

**DELIVER  
POWER  
FOR  
BETTER LIFE!**

# CATALOGUE

SOLAR ENERGY  
COMBINER BOX AND ACCESSORIES





# Company Profile

## About CNC

CNC was founded in 1988 specialized in Low-voltage electrical and Power Transmission and Distribution industries. We provide our customer with profitable growth by offering integrated comprehensive electrical solution.

CNC key value is innovation and quality to ensure clients with safe, reliable products. We set up advanced assembly line, test center, R&D Center and quality control center. We have got the certificates of ISO9001, ISO14001, OHSAS18001 and CE, CB, SEMKO, KEMA, TUV etc.

As a leading manufacturer of electrical products in China, our business covers over 100 countries.



**DELIVER  
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## Electrical Application Plan

# Overview of Photovoltaic Power Generation System

We call for "green" energy, which symbolizes civilization, change, and commitment.

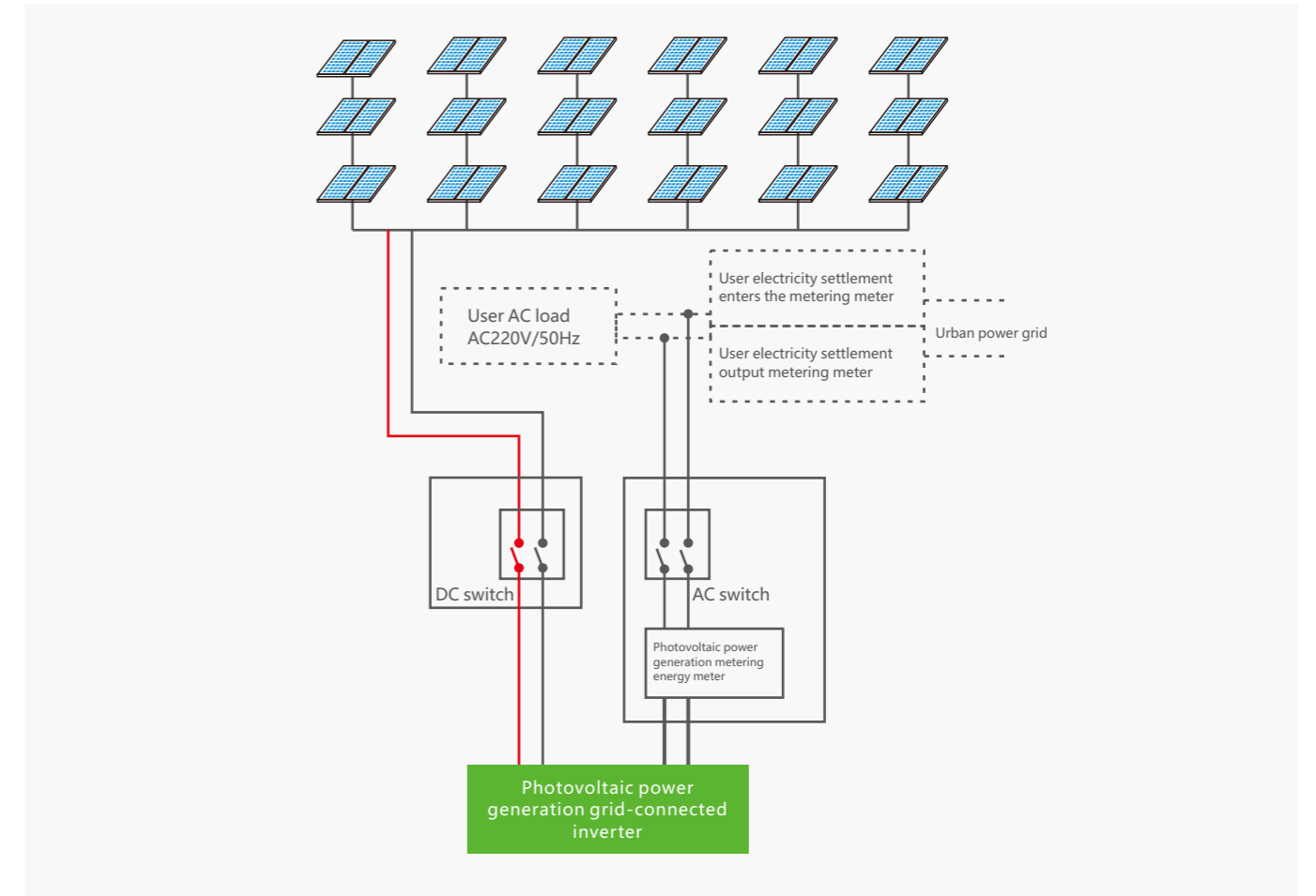
We advocate for a "low-carbon lifestyle" and are committed to seeking sustainable development solutions, providing clean energy and smarter electrical system solutions for human society has been our pursuit for many years. In response to the special requirements of solar photovoltaic power systems and intelligent electrical systems, CNC Electric has launched 8 series of photovoltaic-specific AC/DC electrical products and electrical system solutions, providing electrical support and high-quality services for different fields of photovoltaic power generation applications.

Green energy: Since the beginning of the new century, the solar photovoltaic industry has become one of the most attention-grabbing emerging industries in the world. Photovoltaic power generation does not require fuel, has no gas emissions, and is a "green" industry. It has the advantages of no pollution, safety, long life, easy maintenance, inexhaustible resources, and widely distributed resources. It is considered the most important new energy source of the 21st century and can be widely used in aerospace, communications, energy, agriculture, office facilities, transportation, and residential areas.



## Electrical Application Plan

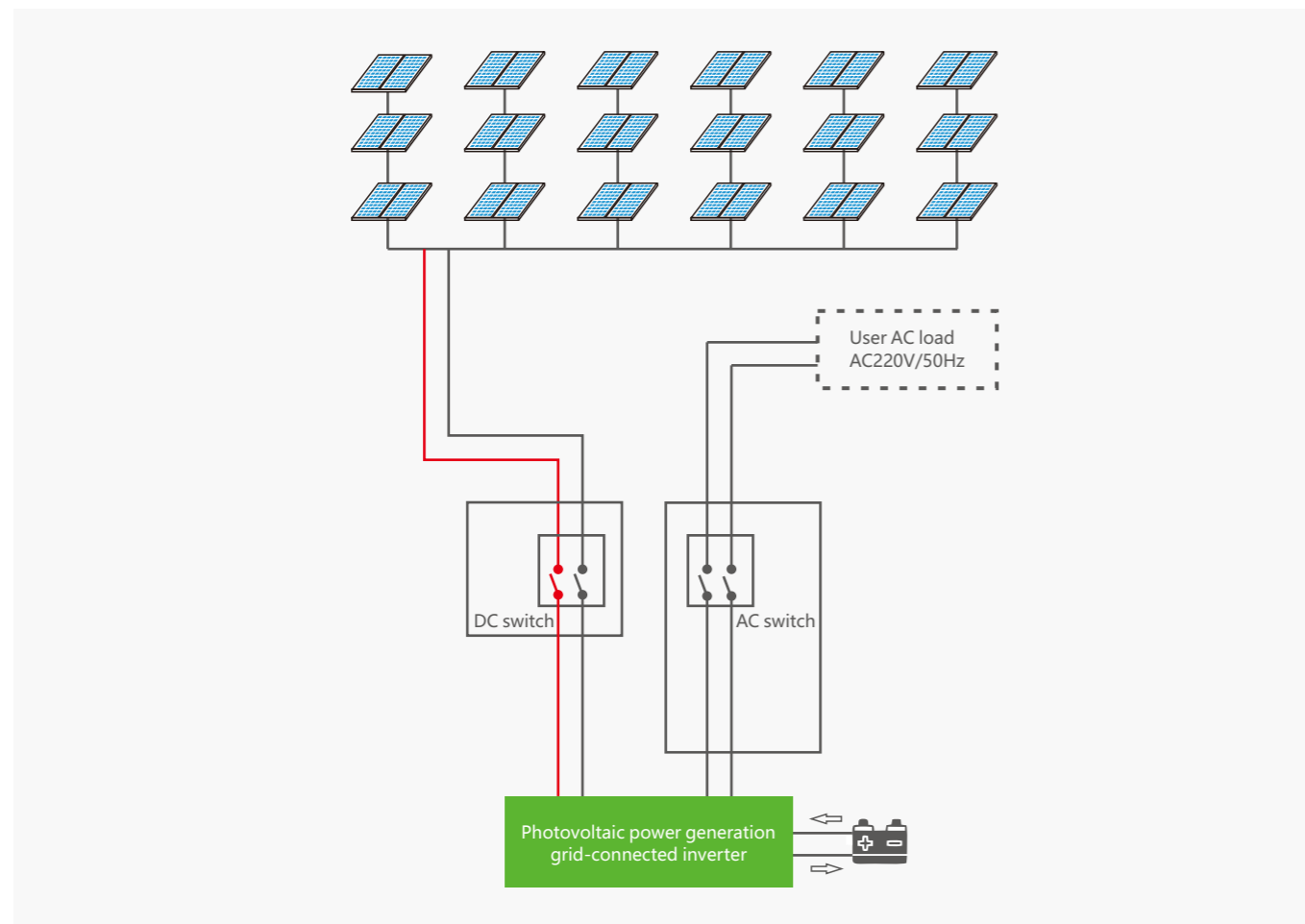
# Overview of Photovoltaic Power Generation System



### For example:

- **Photovoltaic commercial power station**  
Commercial electricity sales
- **Photovoltaic Pilot Demonstration Zone**  
Photovoltaic Agriculture Demonstration Project, Photovoltaic greenhouse, photovoltaic fish pond
- **Photovoltaic commercial roof**  
Large commercial buildings save electricity
- **Photovoltaic integrated building**  
Photovoltaic modules replace traditional building materials and simultaneously provide electricity for buildings
- **Photovoltaic residential community**  
Effectively utilizing solar energy in building communities
- **Photovoltaic grid connected residential system**  
Combination of residential photovoltaic power generation, sales, and usage

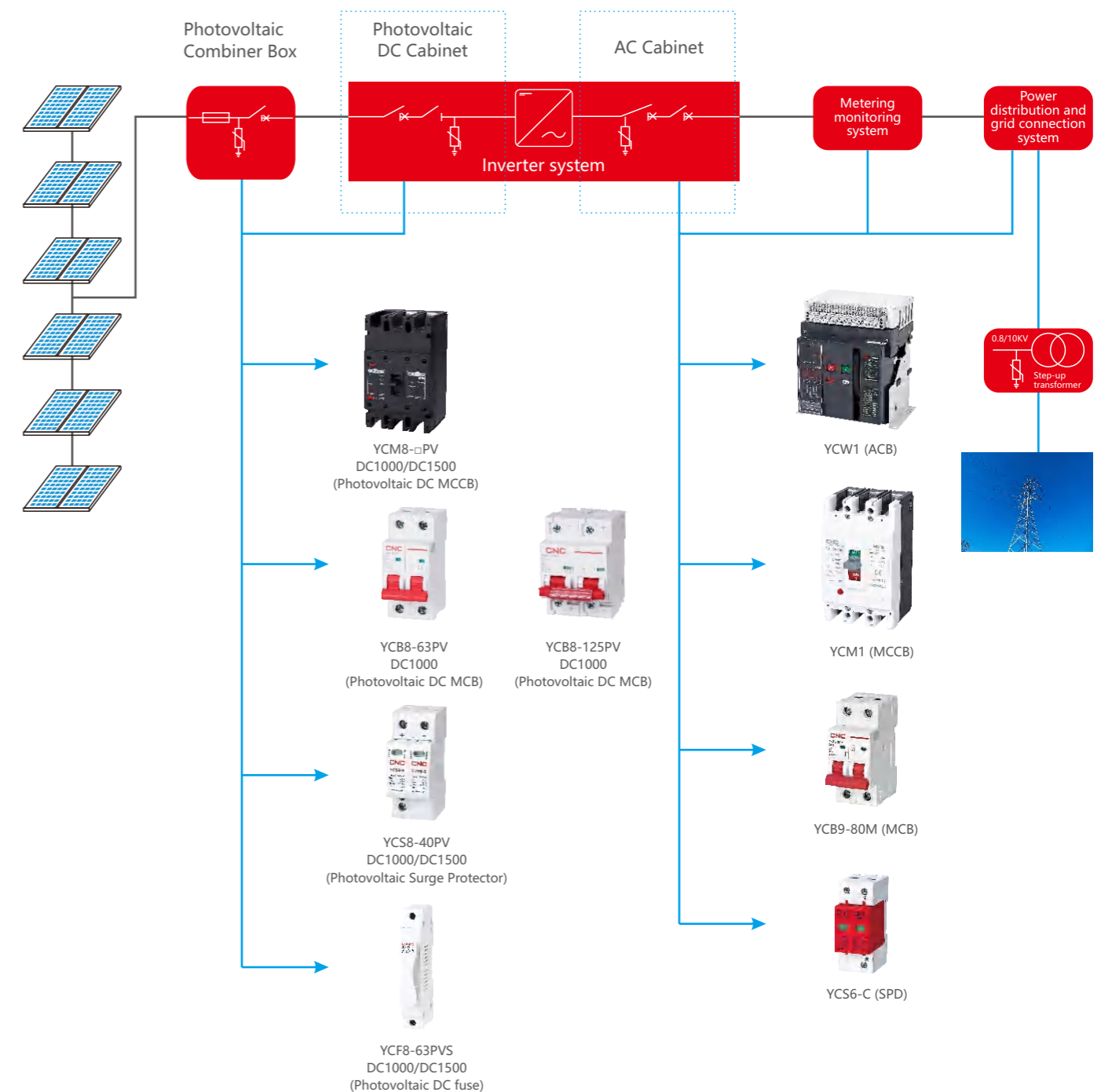
## Overview of Photovoltaic Power Generation System



### For example:

- Photovoltaic noise barrier system for highways**  
 Providing noise protection and auto-visual indication power for highways
- Wind-solar hybrid system**  
 Street lighting system
- Photovoltaic water pumping system**  
 Water pumping storage, agricultural irrigation, photovoltaic fountain, water circulation
- Off-grid residential photovoltaic system**  
 providing electricity for 2 billion people living in remote mountain areas without electricity worldwide
- Off-grid lighting system**  
 Airport runway lighting, hotel outdoor lighting, street lighting, highway tunnel lighting, advertising lighting, etc
- Off-grid industrial applications**  
 Power supply for microwave relay communication, fiber optic communication system, wireless paging station, rural program-controlled telephone, lighthouse, navigation light, cathodic protection of oil and gas pipelines, forest fire prevention, disaster prediction instrument, etc
- Photovoltaic grid connected residential system**  
 Residential photovoltaic generation, sale, and consumption integration

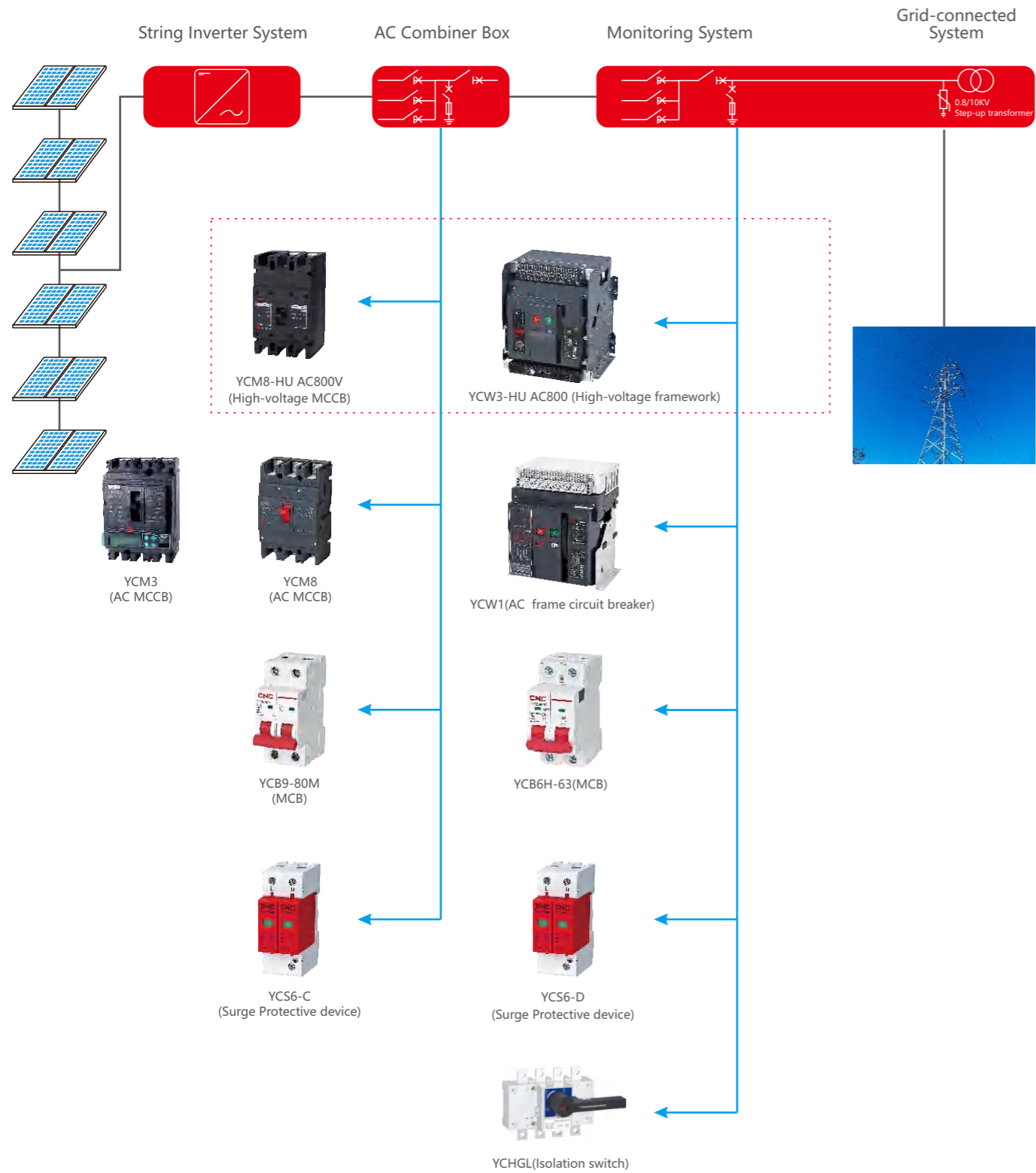
## Centralized Grid-connected System





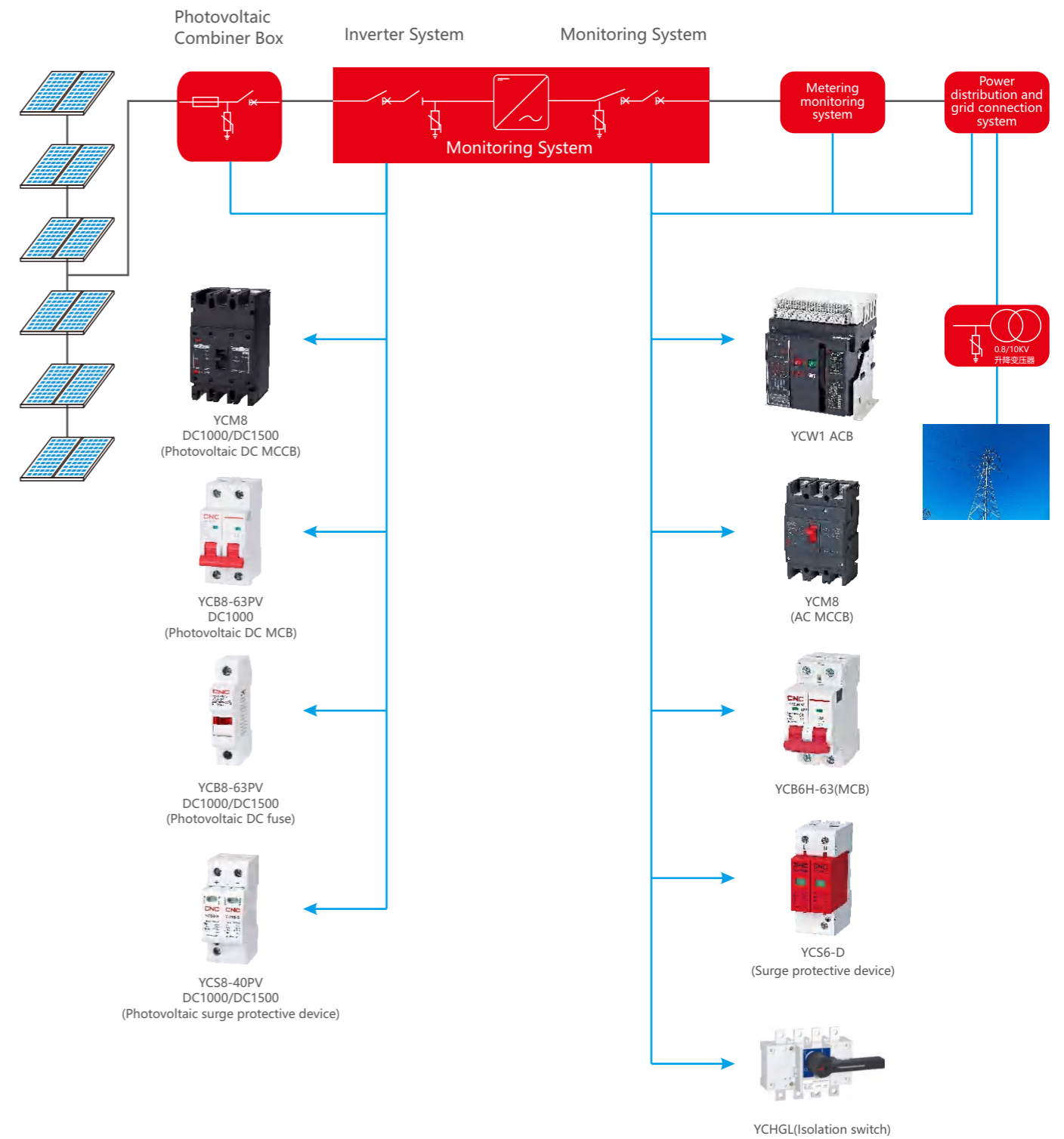
# Electrical Application Plan

## String Grid-connected System

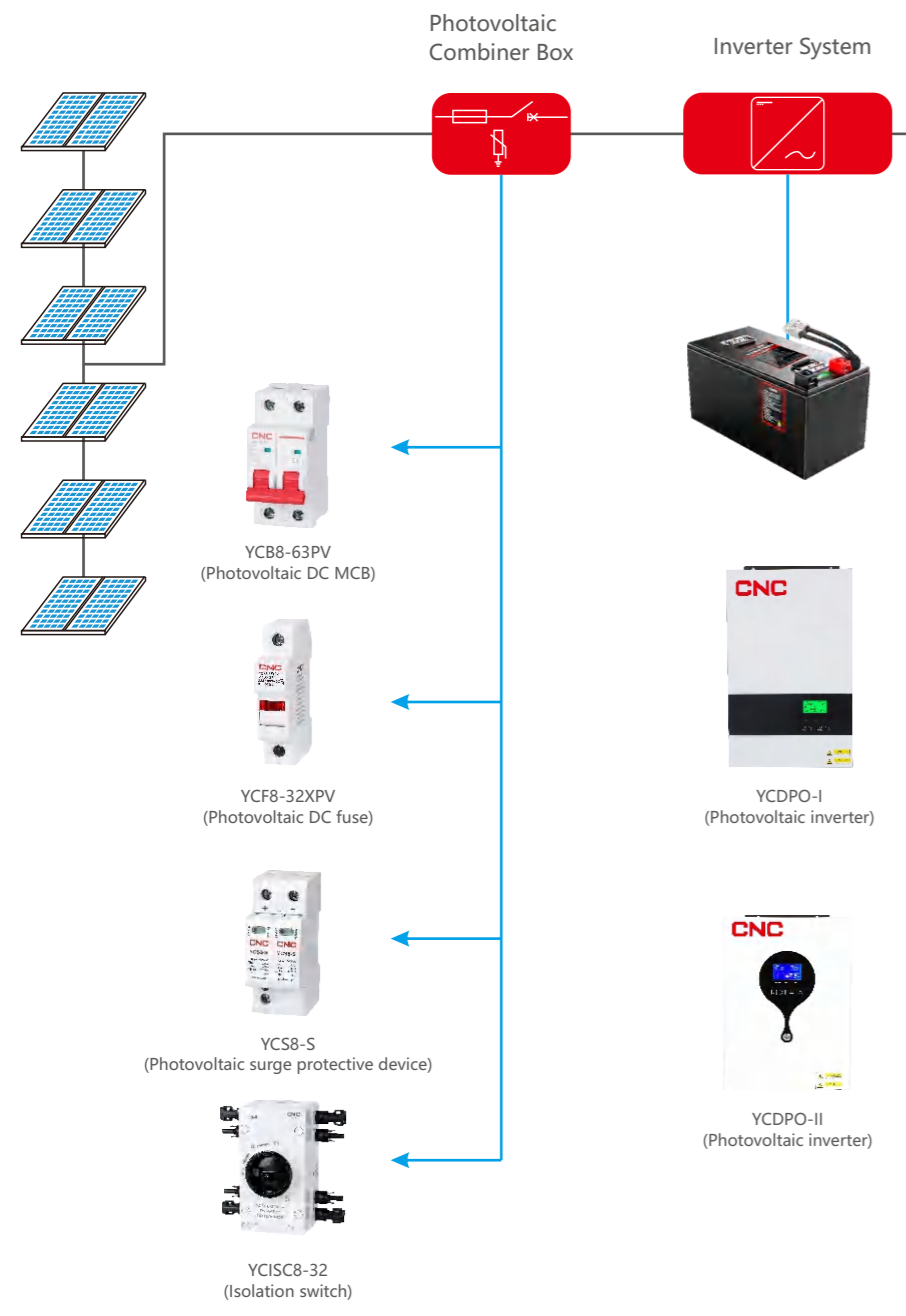


# Electrical Application Plan

## Distributed (Grid-connected) Power Generation System



# Electrical Application Plan Building Integrated Photovoltaic (BIPV) Off-Grid System

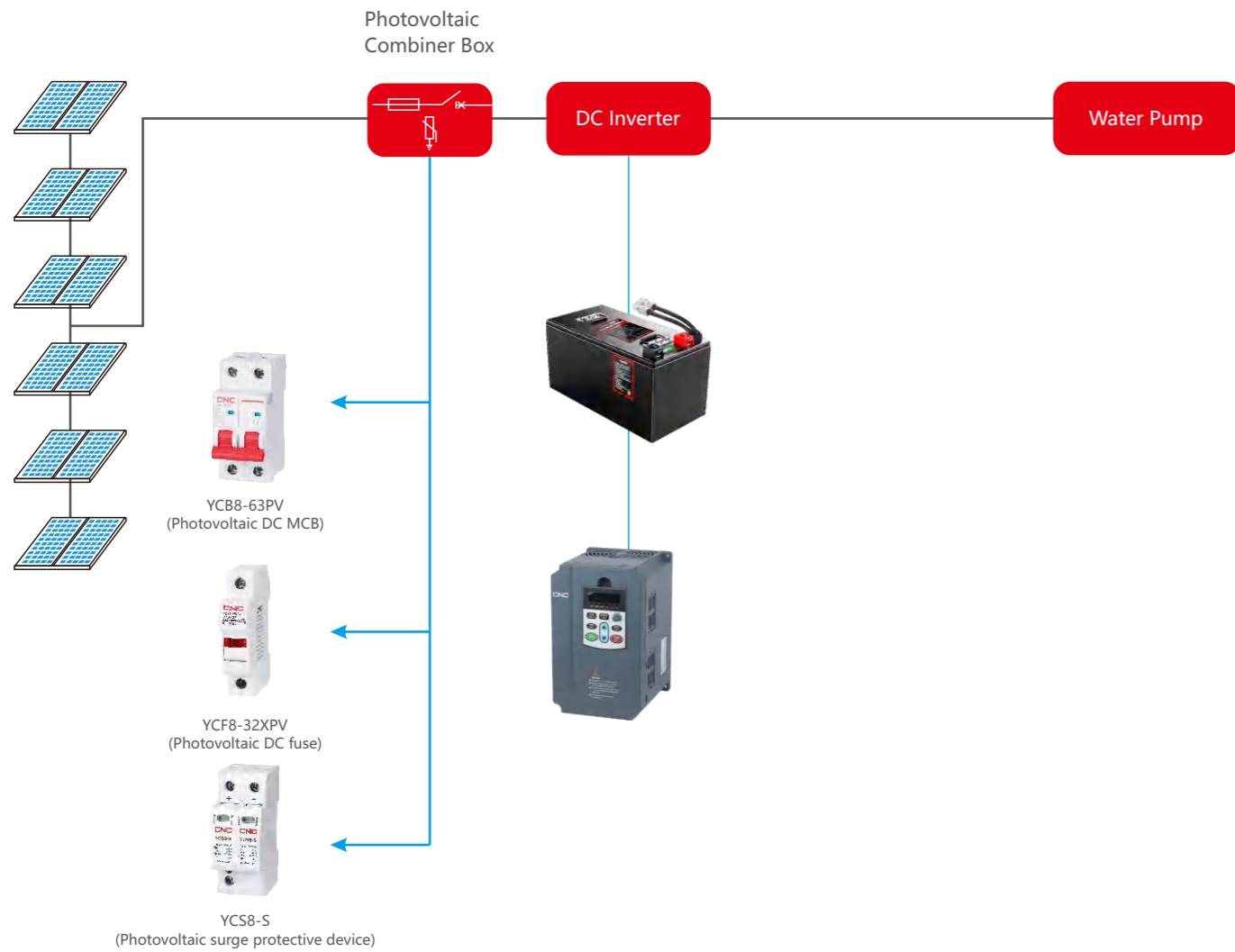


# Electrical Application Plan Building Integrated Photovoltaic (BIPV) Off-Grid System





Electrical Application Plan  
**Photovoltaic Pump Off-grid System**



Photovoltaic DC Components  
**YCB8-□PV Series Photovoltaic DC MCB**



## Photovoltaic DC Components

### YCB8-63PV Photovoltaic DC MCB



#### General

The rated operating voltage of YCB8-63PV series DC miniature circuit breakers can reach DC1000V, and the rated operating current can reach 63A, which are used for isolation, overload and short circuit protection. It is widely used in photovoltaic, industrial, civil, communication and other systems, and can also be used in DC systems to ensure the reliable operation of DC systems.

Standards: IEC/EN 60947-2, EU ROHS environmental protection requirements.



#### Features

- Modular design, small size;
- Standard Din rail installation, convenient installation;
- Overload, short circuit, isolation protection function, comprehensive protection;
- Current up to 63A, 14 options;
- The breaking capacity reaches 6KA, with strong protection capacity;
- Complete accessories and strong expansibility;
- Multiple wiring methods to meet various wiring needs of customers;
- The electrical life reaches 10000 times, which is suitable for the 25-year life cycle of photovoltaic.

#### Selection

YCB8	63	PV	4P	C	20	DC250	+	YCB8-63 OF
Model	Shell grade current	Usage	Number of poles	Tripping characteristics	Rated current	Rated voltage		Accessories
Miniature circuit breaker	63	Photovoltaic/ direct-current PV: heteropolarity Pvn: nonpolarity	1P	B C K	1A, 2A, 3A...63A	DC250V	+	YCB8-63 OF: Auxiliary
			2P			DC500V		YCB8-63 SD: Alarm
			3P			DC750V		YCB8-63 MX: Shunt
			4P			DC1000V		

Note: The rated voltage is affected by the number of poles and wiring mode.  
The single pole is DC250V, the two poles in series are DC500V, and so on.

## Photovoltaic DC Components

### YCB8-63PV Photovoltaic DC MCB

#### Technical data

Standards	IEC/EN 60947-2			
Number of poles	1P	2P	3P	4P
Rated current of shell frame grade	63			
Electrical performance				
Rated working voltage Ue(V DC)	250	500	750	1000
Rated current In(A)	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63			
Rated insulation voltage Ui(V DC)	1200			
Rated impulse voltage Uimp(KV)	4			
Ultimate breaking capacity Icu(KA)(T=4ms)	Pv : 6 PVn : 3			
Operation breaking capacity Ics(KA)	Ics=100%Icu			
Curve type	Type B, Type C, Type K			
Tripping type	Thermomagnetic			
Service life (time)	Mechanical	20000		
	Electrical	Pv : 1000 PVn : 300		
Polarity	Heteropolarity			
Inline methods	Can be up and down into the line			
Electrical accessories				
Auxiliary contact	<input type="checkbox"/>			
Alarm contact	<input type="checkbox"/>			
Shunt release	<input type="checkbox"/>			
Applicable environmental conditions and installation				
Working temperature(°C)	-35~+70			
Storage temperature(°C)	-40~+85			
Moisture resistance	Category 2			
Altitude(m)	Use with derating above 2000m			
Pollution degree	Level 3			
Protection degree	IP20			
Installation environment	Places without significant vibration and impact			
Installation category	Category II , Category III			
Installation method	DIN35 standard rail			
Wiring capacity	2.5-25mm <sup>2</sup>			
Terminal torque	3.5N·m			

■ Standard □ Optional— No



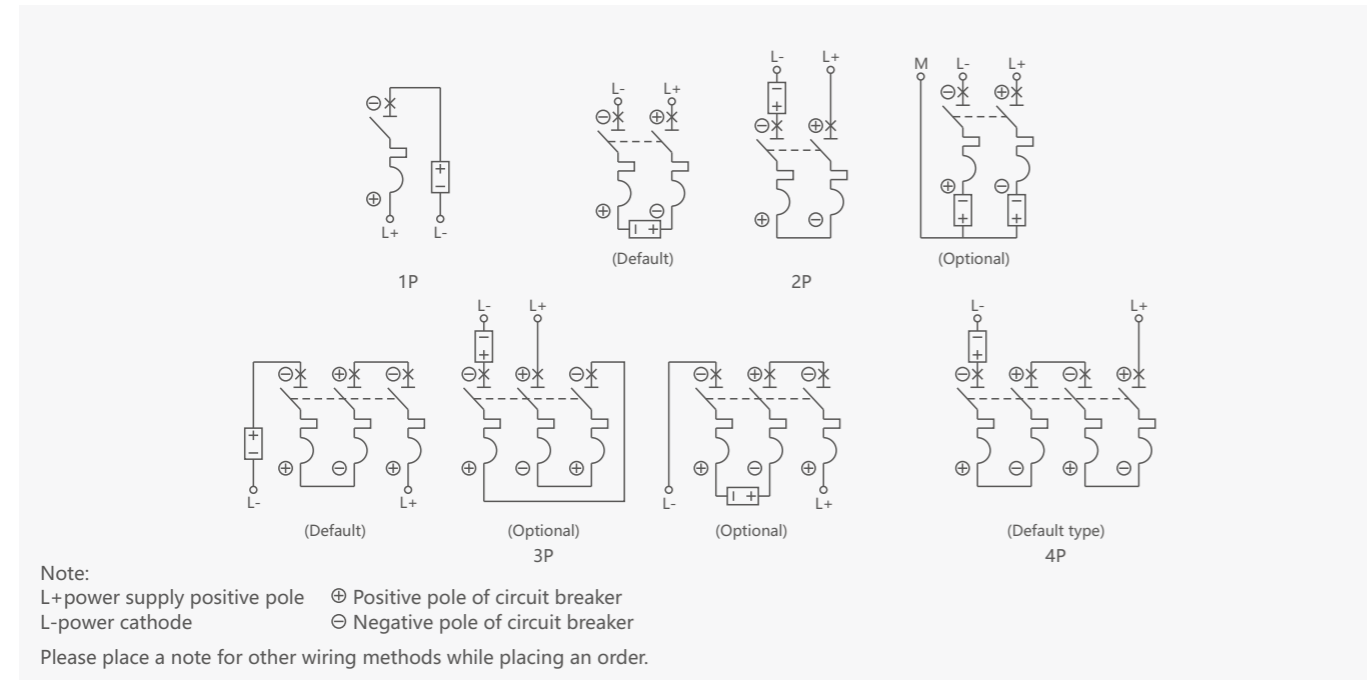
# Photovoltaic DC Components

## YCB8-63PV Photovoltaic DC MCB

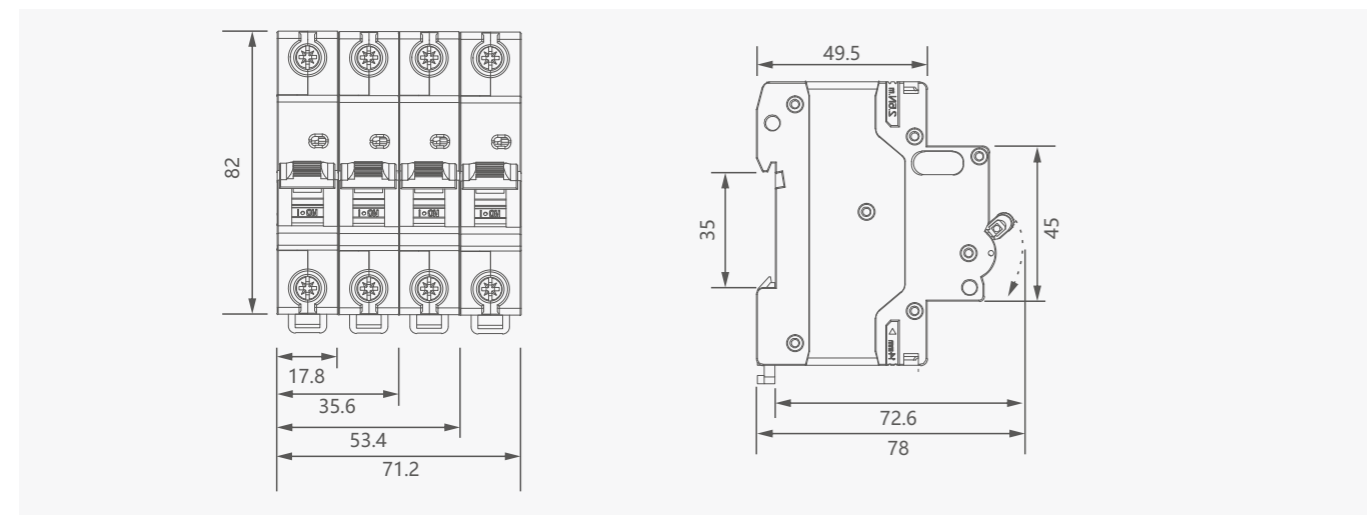
### Grounding and fault effect

Grounding type	Single-stage grounding system		Ungrounded system	
Circuit diagram				
Fault effect	Fault A	Maximum short-circuit current $I_{sc}$	Fault A	No effect
	Fault B	Maximum short-circuit current $I_{sc}$	Fault B	Maximum short-circuit current $I_{sc}$
	Fault C	No effect	Fault C	No effect

### Wiring diagram



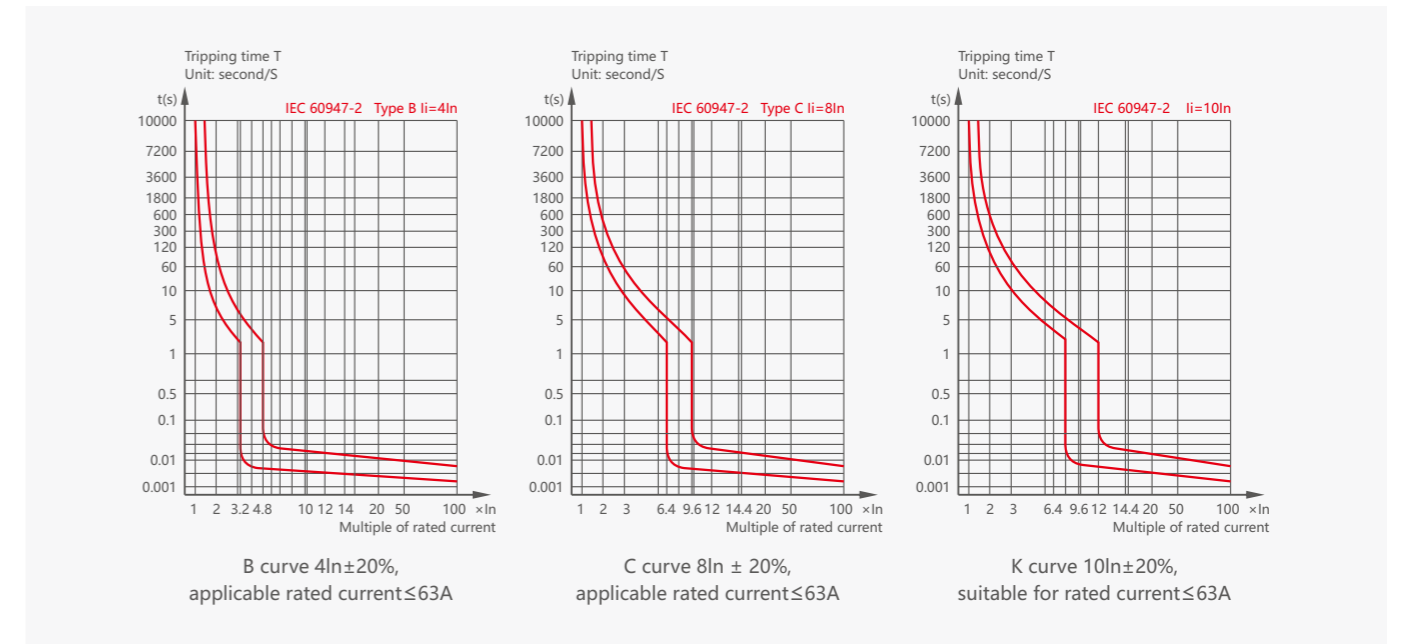
### Overall and mounting dimensions(mm)



# Photovoltaic DC Components

## YCB8-63PV Photovoltaic DC MCB

### Curve



### Temperature correction factor table

Current correction value used in different environments

Current correction value(A)	Environmental temperature (°C)	-35	-30	-20	-10	0	10	20	30	40	50	60	70
1	Rated current(A)	1.3	1.26	1.23	1.19	1.15	1.11	1.05	1	0.96	0.93	0.88	0.83
2		2.6	2.52	2.46	2.38	2.28	2.2	2.08	2	1.92	1.86	1.76	1.66
3		3.9	3.78	3.69	3.57	3.42	3.3	3.12	3	2.88	2.79	2.64	2.49
4		5.2	5.04	4.92	4.76	4.56	4.4	4.16	4	3.84	3.76	3.52	3.32
6		7.8	7.56	7.38	7.14	6.84	6.6	6.24	6	5.76	5.64	5.28	4.98
10		13.2	12.7	12.5	12	11.5	11.1	10.6	10	9.6	9.3	8.9	8.4
13		17.16	16.51	16.25	15.6	14.95	14.43	13.78	13	12.48	12.09	11.57	10.92
16		21.12	20.48	20	19.2	18.4	17.76	16.96	16	15.36	14.88	14.24	13.44
20		26.4	25.6	25	24	23	22.2	21.2	20	19.2	18.6	17.8	16.8
25		33	32	31.25	30	28.75	27.75	26.5	25	24	23.25	22.25	21
32		42.56	41.28	40	38.72	37.12	35.52	33.93	32	30.72	29.76	28.16	26.88
40		53.2	51.2	50	48	46.4	44.8	42.4	40	38.4	37.2	35.6	33.6
50		67	65.5	63	60.5	58	56	53	50	48	46.5	44	41.5
63		83.79	81.9	80.01	76.86	73.71	70.56	66.78	63	60.48	58.9	55.44	52.29

### Use of derating table at high altitude

Tripping type	Rated current(A)	Current correction factor			Example
		$\leq 2000m$	2000-3000m	$\geq 3000m$	
B, C, K	1, 2, 3, 4, 6, 10, 13, 16, 20, 25, 32, 40, 50, 63	1	0.9	0.8	The rated current of 10A products is $0.9 \times 10 = 9A$ after derating at 2500m

## Photovoltaic DC Components

### YCB8-63PV Photovoltaic DC MCB

#### Recommended wiring size

Wiring capacity

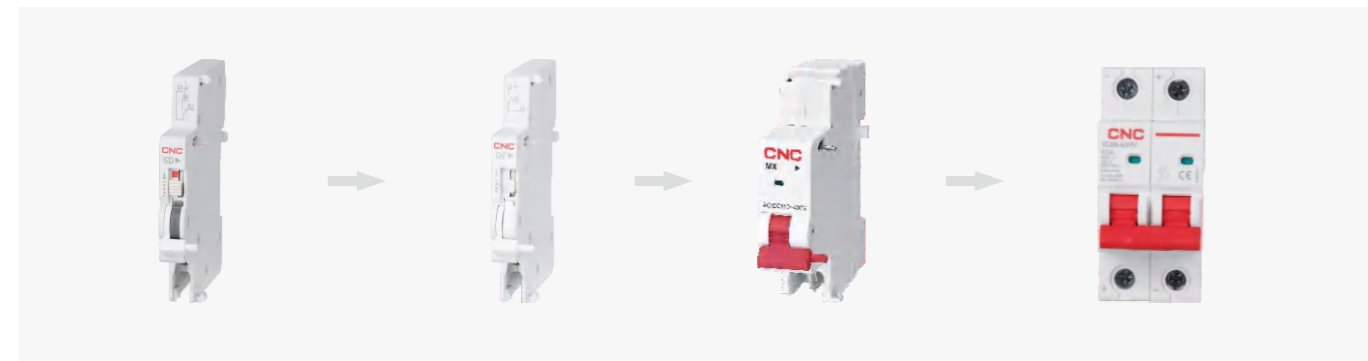
Rated current In(A)	Nominal cross-sectional area of copper conductor(mm <sup>2</sup> )
1~6	1
10	1.5
13、16、20	2.5
25	4
32	6
40、50	10
63	16

#### Power consumption per pole of circuit breaker

Rated current In(A)	Maximum power consumption per stage(W)
1~10	2
13~32	3.5
40~63	5

#### Accessories

The following accessories are suitable for YCB8-63PV series, which can provide the functions of remote control of circuit breaker, automatic disconnection of fault circuit, status indication (breaking/closing/fault tripping).



- The total width of the accessories assembled is within 54mm, the order and quantity from left to right: OF, SD(3max) + MX, MX+OF+MCB, SD can only assemble up to 2 pieces ;
- Assembled with the body, no tools required;
- Before installation, check whether the technical parameters of the product meet the requirements of use, and operate the handle to open and close several times to check whether the mechanism is reliable.

