

Ethernet Surge Protection Device SPD-ETH-RJ45

The SPD-ETH-RJ45 is a heavy-duty DIN rail Gigabit Ethernet surge protection device providing high-speed transient voltage clamping for industrial IP cameras, PLCs, and network switches over Cat5e and Cat6 lines.



Key Features

- High-speed Ethernet surge protection for Cat5e and Cat6 lines
- Two-stage hybrid suppression (Gas Discharge Tube + fast TVS array)
- Compatible with 10/100/1000M Gigabit networks and PoE / PoE+ systems
- Clamps lightning-induced transients and high-voltage spikes
- Ultra-fast response time (< 1 ns) with low signal insertion loss
- Protects IP cameras, industrial PLCs, and network switches
- Shielded RJ45 female connectors with chassis earth ground connection
- Compact DIN rail and surface mountable housing
- Dimensions: 80 mm × 25 mm × 25 mm

Ordering Information

Product Code	Description
SPD-ETH-RJ45	Ethernet Surge Protection Device SPD-ETH-RJ45
SPD-24V-DC	Surge Protection Device 24V DC SPD
SPD-230V-AC	Surge Protection Device 230V SPD / Single Phase SPD
SPD-RS485	Surge Protection Device RS485
UC-ETH-RS485	Ethernet to RS485 Converter

Applications

- **Industrial Automation & Process Control:** Reliable signal interfacing and device connectivity across automated production lines.
- **SCADA & PLC Integration:** Seamless communication between field instrumentation and control systems.
- **Control Panel Building:** Compact 35 mm DIN rail mounting for clean and space-efficient cabinet wiring.
- **OEM Equipment & Diagnostics:** Robust electrical protection and standard industrial ratings.

Specifications

Parameter	Value
Mounting Type	DIN Rail
Dimensions	60 mm x 50 mm x 20 mm (L x W x H)
Enclosure Material	Industrial ABS plastic
Operating Temperature	−10 °C to +60 °C
Storage Temperature	−40 °C to +85 °C
Relative Humidity	5% to 95% RH (non-condensing)

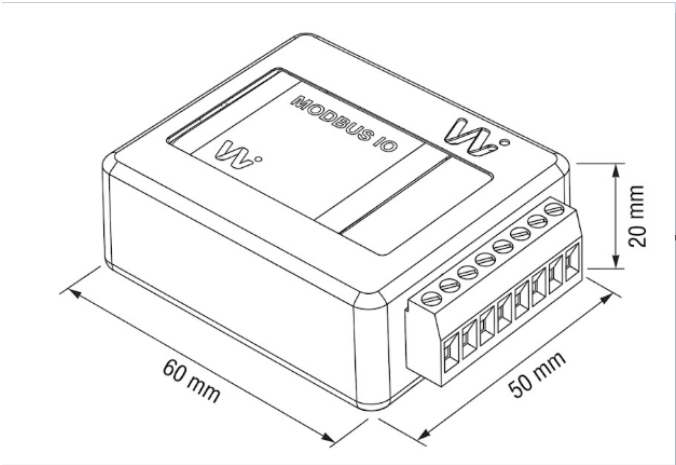
Electrical Specifications

Parameter	Specification
Operating Voltage	Max 5.5 V DC
Nominal Discharge Current (In)	5 kA (8/20 μs impulse)
Max Discharge Current (Imax)	10 kA (8/20 μs impulse)
Response Time (tA)	< 1 ns (TVS) / < 25 ns (GDT)
Protection Technology	Multi-stage Hybrid (GDT + TVS Clamping)

Isolation & Protection Specifications

Parameter	Value	Standard / Notes
Voltage Clamping Level	Low Clamping	High-efficiency multi-stage surge attenuation
Surge Standard	IEC 61643-21 / IEC 61000-4-5	Class-compliant industrial transient immunity
Grounding Interface	Integrated PE Terminal	Low-impedance earth DIN rail connection

Mechanical Dimensions



Terminal Details & Wiring

RJ45 Port Connections

Port	Connector	Signal / Channel	Description
LINE IN (Field)	RJ45 Jack	Cat5e / Cat6 Giga-bit	Unprotected incoming network cable from field / outdoor switch
LINE OUT (Equip)	RJ45 Jack	Cat5e / Cat6 Giga-bit	Protected clean network cable to PLC, IP camera, or switch
Earth Stud / Clip	PE Terminal	Chassis Earth	Heavy-duty copper earth ground stud and 35 mm DIN rail clip

Revision History

Revision	Date	Description of Change
Rev 1.0	2026-09-09	Initial datasheet release

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Support

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