



## Features

- High energy MOV technology with Thermal Disconnecter
- Status indicator
- Replaceable modular design
- For Common Mode and Differential Mode protection
- Remote signaling capability
- IEC/EN 61643-31 compliant Class I + Class II / T1+T2 SPD
- With 80 kA  $I_{max}$  (8/20  $\mu s$ ) and 12.5 kA  $I_{imp}$  (10/350  $\mu s$ ) current capability
- RoHS compliant\*

## 1430 Series – IEC Class I DC Surge Protective Device

### General Information

The Bourns® Model 1430 Series is an IEC Class I + Class II DC Surge Protective Device (SPD) designed to protect power systems from damage due to lightning, transients and power surges, up to rated limits.

The Model 1430 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.				
	1430-PV-48-P 1430-PV-48-D	1430-PV-60-P 1430-PV-60-D	1430-PV-100-P 1430-PV-100-D 1430-PV-100-Y	1430-PV-150-P 1430-PV-150-D	1430-PV-200-P 1430-PV-200-D 1430-PV-200-Y
Network Voltage ( $U_n$ ) DC	48 VDC	60 VDC	100 VDC	150 VDC	200 VDC
Compliance	IEC/EN 61643-31 Class I + Class II / T1 + T2				
Product Technologies	High energy MOV Technology Thermal Disconnecter				
Protection Mode	Single CM <sup>1</sup>		Single CM CM/DM <sup>1</sup>	Single CM <sup>1</sup>	Single CM CM/DM <sup>1</sup>
Max. Operating Voltage ( $U_c$ ) DC	85 VDC	100 VDC	125 VDC 170 VDC (Y config.)	170 VDC	225 VDC 250 VDC (Y config.)
Nominal Discharge Current ( $I_n$ ) 8/20 $\mu s$	25 kA				
Max. Discharge Current ( $I_{max}$ ) 1 Impulse 8/20 $\mu s$	80 kA				
Impulse Discharge Current ( $I_{imp}$ ) 10/350 $\mu s$	12.5 kA				
Protection Level ( $U_p$ )	$\leq 0.6$ kV $\leq 0.6$ kV	$\leq 0.7$ kV $\leq 0.7$ kV	$\leq 0.7$ kV $\leq 0.7$ kV $\leq 1.0$ kV	$\leq 0.8$ kV $\leq 0.8$ kV	$\leq 1.0$ kV $\leq 1.0$ kV $\leq 1.2$ kV
Short Circuit Current Rating ( $I_{scpv}$ )	25 kA				
Leakage Current at $U_c$	< 100 $\mu A$				
Follow Current ( $I_f$ )	None				

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

**BOURNS®**

Americas: Tel: +1 951-781-5500 • Email: [americus@bourns.com](mailto:americus@bourns.com)

Mexico: Tel: +52-614-478-0400 • Email: [mexicus@bourns.com](mailto:mexicus@bourns.com)

Asia: Tel: +886-2-2562-4117 • Email: [asiacus@bourns.com](mailto:asiacus@bourns.com)

EMEA: Tel: +36 88 885 877 • Email: [eurocus@bourns.com](mailto:eurocus@bourns.com)

[www.bourns.com](http://www.bourns.com)

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

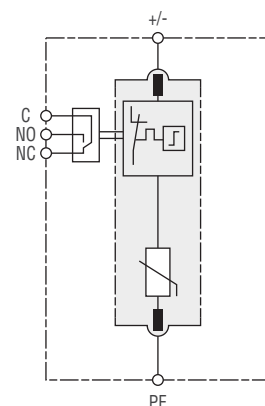
Actual product may differ from image shown.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

