



Surge Protector Series

User Manual

Model : SP006PH-10G

High Performance 10G PoE Surge Protector



Introduction

SP006PH-10G is an in-line surge protector designed for preventing damage to PoE (Power over Ethernet) devices from high voltage surges.

Features

- Surge current up to 20KA
- Supports data rate up to 10Gbps
- Supports Mid-Span and End-Span PoE
- Built-in two-stage protection with GDTs and SIDACTORS
- Supports protection for both differential and common mode
- Response time less than 1ns
- IEC 61000-4-2, IEC61000-4-5, UL497B compliance
- Supports multiple mounting options (Wall/Rack mounting & Din-Rail)

Installation view

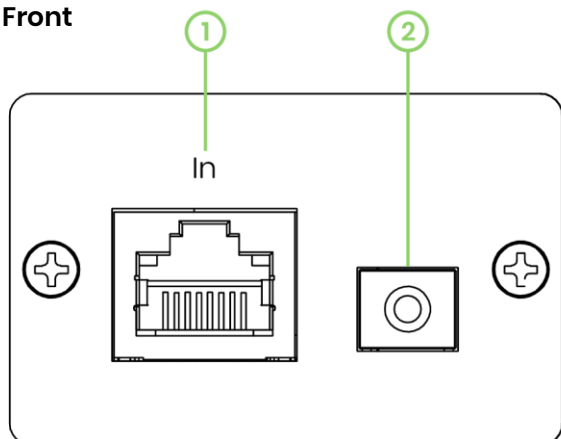


Bandwidth/ Distance

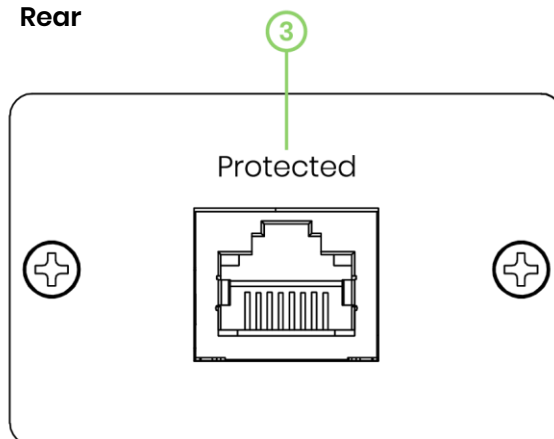
For 10G application, the maximum distance is 80M. SC&T uses COMMSCOPE CAT6a cable for testing, the data rate may be slightly compromised by connected equipment, cables, and connectors.

Panel view

Front



Rear

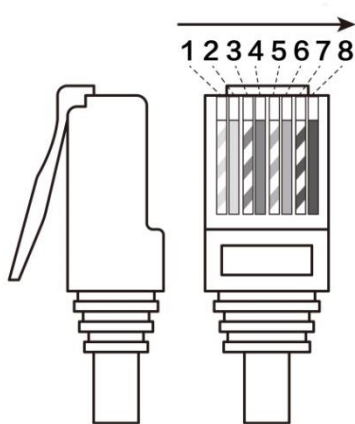


| No | Interface | Function |
|----|---------------------|--|
| 1 | Input Connector | To connect the cable transmission side |
| 2 | GND Connection | To connect the ground |
| 3 | Protected Connector | To connect the device to be protected |

