



FL485

Surge Protection Devices For Twisted-Pairs System

- The transmission performance is superior, the insertion loss is small, and there is no network drop phenomenon caused by ground fault, which can effectively eliminate various interferences caused by the common ground transmission signal
- The excellent lightning protection performance, built-in multi-level surge protection, large surge capacity, high-speed response (nanosecond level), low residual voltage level, chip-level protection for the protected equipment, small size, easy wiring, installation convenience
- The internal equipotential design of the lightning arrester can effectively prevent equipment damage caused by the instantaneous increase of the potential difference between the lines and the lines or between the lines and the ground

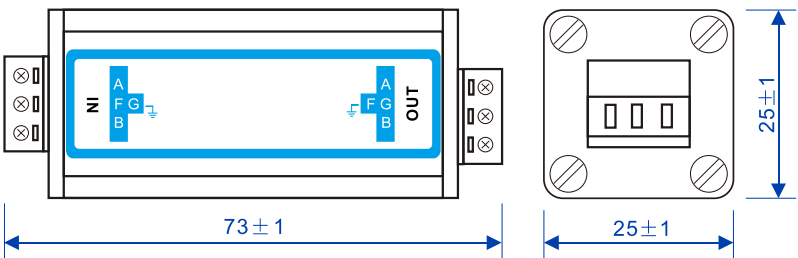


Introduction

FL485 RS-485 surge protection devices is designed according to IEC61643-21 and GB/T 18802.21 standards. It adopts multi-level protection circuit and TDK-EPCOS high-speed surge protective parts. It has fast response speed, low output residual voltage and low capacitance design , transmission performance is superior. This product is suitable for surge protection of twisted-pairs system, such as RS-485, RS-422, CAN bus, Profibus etc. It effectively suppresses high voltage and high current pulses induced in the line and protects the back-end equipment from lightning and industrial surge. This product is made of aluminum alloy shielded metal casing, has good sealing performance, and has dustproof and anti-corrosion function. It is connected in series and installed between the protected equipment and the outer line.

Dimension

Unit:mm



Specification

Nominal operating voltage / U_n	5V
Maximum continuous operating voltage / U_c	6V
Nominal discharge current / $I_n(8/20\mu s)$	500A(Line-line), 3000A(Line-ground)
Maximum discharge current / $I_{max}(8/20\mu s)$	1000A(Line-line), 5000A(Line-ground)
Voltage protection level / $U_p(1.2/50\mu s)$	<30V(Line-line), <600V(Line-ground)
Impulse withstand voltage (10/700 μs)	6000V(Line-line, Line-ground)



Insertion loss	≤0.5dB
Number of protection lines	2 lines
Transmission rate	0-10Mbps
Interface type	3Pin 5.08 terminal blocks
Degree of protection	IP20
Response time	≤10ns
Working temperature	-20°C~+60°C
Dimensions	73*25*25 (±1) mm
Net Weight / Gross weight	49 / 67 (±5) g
Certification	CE, FCC, RoHS
Warranty	1 year

Ordering Information

Available Models	RS-485 (Input)	RS-485 (Output)	Power Supply
FL485	1	1	No



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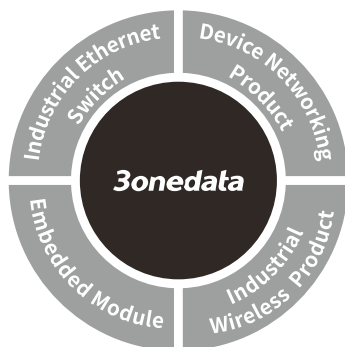
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FL485 Surge Protection Devices For Twisted-Pairs System Quick Installation Guide



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【Package Checklist】

Please check whether the package and accessories are intact while using the device for the first time.

- | | |
|---------------------------|----------------------------|
| 1 Surge protection device | 2 Quick installation guide |
| 3 Certification | 4 Warranty card |

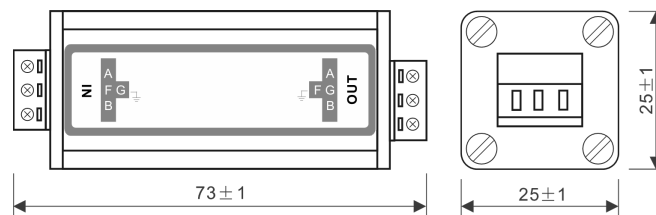
If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

【Product Overview】

The product is RS-485 surge protection device. Model is: FL485 (1 RS-485 input +1 RS-485 output).

【Mounting Dimension】

Unit: mm



Note before mounting:

- Don't place or install the device in area near water or moist, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before power on, first confirm the supported power supply specification to avoid over-voltage damaging the device.
- The device surface temperature is high after running; please don't directly contact to avoid scalding.

【The Method of Maintenance】

- This product is connected in series. The surge protection device is installed in the front end of the protected equipment. The "IN" of the surge protection device is the input side, and the "OUT" is the output side. That is, the external signal cable is connected to the "IN (Line)" end of the surge protection device, The protected device is connected to the "OUT (Equip)" end of the surge protection device;
- The length of the connection line between the protected equipment and the surge protection device should not exceed 0.5 meters, it is better that the surge protection device is closer to the protected equipment;
- The PE line of the surge protection device is connected to the equipotential bonding terminal of the protected device first, and then reliably connected with the grounding network of the lightning protection system. The connection line is required to be short, thick and straight;

- The components in the surge protection device are strictly tested. Normally, no special maintenance is required. The surge protection device should be regularly tested during use. Remove the surge protection device during fault detection. The resistance between the input and output should be $\leq 11\Omega$, and the resistance between the core line and ground should be $\geq 10M\Omega$. If there is a fault, it should be repaired or replaced in time to ensure the safety of the equipment.

【Specification】

Specifications	
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Maximum continuous operating voltage / Uc	6V
Nominal discharge current / In(8/20us)	500A(Line-line), 3000A(Line-ground)
Maximum discharge current / Imax(8/20us)	1000A(Line-line), 5000A(Line-ground)
Voltage protection level / Up(1.2/50us)	<30V(Line-line), <600V(Line-ground)
Impulse withstand voltage (10/700us)	6000V(Line-line, Line-ground)
Insertion loss	$\leq 0.5\text{dB}$
Number of protection lines	2 lines
Transmission rate	0-10Mbps
Interface type	3Pin 5.08 terminal blocks
Degree of protection	IP20
Response time	$\leq 10\text{ns}$
Working temperature	-20°C~+60°C
Dimensions	73*25*25 (±1) mm
Net Weight / Gross weight	49 / 67 (±5) g