

## 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**



## **+** Mechanical

Casing

Aluminum Case

IP20

**Dimensions** 

 $30 \times 62.5 \times 100$ mm (W x H x D)

(1.18" x 2.5" x 3.8")

Weight

184g ±5%

Installation

DIN-Rail

Connection

RI45 Connector

## + 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)

### 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

## + Electrical

Maximum continuous operating voltage UC

≤3.3VDC

Maximum continuous voltage UC (Wire-Wire)

≤3.3VDC (±60VDC/PoE+)

Maximum continuous voltage UC (Wire-Ground)

<180VDC

Nominal current IN

≤1.5A (25°C)

Operating effective current IC at UC

≤1µA

Residual current IPE

≤8μΑ

Nominal discharge surge current In (8/20)  $\mu s$ 

(Core-Core)

100A

Nominal discharge surge current In (8/20) µs

(Core-Earth)

2kA (per signal pair)

Total surge current (8/20) µs

10kA

Nominal pulse current Ian (10/700) µs (Core-

Core)

≤40A

Nominal pulse current Ian (10/700) µs (Core-

Earth)

160A

Output voltage limitation at 1kV/µs (Core-Core)

spike

≤85V (PoE)

Output voltage limitation at 1kV/µs (Core-Earth)

spike

≤700V)

Output voltage limitation at 1kV/µs (Core-Core)

static

≤9V

Output voltage limitation at 1kV/µs (Core-Earth)

static

≤700V



#### **Output voltage limitation at 100V/s (Core-Core)**

<9\

### Output voltage limitation at 100V/s (Core-Earth)

≤300V

# Output voltage limitation at 100V/µs (CoreCore)

≤9V

# Output voltage limitation at $100V/\mu s$ (Core-Earth)

≤600V

## Residual voltage at IN, (Conductor-Conductor)

≤15V

≤100V (PoE)

#### **Voltage protection level Up (Core-Core)**

≤9V (B2-1kV/25A)

≤100V (B2-1kV/25A-PoE)

≤15V (500V/100A)

### **Voltage protection level Up (Core-Earth)**

≤600V

≤700V (C2-4kV/2kA)

#### Response time tA (Core-Core)

≤1ns

### Response time tA (Core-Earth)

≤100ns

#### Input attenuation aE, sym.

1dB (≤250MHz)

#### **Near-end crosstalk attenuation**

≤35dB (At 250MHz/100Ω)

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

>500MHz

#### **Capacity (Core-Core)**

typ. 5pF (f=1MHz/VR=0V)

#### **Capacity (Core-Earth)**

typ. 2pF (f=1MHz/VR=0V)

# 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)

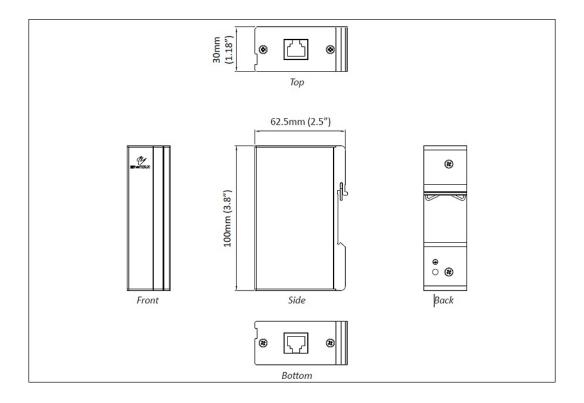
B2 (4kV/100A)

C2 (4kV/2kA)

D1 (1kA)



# **Dimensions**



# **Ordering Info**



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EtherWAN is constantly developing and improving products. Specifications are subject to change without notice and without incurring any obligation.

<sup>\*</sup> Note: Cat.6 cable is recommended.