

Surge Protection Made Simple™

Photovoltaic Applications

Modular DIN Rail SPD Solutions



Type 4



Description

The Cooper Bussmann three-module photovoltaic Surge Protective Device (SPD) features *easyID™* 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 UL 1449 3rd Edition, EN 50539-11 and IEC 60364-7-712. Includes a two year limited warranty.

These prewired solutions consist of a base and modules that feature a disconnection device in the event of an overload.

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.



BSPP _____ YPV(R)

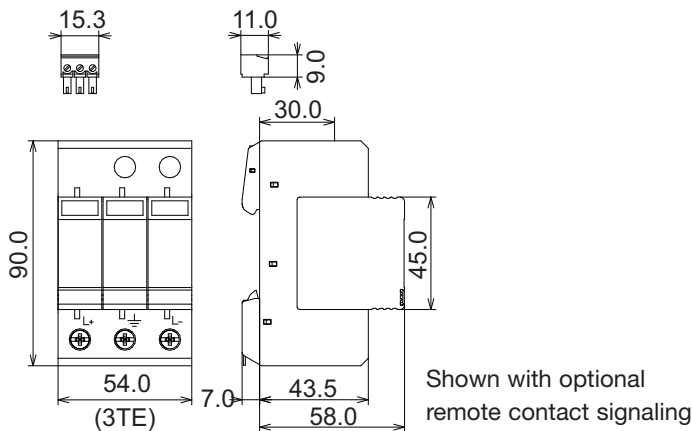
easyID™
Visual Status
Indication



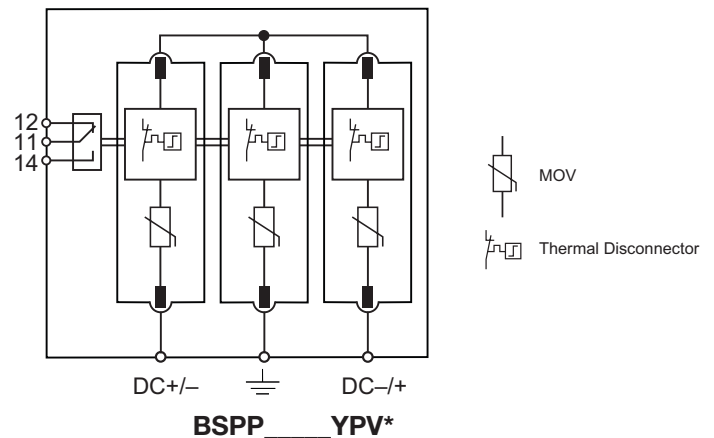
Remote Signal
Contact
Available



Dimensions - mm



Module Circuit Diagrams



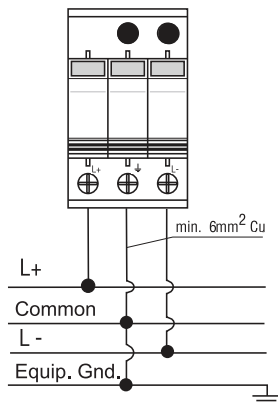
Shown with optional remote contact signaling

* For remote signaling contact, add "R" suffix to the part number.
E.g., BSPP3600YPV**R**

Ordering Information			
Nominal PV System Voltage		600Vdc	1000Vdc
Catalog Numbers: (Base + Modules)	Without Remote Contact Signaling	BSPP3600YPV	BSPP31000YPV
	With Remote Contact Signaling	BSPP3600YPVR	BSPP31000YPVR
Replacement Modules:		BPP300SYPV	BPP500SYPV
Specifications			
Nominal PV System Voltage		600V	1000V
U_{CPV} per EN50539-11*		600Vdc	1000Vdc
System MOV MCOV		700Vdc	1170Vdc
Max System Discharge Current (8/20 μ s) [I_{max}]		40kA	40kA
Voltage Protection Level [U_p]		$\leq 2.5kV$	$\leq 4.0kV$
Voltage Protection Level at 5kA [U_p]		$\leq 2.0kV$	$\leq 3.5kV$
Short-Circuit Withstand Capability [I_{SCP}]		125A	
Technology		Fault Resistant Y MOV Circuit	
Operating Temperature Range [T_{Uj}]		-40°C to +80°C	
Nominal Discharge Current (8/20 μ s) (DC+ \rightarrow DC-) (DC+/DC- \rightarrow PE) [I_n]		20kA	
Response Time [t_A]		$\leq 25ns$	
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:	UL	UL 1449 3 rd Edition (Type 2)	
	IEC	EN 50539-11, IEC 61643-11 Type 2, IEC 61643-1 Class II	
Product Warranty		Two 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	

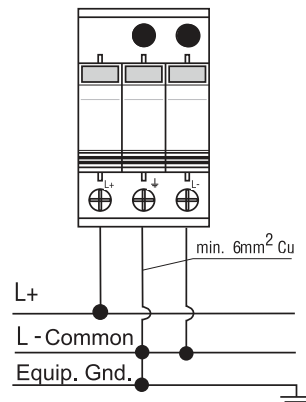
* Maximum continuous operating voltage for PV applications.

Typical Application Schematics



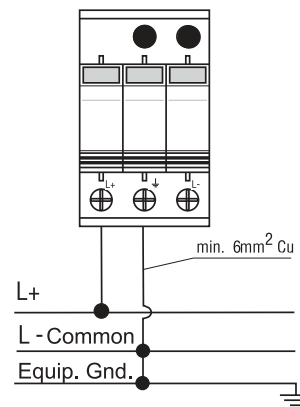
Application A

Two energized poles/modes
600 & 1000Vdc systems



Application B

One energized pole/mode
600Vdc & 1000Vdc systems only



Application C

One energized pole/mode
600Vdc & 1000Vdc** systems

* See Cooper Bussmann SPD Limited Warranty Statement (3A1502) for details at www.cooperbussmann.com/surge.

** BSPP31000YPV(R) 1000Vdc one energized pole/mode requires the following:

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.

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