#### Miniature circuit breaker accessories

- Auxiliary contact OF  
Remote indication of closing/opening status of circuit breaker.
- Alarm contact SD  
When the circuit breaker fault trips, it sends out a signal, together with a red indicator on the front of the device.
- Shunt release MX  
When the power supply voltage is 70%~110%U<sub>e</sub>, the remote control circuit breaker trips after receiving the signal.
- Minimum making and breaking current: 5mA(DC24V)
- Service life: 6000 times (operating frequency: 1s)

## Photovoltaic DC Components

### YCB8-63PV Photovoltaic DC MCB

#### Technical data

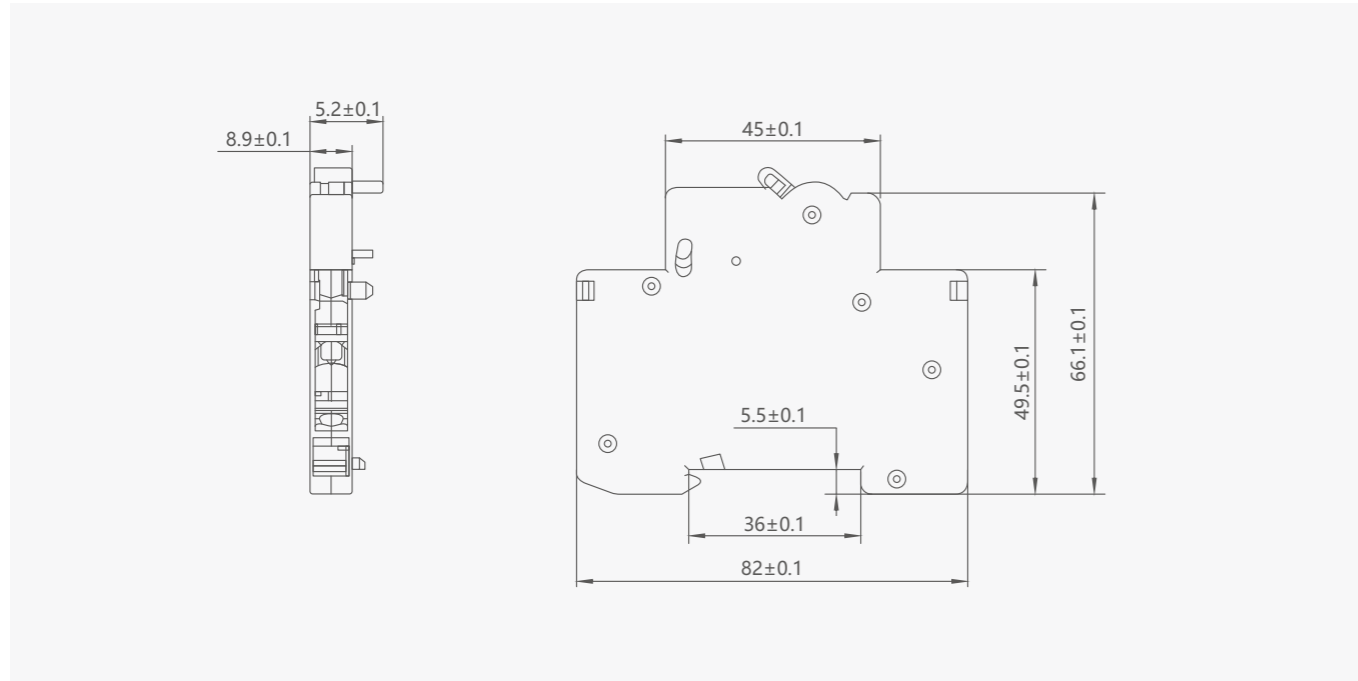
Model	YCB8-63 OF	YCB8-63 SD	YCB8-63 MX
Appearance			
Types			
Number of contacts	1NO+1NC	1NO+1NC	/
Control voltage (V AC)			110-415 48 12-24
Control voltage(V DC)			110-415 48 12-24
Working current of contact	AC-12 U <sub>e</sub> /I <sub>e</sub> : AC415/3A DC-12 U <sub>e</sub> /I <sub>e</sub> : DC125/2A		/
Shunt control voltage			U <sub>e</sub> /I <sub>e</sub> : AC:220-415/ 0.5A AC/DC:24-48/3
Width(mm)	9	9	18
Applicable Environmental Conditions and Installation			
Storage temperature(°C)	-40°C~+70°C		
Storage humidity	the relative humidity does not exceed 95% when at +25°C		
Protection degree	Level 2		
Protection degree	IP20		
Installation environment	Places without significant vibration and impact		
Installation category	Category II、Category III		
Installation method	TH35-7.5/DIN35 rail installation		
Maximum wiring capacity	2.5mm <sup>2</sup>		
Terminal torque	1N·m		

## Photovoltaic DC Components

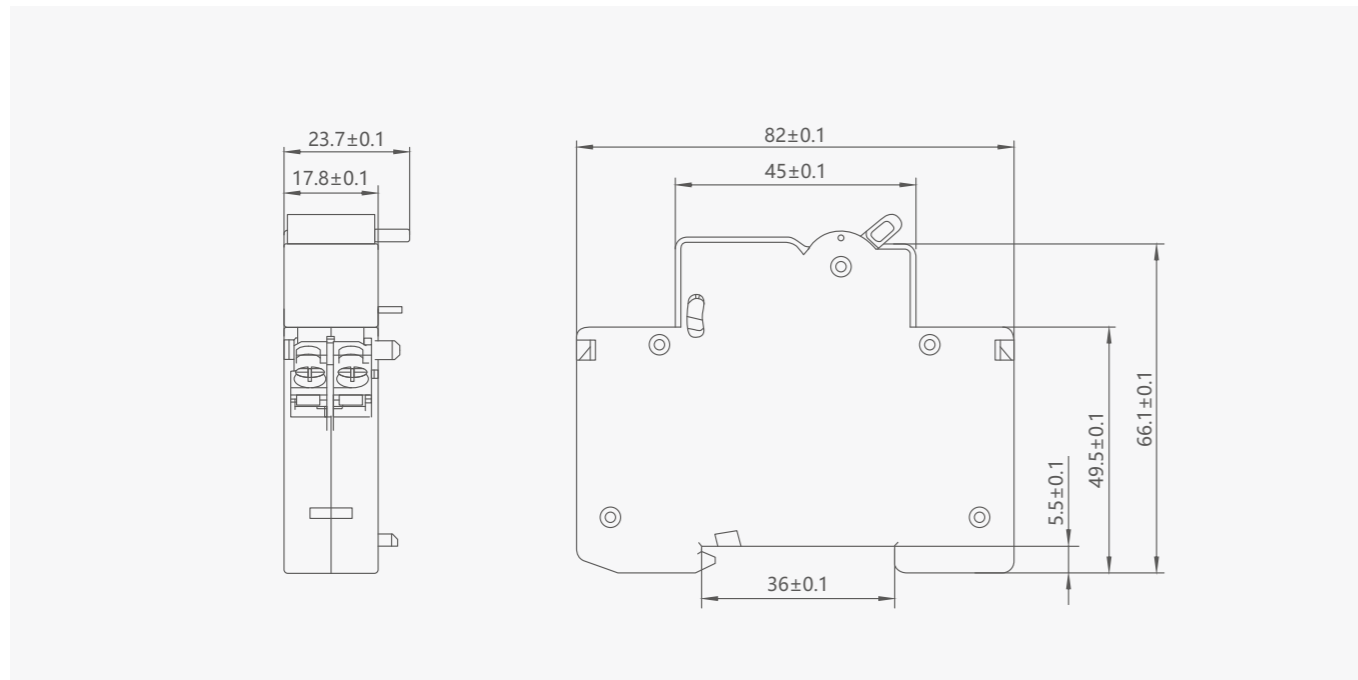
### YCB8-63PV Photovoltaic DC MCB

#### Overall and mounting dimensions(mm)

OF/SD Outline and installation dimensions



MX+OF Outline and installation dimensions



## Photovoltaic DC Components

### YCB8-125PV Photovoltaic DC MCB



#### General

The rated operating voltage of YCB8-125PV series DC miniature circuit breakers can reach DC1000V, and the rated operating current can reach 125A, which are used for isolation, overload and short circuit protection. It is widely used in photovoltaic, industrial, civil, communication and other systems, and can also be used in DC systems to ensure the reliable operation of DC systems. Standards: IEC/EN 60947-2.

#### Features

- Modular design, small size;
- Standard Din rail installation, convenient installation;
- Overload, short circuit, isolation protection function, comprehensive protection;
- Current up to 125A, 4 options;
- The breaking capacity reaches 6KA, with strong protection capacity;
- Complete accessories and strong expansibility;
- Multiple wiring methods to meet various wiring needs of customers;
- The electrical life reaches 10000 times, which is suitable for the 25-year life cycle of photovoltaic.

#### Selection

YCB8	125	PV	4P	63	DC250	YCB8-63 OF
Model	Shell grade current	Usage	Number of poles	Rated current	Rated voltage	Accessories
Miniature circuit breaker	125	Photovoltaic/ direct-current PV: heteropolarity Pvn: nonpolarity	1P	63A, 80A, 100A, 125A	DC250V	YCB8-125 OF: Auxiliary
			2P		DC500V	YCB8-125 SD: Alarm
			3P		DC750V	YCB8-125 MX: Shunt
			4P		DC1000V	

Note: The rated voltage is affected by the number of poles and wiring mode. The single pole is DC250V, the two poles in series are DC500V, and so on.



## Photovoltaic DC Components

### YCB8-125PV Photovoltaic DC MCB

#### Technical data

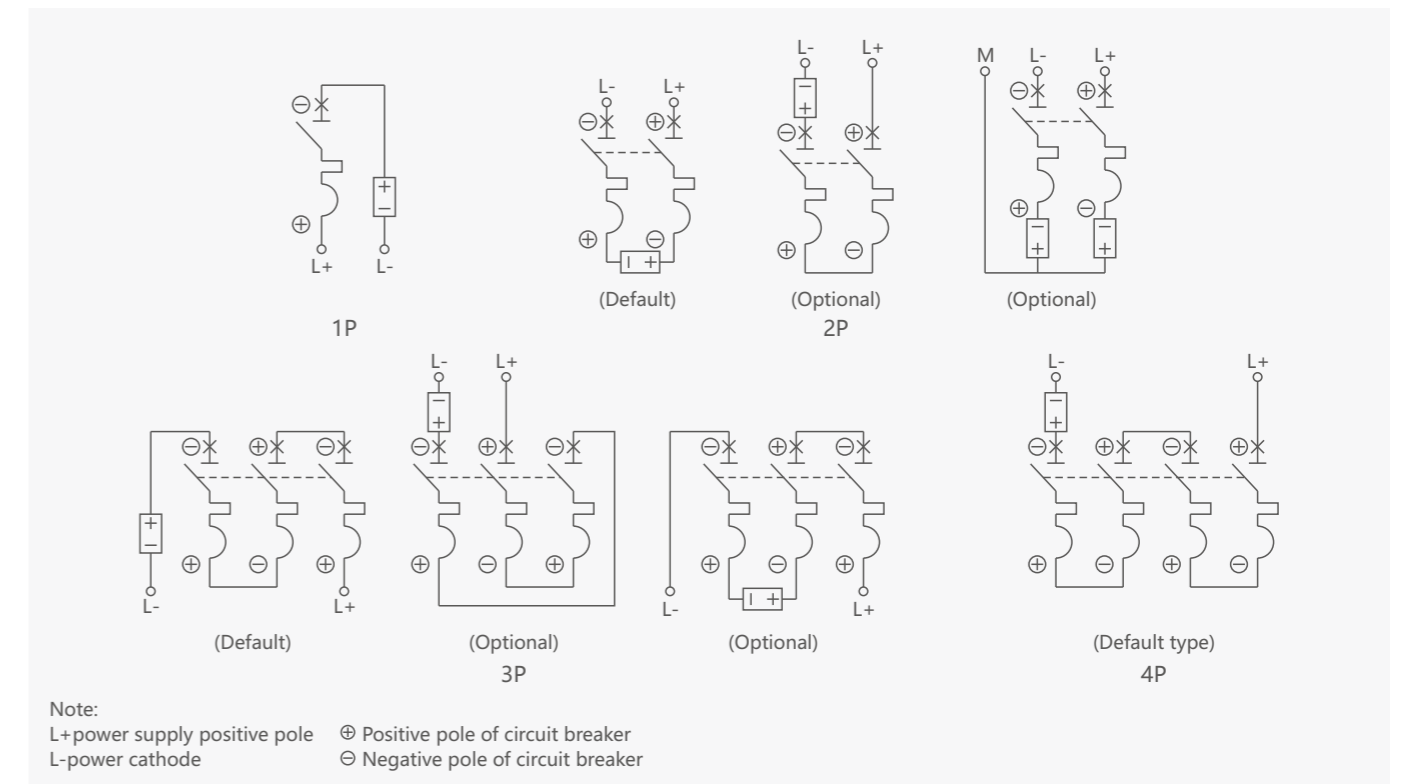
Standards		IEC/EN 60947-2			
Number of poles		1P	2P	3P	4P
Rated current of shell frame grade		125			
<b>Electrical performance</b>					
Rated working voltage Ue(V DC)		250	500	750	1000
Rated current In(A)		63, 80, 100, 125			
Rated insulation voltage Ui(V DC)		500VDC per pole			
Rated impulse voltage Uimp(KV)		6			
Ultimate breaking capacity Icu(kA)		Pv : 6 PVn : 10			
Operation breaking capacity Ics(KA)		PV : Ics=100%Icu PVn : Ics=75%Icu			
Curve type		Ii=10In(default)			
Tripping type		Thermomagnetic			
Service life (time)	Mechanical	20000			
	Electrical	Pv : 1000 PVn : 300			
Polarity		Heteropolarity			
Inline methods		Can be up and down into the line			
<b>Electrical accessories</b>					
Auxiliary contact		□			
Alarm contact		□			
Shunt release		□			
<b>Applicable environmental conditions and installation</b>					
Working temperature(°C)		-35~+70			
Storage temperature(°C)		-40~+85			
Moisture resistance		Category 2			
Altitude(m)		Use with derating above 2000m			
Pollution degree		Level 3			
Protection degree		IP20			
Installation environment		Places without significant vibration and impact			
Installation category		Category III			
Installation method		DIN35 standard rail			
Wiring capacity		2.5-50mm <sup>2</sup>			
Terminal torque		3.5N·m			

■ Standard □ Optional – No

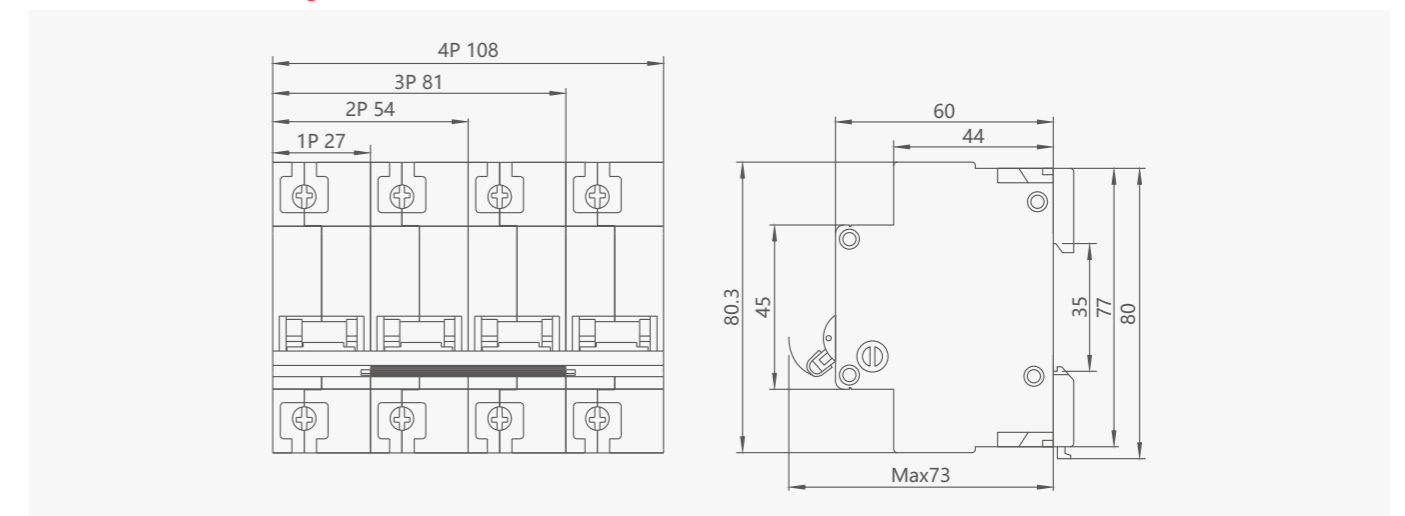
## Photovoltaic DC Components

### YCB8-125PV Photovoltaic DC MCB

#### Wiring diagram



#### Overall and mounting dimensions(mm)



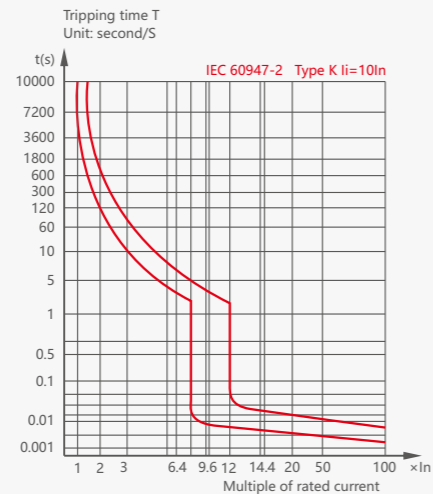
#### Tripping characteristics

Circuit breaker under normal installation conditions and reference ambient temperature (30~35)°C

Tripping type	DC current	Initial state	Appointed time	Expected results
All types	1.05In	Cold state	t ≤ 2h	No tripping
	1.3In	Thermal state	t < 2h	Tripping
Ii=10In	8In	Cold state	t ≤ 0.2s	No tripping
	12In		t < 0.2s	Tripping

## Photovoltaic DC Components YCB8-125PV Photovoltaic DC MCB

### Curve



### Temperature correction factor table

Current correction value for different ambient temperatures

Rated current(A)	Temperature (°C)	-25	-20	-10	0	10	20	30	40	50	60
63A		77.4	76.2	73.8	71.2	68.6	65.8	63	60	56.8	53.4
80A		97	95.5	92.7	89.7	86.6	83.3	80	76.5	72.8	68.9
100A		124.4	120.7	116.8	112.8	108.8	104.5	100	95.3	90.4	87.8
125A		157	152.2	147.2	141.9	136.5	130.8	125	118.8	112.3	105.4

### Use of derating table at high altitude

Current correction factor at different altitudes

Rated current(A)	Current correction factor		
	≤2000m	2000-3000m	≥3000m
63, 80, 100, 125	1	0.9	0.8

Example: If a circuit breaker with a rated current of 100A is used at an altitude of 2500m, the rated current must be derated to  $100A \times 90\% = 90A$

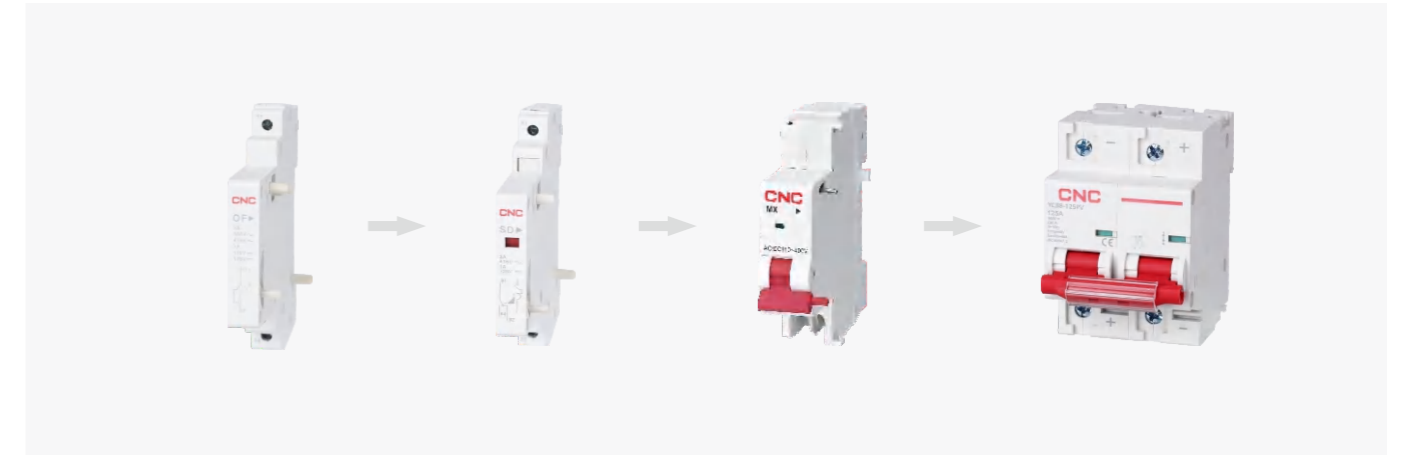
### Power consumption per pole of circuit breaker and wiring size

Rated current In(A)	Nominal cross-section of copper conductor(mm <sup>2</sup> )	Maximum power consumption per pole(W)
63	16	13
80	25	15
100	35	15
125	50	20

## Photovoltaic DC Components YCB8-125PV Photovoltaic DC MCB

### Accessories

The following accessories are suitable for YCB8-125PV series, which can provide the functions of remote control of circuit breaker, automatic disconnection of fault circuit, status indication (breaking/closing/fault tripping)



- The total width of the accessories assembled is within 54mm, the order and quantity from left to right: OF, SD(3max)+MX, MX+OF, MV+MN, MV(1max)+MCB; SD can only assemble up to 2 pieces ;
- Assembled with the body, no tools required;
- Before installation, check whether the technical parameters of the product meet the requirements of use, and operate the handle to open and close several times to check whether the mechanism is reliable.






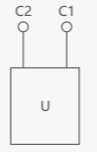
### Miniature circuit breaker accessories

- Auxiliary contact OF  
Remote indication of closing/opening status of circuit breaker.
- Alarm contact SD  
When the circuit breaker fault trips, it sends out a signal, together with a red indicator on the front of the device.
- Shunt release MX  
When the power supply voltage is 70%~110%Ue, the remote control circuit breaker trips after receiving the signal.
- Minimum making and breaking current: 5mA(DC24V)
- Service life: 6000 times (operating frequency: 1s)

## Photovoltaic DC Components

### YCB8-125PV Photovoltaic DC MCB

#### Technical data

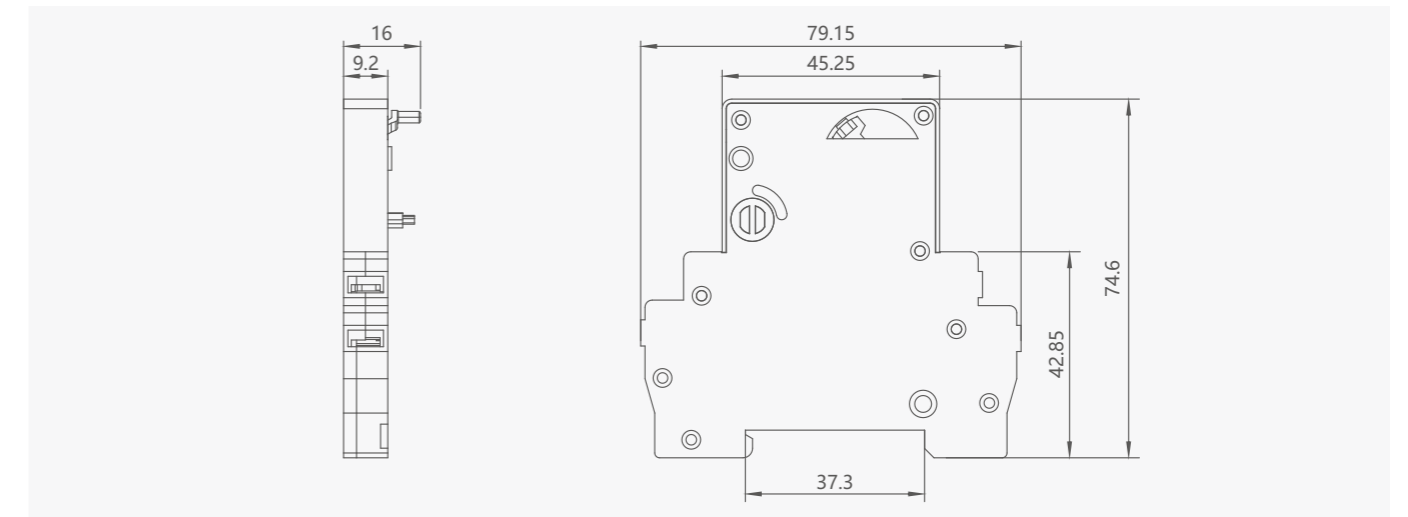
Model	YCB8-125 OF	YCB8-125 SD	YCB8-125 MX
Appearance			
Types			
Number of contacts	1NO+1NC	1NO+1NC	/
Control voltage (V AC)			110-415 48 12-24
Control voltage(V DC)			110-415 48 12-24
Working current of contact	AC-12 Ue/Ie: AC415/3A DC-12 Ue/Ie: DC125/2A		/
Shunt control voltage			Ue/Ie: AC:220-415/ 0.5A AC/DC:24-48/3
Width(mm)	9	9	18
<b>Applicable Environmental Conditions and Installation</b>			
Storage temperature(°C)	-40°C~+70°C		
Storage humidity	the relative humidity does not exceed 95% when at +25°C		
Protection degree	Level 2		
Protection degree	IP20		
Installation environment	Places without significant vibration and impact		
Installation category	Category II 、 Category III		
Installation method	TH35-7.5/DIN35 rail installation		
Maximum wiring capacity	2.5mm <sup>2</sup>		
Terminal torque	1N·m		

## Photovoltaic DC Components

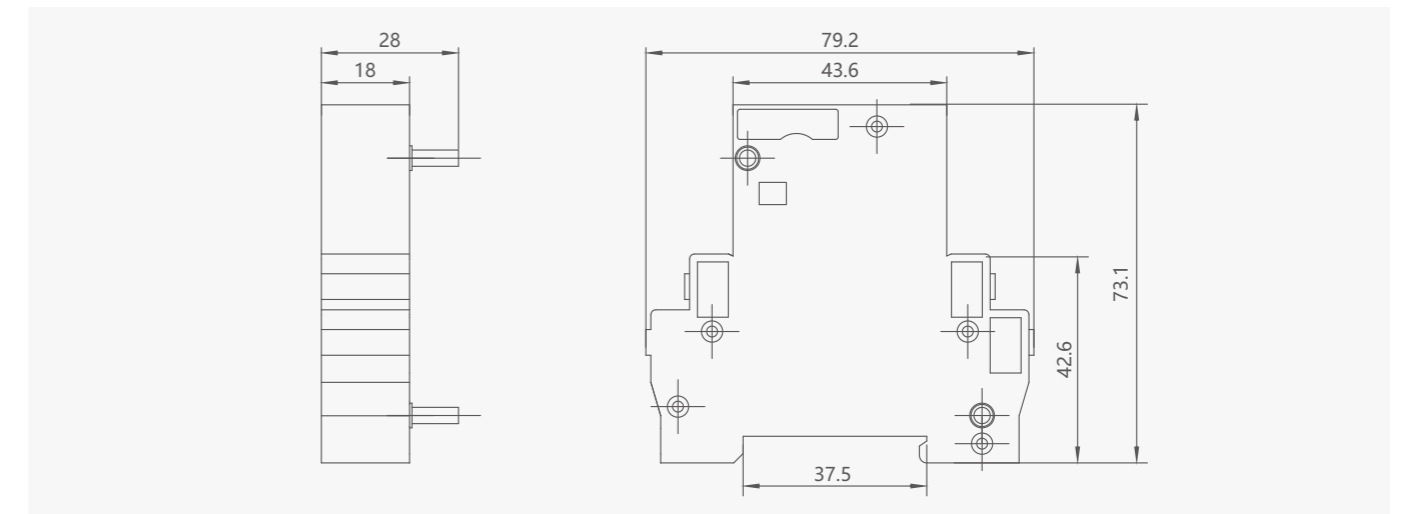
### YCB8-125PV Photovoltaic DC MCB

#### Overall and mounting dimensions(mm)

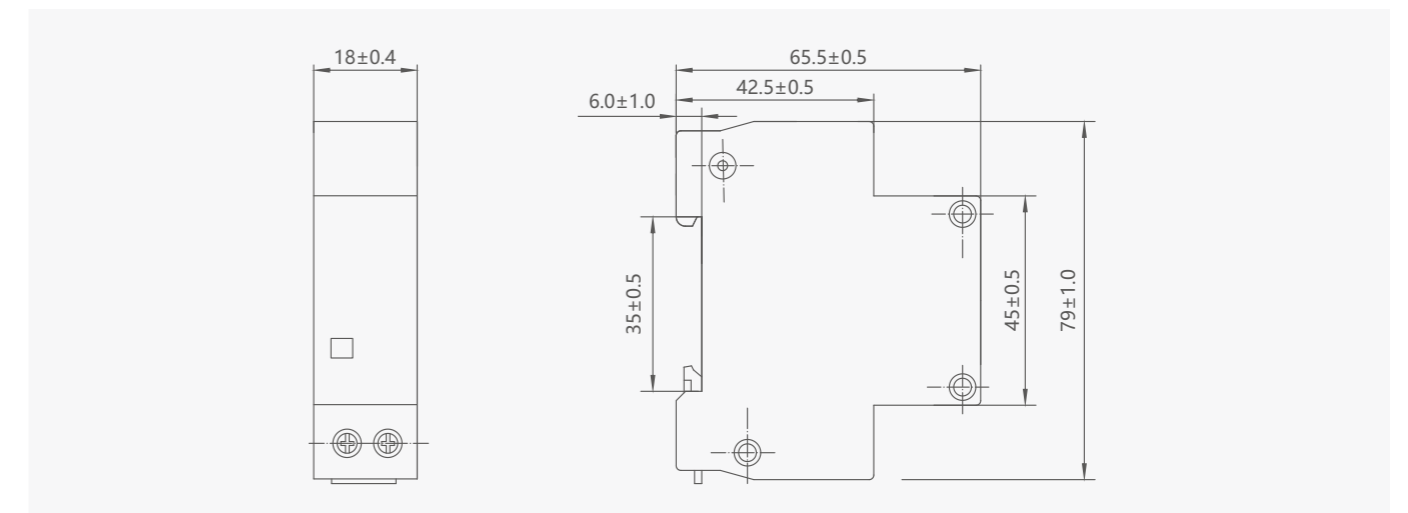
Alarm Contact Outline and installation dimensions



MX+OF Outline and installation dimensions



MX Outline and installation dimensions





Photovoltaic DC Components  
YCM8-□PV Series Photovoltaic DC MCCB



Photovoltaic DC Components  
YCM8-□PV Photovoltaic DC MCCB



**General**

YCM8-□PV series photovoltaic special DC molded case circuit breaker is applicable to DC power grid circuits with rated voltage up to DC1500V and rated current 800A. The DC circuit breaker has overload long delay protection and short circuit instantaneous protection functions, which are used to distribute electric energy and protect the line and power supply equipment from overload, short circuit and other faults.

**Features**

- Ultra-wide breaking capacity:  
rated working voltage up to DC1500V and rated current up to 800A. Under DC1500V working conditions,  $I_{cu}=I_{cs}=20KA$ , ensuring reliable short-circuit protection.
- Small size:  
for frame currents up to 320A, the 2P rated working voltage can reach DC1000V, and for frame currents of 400A and above, the 2P rated working voltage can reach DC1500V.
- 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	PV	3	125A	DC1500
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	PV: Photovoltaic/ direct-current	2 3	63, 80, 100, 125 140, 160, 180 200, 225, 250 280, 315, 320 350, 400, 500 630, 700, 800	DC1000 DC1500

Note: The tripping type of this product is thermal-magnetic type

The working voltage of YCM8-250/320PV 2P is DC1000V; The working voltage of 3P is DC1500V; YCM8-400/630/800PV2P and 3P can work under DC1500.

**Accessory selection**

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 DC110V DC220V P: AC400V AC230V DC220V

**Photovoltaic DC Components**  
**YCM8-□PV Photovoltaic DC MCCB**

**Technical data**

Model		YCM8- 250PV			YCM8- 320PV			YCM8- 400PV					
Appearance													
Shell frame current Inm(A)		250			320			400					
Number of poles of products		2		3	2		3	2		3			
DC working voltage(V)		500	1000	1500	500	1000	1500	250/500	750/1000	1250/1500	1250/1500		
Rated insulation voltageUi(V)		DC1250		DC1500	DC1250		DC1500	DC1500					
Rated impulse withstand voltage Uimp(KV)		8		12	8		12	12					
Rated current In(A)		63, 80, 100, 125, 140, 160, 180, 200, 225, 250			280, 315, 320			225, 250, 315, 350, 400					
Ultimate short-circuit breaking capacity Icu (kA)		S		50	20	20	50	20	20	65	35	15	15 <sup>①</sup> 20 <sup>②</sup>
		N		/			/			70	40	20	20 <sup>①</sup> 25 <sup>②</sup>
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)		3000	2000	1500	3000	2000	1500	1000	1000	700	500		
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)		76	107	76	107	124		182			
		Height(H)		180								250	
		Depth(D)		126			126			165			

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

**Photovoltaic DC Components**  
**YCM8-□PV Photovoltaic DC MCCB**

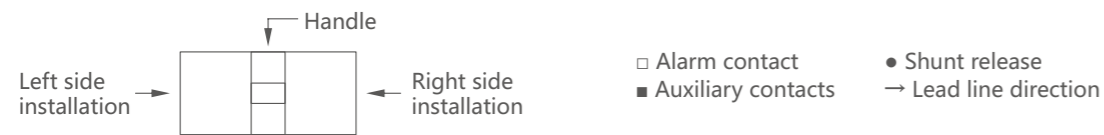
**Technical data**

Model		YCM8-630PV				YCM8-800PV					
Appearance											
Shell frame current Inm(A)		630				800					
Number of poles of products		2		3		2		3			
DC working voltage(V)		250/500	750/1000	1250/1500	1250/1500	250/500	750/1000	1250/1500	1250/1500		
Rated insulation voltageUi(V)		DC1500				DC1500					
Rated impulse withstand voltage Uimp(KV)		12				12					
Rated current In(A)		500, 630				700, 800					
Ultimate short-circuit breaking capacity Icu (kA)		S		65	35	15	15 <sup>①</sup> 20 <sup>②</sup>	65	35	15	15 <sup>①</sup> 20 <sup>②</sup>
		N		70	40	20	20 <sup>①</sup> 25 <sup>②</sup>	70	40	20	20 <sup>①</sup> 25 <sup>②</sup>
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	700	500	1000	1000	700	500		
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)		124	182	124		182			
		Height(H)		250				250			
		Depth(D)		165			165				

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

## Photovoltaic DC Components YCM8-□PV Photovoltaic DC MCCB

### Accessories



Accessory code	Accessory name	250/320PV	400/630/800PV
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 I <sub>th</sub>	The rated working current at AC 400V
In <sub>m</sub> <320	3A	0.30A
In <sub>m</sub> >400	6A	0.40A

Auxiliary contact and its combination

When the circuit breaker is in the "off" position	
When the circuit breaker is in the "on" position	

## Photovoltaic DC Components YCM8-□PV Photovoltaic DC MCCB

### Alarm contact

Alarm contact and its combination

Alarm contact U <sub>e</sub> =220V, I <sub>th</sub> =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.

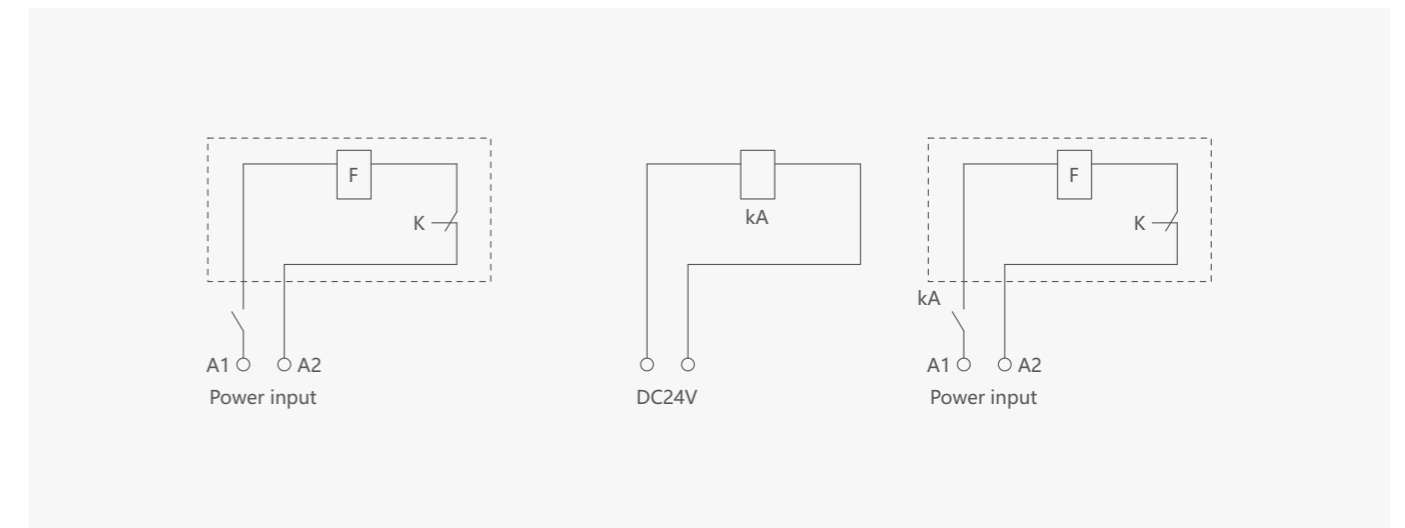
Control voltage: conventional: AC 50Hz, 110V, 230V, 400V, DC 24V, 110V, 220V.

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 DC Components

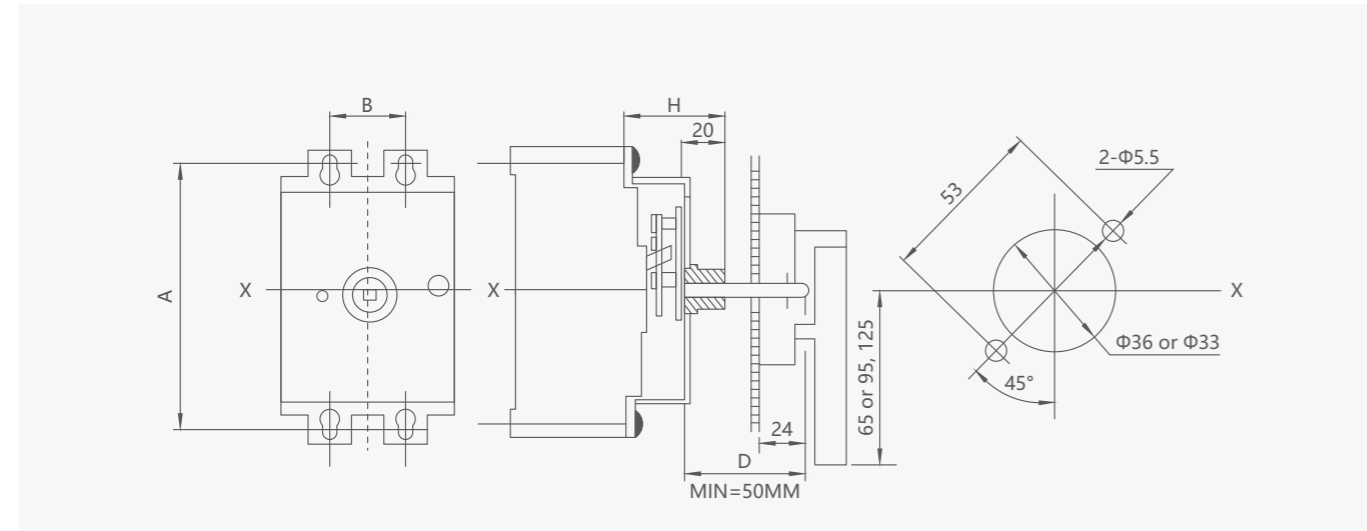
## YCM8-□PV Photovoltaic DC MCCB

### 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	
YCM8-250/320PV	157	35	55	50-150	0
YCM8-400/630/800PV	224	48	78	50-150	±5

Schematic diagram of hole opening of rotating operating handle

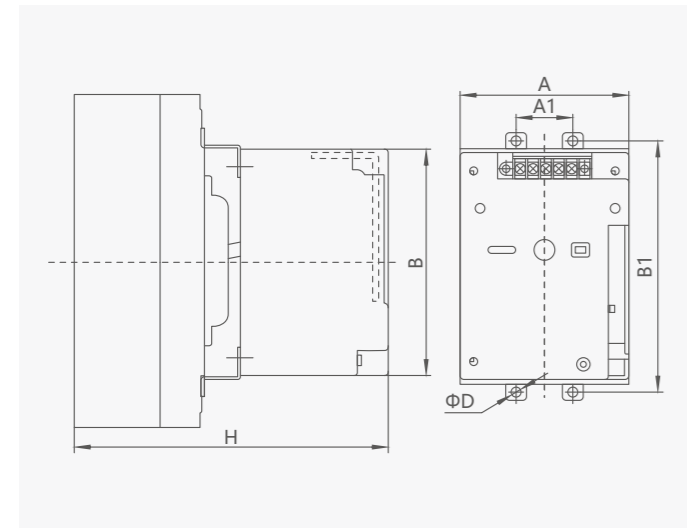


### Overall and mounting dimension of external accessories

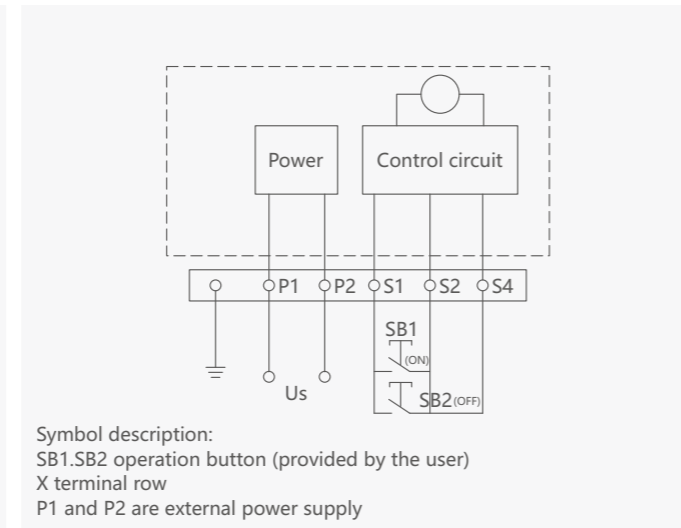
Model and specification of rotating operating handle mechanism

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

Outline and installation dimension diagram of CD2



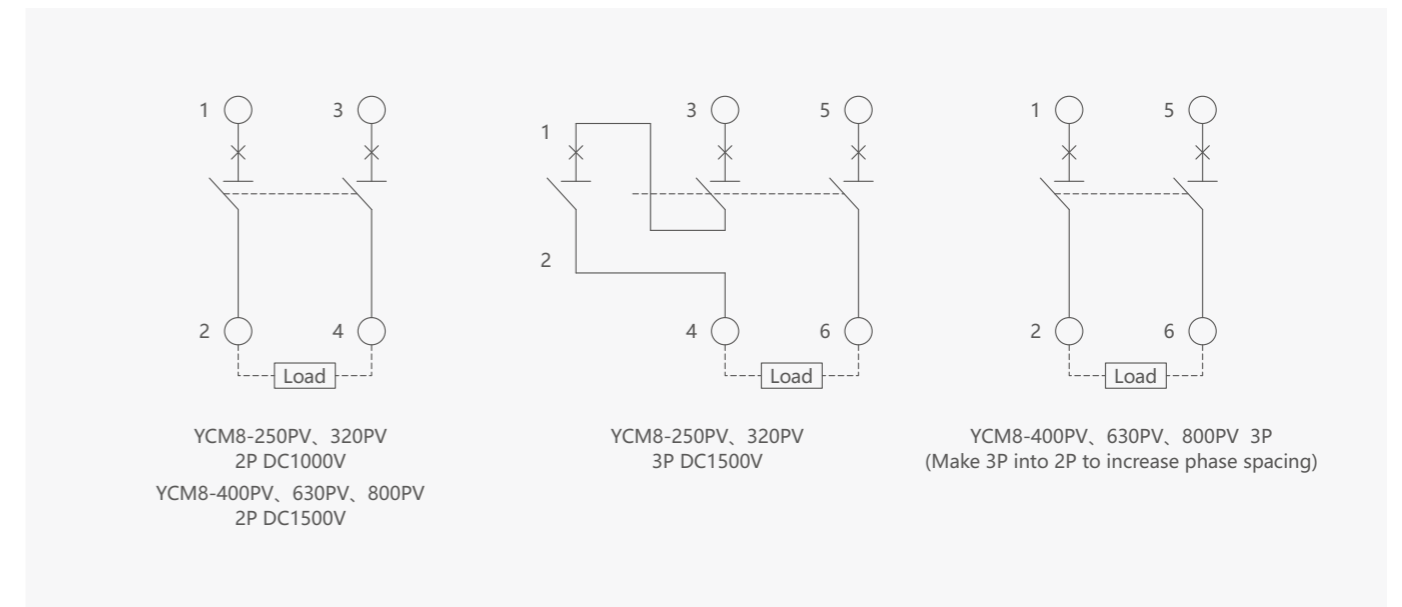
### Wiring diagram



# Photovoltaic DC Components

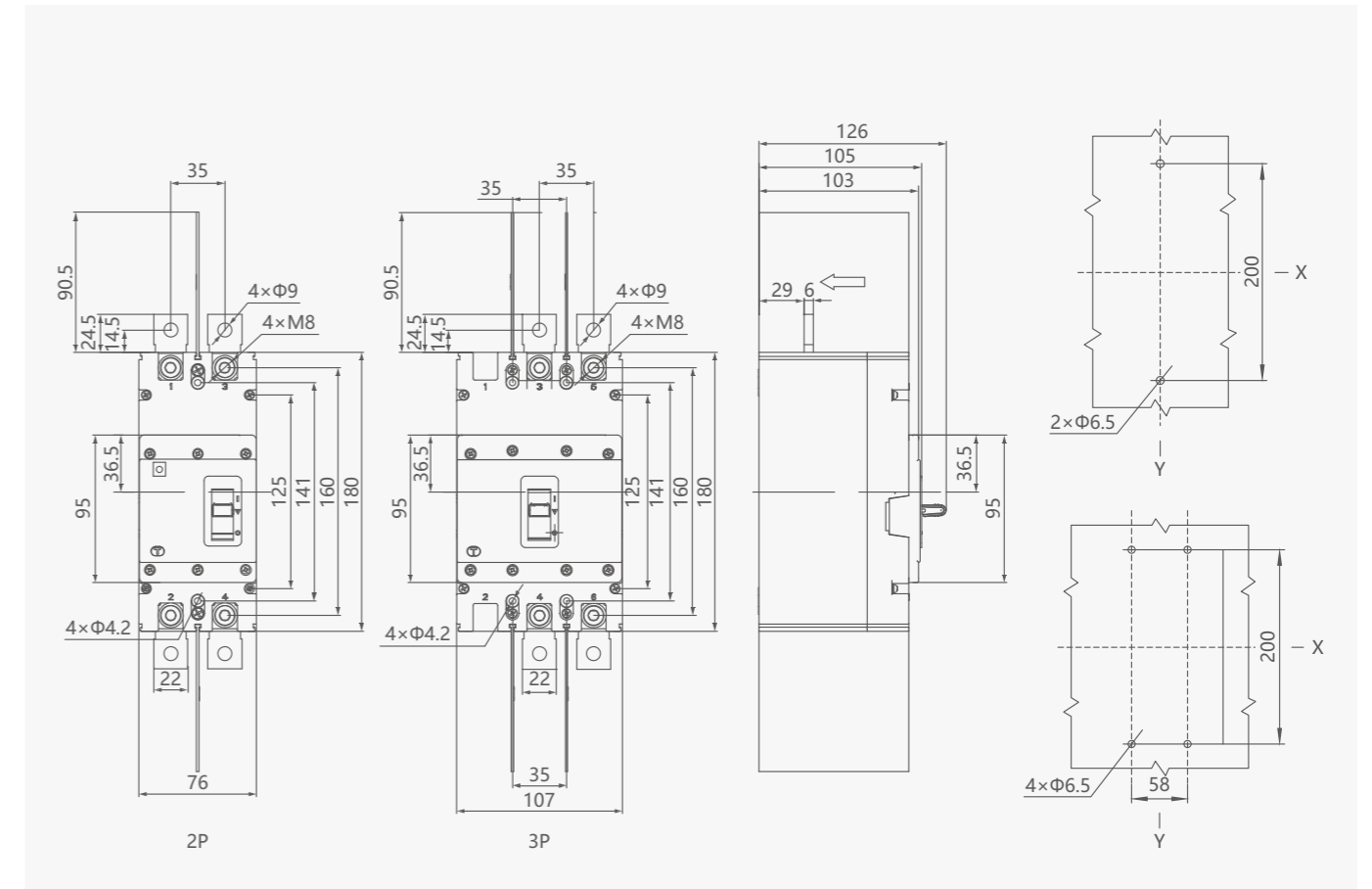
## YCM8-□PV Photovoltaic DC MCCB

### Wiring diagram



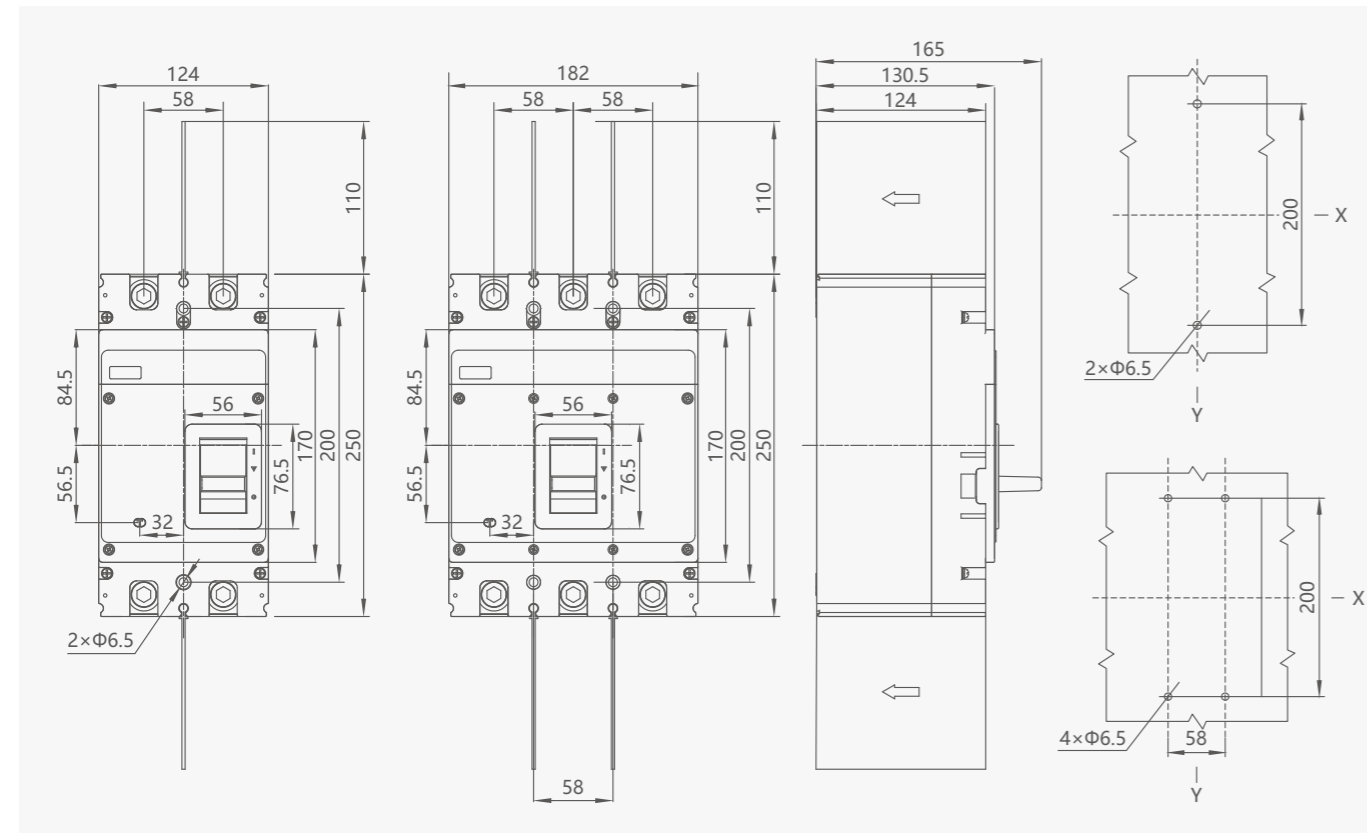
### Overall and mounting dimensions(mm)