RJ45 Pin Define

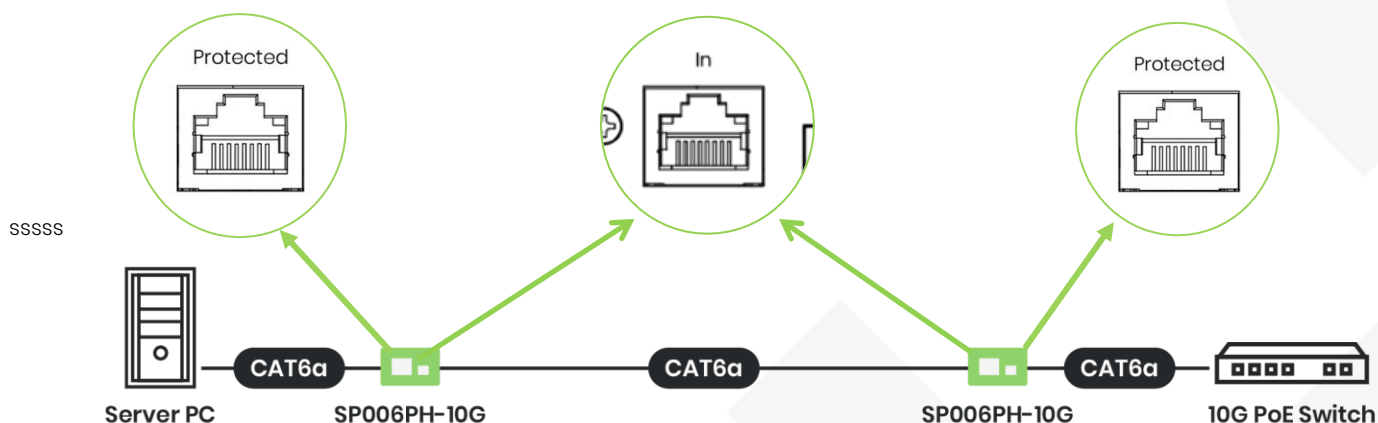
(TIA/EIA-568-B)

| Pin | Pin Color |
|-----|--------------|
| 1 | Orange-white |
| 2 | Orange |
| 3 | Green-white |
| 4 | Blue |
| 5 | Blue-white |
| 6 | Green |
| 7 | Brown-white |
| 8 | Brown |



Caution

- This product is not water resistant. If it is desired for outdoor use, please install additional equipment for waterproof protection.
- Avoid using this product close to water places, or near high temperature devices such as radiators, stoves, etc.
- Using standard and certified Ethernet CAT5e UTP/STP/FTP, CAT6 UTP cables is recommended.
- 10G full speed cannot be reached when transmission distance is longer than 80M.
- Only the port marked “protected” can prevent your PoE device from surges, so we recommend using a SP006PH-10G for each of your PoE device that needs to be protected.
- Ensure the input port connects to a network cable as below.



- To effectively protect your PoE device, please ensure the product is properly grounded.
- **DO NOT** connect the ground wire to power wire.
- The ground resistance value should be less than 100Ω.
- The protection is not bi-directional, the protected device must be connected to the Protected Connector.
- To have the best performance, using high-quality CAT6a cables and RJ45 connectors is recommended.


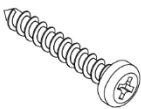
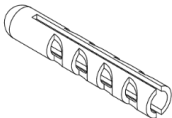

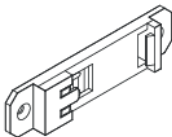
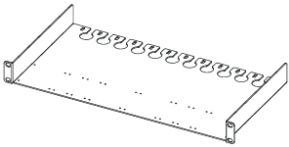
What's in the Package

| No. | Item | Qty |
|-----|---------------|-----|
| 1 | SP006PH-10G | x 1 |
| 2 | Accessory Set | x 2 |

Specification

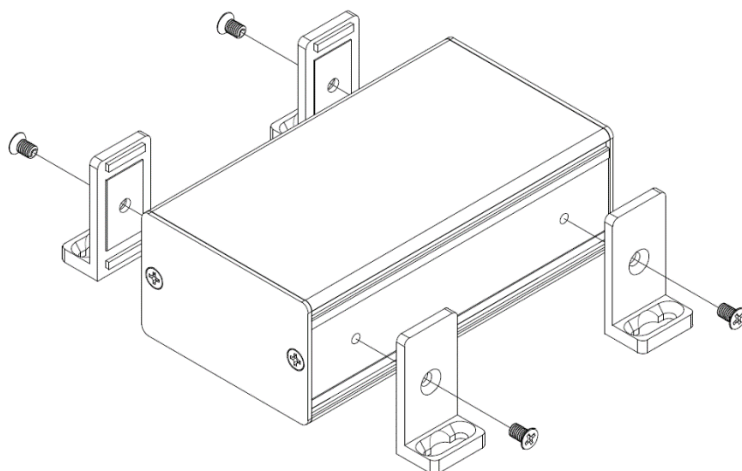
| | |
|----------------------------|---|
| ITEM NO. | SP006PH-10G |
| Support | |
| Compliance | IEEE 802.3af PoE IEEE 802.3at PoE+ IEEE 802.3bt PoE++ Passive PoE Compatible IEC 61000-4-2 Standard IEC 61000-4-5 Standard UL497B |
| Data Rate | 10/ 100/ 1000/ 10000Mbps |
| Response Time | < 1ns |
| Operation Voltage | < 58V |
| Operating Current | 8A |
| Surge Discharge Current | 20KA (8/20us) |
| Peak Pulse Current | 200A (10/1000us) |
| Protection Mode | Differential and Common Mode |
| Insulation Resistance | > 10000Ω. |
| Capacitance (line to line) | < 2.5pF |
| ESD Protection | ± 30KV (Contact & Air) |
| Ports & Interfaces | |
| Data Input | 1 x RJ45 |
| Data Output | 1 x RJ45 |
| Ambient Temperature | |
| Operation | -40 to 70°C |
| Storage | -40 to 90°C |
| Max. Operating Altitude | 2000m |
| Humidity | Up to 95% |
| Physical Characteristics | |
| Mounting | Rack-Mount / Wall-Mount / Din-Rail |
| Dimensions | 50 x 80 x 32mm |
| Weight | 160g |

