

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

- » Provides pair-to-pair protection through RJ45 connector

Flexible Installation

- » Supports DIN-rail or desktop installation

Wide Temperature Range

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

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)

- $\leq 3.3\text{VDC}$ ($\pm 60\text{VDC/PoE+}$)

Maximum continuous voltage UC (Wire-Ground)

- $\leq 180\text{VDC}$

Nominal current I_N

- $\leq 1.5\text{A}$ (25°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) μs (Core-Core)

- 100A

Nominal discharge surge current I_n (8/20) μs (Core-Earth)

- 2kA (per signal pair)

Total surge current (8/20) μs

- 10kA

Nominal pulse current I_{an} (10/700) μs (Core-Core)

- $\leq 40\text{A}$

Nominal pulse current I_{an} (10/700) μs (Core-Earth)

- $\leq 160\text{A}$

Output voltage limitation at 1kV/ μ s (Core-Core) spike

- $\leq 85V$ (PoE)

Output voltage limitation at 1kV/ μ s (Core-Earth) spike

- $\leq 700V$

Output voltage limitation at 1kV/ μ s (Core-Core) static

- $\leq 9V$

Output voltage limitation at 1kV/ μ s (Core-Earth) static

- $\leq 700V$

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

- $\leq 9V$

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

- $\leq 300V$

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

- $\leq 9V$

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

- $\leq 600V$

Residual voltage at IN, (Conductor-Conductor)

- $\leq 15V$
- $\leq 100V$ (PoE)

Voltage protection level Up (Core-Core)

- $\leq 9V$ (B2-1kV/25A)
- $\leq 100V$ (B2-1kV/25A-PoE)
- $\leq 15V$ (500V/100A)

Voltage protection level Up (Core-Earth)

- $\leq 600V$
- $\leq 700V$ (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 a_E , sym.

- 1dB ($\leq 250\text{MHz}$)

Near-end crosstalk attenuation

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

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

- $> 500\text{MHz}$

Capacity (Core-Core)

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

Capacity (Core-Earth)

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

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
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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)
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Regulatory Approvals

ISO

- Manufactured in an ISO 9001 facility

Safety

UL 497B

EMI

CE

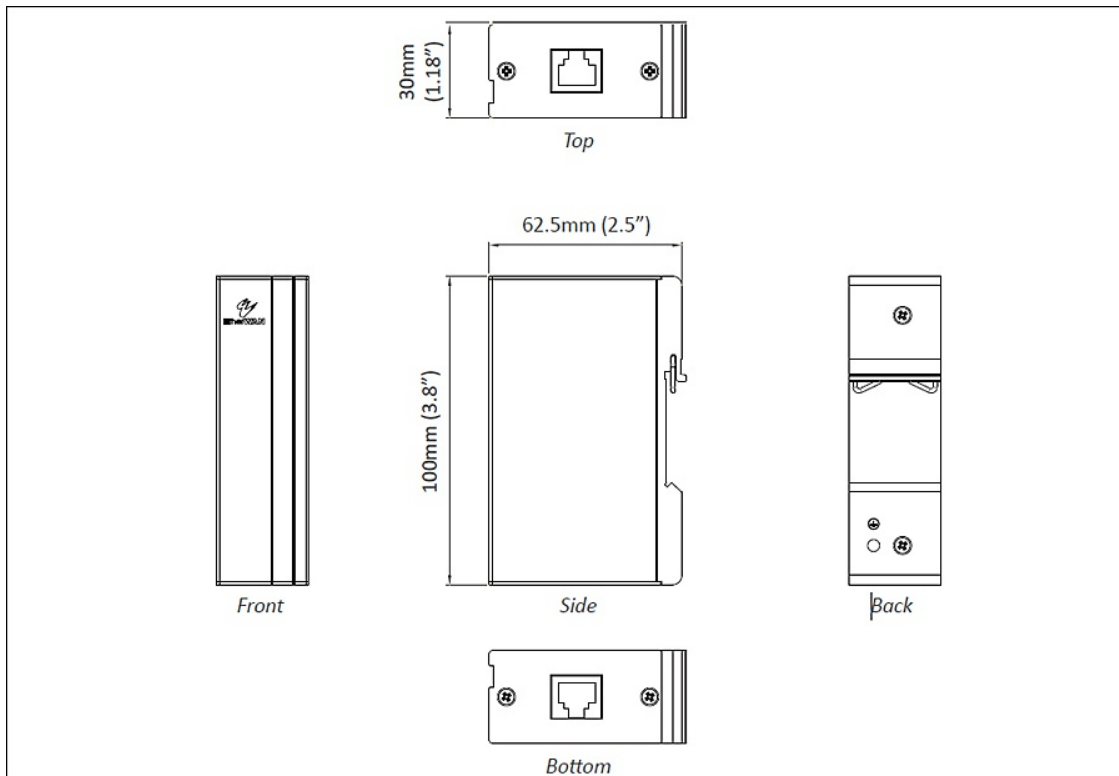
FCC Part 15 Class B

VCCI

Industrial Compliance

IEC 61643-21

Dimensions



Ordering Info

Model

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* Note: Cat.6 cable is recommended.

