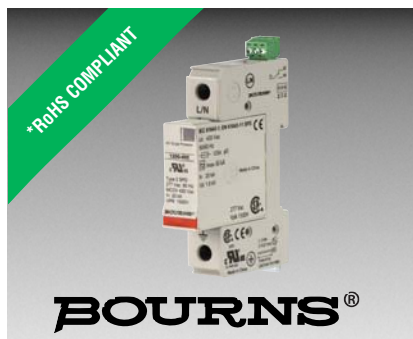




## Features

- 50 kA max. discharge current rating
- Multi-pole uni-block design
- DIN Rail mountable
- UL 60691 compliant integrated thermal disconnect
- Visual fault indicator
- Remote signalling capability
- Compact design ideal for limited spaces
- Standards compliance:   
- RoHS compliant\*

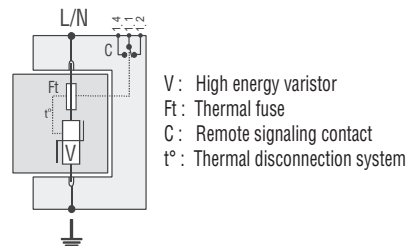
## 1250 Series General Duty AC Surge Protective Device

### General Information

The Bourns® Model 1250 Series is a general duty Surge Protective Device (SPD) designed to protect high risk electrical service entrance and branch panels. This SPD is intended to be installed at the front end of the installation, in the main switchboard, close to sensitive terminals or in installations without LPS (lightning rods).

The Model 1250 Series is a single-pole module that can be configured for both common mode and differential mode protection in single and three phase applications up to 480 V.

### Electrical Diagram



### Electrical Characteristics

| Characteristic                                                         | Model No.                                   |                         |                                       |                     |
|------------------------------------------------------------------------|---------------------------------------------|-------------------------|---------------------------------------|---------------------|
|                                                                        | 1250-xS-120                                 | 1250-xS-230             | 1250-xS-400                           | 1250-xS-480         |
| AC Network                                                             | 120/240 V,<br>120/208 V                     | 220/380 V,<br>240/415 V | 220/380 V,<br>277/480 V,<br>347/600 V | 347/600 V,<br>480 V |
| Connection Mode                                                        | 1-Pole, L-N or L-G                          |                         |                                       |                     |
| AC System                                                              | IT, TT, TN, Single, Split Phase, Delta, Wye |                         |                                       |                     |
| Max. Operating Voltage (MCOV)                                          | 150 V                                       | 275 V                   | 400 V                                 | 550 V               |
| TOV Withstand                                                          | 150 V                                       | 275 V                   | 400 V                                 | 550 V               |
| Leakage Current at Uc                                                  | < 1 mA                                      |                         |                                       |                     |
| Follow Current                                                         | None                                        |                         |                                       |                     |
| UL Nominal Discharge Current (In)<br>15 Impulses 8/20 $\mu$ s          | 20 kA                                       |                         |                                       |                     |
| Max. Discharge Current (I <sub>max</sub> )<br>1 Impulse 8/20 $\mu$ s   | 50 kA                                       |                         |                                       |                     |
| Max. Lightning Current (I <sub>imp</sub> )<br>1 Impulse 10/350 $\mu$ s | --                                          |                         |                                       |                     |
| UL Voltage Protection Rating (VPR)                                     | 700 V                                       | 1000 V                  | 1200 V                                | 1800 V              |
| Protection Level (Up)                                                  | 0.9 kV                                      | 1.25 kV                 | 1.8 kV                                | 2.5 kV              |
| UL Short-Circuit Current Rating (SCCR)                                 | 100kAIC                                     |                         |                                       |                     |

### General Characteristics

| Characteristic          | Model No.                                     |             |             |             |
|-------------------------|-----------------------------------------------|-------------|-------------|-------------|
|                         | 1250-xS-120                                   | 1250-xS-230 | 1250-xS-400 | 1250-xS-480 |
| Thermal Disconnect      | UL 60691                                      |             |             |             |
| Overcurrent Protection  | Time Delay - 125 A Max.                       |             |             |             |
| Connection              | By Screw Terminals, #6 AWG Max.               |             |             |             |
| Dimensions              | 90 x 18 x 67 mm / (3.543 x 0.709 x 2.638 In.) |             |             |             |
| Mounting                | DIN Rail, 35 mm Symmetrical                   |             |             |             |
| Remote Signal Indicator | 250 Vac Max., 2 A                             |             |             |             |
| Enclosure Material      | Thermoplastic UL 94V0                         |             |             |             |

### Environmental Characteristics

| Characteristic        | Model No.                                      |             |             |             |
|-----------------------|------------------------------------------------|-------------|-------------|-------------|
|                       | 1250-xS-120                                    | 1250-xS-230 | 1250-xS-400 | 1250-xS-480 |
| Operating Temperature | -50 °C to +85 °C                               |             |             |             |
| Operating Altitude    | 13,000 ft. (4,000 m)                           |             |             |             |
| Relative Humidity     | 5 to 95 % Non-condensing, up to 100 % External |             |             |             |
| Environmental Rating  | IP 20                                          |             |             |             |

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.