### Electrical Diagram



## Applications

- DC power systems
- Photovoltaic systems
- EV charging stations

# 1430 Series – IEC Class I DC Surge Protective Device

# BOURNS®

### Electrical Characteristics (continued)

Characteristic	Model No.				
	1430-PV-300-P 1430-PV-300-D 1430-PV-300-Y	1430-PV-400-P 1430-PV-400-D 1430-PV-400-Y	1430-PV-500-P 1430-PV-500-D	1430-PV-600-P 1430-PV-600-D 1430-PV-600-Y	1430-PV-750-P
Network Voltage ( $U_n$ ) DC	300 VDC	400 VDC	500 VDC	600 VDC	750 VDC
Compliance	IEC/EN 61643-31 Class I + Class II / T1 + T2				
Product Technologies	High energy MOV Technology Thermal Disconnecter				
Protection Mode	Single CM CM/DM <sup>1</sup>		Single CM <sup>1</sup>	Single CM CM/DM <sup>1</sup>	Single
Max. Operating Voltage ( $U_c$ ) DC	350 VDC 340 VDC (Y config.)	460 VDC 450 VDC (Y config.)	560 VDC	670 VDC 700 VDC (Y config.)	800 VDC
Nominal Discharge Current ( $I_n$ ) 8/20 $\mu$ s	25 kA				
Max. Discharge Current ( $I_{max}$ ) 1 Impulse 8/20 $\mu$ s	80 kA				65 kA
Impulse Discharge Current ( $I_{imp}$ ) 10/350 $\mu$ s	12.5 kA				8 kA
Protection Level ( $U_p$ )	$\leq 1.4$ kV $\leq 1.4$ kV $\leq 1.5$ kV	$\leq 1.6$ kV $\leq 1.6$ kV $\leq 2.0$ kV	$\leq 1.8$ kV $\leq 1.8$ kV	$\leq 2.2$ kV $\leq 2.2$ kV $\leq 2.5$ kV	$\leq 2.5$ kV
Short Circuit Current Rating ( $I_{scpv}$ )	25 kA				
Leakage Current at $U_c$	< 100 $\mu$ A				
Follow Current ( $I_f$ )	None				

Characteristic	Model No.			
	1430-PV-800-Y	1430-PV-1000-Y	1430-PV-1200-Y	1430-PV-1500-Y
Network Voltage ( $U_n$ ) DC	800 VDC	1000 VDC	1200 VDC	1500 VDC
Compliance	IEC/EN 61643-31 Class I + Class II / T1 + T2			
Product Technologies	High energy MOV Technology Thermal Disconnecter			
Protection Mode	CM/DM <sup>1</sup>			
Max. Operating Voltage ( $U_c$ ) DC	920 VDC	1120 VDC	1340 VDC	1500 VDC
Nominal Discharge Current ( $I_n$ ) 8/20 $\mu$ s	25 kA			
Max. Discharge Current ( $I_{max}$ ) 1 Impulse 8/20 $\mu$ s	80 kA			65 kA
Impulse Discharge Current ( $I_{imp}$ ) 10/350 $\mu$ s	12.5 kA			8 kA
Protection Level ( $U_p$ )	$\leq 3.0$ kV	$\leq 3.5$ kV	$\leq 4.0$ kV	$\leq 4.5$ kV
Short Circuit Current Rating ( $I_{scpv}$ )	25 kA			
Leakage Current at $U_c$	< 100 $\mu$ A			
Follow Current ( $I_f$ )	None			

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

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

# 1430 Series – IEC Class I DC Surge Protective Device



## General Characteristics

Characteristic	1430-PV-xxx-x
Thermal Disconnecter	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	1430-PV-xxx-x
Operating Temperature	-40 °C to +85 °C
Operating Altitude	≤4000 m
Environmental Rating	IP 20

## Standards Compliance

IEC/EN 61643-31 .....Class I + Class II, T1 + T2  
RoHS ..... RoHS Directive 2015/863, Mar 31, 2015 and Annex

## How to Order

		1430 - PV - xxxx - x	
Model Designator	_____		
	1430 = IEC Class I 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		

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

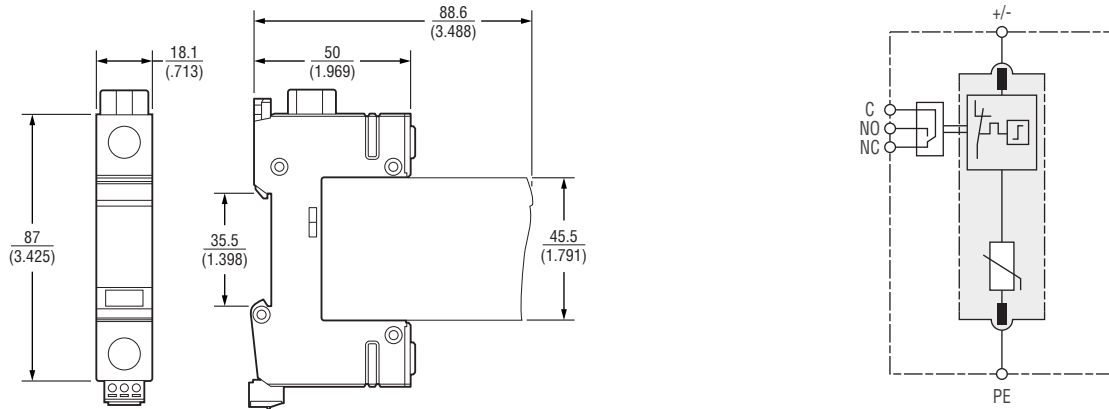
The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

