

NEW PRODUCT BRIEF



Bourns® Model 1440 Series IEC Class II DC Surge Protective Devices

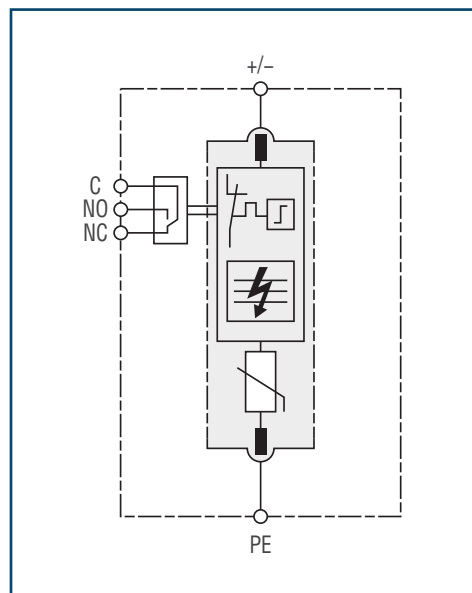
INTRODUCTION

The Bourns® Model 1440 Series are a line of DC power Surge Protective Devices (SPDs). These SPDs are designed for photovoltaic system DC-side protection against damage from surges caused by lightning and other electrical sources, up to rated limits, while operating up to 1500 VDC. These new SPDs have a unique high-energy MOV technology design that features an Advanced Thermal Disconnect (TD+) to deliver an enhanced level of protection against direct or indirect lightning threats. These space-saving Din-Rail mountable devices have a maximum lightning surge current rating of 50 kA (8/20 μ s) per pole. These models are RoHS compliant*, IEC/EN 61643-31 compliant Class I + Class II / T1+T2 SPDs.

FEATURES

- High-energy MOV technology with Advanced Thermal Disconnect (TD+)
- Status indicator
- Replaceable modular design
- Ideal solution for common mode and differential mode protection
- Remote signaling capability
- IEC/EN 61643-31 compliant Class I + Class II / T1+T2 SPDs
- With 50 kA I_{max} (8/20 μ s) and 7.5 kA I_{imp} (10/350 μ s) current capability

CIRCUIT DIAGRAM



UNIQUE CONSTRUCTION

A downside of many SPDs and MOVs is that they may go into thermal runaway due to sustained abnormal temporary overvoltage (TOV) events or from a surge with unexpected energy. These issues can be a threat to systems, potentially causing overheating, smoke, and even a fire hazard.

The new Bourns® Model 1440 SPDs with Advanced Thermal Disconnect (TD+) are an optimal solution to help avoid a thermal runaway condition. They offer a highly effective self-contained solution that can eliminate additional upstream overcurrent protection. The design includes window fault indication and remote alarm contact for enhanced operating status monitoring of the surge protector.

APPLICATIONS

- DC power applications
- Photovoltaic systems
- EV charging stations

MORE INFORMATION

- AC Power SPDs: [Model 1270 Series SPD](#)
- AC Power SPDs: [Model 1280 Series SPD](#)
- DC Power SPDs: [Model 1430 Series SPD](#)
- [High-energy MOVs](#)
- [High-current GDTs](#)
- [Power TVS Diodes](#)

HOW TO ORDER

Model Designator **1440 - PV - xxxx - x**

1440 = IEC Class II DC SPD

Application Code _____

PV = Photovoltaic

Network Voltage _____

48 = 48 VDC	60 = 60 VDC
100 = 100 VDC	150 = 150 VDC
200 = 200 VDC	300 = 300 VDC
400 = 400 VDC	500 = 500 VDC
600 = 600 VDC	750 = 750 VDC
800 = 800 VDC	1000 = 1000 VDC
1200 = 1200 VDC	1500 = 1500 VDC

