

# PD1041

Hardened Surge Protection Device – RJ45



## Overview

EtherWAN's PD1041 Hardened Surge Protection Device is designed to protect your EtherWAN Switch investment; however any Ethernet network device can be protected from dangerous electrical surges. Designed for harsh environments, the PD1041 can be placed where you need it to protect your valuable network equipment.

EtherWAN — "When Connectivity is Crucial."

## Spotlight

### + Protection Solution Against Voltage Surge + Wide Temperature Range

Provides pair-to-pair protection through RJ45 connector

Provides -40 to 75°C operating temperature range for extreme environments

### + Flexible Installation

Supports DIN-rail or desktop installation

### + Compatible with 10/100BASE-T, Gigabit and PoE products

Pass-through Data and PoE Power

# Specifications

## + Electrical

Maximum continuous operating voltage UC  
 $\leq 3.3\text{VDC}$

Maximum continuous voltage UC (Wire-Wire)  
 $\leq 3.3\text{VDC}$  ( $\pm 60\text{VDC}/\text{PoE+}$ )

Maximum continuous voltage UC (Wire-Ground)  
 $\leq 180\text{VDC}$

Nominal current  $I_N$   
 $\leq 1.5\text{A}$  ( $25^\circ\text{C}$ )

Operating effective current  $I_C$  at UC  
 $\leq 1\mu\text{A}$

Residual current IPE  
 $\leq 8\mu\text{A}$

Nominal discharge surge current  $I_n$  (8/20)  $\mu\text{s}$   
 (Core-Core)  
 100A

Nominal discharge surge current  $I_n$  (8/20)  $\mu\text{s}$   
 (Core-Earth)  
 2kA (per signal pair)

Total surge current (8/20)  $\mu\text{s}$   
 10kA

Nominal pulse current  $I_{an}$  (10/700)  $\mu\text{s}$  (Core-Core)  
 $\leq 40\text{A}$

Nominal pulse current  $I_{an}$  (10/700)  $\mu\text{s}$  (Core-Earth)  
 160A

Output voltage limitation at  $1\text{kV}/\mu\text{s}$  (Core-Core) spike  
 $\leq 85\text{V}$  (PoE)

Output voltage limitation at  $1\text{kV}/\mu\text{s}$  (Core-Earth) spike  
 $\leq 700\text{V}$

Output voltage limitation at  $1\text{kV}/\mu\text{s}$  (Core-Core) static  
 $\leq 9\text{V}$

Output voltage limitation at  $1\text{kV}/\mu\text{s}$  (Core-Earth) static  
 $\leq 700\text{V}$

Output voltage limitation at  $100\text{V}/\text{s}$  (Core-Core)  
 $\leq 9\text{V}$

Output voltage limitation at  $100\text{V}/\text{s}$  (Core-Earth)  
 $\leq 300\text{V}$

Output voltage limitation at  $100\text{V}/\mu\text{s}$  (Core-Core)  
 $\leq 9\text{V}$

Output voltage limitation at  $100\text{V}/\mu\text{s}$  (Core-Earth)  
 $\leq 600\text{V}$

Residual voltage at  $I_N$ , (Conductor-Conductor)  
 $\leq 15\text{V}$   
 $\leq 100\text{V}$  (PoE)

Voltage protection level Up (Core-Core)  
 $\leq 9\text{V}$  (B2-1kV/25A)  
 $\leq 100\text{V}$  (B2-1kV/25A-PoE)  
 $\leq 15\text{V}$  (500V/100A)

Voltage protection level Up (Core-Earth)  
 $\leq 600\text{V}$   
 $\leq 700\text{V}$  (C2-4kV/2kA)

Response time  $t_A$  (Core-Core)  
 $\leq 1\text{ns}$

Response time  $t_A$  (Core-Earth)  
 $\leq 100\text{ns}$

Input attenuation aE, sym.  
 1dB ( $\leq 250\text{MHz}$ )