YCM8-250PV, 320PV

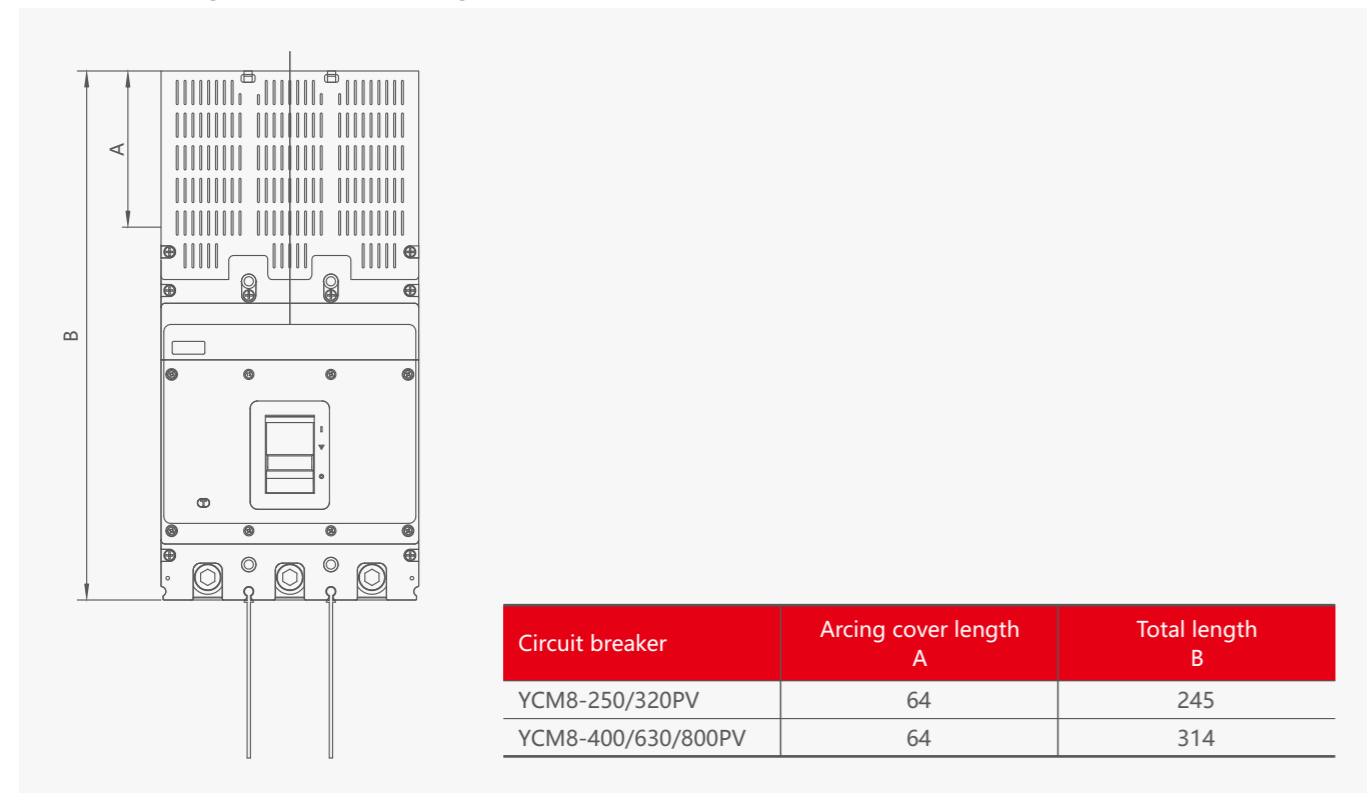


## Photovoltaic DC Components YCM8-□PV Photovoltaic DC MCCB

YCM8-400PV, 630PV, 800PV

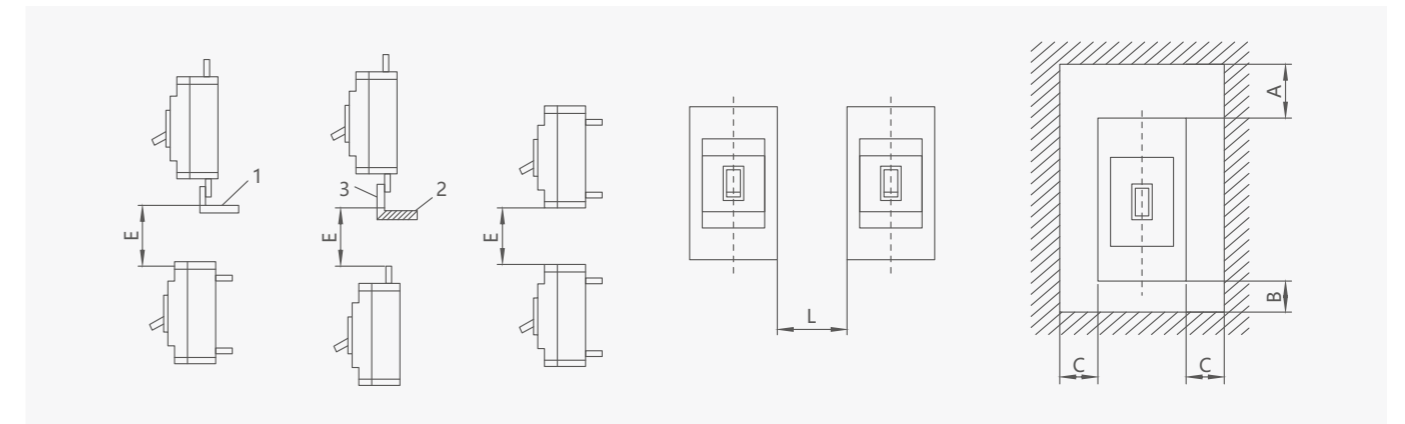


Installation drawing of YCM8-PV with arcing cover



## Photovoltaic DC Components YCM8-□PV Photovoltaic DC MCCB

### 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
YCM8-250PV	40	50	65	25	25	50	130
YCM8-320PV	40	50	65	25	25	50	130
YCM8-400PV	70	100	65	25	25	100	130
YCM8-630PV	70	100	65	25	25	100	130
YCM8-800PV	70	100	65	25	25	100	130

### Temperature correction factor table

Product shell frame	Working current In						
	40°C	45°C	50°C	55°C	60°C	65°C	70°C
250	1.00	1.00	1.00	0.97	0.95	0.93	0.90
320	1.00	0.96	0.94	0.92	0.90	0.88	0.85
400	1.00	1.00	1.00	0.97	0.95	0.93	0.90
630	1.00	1.00	0.98	0.95	0.92	0.89	0.87
800	1.00	0.94	0.92	0.90	0.87	0.84	0.80

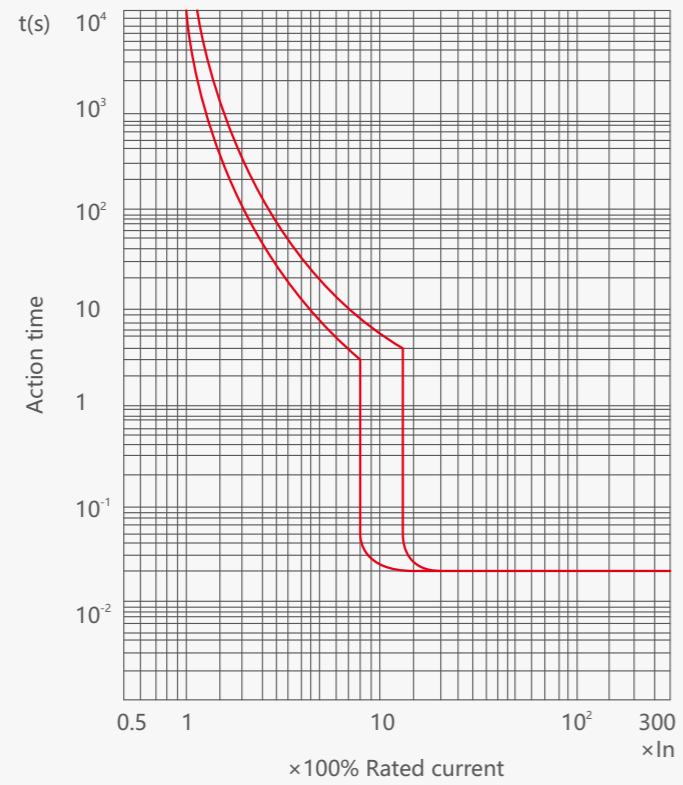
Note: 1. When the ambient temperature is lower than 50 °C, the product can be used normally without derating;  
2. The above derating factors are measured at the rated current of the shell frame.

### Use of derating table at high altitude

Product shell frame	250			320			400			630			800		
	Rated work Current A	Rated working voltage V	Rated power frequency withstand voltage V	Rated work Current A	Rated working voltage V	Rated power frequency withstand voltage V	Rated work Current A	Rated working voltage V	Rated power frequency withstand voltage V	Rated work Current A	Rated working voltage V	Rated power frequency withstand voltage V	Rated work Current A	Rated working voltage V	Rated power frequency withstand voltage V
2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2.5	1.00	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	1.00	1.00
3	1.00	0.98	0.98	0.92	0.98	0.98	1.00	0.98	0.98	0.98	0.98	0.98	0.92	0.98	0.98
3.5	1.00	0.95	0.95	0.90	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.95
4	1.00	0.92	0.92	0.87	0.92	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.87	0.92	0.92
4.5	0.98	0.89	0.89	0.84	0.89	0.89	0.98	0.89	0.89	0.89	0.89	0.89	0.84	0.89	0.89
5	0.96	0.86	0.86	0.82	0.86	0.86	0.97	0.86	0.86	0.86	0.86	0.86	0.80	0.86	0.86

Photovoltaic DC Components  
**YCM8-□PV Photovoltaic DC MCCB**

Curve



Photovoltaic DC Components  
**YCISC8-32PV Series Photovoltaic DC Isolation Switch**





## YCISC8-32 Photovoltaic DC Isolation Switch



Din rail installation



Panel installation



Door lock installation



External installation

Terminal shield

### General

Cage type isolation switch YCISC8 series is suitable for DC power systems with rated voltage DC1200V and below and rated current 32A and below. This product is used for infrequent on/off, and can disconnect 1~2 MPPT lines at the same time. It is mainly used in the control cabinet, distribution box and combiner box of the photovoltaic power generation system, and is used for isolation of the DC power distribution system. The external waterproof performance of this product reaches IP66.

Standards: IEC/EN60947-3: AS60947.3, UL508i.

### Features

- E type external installation can reach IP66 waterproof level at any angle;
- UV resistant and V0 flame retardant material;
- Contact silver plating, silver layer thickness reaches the highest standard in the industry;
- Arc extinguishing time(3ms);
- The bottom of the external box is equipped with a breather valve;
- Nonpolarity;
- Lockable in closed position;
- 4 installation modes optional.

### Selection

YCISC8	32	X	PV	P	2	MC4	13A
Model	Rated current	With lock or not	Usage	Installation mode	Wiring method	Joint type	Rated current
Isolation switch	32	/: No lock X: With lock	PV: Photovoltaic/ direct-current	No: Din rail installation	2\4\4B\ 4T\4S	/: No	DC1000 DC1200
				P: Panel installation		/: No	
				D: Door lock installation		M25: PG25 Waterproof joint M16: PG16 Waterproof joint	
				E: External installation		MC4: MC4 joint	





### Accessory Selection

YCISC8-C
Model
C: Terminal shield

Note: The "Din rail installation" and "external installation" can only be with the lock.

## YCISC8-32 Photovoltaic DC Isolation Switch

### Technical data

Model	YCISC8-32PV			
Standards	IEC/EN60947-3:AS60947.3, UL508i			
Use category	DC-PV1, DC-PV2			
Appearance				
	Din rail installation	Panel installation	Door lock installation	External
Wiring method	2,2H,4,4T,4B,4S			/,M25,2MC4,4MC4
Shell frame grade	32			
Electrical performance				
Rated heating current Ith(A)	32			
Rated insulation voltage Ui(V DC)	1500			
Rated working voltage Ue(V DC)	1000V or 1200V			
Rated impulse voltage Uimp(kV)	8			
Rated short-time withstand current Icw(1s)(kA)	1kA			
Rated short-time making capacity(Icm)(A)	1.7kA			
Rated short circuit current(Icn)	3kA			
Overvoltage category	II			
Polarity	No polarity, "+" and "-" polarity can be interchanged			
Switch knob position	9 o'clock position off, 12 o'clock position on (or 12 o'clock position off, 3 o'clock position on)			
Service life	Mechanical	10000		
	Electrical	3000		
Applicable environmental conditions and installation				
Maximum wiring capacity (including jumper wires)				
Single wire or standard(mm <sup>2</sup> )	4-16			
Flexible cord(mm <sup>2</sup> )	4-10			
Flexible cord (+ stranded cable end)(mm <sup>2</sup> )	4-10			
Torque				
Tightening torque of terminal M4 screw(Nm)	1.2-1.8			
Tightening torque of upper cover mounting screw ST4.2 (304 stainless steel)(Nm)	1.5-2.0			
Tightening torque of knob M3 screw(Nm)	0.5-0.7			
Bottom wiring torque(Nm)	1.1-1.4			
Environment				
Protection degree	IP20; External type IP66			
Operating temperature(°C)	-40~+85			
Storage temperature(°C)	-40~+85			
Pollution degree	3			
Overvoltage category	III			

## Photovoltaic DC Components

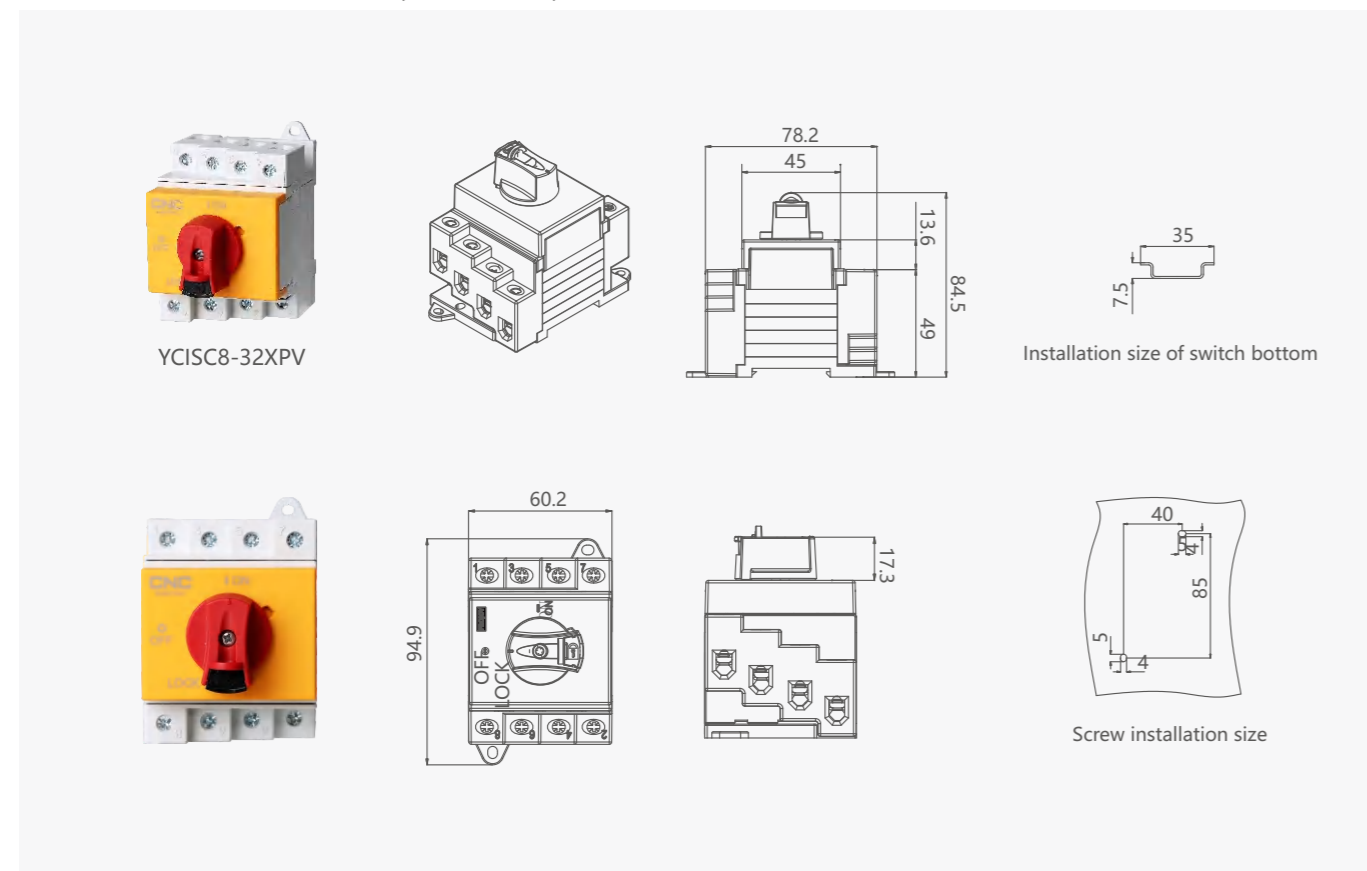
### YCISC8-32 Photovoltaic DC Isolation Switch

#### Wiring diagram

Type	2-Pole	4-Pole	4-Pole with Input and Output on top	4-Pole with Input and Output bottom	4-Pole with Input on top Output bottom
YCISC8-32 DC1000/DC1200	2	4	4T	4B	4S
Contacts Wiring graph					
Switching example					

#### Overall and mounting dimensions(mm)

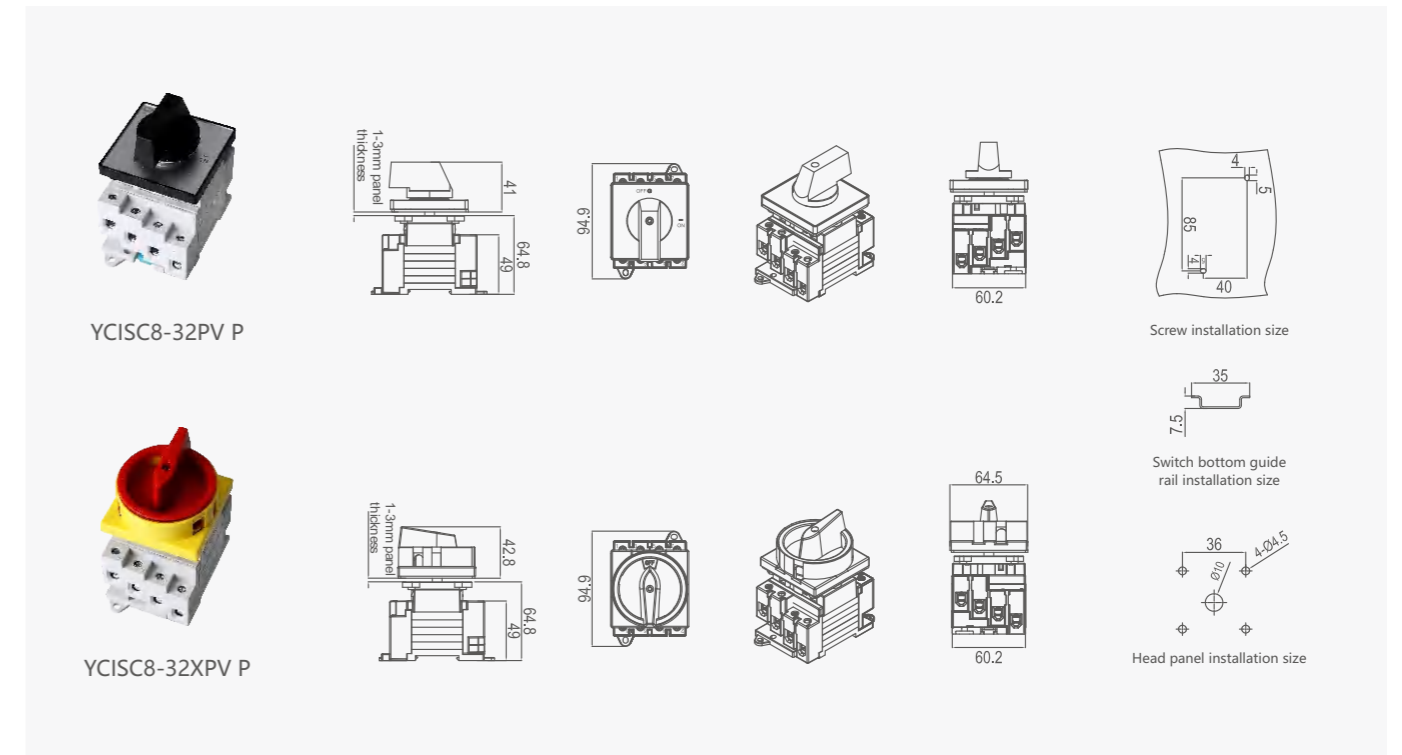
Power distribution module DC switch(YCISC8-32XPV)



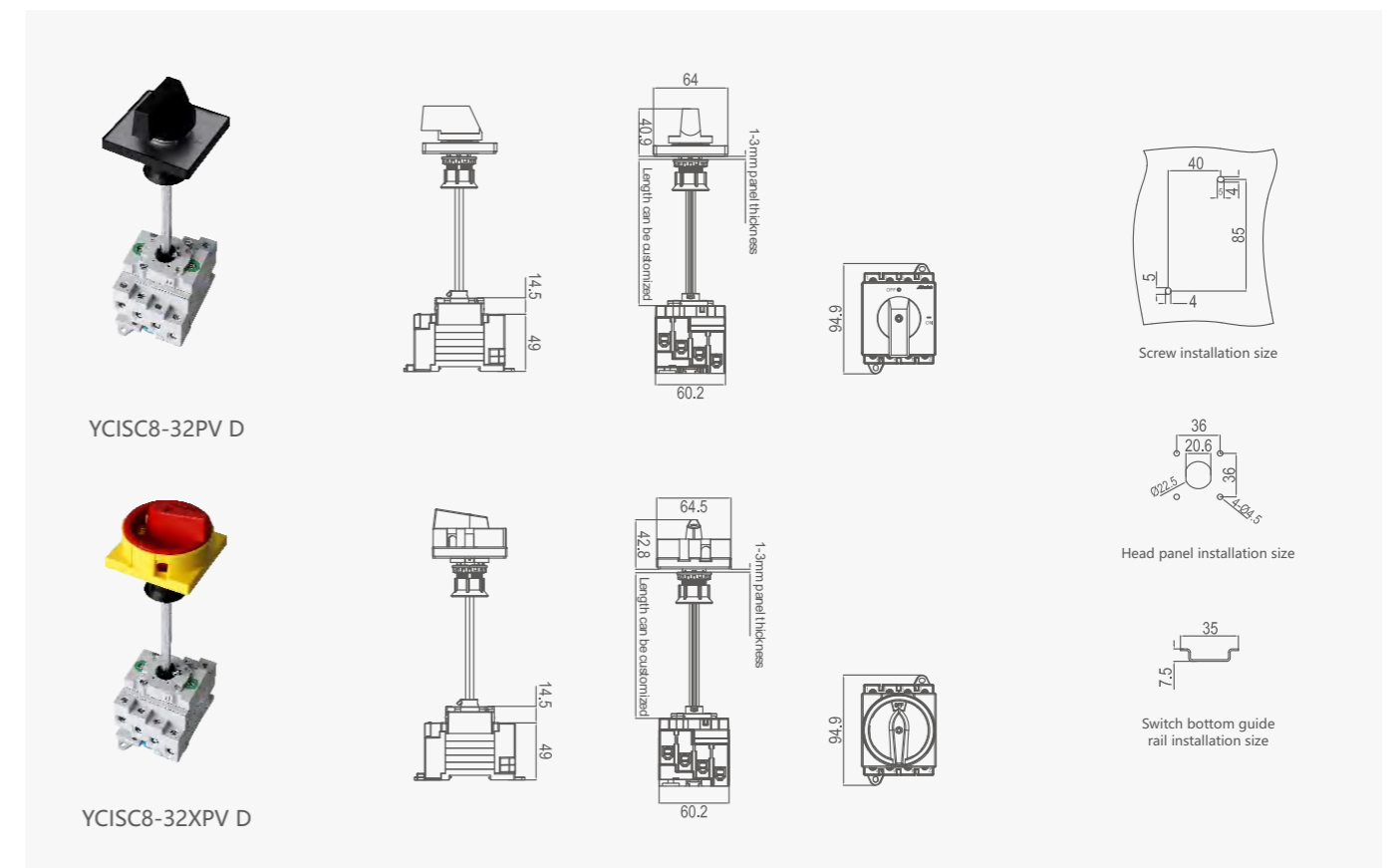
## Photovoltaic DC Components

### YCISC8-32 Photovoltaic DC Isolation Switch

#### Panel mounting



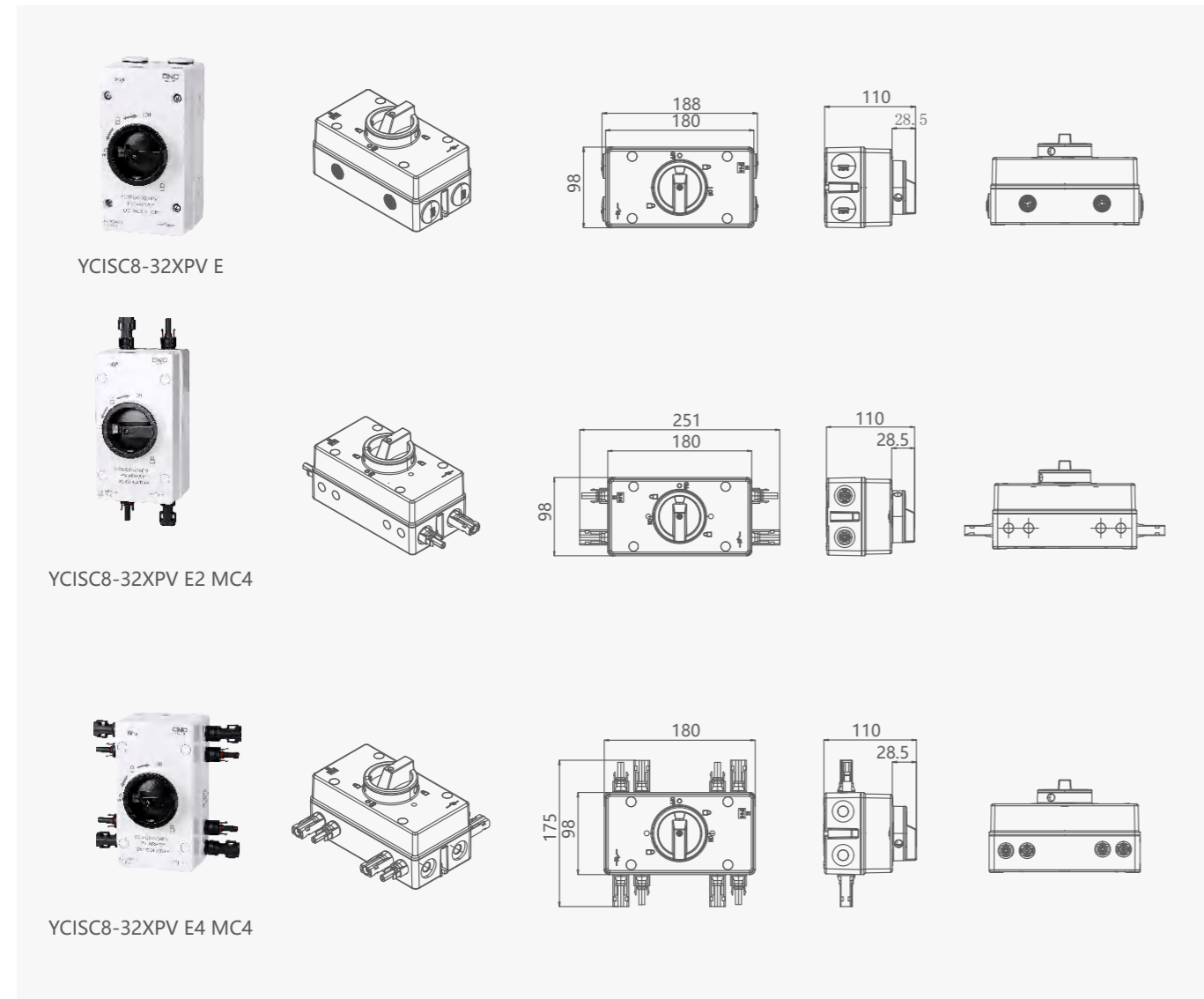
#### Door-lock installation DC switch



## Photovoltaic DC Components

### YCISC8-32 Photovoltaic DC Isolation Switch

External DC switch



## Photovoltaic DC Components

### YCISC8-32 Photovoltaic DC Isolation Switch

#### Current/Voltage category parameter table

The following current data IEC/EN60947-3:2009+A1+A2, AS60947.3, use category DC-PV1, DC-PV2

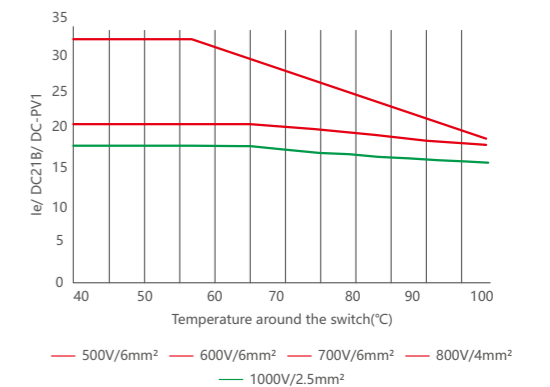
Model	Series	Wiring method	300V		600V		800V		1000V		1200V	
			PV1	PV2	PV1	PV2	PV1	PV2	PV1	PV2	PV1	PV2
YCISC8-32XPV □2 DC1000	1	2	32	32	32	32	32	16	16	9	/	/
YCISC8-32XPV □2 DC1200	1		32	32	32	32	32	16	16	9	13	9
YCISC8-32XPV □4 DC1000	2	4	32	32	32	32	32	16	16	9	/	/
YCISC8-32XPV □4 DC1200	2		32	32	32	32	32	16	16	9	13	9
YCISC8-32XPV □4S DC1000	1	4S	32	32	32	32	32	32	32	32	/	/
YCISC8-32XPV □4S DC1200	1		32	32	32	32	32	32	32	32	32	32
YCISC8-32XPV □4B DC1000	1	4B	32	32	32	32	32	32	32	32	/	/
YCISC8-32XPV □4B DC1200	1		32	32	32	32	32	32	32	32	32	32
YCISC8-32XPV □4T DC1000	1	4T	32	32	32	32	32	32	32	32	/	/
YCISC8-32XPV □4T DC1200	1		32	32	32	32	32	32	32	32	32	32

#### Data comply with AS60947-3

Main contact	Voltage	DC1000	DC1200
Rated thermal current $I_{the}$		32A	
Rated insulation voltage $U_i$		1500V	
Contact spacing (per pole)		8mm	
Rated working current $I_e$ (DC-PV2)			
4 layers, only 2 layers in series, with two loads 1 / 2 / _	300V	32A	32A
	600V	32A	32A
	800V	16A	16A
	1000V	9A	9A
	1200V	/	9A
4 layers, 4 layers in series, one load 1 / 2 / 3 / 4 / _	300V	32A	32A
	600V	32A	32A
	800V	32A	32A
	1000V	32A	32A
	1200V	/	32A

#### Type

Number of poles	4-pole
Terminal name, main circuit	1; 3; 5;7; 2; 4; 6; 8
Terminal type, main circuit	Screw terminal
Cable cross-section	4.0-16mm <sup>2</sup>
Conductor type	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <input type="checkbox"/> </div> <div style="margin-right: 10px;"> <input type="checkbox"/> </div> </div> 4-16mm (rigidity: solid or stranded) 4-10mm Flexible
Number of wires per terminal	1
Preparation required for wire	Yes
Stripping length (mm), main circuit	8mm
Tightening torque (M4), main circuit	1.2~1.8N.m



YCIS8-55□PV Series Photovoltaic DC Isolation Switch



YCIS8-55□PV Photovoltaic DC Isolation Switch



**General**

Isolating switch YCIS8 series is suitable for DC power systems with rated voltage DC1500V and below and rated current 55A and below. This product is used for infrequent on/off, and can disconnect 1~4 MPPT lines at the same time. It is mainly used in control cabinets, distribution boxes, inverters and combiner boxes in photovoltaic power generation systems for isolation of DC power distribution systems. The external waterproof performance of this product reaches IP66. The inner core of the product can be installed inside the inverter for controlling the incoming line of the inverter.

Standards: IEC/EN60947-3, AS60947.3, UL508i standards.

Certification: TUV, CE, CB, SAA, UL, CCC.

**Features**

- Non-polarity design;
- Switch modular design, can provide 2-10 layers;
- Provide single-hole installation, panel installation, guide rail installation, door clutch or waterproof housing (dynamic sealing design and world-class sealing materials ensure IP66 protection grade);
- DC1500V insulation voltage design;
- Single-channel current 13-55A;
- Single hole installation, panel installation, power distribution module, door lock installation, external installation and other installation methods are optional;
- Provide 15 wiring schemes.

\*: If you order "External installation" M25 and M16 interface products, we only reserve corresponding waterproof connector holes, and do not provide PG waterproof connectors

**Selection**

YCISC8	55	X	PV	P	2	MC4	25A
Model	Rated current	With lock or not	Usage	Installation mode	Wiring method	Joint type	Rated current
Isolation switch	55	/: No lock X: With lock	PV: Photovoltaic/ direct-current	No: Din rail installation	2/3/4/6/8/10 2H/3H/4H 4S/4B/4T 3T/6T/9T	/: No	13A, 20A, 25A, 40A, 50A (note the type when ordering)
				P: Panel installation			
				D: Door lock installation			
				S: Single hole installation			
E: External installation	2\4\4B\4T\4S	/: No M25: PG25 Waterproof joint M16: PG16 Waterproof joint MC4: MC4 joint					

Note:

1. The "Din rail installation" and "external installation" can only be with the lock.
2. The rated current is the category of DC-PV1, and DC1000V is the benchmark. For other scenarios, please refer to: "Current/Voltage Category Parameter Table (DC-PV1/DC-PV2)"
3. Rated current 55A, suitable for wiring mode 4B, 4T, 4S



## Photovoltaic DC Components

### YCIS8-55□PV Photovoltaic DC Isolation Switch

#### Technical data

Model	YCIS8-55□PV				
Standards	IEC/EN60947-3:AS60947.3, UL508i				
Use category	DC-PV1, DC-PV2				
Appearance					
	Din rail installation	Panel installation	Door lock installation	Single hole installation	External installation
Wiring method	2/3/4/6/8/10; 2H/3H/4H; 4S/4B/4T; 3T/6T/9T				2\4\4B\4T\4S
Joint type	/				/,M25,2MC4,4MC4
Electrical performance					
Rated current In(A)	13	20	25	40	50
Rated heating current Ith(A)	32	40	55	55	55
Rated insulation voltage Ui(V DC)	1500				
Rated working voltage Ue(V DC)	1500				
Rated impulse voltage Uimp(kV)	8				
Rated short-time withstand current Icw(1s)(A)	780				
Rated short-time making capacity(Icm)(A)	1200				
Rated limited short-circuit current Icc(A)	5000				
Maximum fuse specification gL(gG)(A)	160				
Overvoltage category	III				
Polarity	No polarity, "+" and "-" polarity can be interchanged				
Switch knob position	9 o'clock position off, 12 o'clock position on (or 12 o'clock position off, 3 o'clock position on)				
Contact spacing (per pole)(mm)	8				
Service life	Mechanical	10000			
	Electrical	3000			
Applicable environmental conditions and installation					
Maximum wiring capacity (including jumper wires)					
Single wire or standard(mm <sup>2</sup> )	4-16				
Flexible cord(mm <sup>2</sup> )	4-10				
Flexible cord (+ stranded cable end)(mm <sup>2</sup> )	4-10				
Torque					
Tightening torque of terminal M4 screw(Nm)	1.2-1.8				
Tightening torque of upper cover mounting screw ST4.2 (304 stainless steel)(Nm)	2.0-2.5				
Tightening torque of knob M3 screw(Nm)	0.5-0.7				
Switching torque	0.9-1.9				
Environment					
Protection degree	IP20; External type IP66				
Operating temperature(°C)	-40~+85				
Storage temperature(°C)	-40~+85				
Pollution degree	3				
Overvoltage category	III				

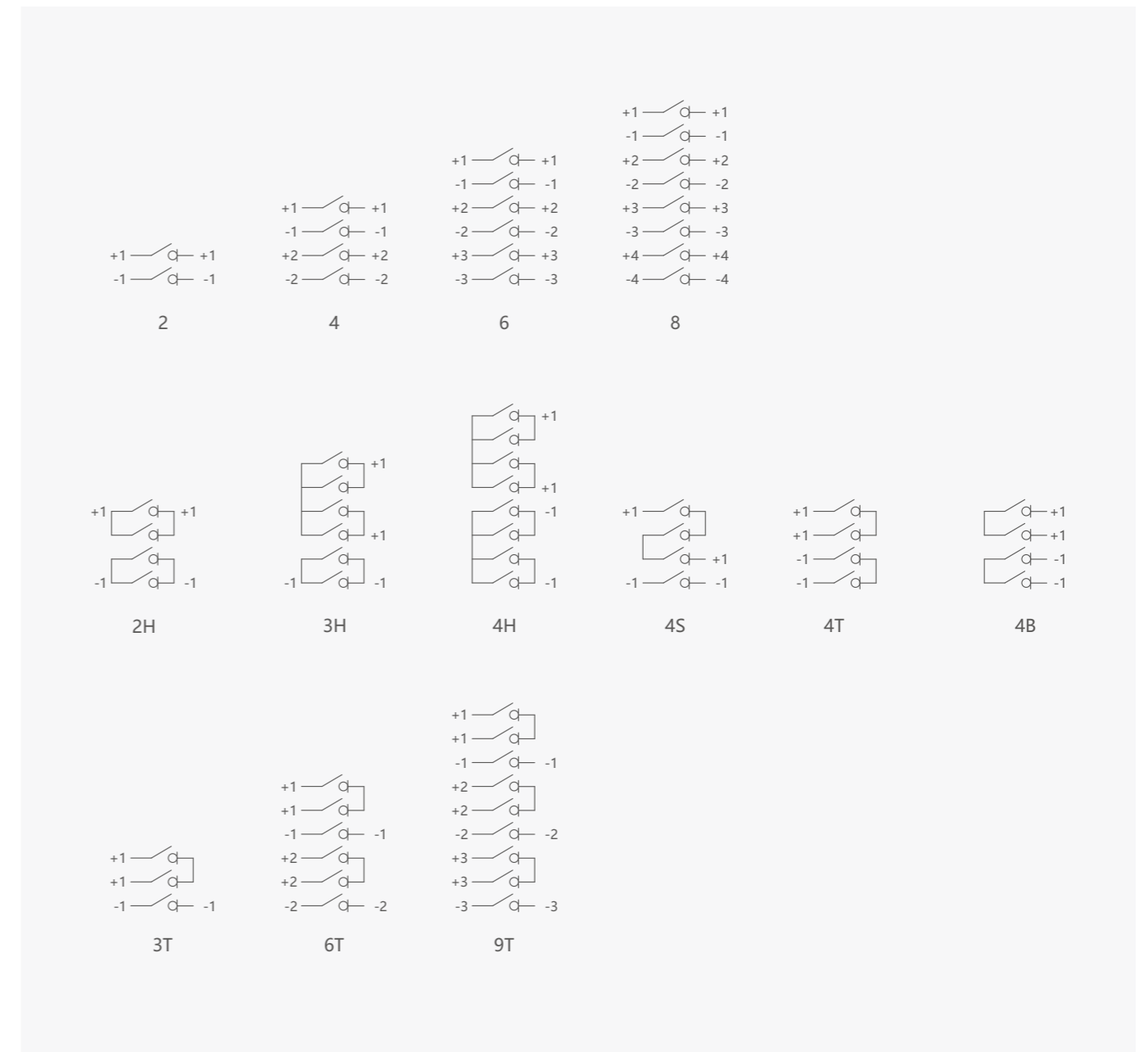
## Photovoltaic DC Components

### YCIS8-55□PV Photovoltaic DC Isolation Switch

#### Maximum power loss per contact pair

Wiring method	Power loss(W)
2	≤6
4	≤12
6	≤18
8	≤24
2H	≤3
3H	≤4.5
4H	≤6

#### Wiring diagram

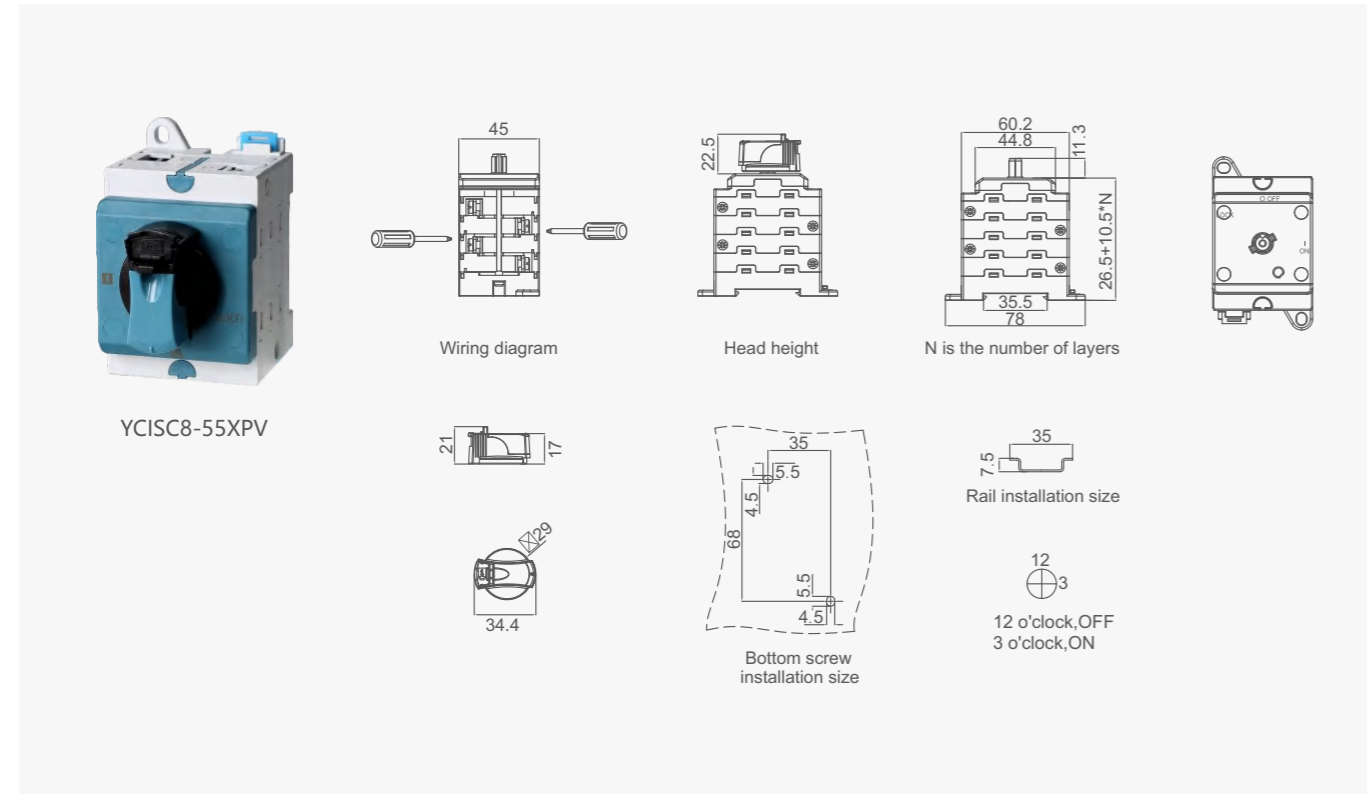


Photovoltaic DC Components

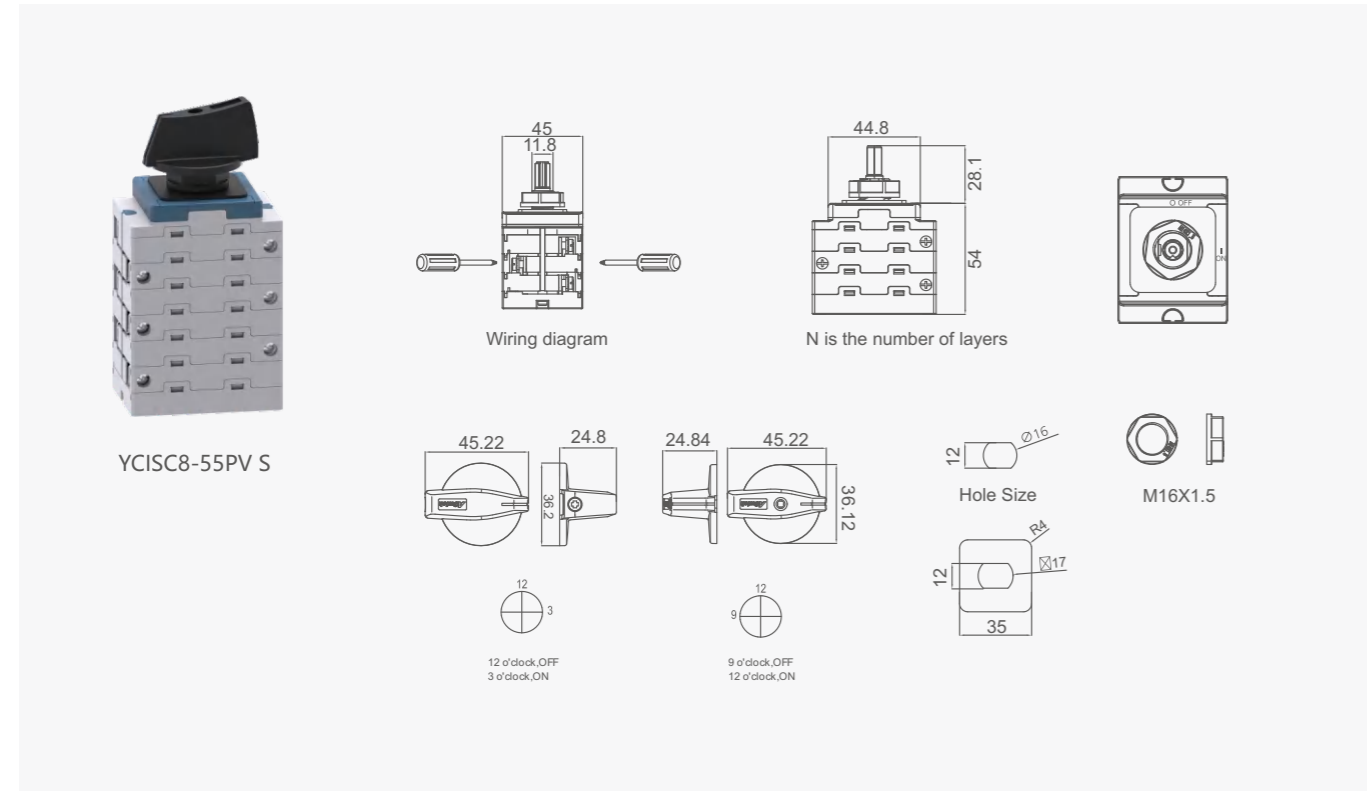
**YCIS8-55□PV Photovoltaic DC Isolation Switch**

Overall and mounting dimensions(mm)

