PROCET
PoE System

User Manual for Outdoor PoE Switch

PT-POS8PB2SM-OT
PT-POS8PB2SM-RS-OT

Product Positioning

The PT-POS8PB2SM-OT/PT-POS8PB2SM-RS-OT series of PoE outdoor switches strictly adhere to industrial - grade design standards. They are specifically developed for key network deployment scenarios in complex and harsh outdoor environments, covering application fields such as security monitoring systems (e.g., intelligent traffic cameras, border protection devices), outdoor network projects (e.g., smart city streetlight gateways, industrial IoT terminal aggregation), and remote device power supply (e.g., edge computing nodes, meteorological monitoring sensors). The products focus on high - reliability PoE power supply and high - speed data transmission to ensure continuous, stable, and reliable operation in various outdoor environments.

Strengthens network and power management capabilities. It is equipped with lightweight network management functions, supports refined port configuration, dynamic power allocation, and centralized device monitoring. It is suitable for large and complex network architectures and meets the needs of enterprise - level users who require power resource optimization and remote fault diagnosis.

Product Features

PoE Power Supply Management: Supports independent power configuration for each port (maximum 90W per port, with a maximum total power of 330W for 8 PoE ports), scheduled task plans (such as powering on/off by time period), and an over - current protection mechanism to prevent device damage due to abnormal load.

Network Management: Integrates 802.1Q VLAN division (supporting 4096 VLAN IDs), MAC address auto - learning (with a capacity of 16K) and aging functions, and has a cable detection function. It also features four - level traffic priority scheduling based on ports and supports broadcast storm suppression.

DC&485 Port Expansion: Equipped with a multifunctional port that supports dual - channel RS485 interfaces, compatible with industrial sensor data collection and transparent transmission settings, meeting the diverse power supply and communication requirements of IoT devices; 12/24Vdc adjustable output.

Localized Software Upgrade: Through the localized web - based page, software can be automatically updated.

Electrical Protection System: PoE ports have 6kV common - mode / 1.5kV differential - mode surge protection (in line with IEC 61000 - 4 - 5 standard), and AC ports have 6kV common - mode / 1.5kV differential - mode surge protection.

Electrostatic Protection: 6kV contact discharge / 8kV air discharge electrostatic protection (IEC 61000 - 4 - 2).

Power Supply: 350W, MTBF (217514h)

Wide - Temperature Operation: Supports a wide - temperature operating range of - 40℃ ~ + 65℃. It can start at full load at - 40℃ in a cold - start state and still operate at full load at an ambient temperature of 65℃.

Protection Level: IP67 protection level.

Robust Structure Design: Adopts an integrated cast aluminum alloy housing with a white electrostatic spray - painted surface, meeting the 1K10 anti - collision standard.

Air Pressure Balance and Protection Details: 304 stainless - steel pressure relief valve, 160ml/min@12kpa; ports are equipped with metal seals and waterproof rubber plugs to prevent moisture intrusion from the source.

Heat Dissipation Design: Adopts an overall cast aluminum process and a fan - less heat dissipation design to extend the MTBF value of the device.

Multi - Scenario Adaptable Installation: Provides multiple installation methods such as pole - mounting (for pole diameters ϕ70 - 110mm), wall - mounting, and clamping. It is equipped with special installation kits (including lifting ropes, brackets, and protective covers), suitable for diverse outdoor scenarios such as poles, equipment boxes, and building facades.

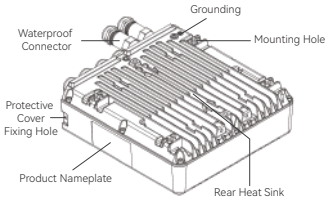
Protective Cover Installation: The protective cover design effectively protects the interfaces from wind and rain, optimizes cable storage, improves the aesthetic degree of the project, and enhances the anti - aging and anti - ultraviolet capabilitiesof the lines.

Green Design: Complies with the RoHS environmental protection standard, strictly limiting the use of harmful substances such as lead and mercury; packaging and accessories use recyclable materials to reduce the environmental burden.