Installation Guide

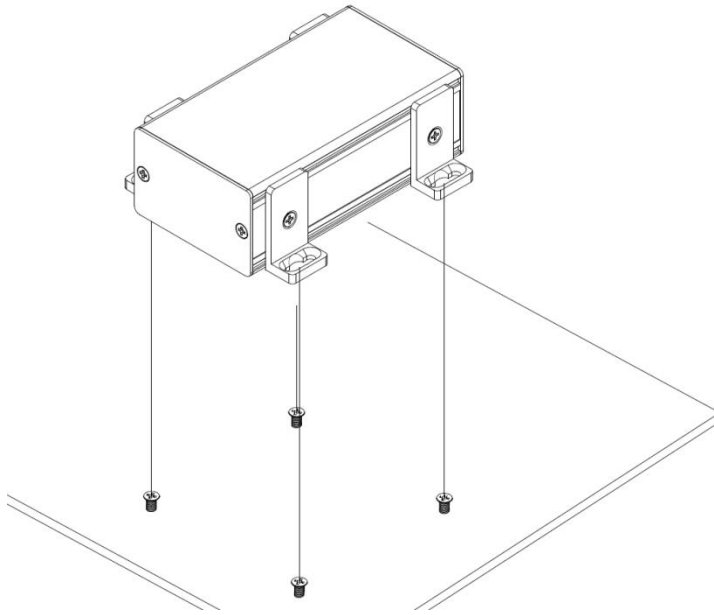
| Accessory | | |
|-----------|------------------------|---|
| A | Machine Screw |  |
| B | Self-drilling Screw |  |
| C | Screw Plug |  |
| D | Angle Bracket |  |
| E | DIN-rail Mounting Plat |  |
| F | 1U Rack |  |

Installed on a Platform

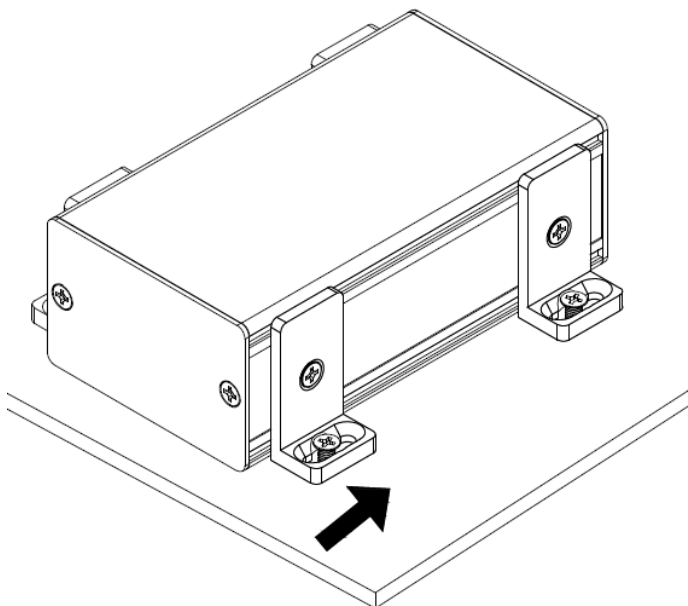
Step 1 Use machine screws to fix angle brackets on both sides of your product



