

# PD3041

Hardened Surge Protection Device – RJ11 & Two Wire Terminal Block



## Overview

EtherWAN's PD3041 Hardened Surge Protection Device shields DSL equipment from dangerous power surges, ground loops, and electrical discharges caused by faulty wiring or lightning. With full wire-to-wire and wire-to-earth surge protection, the PD3041 is ideal for use in areas that have unstable supplies of electricity, and on sites that have excessive amounts of electromagnetic interference. Applications include outdoor IP cameras and access points, as well as rooftop networking cabinets.

## Spotlight

- **Robust Protection Against Voltage Surges**
  - Provides pair-to-pair protection through RJ11 connector & terminal block
- **Flexible Installation**
  - Supports DIN-rail or desktop installation
- **Wide Operating Temperature Range**
  - Operates in temperatures from -40°C to 75°C, with throughput under 100Mbps

# Hardware Specifications

## Electrical

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### Maximum continuous operating voltage UC

- $\leq 185\text{VDC}$

### Maximum continuous voltage UC (wire-wire)

- $\leq 185\text{VDC}$

### Maximum continuous voltage UC (wire-ground)

- $\leq 185\text{VDC}$

### Nominal current IN

- $\leq 380\text{mA}$  (25 °C)

### Operating effective current IC at UC

- $\leq 6\ \mu\text{A}$

### Residual current IPE

- $\leq 4\ \mu\text{A}$

### Nominal discharge surge current In (8/20) $\mu\text{s}$

#### (Core-Core)

- $\leq 5\ \text{kA}$

### Nominal discharge surge current In (8/20) $\mu\text{s}$

#### (Core-Earth)

- $\leq 5\ \text{kA}$

### Total surge current (8/20) $\mu\text{s}$

- $10\ \text{kA}$

### Nominal pulse current Ian (10/1000) $\mu\text{s}$ (Core-Core)

- $\leq 100\text{A}$

### Nominal pulse current Ian (10/1000) $\mu\text{s}$ (Core-Earth)

- $\leq 100\text{A}$

### Nominal pulse current Ian (10/700) $\mu\text{s}$ (Core-Core)

- $\leq 150\text{A}$

### Nominal pulse current Ian (10/700) $\mu\text{s}$ (Core-Earth)

- $\leq 150\text{A}$

### Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Core) spike

- $\leq 250\ \text{V}$

### Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) spike

- $\leq 250\ \text{V}$

### Residual voltage at In, (conductor-conductor)

- $\leq 120\ \text{V}$

### Residual voltage at In, (conductor-ground)

- $\leq 120\ \text{V}$

### Voltage protection level UP (Core-Core)

- $\leq 300\ \text{V}$  (B2 – 100A)
- $\leq 300\ \text{V}$  (C1 – 500A)
- $\leq 300\ \text{V}$  (C2 – 5kA)

### Voltage protection level UP (Core-Earth)

- $\leq 300\ \text{V}$  (B2 – 100A)
- $\leq 300\ \text{V}$  (C1 – 500A)
- $\leq 300\ \text{V}$  (C2 – 5kA)

### Response time tA (Core-Core)

- $\leq 100\ \text{ns}$

### Response time tA (Core-Earth)

- $\leq 100\ \text{ns}$

### Input attenuation aE, sym.

- Typ. 0.5 dB ( $\leq 5\ \text{MHz}$ )
- Typ. 0.3 dB ( $\leq 8\ \text{MHz} / 150\ \Omega$ )
- Typ. 0.3 dB ( $\leq 2.5\ \text{MHz} / 600\ \Omega$ )

### Near-end crosstalk attenuation

- $\leq 35\ \text{dB}$  (At 250 MHz / 100  $\Omega$ )

### Cut-off frequency fg (3 dB), sym. in 100 Ohm system

- Typ. 50 MHz

### Resistance in series

- $3.3\ \Omega \pm 10\%$

### Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)

- B2 (4kV / 100A)
- C1 (1kV / 500A)
- C2 (10kV / 5kA) (Terminal block)
- C2 (6kV / 3kA) (RJ11)

### Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)

- B2 (4kV / 100A)
- C1 (1kV / 500A)
- C2 (10kV / 5 kA) (Terminal block)
- C2 (6kV / 3kA) (RJ11)
- D1 (1 kA)

## Mechanical

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### Casing

- Aluminum case
- IP20

### Dimensions

- 62.5 x 100 x 30mm (W x H x D)
- 2.5" x 3.8" x 1.18"

### Weight

- $184\text{g} \pm 10\%$

### Installation

- RJ11 connector/ Terminal Block

## Environment

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### Operating Temperature

- $-40^\circ\text{C}$  to  $75^\circ\text{C}$  ( $-40^\circ\text{F}$  to  $167^\circ\text{F}$ )

