PROCET®
PoE System

PT-PSE106GBTR-24VAC Series

Quick Installation Guide

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Declaration

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-PSE106GBTR-24VAC Series 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-PSE106GBTR-24VAC Series, 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. The method of product installation.

For Whom

This manual is intended for:
Network Engineers
Network Administrators

List of differences

Model	PoE Standard	Input	Output	Data Rates	Interface
PT-PSE106GBTR-24VAC	IEEE802.3af /at/bt	AC Input: 22~35Vac(Normal=24Vac) 50/60Hz 5.5A DC Input: 24~48Vdc(Normal=24Vdc) 5.5A	55Vdc 1.1A	10/100/1000Mbps	AC/DC*1 + PoE*1 + LAN*1 + Grounding*1
PT-PSE106GBTR-10-24VAC				10Gbps	AC/DC*1 + PoE*1 + LAN*1 + Grounding*1
PT-PSE106GBTR-S-24VAC				10/100/1000Mbps	AC/DC*1 + PoE*1 + LAN*1 + SFP*1 + Grounding*1

Table of Contents

1. Introduction

1.1 Introduction

- The product supports direct 24VAC/24-48VDC power input.
- The PoE power supply port complies with the IEEE802.3af/at/bt standard, with a maximum power output of 60W per port.
- Designed for wide temperature ranges, the product operates in environments from -40°C to 55°C, making it suitable for outdoor use, with full-load startup achievable at -40°C.
- Users can choose between optical port cascading or network port cascading to adapt to various working environments.
- The PoE port features lightning and surge protection of up to 6KV common mode and 1.5KV differential mode, ensuring safe and stable power supply.
- The product meets the EN55032 3m EMC test standard, providing high electromagnetic immunity.
- This product features full gigabit ports, and the RJ45 port is compatible with 10/100/1000Mbps speeds. The PT-PSE106GBTR-10-24VAC model supports 10Gbps speeds.

Notice:
Supply power to the input terminal according to the specified pins. otherwise, it may be damaged.

1.2 Appearance

PT-PSE106GBTR-24VAC / PT-PSE106GBTR-10-24VAC Product Diagram as Figure 1-1

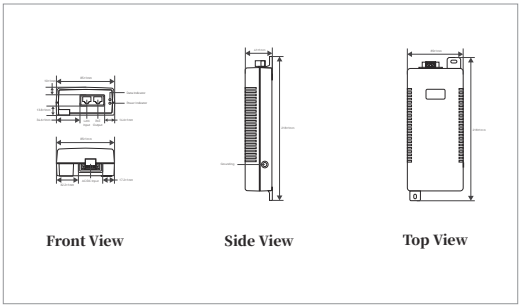


Figure 1-1 Product Dimensions Diagram

PT-PSE106GBTR-S-24VAC Product Dimensions Diagram as Figure 1-2

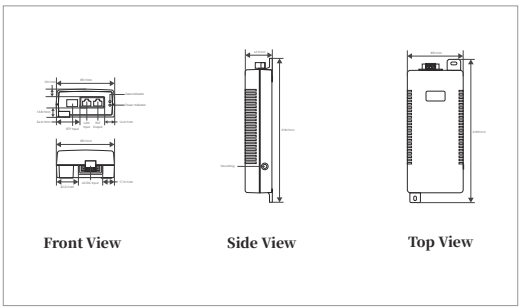


Figure 1-2 Product Dimensions Diagram

LED Indicator Chart:

Items	Status	Descriptions
Power Indicator	Solid Green Light	The equipment is powered
	Light Off	The equipment is powered off / not plugged in / no power
PoE Data Indicator	Solid Yellow Light	Data available, but no transfer / no activity
	Flashing Yellow Light	Data is being transferred
	Light Off	Data not available or failed connection
PoE Load Indicator	Solid Green Light	Power output is active/Work Normally
	Flashing Green Light	Detecting 802.3af/at/bt PD
	Light Off	PoE output is not active
LAN Indicator	Solid Yellow Light	Data available, but no transfer / no activity
	Flashing Yellow Light	Data is being transferred
	Light Off	Data not available or failed connection
SFP Indicator	Solid Green Light	Data available, but no transfer / no activity
	Flashing Green Light	Data is being transferred
	Light Off	Data not available or failed connection
Network Management Indicator	Flashing Green Light Slowly	The system is operating normally
	Flashing Green Light Rapidly	The system is resetting
	Light Off/Solid Light	The system is initializing

