

SUP2H1-PV Photovoltaic Surge Protective Device



The Cooper suntree three-module photovoltaic Surge Protective Device (SPD) (with three-step DC switching device) features visual indication and optional remote contact signaling (floating changeover contact) for use in PV systems.

These complete surge protective devices are suitable for all PV systems in accordance with IEC 60364-7-712. Includes a five year limited warranty.

These prewired solutions consist of a base and locking modules that feature a combined disconnection and short-circuiting (shunting) device with safe electrical isolation to prevent fire damage due to DC arcs. An integrated DC fuse allows safe module replacement without arc formation.

In case of insulation faults in the generator circuit, a reliable and tested fault-resistant Y circuit prevents damage to the surge protective devices.

The green and red visual indicator flags show the module protective status (green = good, red = replace). Apart from this visual indication, the remote signaling option features a three terminal floating changeover contact that can be used as a make or break contact depending on the particular monitoring system design employed.

Visual Status Indication

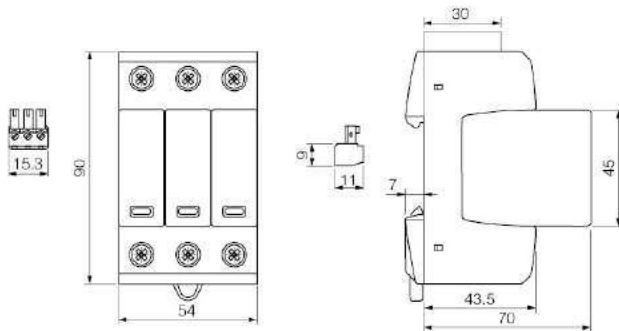


Remote Signal Contact Available

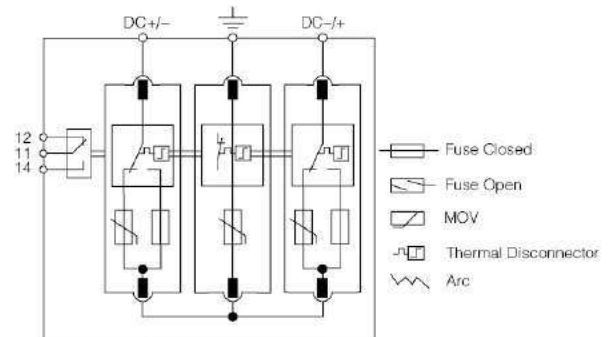


CE TÜV ROHS

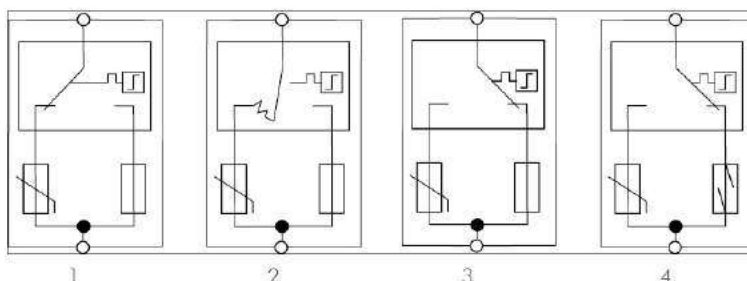
Dimensions(mm)