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

Cut-off frequency  $f_g$  (3dB), sym. in 100 Ohm system  
 $> 500\text{MHz}$

Capacity (Core-Core)  
 typ.  $5\text{pF}$  ( $f=1\text{MHz}/V_R=0\text{V}$ )

Capacity (Core-Earth)  
 typ.  $2\text{pF}$  ( $f=1\text{MHz}/V_R=0\text{V}$ )

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

B2 (1kV/25A)

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

B2 (4kV/100A)

C2 (4kV/2kA)

D1 (1kA)

## + Mechanical

### Casing

Aluminum Case

IP20

### Dimensions

30 x 62.5 x 100mm (W x H x D)

(1.18" x 2.5" x 3.8")

### Weight

184g ±5%

### Installation

DIN-Rail

### Connection

RJ45 Connector

## + Regulatory Approvals

### ISO

Manufactured in an ISO 9001 facility

### Safety

UL 497B

### EMI

CE

FCC Part 15 Class B

VCCI

### Industrial Compliance

IEC 61643-21

## + Environment

### Operating Temperature

-40 to 75°C (-40 to 167°F)

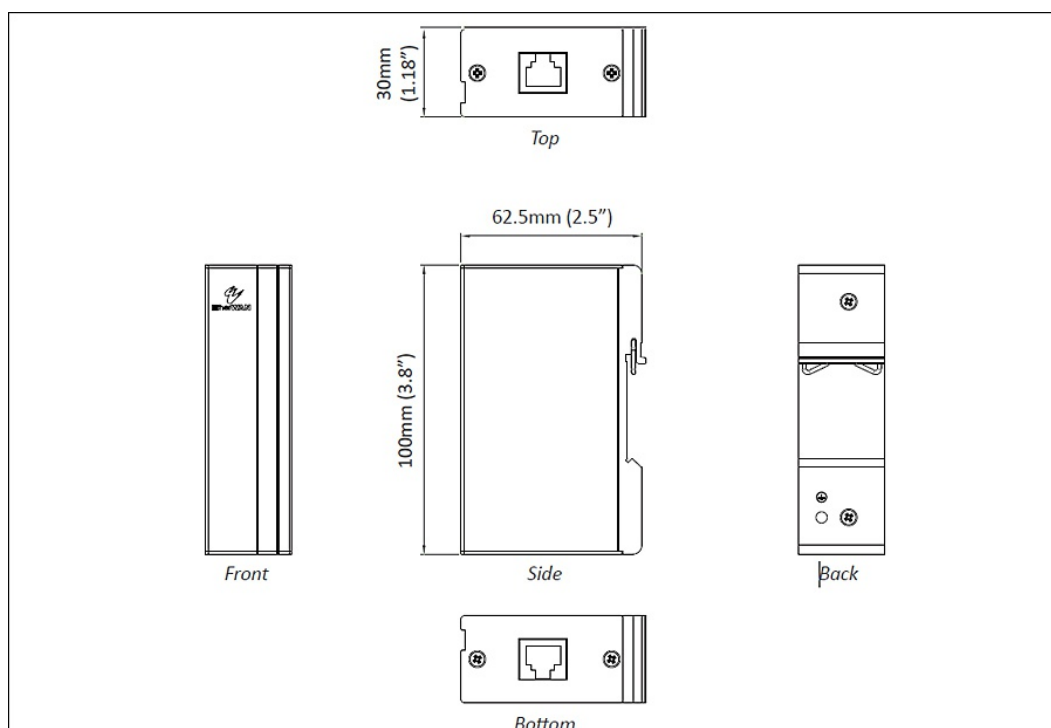
### Storage Temperature

-40 to 85°C (-40 to 185°F)

### Ambient Relative Humidity

5% to 95% (non-condensation)

## Dimensions



## Ordering Info

### + Model

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\* Note: Cat.6 cable is recommended.