1.3 Specification

Items	Descriptions
Interface	PoE*1 LAN*1/LAN*1+SFP*1 AC/DC*1 Grounding*1
PoE Standard	IEEE802.3af/at/bt
Power Pins	4,5(+)/7,8(-) 3,6(+)/1,2(-)
Data Rates	RJ45 Ports: 10/100/1000Mbps/10Gbps, SFP: 1000Mbps
Network Protocol	IEEE802.3i/IEEE802.3u/IEEE802.3ab/IEEE802.3z

Items	Descriptions
AC Input	22-35Vac(Normal=24Vac) 50/60Hz 5.5A
DC Input	24-48Vdc(Normal=24Vdc) 5.5A
Output	55Vdc 1.1A
PoE Surge Protection	Common mode：6KV Differential mode：1.5KV
Operating Temp.	-40℃ to 55℃
Operating Humidity	20%-90%，non-condensation
Operating Altitude	Up to 5000 meters
Storage Temp.	-40℃ to 85℃
Storage Humidity	10%-90%，non-condensation
IP Rates	IP40
Dimensions & N.W	193mm X 85mm X 40.95mm / 591g
Overcurrent protection	Overcurrent protection for each PoE port, exceeding the current limit will shut down the port power

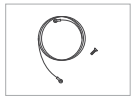
2. Installation Preparation

2.1 Package contents

Open the box of the PT-PSE106GBTR-24VAC Series and carefully unpack it, the box should contain the following items:

PT-PSE106GBTR-24VAC Series

Operating Manual



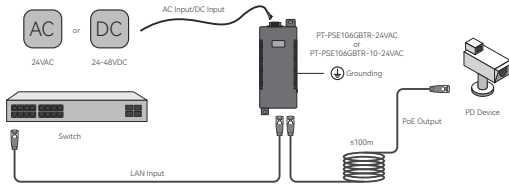
Ground
lug Wire&3.0 Screw

2.2 Inspection

Before installing the device, please feed it with a power source to check proper function first.

Connect the power supply via the AC/DC port and connect the network via the SFP/LAN port to a switch. When using standard PoE power supply, connect the PoE port to PD devices that support PoE power, such as PoE-enabled cameras, as shown in Figure 2-1.

Notice:
Please use PoE powered device(PD) that complies with IEEE802.3af/at/bt/PoE++ to connect this product.



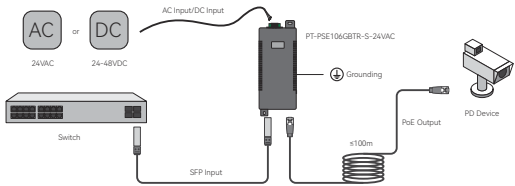


Figure 2-1 Diagram of Connected Equipment

Notice:

- Products with fiber ports require users to configure their own optical modules, supporting either single-mode or multi-mode.
- This device must be grounded.
- For indoor use only.
- Do not place this device on an unstable box or table. If it falls, it may sustain serious damage. When choosing wall-mounted installation, ensure it is properly secured.
- Leave sufficient space (greater than 5cm) around the device to allow for proper heat dissipation.
- Do not place heavy objects on this device.

3. Installation

This product is designed for safe use in wall-mounted installations.

If the device needs to be mounted on a wall, expansion bolts must be used.

3.1 Wall Installation

(1) Attach the screw hole positioning sticker to the wall.

(2) Drill 8mm diameter holes at the marked screw hole positions, then use a rubber hammer to fix the expansion bolts into the holes by tapping one end of the bolts.

Notes for drilling:

Ensure the drill bit is perpendicular to the wall during drilling. Hold the drill handle firmly with both hands to maintain direction and avoid shaking, which may damage the wall or create slanted holes.

