

PT-PSE109GMN-A-S PoE Injector

Quick Installation Guide



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Declaration

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The symbol indicates that the product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.

Overview

The installation Guide for PT-PSE109GMN-A-S and mainly introduces the hardware specification, installation methods, and precautions of the installation.

There may be differences in the appearance and configuration from other models. All product images in this manual are for illustration purposes only and may differ from the actual product.

This manual includes the following chapters:

1. Product Introduction. Including the basic functions and specification of PT-PSE109GMN-A-S, as well as the product appearance and applications introduction.
2. Installation Introduction. Introducing the preparation work and precautions before installing the product.
3. Product Installation. Two methods of product installation.

For Whom

Network Engineers
Network Administrators
Field Technicians

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1. Introduction

1.1 Introduction

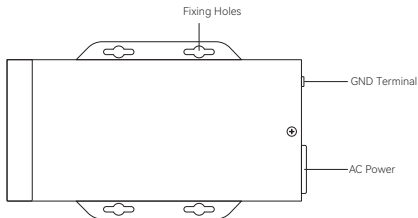
PT-PSE109GMN-A-S, a single port fiber PoE Injector with Managed Ethernet function. Supports IEEE 802.1Q VLAN and port-based VLAN. We can access and manage the device via web browser, including IP configuration, port configuration, VLAN configuration, PoE configuration, device control, etc. We can also view device information such as switch status, port status, and PoE status etc. In addition, the PoE port enables remote control of the device' on/off and reset status.

This model has a 1000BASE-X SFP Interfaces, offers a unique solution to powering long range installations, where the data input comes over fiber. The PoE output port delivers 55V/2.2A power up to 121W(max) for remote PD via full 4 pairs with 4KV surge protection at 10/100/1000Mbps of data speed. It supports terminal equipments with IEEE802.3af/at, PoE++, IEEE802.3bt standard. such as wireless APs, IP cameras, base stations, gateways, and other high-power Ethernet backhaul devices.

Industrial design, when cover with waterproof case can be used for outdoor application. It works like a switch, the data is interoperable among LAN port, PoE port and SFP port.

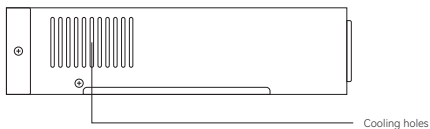
1.2 Appearance

● Upper View



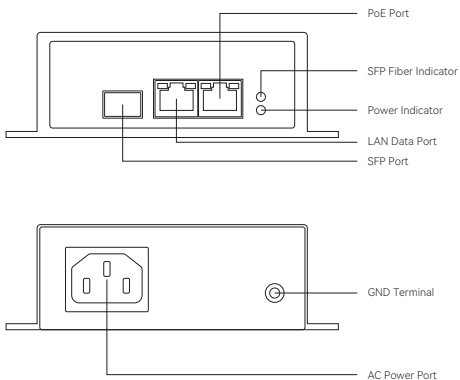
1-1 Upper View

• Side View



1-2 Side View

• Front View



1-3 Front View

PoE Indicator Display

Items	Status	Descriptions
PoE Load Indicator (Green)	Lit	Power Normally
	Flashing	Detecting
Data Indicator (Yellow)	Lit	Good Connection
	Flashing	Data Transferring
Light Off		System abnormal or power off

1.3 Specification

Items	Descriptions
Interface	PoE*1 LAN*1 SFP*1 AC*1 GND*1
Input	100-240Vac 2.0A 50/60Hz
Output	55Vdc 2.2A
Power Pins	1/2/3/6(+) & 4/5/7/8(-)
Data Rates	RJ45:10/100/1000Mbps SFP:1G
Operating Temp.	0°C to 40°C
Operating Humidity	20%-80%, non-condensation
Operating Altitude	Up to 5000 meters
Storage Temp.	-20°C to 70°C
Storage Humidity	10%-90%, non-condensation
Network Protocol	IEEE802.3i / IEEE802.3u / IEEE802.3ab /IEEE802.3z
PoE Surge Protection	Protected line:1,2,3,4,5,6,7,8
	Common mode surge protection(10/700us): 4kV
	Differential mode surge protection (10/700us): 1.5KV
IP Rated	IP20
Dimensions	213.9mm×134mm×41mm (1104g)
EMC	EN 55032:2015/A11:2020
	EN 55035:2017/A11:2020

1.4 Web Management

When all network connection is completed, run web browser on the computer, type in the address field, for example, 192.168.1.151, then press ENTER for opening the login page. Log into the system with a username and password. The login page is displayed in the below pic. Caution: Make sure the computer must be set on the same IP subnet address as the PoE managed switch. Such as 192.168.1.*



After entering the username and password, the main screen appears as below figure.

