

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.

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°C to 75°C operating temperature range for extreme environments
- **Compatible with 10/100BASE-T, Gigabit and PoE products**
 - Pass-through Data and PoE Power

Electrical

Maximum continuous operating voltage U_C
• $\leq 3.3V$ DC

Maximum continuous voltage U_C (wire-wire)
• $\leq 3.3 V$ DC ($\pm 60 V$ DC/PoE+)

Maximum continuous voltage U_C (wire-ground)
• $\leq 180 V$ DC

Nominal current I_N
• $\leq 1.5 A$ ($25^\circ C$)

Operating effective current I_C at U_C
• $\leq 1 \mu A$

Residual current I_{PE}
• $\leq 8 \mu A$

Nominal discharge surge current I_n (8/20) μs (Core-Core)
• 100 A

Nominal discharge surge current I_n (8/20) μs (Core-Earth)
• 2 kA (per signal pair)

Total surge current (8/20) μs
• 10 kA

Nominal pulse current I_{an} (10/700) μs (Core-Core)
• $\leq 40 A$

Nominal pulse current I_{an} (10/700) μs (Core-Earth)
• $\leq 160 A$

Output voltage limitation at 1 kV/ μs (Core-Core) spike
• $\leq 85 V$ (PoE)

Output voltage limitation at 1 kV/ μs (Core-Earth) spike
• $\leq 700 V$

Output voltage limitation at 1 kV/ μs (Core-Core) static
• $\leq 9 V$

Output voltage limitation at 1 kV/ μs (Core-Earth) static
• $\leq 700 V$

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

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

Output voltage limitation at 100V/ μs (Core-Core)
• $\leq 9 V$

Output voltage limitation at 100V/ μs (Core-Earth)
• $\leq 600 V$

Residual voltage at I_N , (conductor-conductor)
• $\leq 15 V$
• $\leq 100 V$ (PoE)

Voltage protection level U_p (Core-Core)
• $\leq 9 V$ (B2 - 1 kV/25 A)
• $\leq 100 V$ (B2 - 1 kV/25 A - PoE)
• $\leq 15 V$ (500 V/100 A)

Voltage protection level U_p (Core-Earth)
• $\leq 600 V$
• $\leq 700 V$ (C2 - 4 kV/2 kA)

Response time t_A (Core-Core)
• $\leq 1 ns$

Response time t_A (Core-Earth)
• $\leq 100 ns$

Input attenuation a_E , sym.
• 1 dB ($\leq 250 MHz$)

Near-end crosstalk attenuation
• $\leq 35 dB$ (At 250 MHz / 100 Ω)

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

Capacity (Core-Core)
• typ. 5 pF ($f= 1 MHz / VR= 0 V$)

Capacity (Core-Earth)
• typ. 2 pF ($f= 1 MHz / VR= 0 V$)

Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)
• B2 (1 kV/25 A)

Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)
• B2 (4 kV / 100 A)
• C2 (4 kV / 2 kA)
• D1 (1 kA)

Mechanical

Casing

- Aluminum case
- IP20

Dimensions

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

Weight

- 184g $\pm 5\%$

Installation

- DIN-Rail

Connection (input / output)

- RJ45 connector / RJ45 connector

Environment

Operating Temperature

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

Storage Temperature

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

Ambient Relative Humidity

- 5% to 95%, non-condensation

Regulatory Approvals

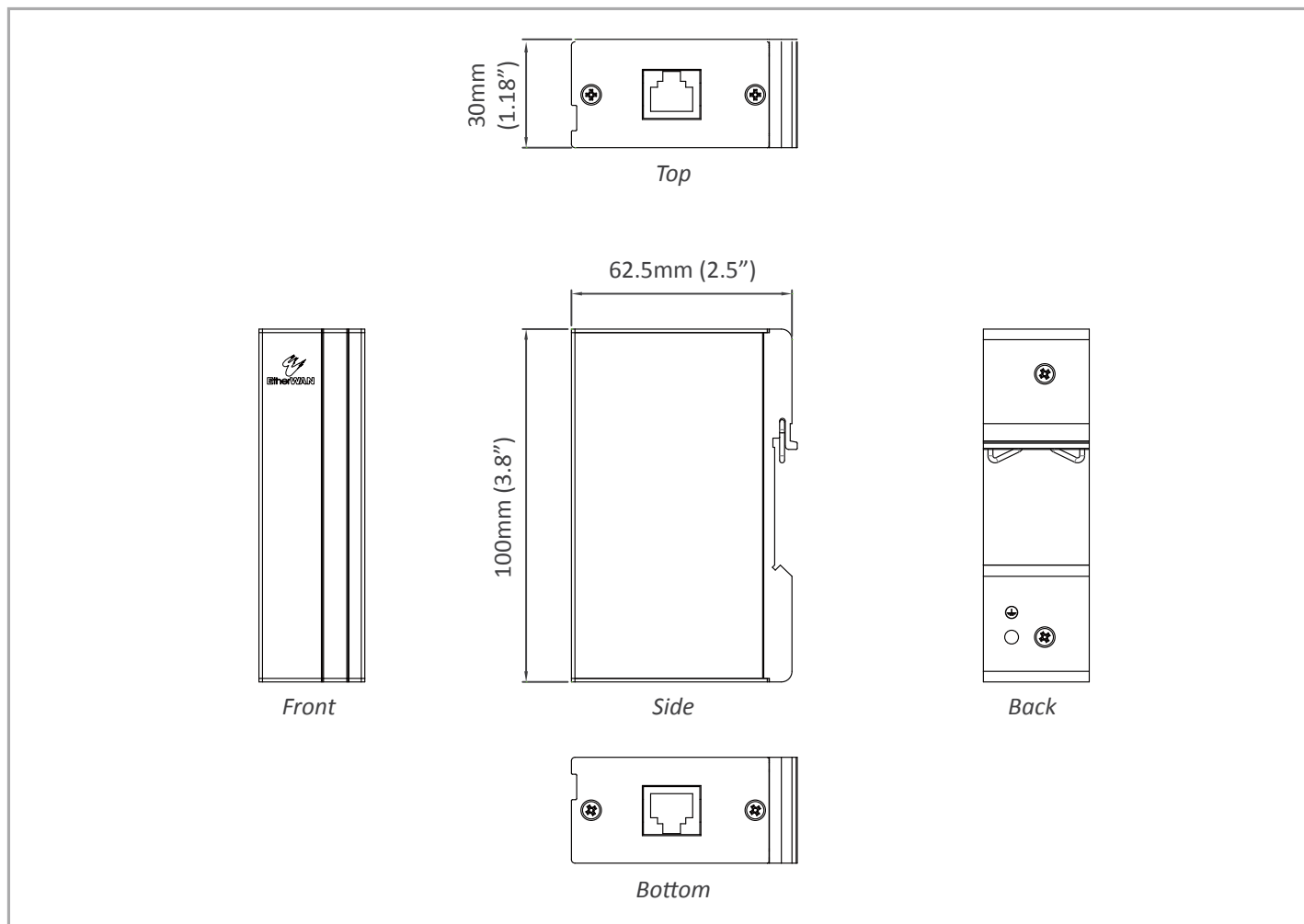
ISO

- Manufactured in an ISO9001 facility

UL

- UL497B

Dimensions



Ordering Information

Model

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*Note: CAT6 cable is recommended