If the wall is particularly hard and smooth, and the drill bit cannot be positioned correctly, use a center punch to create a small dent at the hole location to help guide the drill bit.

Ensure consistent hole depth.

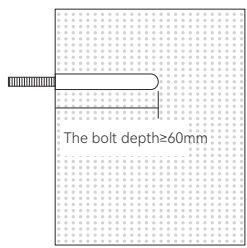


Figure 3-1 Illustration of expansion bolt depth.

(3) Tighten the screws after passing them through the product to secure it in place, as shown in Figure 3-2.

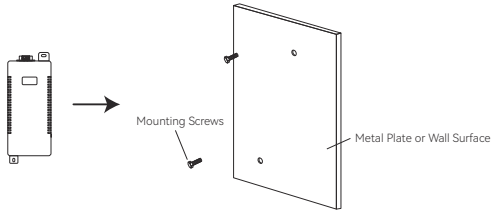


Figure 3-2 Illustration of Fixed Installation

3.2 Connecting the Network Cable

After installation, the network cable needs to be connected. This product is based on PoE power supply, which is used as an example here. For other power supply methods, refer to the technical manuals of other products. Before connecting, please read the following precautions:

① Lay the network cables according to the design plan, ensuring the cables are securely and neatly routed, with no crossing, twisting, cracking, or damage.

② Do not route network cables alongside high-voltage power lines, fire protection pipelines, or building lightning protection lines, ensuring there is no interference from strong electrical or magnetic fields.

③ It is recommended to use PVC pipes, iron pipes, Plica pipes, or cable trays for cable routing. Routing pipes or trays should be placed along the walls, arranged neatly and securely. At corners, use flexible conduits or corner connectors, and secure the cables with cable ties, hangers, or angle irons at intervals of 1 to 1.5 meters. If using metal conduits, ensure both ends are grounded.

④ For outdoor horizontal PVC piping, it is recommended to cut drainage holes every 6 meters at the bottom of the PVC pipe to prevent water accumulation inside.

⑤ Wall penetration holes for network cables should be sealed with waterproof and fire-retardant materials.

Notice:
For outdoor cabling, sheathed waterproof network cables must be used. It is recommended to use Category 5e or higher shielded cables.

3.3 Grounding Installation

The grounding method for the PROCET PoE Injector PT-PSE106GBTR-24VAC series, summarized from numerous installation projects, is as follows. This is provided as a reference for grounding this product:

If the product is installed in a server room, it can be connected to the dedicated grounding busbar. The grounding busbar is a conductor that connects the grounding bodies of the building and can be made of flat iron, flat steel, nano-conductive materials, copper-clad steel, etc. Use a grounding wire to connect the device to the grounding busbar, as shown in Figure 3-3.

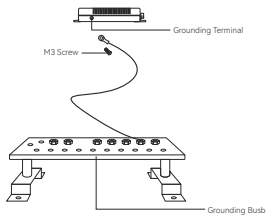


Figure 3-3: Grounding Busbar Installation Illustration

Grounding in environments without dedicated grounding equipment:

For safety, both for personnel and equipment, a simple grounding system can be built, as shown in Figure 3-4.

(1) Prepare a 6mm² grounding wire or braided soft copper wire.

(2) Obtain a copper pipe, angle iron, or other metal pipe, and bury it at least 1 meter deep into the ground to serve as the ground rod.

(3) Use the grounding wire to connect the product's external grounding terminal to the metal pipe (or angle iron).

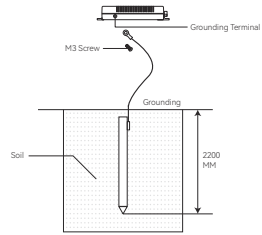


Figure 3-4: Illustration of Simple Grounding Installation

Notice:

If no other suitable environment is available, a simple emergency grounding method can be used. Connect the product to a galvanized metal pipe buried at least 1 meter underground, such as a drainage pipe or sewage pipe.

Qualification Card

PASS

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