



DIC-RJ45/POE

Signal Surge Protective Device (SPD) for Power over Ethernet

High-performance signal surge protection for Power-over-Ethernet (PoE) lines—protecting switches, routers, and PoE-powered devices from lightning surges and transient overvoltages.

Model	DIC-RJ45/POE
Product Series	Industrial Surge Protective Series
Manufacturer	Qualitech Technology Pte. Ltd.
Quality System	ISO 9001 Certified
Type Test Report NO.	2020-(S)-07-004 (Lab:Shenzhen Met. Lightning Protection Lab)
Document No.	KB-DS-DICRJ45POE-001
Revision	V1.07
Issue Date	August 2026

Overview & Applications

The DIC-RJ45/POE is a high-performance signal Surge Protective Device (SPD) specifically designed for robust overvoltage and lightning protection. It is engineered for sensitive ethernet equipment receiving power and data over a single network cable, shielding components such as network switches, servers, enterprise routers, modems, printer servers, and serial controllers from transient surges.

Key Features

- High Discharge Capacity:** Supports multi-stage protection with a maximum discharge current (I_{max}) of up to 5 kA.
- Ultra-Fast Response Time:** Integrates premium silicon semiconductor protection components with a response time of ≤ 1 ns for data and ≤ 25 ns for power lines.
- Extremely Low Insertion Loss:** Maintains signal integrity at high transmission speeds (1000 Mbps) with ≤ 0.2 dB insertion loss.
- Premium Engineering:** Built with globally recognised core components for maximum reliability and sustained longevity.
- Easy Installation:** Compact design with standard RJ45 interface, ensuring seamless inline integration.

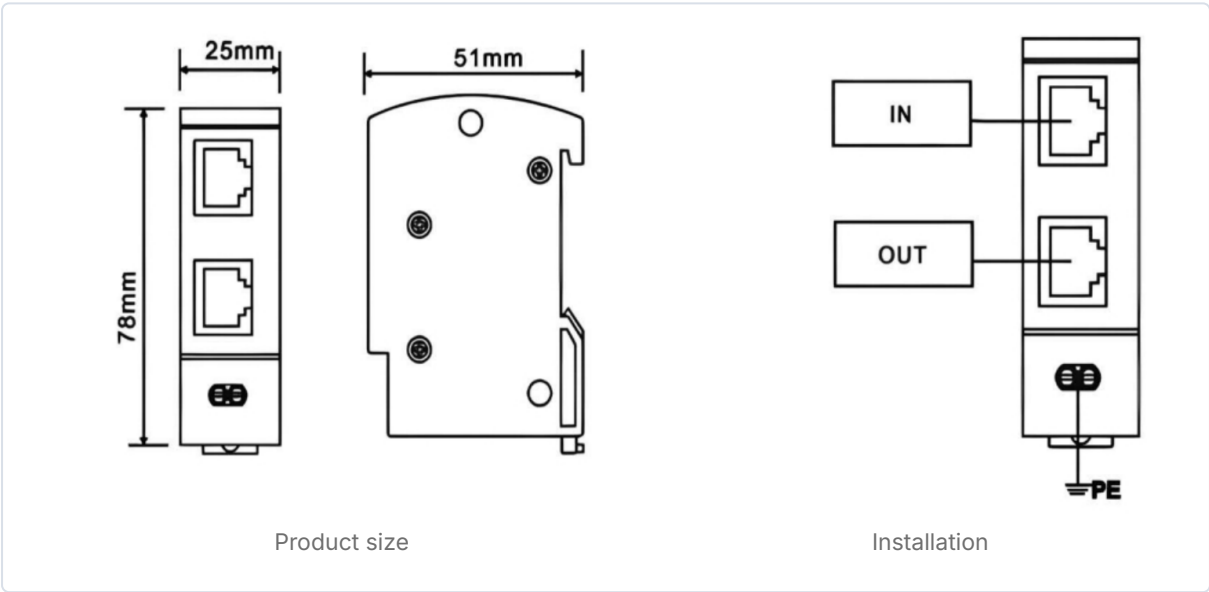
Technical Specifications

Parameter	Power Line (PoE Channel)	Network Line (Data Channel)
Interface Type	RJ45	RJ45
Nominal Operating Voltage (U_n)	48 VDC	5 V
Max. Continuous Operating Voltage (U_c)	60 VDC	6 V
Voltage Protection Level (U_p) (1.2/50 μ s)	≤ 400 V	≤ 40 V
Nominal Discharge Current (I_n) (8/20 μ s)	2.5 kA	2.5 kA
Max. Discharge Current (I_{max}) (8/20 μ s)	5 kA	5 kA
Response Time (T_A)	≤ 25 ns	≤ 1 ns
Transmission Rate	—	1000 Mbps (Gigabit Ethernet)
Insertion Loss	—	≤ 0.2 dB

Certifications & Compliance

Quality System	ISO 9001 Certified
Test Report	By Lightning Protection Technology Lab of Shenzhen Meteorological Service Center

Product Dimensions & Installation Diagram



Connect **IN** to the incoming source and **OUT** to the protected equipment.

Instructions

Wiring & Mounting Guidelines:

- **Series Connection:** The SPD must be installed in series along the cable line between the threat source and the protected device.
- **Port Orientation:** Connect the external incoming line to the IN port and connect the protected network equipment to the OUT port. Reverse installation will render protection ineffective.
- **Voltage Alignment:** Ensure the nominal working voltage of the protected network interface matches the specified parameters of the SPD.
- **Grounding (PE):** The protective ground terminal (PE) must be connected securely to the main lightning protection grounding system. Grounding wires must be as short, thick, and straight as possible to minimise impedance.
- **Regular Maintenance:** The lightning arrester should be tested regularly during its use. If it fails, it should be repaired or replaced in time to ensure the safety of the equipment.



Support & Partnership

Qualitech Technology provides technical guidance and engineering support services for partners.

Contact & Ordering Information

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MODEL

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