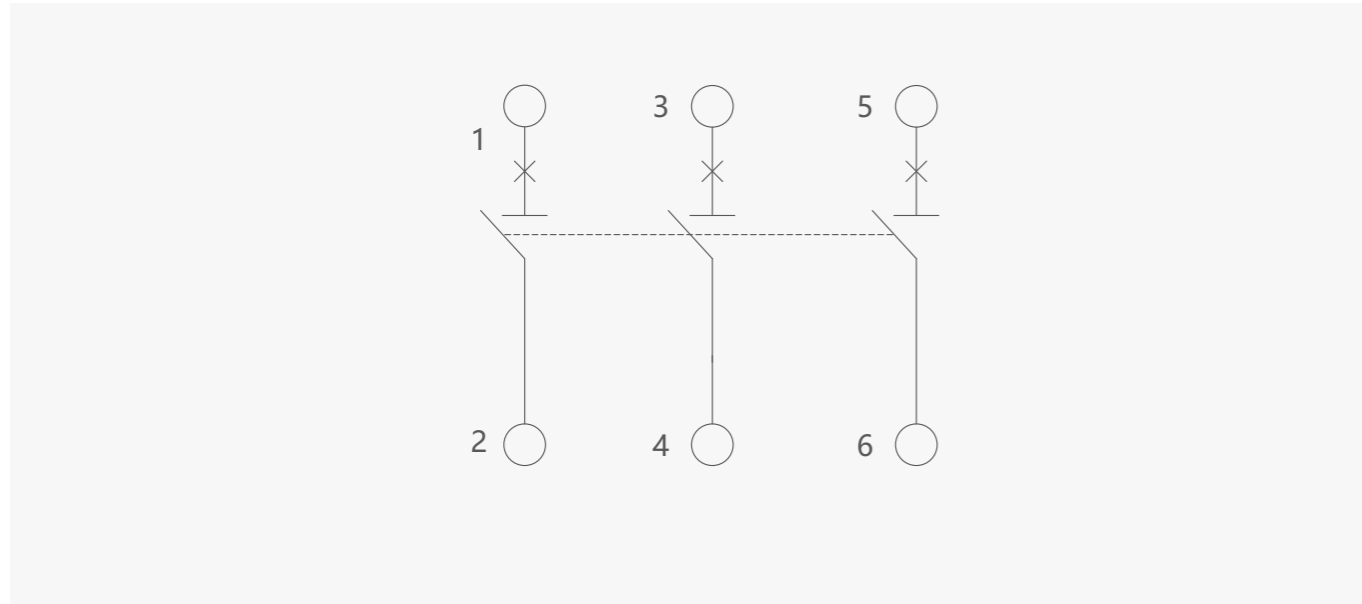


#### Wiring diagram



