

## Photovoltaic DC Components

### 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 (Only type S)	
		2: 2P			DC600 Dc1000		
		3: 3P			Dc1500 (Only type S)		

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#### Technical data

Model	YCS8			
Standard	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 Ucpv	600VDC	1000VDC	600VDC	1000VDC
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	2.2	3.6
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			

Note: 2P can be customized other voltage

## Photovoltaic DC Components

### YCS8-□ Photovoltaic DC Surge Protective Device

#### Technical data

Model	YCS8-S					
Standard	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					

Note: 2P can be customized other voltage

#### Failure release device, Alarm release device

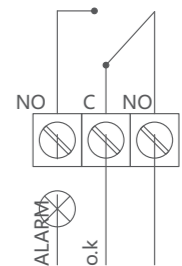
##### Failure release device

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

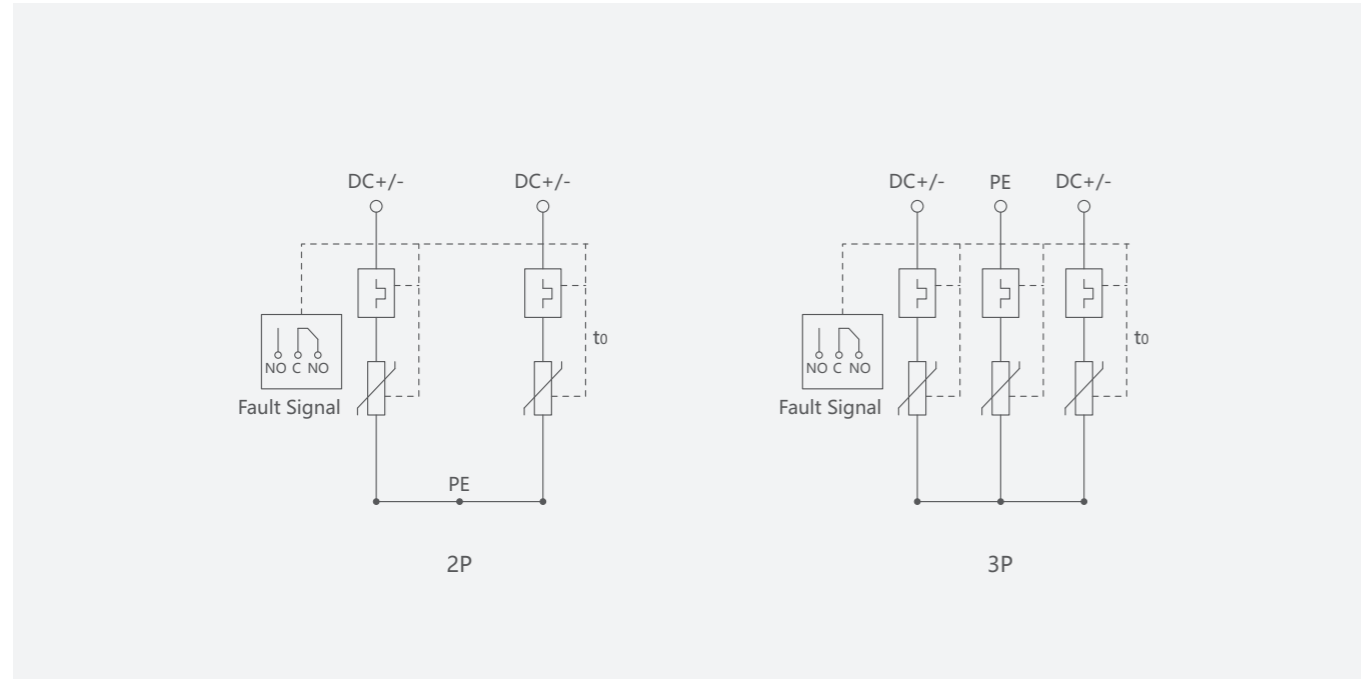
The protector can be made into a variety with remote signaling contacts. The remote signaling contacts have a set of normally open and normally closed contacts. When the protector works normally, the normally closed contacts are connected. If one or more modules of the protector fail, the contact will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