Din rail type



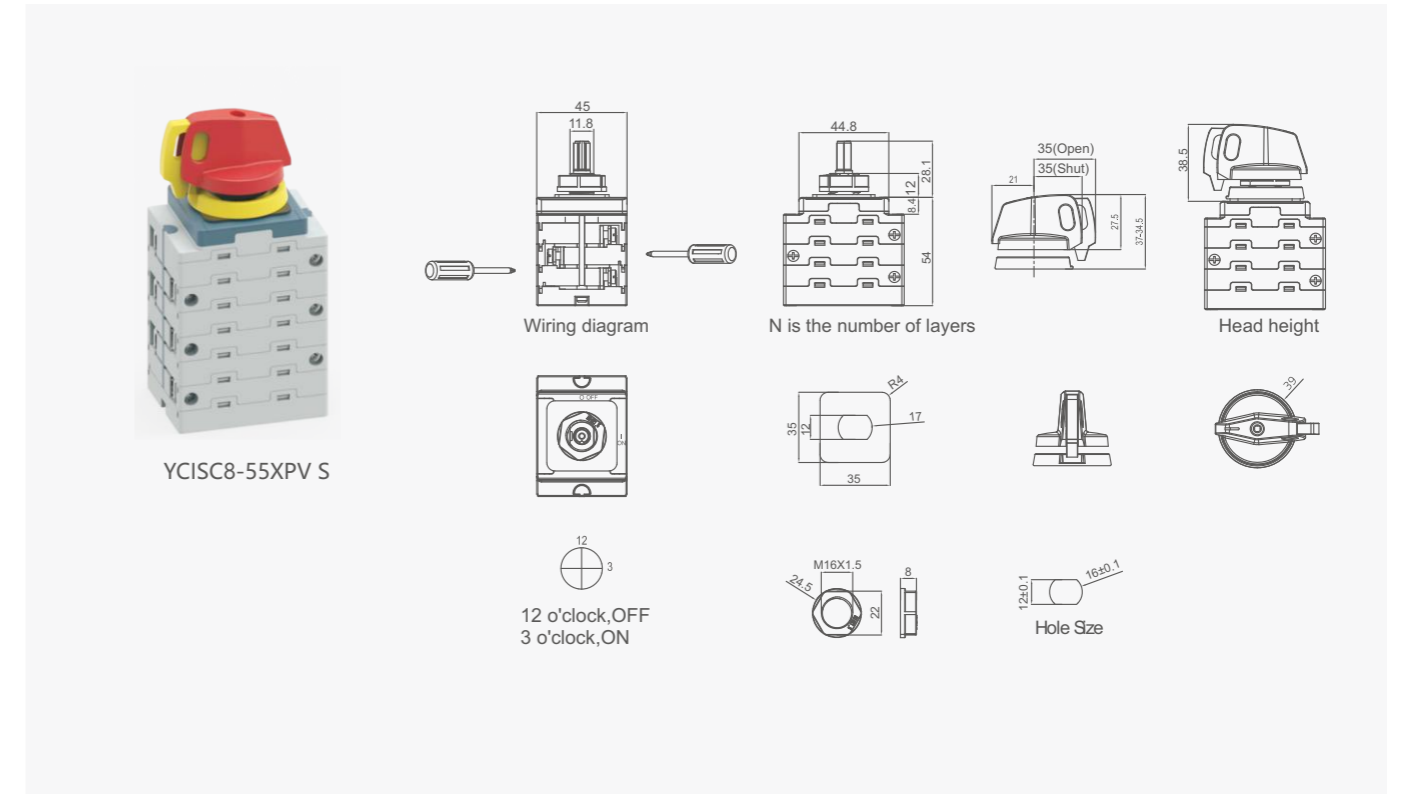
Single hole type



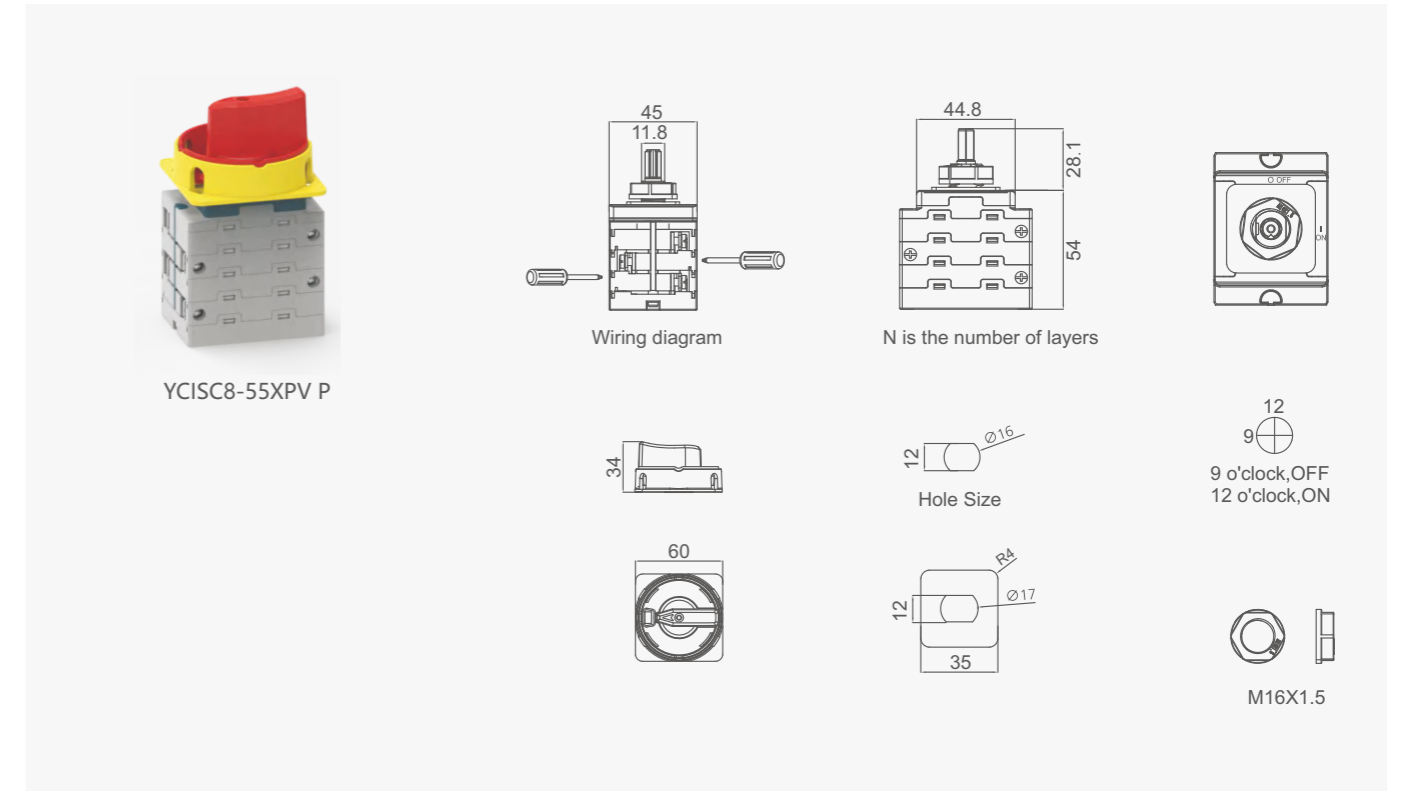
Photovoltaic DC Components

**YCIS8-55□PV Photovoltaic DC Isolation Switch**

Single hole type



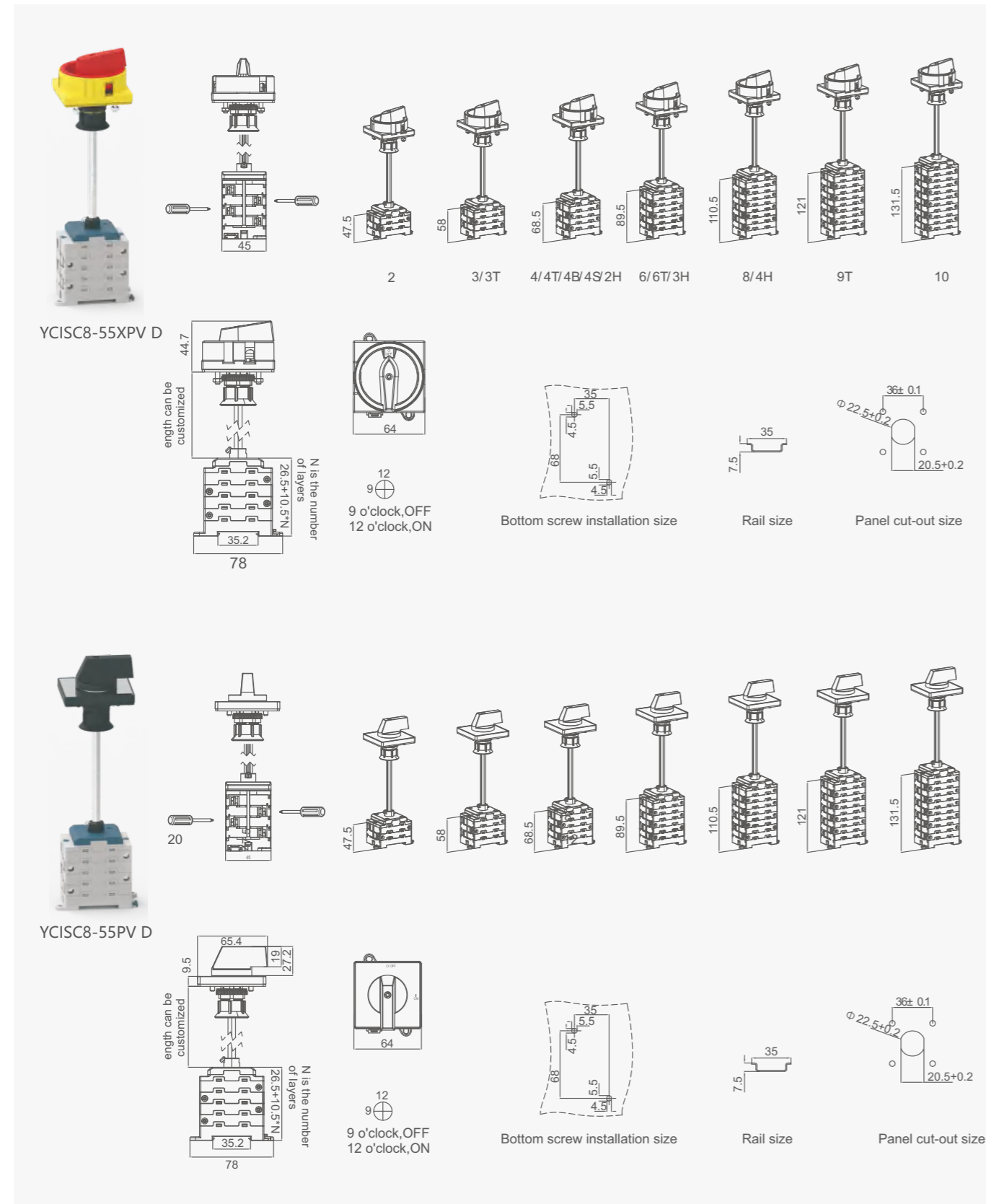
Panel type



## Photovoltaic DC Components

### YCIS8-55□PV Photovoltaic DC Isolation Switch

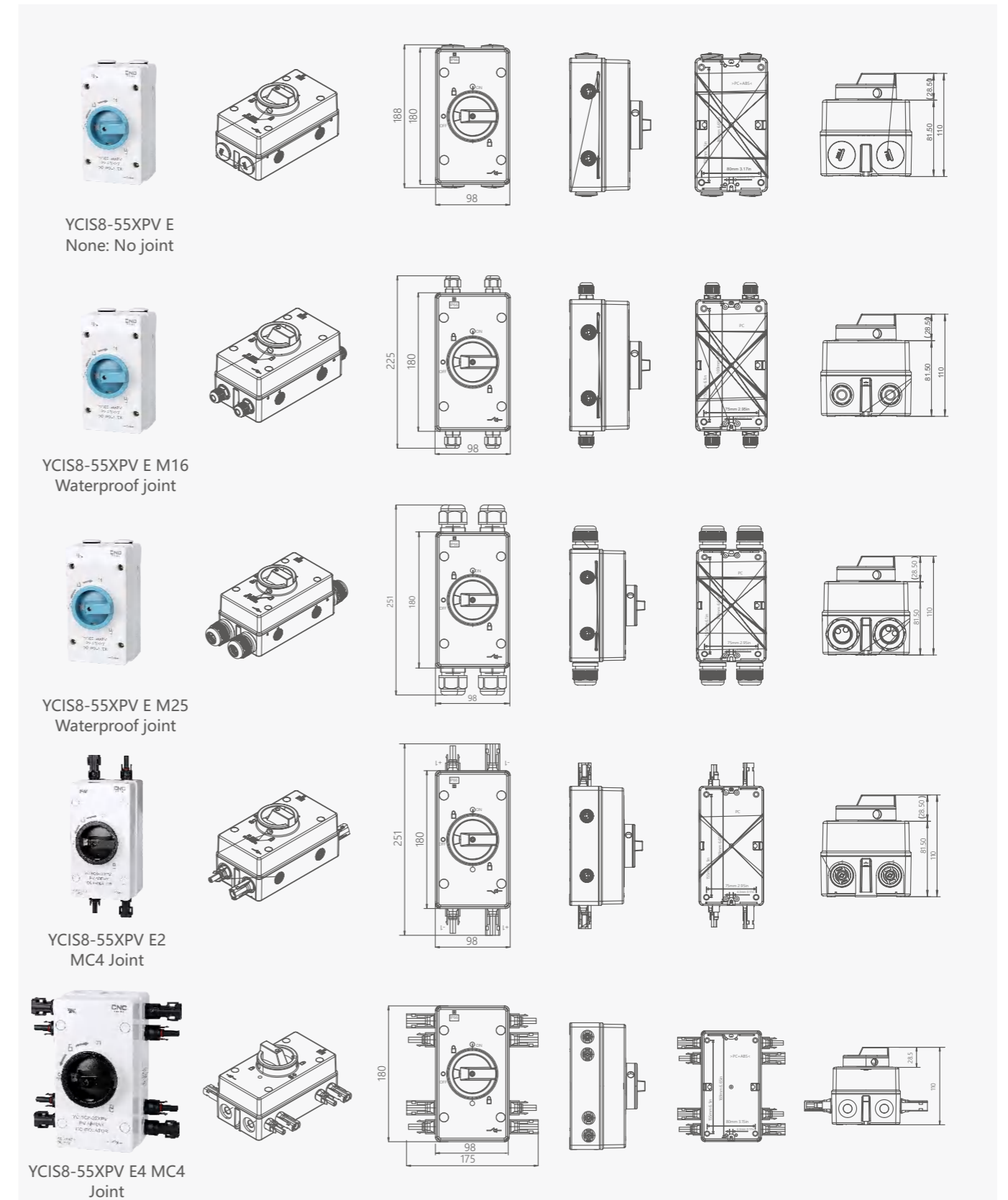
#### Door lock type



## Photovoltaic DC Components

### YCIS8-55□PV Photovoltaic DC Isolation Switch

#### External type



## Photovoltaic DC Components

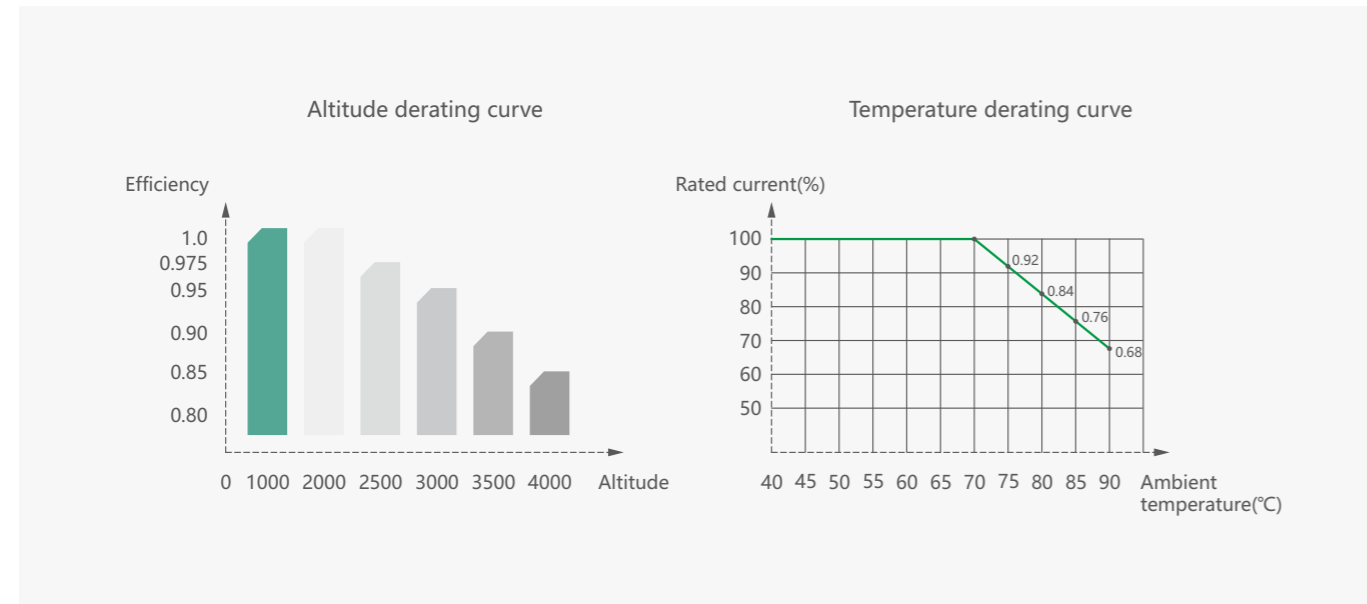
### YCIS8-55□PV Photovoltaic DC Isolation Switch

Current/Voltage category parameter table

Wiring method	Rated current	Working voltage	600V		800V		1000V		1200V		1500V	
			PV1	PV2	PV1	PV2	PV1	PV2	PV1	PV2	PV1	PV2
2、3、4 6、8、10	13		32	13	26	13	13	6	10	4	5	3
	20		40	20	30	15	20	8	12	6	6	4
	25		55	25	45	23	25	10	15	8	8	5
	40		55	40	50	30	40	15	30	15	20	8
	50		55	50	55	40	50	18	40	18	30	10
4T、4B、4S	13		32	12	32	12	32	8	26	8	13	5
	20		40	18	40	18	40	12	30	12	20	8
	25		55	20	55	20	55	15	40	15	30	10
	40		55	40	55	40	55	32	50	32	45	20
	50		55	50	55	50	55	40	55	40	50	/

Note: 2H/3H/4H/3T/6T/9T/10P products need to be customized, if necessary, please contact us.

### Derating table



## Photovoltaic DC Components

### YCF8-□PV Series Photovoltaic DC Fuse





## Photovoltaic DC Components

### YCF8-63PVS Photovoltaic DC Fuse



#### General

Photovoltaic fuse YCF8-□ PVS series is applicable to DC distribution lines with rated voltage not exceeding DC1500V, rated current not exceeding 50A and rated short circuit capacity not exceeding 50kA; It is used for line overload and short circuit protection. It is mainly used in energy storage systems and solar photovoltaic combiner boxes as short circuit and overload protection for solar photovoltaic power generation devices, batteries and other semiconductor devices.

Standards: IEC 60269-6 UL248-19

Certificate: CE, CB, TUV, etc

#### Selection

YCF8	63	PVS	DC1500
Model	Shell frame	Product type	Rated Voltage
Fuses	63	PVS : Photovoltaic DC sailboat	DC1500V

#### Technical data

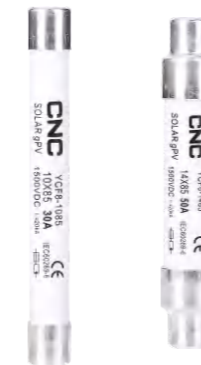
Model	YCF8-63PVS	
Fuse size(mm)	10×85	14×85
Rated working voltage Ue(V)	DC1500	
Rated insulation voltage Ui(V)	DC1500	
Rated short-circuit breaking capacity (KA)	20	
Operating level	gPV	
Standards	IEC60269-6, UL4248-19	
Number of poles	1P	
Installation method	TH-35 Din-rail installation	
Operating environment and installation		
Working temperature	-40°C≤X≤+90°C	
Altitude	≤2000m	
Humidity	When the maximum temperature is +40°C, the relative humidity of the air shall not exceed 50%, and higher humidity can be allowed at lower temperatures, For example +90% at 25°C. Special measures shall be taken for occasional condensation due to temperature changes;	
Installation environment	In a place where there is no explosive medium and the medium is not enough to corrode metal and damage insulation gas and conductive dust.	
Pollution degree	Level 3	
Installation category	III	

#### Fuse adapter table

Fuse(Base)	Fuse		
Model	Model	Current rating	Voltage
YCF8-63PVS DC1500	YCF8-1085	2, 3, 4, 5, 6, 8, 10, 15, 16, 20, 25, 30, 32	DC1500
	YCF8-1485	30-50	

## Photovoltaic DC Components

### YCF8-63PVS Photovoltaic DC Fuse



#### Selection

YCF8	1085	25A	DC1500
Product name	Size	Rated current	Rated Voltage
Fuse link	1085: 10×85(mm)	2-32A	DC1500V
	1485: 14×85(mm)	30-50A	

#### Technical data

Model	YCF8-1085	YCF8-1485
Rated current In(A)	2-32A	30-50A
Fuse size	10×85	14×85
Rated working voltage Ue(V)	DC1500	
Rated short-circuit breaking capacity (KA)	20	
Time constant(ms)	1-3ms	
Operating level	gPV	
Standards	IEC60269-6, UL248-19	

#### Test method

The agreed time and current of the fuse "gPV"

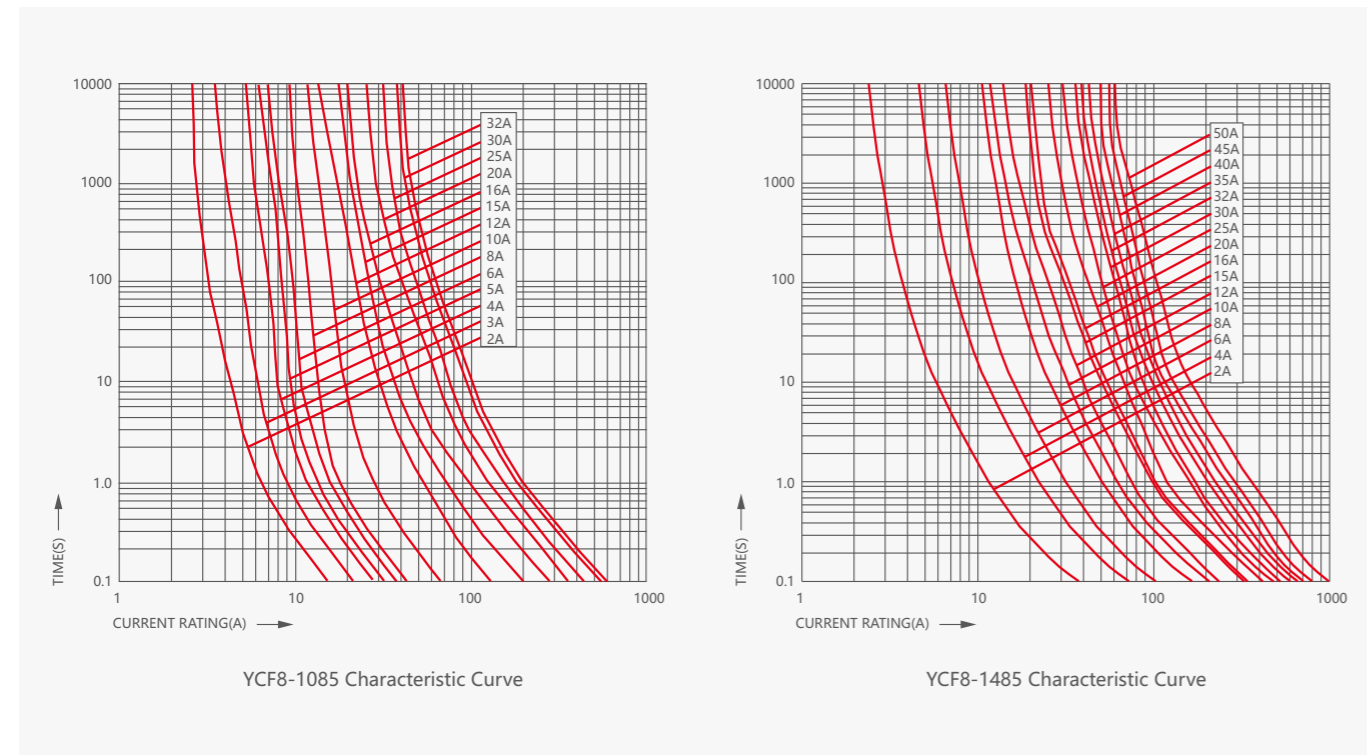
Rated current of the fuse "gPV" (A)	Agreed time (h)	Agreed current	
		Inf	If
In≤63	1	1.13In	1.45In
63<In≤160	2		
160<In≤400	3		
In>400	4		

Photovoltaic DC Components  
**YCF8-63PVS Photovoltaic DC Fuse**

**Joule integral table**

Model	Rated current (A)	Joule integral I <sup>2</sup> T(A <sup>2</sup> S)	
		Pre-arcing	Total
YCF8-1085	2	4	8
	3	6	11
	4	8	14
	5	11	22
	6	15	30
	8	9	35
	10	10	98
	12	12	120
	15	14	170
	20	34	400
	25	65	550
	30	85	680
	32	90	720
YCF8-1485	40	125	800
	50	155	920

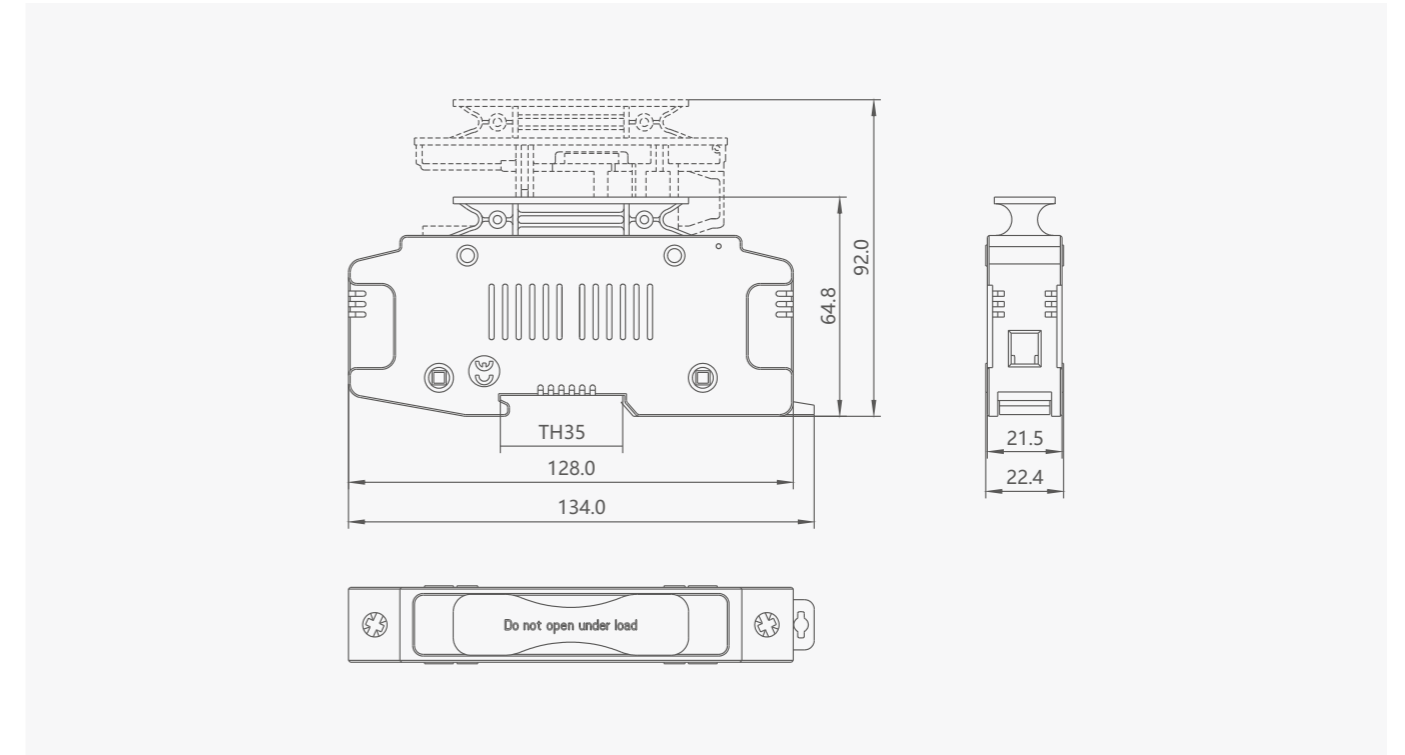
**Curve**



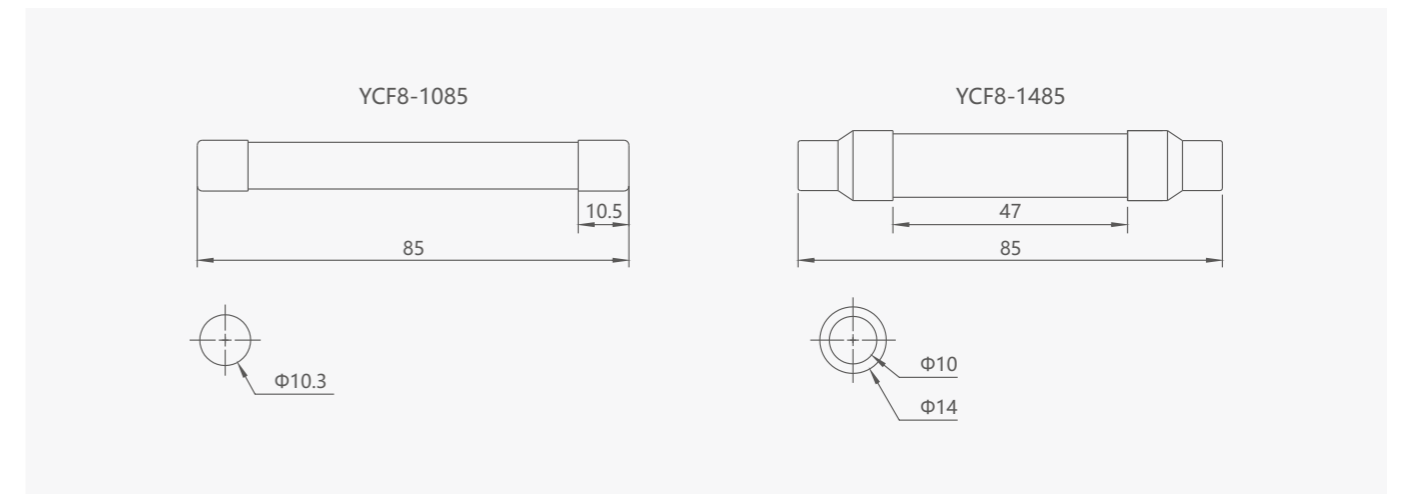
Photovoltaic DC Components  
**YCF8-63PVS Photovoltaic DC Fuse**

**Product size and installation**

Fuse(Base)



Fuse





**General**

YCF8-□□PV series fuses have a rated operating voltage of DC1500V and a rated current of 80A. It is mainly used in the solar photovoltaic DC combiner box to break the line overload and short-circuit current generated by the current feedback of the photovoltaic components of the solar panel and the inverter, so as to protect the solar photovoltaic components. It is widely used in the circuit protection of electric drive system, power supply system and auxiliary system, and the fuse can also be selected in any other DC circuit as the circuit overload and short circuit protection of electrical components.

Standards: IEC60269, UL4248-19.

Certification: CE, CB, TUV and other certifications.

**Features**

The fuse base is made of a plastic pressed shell with contacts and fuse-carrying parts, which are riveted and connected, and can be used as the supporting part of the fuse link of corresponding size. This series of fuses has the characteristics of small size, convenient installation, safe use and beautiful appearance.

**Selection**

YCF8	32	X	PV	DC1500
Model	Shell frame	Functions	Product type	Rated Voltage
YCF8	32: 1~32A	/:standard X: With display H: High base	PV: Photovoltaic/ direct-current	DC1000V
	63: 15~40A			DC1000V
	125: 40~80A	/:non		DC1500V

**Fuse adaptation table**

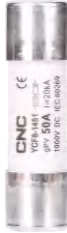
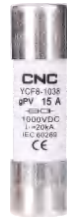
Fuse holder	Assembly fuse
YCF8-32	YCF8-1038
YCF8-63	YCF8-1451
YCF8-125	YCF8-2258

**Technical data**

Model	YCF8-32PV	YCF8-63PV	YCF8-125PV
Specifications	/:standard X: With display H: High base	/:standard	/:standard
Fuse size(mm)	10×38	14×51	22×58
Rated working voltage Ue(V)	DC1000		DC1500
Rated insulation voltage Ui(V)	DC1500		
Use category	gPV		
Standards	IEC60269-6, UL4248-19		
Number of poles	1P		
<b>Operating environment and installation</b>			
Working temperature	-40°C≤X≤+90°C		
Altitude	≤2000m		
Humidity	When the maximum temperature is +40°C, the relative humidity of the air shall not exceed 50%, and higher humidity can be allowed at lower temperatures, For example+ 90% at 25°C. Special measures shall be taken for occasional condensation due to temperature changes;		
Installation environment	In a place where there is no explosive medium and the medium is not enough to corrode metal and damage insulation gas and conductive dust.		
Pollution degree	Level 3		
Installation category	III		
Installation method	TH-35 Din-rail installation		

## Photovoltaic DC Components

### YCF8-□□PV Photovoltaic DC Fuse



#### General

The variable cross-section melt made of pure silver sheet (or silver wire winding) is soldered with low-temperature tin and packaged in a fusion tube made of high-strength porcelain. The fusion tube is filled with chemically treated and specially processed Process-treated high-purity quartz sand is used as the arc-extinguishing medium, and the two ends of the melt are firmly electrically connected with the contacts by electric welding.

#### Selection

YCF8	1038	25A	DC1500
Model	Size	Rated current	Rated voltage
YCF8	1038: 10×38	2,3,4,5,6,8,10,15,16,20,25,30,32	DC1000V
	1451: 14×51	15,16,20,25,30,32,40,50	
	2258: 22×58	40,50,63,80	DC1500V

#### Technical data

Model	YCF8-1038	YCF8-1451	YCF8-2258
Rated current $I_n$ (A)	1,2,3,4,5,6,8,10,12,15,20,25,30,32	15,20,25,30,32,40,50	40,50,63,80
Specifications	/ X: With display H: High base	/	/
Fuse size(mm)	10×38	14×51	22×58
Rated working voltage $U_e$ (V)	DC1000		DC1500
Rated short-circuit breaking capacity (KA)	20		
Time constant(ms)	1-3ms		
Operating level	gPV		
Standards	IEC60269-6, UL248-19		

#### Test method

The agreed time and current of the fuse "gPV"

Rated current of the fuse "gPV" (A)	Agreed time (h)	Agreed current	
		$I_{nf}$	$I_f$
$I_n \leq 63$	1	1.13 $I_n$	1.45 $I_n$
$63 < I_n \leq 160$	2		
$160 < I_n \leq 400$	3		
$I_n > 400$	4		

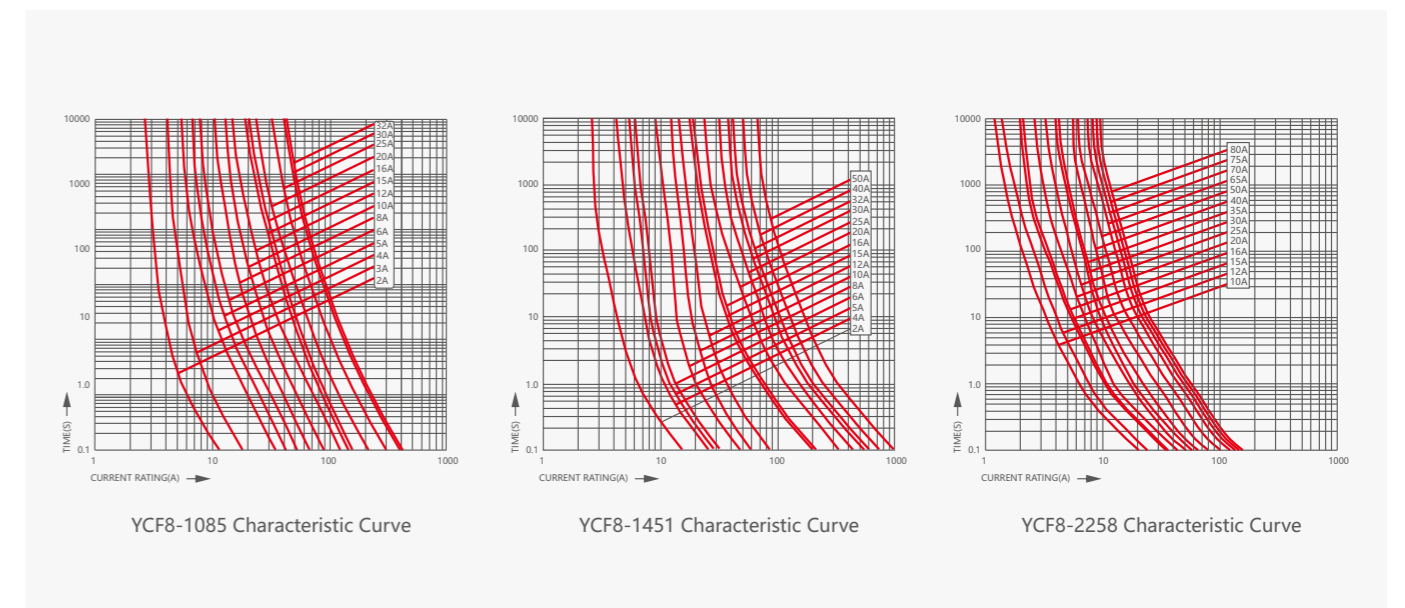
## Photovoltaic DC Components

### YCF8-□□PV Photovoltaic DC Fuse

#### Joule integral table

Model	Rated current (A)	Joule integral $I^2T(A^2S)$	
		Pre-arcing	Total
YCF8-1038	1	0.15	0.4
	2	1.2	3.3
	3	3.9	11
	4	10	27
	5	18	48
	6	31	89
	8	3.1	31
	10	7.2	68
	12	16	136
	15	24	215
	16	28	255
	20	38	392
	25	71	508
	30	102	821
	YCF8-1451	32	176
15		330	275
20		220	578
25		275	956
30		380	1160
32		405	1830
40		600	2430
YCF8-2258	50	850	3050
	40	750	3450
	50	1020	5050

#### Curve

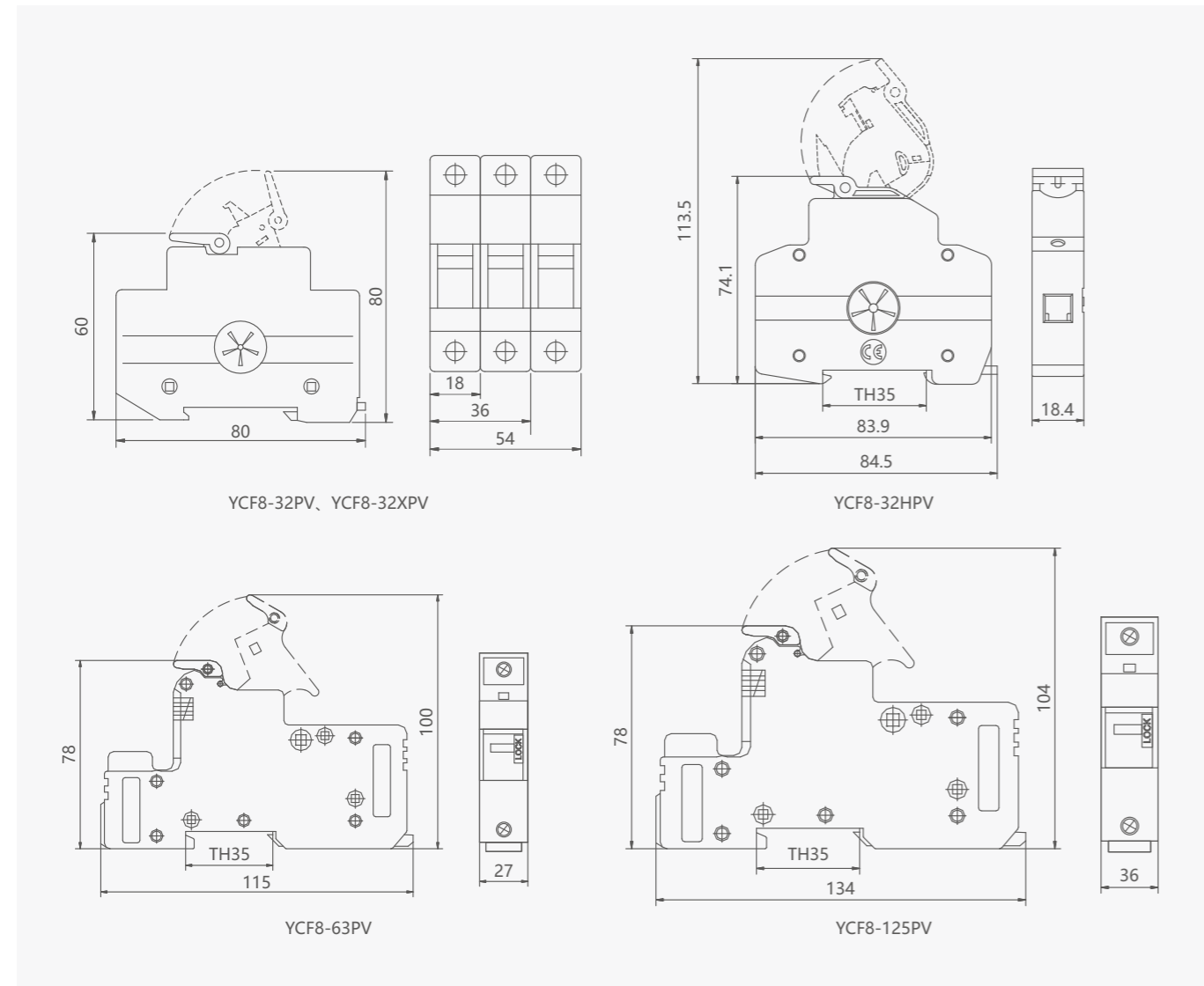




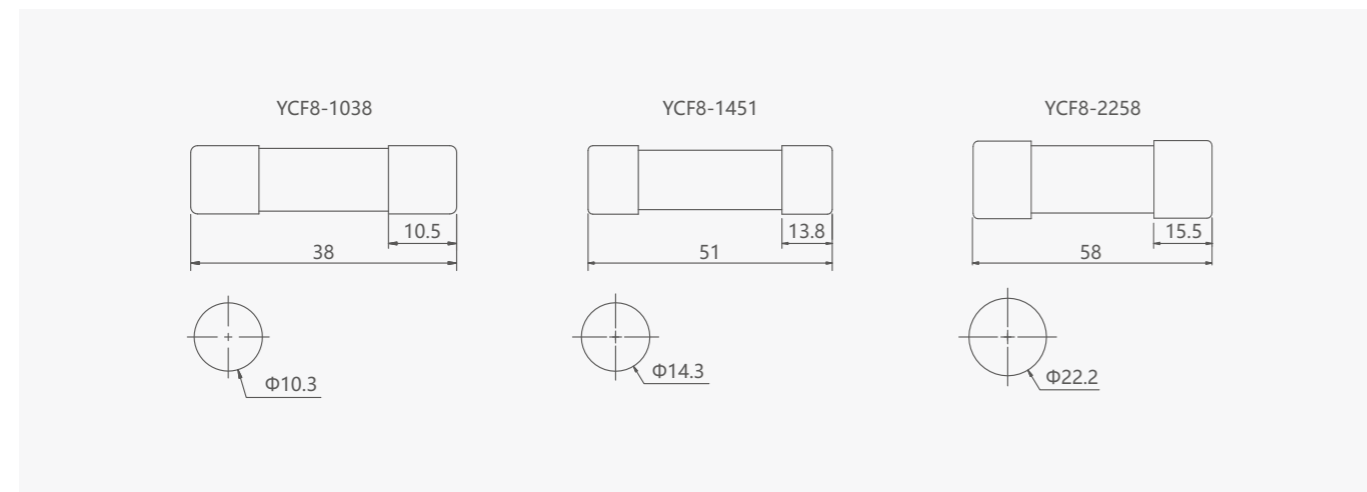
Photovoltaic DC Components  
**YCF8-□□PV Photovoltaic DC Fuse**

**Product size and installation**

Fuse(Base)



Fuse



Photovoltaic DC Components  
**YCF8-□PV Series Photovoltaic DC Surge Protective Device**



**YCS8-□ Photovoltaic DC Surge Protective Device**



**General**

YCS8-□ series is applicable to photovoltaic power generation system. When surge overvoltage occurs in the system due to lightning stroke or other reasons, the protector immediately conducts in nanosecond time to introduce the surge overvoltage to the earth, thus protecting the electrical equipment on the grid.

**Features**

- T2/T1+T2 surge protection has two types of protection, which can meet Class I (10/350 μS waveform) and Class II (8/20 μS waveform) SPD test, and voltage protection level  $U_p \leq 1.5kV$ ;
- Modular, large-capacity SPD, maximum discharge current  $I_{max}=40kA$ ;
- Pluggable module;
- Based on zinc oxide technology, it has no power frequency aftercurrent and fast response speed, up to 25ns;
- The green window indicates normal, and the red indicates a defect, and the module needs to be replaced;
- Dual thermal disconnection device provides more reliable protection;
- Remote signal contacts are optional;
- Its surge protection range can be from power system to terminal equipment;
- It is applicable to direct lightning protection and surge protection of DC systems such as PV combiner box and PV distribution cabinet.

**Selection**

YCS8	S	I+II	40	PV	2P	DC600	/
Model	Types	Test category	Maximum discharge current	Use category	Number of poles	Maximum continuous working voltage	Functions
Photovoltaic surge protective device	/: Standard type S: Upgraded type	I+II: T1+T2	40: 40KA	PV: Photovoltaic/ direct-current	2: 2P	DC600	/: Non communication R: Remote communication
					3: 3P	DC1000 DC1500 (Type S only)	
		2: 2P			DC600		
		3: 3P			Dc1000 DC1500 (Type S only)		

**YCS8-□ Photovoltaic DC Surge Protective Device**

**Technical data**

Model	YCS8			
Standards	IEC61643-31:2018; EN 50539-11:2013+A1:2014			
Test category	T1+T2		T2	
Number of poles	2P	3P	2P	3P
Maximum continuous working voltage $U_{cpv}$	600VDC	1000VDC	600VDC	1000VDC
Maximum discharge current $I_{max}(kA)$	40			
Nominal discharge current $I_n(kA)$	20			
Maximum impulse current $I_{imp}(kA)$	6.25		/	
Voltage protection level $U_p(kV)$	2.2	3.6	2.2	3.6
Response time $t_A(ns)$	$\leq 25$			
<b>Remote and indication</b>				
Working status/fault indication	Green/red			
Remote contacts	Optional			
Remote terminal switching capability	AC	250V/0.5A		
	DC	250VDC/0.1A/125VDC 0.2A/75VDC/0.5A		
Remote terminal connection capability	1.5mm <sup>2</sup>			
<b>Installation and environment</b>				
Working temperature range	-40°C-+70°C			
Allowable working humidity	5%...95%			
Air pressure/altitude	80k Pa...106k Pa/-500m....2000m			
Terminal torque	4.5Nm			
Conductor cross section(maximum)	35mm <sup>2</sup>			
Installation method	DIN35 standard din-rail			
Protection degree	IP20			
Shell material	Fire-proof level UL 94 V-0			
Thermal protection	Yes			

## Photovoltaic DC Components

### YCS8-□ Photovoltaic DC Surge Protective Device

#### Technical data

Model	YCS8-S					
Standards	IEC61643-31:2018; EN 50539-11:2013+A1:2014					
Test category	T1+T2			T2		
Number of poles	2P	3P	3P	2P	3P	3P
Maximum continuous working voltage Ucpv	600VDC	1000VDC	1500VDC	600VDC	1000VDC	1500VDC
Maximum discharge current I <sub>max</sub> (kA)	40					
Nominal discharge current I <sub>n</sub> (kA)	20					
Maximum impulse current I <sub>imp</sub> (kA)	6.25			/		
Voltage protection level U <sub>p</sub> (kV)	2.2	3.6	5.6	2.2	3.6	5.6
Response time t <sub>A</sub> (ns)	≤25					
<b>Remote and indication</b>						
Working status/fault indication	Green/red					
Remote contacts	Optional					
Remote terminal switching capability	AC	250V/0.5A				
	DC	250VDC/0.1A/125VDC 0.2A/75VDC/0.5A				
Remote terminal connection capability	1.5mm <sup>2</sup>					
<b>Installation and environment</b>						
Working temperature range	-40°C~+70°C					
Allowable working humidity	5%...95%					
Air pressure/altitude	80k Pa...106k Pa/-500m...2000m					
Terminal torque	4.5Nm					
Conductor cross section(maximum)	35mm <sup>2</sup>					
Installation method	DIN35 standard din-rail					
Protection degree	IP20					
Shell material	Fire-proof level UL 94 V-0					
Thermal protection	Yes					

#### Failure release device, Alarm release device

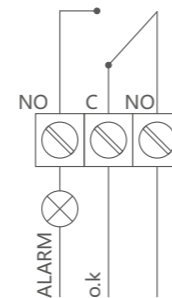
##### Failure release device

The surge protective device is equipped with a failure protection device. When the protector is broken down due to overheating, the failure protection device can automatically disconnect it from the power grid and give an indication signal.

The window displays green when the protector is normal, and red when the protector fails.