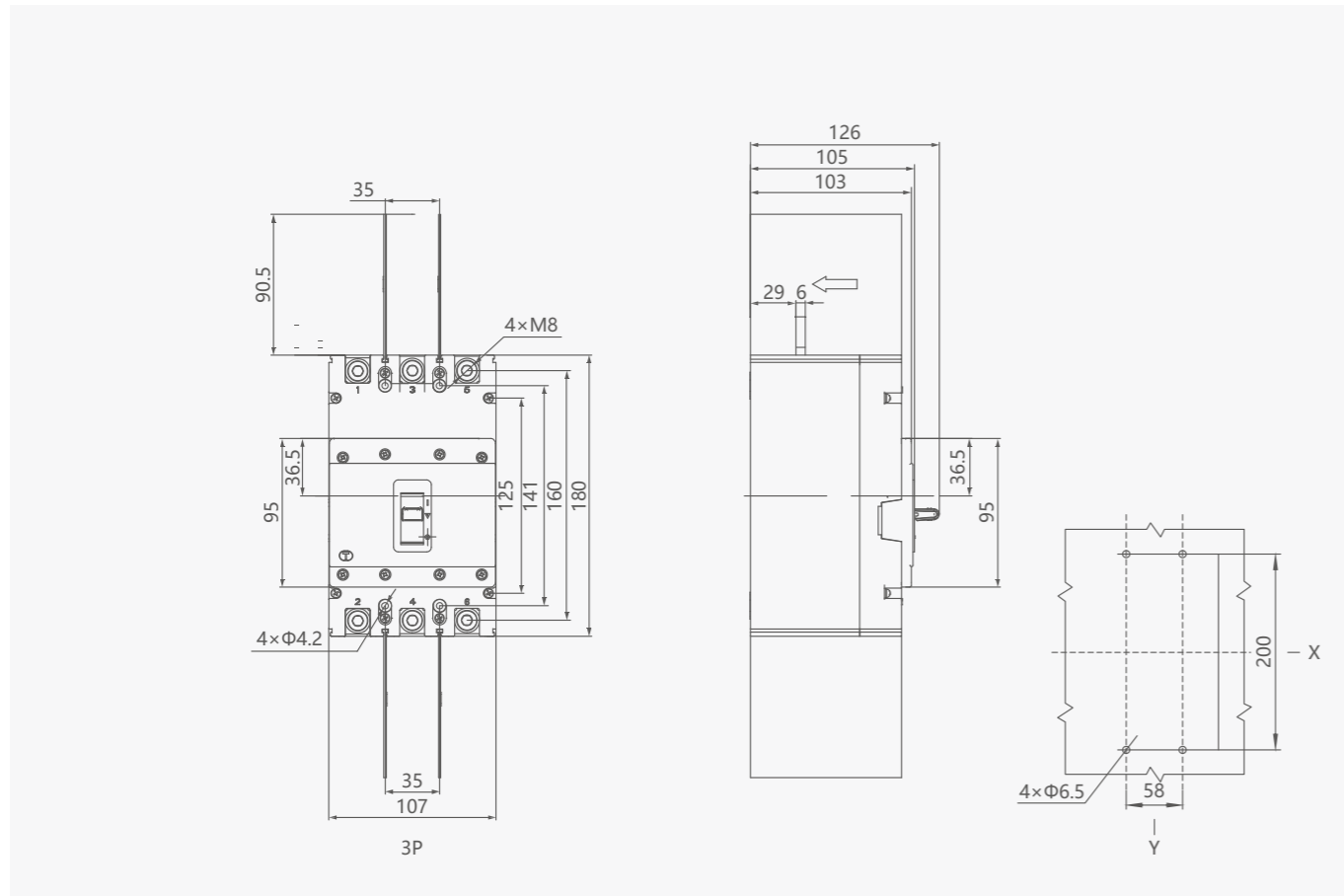
Photovoltaic AC Components  
**YCM8-□HU Photovoltaic AC MCCB**

