



Surge Protector Series

# User Manual

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Model : SP006PH-10G

High Performance 10G PoE Surge Protector

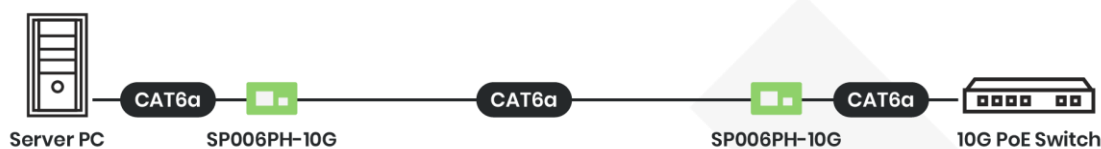
## Introduction

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 10Gpbs
- 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

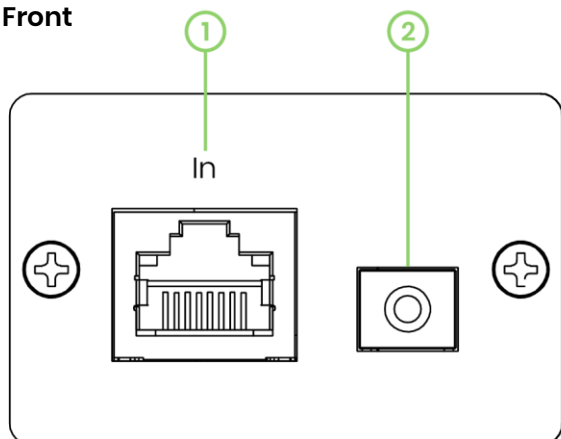


## Bandwidth/ Distance

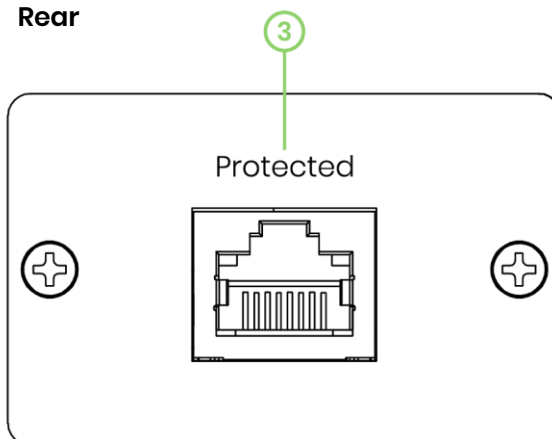
For 10G application, the maximum distance is 80M. SC&T uses COMMSCOPE CAT6a cable for testing, the data rate may be slightly compromised by connected equipment, cables, and connectors.

## Panel view

Front



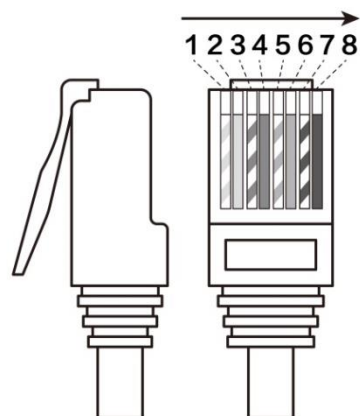
Rear



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

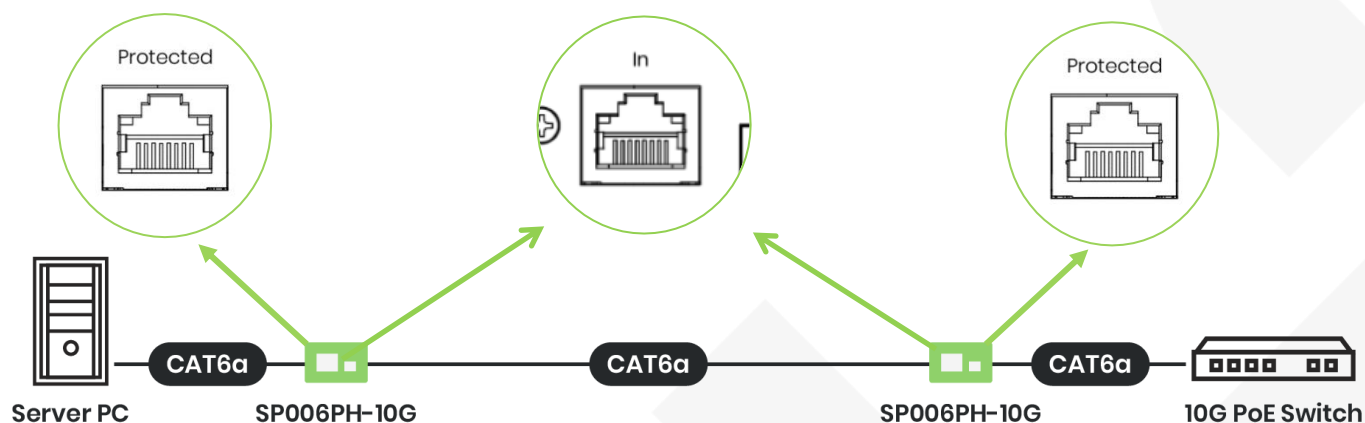
## RJ45 Pin Define

(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.