##### Alarm remote signaling device

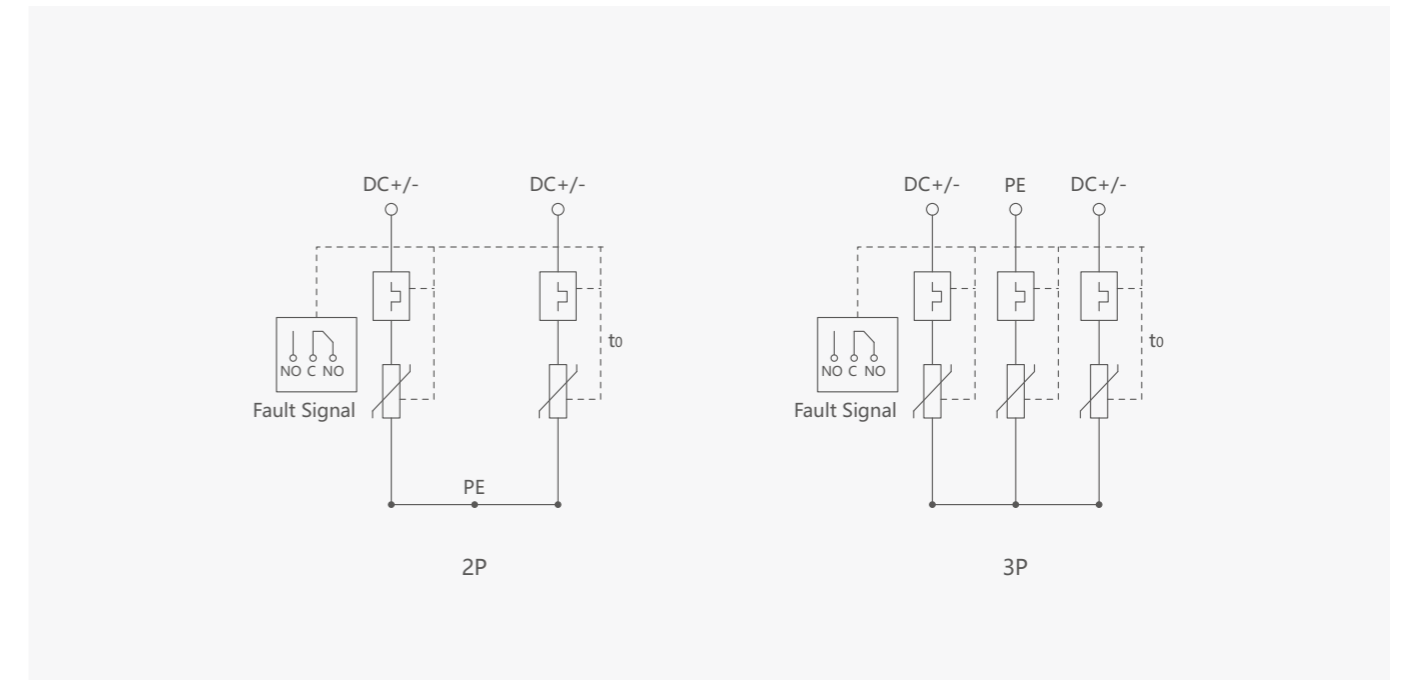
The protector can be made into a variety with remote signaling contacts. The remote signaling contacts have a set of normally open and normally closed contacts. When the protector works normally, the normally closed contacts are connected. If one or more modules of the protector fail, the contact will change from normally open to normally closed, and the normally open contact will work and send a fault message.



## Photovoltaic DC Components

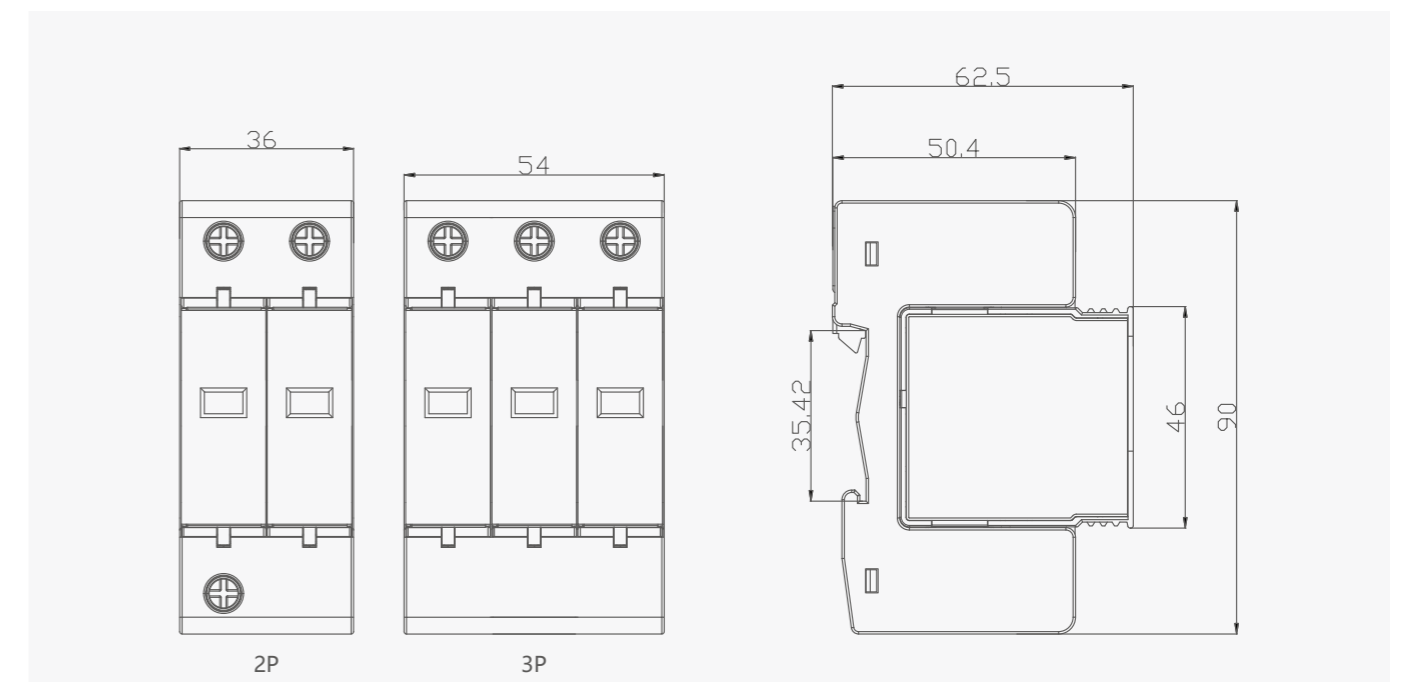
### YCS8-□ Photovoltaic DC Surge Protective Device

#### Wiring diagram



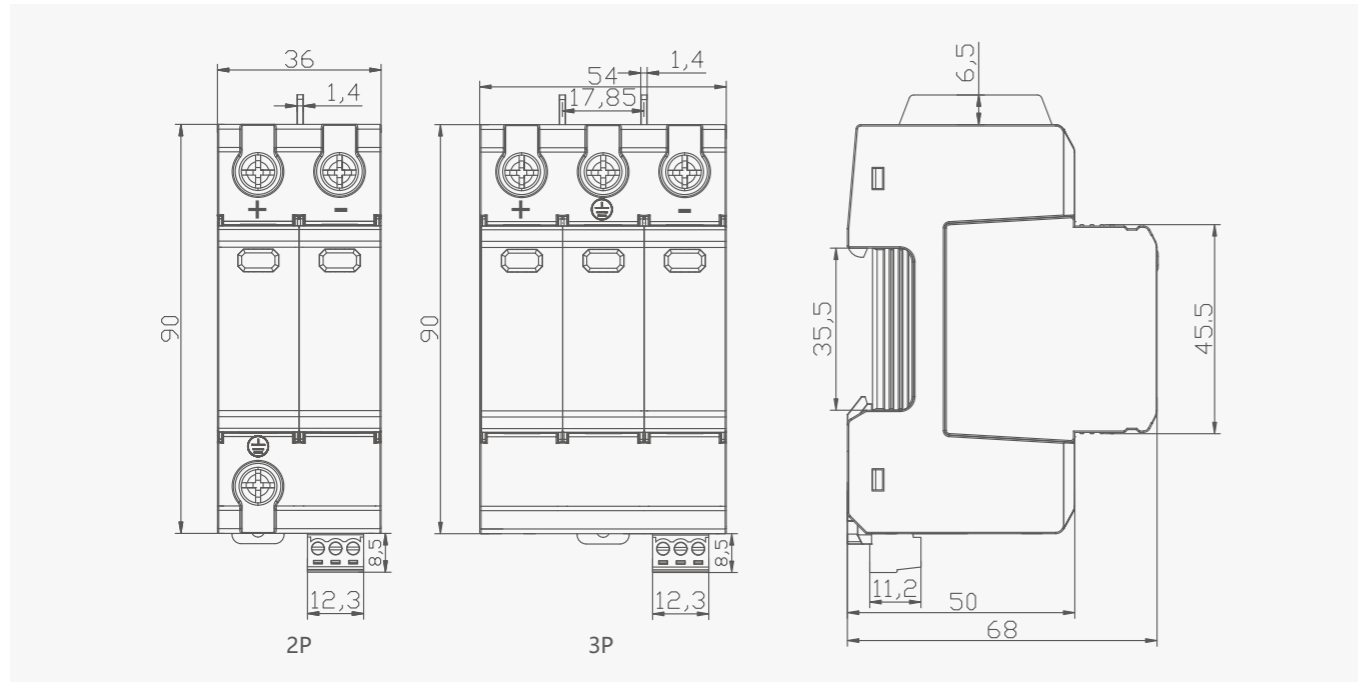
#### Overall and mounting dimensions(mm)

YCS8

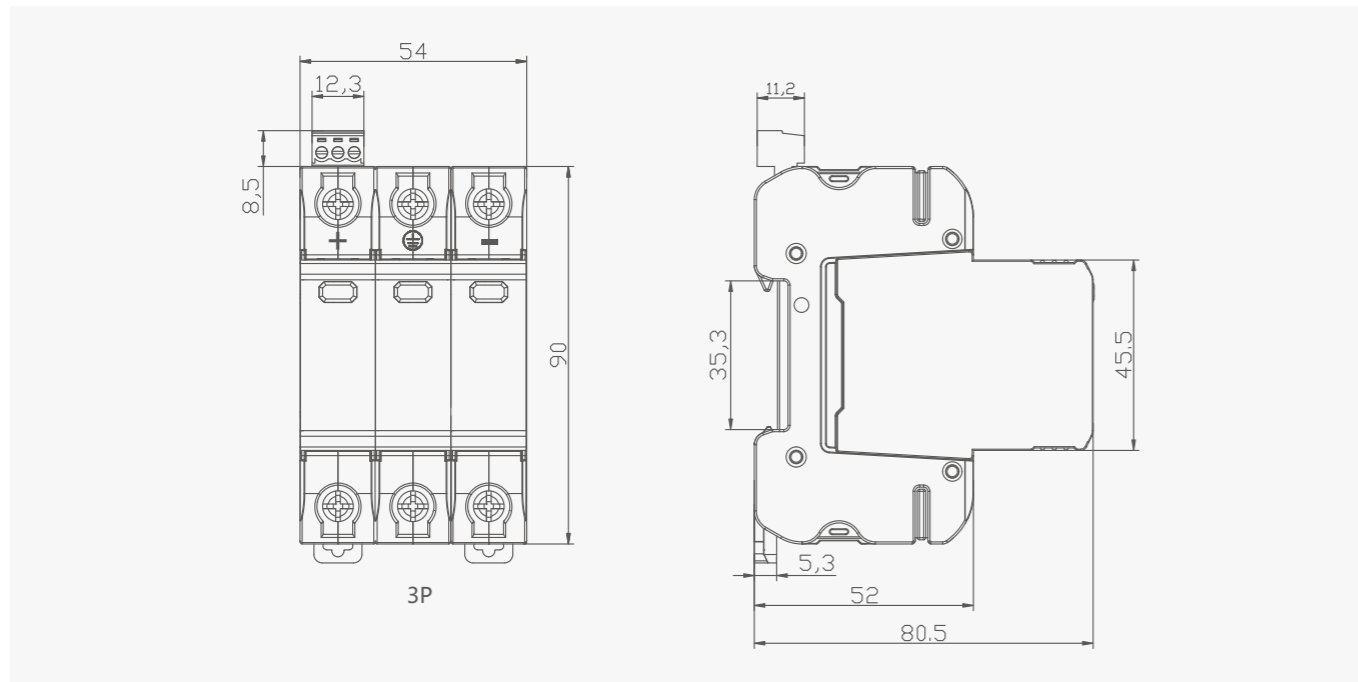


**YCS8-□ Photovoltaic DC Surge Protective Device**

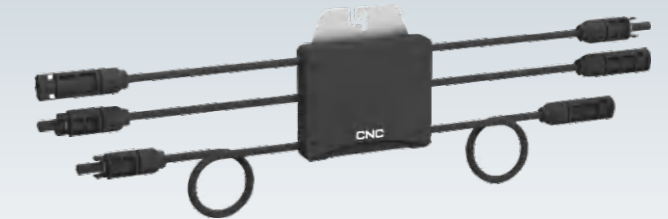
YCS8-S



YCS8-S DC1500



Photovoltaic DC Components  
**Rapid Shutdown Device**





## Photovoltaic DC Components YCRS Rapid Shutdown Device



### General

The YCRS series rapid shutdown device can shut down one or two string modules at maximum, with a maximum circuit current of 55A and a maximum circuit voltage of 1500VDC. It is made of PC+ABS material and has an IP66 protection rating. Multiple interface types are available, including push-through holes, pressure covers, and MC4 terminals. The internal isolation switch is certified by TUV.CE.CB.SAA, and the device is equipped with a waterproof and ventilated valve design to prevent condensation inside the housing. An advanced temperature sensor is used to detect the highest temperature inside the housing in real-time, and the switch will automatically cut off when the internal temperature exceeds 70 degrees Celsius. This device is suitable for residential, industrial, and commercial photovoltaic systems.

Certification: CE

### Cause

Why do photovoltaic power generation systems need to be equipped with fast shutdown devices? The use of rapid shutdown devices in photovoltaic (PV) systems has become increasingly important due to concerns about safety in recent years. PV system accidents often result in fires, and 80% of these fires are caused by DC voltage arcing. Additionally, because many distributed PV systems are installed in densely populated areas or near industrial facilities, any accidents or failures can lead to significant losses of life and property. Therefore, many countries require that PV systems be equipped with component-level rapid shutdown devices in order to eliminate DC voltage in emergency situations and protect the safety of firefighting and maintenance personnel, as well as to ensure the overall safety of the system. In the event of a fire or other emergency, maintenance personnel can quickly disconnect each component by closing the YCRS device and eliminating the DC voltage, thus protecting the safety of firefighting and maintenance personnel.

### Selection

YCRS	50	2	MC4
Enterprise code	Rated current	Wiring mode	Joint type
Firefighter safety switch	13: 13A 20: 20A 25: 25A 40: 40A 50: 50A	2: 2P 4: 4P 4B: 4B 6: 6P 8: 8P 10: 10P 12: 12P 14: 14P 16: 16P 18: 18P 20: 20P	MC4: MC4 joint /: No

Note: RP Rapid Shutdown Switch/Panel

## Photovoltaic DC Components YCRS Rapid Shutdown Device

### Technical data

Model	YCRS-2/4P/4B	YCRS-6/8	YCRS-10	YCRS-12~20 Large
String voltage(VDC)	300~1500	300~1500	300~1500	300~1500
String current A	9~55	9~55	9~55	9~55
Return circuit	1/2	3/4/5	3/4/5	6/8/10
Isolation switch circuit connection method	2/4/4B	6/8	10	12/16/20
Working voltage	100Vac-270Vac	100Vac-270Vac	100Vac-270Vac	100Vac-270Vac
Rated voltage	230Vac	230Vac	230Vac	230Vac
Rated current	30mA	30mA	30mA	60mA
Starting (loading) current	100mA(AVG)	100mA(AVG)	100mA(AVG)	200mA(AVG)
Action current	300mA(Max)	300mA(Max)	300mA(Max)	600mA(Max)
Contact action conditions	24Vdc-300mA(Max)	24Vdc-300mA(Max)	24Vdc-300mA(Max)	24Vdc-300mA(Max)
Working temperature	-20°C-+50°C	-20°C-+50°C	-20°C-+50°C	-20°C-+50°C
Maximum temperature before automatic shutdown	+70°C	+70°C	+70°C	+70°C
Storage temperature	-40°C-+85°C	-40°C-+85°C	-40°C-+85°C	-40°C-+85°C
Protection degree	IP66	IP66	IP66	IP66
Overcurrent protection	II	II	II	II
Authentication	CE	CE	CE	CE
Standards	EN60947-1&3	EN60947-1&3	EN60947-1&3	EN60947-1&3
Mechanical life	10000	10000	10000	10000
Load operands(PV1)	>1500	>1500	>1500	>1500

## Photovoltaic DC Components YCRS Rapid Shutdown Device

### Current/Voltage category parameter table(DC-PV1)

Data of ERS refer to built-in DC isolators. Data according to IEC60947-3(ed.3.2):2015,UL508i.Utilization category DC-PV1.					Pole number	Circuit	Model
600V	800V	1000V	1200V	1500V			
32	26	13	10	5	2	1	YCRS-13 2
40	30	20	12	6	2	1	YCRS-20 2
55	40	25	15	8	2	1	YCRS-25 2
/	50	40	30	20	2	1	YCRS-40 2
/	55	50	40	30	2	1	YCRS-50 2
32	26	13	10	5	4	2	YCRS-13 4
40	30	20	12	6	4	2	YCRS-20 4
55	40	25	15	8	4	2	YCRS-25 4
/	50	40	30	20	4	2	YCRS-40 4
/	55	50	40	30	4	2	YCRS-50 4
32	26	13	10	5	4	1	YCRS-13 4B
40	40	40	30	20	4	1	YCRS-20 4B
/	/	55	40	30	4	1	YCRS-25 4B
/	/	/	/	45	4	1	YCRS-40 4B
/	/	/	/	50	4	1	YCRS-50 4B
32	26	13	10	5	6	3	YCRS-13 6
40	30	20	12	6	6	3	YCRS-20 6
55	45	25	15	8	6	3	YCRS-25 6
/	50	40	30	20	6	3	YCRS-40 6
/	55	50	40	30	6	3	YCRS-50 6
32	26	13	10	5	8	4	YCRS-13 8
40	30	20	12	6	8	4	YCRS-20 8
55	40	25	15	8	8	4	YCRS-25 8
/	50	40	30	20	8	4	YCRS-40 8
/	55	50	40	30	8	4	YCRS-50 8
32	26	13	10	5	10	5	YCRS-13 10
40	30	20	12	6	10	5	YCRS-20 10
55	40	25	15	8	10	5	YCRS-25 10
/	50	40	30	20	10	5	YCRS-40 10
/	55	50	40	30	10	5	YCRS-50 10
32	26	13	10	5	12	6	YCRS-13 12
40	30	20	12	6	12	6	YCRS-20 12
55	40	25	15	8	12	6	YCRS-25 12
/	50	40	30	20	12	6	YCRS-40 12
/	55	50	40	30	12	6	YCRS-50 12
32	26	13	10	5	14	6	YCRS-13 14
40	30	20	12	6	14	6	YCRS-20 14
55	40	25	15	8	14	6	YCRS-25 14
/	50	40	30	20	14	6	YCRS-40 14
/	55	50	40	30	14	6	YCRS-50 14

Note: RP Rapid Shutdown Switch/Panel

## Photovoltaic DC Components YCRS Rapid Shutdown Device

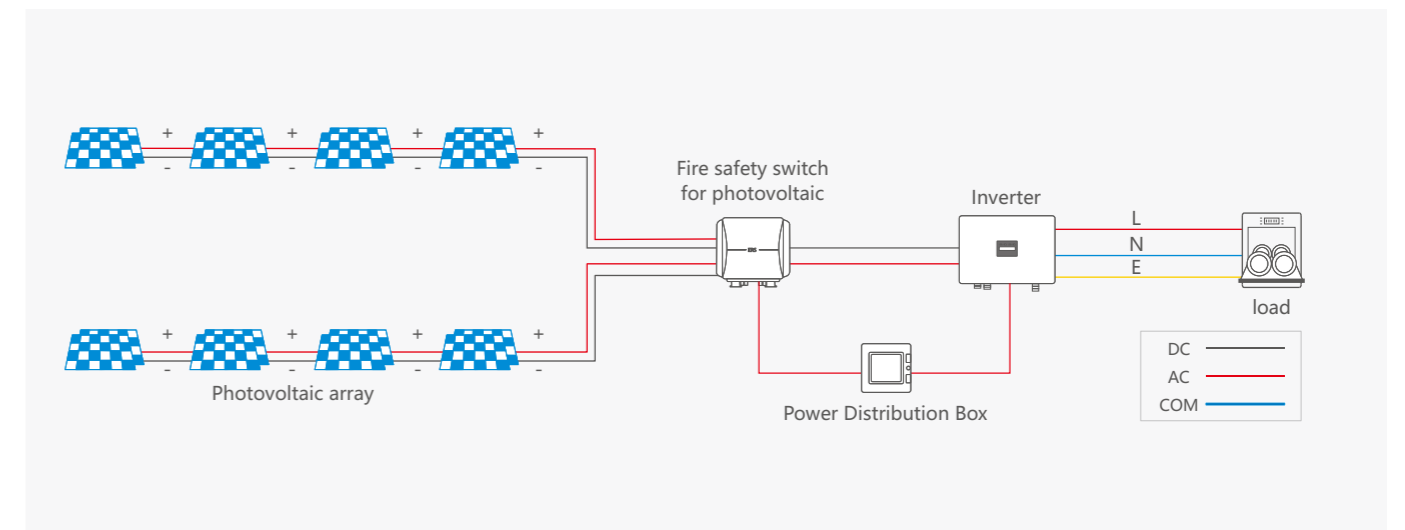
### Current/Voltage category parameter table(DC-PV1)

Data of ERS refer to built-in DC isolators. Data according to IEC60947-3(ed.3.2):2015,UL508i.Utilization category DC-PV1.					Pole number	Circuit	Model
600V	800V	1000V	1200V	1500V			
32	26	13	10	5	16	8	YCRS-13 16
40	30	20	12	6	16	8	YCRS-20 16
55	40	25	15	8	16	8	YCRS-25 16
/	50	40	30	20	16	8	YCRS-40 16
/	55	50	40	30	16	8	YCRS-50 16
32	26	13	10	5	18	8	YCRS-13 18
40	30	20	12	6	18	8	YCRS-20 18
55	40	25	15	8	18	8	YCRS-25 18
/	50	40	30	20	18	8	YCRS-40 18
/	55	50	40	30	18	8	YCRS-50 18
32	26	13	10	5	20	10	YCRS-13 20
40	30	20	12	6	20	10	YCRS-20 20
55	40	25	15	8	20	10	YCRS-25 20
/	50	40	30	20	20	10	YCRS-40 20
/	55	50	40	30	20	10	YCRS-50 20

Note: RP Rapid Shutdown Switch/Panel

### Sketch map

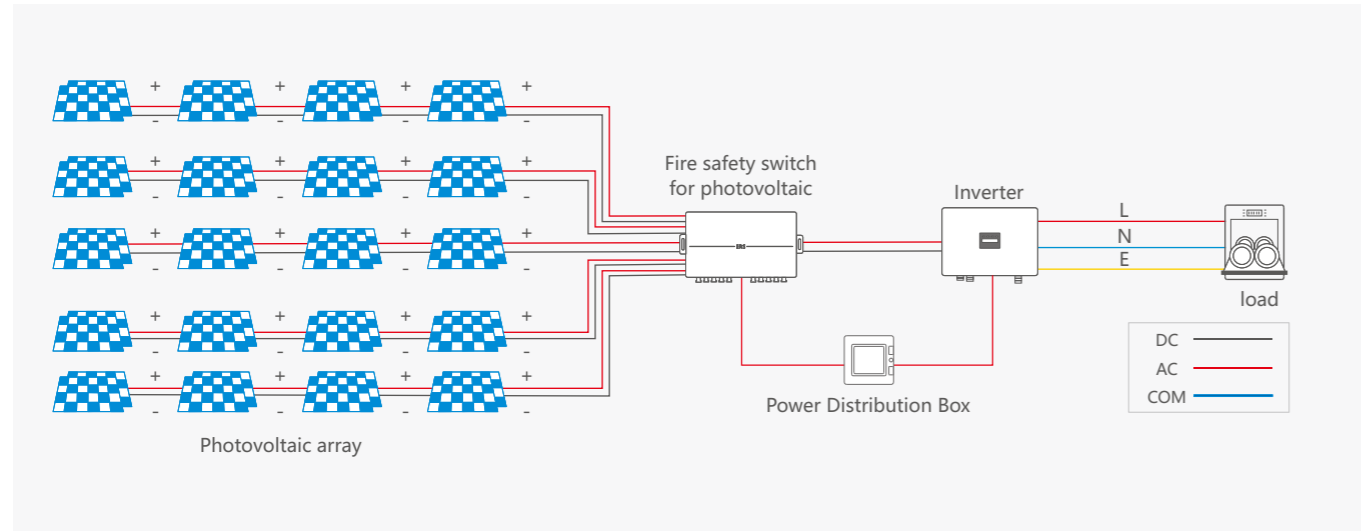
YCRS-2/4P/4B series



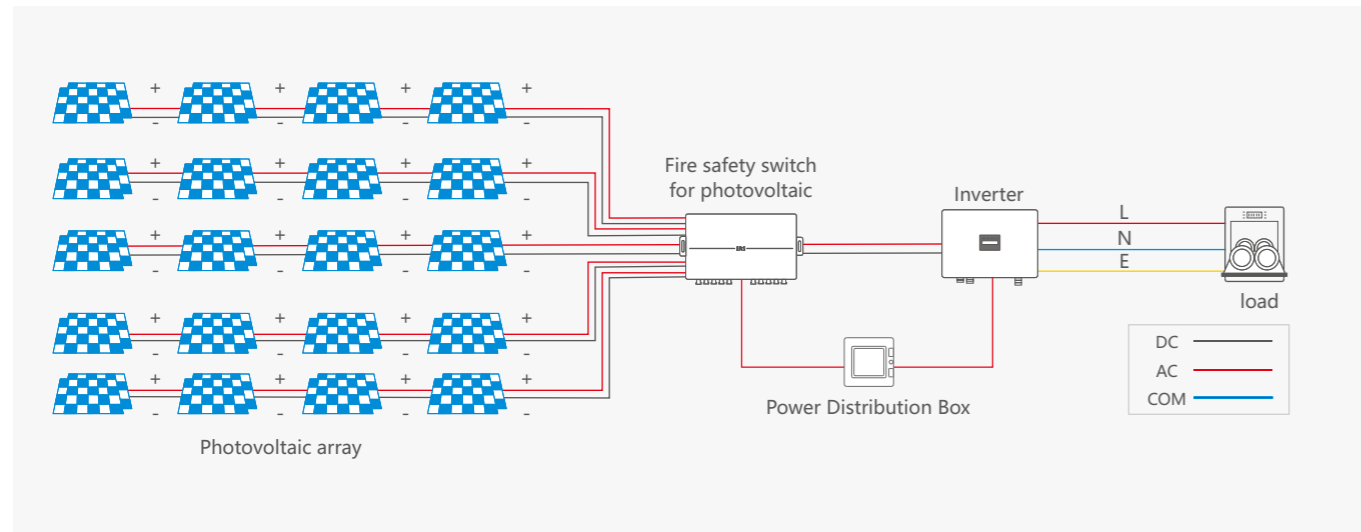
# Photovoltaic DC Components

## YCRS Rapid Shutdown Device

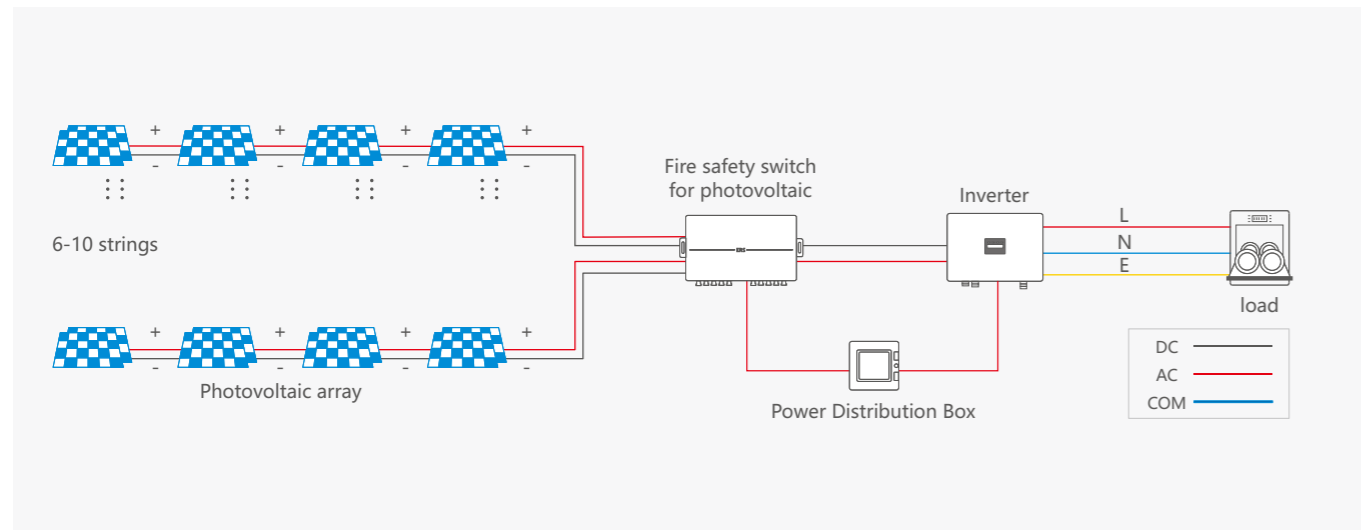
YCRS-2/4P/4B series



YCRS-10 series



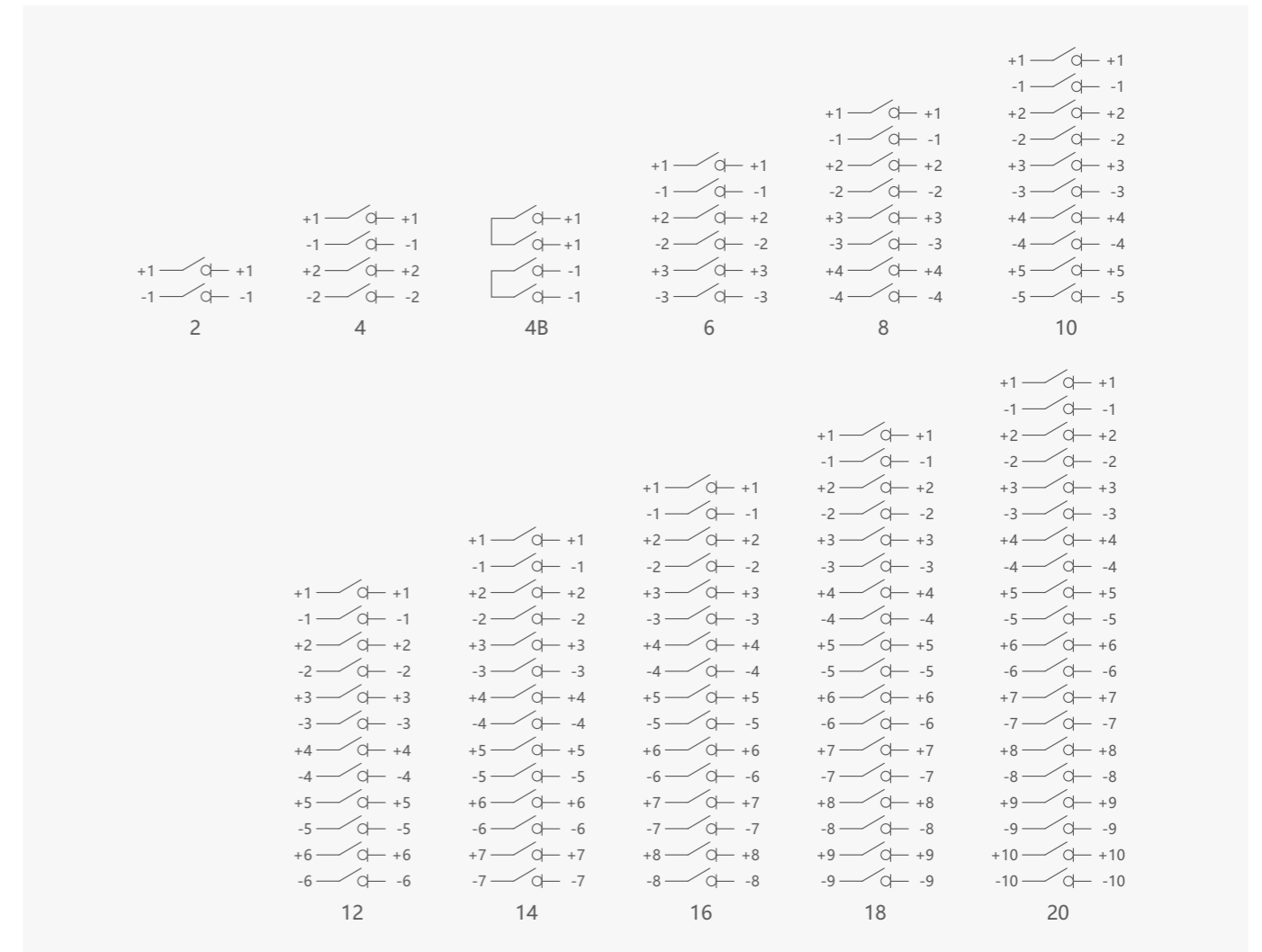
YCRS-12~20 series



# Photovoltaic DC Components

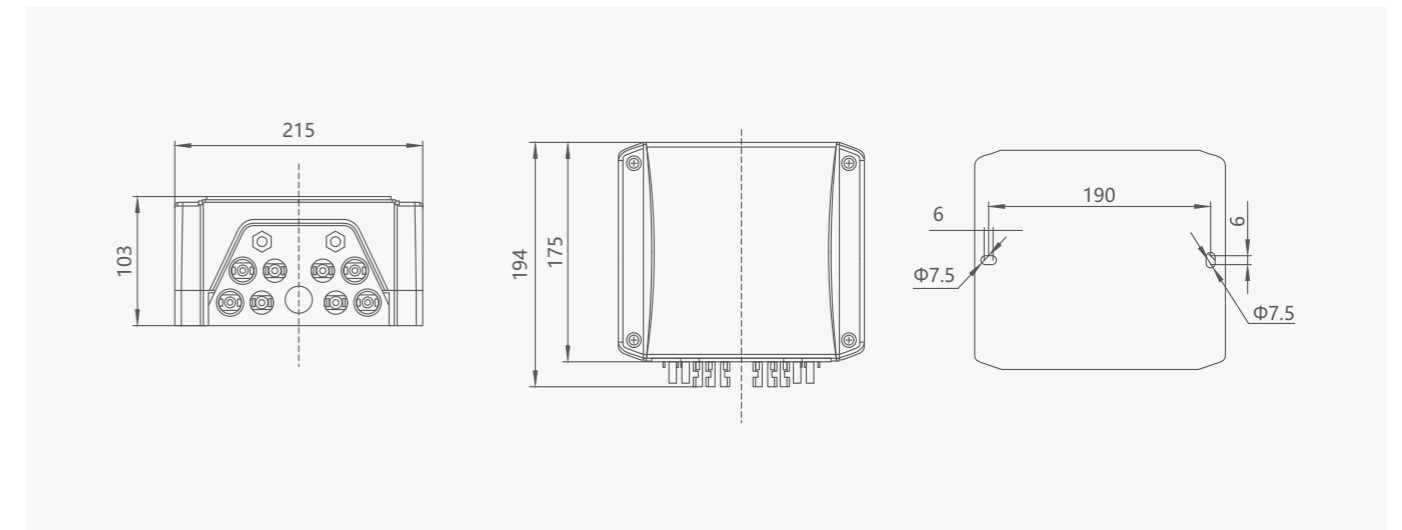
## YCRS Rapid Shutdown Device

### Wiring Diagram



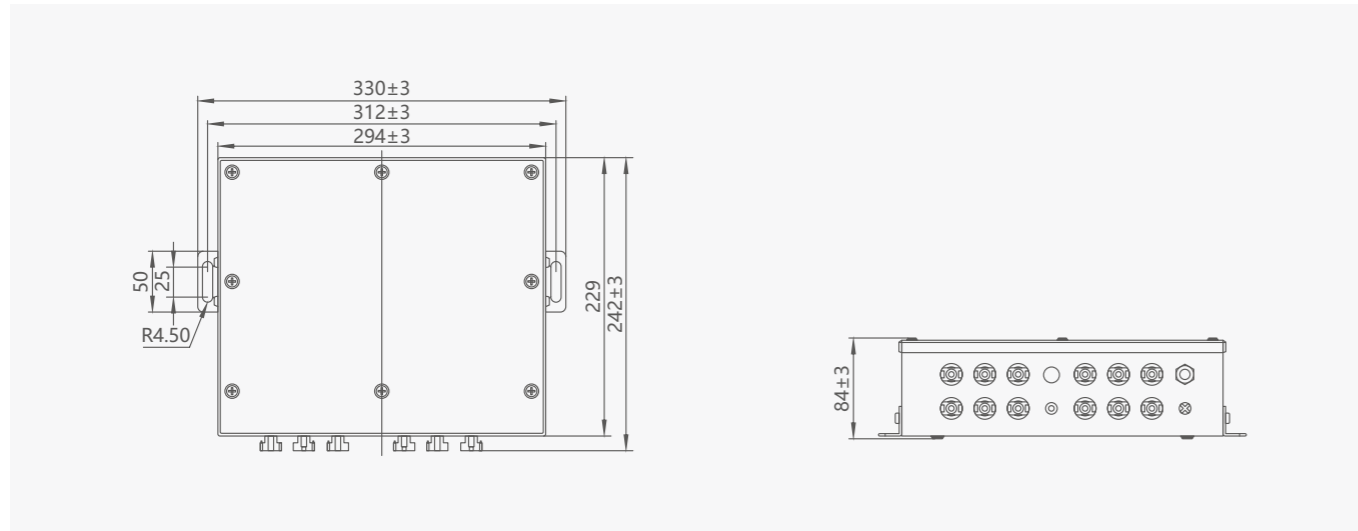
### Overall and mounting dimensions(mm)

2P/4P

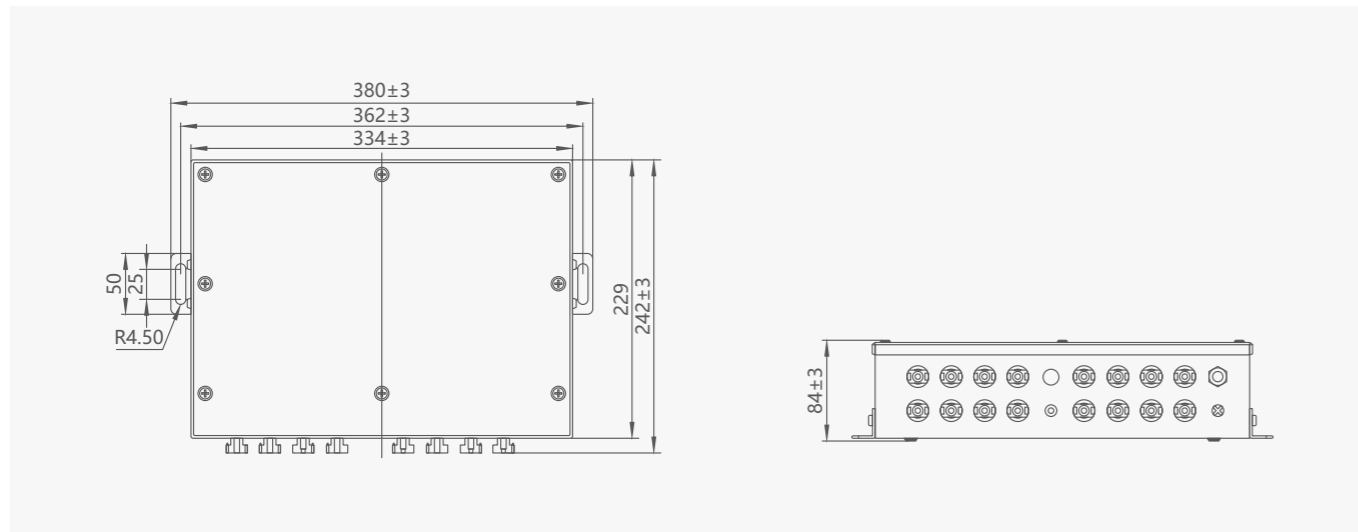


Photovoltaic DC Components  
**YCRS Rapid Shutdown Device**

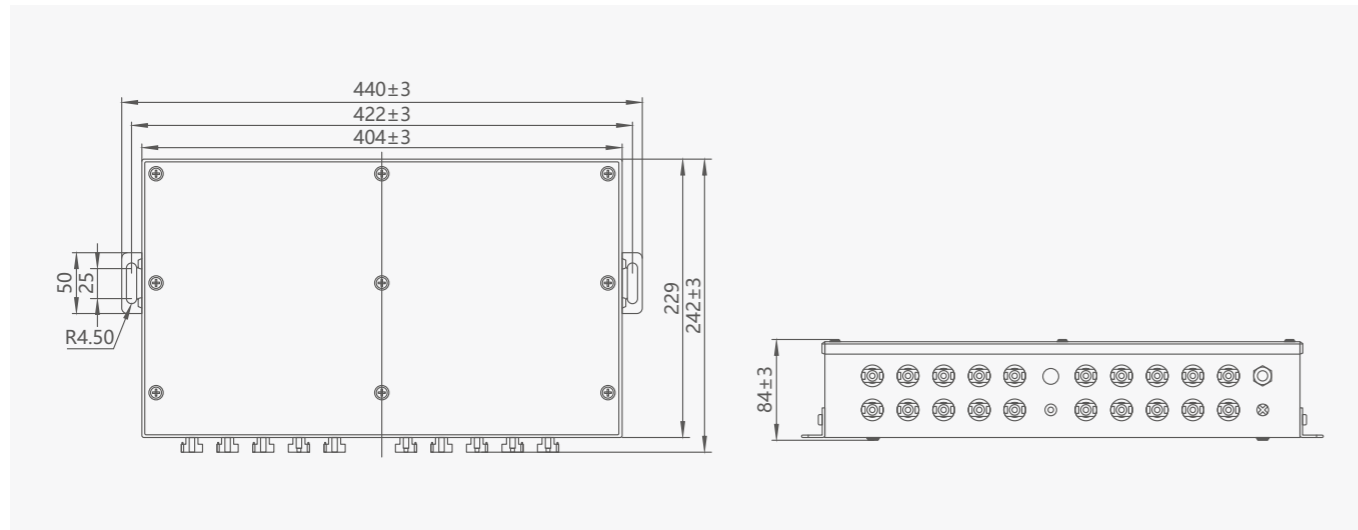
6P



8P

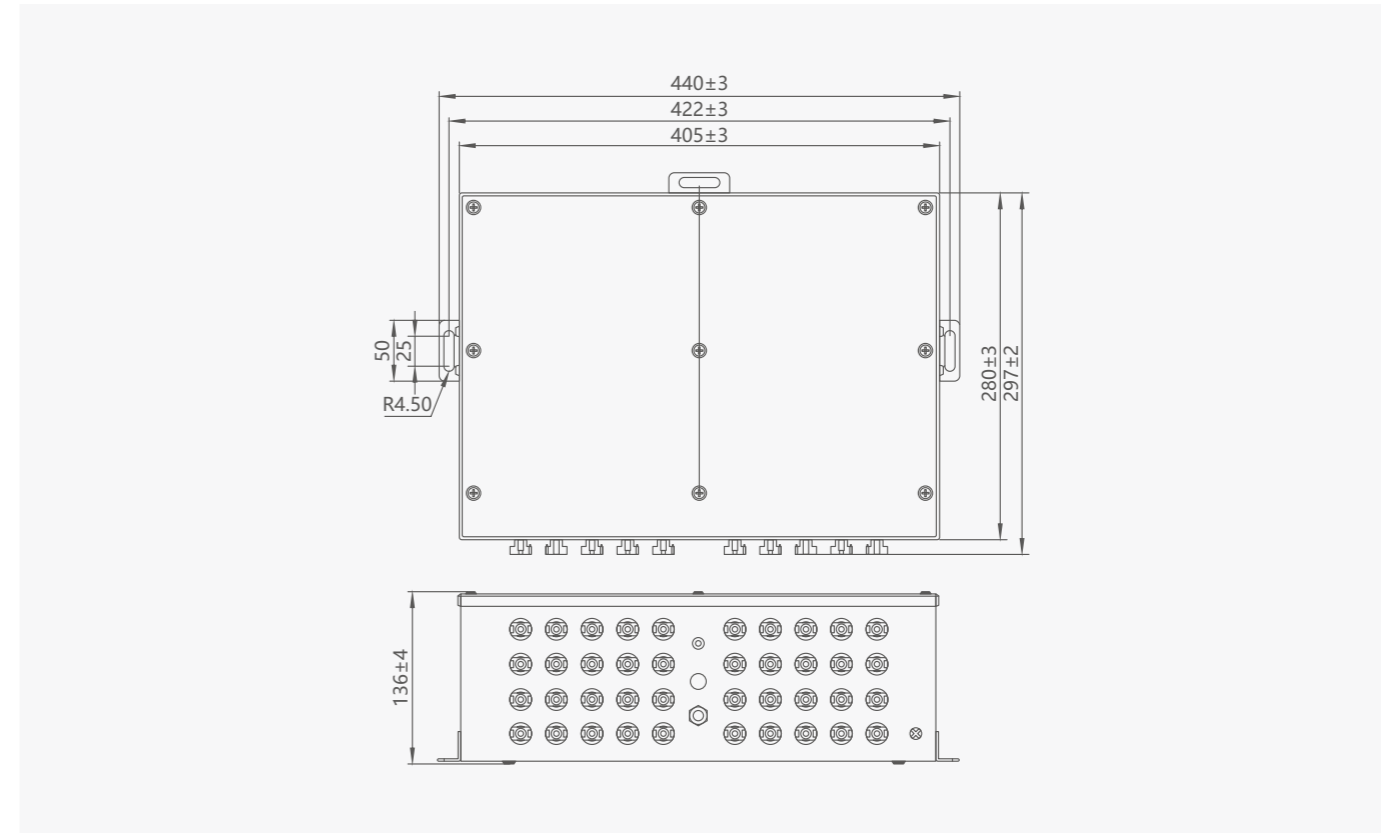


10P

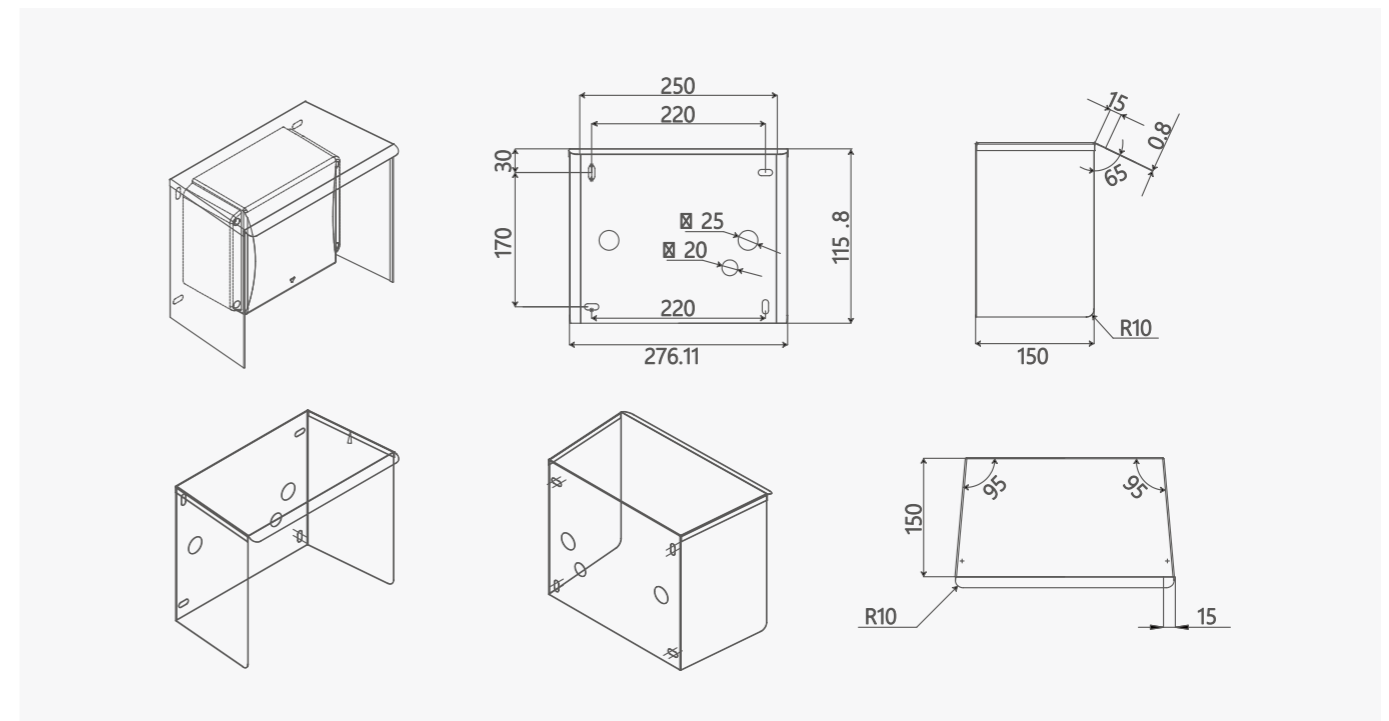


Photovoltaic DC Components  
**YCRS Rapid Shutdown Device**

12~20P



Note: the fire safety switch cannot be installed in the place with direct sunlight, and the sun visor is recommended.



The specific specifications are subject to the specific product packaging.



## Photovoltaic DC Components

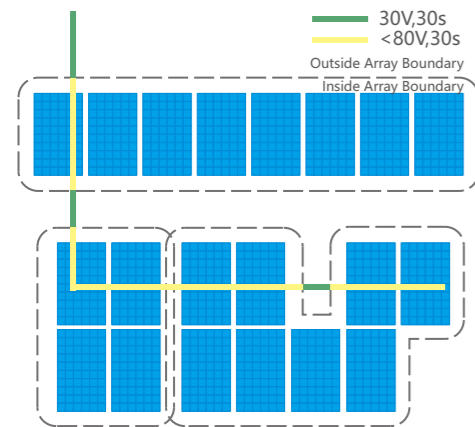
### YCRP-□C Rapid Shutdown Device



#### General

The component-level rapid shutdown PLC control box is a device that cooperates with the component-level fire rapid shutdown actuator to form the photovoltaic DC side quick shutdown system, and the device conforms to the American National Electrical Code NEC2017&NEC2020 690.12 for rapid shutdown of photovoltaic power stations. The specification requires that the photovoltaic system on all buildings, and the circuit beyond 1 foot (305 mm) from the photovoltaic module array, must drop to below 30 V within 30 seconds after the rapid shutdown start; The circuit within 1 foot (305 mm) from the PV module array must drop to below 80V within 30 seconds after the fast shutdown start. The circuit within 1 foot (305 mm) from the PV module array must drop to below 80V within 30 seconds after the rapid shutdown start.