## Applications

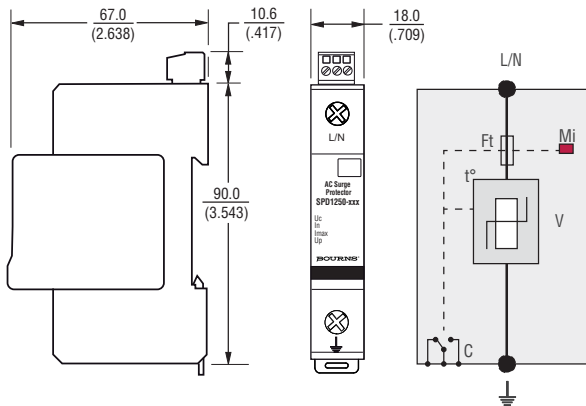
- Electrical service entrance
- Branch panels

# 1250 Series General Duty AC Surge Protective Device

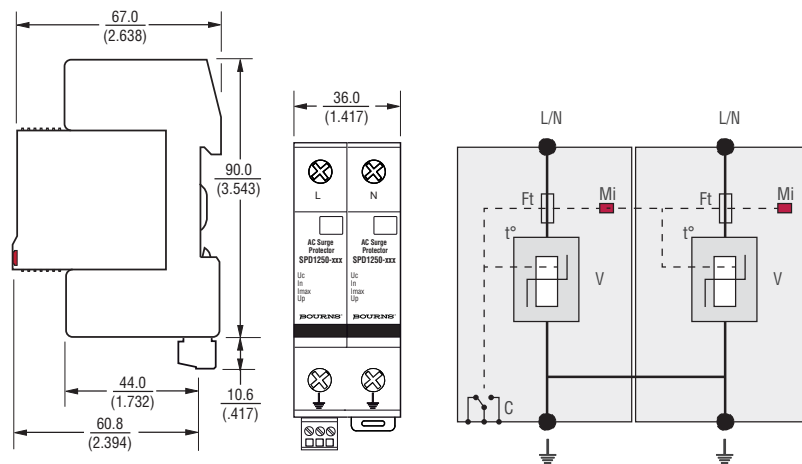
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## Product Dimensions and Schematics

### 1250-1S-xxx

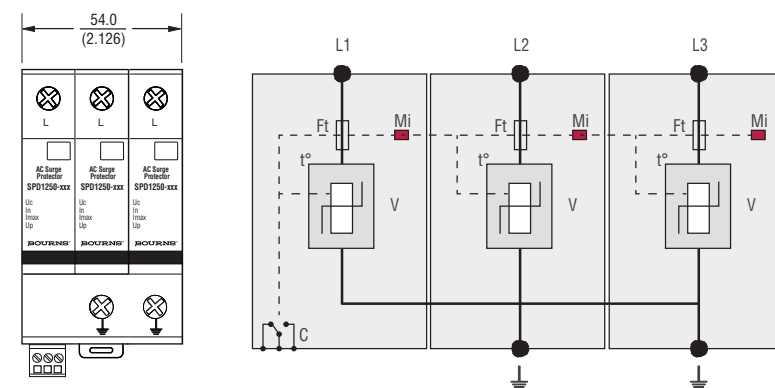


### 1250-2S-xxx



DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

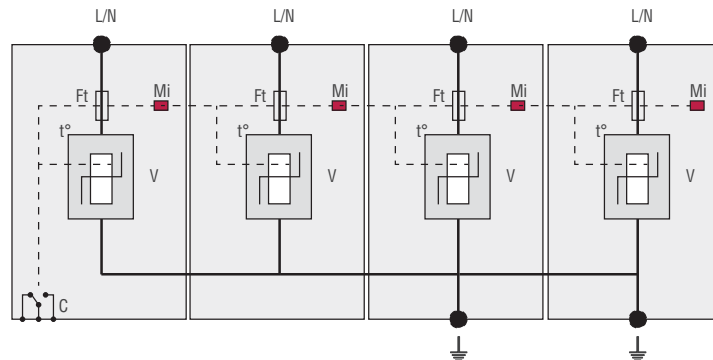
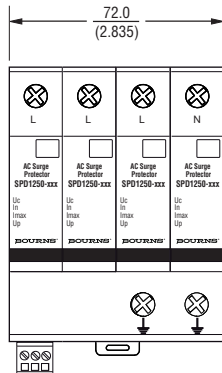
### 1250-3S-xxx



Specifications are subject to change without notice.  
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.

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**1250-4S-xxx**



DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

|                                  |                                     |
|----------------------------------|-------------------------------------|
| IEC61643-1 - International ..... | Class I, Class II                   |
| EN 61643-11 - Europe.....        | Class I, Class II                   |
| NF EN 61643-11 - France .....    | Class I, Class II                   |
| UL1449 3rd Edition - USA .....   | Type 4, Type 2 Location             |
| UL1449 3rd Edition - Canada..... | Type 4, Type 2 Location             |
| CSA C22.2 No. 8-M1986 .....      | Class 9091 32, Class 9091 92        |
| RoHS .....                       | RoHS Directive 2002/95/EC           |
|                                  | Jan. 27, 2003 including annex and   |
|                                  | RoHS Recast 2011/65/EU June 8, 2011 |

**1250 - x S - xxx**

Series \_\_\_\_\_

Configuration \_\_\_\_\_

1 = One Protected Pole  
2 = Two Protected Poles  
3 = Three Protected Poles  
4 = Four Protected Poles

Remote Signaling Code \_\_\_\_\_

S = Remote Signaling

Operating Voltage \_\_\_\_\_

120 = 120/240 V, 120/208 V  
230 = 220/380 V, 240/415 V  
400 = 220/380 V, 277/480 V, 347/600 V  
480 = 347/600 V, 480 V

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