Step 2 Use self-drilling screws to fix the product on a platform

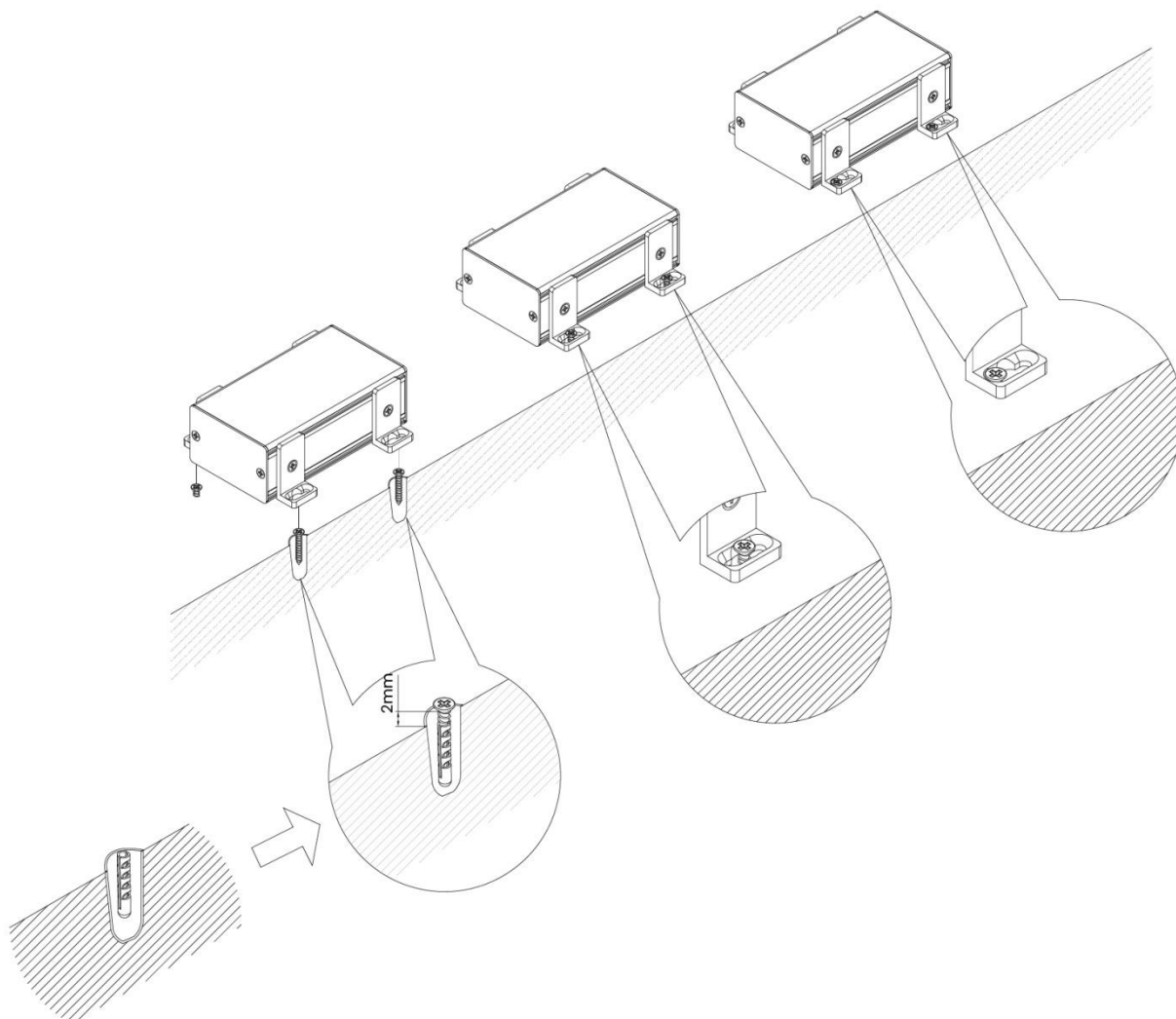


Step 3 Move the product to get fixed and then lock the screws



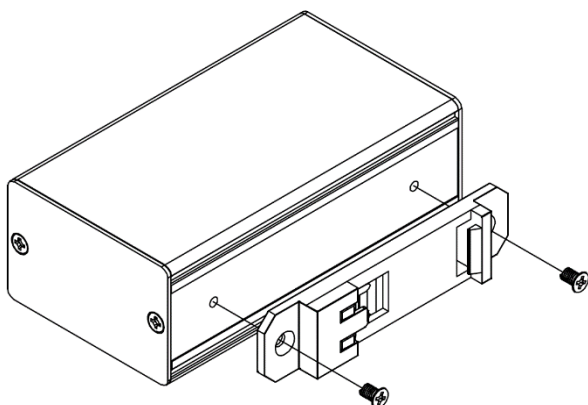
Installed on Wall

Step 1 Same way as “Installed on a Platform”, but need to put screw plugs into the wall before inserting the screws (leave 2mm space from the platform)

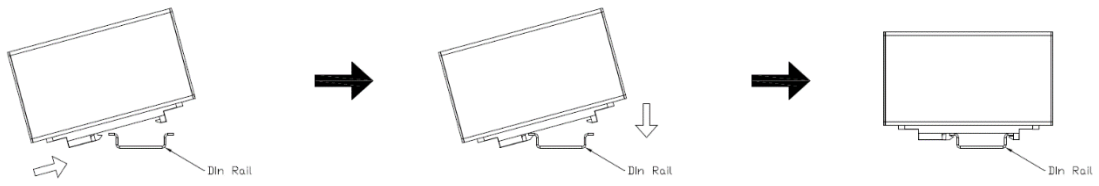


Installed on a Din-Rail