The component-level fire rapid shutdown system has automatic power off and reclosing functions. On the basis of meeting the rapid shutdown function requirements of NEC2017&NEC2020 690.12, it can maximize the power generation of the photovoltaic power generation system and improve the power generation rate. When the mains power is normal and there is no emergency stop demand, the module level fast shutdown PLC control box will send a closing command to the fast shutdown actuator through the photovoltaic power line to connect each photovoltaic panel; When the mains power is cut off or the emergency stop is started, the component-level rapid shutdown PLC control box will send the disconnection command to the rapid shutdown actuator through the photovoltaic power line to disconnect each photovoltaic panel.



#### Features

- Meet the requirements of NEC2017&NEC2020 690.12;
- MC4 quick connection terminal quick installation without opening the cover;
- Integrated design, without additional distribution box;
- Wide operating temperature adaptability -40~+85 °C;
- Compatible with SUNSPEC rapid shutdown protocol;
- Support PSRSS rapid shutdown protocol.

#### Selection

YCRP	-	15	C	+	S
Model		Rated current	Usage		DC input
Rapid shutdown device		15: 15A 25: 25A	C: Control box (Use with YCRP)		S: Single D: Dual

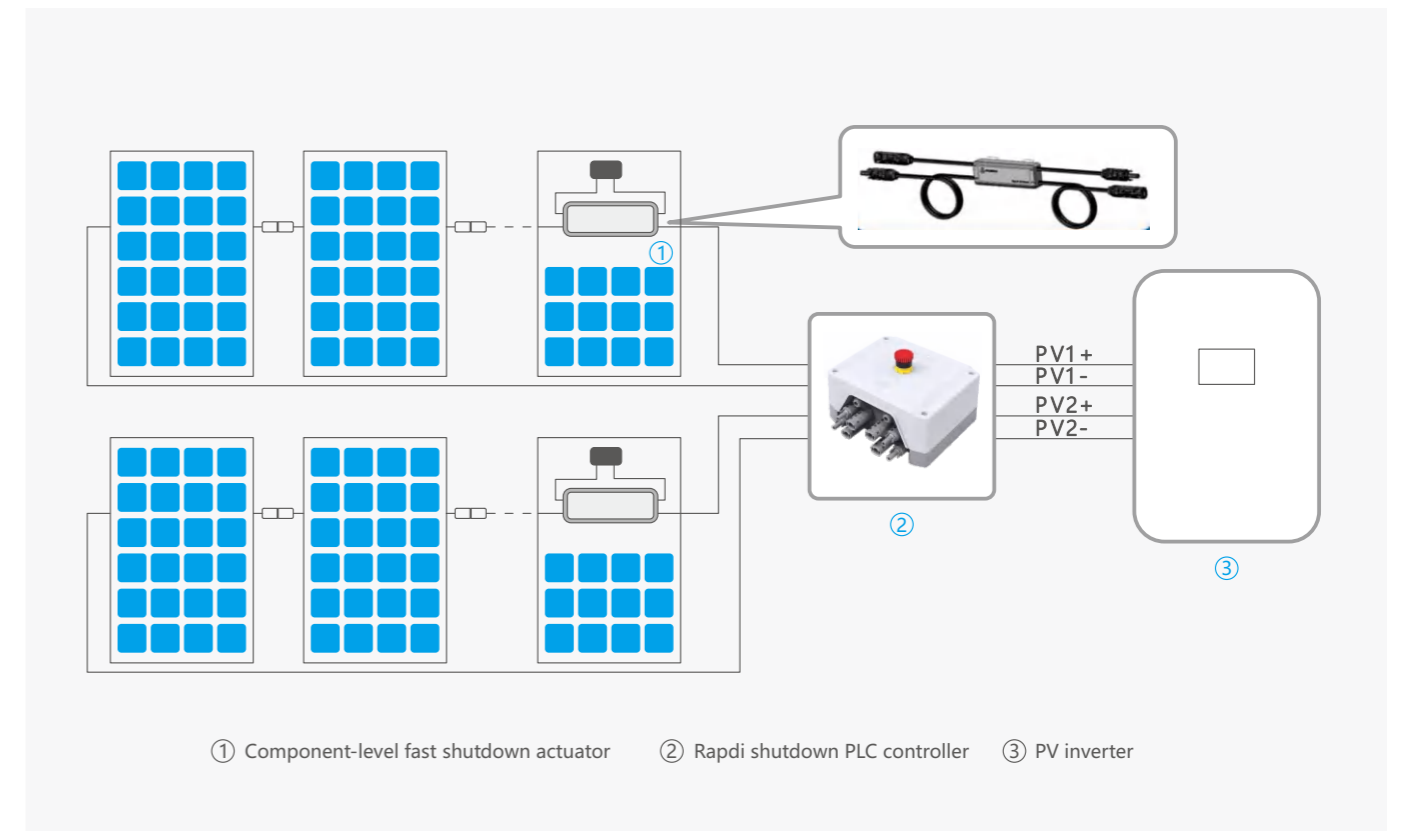
## Photovoltaic DC Components

### YCRP-□C Rapid Shutdown Device

#### Technical data

Model	YCRP-□C-S	YCRP-□C-D
Maximum input current(A)	15、25	
Input voltage range(V)	85~275	
Maximum system voltage(V)	1500	
Working temperature(°C)	-40~85	
Protection degree	IP68	
Maximum number of PV panel strings supported	1	2
Maximum number of PV panels supported per string	30	
Connection terminal type	MC4	
Communication type	PLC	
Over-temperature protection function	Yes	

#### Sketch map



## Photovoltaic DC Components

### YCRP Rapid Shutdown Switch




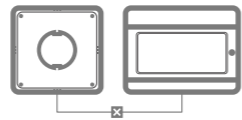

#### General

Rapid shutdown switch YCRP series is a cost-effective rapid shutdown device; through one-button operation, the DC high voltage is limited to the roof or near the components, and in case of fire and other emergency situations, the personal safety of rescuers is protected to a certain extent to avoid electric shock accidents.

#### Features

- Shutdown when ambient temperature exceeds 85°C;
- Ultra-thin size perfectly matches the module;
- Flame retardant grade: UL94-V0;
- Protection grade: IP68;
- Meet UL standard and SUNSPEC protocol;
- PLC control optional;
- Hook design, convenient and simple installation, saving labor costs.

#### Shutdown mode

Automatic Shutdown	Manual Shutdown	Manual Shutdown
 <p>Automatically shutdown the DC power of panels when detecting temperature of the area is higher than 85°C.</p>	 <p>In an emergency, firefighters or homeowners can manually turn off the AC power of the distribution box</p>	 <p>In an emergency, it can be shut down manually through the Panel Level Rapid Shutdown Controller Box</p>

#### Selection

YCRP	-	15	P	S	+	S
Model		Rated current	Communication method	DC input		DC input
Rapid shutdown device		15: 15A 21: 21A	P: PLC W: Wifi	S: Single D: Dual		S: Screw type C: Clip type

Note: RP Rapid Shutdown Switch/Panel

## Photovoltaic DC Components

### YCRP Rapid Shutdown Switch

#### Product parameters

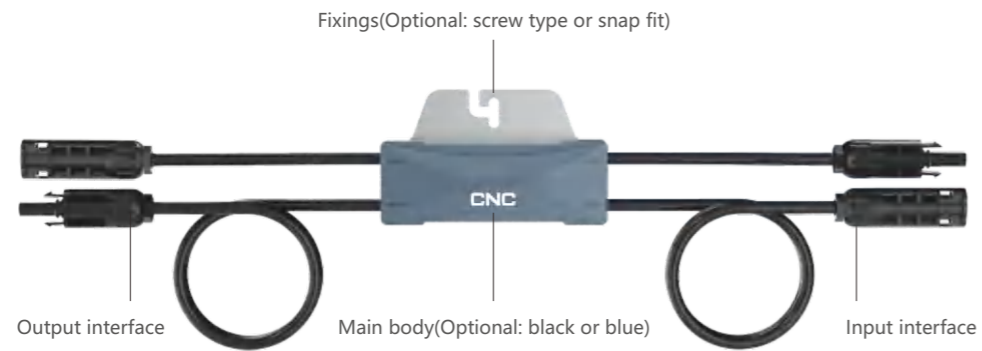
Model	YCRP-□□ S-□	YCRP-□□ D-□
Maximum allowable input voltage	80V	160V
Maximum output voltage	80V	160V
Number of connectable panels	1	2
Maximum input current	15A/21A	
Maximum short-circuit current	15A/21A	
Maximum system voltage	1000V(1500V optional)	
Working temperature	-30°C~+80°C(Automatic shutdown when the temperature exceeds 85 °C)	
Operating ambient temperature	-30°C~+80°C	
Supply voltage	PV panel	
Protection degree	IP68	
Fire rating	UL94-V0	
Humidity	0%~90%(20°C)	
Interface	MC4	
Warranty	10 Years	
Panel cable length	280±10mm	
String cable length	1280±10mm	
Communication	PLC	
Standards	UL 1741/NEC 2017 690.12	

# Photovoltaic DC Components

## YCRP Rapid Shutdown Switch

### Product details

S(Single type)



Main body colors		Product back	
Optional: ■ blue	Optional: ■ black	Optional: screw type	Optional: clip type

D(Dual type)



Main body colors		Product back	
Optional: ■ blue	Optional: ■ black	Optional: screw type	Optional: clip type

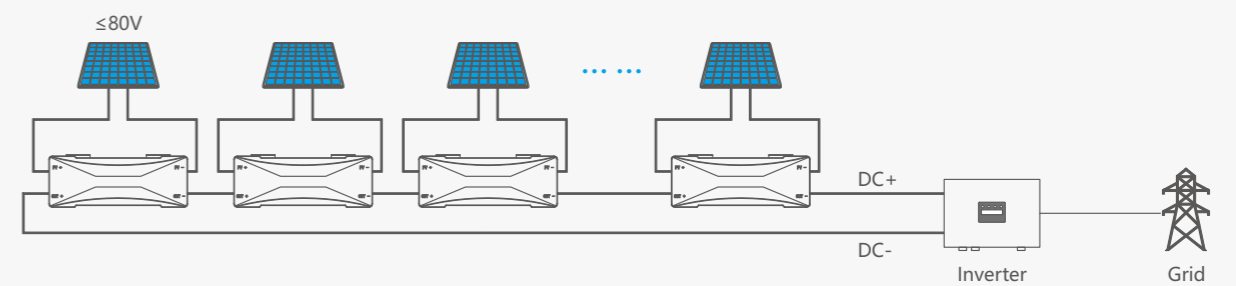
# Photovoltaic DC Components

## YCRP Rapid Shutdown Switch

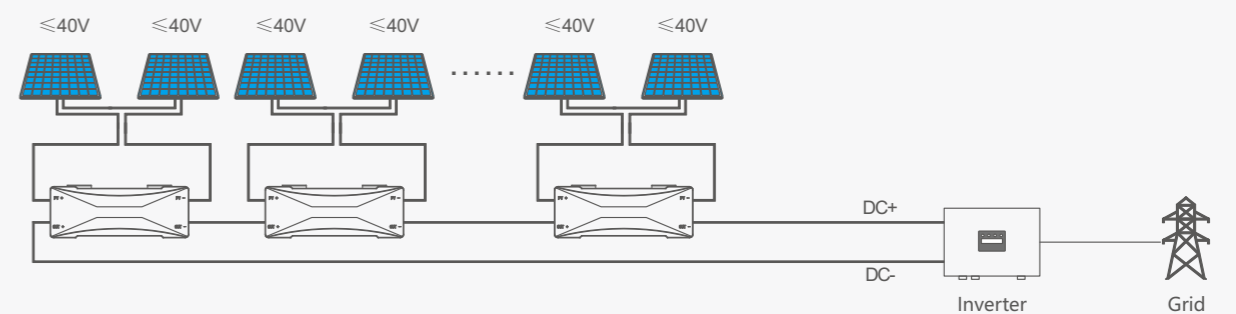
### Wiring diagram

The inverter contains SunSpec

When the open-circuit voltage of PV panel is below 80V.

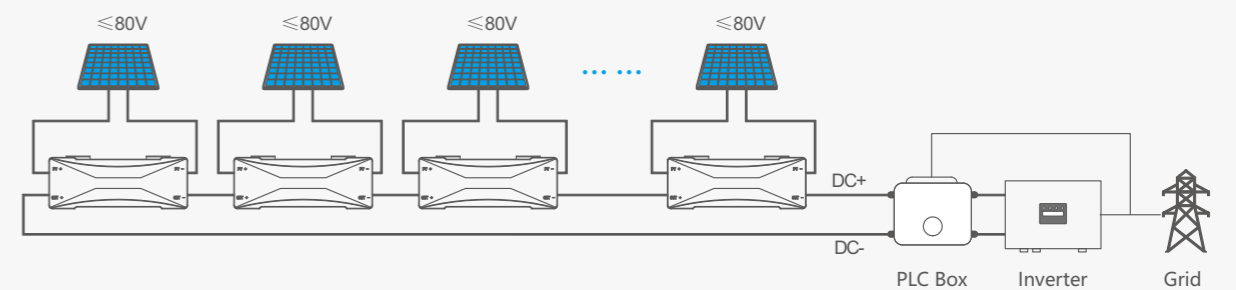


When the open-circuit voltage of PV panel is below 40V.

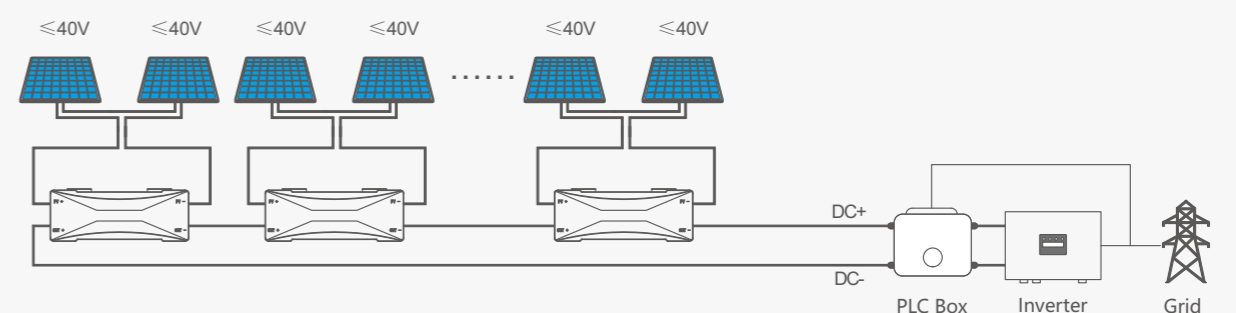


The inverter contains SunSpec

When the open-circuit voltage of PV panel is below 80V.

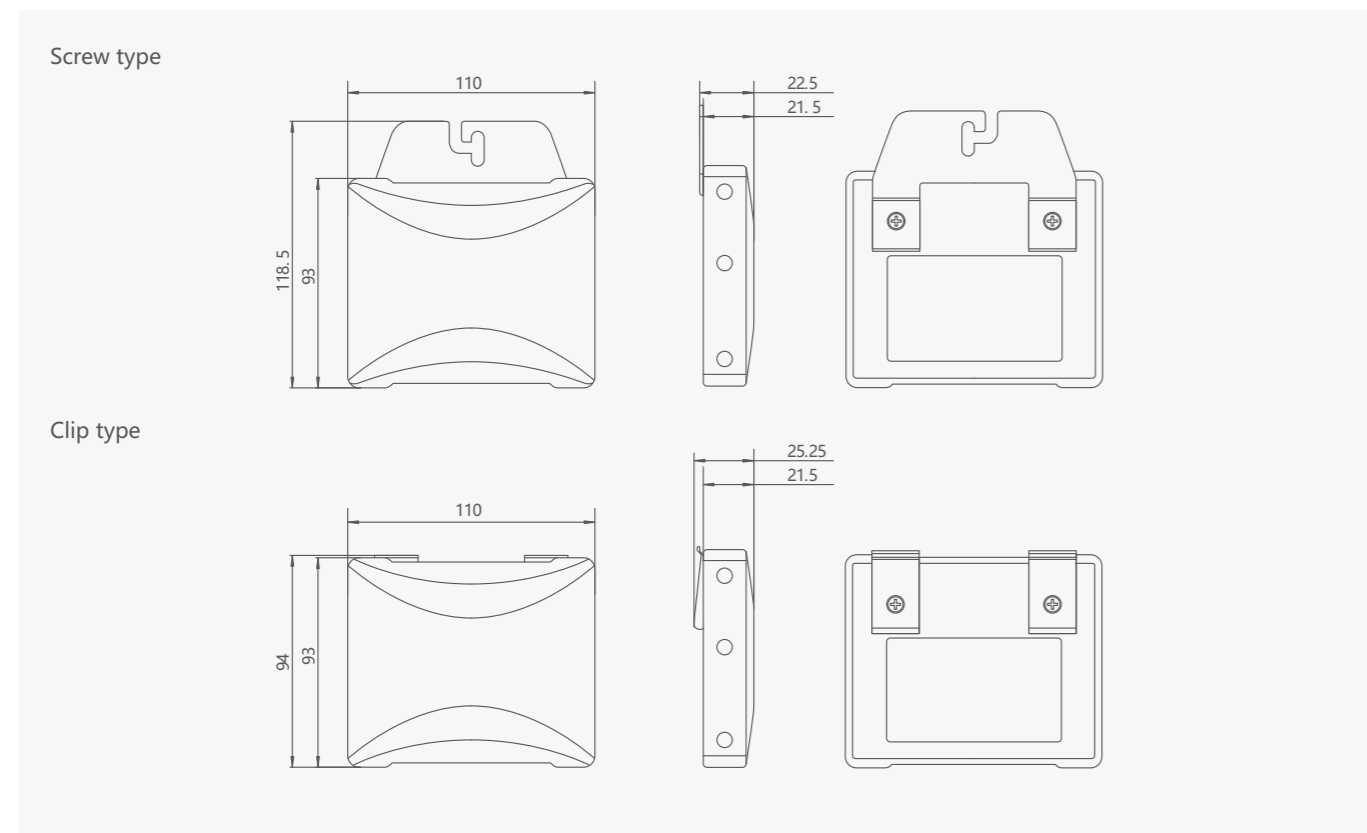
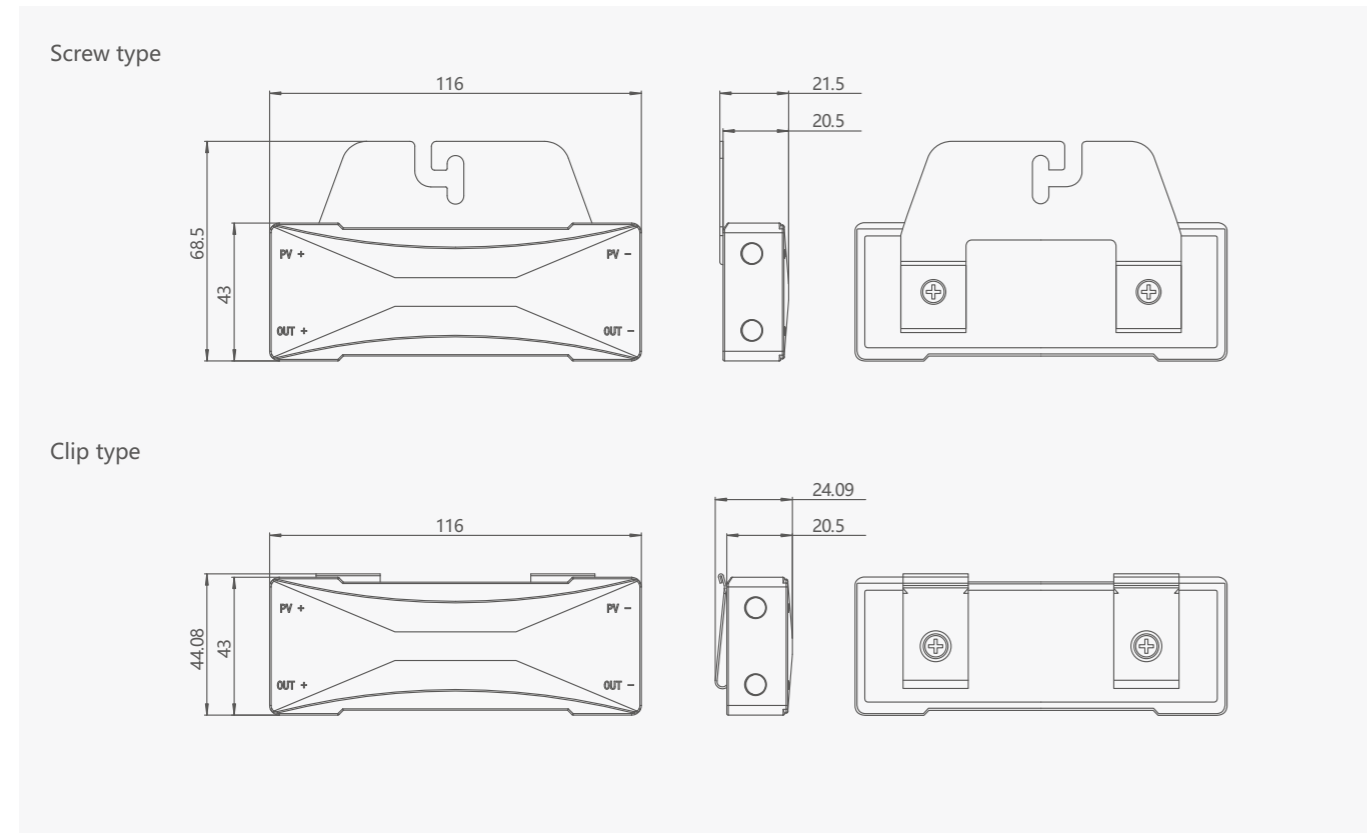


When the open-circuit voltage of PV panel is below 40V.



Photovoltaic DC Components  
**YCRP Rapid Shutdown Switch**

Overall and mounting dimensions(mm)



Photovoltaic DC Components  
**YCPDO Series Photovoltaic Inverter**





## YCDPO I Off Grid Energy Storage Inverter



### 3.5-8KVA

Battery Optional



1kW=1kVA



Parallel



Bluetooth



### General

Model: 3.5kW/5.5kW/8kW

Nominal Voltage: 230VAC

Frequency Range: 50Hz/60Hz

### Key features of 3.5kW/5.5kW:

- Pure sine wave solar inverter
- Output power factor 1
- Parallel operation upto 9 units
- High PV input voltage range
- Battery independent design
- Built-in 100A MPPT solar charger
- Battery equalization function to optimize battery performance and extend lifecycle

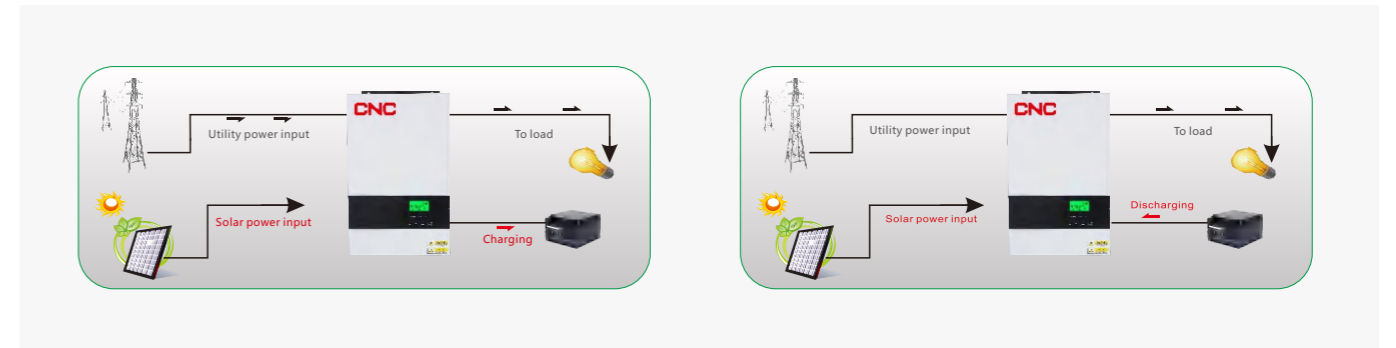
### Key features of 8kW:

- Built-in two 5000W MPPTs, with wide input range: 120-450VDC
- Parallel 9 units
- Communication WIFI or bluetooth
- Operation without battery
- Built-in BMS
- With Touch Buttons
- Reserved communication ports (Rs232, Rs485, CAN)

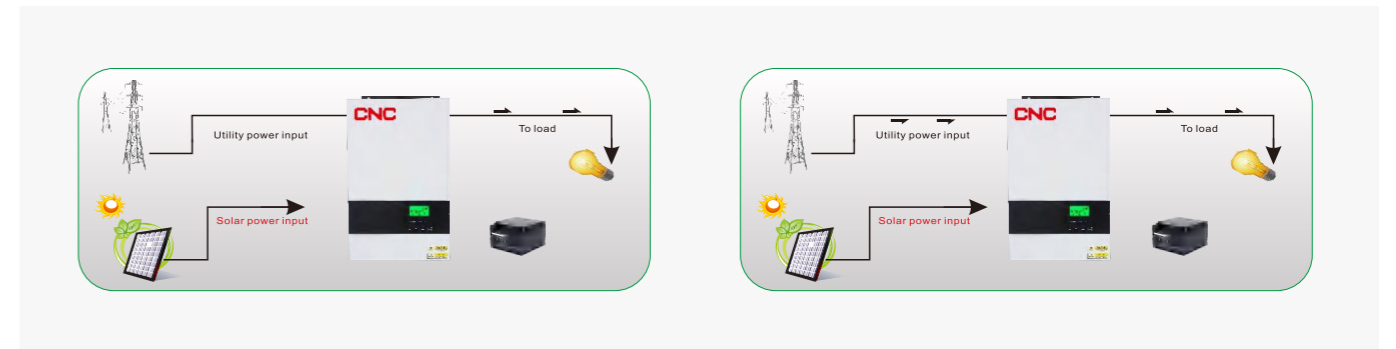
## YCDPO I Off Grid Energy Storage Inverter

### Hybrid operation

With battery connected

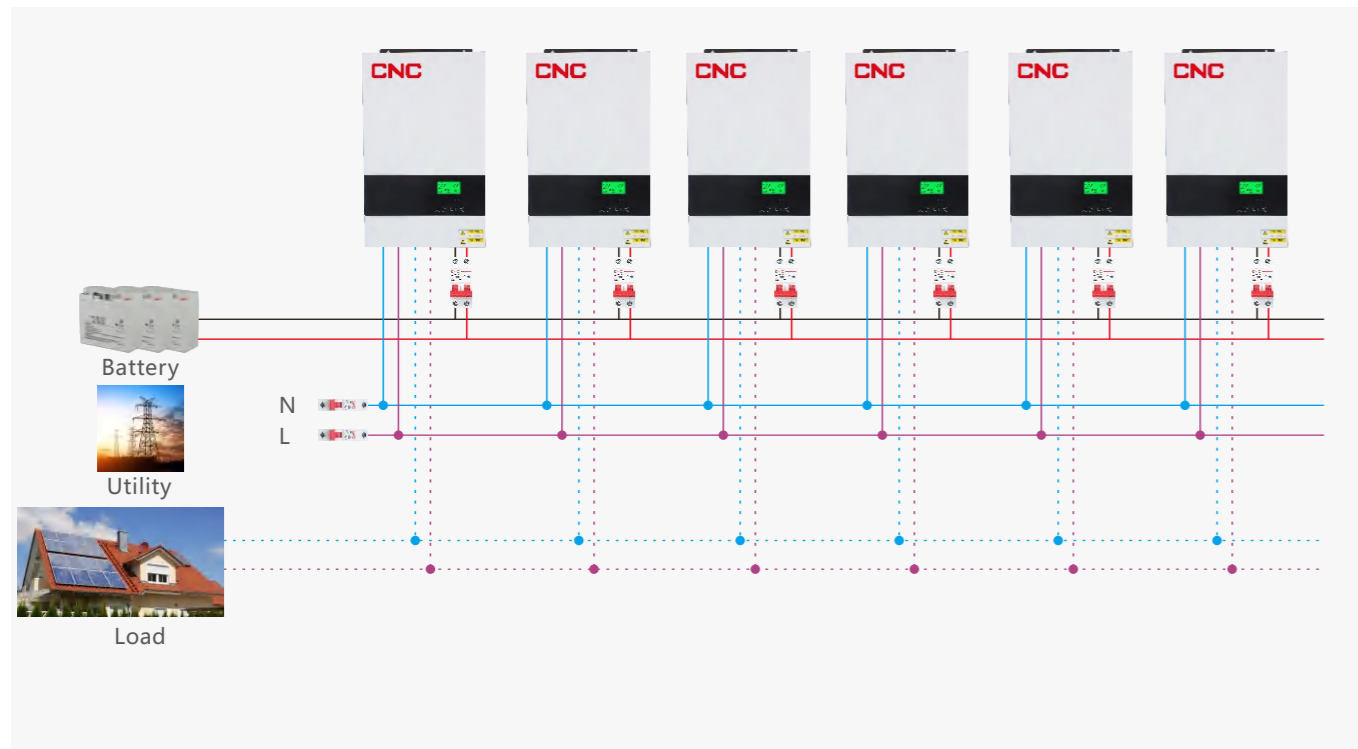


Without battery connected

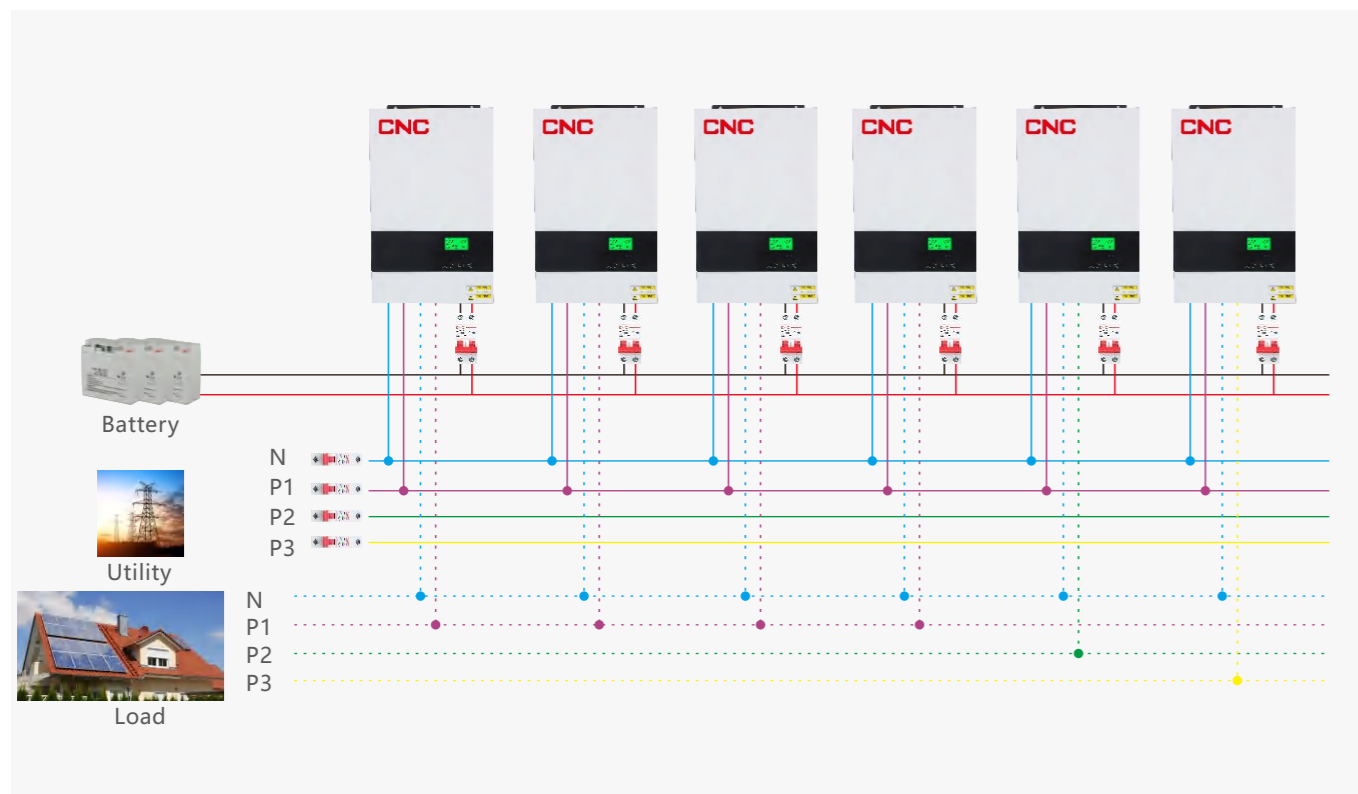


## YCDPO I Off Grid Energy Storage Inverter

### Single phase output using 9 units(72kW)



### Three phase output using either 3 units (24kW) or max 9 units (72kW)



## YCDPO I Off Grid Energy Storage Inverter

### Wall mounted integrated solar inverter technical specification built-in MPPT solar controller

Model	YCDPO I 3500-24	YCDPO I 5500-48	YCDPO I 8000-48
Rated power	3500VA/3500W	5500VA/5500W	8000VA/8000W
<b>Input</b>			
Voltage	230VAC		
Selectable voltage range	170-280VAC(For Personal Computers); 90-280VAC(For Home Appliances)		
Frequency range	50Hz/60Hz(Auto sensing)		
<b>Output</b>			
AC Voltage regulation (Batt. Mode)	230VAC±5%		
Surge power	7000VA	11000VA	16000VA
Efficiency (Peak)	up to 93.5%		
Transfer time	10 ms (For Personal Computers); 20 ms (For Home Appliances)		
Waveform	Pure sine wave		
<b>Battery</b>			
Battery voltage	24VDC	48VDC	48VDC
Floating charge voltage	27VDC	54VDC	54VDC
Overcharge protection	33VDC	63VDC	63VDC
<b>Solar charger &amp; AC charger</b>			
Maximum PV array open circuit voltage	500VDC	500VDC	500VDC
Maximum PV array power	5500W	5500W	4000W*2
MPPT Range @ operating voltage	120~450VDC	120~450VDC	120~450VDC
Maximum solar charge current	100A	100A	120A
Maximum AC charge current	80A	80A	120A
Maximum charge current	100A	100A	120A
<b>Physical</b>			
Dimension, D×W×H (mm)	550×420×225		420×561.6×152.4
Net weight (kgs)	11.5	12.1	21
Communication interface	USB/RS232		
<b>Environment</b>			
Humidity	5% to 95% Relative Humidity (Non-condensing)		
Operating temperature	-10°C to 50°C		
Storage temperature	-15°C to 60°C		

Note: Product specifications are subject to change without further notice.

## YCDPO II Off Grid Energy Storage Inverter



### 3.5-5.5KVA

Battery Optional



1kW=1kVA



Bluetooth



### General

Model: 3.5kW/5.5kW  
Nominal Voltage: 230VAC  
Frequency Range: 50Hz/60Hz

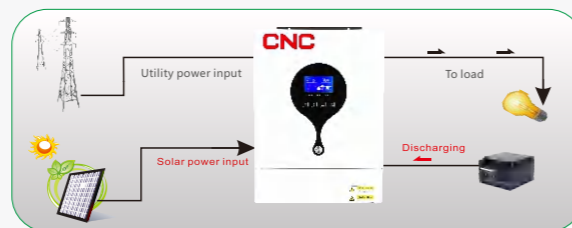
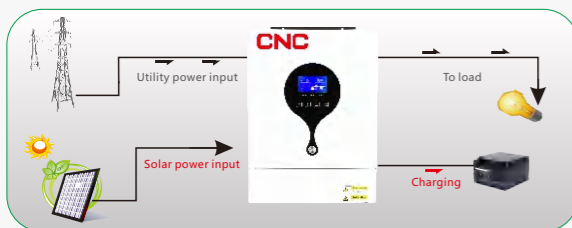
### Features

- Pure sine wave MPPT solar inverter
- High PV input voltage range
- Built-in 100A MPPT solar charger
- With Touch Buttons
- Built-in anti-dusk kit for harsh environment
- Support lithium iron battery
- Battery equalization function to optimize battery performance and extend lifecycle
- Reserved communication port (Rs485, CAN-BUS or Rs232) for BMS (Optional)

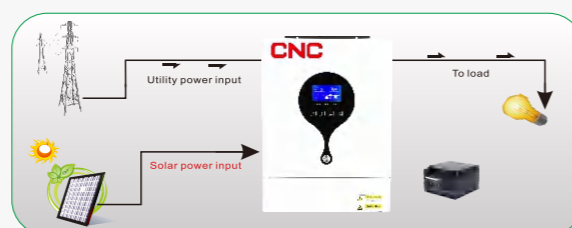
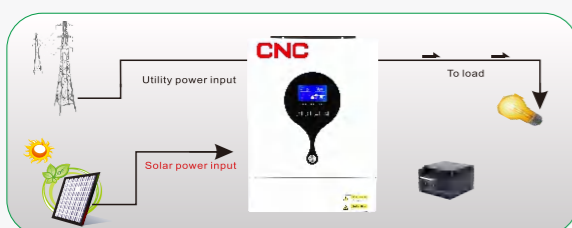


### Hybrid operation

With battery connected



Without battery connected



## YCDPO II Off Grid Energy Storage Inverter

### Wall mounted integrated solar inverter technical specification built-in MPPT solar controller

Model	YCDPO II 3500-24	YCDPO II 5500-48
Rated power	3500VA/3500W	5500VA/5500W
<b>Input</b>		
Voltage	230VAC	
Selectable voltage range	170-280VAC(For Personal Computers); 90-280VAC(For Home Appliances)	
Frequency range	50Hz/60Hz(Auto sensing)	
<b>Output</b>		
AC Voltage regulation (Batt. Mode)	230VAC±5%	
Surge power	7000VA	11000VA
Efficiency (Peak)	up to 93.5%	
Transfer time	10 ms (For Personal Computers); 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
<b>Battery</b>		
Battery voltage	24VDC	48VDC
Floating charge voltage	27VDC	54VDC
Overcharge protection	33VDC	63VDC
<b>Solar charger &amp; ac charger</b>		
Maximum PV array open circuit voltage	500VDC	500VDC
Maximum PV array power	5500W	5500W
MPPT Range @ operating voltage	120~450VDC	
Maximum solar charge current	100A	100A
Maximum AC charge current	80A	80A
Maximum charge current	100A	100A
<b>Physical</b>		
Dimension, D×W×H (mm)	400×300×115	400×300×115
Net weight (kgs)	8.5	9
Communication interface	USB/RS232	
<b>Environment</b>		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating temperature	-10°C to 50°C	
Storage temperature	-15°C to 60°C	

Note: Product specifications are subject to change without further notice.

SSI20-000008-19

# YCDPO III Hybrid Energy Storage Inverter



## 5.5KVA

Battery Optional



1kW=1kVA



Wi-Fi Function



Touch Screen



On&Off Grid



## General

Model: 5.5kW

Nominal Voltage: 220/230/240VAC

Frequency Range: 50Hz/60Hz

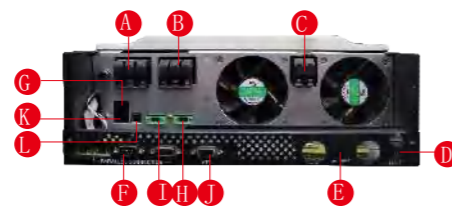
## Features

- Touch screen display
- PV and utility power the load at the same time ( can be set )
- Output power factor PF=1.0
- On&Off Grid with energy storage
- Energy generated record, load record, history information and fault record
- Structure with dust filter
- AC charging start and stop time setting
- External Wi-Fi device optional
- Parallel operation up to 9 units
- Connected with battery optional
- Wide PV input range 120-450VDC
- Independent CPU
- MAX PV Array power 5500W
- Solar and Utility supply power to the load When solar power is not sufficient to load
- The CT sensor will monitor the power consumption of the system and will make sure no excess PV power is delivered to the Grid

## Touch Display Screen



WiFi

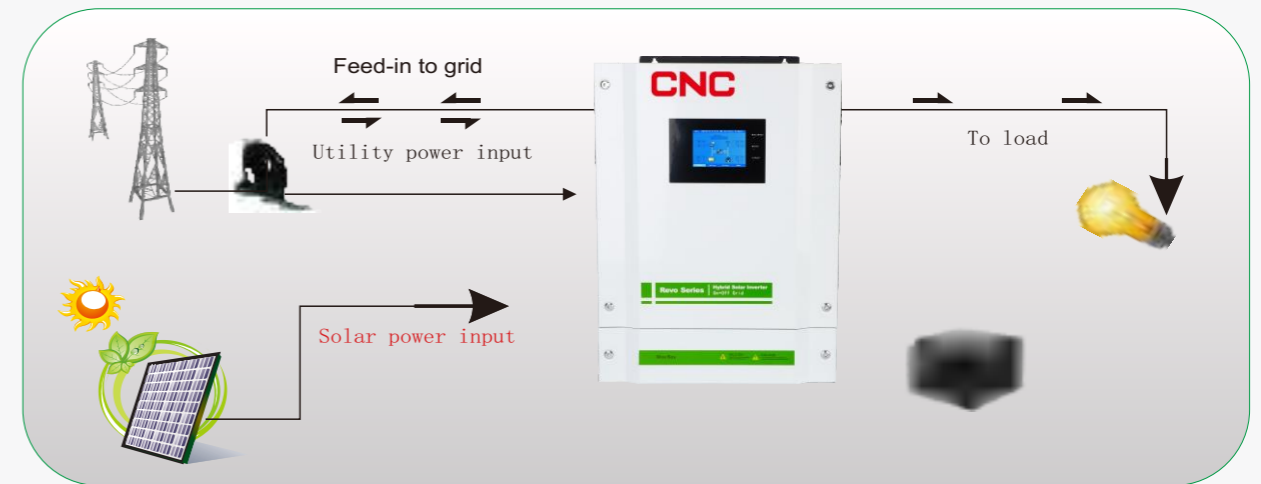
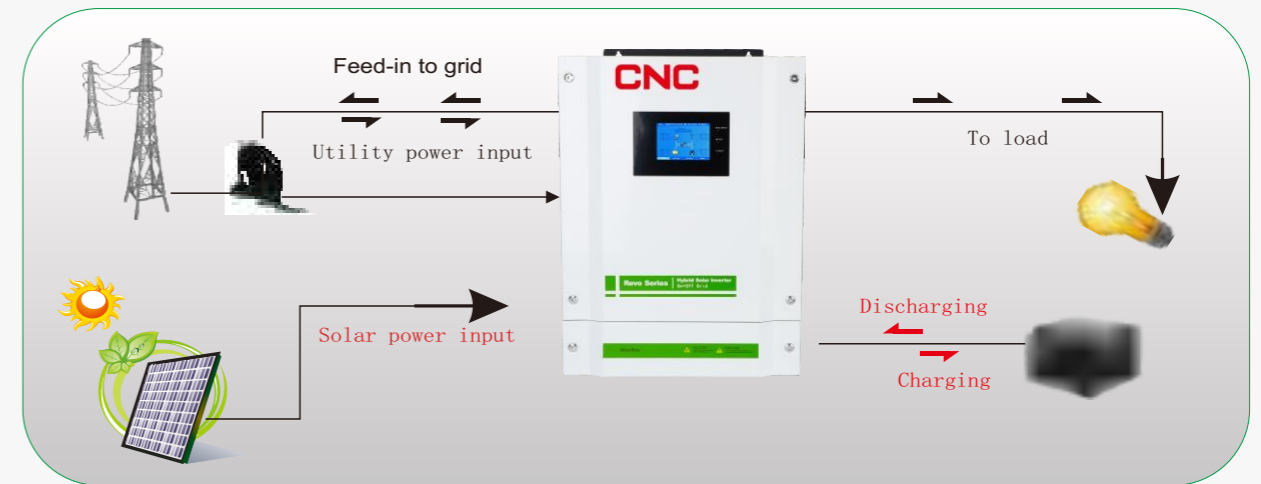


- A AC input
- B AC output
- C PV input
- D ON/OFF switch
- E DC input
- F Parallel connection terminal
- G CAN
- H Generator dry contactor
- I CT
- J Wifi
- K RS232
- L USB

# YCDPO III Hybrid Energy Storage Inverter

## Hybrid operation

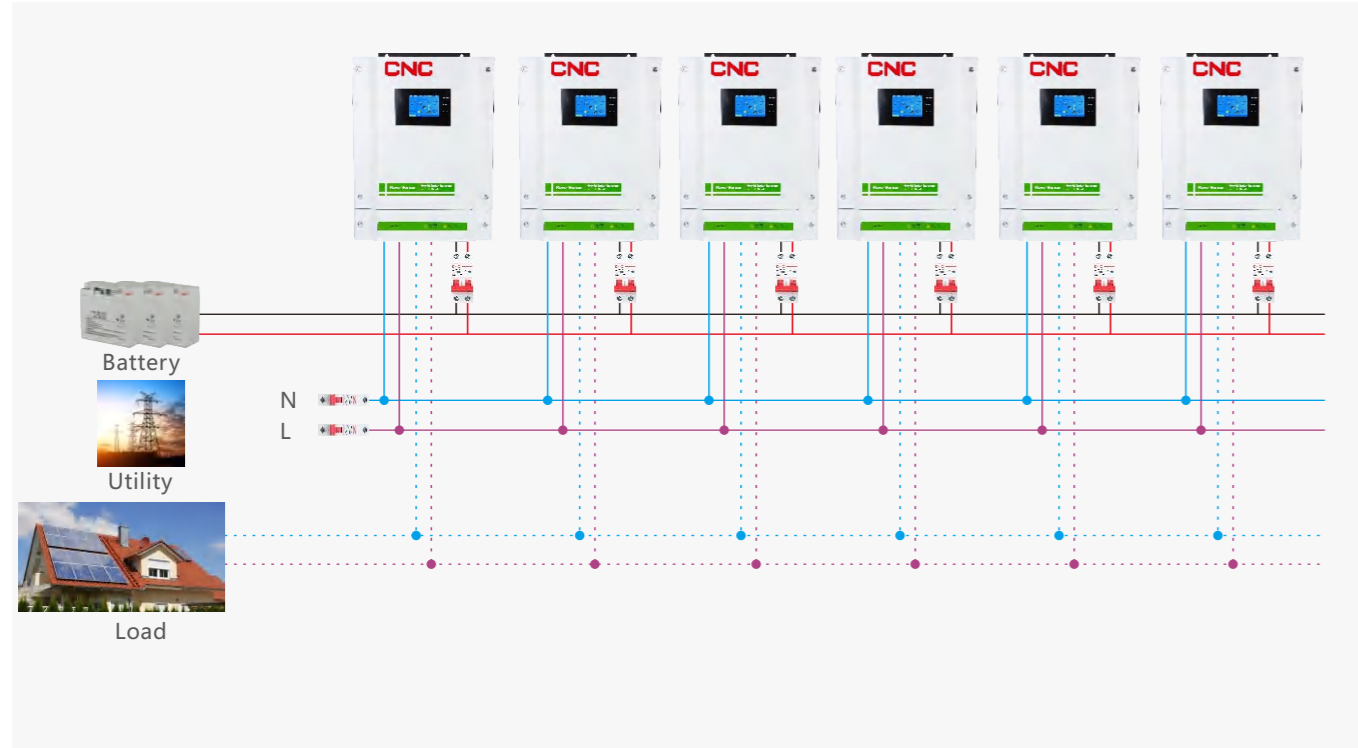
With battery connected



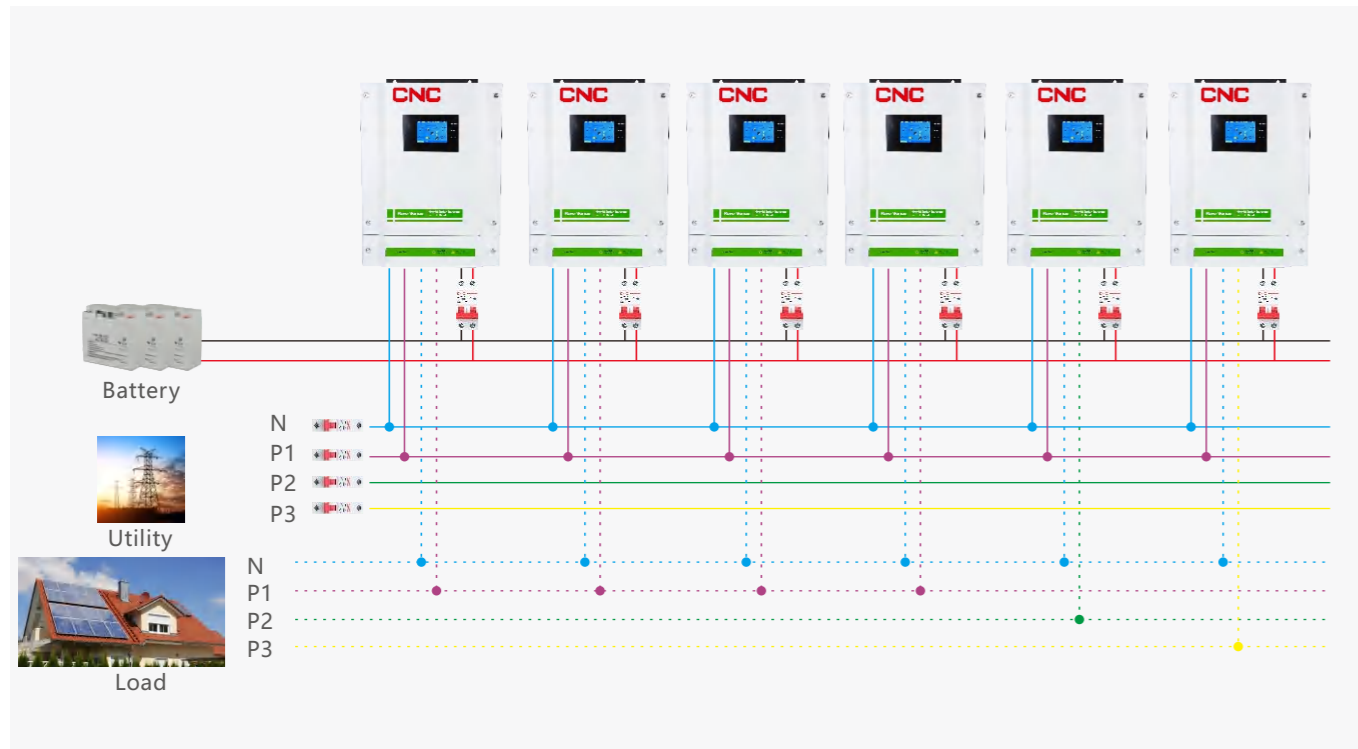


## YCDPO III Hybrid Energy Storage Inverter

Single phase output using 9 units(49.5kW)



Three phase output using either 3 units(16.5KW)or max 9 units(49.5KW)



## YCDPO III Hybrid Energy Storage Inverter

Wall mounted integrated solar inverter technical specification, built-in MPPT solar controller

Model	YCDPO III 5500-48
Max PV array power	5500W
Rated output power	5500W
Mppt range @ operating voltage	120-450VDC
GRID-TIE Operation	
GRID Output (AC)	
Nominal output voltage	220/230/240VAC
Output voltage range	184-265VAC
Nominal output current	20.5A/19.6A/18.8A
Efficiency	up to 93%
OFF-GRID, Hybrid operation	
GRID Input	
Acceptable input voltage range	120-280VAC or 170-280 VAC
Frequency range	50Hz/60Hz (Auto sensing)
Battery mode output (AC)	
Nominal output voltage	220/230/240VAC
Output wave form	Pure sine wave
Battery & charger	
Nominal DC voltage	48VDC
Maximum AC charge current	60A
Maximum charge current(AC+PV)	90A
Emergency output power	
Maximum output power	5500W
Surge power	11000W
Automatic transfer time	< 10ms
General	
Interface	
Parallel function	Yes
Communication	USB or RS232,WIFI, Generator dry-Contact
Environment	
Humidity	0~90% RH (No Condensing)
Operating temperature	0 to 50°C
Net weight(KG)	11.9
Gross weight(KG)	13.1
Dimension (W x D x H)mm	345x476x133.2

Note: Product specifications are subject to change without further notice.