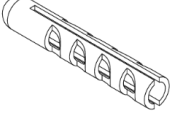
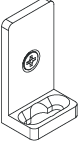
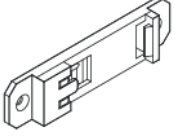
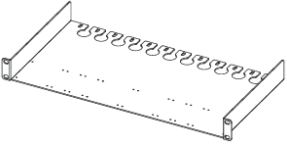
## What's in the Package

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

## Specification

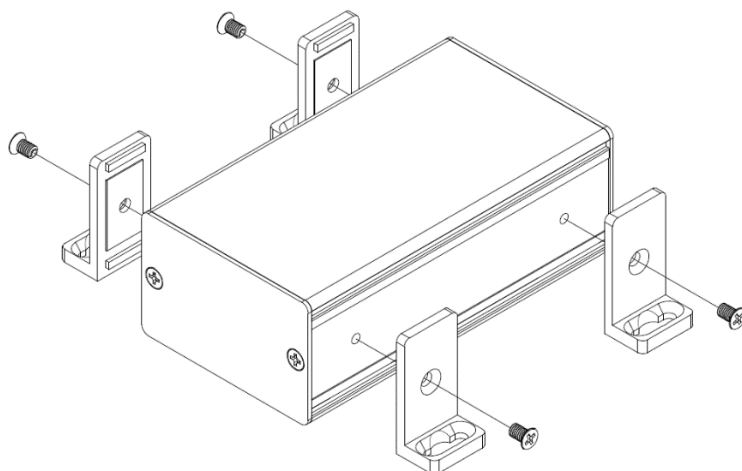
<b>ITEM NO.</b>	<b>SP006PH-10G</b>
Support	
Compliance	IEEE 802.3af PoE IEEE 802.3at PoE+ IEEE 802.3bt PoE++ Passive PoE Compatible IEC 61000-4-2 Standard IEC 61000-4-5 Standard UL497B
Data Rate	10/ 100/ 1000/ 10000Mbps
Operation Voltage	< 58V
Operating Current	8A
Surge Discharge Current	20KA (8/20us)
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

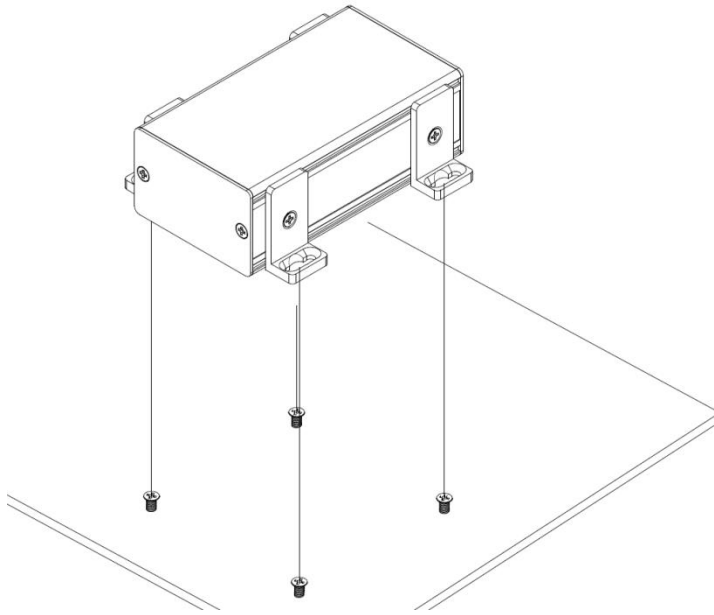
Accessory		
A	Machine Screw	
B	Self-drilling Screw	
C	Screw Plug	
D	Angle Bracket	
E	DIN-rail Mounting Plat	
F	1U Rack	

