

# PV PRO three module photovoltaic surge protective devices for 600 and 1000Vdc systems



### Catalog symbols:

- BSPP3\_YPV
- BSPP3\_YPVR

### **Description:**

Eaton Bussmann™ series three-module photovoltaic SPDs have a three-step DC switching device and feature *easy*ID™ local visual indication and optional remote contact signaling.

These complete surge protective devices are suitable for all PV systems in accordance with UL 1449 4<sup>th</sup> 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 and are mechanically keyed to prevent the use of an incorrect replacement module.

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

#### Standard local visual indication

The green and red visual indicator flags show the module protective status (green = good, red = replace).

#### Optional remote contact signaling

The three-pole terminal remote contact signaling option has a floating changeover contact for use as a break or make contact, according to circuit concept.

## **Specifications:**

### System volts

- 600 Vdc
- 1000 Vdc

### Systems types

- · Two energized poles (all voltages)
- One energized pole (600 and 1000Vdc)

# **Agency information**

- UL Recognized
- CE
- · RoHS compliant

# Mounting

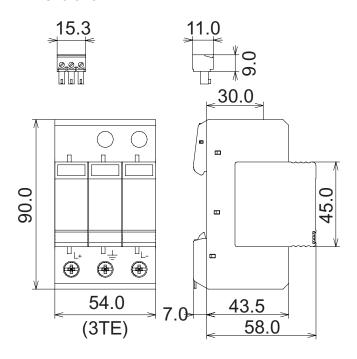
• 35 mm DIN-Rail

#### Warranty

• Five years



# **Dimensions - mm:**

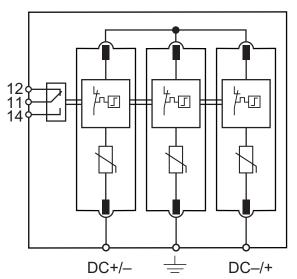


Shown with optional remote contact signaling.

# Module circuit diagrams:

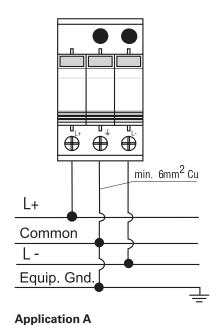
Shown with optional remote contact signaling



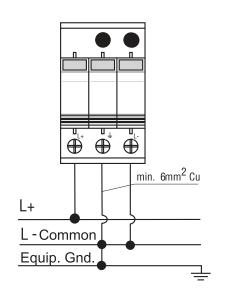


BSPP3600YPV(R) BSPP31000YPV(R)

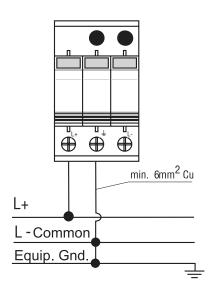
# Typical application schematics:



Two energized poles/modes



**Application B**One energized pole/mode



**Application C**One energized pole/mode\*

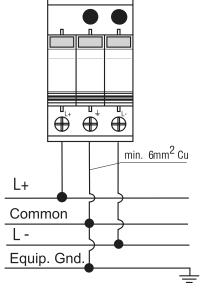
# Ordering information:

Nominal PV system voltage		600Vdc	1000Vdc
Catalog numbers (base + modules)	W/O remote contact signaling	BSPP3600YPV	BSPP31000YPV
	W/ remote contact signaling	BSPP3600YPVR	BSPP31000YPVR
Replacement modules:		BPP300SYPV	BPP500SYPV
Specifications			
Nominal PV system voltage		600V	1000V
UCPV per EN50539-11*		600Vdc	1000Vdc
System MOV MCOV		700Vdc	1170Vdc
Max system discharge current (8/20µs) [I <sub>max</sub> ]		40kA	40kA
Voltage protection level	[U <sub>P</sub> ]	=2.5kV	=4.0kV
	at 5kA [U <sub>P</sub> ]	=2.0kV	=3.5kV
Short-circuit withstand capability [ISCPV]		125A	
Technology		Fault resistant Y MOV circuit	
Operating temperature range [T <sub>U</sub> ]		-40°C to +80°C	
Nominal discharge current (8/20 $\mu$ s) (DC+ $\Delta$ DC-) (DC+/DC- $\Delta$ PE) [I $_{\rm n}$ ]		20kA	
Response time [t <sub>A</sub> ]		=25ns	
Operating state/fault indication		Green (good) / Red (replace)	
Conductor ratings and cross-sectional area:	Min.	60/75°C 1.5mm² / 14AWG Solid/Flexible	
	Max.	60/75°C 35mm² / 2AWG stranded / 25mm² / 4AWG flexible	
Mounting		35mm DIN-Rail per EN 60715	
Enclosure material		UL 94V0 Thermoplastic	
Degree of protection		IP20	
Capacity		3 Modules, DIN 43880	
Agency information:		UL UL 1449 3rd Edition (Type 2)	
		IEC EN 50539-11, IEC 61643-11 Type 2, IEC 61643-11 Class II	
Warranty		Two Years**	
Remote contact signaling			
Contact signaling type		Changeover contact	
AC switching capacity (Volts/Amps)	AC	250V / 0.1A	
	DC	250V / 0.1A; 125V / 0.2A; 75V / 0.5A	
Cross-sectional area		60/75°C Max. 1.5mm² / 14AWG s	solid/flexible

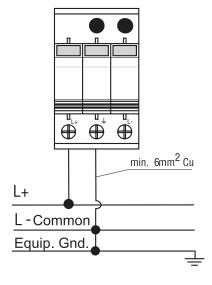
<sup>\*</sup> Maximum continuous operating voltage for PV applications.

\*\* See Eaton's Bussmann Division SPD limited warranty statement (3A1502) for details at www.cooperbussmann.com/surge.

# Typical application schematics:



 $\bigoplus$ min.  $6 \text{mm}^2 \text{Cu}$ L+ L-Common Equip. Gnd.



# **Application A**

Two energized poles/modes

## Application B

One energized pole/mode

#### **Application C**

One energized pole/mode\*

- \* 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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