

The handle connecting rod material you can choose stainless steel, or plastic materials

PV Surge Protector



SUP2-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 

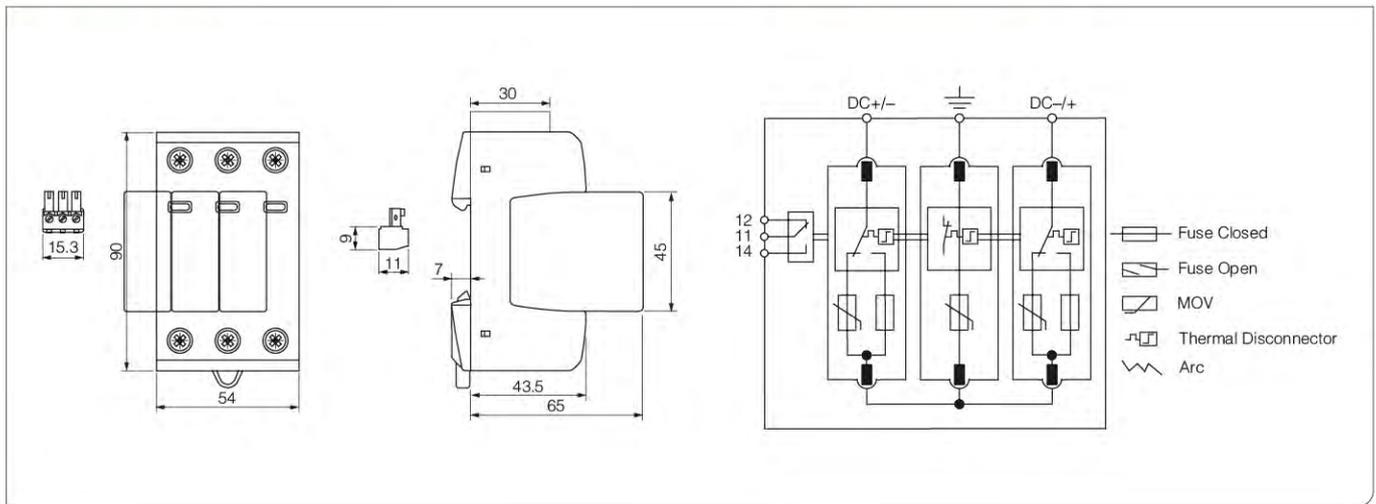
Remote Signal Contact Available 



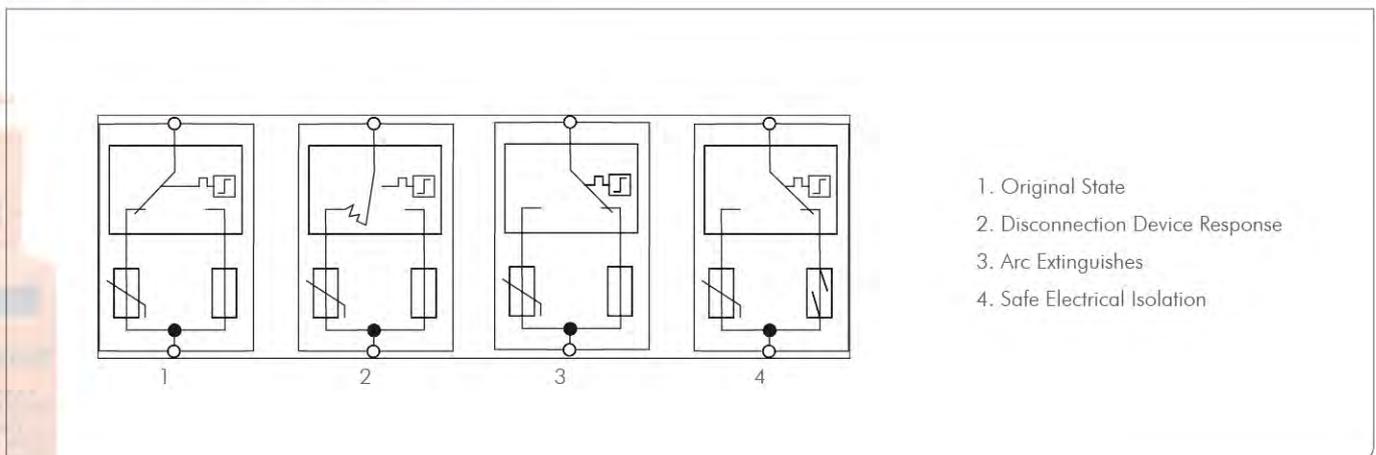
CE  ROHS

Dimensions(mm)

Module Circuit Diagrams



Short-Circuit Interrupting (SCI) Technology



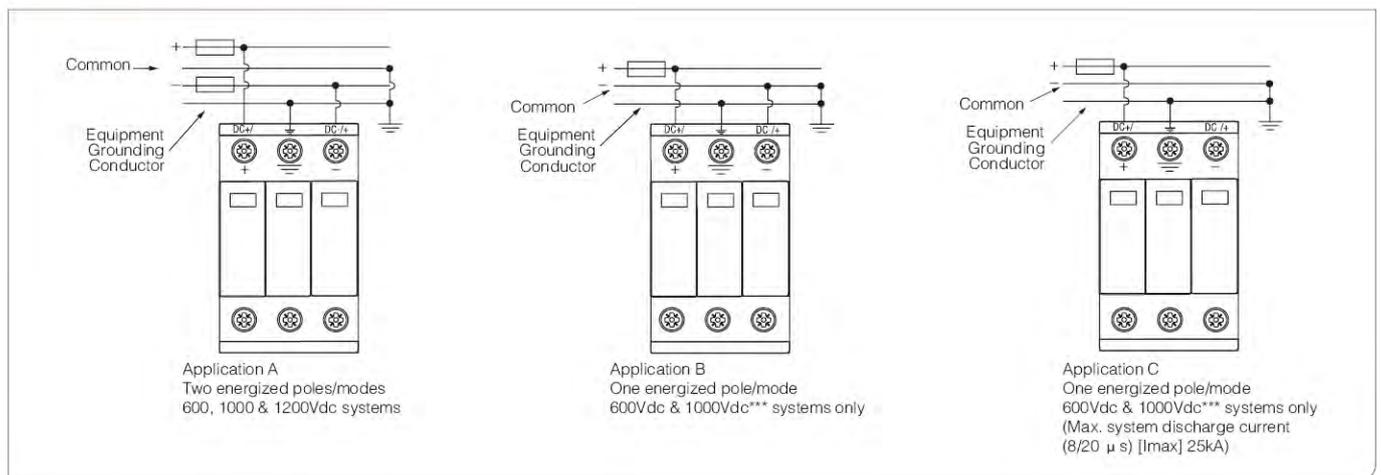
Specifications

Nominal PV System Voltage	1000V	1200V	1500V
MCOV [UCPV]	1170Vdc	1200Vdc	1500Vdc
Max System Discharge Current (8/20 μ s) [I _{max}]	40kA	30kA	30kA
Voltage Protection Level [UP]	≤ 4.0 kV	≤ 4.5 kV	≤ 4.5 kV
Voltage Protection Level at 5kA [UP]	≤ 3.5 kV	≤ 4.0 kV	≤ 4.0 kV
Integrated Fuse Breaking Capacity/Interrupting Rating	30kA/1000Vdc	30kA/1200Vdc	30kA/1500Vdc
Technology	Short-Circuit Interruption (SCI) Overcurrent Protection		
Operating Temperature Range [TU]	-40°C to +80°C		
Nominal Discharge Current (8/20 μ s) [(DC+/DC-) --> PE] [I _n]	12.5kA		
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 Contact Signal Terminals	60/75°C Max. 1.5mm ² /14AWG Solid/Flexible
Ordering Information	Order from Catalog Numbers Above

Typical Application Schematics



* Does not apply to 1200Vdc.

