



## Features

- GDT/TBU® High-Speed Protector technology
- Low impulse let-through
- High surge current rating
- Available in isolated and grounded versions
- 10/100/1000 data compatibility
- 5 kV isolation
- Ⓛ Listed per UL 497B (File: E153537)

## Applications

- Data communications
- Highly exposed Ethernet
- 1000 Base-T Gigabit Ethernet
- Indoor/controlled environment installations
- Telecommunications and industrial installations

## 1500 Series Gigabit Ethernet SPD

The 1500 Series Ethernet Surge Protective Device (SPD) incorporates multiple Bourns® circuit protection technologies. These technologies are designed to work together to provide an unmatched level of surge protection for exposed Ethernet applications. The 1500 Series is designed to meet key surge and AC power cross requirements of GR-1089-Core Issue 6. The isolated model is designed to withstand voltages up to 5 kV.

The 1500 Series is available as a wall mount unit with optional DIN Rail hardware.

### Characteristics

Test methods per UL 497B, GR-1089 Issue 6, and CSA C22.2.

| Parameter                                                                                                                                                | Isolated Version                                                  | Grounded Version |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------|
| DC Breakdown Line to Line                                                                                                                                | 5 V to 360 V                                                      |                  |
| DC Breakdown Line to Ground                                                                                                                              | N/A                                                               | 150 V Typ.       |
| Line Series Resistance (Loop)                                                                                                                            | 12 $\Omega$ Typ.                                                  |                  |
| Line Series Balance                                                                                                                                      | 0.5 $\Omega$ Typ. / 1.0 $\Omega$ Max                              |                  |
| Capacitance Line to Line @ 1 MHz                                                                                                                         | N/A                                                               | 10 pF Typ.       |
| Time-to-block ( $t_{block}$ )                                                                                                                            | <1 $\mu$ s                                                        |                  |
| First Level Surge<br>1 kV – 10/1000 $\mu$ s, 100 A<br>2.5 kV – 2/10 $\mu$ s, 500 A<br>800 V – 1.2/50 $\mu$ s, 8/20 $\mu$ s Combo Wave                    | >10 operations<br>>10 operations<br>>10 operations                |                  |
| Second Level Surge<br>2.5 kV – 2/10 $\mu$ s, 500 A, Inductive Kick<br>6 kV / 3 kA – 1.2/50 $\mu$ s, 8/20 $\mu$ s Combo Wave                              | > 1 operation<br>> 1 operation                                    |                  |
| First Level Power Fault<br>220 mA Below Protection Threshold<br>600 V / 1 A / 1 Second<br>1000 V / 1 A / 1 Second<br>425 V / 0.5 A / 4 Seconds           | 15 minutes<br>> 60 operations<br>> 60 operations<br>> 1 operation |                  |
| Second Level Power Fault<br>120 V / 25 A <sup>1</sup><br>425 V / 40 A / 1.5 Second <sup>1</sup><br>425 V / 7 A / 5 Seconds <sup>1</sup><br>425 V / 2.2 A | 15 minutes<br>1 operation<br>1 operation<br>15 minutes            |                  |
| BER Performance Testing<br>10/100 Mbps<br>1 Gbps                                                                                                         | > 100 meters<br>Up to 100 meters                                  |                  |
| Storage and Operating Temperature                                                                                                                        | -40 to +65 °C                                                     |                  |
| Ground Connection                                                                                                                                        | Screw Lug or DIN Rail Clip                                        |                  |

#### Notes:

Isolated version does not require a ground connection.

1) Fuse may fail open and disconnect from circuit.

**BOURNS®**

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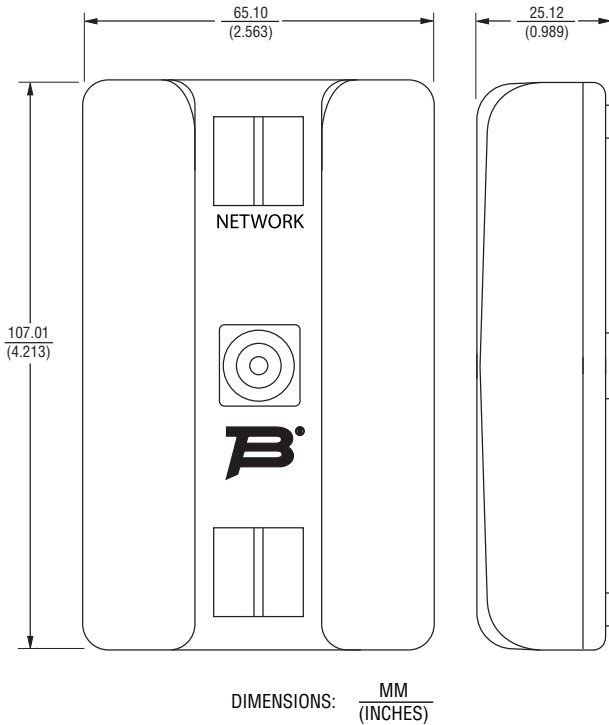
Specifications are subject to change without notice.

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.

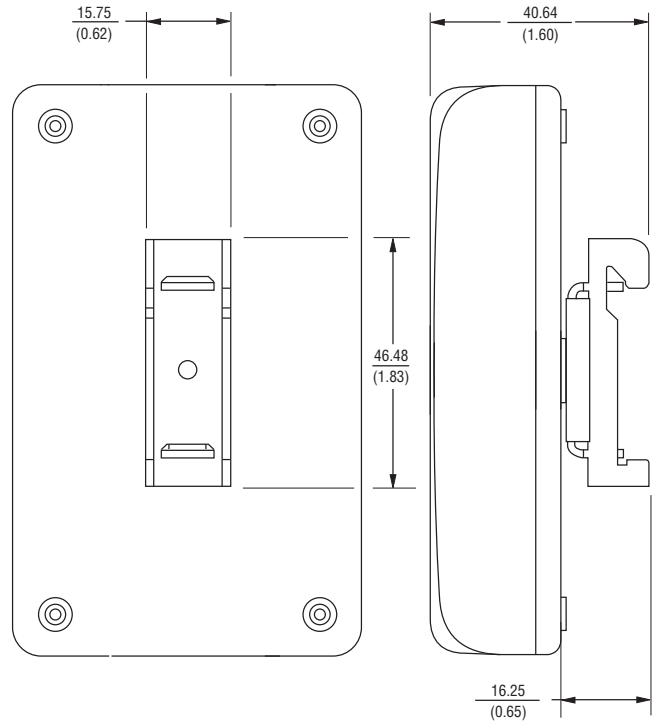
# 1500 Series Gigabit Ethernet SPD

**BOURNS®**

## Product Dimensions



## DIN Rail Hardware Dimensions



## How To Order

**1500 - X Y - W**

**Model Number Designator** \_\_\_\_\_

**Configuration** \_\_\_\_\_

- 1 = Isolated\*
- 2 = Grounded

**Hardware Options** \_\_\_\_\_

- S = Screw Lug
- D = DIN Rail

**Ground Wire (Optional)** \_\_\_\_\_

- W = #14 AWG Ground Wire, 3 Ft.

\* Isolated unit requires no ground.

REV. A 05/13

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