### Installed on a Platform

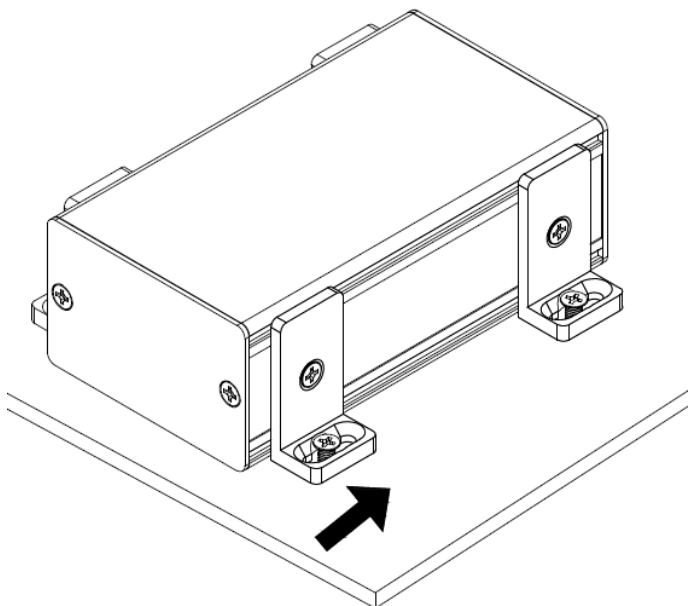
**Step 1** Use machine screws to fix angle brackets on both sides of your product