Module Circuit Diagrams



Short-Circuit Interrupting (SCI) Technology



1. Original State
2. Disconnection Device Response
3. Arc Extinguishes
4. Safe Electrical Isolation

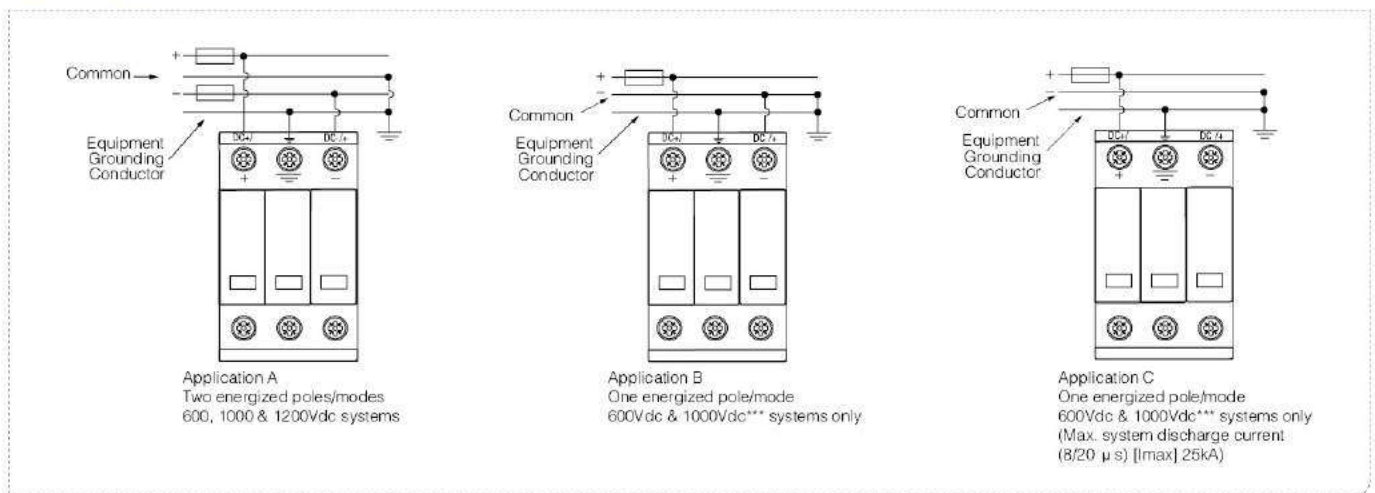
Specifications

UCPV(V DC)		1000V	1200V	1500V
Max System Discharge Current (8/20 μs) [Imax]		40kA	40kA	40kA
Voltage Protection Level [UP]		≤4.0kV	≤4.5kV	≤4.5kV
Voltage Protection Level at 5kA [UP]		≤3.6kV	≤4.0kV	≤5.0kV
Integrated Fuse Breaking Capacity/Interrupting Rating		40kA/1000Vdc	40kA/1200Vdc	40kA/1500Vdc
Technology		Short-Circuit Interruption (SCI) Overcurrent Protection		
Operating Temperature Range [TU]		-40°C to +80°C		
Nominal Discharge Current (8/20 μs) [(DC+/DC-) --> PE] [In]		20kA		
Response Time [tA]		<25ns		
Operating State/Fault Indication		Green (good)/Red (replace)		
Conductor Ratings and Cross-Sectional Area:	Minimum	60/75°C 1.5mm ² /14AWG Solid/Flexible		
	Maximum	60/75°C 35mm ² /2AWG Stranded/25mm ² /4AWG Flexible		
Mounting		35mm DIN Rail per EN 60715		
Enclosure Material		UL 94V0 Thermoplastic		
Degree of Protection		IP20		
Capacity		3 Modules, DIN 43880		
Standards Information:		IEC 61643-11 Type 2, IEC 61643-1 Class II		
Product Warranty		Five Years**		

Remote Contact Signaling

Remote Contact Signaling Type	Changeover Contact
AC Switching Capacity (Volts/Amps)	250V/0.1A
DC Switching Capacity (Volts/Amps)	250V/0.1A; 125V/0.2A; 75V/0.5A
Conductor Ratings and Cross-Sectional Area for Remote	60/75°C Max. 1.5mm ² /14AWG Solid/Flexible
Contact Signal Terminals	
Ordering Information	Order from Catalog Numbers Above

Typical Application Schematics



* Does not apply to 1200Vdc.

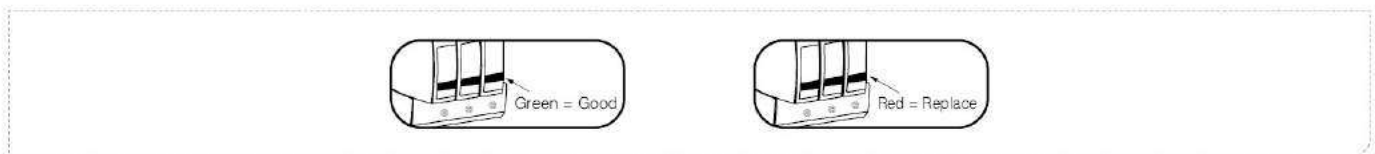
1. Use a suitable electrical insulator to keep a 10mm min. safety distance from the PV-SPD and other grounded parts in the housing.
2. No metal covers are in the area of the module release buttons as shown.

Conductors and Busbars for Use in Photovoltaic Systems

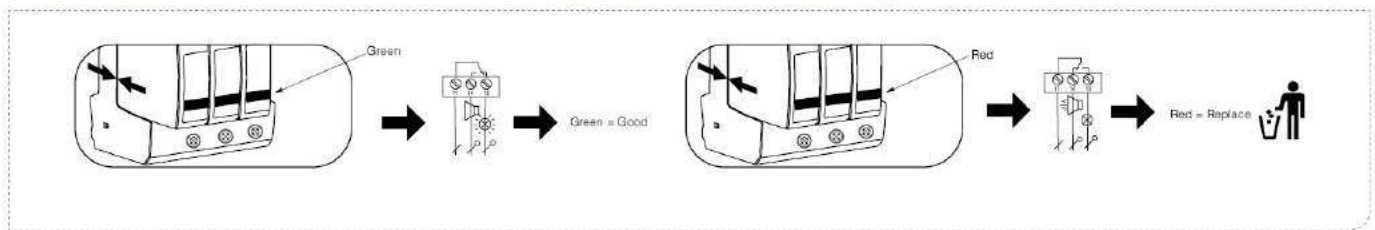
IEC 60364-7-712 (DIN VDE 0100 Part 712)

60/75°C Cu Conductors		
Min. $\square$ DC $\pm$, DC $\pm$, $\downarrow$	1.5mm ² /14AWG	
Max. $\square$ DC $\pm$, DC $\pm$, $\downarrow$	25mm ² /4AWG	35mm ² /2AWG
Busbar	16mm ² Cu 	

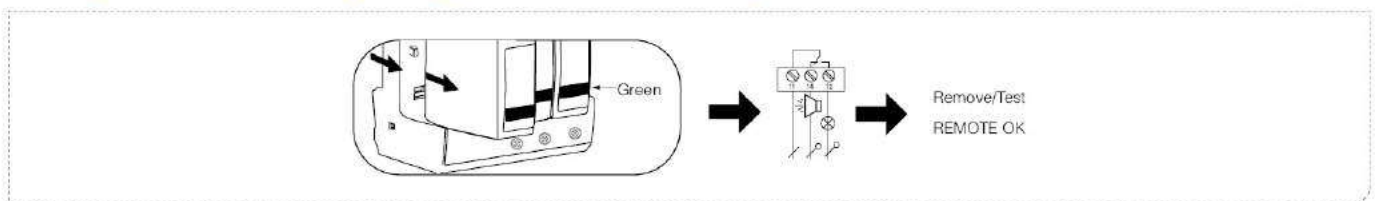
Visual Indication Status



Fault Indication & Remote Contact Signaling (with modules installed)



Testing Remote Contact Signaling (with modules removed)



Remote Contact Signaling

