



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 _n) DC	48 VDC	600 VDC	1000 VDC	1200 VDC	1500 VDC
Compliance	UL 1449 Type 4, Type 2 Location				
Product Technologies	High energy MOV Technology Advanced Thermal Disconnect (TD+)				
Protection Mode	Single CM ¹	CM ¹ CM/DM ¹	CM/DM ¹		
Max. Operating Voltage (U _c) DC	85 VDC	670 VDC 700 VDC	1120 VDC	1340 VDC	1500 VDC
UL Nominal Discharge Current (I _n) 15 Impulses 8/20 μs	20 kA				
Max. Discharge Current (I _{max}) 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 _c	< 50 μA				
Follow Current (I _f)	None				

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



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

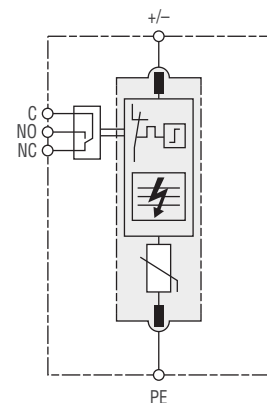
Actual product may differ from image shown.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Electrical Diagram



1420A Series DC Power SPD for Photovoltaic Applications



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 ² ; Multi-strand #4 AWG or 25 mm ²				
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 2 location
 CSA C22.2 Type 4, Type 2 location
 RoHS RoHS Directive 2015/863, Mar 31, 2015 and Annex

How to Order

1420A - PV - xxxx - x

Model Designator _____
 1420A = Advanced Version of 1420 Series

Application Code _____
 PV = Photovoltaic

Network Voltage* _____
 48 = 48 VDC
 600 = 600 VDC
 1000 = 1000 VDC
 1200 = 1200 VDC
 1500 = 1500 VDC

Configuration _____
 P = Single Protection
 D = V Configuration
 Y = Y Configuration

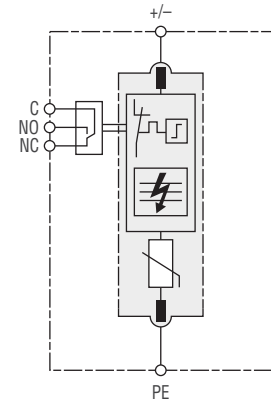
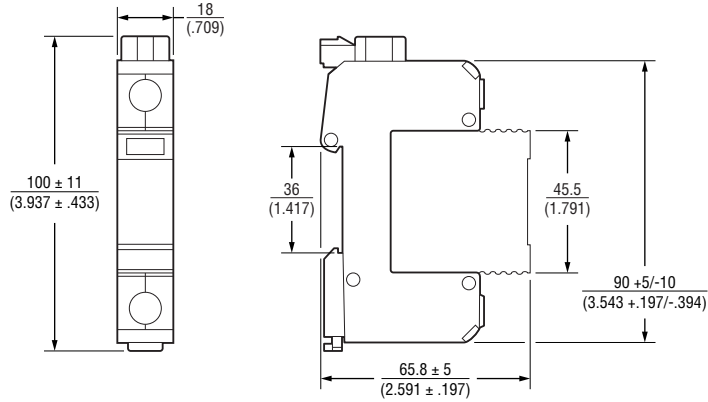
*U_n = 48 VDC is not available with Y option (Y configuration).
 U_n = 600 VDC is not available with P option (Single Protection).
 U_n >= 1000 VDC is not available with P option (Single Protection) or D option (V configuration).

1420A Series DC Power SPD for Photovoltaic Applications

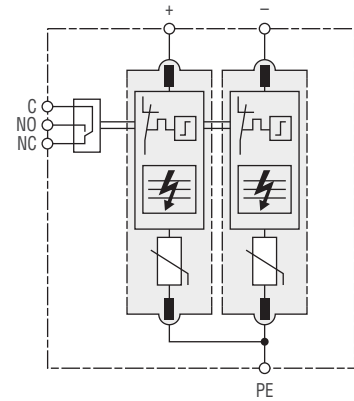
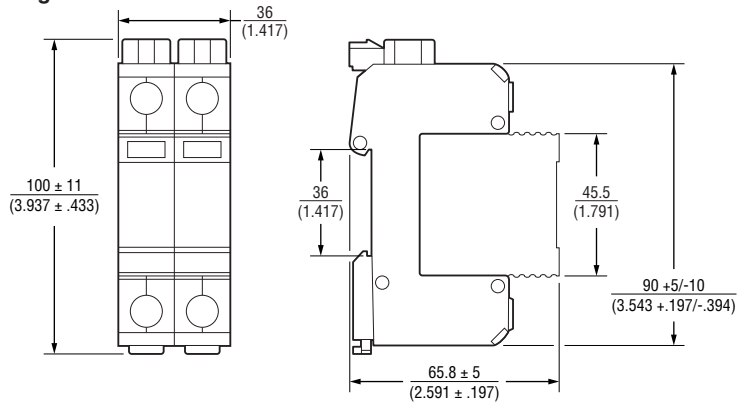
BOURNS®

Product Dimensions and Schematics

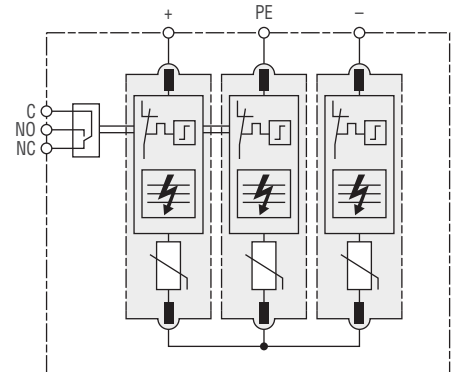
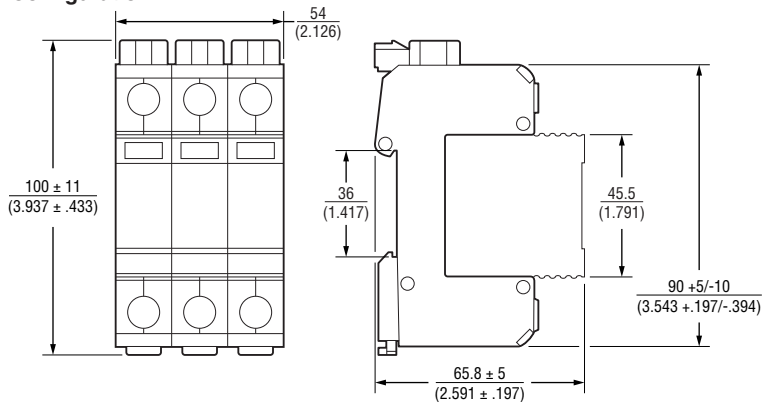
Single Protection



V Configuration



Y Configuration



REV. 11/23

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