# 1430 Series – IEC Class I DC Surge Protective Device

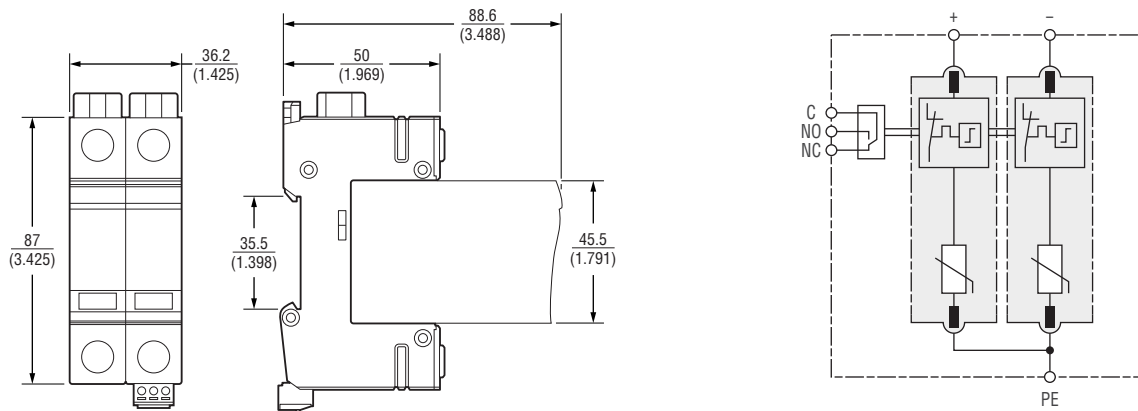
**BOURNS®**

## Product Dimensions and Schematics

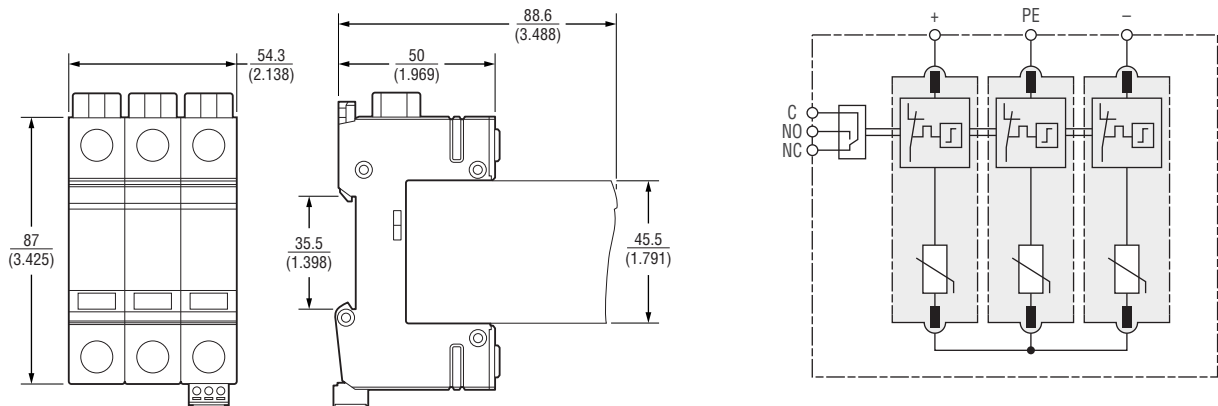
### Single Protection



### V Configuration



### Y Configuration



REV. 08/24

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).

This legal disclaimer applies to purchasers and users of Bourns® products manufactured by or on behalf of Bourns, Inc. and its affiliates (collectively, "Bourns").