Step 1 Use machine screws to fix a din-rail mounting plat on the side of your product



Step 2 Install your product on a DIN-rail as following instruction

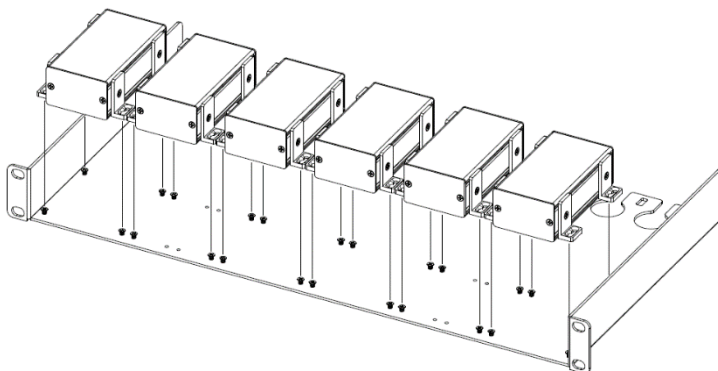


Installed on a Rack

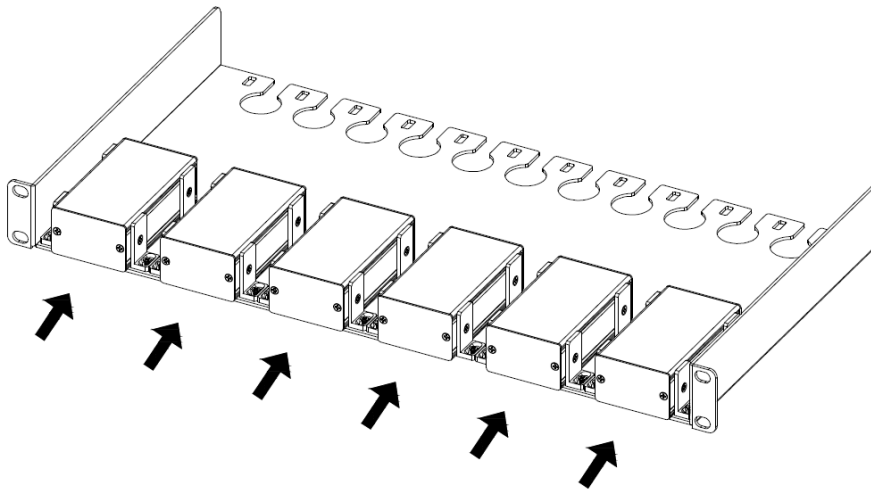
Step 1 Lock machine screws in the rack



Step 2 Put your products on the rack



Step 3 Push the products to the other side of the rack



Step 4 Install the rack in a cabinet

