



## Features

- High energy MOV technology with Advanced Thermal Disconnect (TD+)
- Status indicator
- Replaceable modular design
- For Common Mode and Differential Mode protection
- Remote signaling capability

- Complies with UL 1449 standard
- RoHS compliant\*

## Applications

- DC power systems
- Photovoltaic systems
- EV charging stations

## 1420A Series DC Power SPD for Photovoltaic Applications

### General Information

The Bourns® Model 1420A Series is a DC power Surge Protective Device (SPD) designed to protect power systems from damage due to lightning, transients and power surges, up to rated limits.

The Model 1420A Series is a Din-Rail mountable SPD designed to protect DC power systems operating up to 1500 VDC.

### Additional Information

Click these links for more information:



### Electrical Characteristics

Characteristic	Model No.				
	1420A-PV-48-P 1420A-PV-48-D	1420A-PV-600-D 1420A-PV-600-Y	1420A-PV-1000-Y	1420A-PV-1200-Y	1420A-PV-1500-Y
Network Voltage (U <sub>n</sub> ) DC	48 VDC	600 VDC	1000 VDC	1200 VDC	1500 VDC
Compliance	UL1449 Type 4,Type 1 location				
Product Technologies	High energy MOV Technology Advanced Thermal Disconnecter (TD+)				
Protection Mode	Single CM <sup>1</sup>	CM <sup>1</sup> CM/DM <sup>1</sup> 1 CM/DM			
Max. Operating Voltage (U <sub>c</sub> ) DC	85 VDC	670 VDC 700 VDC	1120 VDC	1340 VDC	1500 VDC
UL Nominal Discharge Current (I <sub>n</sub> ) 15 Impulses 8/20 μs	20 kA				
Max. Discharge Current (I <sub>max</sub> ) 1 Impulse 8/20 μs	50 kA				
UL Voltage Protection Rating (VPR)	< 0.4 kV < 0.4 kV	< 1.5 kV < 1.8 kV	< 2.5 kV	< 3.0 kV	< 4.0 kV
UL Short-Circuit Current Rating (SCCR)	30 kA	50 kA			
Leakage Current at U <sub>c</sub>	< 50 μA				
Follow Current (I <sub>f</sub> )	None				

Note 1. CM = Common Mode (+/PE or -/PE) and CM/DM = Common Mode and Differential Mode ( $\pm$ ).

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**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant.  
See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

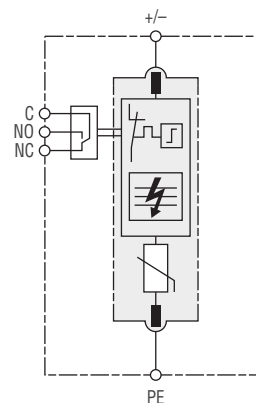
Actual product may differ from image shown.

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### Electrical Diagram





# 1420A Series DC Power SPD for Photovoltaic Applications

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## General Characteristics

Characteristic	Model No.				
	1420A-PV-48-P 1420A-PV-48-D	1420A-PV-600-D 1420A-PV-600-Y	1420A-PV-1000-Y	1420A-PV-1200-Y	1420A-PV-1500-Y
Thermal Disconnect	Internal green – normal ; red - failure				
Dimensions	See Product Dimensions				
Connection	By Screw Terminal: Single-strand #2 AWG or 35 mm <sup>2</sup> ; multi-strand #4 AWG or 25 mm <sup>2</sup>				
Disconnection Indicator	1 Mechanical Indicator				
Mounting	Din-Rail, 35 mm Symmetrical				
Remote Signaling	250 V / 0.5 A (AC) 125 V / 0.2 A (DC)				
Enclosure Material	Thermoplastic UL 94V0				


## Environmental Characteristics

Characteristic	Model No.				
	1420A-PV-48-P 1420A-PV-48-D	1420A-PV-600-D 1420A-PV-600-Y	1420A-PV-1000-Y	1420A-PV-1200-Y	1420A-PV-1500-Y
Operating Temperature	-40 °C to +85 °C				
Environmental Rating	IP 20				

## Standards Compliance

UL1449..... Type 4, Type 1 location  
 CSA C22.2..... Type 4, Type 1 location  
 RoHS..... RoHS Directive 2015/863, Mar 31, 2015 and Annex

## Agency Recognition

Agency	Category	Agency File No.
	UL1449 - 5th Ed.	<a href="#">E313168</a>

## How to Order

**1420A - PV - 1000 - Y**

Model Designator \_\_\_\_\_  
 1420A = Advanced Version of 1420 Series

Application Code \_\_\_\_\_  
 PV = Photovoltaic

Network Voltage \_\_\_\_\_  
 1000 = 1000 VDC

Configuration \_\_\_\_\_  
 P = Single protection  
 D = V configuration  
 Y = Y configuration