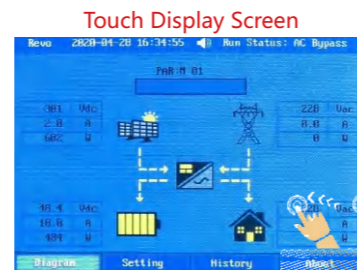
# YCDPO IV Hybrid Energy Storage Inverter

8KVA



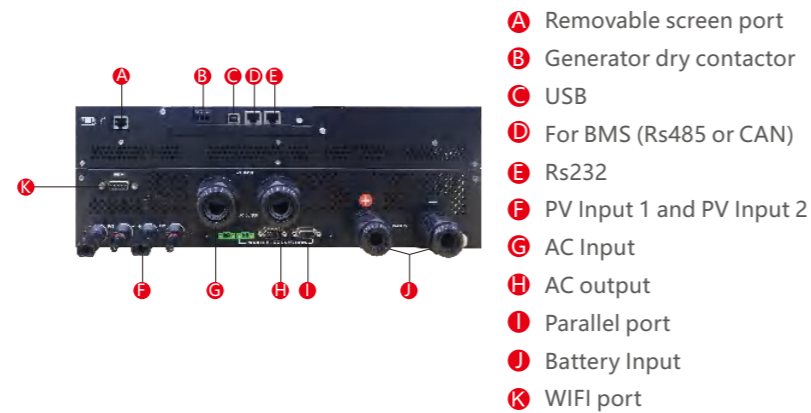
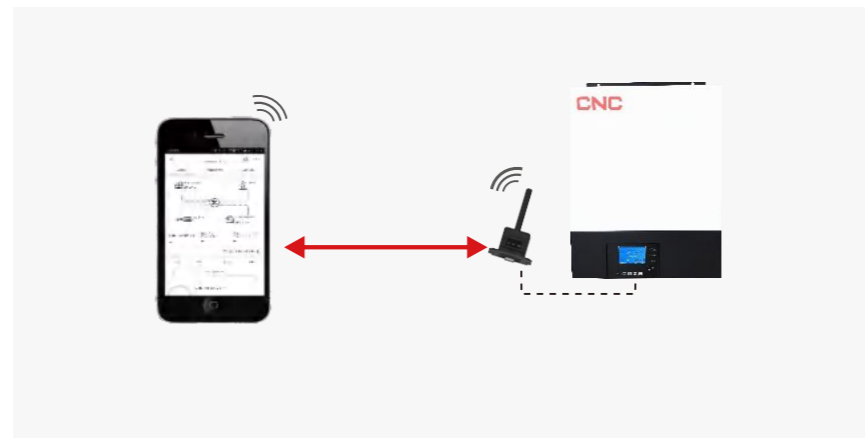
### General

Model: 8kW  
Nominal Voltage: 230VAC  
Frequency Range: 50Hz/60Hz



### Features

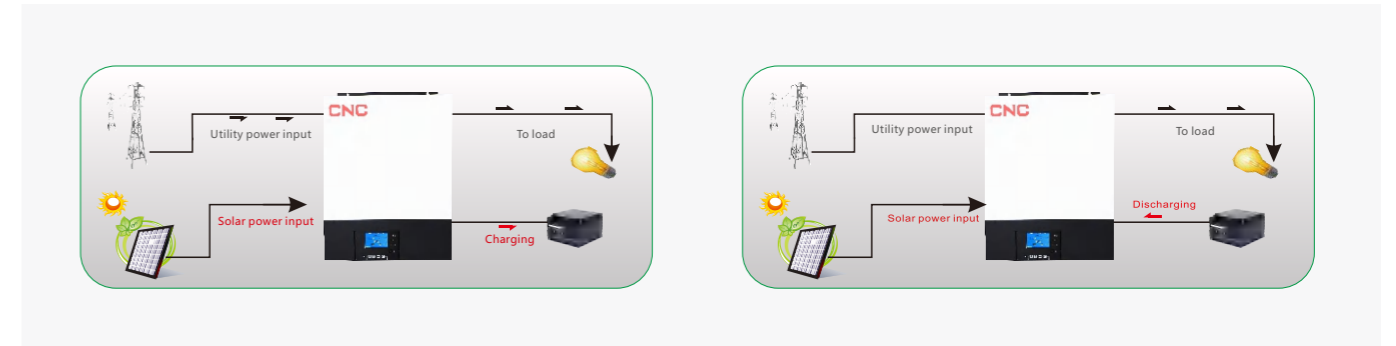
- Detachable touch screen control module with various communications
- PV and utility power the load at the same time ( can be set )
- Output power factor PF=1.0
- Energy generated record, load record, history information and fault record
- Support Peak-Valley Charge
- Parallel operation up to 6 units
- Built-in two 5000W MPPTs, with wide input range: 120-450VDC
- Reserved communication ports (RS232,RS485,CAN)



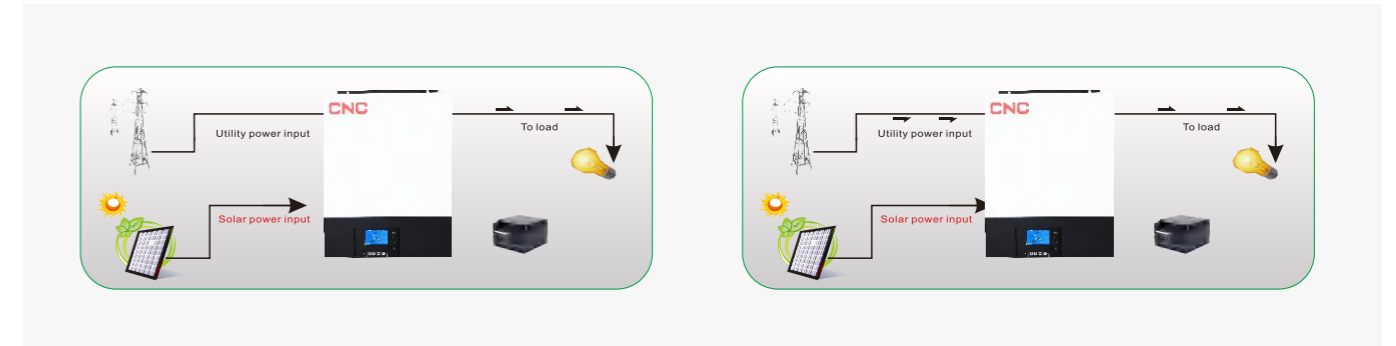
# YCDPO IV Hybrid Energy Storage Inverter

### Hybrid operation

With battery connected

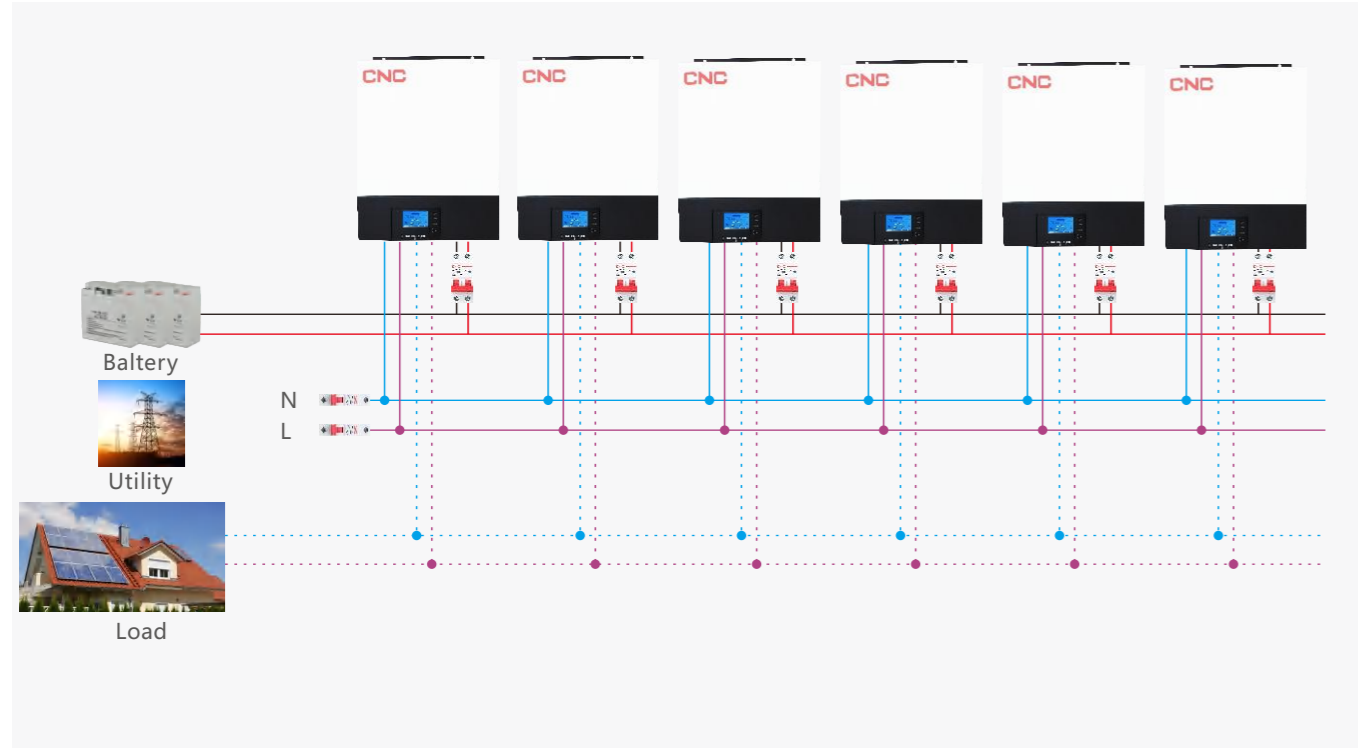


Without battery connected

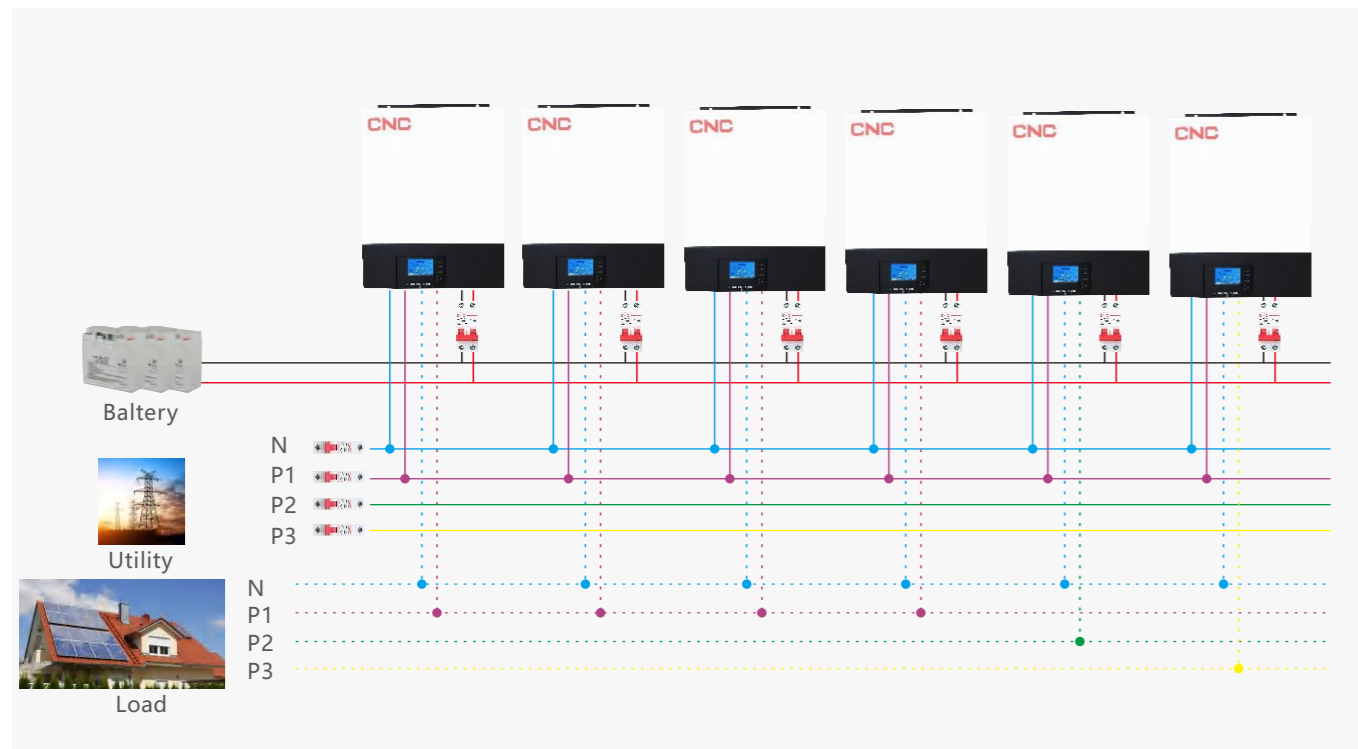


## YCDPO IV Hybrid Energy Storage Inverter

Single phase output up to 48kW using 6 units



Three phase output using either 3 units(24KW)or max 6 units(48KW)



## YCDPO IV Hybrid Energy Storage Inverter

Wall mounted integrated solar inverter technical specification built-in MPPT solar controller

Model	YCDPO IV 8000
Rated power	8000VA, 8000W
<b>Input</b>	
Voltage	230VAC
Selectable voltage range	170-280VAC (For Personal Computers); 90-280VAC (For Home Appliances)
Frequency range	50Hz/60Hz (Auto sensing)
<b>Output</b>	
AC Voltage regulation (Batt. Mode)	230VAC ±5%
Surge power	16000VA
Efficiency (Peak)	up to 93.5%
Transfer time	10ms (For Personal Computers); 20ms (For Home Appliances)
Waveform	Pure sine wave
<b>Battery</b>	
Battery voltage	48VDC
Floating charge voltage	54VDC
Overcharge protection	63VDC
<b>Solar charger &amp; AC charger</b>	
Maximum PV array open circuit voltage	500VDC
Maximum PV array power	5000W×2
MPPT Range @ operating voltage	120~450VDC
Maximum solar charge current	160A
Maximum AC charge current	120A
Maximum charge current	160A
<b>Physical</b>	
Dimension, D×W×H (mm)	420×561.6×152.4
Net weight (kgs)	21
Communication interface	USB/RS232
<b>Environment</b>	
Humidity	5% to 95% Relative Humidity (Non-condensing)
Operating temperature	-10°C to 50°C
Storage temperature	-15°C to 60°C

Note: Product specifications are subject to change without further notice.

## YCP2000PV Series DC Variable Frequency Drive

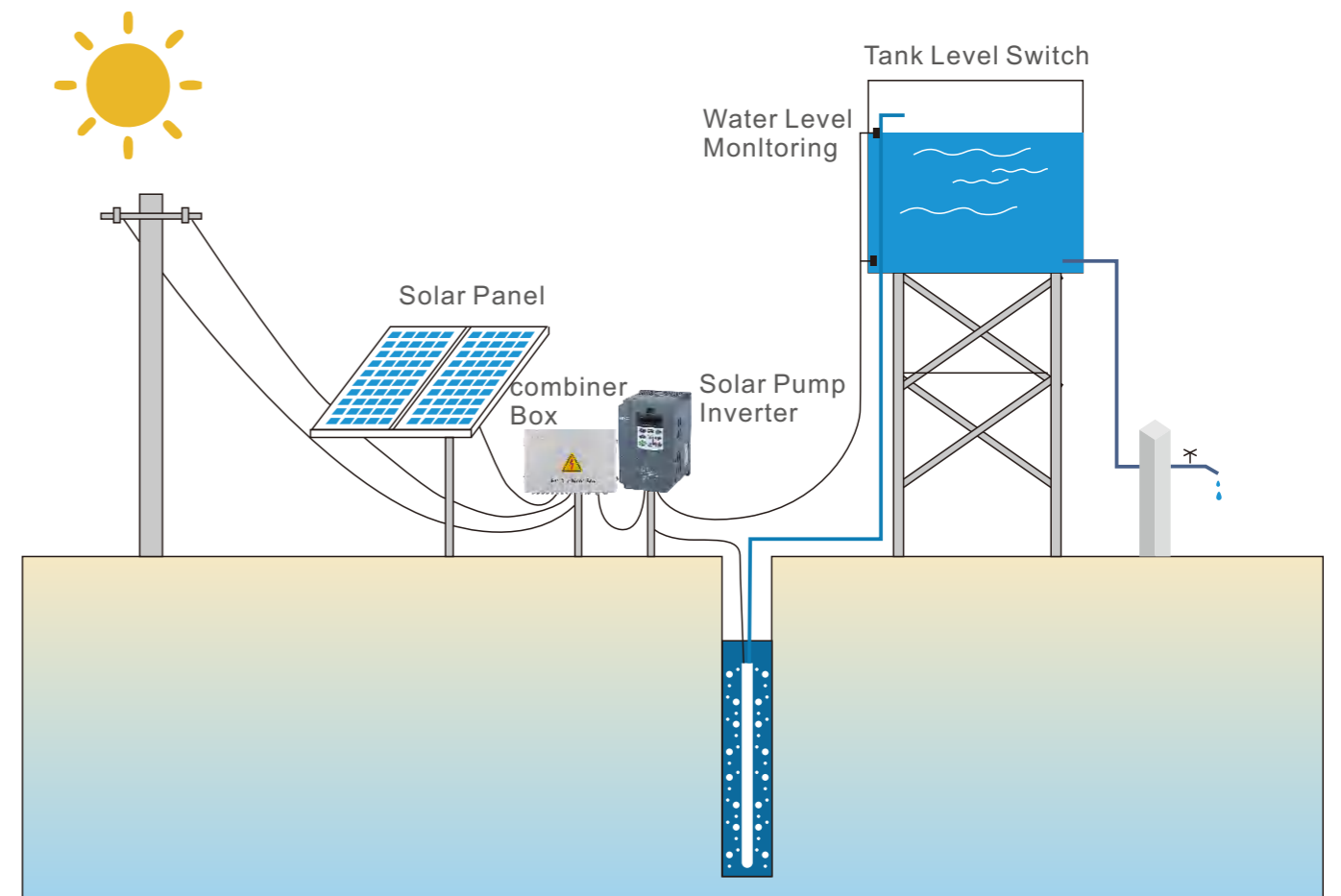


## YCP2000PV Series DC Variable Frequency Drive

### Solar pumping system

The YCP2000PV solar pumping system serves to provide water in remote applications where electrical grid power is either unreliable or unavailable. The system pumps water using a high-voltage DC power source such as a photovoltaic array of solar panels. Since the sun is only available during certain hours of a day and only in good weather conditions, the water is generally pumped into a storage pool or tank for further usage. And water sources are those natural or special such as river, lake, well or waterway, etc.

Solar pumping system is constituted by solar module array, combiner box, liquid level switch, solar pump etc. It aims at providing solutions for the region that suffers water shortage, no power supply or uncertain power supply.





## Photovoltaic DC Components

### YCP2000PV Series DC Variable Frequency Drive

#### General

In order to satisfy the demands of various pumping applications, YCB2000PV solar pump controller adopts Max Power Point Tracking and proven motor drive technology to maximize output from solar modules. It supports both single phase or three-phase AC input such as a generator or inverter from battery. The controller provides fault detection, motor soft start, and speed control. YCB2000PV controller is designed to proceed these features with the plug and play, ease of installation.

#### Selection

YCB2000PV	4	T	0055	G
Model	Voltage level	Input voltage	Adaptive power	Load type
Photovoltaic Inverter	2: 220V 4: 380V	S: Single phase T: Three phase	0004: 0.4KW 0007: 0.7KW 0015: 1.5KW 0022: 2.2KW ..... 0370: 37KW	G: Constant torque

## Photovoltaic DC Components

### YCP2000PV Series DC Variable Frequency Drive

#### Flexibility

Compatible with IEC standard three-phase asynchronous induction motors  
Compatible with popular PV arrays  
Grid supply option

#### Remote monitoring

Standard Rs485 interface equipped for each solar pump controller  
Optional GPRS/Wi-Fi/Ethernet Rj45 modules for remote access  
Spots value of solar pump parameters monitoring available from anywhere  
History of solar pump parameters and events lookup support  
Android/iOS monitoring APP support

#### Cost effectiveness

Plug-and-play system design  
Embedded motor protection and pump functions  
Battery-free for most applications  
Effortless maintenance

#### Reliability

10-year market proven experience of leading motor and pump drive technology  
Soft start feature to prevent water hammer and increase system life  
Built-in overvoltage, overload, overheat and dry-run protection

#### Smartness

Self-adaptive maximum power point tracking technology up to 99% efficiency  
Automatic regulation of pump flow  
Self-adaptation to the motor used in the installation

#### Protection

Surge protection  
Overvoltage protection  
Undervoltage protection  
Locked pump protection  
Open circuit protection  
Short circuit protection  
Overheat protection  
Dry run protection

#### General data

Ambient Temperature Range: -20°C~60°C,  
> 45°C, Derating as required  
Cooling Method: Fan Cooling  
Ambient Humidity: ≤95%RH



## Photovoltaic DC Components

### YCP2000PV Series DC Variable Frequency Drive

#### Technical data

Model	YCB2000PV-S0D7G	YCB2000PV-S1D5G	YCB2000PV-S2D2G	YCB2000PV-T2D2G	YCB2000PV-T4D0G
<b>Input data</b>					
PV Source					
Max input voltage(Voc)[V]	400			750	
Min input voltage, at mpp[V]	180			350	
Recommended voltage,at mpp	280VDC~360VDC			500VDC~600VDC	
Recommended amps input,at mpp[A]	4.7	7.3	10.4	6.2	11.3
Recommended max power at mpp[kW]	1.5	3	4.4	11	15
Alternate AC generator					
Input voltage	220/230/240V AV(±15%),Single Phase			380V AV(±15%), Three Phase	
Max amps(RMS)[A]	8.2	14.0	23	5.8	10.0
Power and va capability [kVA]	2.0	3.1	5.1	5.0	6.6
<b>Output data</b>					
Rated output power[kW]	0.75	1.5	2.2	2.2	4
Rated output voltage	220/230/240V AC, Three Phase			380V AC,Three Phase	
Max amps(RMS)[A]	4.5	7.0	10	5.0	9.0
Output frequency	0-50Hz/60Hz				
<b>Pump system configuration parameters</b>					
Recommended solar panel power(KW)	1.0-1.2	2.0-2.4	3.0-3.5	3.0-3.5	5.2-6.4
Solar panel connection	250W×5P×30V	250W×10P×30V	250W×14P×30V	250W×20P×30V	250W×22P×30V
Applicable pump (kW)	0.37-0.55	0.75-1.1	1.5	1.5	2.2-3
Pump motor voltage(V)	3 phase 220	3 phase 220	3 phase 220	3 phase 380	3 phase 380

## Photovoltaic DC Components

### YCP2000PV Series DC Variable Frequency Drive

#### Technical data

Model	YCB2000PV-T5D5G	YCB2000PV-T7D5G	YCB2000PV-T011G	YCB2000PV-T015G	YCB2000PV-T018G
<b>Input data</b>					
PV source					
Max input voltage(Voc)[V]	750				
Min input voltage, at mpp[V]	350				
Recommended voltage,at mpp	500VDC~600VDC				
Recommended amps input,at mpp[A]	16.2	21.2	31.2	39.6	46.8
Recommended max power at mpp[kW]	22	30	22	30	37
Alternate AC generator					
Input voltage	380V AV(±15%), Three Phase				
Max amps(RMS)[A]	15	20	26.0	35.0	46.0
Power and va capability [kVA]	9.0	13.0	17.0	23.0	25
<b>Output data</b>					
Rated output power[kW]	5.5	7.5	11	15	18.5
Rated output voltage	380V AC,Three Phase				
Max amps(RMS)[A]	13	17	25.0	32.0	37
Output frequency	0-50Hz/60Hz				
<b>Pump system configuration parameters</b>					
Recommended solar panel power(KW)	7.2-8.8	9.8-12	14.3-17.6	19.5-24	24-29.6
Solar panel connection	250W×40P×30V 20 series 2 parallel	250W×48P×30V 24 series 2 parallel	250W×60P×30V 20 series 3 parallel	250W×84P×30V 21 series 4 parallel	250W×100P×30V 20 series 5 parallel
Applicable pump (kW)	3.7-4	4.5-5.5	7.5-9.2	11-13	15
Pump motor voltage(V)	3 phase 380	3 phase 380	3 phase 380	3 phase 380	3 phase 380

## Photovoltaic DC Components

### YCP2000PV Series DC Variable Frequency Drive

#### Technical data

Model	YCB2000PV-T022G	YCB2000PV-T030G	YCB2000PV-T037G	YCB2000PV-T045G
<b>Input data</b>				
PV source				
Max input voltage(Voc)[V]	750			
Min input voltage, at mpp[V]	350			
Recommended voltage,at mpp	500VDC~600VDC			
Recommended amps input,at mpp[A]	56.0	74.0	94.0	113
Recommended max power at mpp[kW]	44	60	74	90
Alternate AC generator				
Input voltage	380V AV(±15%), Three Phase			
Max amps(RMS)[A]	62.0	76.0	76.0	90.0
Power and va capability [kVA]	30.0	41.0	50.0	59.2
<b>Output data</b>				
Rated output power[kW]	22	30	37	45
Rated output voltage	380V AC,Three Phase			
Max amps(RMS)[A]	45	60	75	90
Output frequency	0-50Hz/60Hz			
<b>Pump system configuration parameters</b>				
Recommended solar panel power(KW)	28.6-35.2	39-48	48.1-59.2	58.5-72
Solar panel connection	250W×120P×30V 20 series 6 parallel	250W×200P×30V 20 series 10 parallel	250W×240P×30V 22 series 12 parallel	250W×84P×30V 21 series 4 parallel
Applicable pump (kW)	18.5	22-26	30	37-40
Pump motor voltage(V)	3 phase 380			

## Photovoltaic DC Components

### YCP2000PV Series DC Variable Frequency Drive

#### Technical data

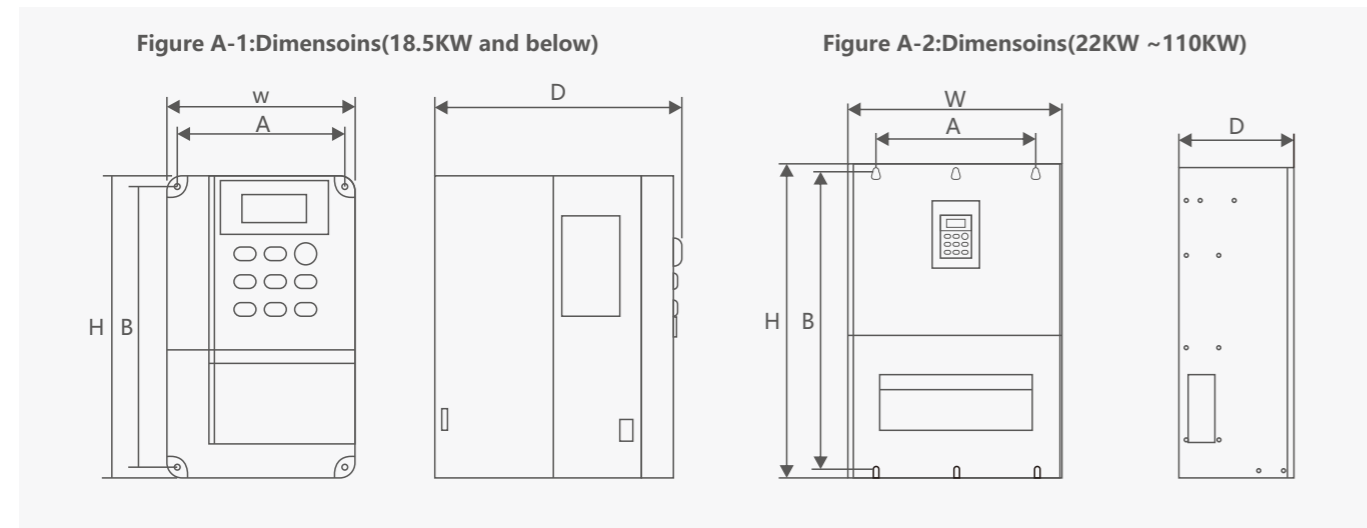
Model	YCB2000PV-T055G	YCB2000PV-T075G	YCB2000PV-T090G	YCB2000PV-T110G
<b>Input data</b>				
PV source				
Max input voltage(Voc)[V]	750			
Min input voltage, at mpp[V]	350			
Recommended voltage,at mpp	500VDC~600VDC			
Recommended amps input,at mpp[A]	105	140	160	210
Recommended max power at mpp[kW]	55	75	90	110
Alternate AC generator				
Input voltage	380V AV(±15%), Three Phase			
Maxamps(RMS)[A]	113	157	180	214
Power and va capability [kVA]	85	114	134	160
<b>Output data</b>				
Rated output power[kW]	55	75	93	110
Rated output voltage	380V AC,Three Phase			
Max amps(RMS)[A]	112	150	176	210
Output frequency	0-50Hz/60Hz			
<b>Pump system configuration parameters</b>				
Recommended solar panel power(KW)	53-57	73-80	87-95	98-115
Solar panel connection	400W*147P*30V 21series 7 parallel	400W*200P*30V 20 series 10 parallel	400W*240P*30V 20 series 12 parallel	400W*280P*30V 20 series 4 parallel
Applicable pump (kW)	55	75	90	110
Pump motor voltage(V)	3PH 380V			

**YCP2000PV Series DC Variable Frequency Drive**

**External dimension**

	W(mm)	H(mm)	D(mm)	A(mm)	B(mm)	Mounting Aperture
YCB2000PV-S0D7G	125	185	163	115	175	4
YCB2000PV-S1D5G						
YCB2000PV-S2D2G						
YCB2000PV-T0D7G						
YCB2000PV-T1D5G						
YCB2000PV-T2D2G	150	246	179	136	230	4
YCB2000PV-T3D0G						
YCB2000PV-T4D0G						
YCB2000PV-T5D5G						
YCB2000PV-T7D5G	218	320	218	201	306	5
YCB2000PV-T011G						
YCB2000PV-T015G						
YCB2000PV-T018G	235	420	210	150	404	5
YCB2000PV-T022G						
YCB2000PV-T030G						
YCB2000PV-T037G	270	460	220	195	433	6
YCB2000PV-T045G						
YCB2000PV-T055G	320	565	275	240	537	6
YCB2000PV-T075G						
YCB2000PV-T090G	380	670	272	274	640	8
YCB2000PV-T110G						

**Overall and mounting dimensions(mm)**



**YCP2000PV Series DC Variable Frequency Drive**



**Scenic spot of daocheng yading, shangri-la:**

System installed in Scenic Spot of Daocheng Yading, Shangri-la to cloth barren mountains with greenery scene. 3pcs 37kW solar pumps, 3PCS YCB2000PV-T037G Solar Pump Controllers.

System capacity:160KW

Panels:245W

Altitude:3400M

Pumping<sup>3</sup>height:250M

Flow:69M /H





Photovoltaic DC Solutions  
YCX8 Series DC Combiner Box



Photovoltaic DC Solutions  
YCX8 Series DC Combiner Box



YCX8-I Photovoltaic DC box



YCX8-DIS Door clutch DC isolating switch box



YCX8-BS Overload protection switch box

**General**

YCX8-□ series photovoltaic DC box can be equipped with different components according to different needs of customers, and its combination is diversified to meet different needs of customers. It is used for isolation, overload, short circuit, lightning protection and other protection of photovoltaic DC system to ensure the reliable and safe operation of photovoltaic system. This product is widely used in residential, commercial, and factory photovoltaic power generation systems. And it is designed and configured in strict accordance with the requirements of "Technical Specifications for Photovoltaic Convergence Equipment" CGC/GF 037:2014.

**Features**

- Multiple solar photovoltaic arrays can be connected simultaneously, with a maximum of 6 circuits;
- Rated input current of each circuit is 15A (customizable as required);
- The output terminal is equipped with a photovoltaic DC high-voltage lightning protection module that can withstand a maximum lightning current of 40kA;
- High voltage circuit breaker is adopted, with DC rated working voltage up to DC1000, safe and reliable;
- The protection level reaches IP65, meeting the use requirements for outdoor installation.

**Selection**

YCX8	I	2/1	15/32	8
Model	Functions	Input circuit/ Output circuit	Input current per series/ Maximum output current	Shell type
Photovoltaic box	I: Isolation switch box	1/1: 1 input 1 output 2/1: 2 input 1 output 2/2: 2 input 2 output 3/1: 3 input 1 output 3/3: 3 input 3 output 4/1: 4 input 1 output 4/2: 4 input 2 output 4/4: 4 input 4 output 5/1: 5 input 1 output 5/2: 5 input 2 output 6/2: 6 input 2 output 6/3: 6 input 3 output 6/6: 6 input 6 output	15A(Customizable)/ Match as needed	Terminal box: 4, 6, 9, 12, 18, 24, 36 Plastic distribution box: T Fully plastic sealed box: R
	IF: Isolation switch box with fuse			
	DIS: Door clutch combiner box			
	BS: Overload lightning protection box (miniature)			
	IFS: Photovoltaic combiner box			
	IS: Isolation lightning protection box			
	FS: Overload lightning protection box (fuse)			

\* Due to the large number of scheme combinations, the shell part (dashed box content) is only used for internal selection and not for product marking models. The product will be produced according to the company's standard scheme. (To be confirmed with the customer before production)

\* If the customer customizes other solutions, please contact us before placing an order



## Photovoltaic DC Solutions YCX8 Series DC Combiner Box

### Technical data

Model	YCX8-I	YCX8-IF	YCX8-DIS	YCX8-BS	YCX8-IFS	YCX8-IS	YCX8-FS		
Rated insulation voltage(Ui)	1500VDC								
Input	1、2、3、4、6								
Output	1、2、3、4、6								
Maximum voltage	1000VDC								
Maximum input current	1~100A								
Maximum output current	32~100A								
<b>Shell frame</b>									
Waterproof terminal box: YCX8-return circuit	■	■	-	■	■	■	■		
Plastic distribution box: YCX8-T	■	■	■	■	■	■	■		
Fully plastic sealed box: YCX8-R	■	■	-	■	■	■	■		
<b>Configuration</b>									
Photovoltaic isolation switch	■	■	■	-	■	■	-		
Photovoltaic fuse	-	■	■	-	■	-	■		
Photovoltaic MCB	-	-	-	■	-	-	-		
Photovoltaic surge protective device	-	-	■	■	■	■	■		
Anti reflection diode	□	□	□	□	□	□	□		
Monitoring module	□	□	□	□	□	□	□		
Input/output port	MC4	□	□	□	□	□	□		
	PG waterproof cable connector	□	□	□	□	□	□		
<b>Component parameters</b>									
Photovoltaic isolation switch	Ui	1000V	□	□	□	-	□	□	-
		1200V	□	□	□	-	□	□	-
	Ie	32A	□	□	□	-	□	□	-
		55A	□	□	□	-	□	□	-
Photovoltaic MCB	Ie(max)	63A	-	-	-	□	-	-	-
		125A	-	-	-	□	-	-	-
	DC polarity	Yes	-	-	-	□	-	-	-
		No	-	-	-	□	-	-	-
Photovoltaic surge protective device	Ucpv	600VDC	-	-	□	□	□	□	□
		1000VDC	-	-	□	□	□	□	□
		1500VDC	-	-	□	□	□	□	□
	I <sub>max</sub>	40kA	-	-	□	□	□	□	□
Photovoltaic fuse	Ie(max)	32A	-	□	□	-	□	-	□
		63A	-	□	□	-	□	-	□
		125A	-	□	□	-	□	-	□
<b>Use environment</b>									
Working temperature	-20°C~+60°C								
Humidity	0.99								
Altitude	2000m								
Installation	Wall mounting								

■ Standard; □ Optional; - Non

## Photovoltaic DC Solutions YCX8-I Solar DC Switch Box



### General

Isolation boxes are most commonly used in two way / three way / four way / six way solar home roof systems. The UV-resistant and fire-resistant PC case protects the DC components from sunlight and water ingress, and the box lid is lockable. Included in the box are two din rail mounted DC switches, up to 40A per IEC 60947.3 and AS60947.3 PV2, with lockable handles for safe use and maintenance.

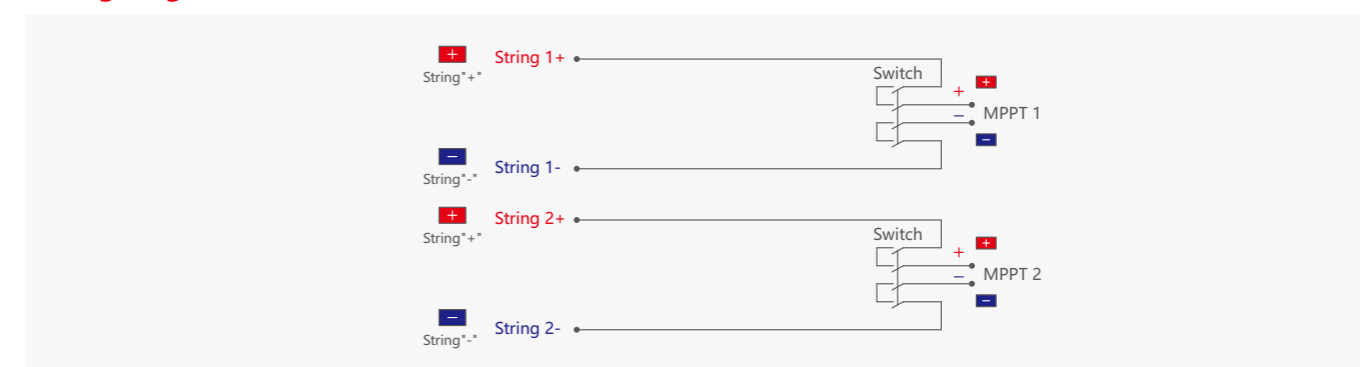
### Features

- IP65;
- 3ms arc suppression;
- Lockable in closed position.

### Technical data

Model	YCX8-I 2/2 32/32	YCX8-I 4/4 32/32
Input/Output	2/2	4/4
Maximum voltage	1000V	
Maximum input current	32A(Adjustable)	
Maximum output current	32A	
<b>Shell frame</b>		
Material	Polycarbonate/ABS	
Protection degree	IP65	
Impact resistance	IK10	
Dimension(width×height×depth)	219*200*100mm(南普确认)	
DC isolation switch	YCISC-32PV 2 DC1000	YCISC-32PV 4 DC1000
Rated insulation volatge(Ui)	1000V	
Rated current(Ie)	32A	
Use category	DC-21B/DC-PV2	
Standards	IEC 60947-3	
Certifications	UL, TUV, KEMA, SAA, CE	
<b>Use environment</b>		
Working temperature	-20°C~+60°C	
Humidity	0.99	
Altitude	2000m	
Installation	Wall mounting	

### Wiring diagram



## Photovoltaic DC Solutions YCX8-IF Solar DC Fuse Box



### General

Isolation boxes are most commonly used in three-string solar home or small business systems. The UV-resistant and fire-resistant PC case protects the DC components from sunlight and water ingress, and the box lid is lockable. Included in the box are six DIN rail mounted DC switches, up to 40A per IEC 60947.3 and AS60947.3 PV2, with lockable handles for safe use and maintenance.

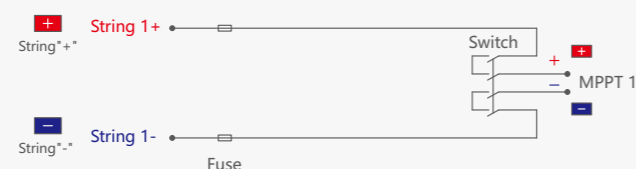
### Features

- IP65;
- 3ms arc suppression;
- Lockable in closed position;
- Fuses with overcurrent protection.

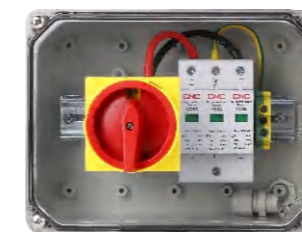
### Technical Parameters

Model	YCX8-IF III 32/32
Input/Output	III
Maximum voltage	1000VDC
Maximum DC short-circuit current per input (Isc)	15A(Adjustable)
Maximum output current	32A
<b>Shell frame</b>	
Material	Polycarbonate/ABS
Protection degree	IP65
Impact resistance	IK10
Dimension(width×height×depth)	南普确认
<b>Configuration (recommended)</b>	
Photovoltaic isolation switch	YCISC-32PV 4 DC1000
Photovoltaic fuse	YCF8-32HPV
<b>Use environment</b>	
Working temperature	-20°C~+60°C
Humidity	0.99
Altitude	2000m
Installation	Wall mounting
<b>Wiring diagram</b>	

### Wiring diagram



## Photovoltaic DC Solutions YCX8-DIS Door Clutch Combiner



### General

600VDC/1000VDC door clutch DC box. IP66 DC string box is designed for 1~6 string PV system. For surge protection and isolating at solar DC side.

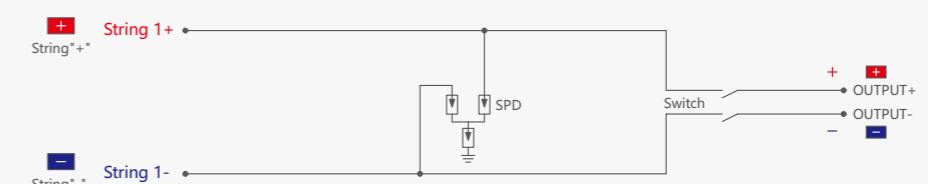
### Features

- IP66;
- 1 input 4 output, 600VDC/1000VDC;
- Lockable in closed position;
- UL 508i certificated,  
Standard: IEC 60947-3 PV2.

### Technical data

Model	YCX8-DIS 1/1 15/32	
Input/Output	1/1	
Maximum voltage	600V	1000V
Short circuit current per input (Isc)	15A-30A(Adjustable)	
Maximum output current	16A	25A
<b>Shell frame</b>		
Material	Polycarbonate	
Protection degree	IP66	
Impact resistance	IK10	
Dimension(width×height×depth)	160*210*110	
Input cable gland	MC4/PG09,2.5~16mm	
Output cable gland	MC4/PG21,2.5~16mm	
<b>Use environment</b>		
Working temperature	-25°C~+60°C	
<b>Wiring diagram</b>		

### Wiring diagram



## YCX8-BS Over-Load Protection Box



### General

IP65 DC wiring box is designed for 1~6 string PV system. For surge protection and overload protection at solar DC side.

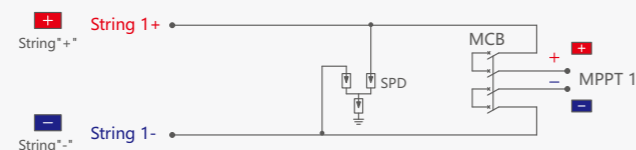
### Features

- IP66;
- 1 input 4 output, 600VDC/1000VDC;
- Lockable in closed position;
- UL 508i certificated,  
Standard: IEC 60947-3 PV2.

### Technical data

Model	YCX8-BS 1/1	YCX8-BS 6/2
Input/Output	1/1, 3/1	6/2
Maximum voltage	1000VDC	
Maximum output current	1~63A/63A~125A	
Shell frame		
Material	Polycarbonate/ABS	
Protection degree	IP65	
Impact resistance	IK10	
Dimension(width×height×depth)	219*200*100mm	381*230*110
Configuration (recommended)		
Photovoltaic DC circuit breaker	YCB8-63PV 4P K63 YCB8-125PV 4P 125A	YCB8-63PV 4P K63 YCB8-125PV 4P 125A
Photovoltaic surge protective device	YCS8-II 40PV 3P DC1000 YCS8-II 40PV 3P DC1000	YCS8-II 40PV 3P DC1000 YCS8-II 40PV 3P DC1000
Use environment		
Working temperature	-20°C~+60°C	

### Wiring diagram



## YCX8-IFS Solar Combiner Box



### General

YCX8-IFS photovoltaic combiner box is suitable for the maximum input voltage of the inverter DC1000V, which is made of PVC engineering materials, and the protection level reaches IP65. With solar DC side overload protection, short circuit protection, surge protection and isolation functions.

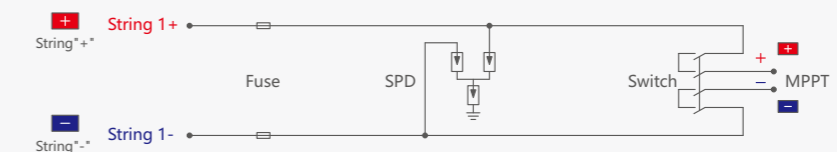
### Features

- IP66;
- 1 input 4 output, 600VDC/1000VDC;
- Lockable in closed position;
- UL 508i certificated,  
Standard: IEC 60947-3 PV2.

### Technical data

Model	YCX8-IFS 1/1	YCX8-IFS 6/2
Input/Output	1/1	6/2
Maximum voltage	1000VDC	
Maximum output current	32A	
Shell frame		
Material	Polycarbonate/ABS	
Protection degree	IP65	
Impact resistance	IK10	
Dimension(width×height×depth)	219*200*100mm	381*200*100
Configuration (recommended)		
Photovoltaic isolation switch	YCISC-32 2 DC1000	YCISC-32 2 DC1000
Photovoltaic surge protective device	YCS8-II 40PV 3P DC1000	YCS8-II 40PV 3P DC1000
Photovoltaic fuse	YCF8-32HPV DC1000	YCF8-32HPV DC1000
Use environment		
Working temperature	-25°C~+60°C	

### Wiring diagram



## Photovoltaic DC Solutions YCX8-IS Solar DC String Box



### General

YCX8-IS photovoltaic combiner box is suitable for inverters with a maximum input voltage of DC1000V, which is made of PVC engineering material and has a protection level of IP65. Equipped with solar DC side surge protection and isolation function.

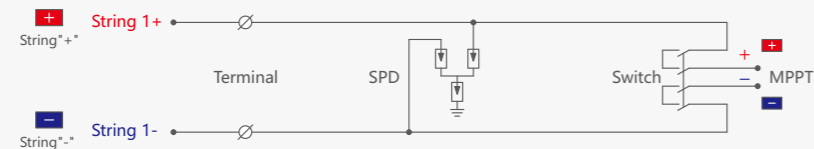
### Features

- IP66;
- 1 input 4 output, 600VDC/1000VDC;
- Lockable in closed position;
- UL 508i certificated,  
Standard: IEC 60947-3 PV2.