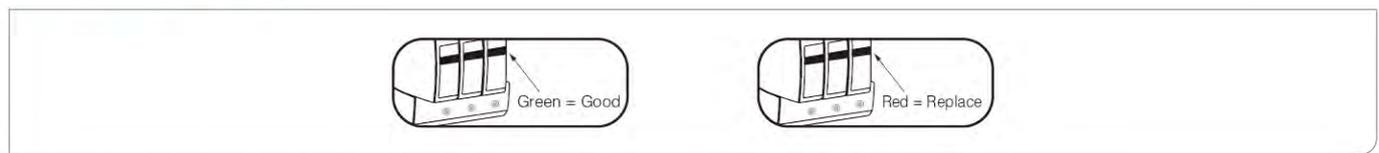
1. Use a suitable electrical insulator to keep a 10mm min. safety distance from the PV-SPD and other grounded parts in the housing.
2. No metal covers are in the area of the module release buttons as shown.

Conductors and Busbars for Use in Photovoltaic Systems

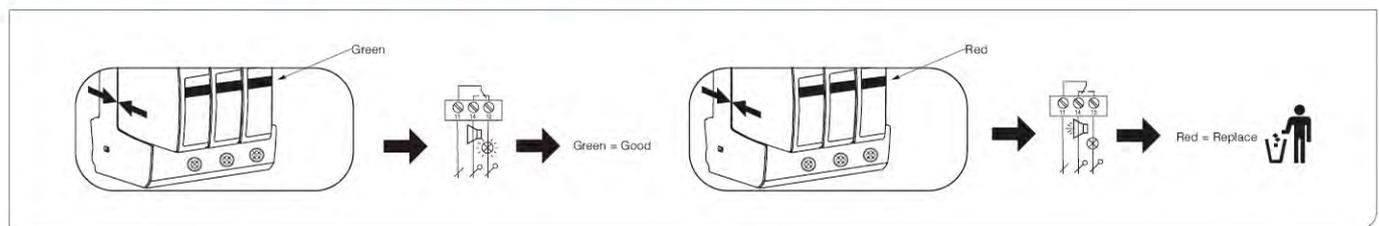
IEC 60364-7-712 (DIN VDE 0100 Part 712)

60/75°C Cu Conductors		
Min. □ DC±, DC±, ±	1.5mm ² /14AWG	
Max. □ DC±, DC±, ±	25mm ² /4AWG	35mm ² /2AWG
Busbar	16mm ² Cu ≥ 15.5mm	

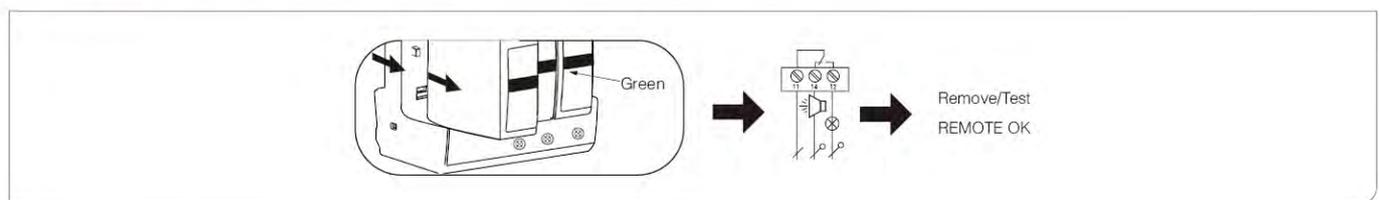
Visual Indication Status



Fault Indication & Remote Contact Signaling (with modules installed)



Testing Remote Contact Signaling (with modules removed)



Remote Contact Signaling

U_N / I_N
AC: 250V/0.5A
AC: 250V/0.1A 125V/0.2A 75V/0.5A

60/75° C max. 1.5mm² /14AWG

U_N = Nominal Voltage
 I_N = Nominal Current

= Audio Alarm/Alert
 = PLC / Monitoring System Connection