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

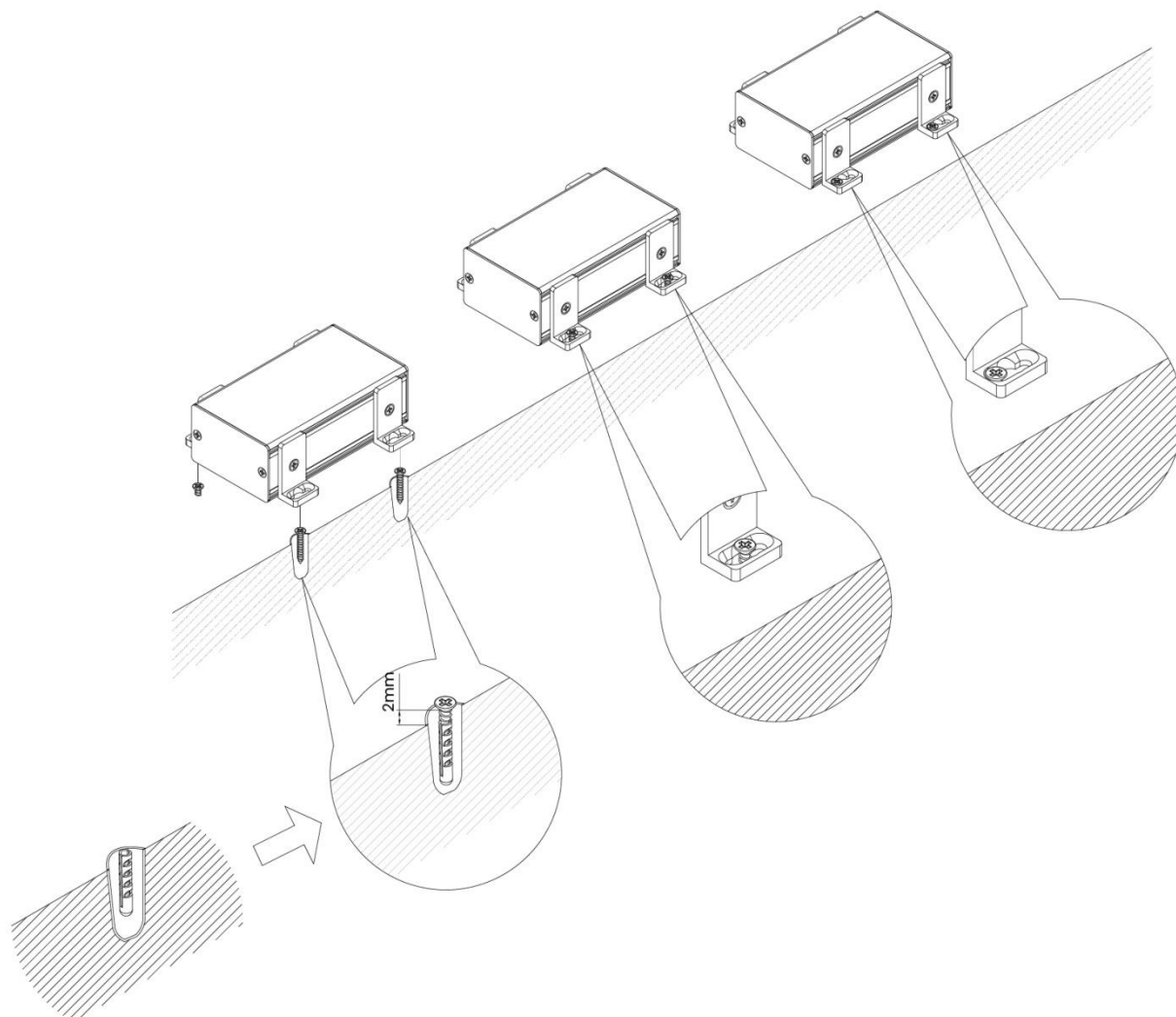


**Step 3** Move the product to get fixed and then lock the screws



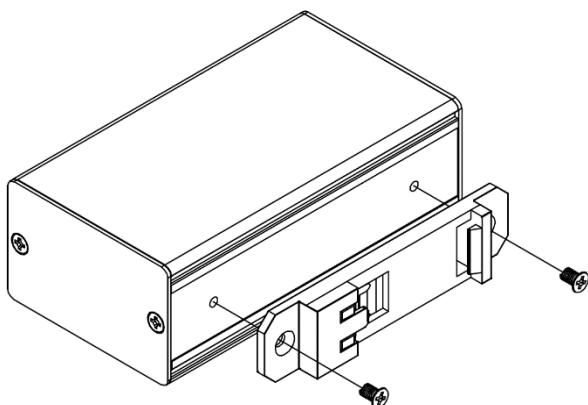
### Installed on Wall

**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)



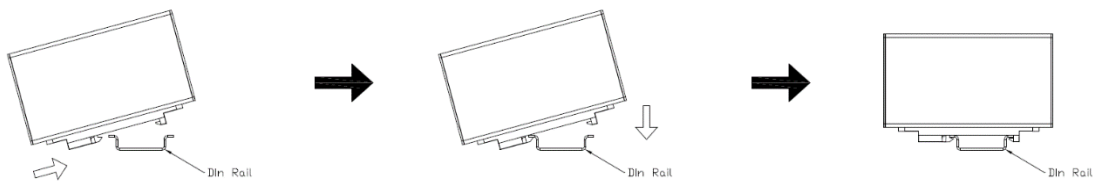
### Installed on a Din-Rail

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



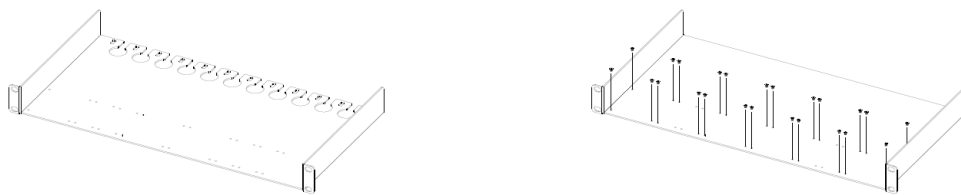


**Step 2** Install your product on a DIN-rail as following instruction

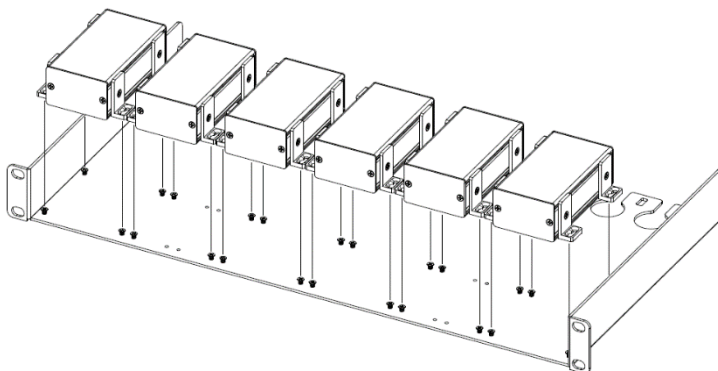


### Installed on a Rack

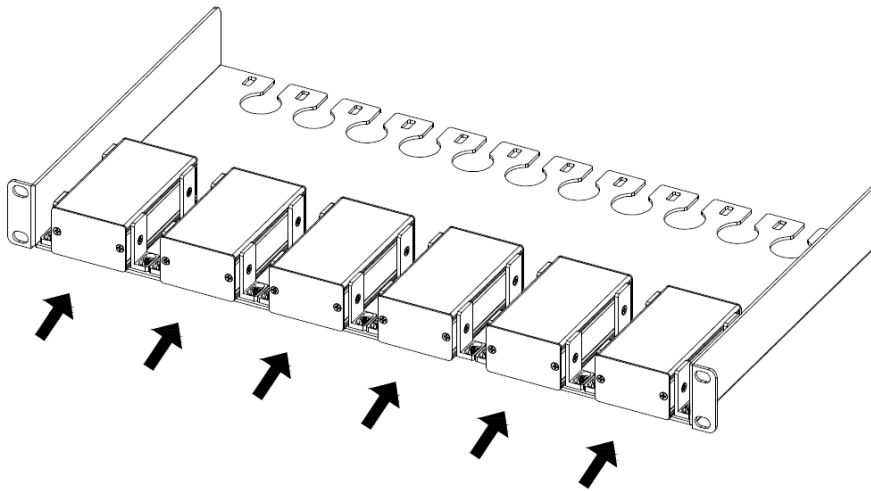
**Step 1** Lock machine screws in the rack



**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