Configuration _____

P = Single protection
D = V configuration
Y = Y configuration

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

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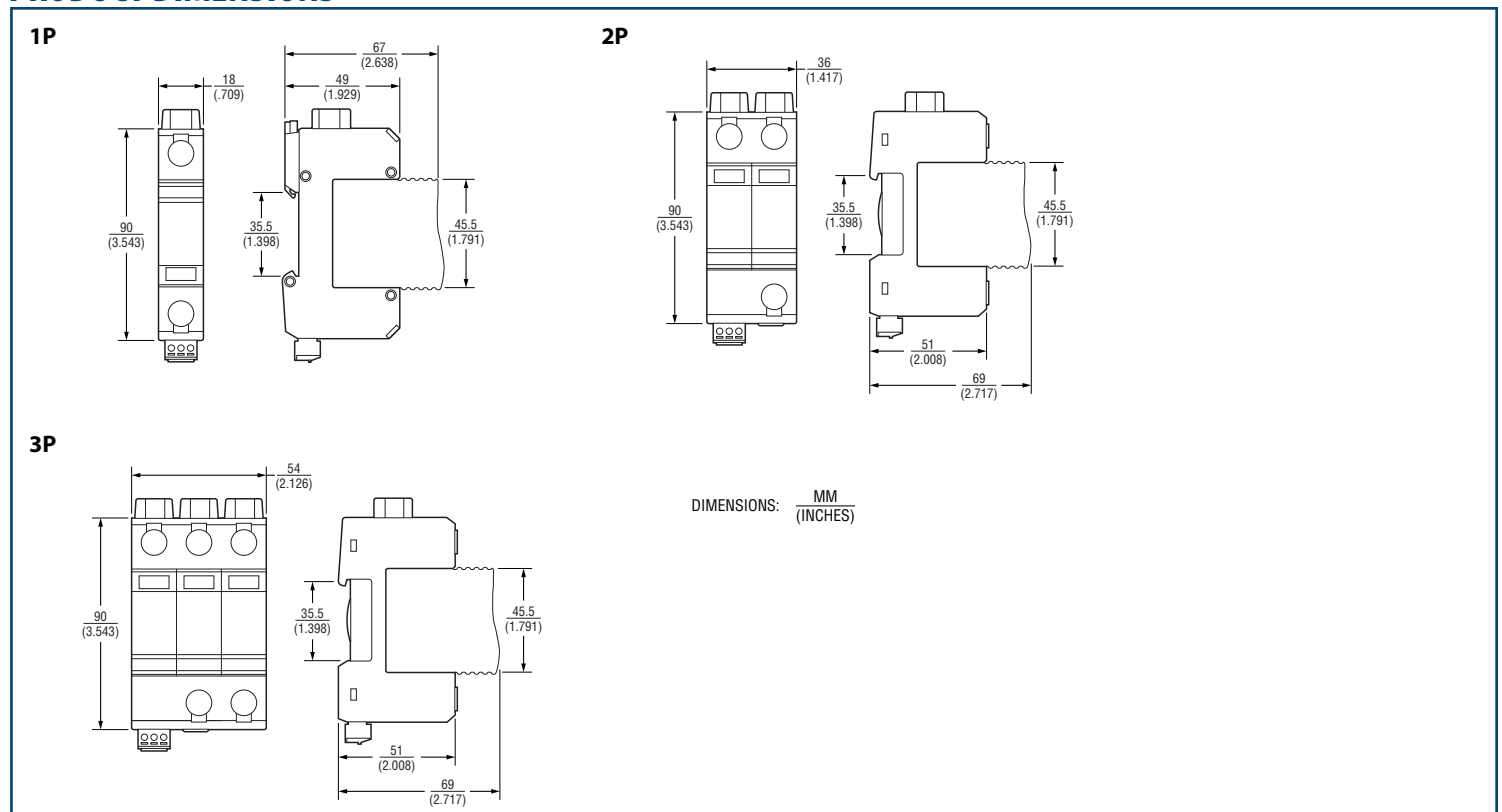
Bourns® Model 1440 Series IEC Class II DC Surge Protective Devices

ELECTRICAL CHARACTERISTICS

Series	Product Technologies	Connection Mode	DC Network	Max. Operating Voltage (U _c)	IEC/EN Category	Compliance
1440-PV-48-x	High Energy MOV Technology Advanced Thermal Disconnect (TD+)	1-Pole Single Protection 2-Pole V Configuration 2-Pole Y Configuration	48 VDC	85 VDC	Class I + Class II / T1 + T2	IEC/EN 61643-31
1440-PV-60-x			60 VDC	100 VDC		
1440-PV-100-x			100 VDC	125 VDC, 110 VDC (Y config.)		
1440-PV-150-x			150 VDC	170 VDC		
1440-PV-200-x			200 VDC	225 VDC, 250 VDC (Y config.)		
1440-PV-300-x			300 VDC	350 VDC, 340 VDC (Y config.)		
1440-PV-400-x			400 VDC	460 VDC, 450 VDC (Y config.)		
1440-PV-500-x			500 VDC	560 VDC		
1440-PV-600-x			600 VDC	670 VDC, 700 VDC (Y config.)		
1440-PV-750-x			750 VDC	800 VDC		
1440-PV-800-x			800 VDC	920 VDC		
1440-PV-1000-x			1000 VDC	1120 VDC		
1440-PV-1200-x	1200 VDC	1340 VDC				
1440-PV-1500-x	1500 VDC	1500 VDC				

For full characteristics, see data sheet

PRODUCT DIMENSIONS



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