Unless otherwise expressly indicated in writing, Bourns® products and data sheets relating thereto are subject to change without notice. Users should check for and obtain the latest relevant information and verify that such information is current and complete before placing orders for Bourns® products.

The characteristics and parameters of a Bourns® product set forth in its data sheet are based on laboratory conditions, and statements regarding the suitability of products for certain types of applications are based on Bourns' knowledge of typical requirements in generic applications. The characteristics and parameters of a Bourns® product in a user application may vary from the data sheet characteristics and parameters due to (i) the combination of the Bourns® product with other components in the user's application, or (ii) the environment of the user application itself. The characteristics and parameters of a Bourns® product also can and do vary in different applications and actual performance may vary over time. Users should always verify the actual performance of the Bourns® product in their specific devices and applications, and make their own independent judgments regarding the amount of additional test margin to design into their device or application to compensate for differences between laboratory and real world conditions.

Unless Bourns has explicitly designated an individual Bourns® product as meeting the requirements of a particular industry standard (e.g., IATF 16949) or a particular qualification (e.g., UL listed or recognized), Bourns is not responsible for any failure of an individual Bourns® product to meet the requirements of such industry standard or particular qualification. Users of Bourns® products are responsible for ensuring compliance with safety-related requirements and standards applicable to their devices or applications.

Bourns® products are not recommended, authorized or intended for use in nuclear, lifesaving, life-critical or life-sustaining applications, nor in any other applications where failure or malfunction may result in personal injury, death, or severe property or environmental damage. Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any Bourns® products in such unauthorized applications might not be safe and thus is at the user's sole risk. Life-critical applications include devices identified by the U.S. Food and Drug Administration as Class III devices and generally equivalent classifications outside of the United States.

Bourns expressly identifies those Bourns® standard products that are suitable for use in automotive applications on such products' data sheets in the section entitled "Applications." Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any other Bourns® standard products in an automotive application might not be safe and thus is not recommended, authorized or intended and is at the user's sole risk. If Bourns expressly identifies a sub-category of automotive application in the data sheet for its standard products (such as infotainment or lighting), such identification means that Bourns has reviewed its standard product and has determined that if such Bourns® standard product is considered for potential use in automotive applications, it should only be used in such sub-category of automotive applications. Any reference to Bourns® standard product in the data sheet as compliant with the AEC-Q standard or "automotive grade" does not by itself mean that Bourns has approved such product for use in an automotive application.

Bourns® standard products are not tested to comply with United States Federal Aviation Administration standards generally or any other generally equivalent governmental organization standard applicable to products designed or manufactured for use in aircraft or space applications. Bourns expressly identifies Bourns® standard products that are suitable for use in aircraft or space applications on such products' data sheets in the section entitled "Applications." Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any other Bourns® standard product in an aircraft or space application might not be safe and thus is not recommended, authorized or intended and is at the user's sole risk.

The use and level of testing applicable to Bourns® custom products shall be negotiated on a case-by-case basis by Bourns and the user for which such Bourns® custom products are specially designed. Absent a written agreement between Bourns and the user regarding the use and level of such testing, the above provisions applicable to Bourns® standard products shall also apply to such Bourns® custom products.

Users shall not sell, transfer, export or re-export any Bourns® products or technology for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor shall they use Bourns® products or technology in any facility which engages in activities relating to such devices. The foregoing restrictions apply to all uses and applications that violate national or international prohibitions, including embargos or international regulations. Further, Bourns® products and Bourns technology and technical data may not under any circumstance be exported or re-exported to countries subject to international sanctions or embargoes. Bourns® products may not, without prior authorization from Bourns and/or the U.S. Government, be resold, transferred, or re-exported to any party not eligible to receive U.S. commodities, software, and technical data.

To the maximum extent permitted by applicable law, Bourns disclaims (i) any and all liability for special, punitive, consequential, incidental or indirect damages or lost revenues or lost profits, and (ii) any and all implied warranties, including implied warranties of fitness for particular purpose, non-infringement and merchantability.

*For your convenience, copies of this Legal Disclaimer Notice with German, Spanish, Japanese, Traditional Chinese and Simplified Chinese bilingual versions are available at:*

*Web Page:* <http://www.bourns.com/legal/disclaimers-terms-and-policies>

*PDF:* <http://www.bourns.com/docs/Legal/disclaimer.pdf>