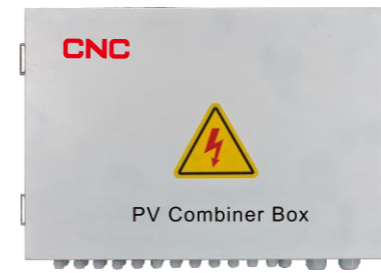
### Technical data

Model	YCX8-IS 2/1	YCX8-IS 2/2
Input/Output	1/1	2/2
Maximum voltage	1000VDC	
Maximum output current	32A	
Shell frame	Polycarbonate/ABS	
Material	Polycarbonate/ABS	
Protection degree	IP65	
Impact resistance	IK10	
Dimension(width×height×depth)	219*200*100mm	381*230*110
Configuration (recommended)		
Photovoltaic isolation switch	YCISC-32 2 DC1000	YCISC-32 2 DC1000
Photovoltaic surge protective device	YCS8-II 40PV 3P DC1000	YCS8-II 40PV 3P DC1000
Use environment		
Working temperature	-25°C~+60°C	

### Wiring diagram



## Photovoltaic DC Solutions YCX8-(Fe) Photovoltaic DC Combiner Box



### General

YCX8-(Fe) photovoltaic DC combiner box is suitable for photovoltaic power generation systems with a maximum DC system voltage of DC1500V and an output current of 800A. This product is designed and configured in strict accordance with the requirements of the "Technical Specification for Photovoltaic Combiner Equipment" CGC/GF 037:2014, providing users with a safe, concise, beautiful and applicable photovoltaic system product.

### Features

- The box can be made of hot-dip galvanized steel plate or cold-rolled steel plate to ensure that the components do not shake and remain unchanged in shape after installation and operation;
- Protection grade: IP65;
- Can simultaneously access up to 50 solar photovoltaic arrays, with a maximum output current of 800A;
- The positive and negative electrodes of each battery string are equipped with photovoltaic dedicated fuses;
- The current measurement adopts Hall sensor perforated measurement, and the measuring equipment is completely isolated from the electrical equipment;
- The output terminal is equipped with a photovoltaic DC high-voltage lightning protection module that can withstand a maximum lightning current of 40KA;
- The combiner box is equipped with a modular intelligent detection unit to detect the current, voltage, circuit breaker status, box temperature, etc. of each string of components;
- The overall power consumption of the modular combiner box intelligent detection unit is less than 4W, and the measurement accuracy is 0.5%;
- The modular combiner box intelligent detection unit adopts DC 1000V/1500V self power supply mode;
- It has multiple methods for remote data transmission, providing RS485 interface and wireless ZigBee interface;
- The power supply has functions such as simulated reverse connection, overcurrent, overvoltage protection, and anti-corrosion.

### Selection

YCX8	16/1	M	D	DC1500	Fe
Product name	Input circuit/output circuit	Monitoring module	Functional protection	Rated voltage	Shell type
Distribution box	6/1 8/1 12/1 16/1 24/1 30/1 50/1	No: without the monitoring module M: Monitoring module	No: without anti-reverse diode module D: with anti-reverse diode module	DC600 DC1000 DC1500	Fe: Iron shell

Note: In addition to relevant core components, others can be customized according to user requirements

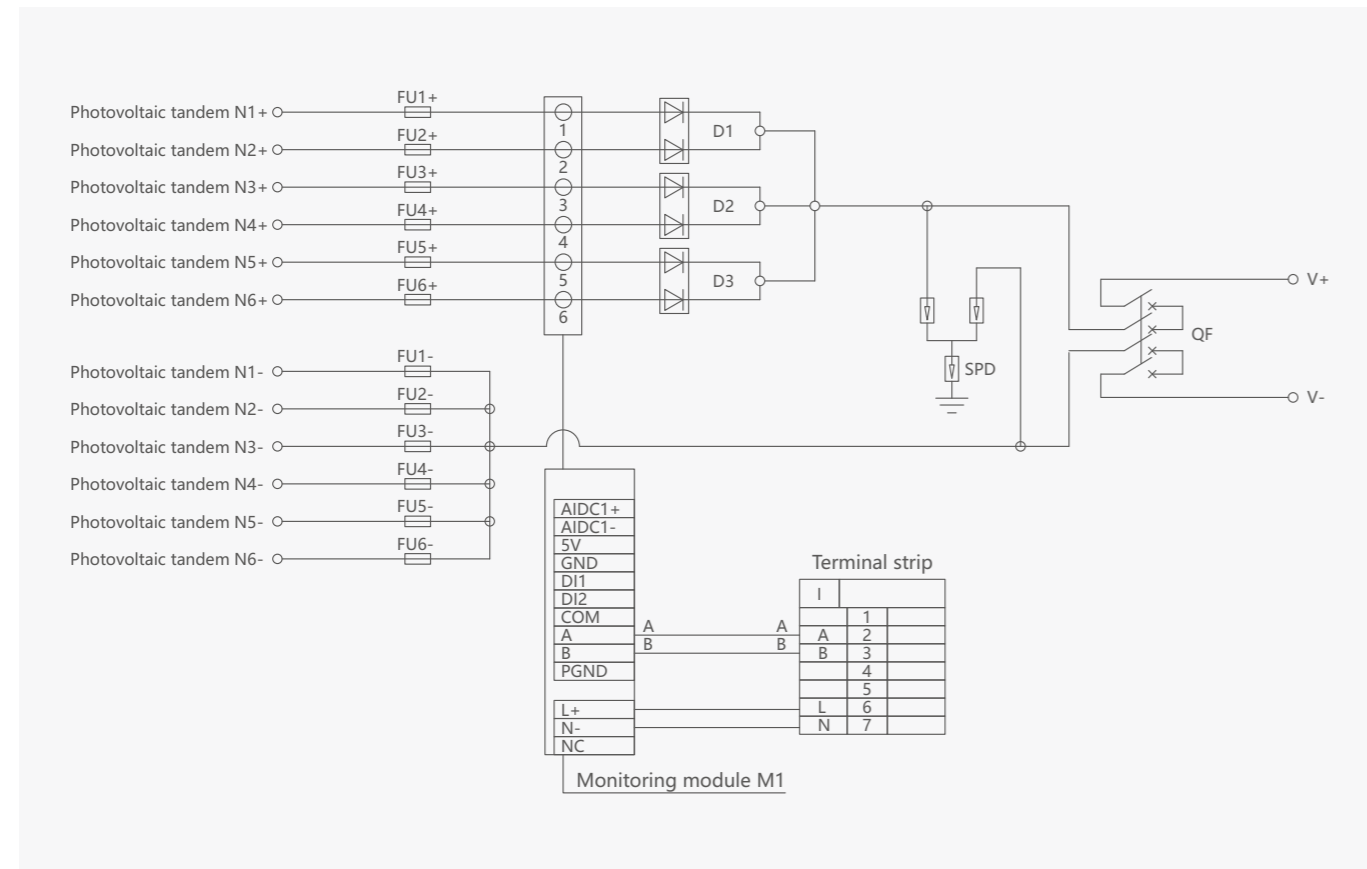
## Photovoltaic DC Solutions

### YCX8-(Fe) Photovoltaic DC Combiner Box

#### Technical data

Model	YCX8-(Fe)						
Maximum DC voltage	DC1500V						
Input/output circuit	6/1	8/1	12/1	16/1	24/1	30/1	50/1
Maximum input current	0~20A						
Maximum output current	105A	140A	210A	280A	420A	525A	750A
Circuit breaker frame current	250A	250A	250A	320A	630A	700A	800A
Protection degree	IP65						
Input switch	DC fuse						
Output switch	DC molded case circuit breaker (standard)/DC isolation switch						
Lightning protection	Standard						
Anti-reverse diode module	Optional						
Monitoring module	Optional						
Joint type	MC4/PG waterproof joint						
Temperature and humidity	Working temperature: -25°C~+55 °C, humidity: 95%, no condensation, no corrosive gas places						
Altitude	2000m						

#### Wiring diagram



## Photovoltaic DC Accessories

### YCX8 Waterproof Terminal Box



#### General

It is suitable for special occasions such as waterproof, dustproof and anti-corrosion.  
Standard: IEC60529 EN 60309.  
Protection class: IP65.

#### Selection

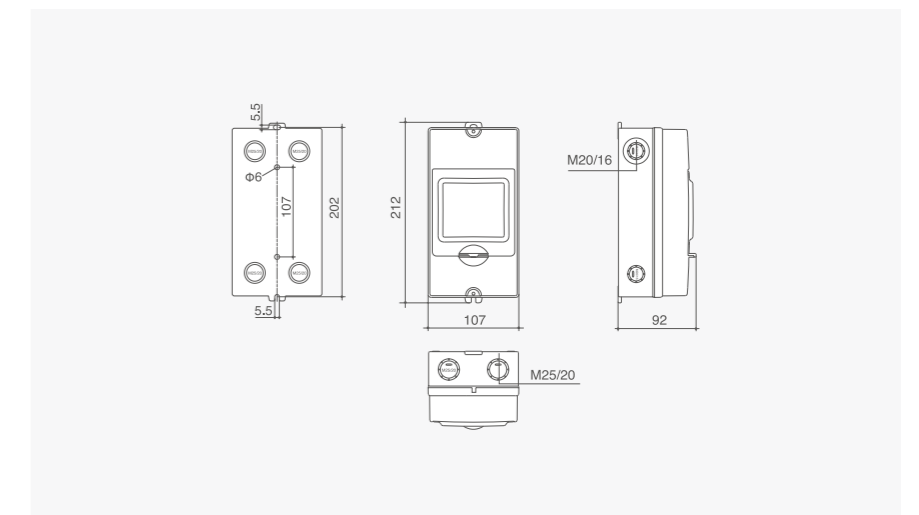
YCX8	8
Model	Number of shell circuits
Plastic distribution box	4, 6, 9, 12, 18, 24, 36

#### Technical data

Name	Data
Max. Rated insulation voltage AC/DC	AC1000V/DC1500V
Impact strength(IK degree)	IK08
Type of protection(IP degree)	IP65
Number of modules	4/6/9/12/18/24/36
Flammability class according with UL94 (Base part)	V0
Glow-wire flammability according to IEC/EN 60695-2-11 (Base part)	960°C
Ambient temperature	-25-+80°C
Base/Cover unit material	Polycarbonate

#### Overall and mounting dimensions(mm)

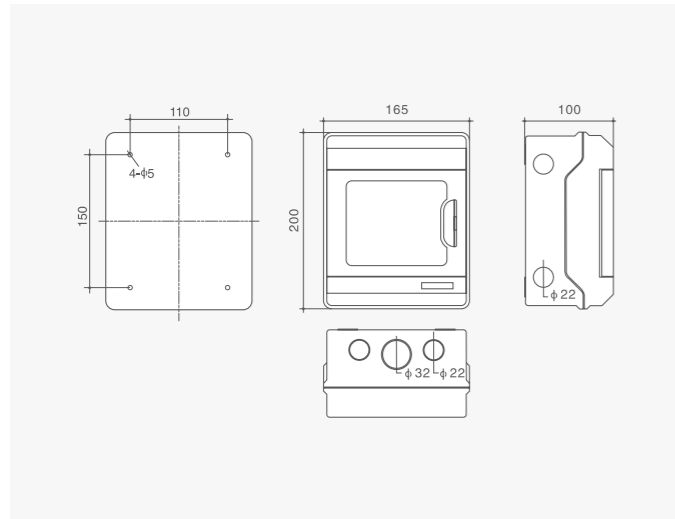
YCX8-4



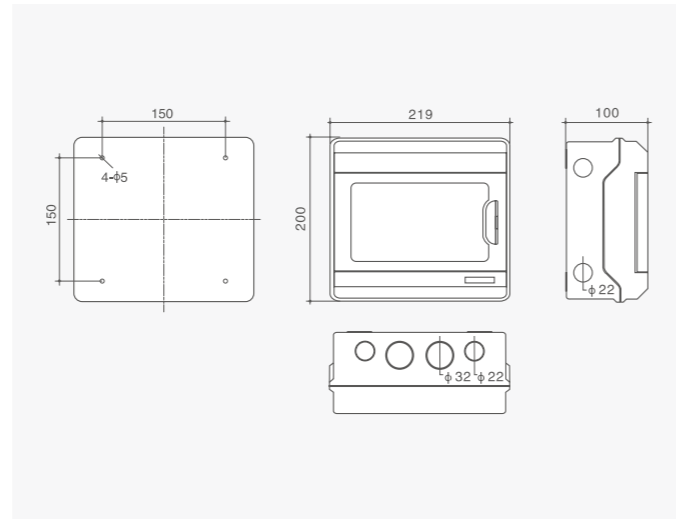


## Photovoltaic DC Accessories YCX8 Waterproof Terminal Box

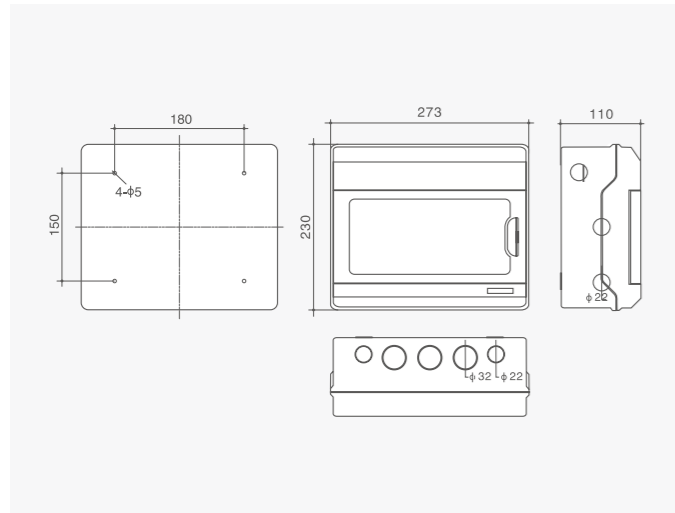
YCX8-6



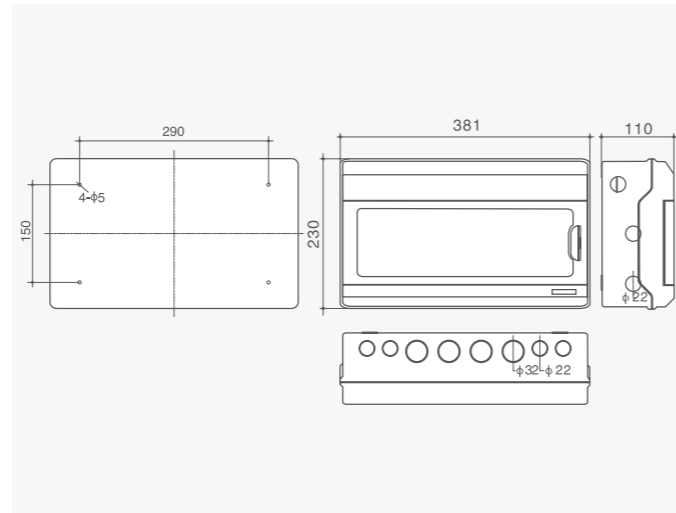
YCX8-9



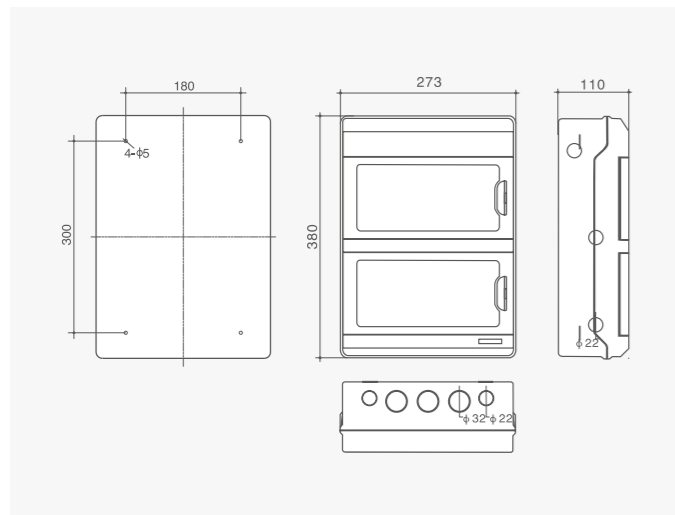
YCX8-12



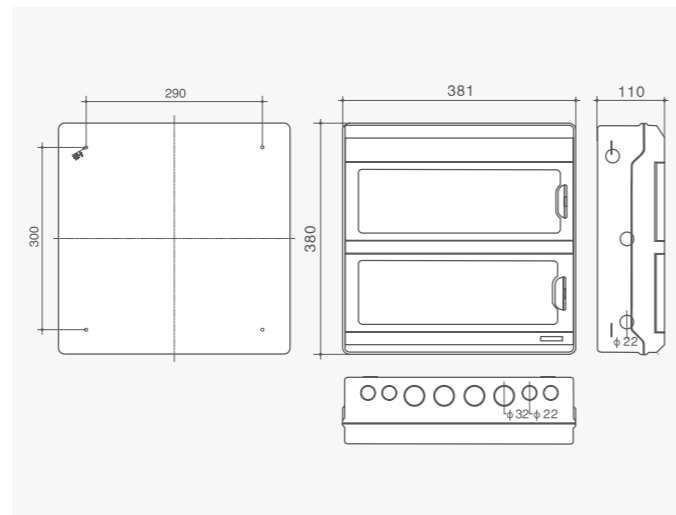
YCX8-18



YCX8-24



YCX8-36



## Photovoltaic DC Accessories YCX8-T Waterproof Electrical Box



### General

It is suitable for special occasions such as waterproof, dustproof and anti-corrosion. Protection class: IP67.

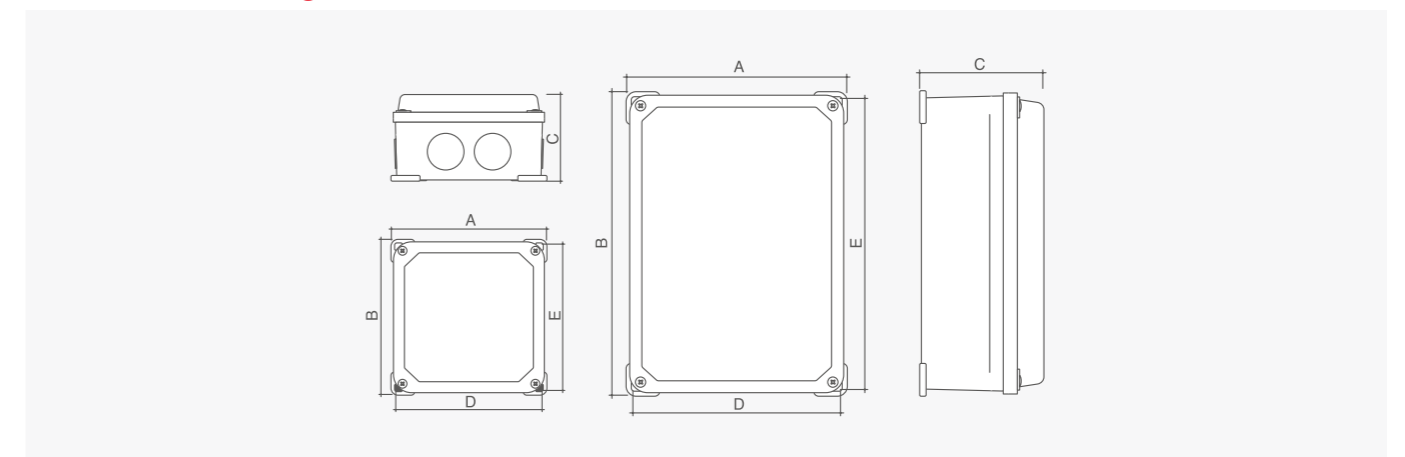
### Selection

YCX8	T	858575	Corresponding overall dimensions(mm)				
Model	Box type	Dimension	A	B	C	D	E
Plastic distribution box	T: Electrical box (transparent cover)	858575	85	85	75	74	74
		111180	110	110	80	104	104
		131390	130	130	90	124	124
		131890	130	180	90	154	154
		161690	160	160	90	154	154
		162111	160	210	110	154	204
		162112	160	210	120	154	204
		182511	180	250	110	174	244
		182511	180	250	120	174	244
		202011	200	200	110	194	194
		202012	200	200	120	194	194
		212911	210	290	110	204	284
212912	210	290	120	204	284		

### Technical data

Name	Data
Max. Rated insulation voltage AC/DC	AC1000V/DC1500V
Impact strength(IK degree)	IK10
Type of protection(IP degree)	IP67
Flammability class according with UL94 (Base part)	V0
Glow-wire flammability according to IEC/EN 60695-2-11 (Base part)	960°C
Ambient temperature	-25-+80°C
Base/Cover unit material	Polycarbonate

### Overall and mounting dimensions(mm)



## YCX8-R Fully Plastic Sealed Box



### General

Waterproof, dustproof, corrosion-resistant, high-strength insulation. Holes can be opened at will according to user needs, with complete specifications and easy installation.

Standards: IEC60529 En60309.

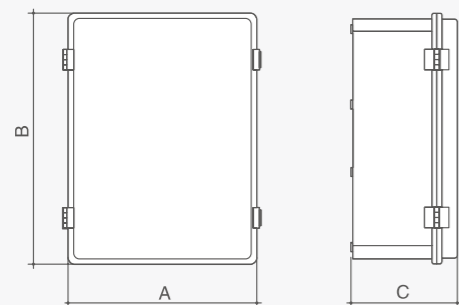
Protection class: IP66.

### Selection

YCX8	R	ABS	A	M	858575	Corresponding overall dimensions(mm)						
Model	Box type	Material	Door type	Other functions	Dimension	A	B	C				
Plastic distribution box	R: Fully plastic sealed box	PC: Polycarbonate ABS: ABS	A: transparent door B: grey door	/:non M: with inner door	203017	200	300	170	Plastic Hinge Type			
					304017	300	400	170				
					405020	400	500	200				
					406022	400	600	220				
					101590	100	150	90				
					121790	125	175	90				
								151590	150	150	90	Stainless Steel Hinge Type
								162110	160	210	100	
								172711	175	275	110	
								203013	200	300	130	
								253515	250	350	150	
								334318	330	430	180	
								435320	430	530	200	
								436323	430	630	230	
								537325	530	730	250	
								638328	630	830	280	

Note: Adding a base plate or opening requires additional costs, please contact us

### Overall and mounting dimensions(mm)



### Technical data

Name	Data
Max. Rated insulation voltage AC/DC	AC1000V/DC1500V
Impact strength(IK degree)	IK08
Type of protection(IP degree)	IP66
Number of modules	4/6/9/12/18/24/36
Flammability class according with UL94 (Base part)	V0
Glow-wire flammability according to IEC/EN 60695-2-11 (Base part)	960°C
Ambient temperature	-25-+80°C
Base/Cover unit material	Polycarbonate

## Photovoltaic Cables And Connectors



## MC4 Series

### General

Mainly used for the connection of solar panels and inverters. With a withstand voltage of up to DC1500V and using the new standard photovoltaic connector IEC62852

### Features

- Makes photovoltaic power generation safer
- Quick connection of photovoltaic cables and easy to install
- Extremely low contact resistance
- Waterproof and dustproof design
- Excellent resistance to high and low temperatures, fire, and UV radiation

### Selection

MC4	P
Model	Installation category
Photovoltaic Special Connector	/: Plug-inconnection P: Panel installation connection Hard connection: Lt2: 1-to-2 Lt3: 1-to-3 Lt4: 1-to-4 Lt5: 1-to-5 Lt6: 1-to-6 Soft connection: LTY2: 1-to-2 LTY3: 1-to-3 LTY4: 1-to-4

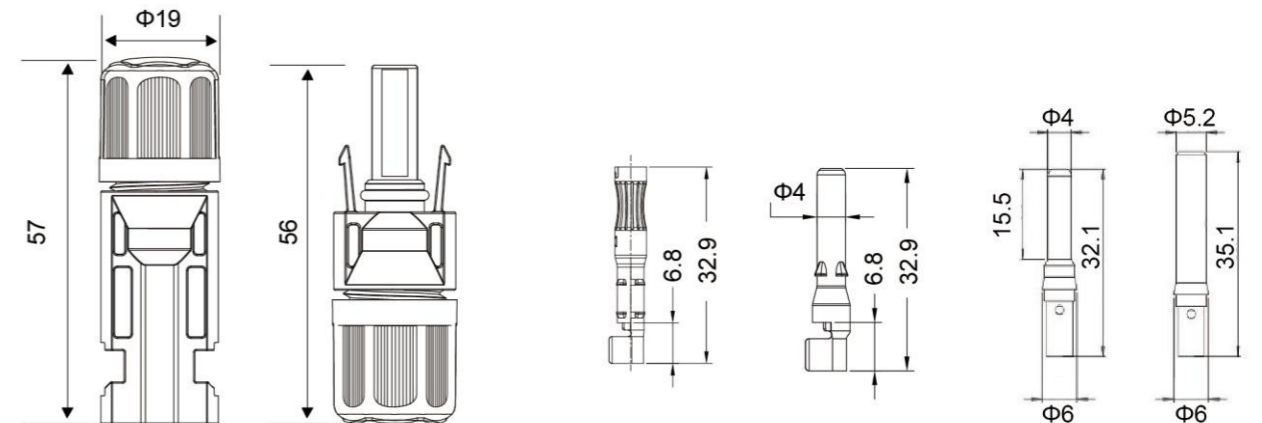


## MC4 Photovoltaic Connector

### Technical data

Connector system	Φ4mm
Rated voltage	1000V DC (IEC)
Rated current	17A (1.5mm <sup>2</sup> ) 22A (2.5mm <sup>2</sup> ; 14AWG) 30A (4mm <sup>2</sup> ; 6mm <sup>2</sup> ; 12AWG, 10AWG)
Test voltage	6kV (50Hz, 1min)
Ambient temperature range	-40°C...+90°C (IEC) -40°C...+75°C (UL)
Upper limiting temperature	+105°C (IEC)
Protection degree, mated	IP67
Touch protection level, unmated	IP2X
Contact resistance of plug connectors	0.5mΩ
Safety class	II
Contact material	Messing, verzinkt Copper Alloy, tin plated
Insulation material	PC/PPO
Locking system	Snap-in
Flame class	UL-94-Vo
Salt mist spray test, degree of severity 5	IEC 60068-2-52

### Overall and mounting dimensions(mm)



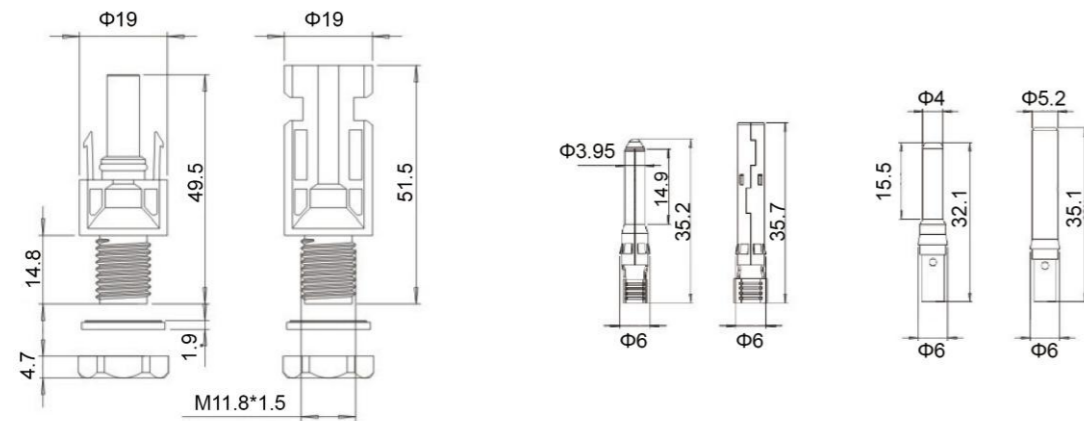
## Photovoltaic DC Accessories

### MC4-P Photovoltaic Connector (Board-end type)

#### Technical data

Connector system	Φ4mm
Rated voltage	1000V DC (IEC)
Rated current	17A (1.5mm <sup>2</sup> ) 22A (2.5mm <sup>2</sup> ; 14AWG) 30A (4mm <sup>2</sup> ; 6mm <sup>2</sup> ; 12AWG, 10AWG)
Test voltage	6kV (50Hz, 1min)
Ambient temperaturerange	-40°C...+90°C (IEC) -40°C...+75°C (UL)
Upper limiting temperature	+105°C (IEC)
Protection degree, mated	IP67
Touch protection level, unmated	IP2X
Contact resistance of plug connectors	0.5mΩ
Safety class	II
Contact material	Messing, verzinkt Copper Alloy, tin plated
Insulation material	PC/PPO
Locking system	Snap-in
Flame class	UL-94-Vo
Salt mist spray rest, degree of severity 5	IEC 60068-2-52

#### Overall and mounting dimensions(mm)



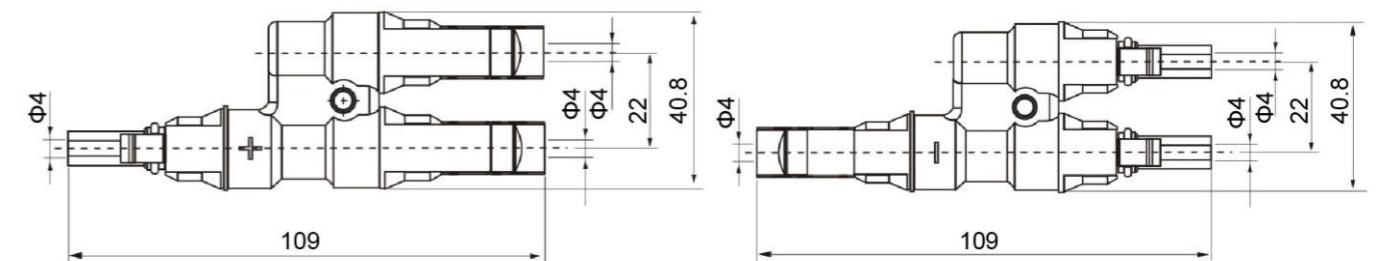
## Photovoltaic DC Accessories

### MC4-LT2 Photovoltaic Connector (Hardconnection)

#### Technical data

Insulation material	PPO
Contact material	Copper, Tin plated
Suitable current	50A
Rated voltage	1000V (TUV) 600V (UL)
Test voltage	6kV (TUV50Hz, 1min)
Contact resistance	< 0.5mΩ
Protection degree	IP67
Ambient temperature range	-40°C~+85°C
Flame class	UL 94-V0
Safety class	II
Pin dimensions	Φ4mm

#### Overall and mounting dimensions(mm)

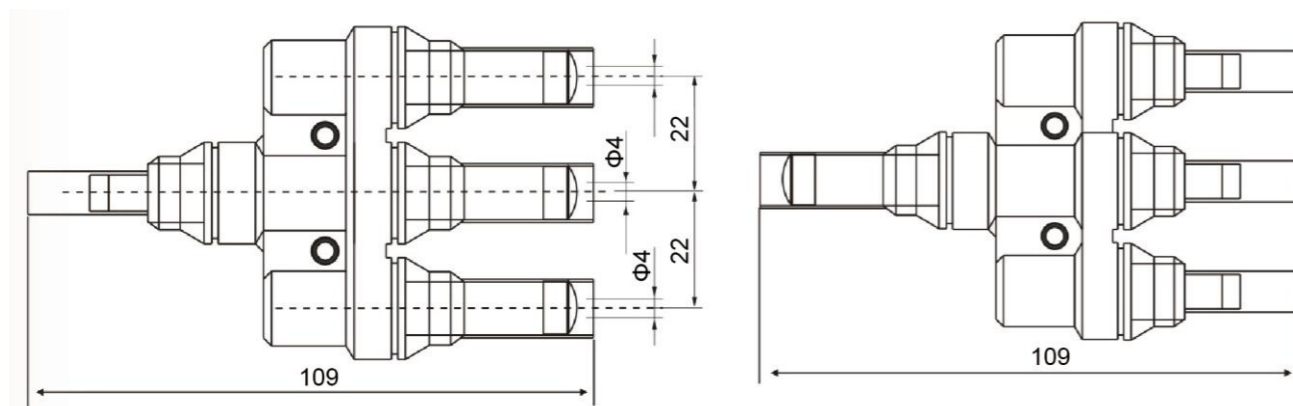


## MC4-LT3 Photovoltaic Connector (Hardconnection)

### Technical data

Insulation material	PPO
Contact material	Copper, Tin plated
Suitable current	50A
Rated voltage	1000V (TUV) 600V (UL)
Test voltage	6kV (TUV50Hz, 1min)
Contact resistance	< 0.5mΩ
Protection degree	IP67
Ambient temperature range	-40°C~+85°C
Flame class	UL 94-VO
Safety class	II
Pin dimensions	Φ4mm

### Overall and mounting dimensions(mm)

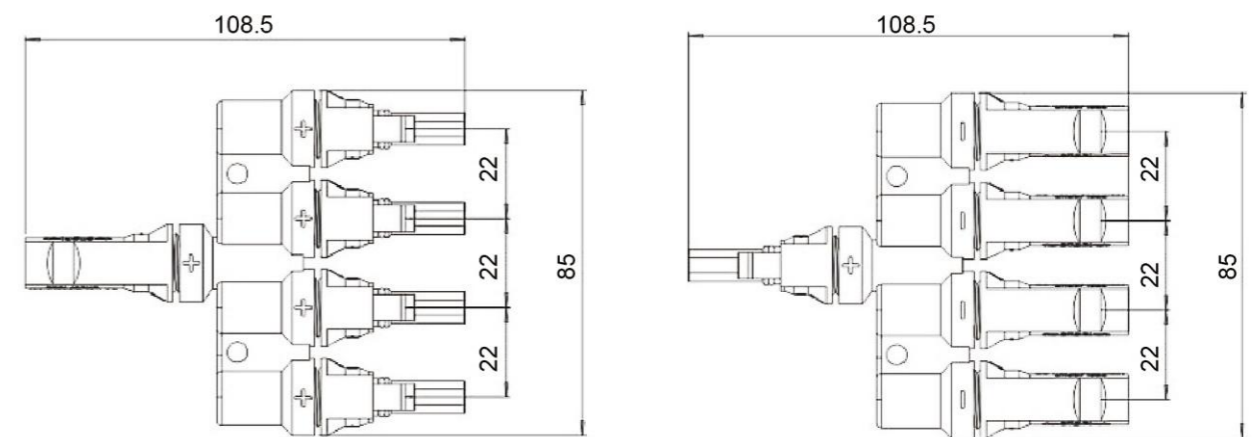


## MC4-LT4 Photovoltaic Connector (Hardconnection)

### Technical data

Insulation material	PPO
Contact material	Copper, Tin plated
Suitable current	30A
Rated voltage	1000V (TUV) 600V (UL)
Test voltage	6kV (TUV50Hz, 1min)
Contact resistance	< 0.5mΩ
Protection degree	IP67
Ambient temperature range	-40°C~+85°C
Flame class	UL 94-VO
Safety class	II
Pin dimensions	Φ4mm

### Overall and mounting dimensions(mm)



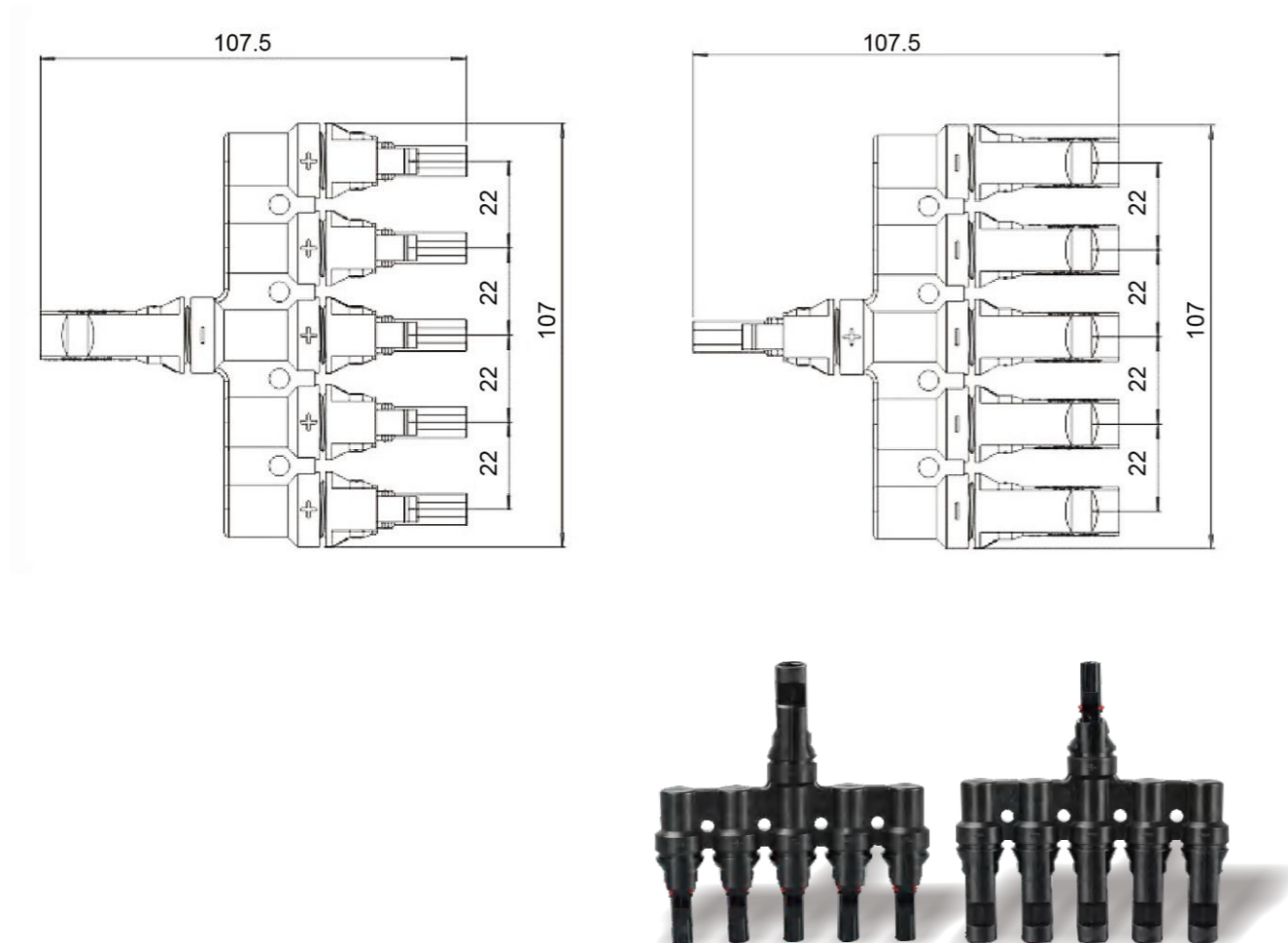


## MC4-LT5 Photovoltaic Connector (Hardconnection)

### Technical data

Insulation material	PPO
Contact material	Copper, Tin plated
Suitable current	30A
Rated voltage	1000V (TUV) 600V (UL)
Test voltage	6kV (TUV50Hz, 1min)
Contact resistance	< 0.5mΩ
Protection degree	IP67
Ambient temperature range	-40°C~+85°C
Flame class	UL 94-VO
Safety class	II
Pin dimensions	Φ4mm

### Overall and mounting dimensions(mm)

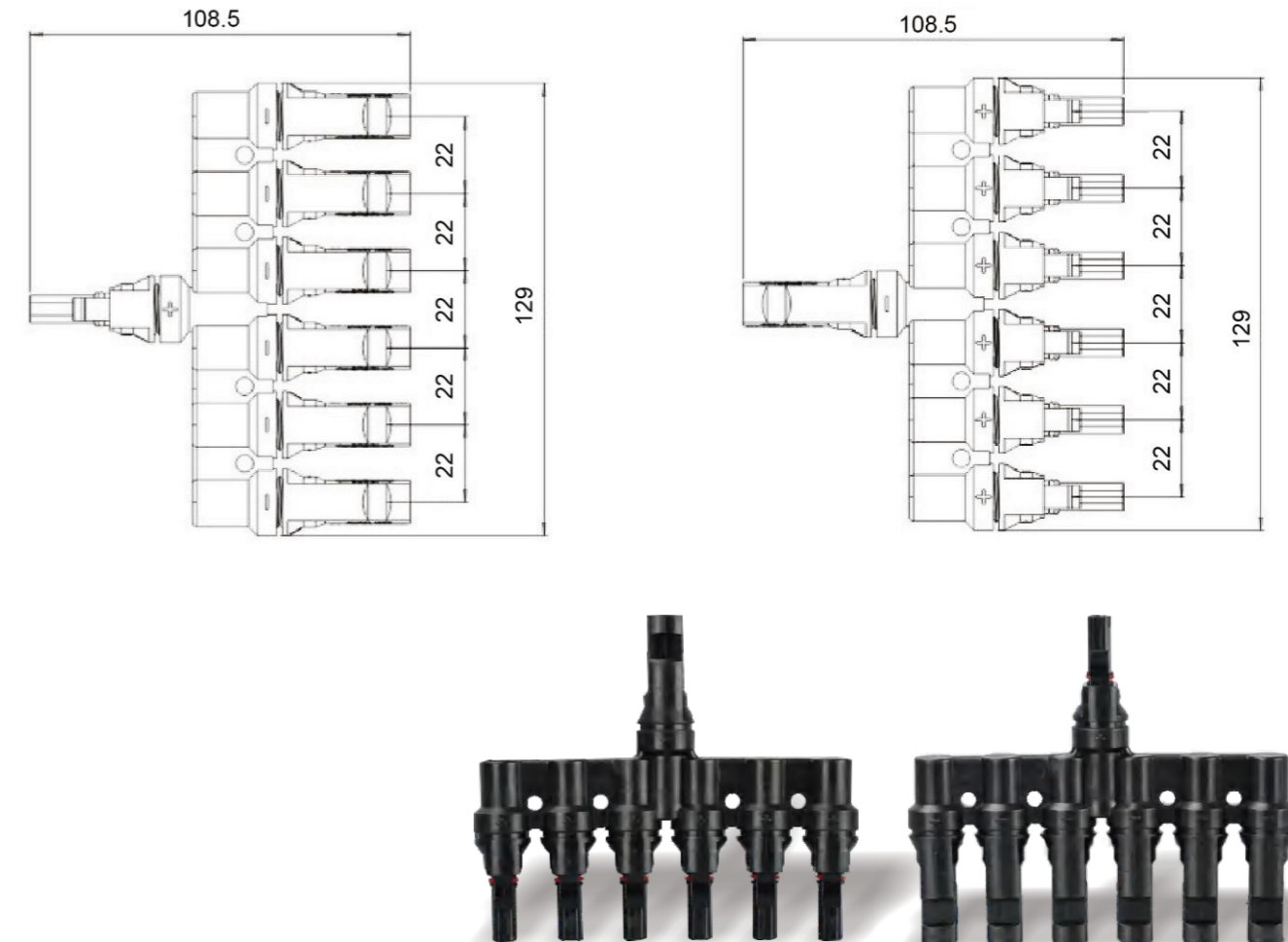


## MC4-LT6 Photovoltaic Connector (Hardconnection)

### Technical data

Insulation material	PPO
Contact material	Copper, Tin plated
Suitable current	50A
Rated voltage	1000V (TUV) 600V (UL)
Test voltage	6kV (TUV50Hz, 1min)
Contact resistance	< 0.5mΩ
Protection degree	IP67
Ambient temperature range	-40°C~+85°C
Flame class	UL 94-VO
Safety Class	II
Pin Dimensions	Φ4mm

### Overall and mounting dimensions(mm)



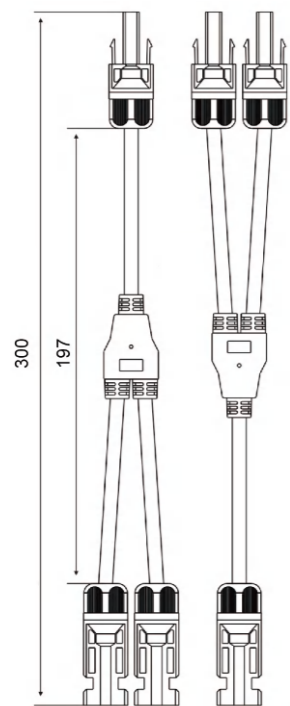
## Photovoltaic DC Accessories

### MC4-LTY2 Photovoltaic Connector (Softconnection)

#### Technical data

Connector system	Φ4mm
Rated voltage	1000VDC (IEC)
Rated current	30A
Test voltage	6kV (50Hz, 1min)
Ambient temperature range	-40°C...+90°C (IEC) -40°C...+75°C (UL)
Upper limiting temperature	+105°C (IEC)
Protection degree	IP67
Touch protection level, unmated	IP2X
Contact resistance of plug connectors	0.5mΩ
Safety class	II
Contact material	Messing, verzinkt Copper Alloy, tin plated
Insulation material	PC/PA
Locking system	Snap-in
Flame class	UL-94-VO
Salt mist spray test, degree of severity 5	IEC 60068-2-52

#### Overall and mounting dimensions(mm)



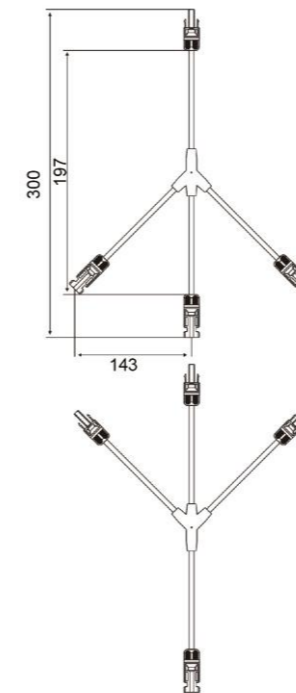
## Photovoltaic DC Accessories

### MC4-LTY3 Photovoltaic Connector (Softconnection)

#### Technical data

Connector system	Φ4mm
Rated voltage	1000VDC (IEC)
Rated current	30A
Test voltage	6kV (50Hz, 1min)
Ambient temperature range	-40°C...+90°C (IEC) -40°C...+75°C (UL)
Upper limiting temperature	+105°C (IEC)
Protection degree, mated	IP67
Touch protection level, unmated	IP2X
Contact resistance of plug connectors	0.5mΩ
Safety class	II
Contact material	Messing, verzinkt Copper Alloy, tin plated
Insulation material	PC/PA
Locking system	Snap-in
Flame class	UL-94-VO
Salt mist spray test, degree of severity 5	IEC 60068-2-52

#### Overall and mounting dimensions(mm)



## MC4-LTY4 Photovoltaic Connector (Softconnection)

### Technical data

Connector system	Φ4mm
Rated voltage	1000VDC (IEC)
Rated current	30A
Test voltage	6kV (50Hz, 1min)
Ambient temperaturerange	-40°C...+90°C (IEC) -40°C...+75°C (UL)
Upper limiting temper ature	+105°C (IEC)
Protection degree, mated	IP67
Touch protection level, unmated	IP2X
Comtact resistance of plug connectors	0.5mΩ
Safety class	II
Contact material	Messing, verzinnt Copper Alloy, tin plated
Insulation material	PC/PA
Locking system	Snap-in
Flame class	UL-94-VO
Salt mist spray test, degree of severity 5	IEC 60068-2-52

### Overall and mounting dimensions(mm)



## Photovoltaic DC Cable



### General

Solar PV Cable is mainly used to interconnect solar panels and inverters in solar system. We use the XLPE material for insulation and jacket so that the cable can resist sun irradiate, it also can be used in high and low temperature environment.

### Features

Cable Full Name:

Halogen-free low smoke cross-linked polyolefin insulated and sheathed cables for photovoltaic power generation systems.

Conductor Structure:

En60228 (IEC60228) Type five conductor and must be tinned copper wire.

Cable Color:

Black or Red (The insulation material shall be extruded halogen-free material, which shall be composed of one layer or several tightly adhered layers. The insulation shall be solid and uniform in material, and the insulation itself, the conductor and the tin layer shall be as for as possible not damaged when the insulation is peeled off)

Cable Characteristics Double insulated construction, Higher systems bear voltage, UV radiation, Low and High tem-perature resistant environment.

### Selection

PV-15	1.5
Model	Wire diameter
Photovoltaic cable PV10: DC1000 PV10: DC1500	1.5mm <sup>2</sup> 2.5mm <sup>2</sup> 4mm <sup>2</sup> 6mm <sup>2</sup> 10mm <sup>2</sup> 16mm <sup>2</sup> 25mm <sup>2</sup> 35mm <sup>2</sup>

### Technical data

Rated voltage	AC : U <sub>0</sub> /U=1.0/1.0KV , DC:1.5KV
Voltage test	AC : 6.5KV DC:15KV,5min
Ambient temperature	-40°C~90°C
Maximum conductor temperature	+120°C
Service life	> 25 years (-40°C~+90°C)
Reference short-circuit allowable temperature	200°C 5 (seconds)
Bending radius	IEC60811-401:2012,135±2/168h
Compatibility test	IEC60811-401:2012,135±2/168h
Acid and alkali resistance test	EN60811-2-1
Cold bending test	IEC60811-506
Damp heat test	IEC60068-2-78
Sunlight resistance tTest	IEC62930
Cable ozone resistance test	IEC60811-403
Flame retardant test	IEC60332-1-2
Smoke density	IEC61034-2,EN50268-2
Evaluate all non-metallic materials for halogens	IEC62821-1

## Photovoltaic DC Cable

### Extension cord customization (1000V, 1500V)

• 2.5m<sup>2</sup> • 4m<sup>2</sup> • 6m<sup>2</sup>



## Photovoltaic DC Cable

### Details