### Storage Temperature

- $-40^\circ\text{C}$  to  $85^\circ\text{C}$  ( $-40^\circ\text{F}$  to  $185^\circ\text{F}$ )

### Humidity

- 5% to 95%, non-condensing

## Regulatory Approvals

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### ISO

- Manufactured in an ISO 9001 facility

### EMI

- CE
- FCC Part 15 Class B
- VCCI

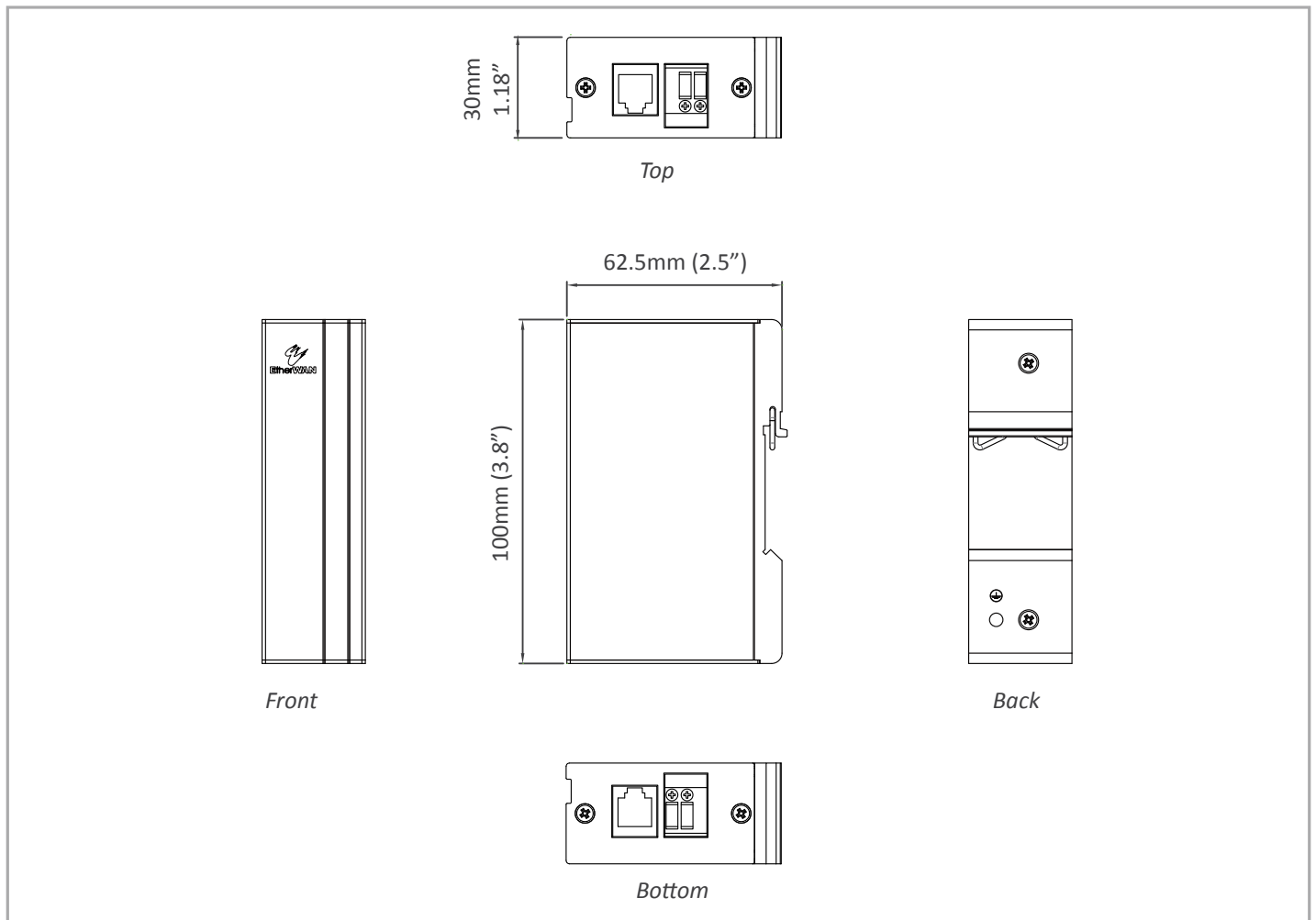
### TUV

- IEC 61643-21

### UL

- UL 497B

## Dimensions



## Ordering Information

### Model

**PD3041**

Hardened Surge Protection Device – RJ11 & Two Wire Terminal Block Type