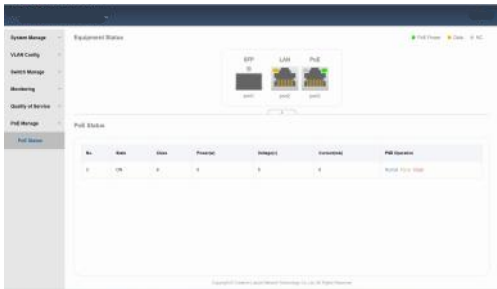
There are Switch Menu on the left of the web page, including System Information, IP Address, Account Information, Port, VLAN, PoE, Reset configuration, and Reboot.



The current device supports VLAN segmentation function. Users can flexibly segment the VLAN according to demand.



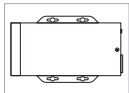
This Page supports the PoE configuration function, disables or enables PoE port, displays per PoE port power consumption, voltage, current, and Class level information.



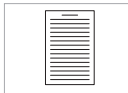
2. Installation Preparation

2.1 Package contents

Open the box of the PT-PSE109GMN-A-S and carefully unpack it, the box should contain the following items:



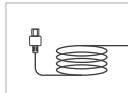
PT-PSE109GMN-A-S



Operating Manual



Ground
lug Wire&2.5
Screw



AC Power Cord

2.2 Installation toolkit

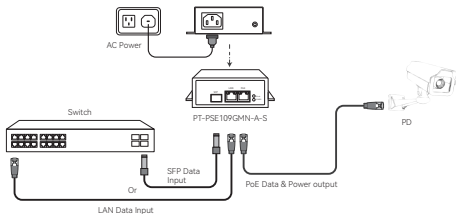
These tools may be needed during equipment installation, and should be prepared by yourself: level ruler, marking pen, craft knife, wire stripper, network pliers, impact drill, different matching drillbits, rubber hammer, cross screwdriver, wrench, ladder, etc.

2.3 Inspection

2.3.1 Connect the device to AC Power cord and check the PWR LED to ensure proper function before installation.

2.3.2 Connect the PoE port to the PoE powered device(PD). Such as the IP Cameras or Wireless APs.

As showed in Figure 2-1 ;



2-1 Device Connection

After the power is turned on, this product will automatically perform initialization. During this time, the system indicator light will be constantly on. Once the initialization is complete, the indicator light will flash for 2 seconds. When the system indicator light is on again, it indicates that the device is now working normally. For detailed instructions on the system indicator light status, please refer to Section 1&2 on the system indicator light status description.

Caution :

- 1. Please read the instructions carefully and follow the standard operating procedures before using.
- 2. Please place it in a well-ventilated and dry area, and it is for indoor use only.
- 3. Connect the power cable's trapezoidal plug into the rear of the unit. On the other end of the power cable plug into a standard grounded wall outlet for safety.
- 4. Connect a CAT5/5e/6 cable from your non-PoE router/switch into the unit's LAN port, for Ethernet transfer if needed.
- 5. Connect a CAT5e/6 cable with the RJ45 connector into the RJ45 socket labeled PoE. On the other end of the CAT5e/6 cable, connect to your PoE Device (such as IP Cameras etc)
- 6. The total Ethernet cable length can not exceed 100 meters.
- 7. The device must be placed on a stable surface, preferably affixed and mounted permanently. Do not leave it "dangling" and use plugged-in cables in tension as support. Drops, falls, and impacts experienced by the injector can compromise the internal components & cause premature failure.
- 8. Do not place heavy objects on top of this injector. Allow at least 5cm of clearance on all sides of the device for heat ventilation / natural convection.
- 9. Do not use with 24V DC PDs. This unit outputs 55V, which may damage 24V DC input devices (due to voltage mismatch).



To ensure better lightning protection for outdoor PD, it is recommended to use PROCET Ethernet surge protection products.

For more information, please visit <http://www.procetpoe.com>

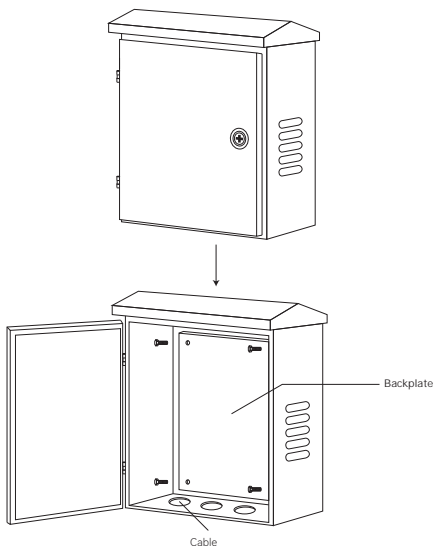
3. Installation

This product is safe to use for waterproof case installation and wall-mounted installation.

3.1 Installation in waterproof case

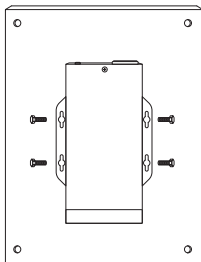
If it is placed in an outdoor environment, please install the device in a waterproof case with a height of 45cm if possible.