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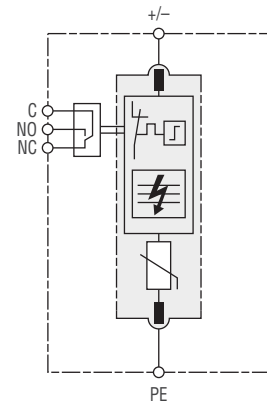
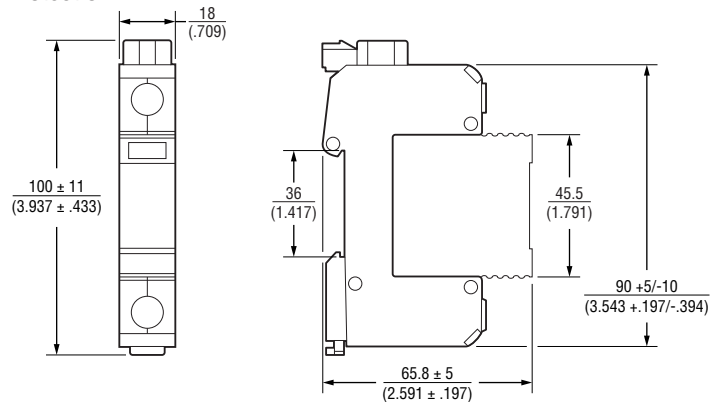


# 1420A Series DC Power SPD for Photovoltaic Applications

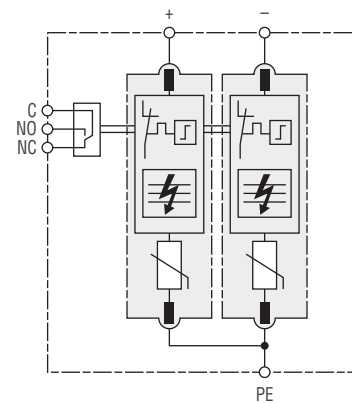
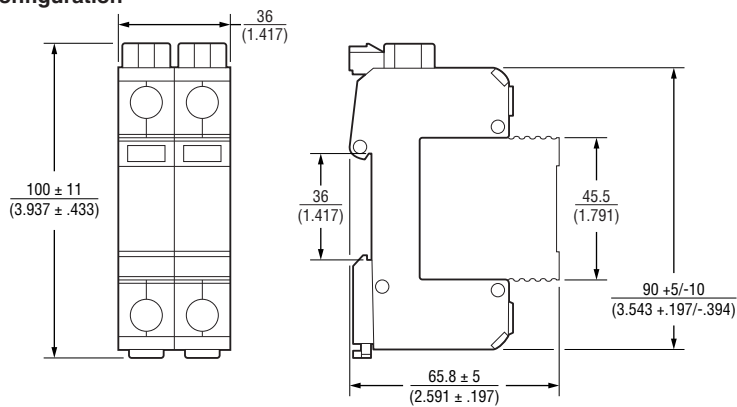
**BOURNS®**

## Product Dimensions and Schematics

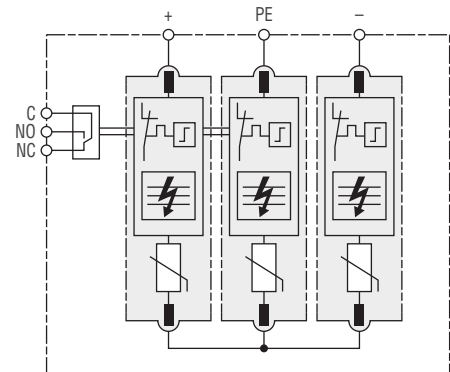
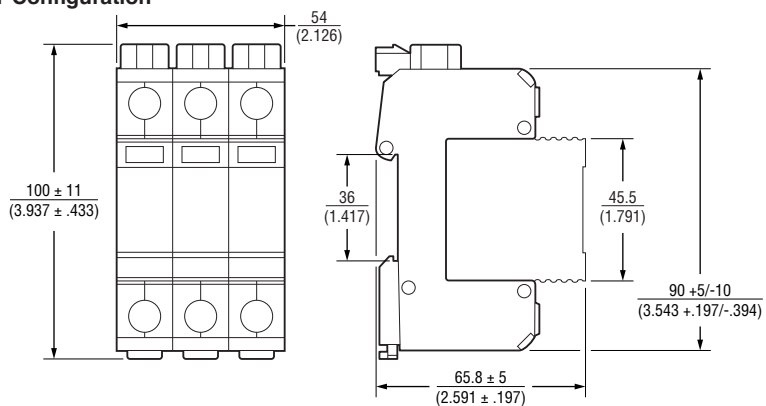
### Single Protection



### V Configuration



### Y Configuration



REV. 11/25

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