**Wiring diagram**



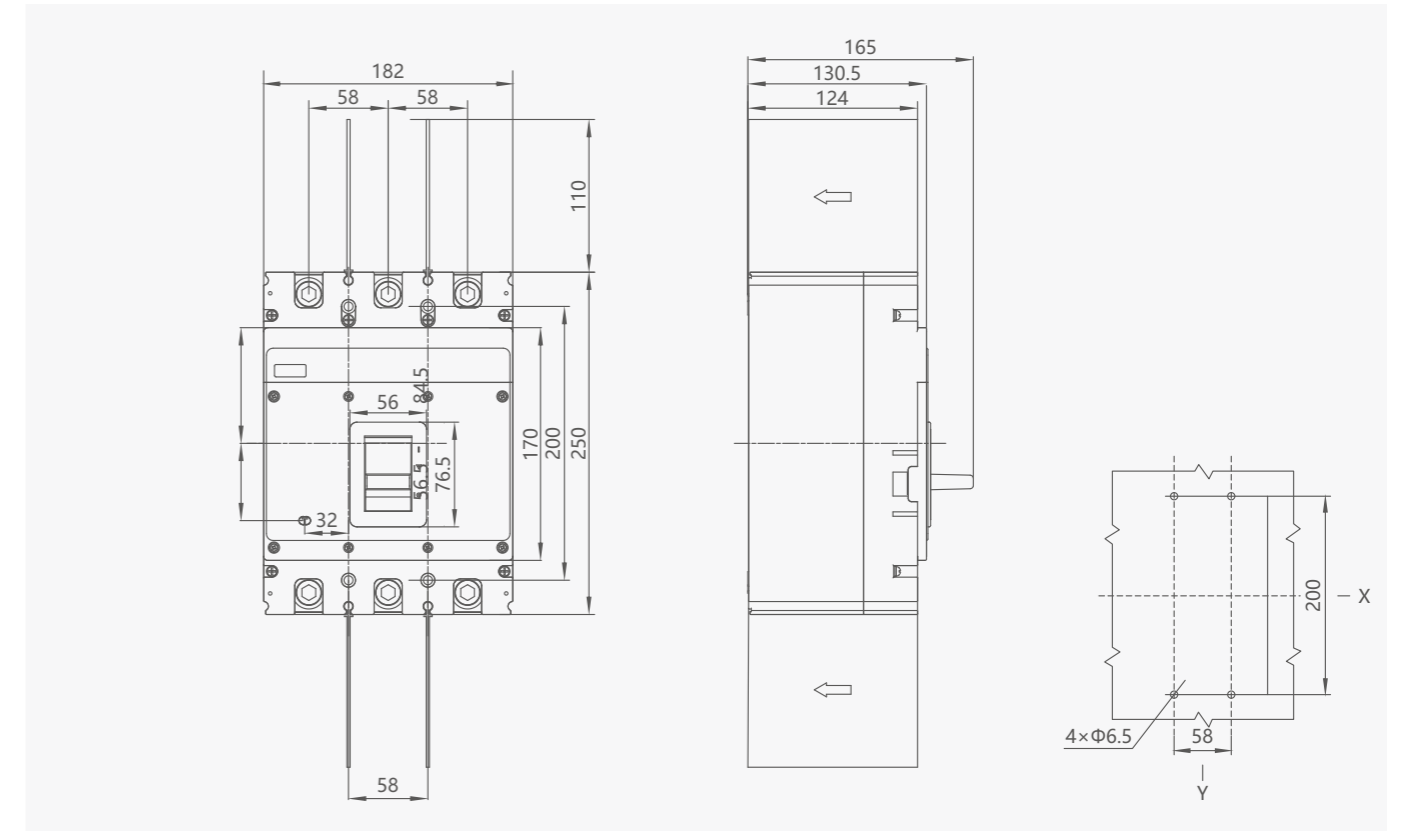
**Overall and mounting dimensions(mm)**

YCM8-250HU, 320HU

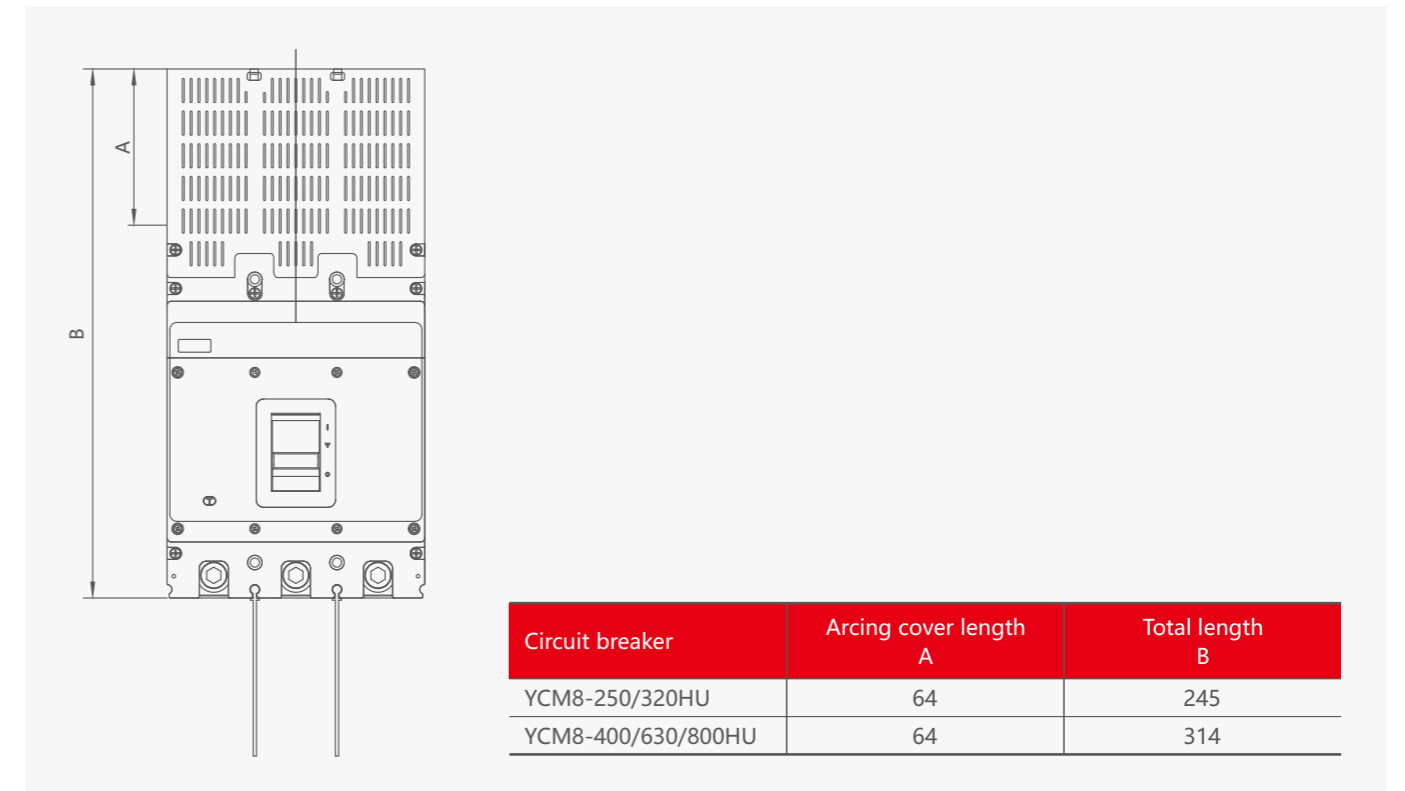


Photovoltaic AC Components  
**YCM8-□HU Photovoltaic AC MCCB**

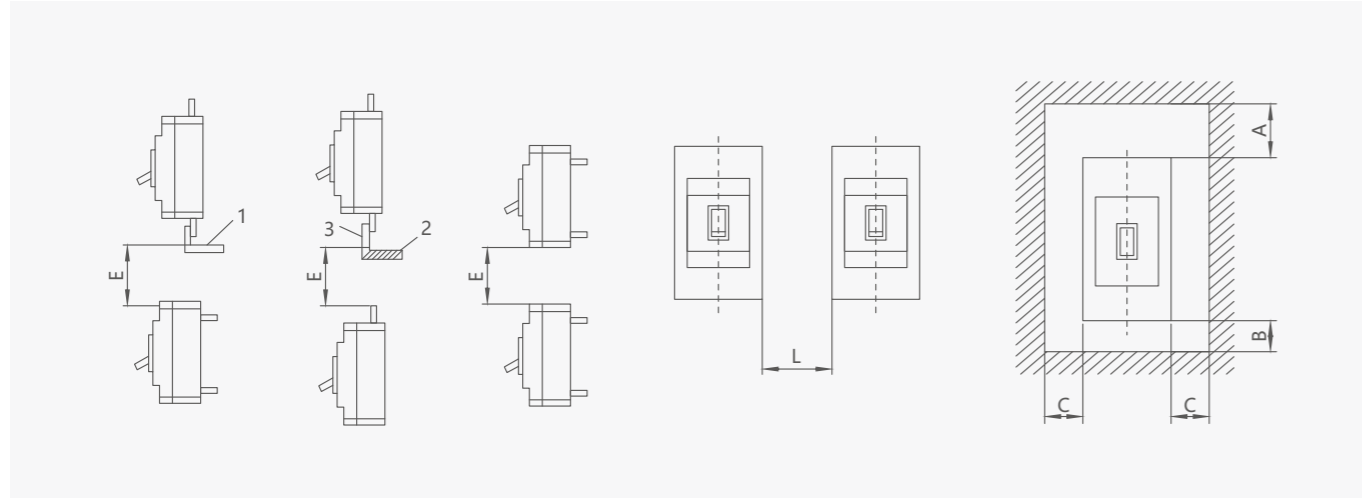
YCM8-400HU, 630HU, 800HU



Installation drawing of YCM8-HU with arcing cover



**Safety distance when installing circuit breaker**



Model	L	A		B	C	E	
		Without zero arcing cover	With zero arcing cover			Without zero arcing cover	With zero arcing cover
YCM8-250HU	40	100	165	40	40	100	165
YCM8-320HU	40	100	165	40	40	100	165
YCM8-400HU	40	100	165	40	40	100	165
YCM8-630HU	40	100	165	40	40	100	165
YCM8-800HU	40	100	165	40	40	100	165

**Curve**