3.1.1 Install the waterproof case first, and keep the case open.
As showed in 3-1.



3-1 Waterproof case

3.1.2 Remove the metal backplate from the waterproof case and fix the product on the backplate with screws.



3-2 Installation on backplate

3.1.3 Reinstall the backplate into the waterproof case.

3.2 Wall-mounted Installation

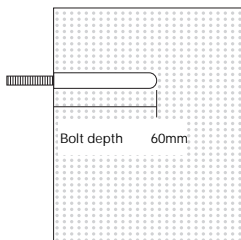
3.2.1 Mark the screw hole positions with marking pens.

3.2.2 Drill 8mm diameter round holes at the marked screw hole locations.

Then, use a rubber mallet to tap one end of the expansion bolts into the holes firmly.

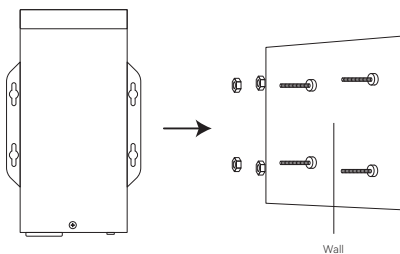
Caution In drilling process :

- Keep the drill bit perpendicular to the wall surface, hold the drill handle tightly with both hands, maintain a steady direction to avoid shaking and damaging the wall or causing the hole to tilt.
- If the wall is too hard and smooth for the drillbit to locate, use a center punch to make an indentation at the hole position to help guide the drillbit.
- The depth of each hole should be consistent.



3-3 Bolt depth

3.2.3 Pass the protruding screws through the product's mounting holes and tighten them down with nuts.



3-4 Wall-mounted Installation

3.3 Connection

After installation is done, the next step is the connection. The following precautions should be taken when connecting the Ethernet cable:

3.3.1 Lay the cable according to the design requirements. The cable should be laid firmly and neatly, with no crossing, twisting, or cracking.

3.3.2 Do not lay the cable together with high-voltage pipelines, fire pipelines, or building lightning protection systems to avoid interference from strong electricity or magnetism.

3.3.3 Use PVC pipes, iron pipes, Prilka pipes, or cable trays for cable laying. The cable trays should be placed against the wall, with neat and be autiful routing. Soft hoses or elbow joints should be used at turning points. The cable trays should be secured with cable ties, hangers, and angle steels at a spacing of 1 to 1.5 meters. If a metal cable tray is used, it should be grounded at both ends.

3.3.4 For outdoor horizontal wiring, please use a slot every 6 meters under the PVC pipe as a drain to prevent water accumulation inside the pipe.

3.3.5 The wall penetration for the Ethernet cable should be sealed with waterproof and flame-retardant materials.



Caution :

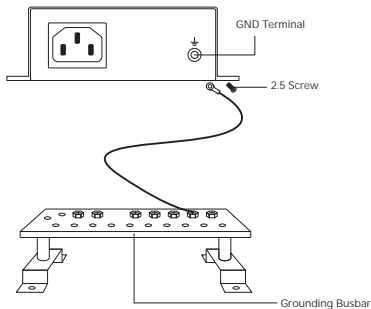
Waterproof Ethernet cables should be with a protective sheath. CAT5e/6 cables are recommended.

3.4 Grounding

PROCET PoE switch PT-PSE109GMN-A-S has the following grounding solutions for reference during construction:

If the installation is in the computer room, it can be connected to the dedicated grounding busbar in the room. The grounding busbar is a connecting conductor between the grounding bodies of the building, such as flat iron , flat steel, nanomaterial conductors, copper-clad steel, etc.

Pls refer to the figure 3-6.



3-5 Grounding

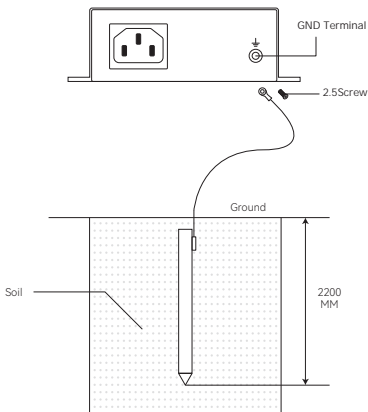
For the safety of personnel and equipment in an environment without dedicated grounding equipment, a simple grounding device can be constructed as follows:

- a. Prepare a 6mm 2 grounding wire or a braided soft copper wire.
- b. Prepare a copper tube or angleiron, or other metal tube, bury it underground to a depth of one meter or more as a grounding electrode.
- c. Use the grounding wire to connect the external grounding terminal of the product to the metal tube. (or angle iron)



Caution:

Use a galvanized metal pipe buried underground at a depth of one meter or more, such as a water or sewage pipe , as an emergency grounding if no other grounding environment is available.



3-6 Simple Grounding

3.5 Inspection

Inspect the installed equipment before putting it into operation :

- Make sure the PD can be powered by 44-57Vdc PoE.
- Make sure the Ethernet cable connection is correct.

Make sure all connections are correct, and turn on the power, inspect all the indicators.



Caution :

For outdoor installation, use weatherproof ethernet cables and seal the cable exit point in the enclosure.

Qualification Card

PASS