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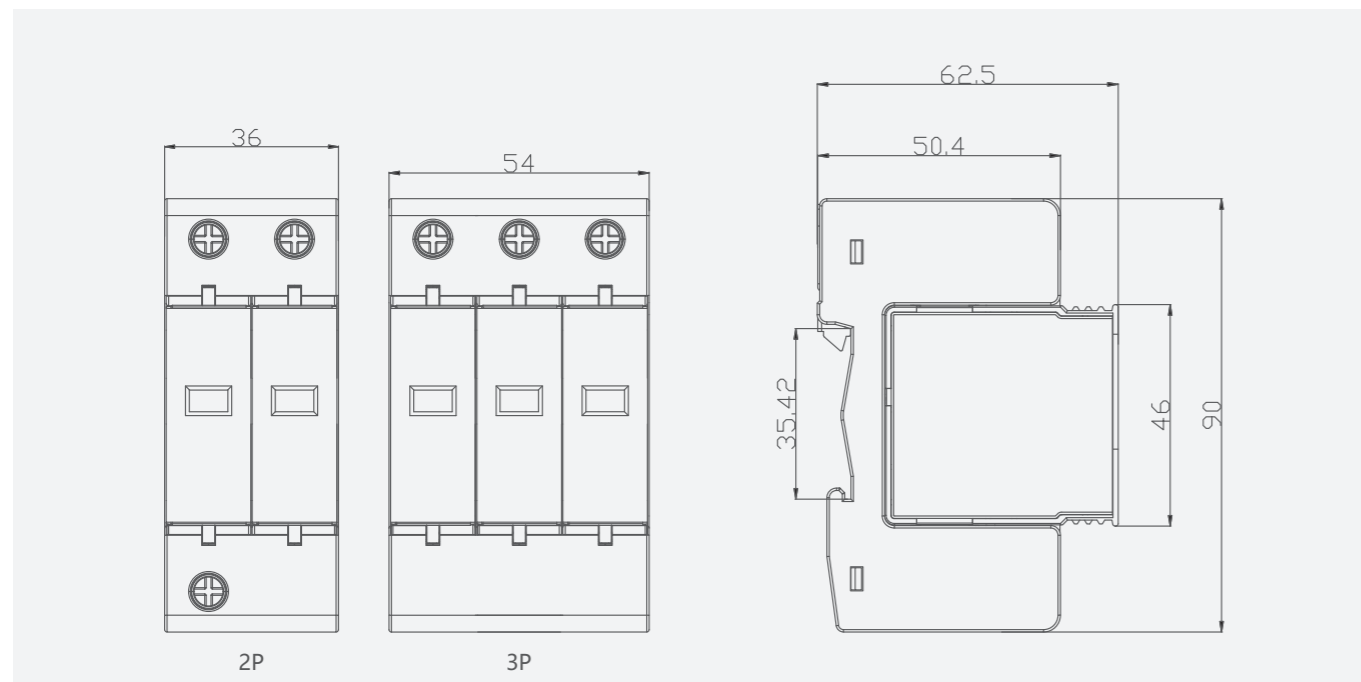
**YCS8-□ Photovoltaic DC Surge Protective Device**

**Wiring diagram**



**Overall and mounting dimensions(mm)**

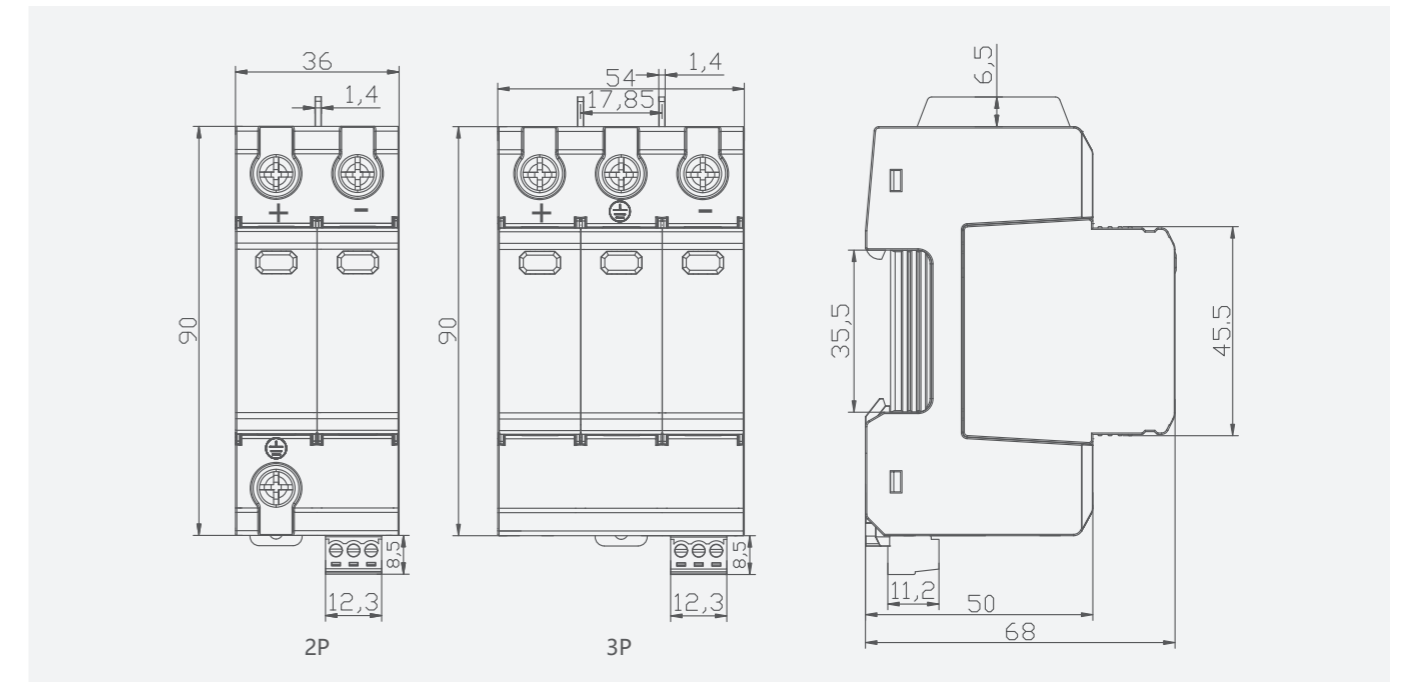
YCS8



**Photovoltaic DC Components**

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

YCS8-S



YCS8-S DC1500