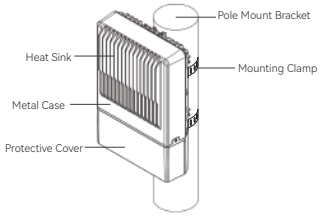
Appearance

- **Main Product:**

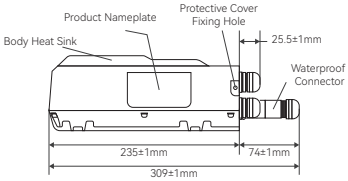
Perspective View



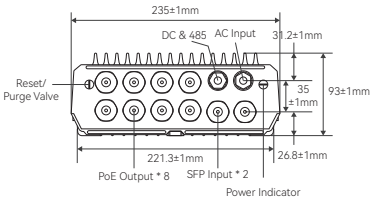
Perspective View(Installed)



Side View

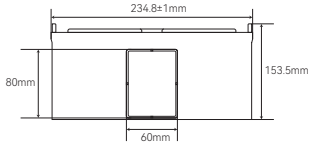


Bottom View

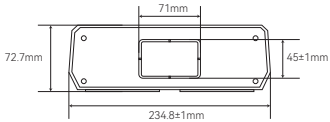


- **Protective Cover:**

Front View



Bottom View



Electrical Parameters

Item	PT-POS8PB2SM-OT	PT-POS8PB2SM-RS-OT
Ports	AC*1 SFP*2 PoE*8 Grounding*1	
DC & 485 Port	-	8PIN interface, 2PIN DC OUT port provides 12Vdc/24Vdc 2A switching option, 2 * 2PIN RS485 interfaces
Input	110~240Vac 350W	
Output	Total power 330W Max (including DC multifunctional port)	
DC Output	12/24Vdc 48W(Max)	
IPC	<20W	
Surge Protection	Protected Lines: 1,2,3,4,5,6,7,8 Common Mode Protection(10/700us): 6KV Differential Mode Protection(10/700us): 1.5KV	
ESD Protection	6kV contact discharge; 8kV air discharge, Standard: IEC61000-4-2	
MTBF	217514h	

PoE Characteristics

Item	PT-POS8PB2SM-OT	PT-POS8PB2SM-RS-OT
PoE Standard	IEEE802.3af Power over Ethernet IEEE802.3af Power over Ethernet IEEE802.3af Power over Ethernet	
Power Pins	4/5(+),7/8(-) & 3/6(+),1/2(-)	
PoE Output	55Vdc 1.64A 90W Max per port Total power 330W Max	

Switching Characteristics

Item	PT-POS8PB2SM-OT	PT-POS8PB2SM-RS-OT
Switching Mode	Store-and-Forward	
VLAN	Support 4096 VLAN IDs. Support 802.1Q VLAN.Support VLAN based on any combination of ports across multiple chips	
Network Protocols	IEEE802.3i/IEEE802.3u/IEEE802.3ab/IEEE802.3z/IEEE802.3bz	
Data Rate	RJ45：100/1000Mbps, SFP: 100/1000/2500Mbps	
Backplane Bandwidth	26Gbps	
MAC Addr. Capacity	16K	
Packet Forward Rate	19.344Mpps	
MAC Addr. Table	Follow IEEE 802.1d standard. Support MAC address auto - learning and aging	
Qos	Support high - speed, non - blocking four - traffic - class QoS structure	

Physical Characteristics

Item	PT-POS8PB2SM-OT	PT-POS8PB2SM-RS-OT
Housing Material	Aluminum alloy (metal seals + waterproof rubber plugs)	
Installation	Pole - mounting (ϕ70 - 110mm)/Wall - mounting (expansion screws)	
IP Rate	IP67（dust - proof and waterproof)	
Dimensions	309mm（including 337mm with protective cover） X 235mm X 93mm	
Weight	4650g	

Environmental Parameters

Item	PT-POS8PB2SM-OT	PT-POS8PB2SM-RS-OT
Op Temp	-40℃ — 65℃	
Op Humid	5%-95%，non-condensing	
Op Alt	Up to 5000m	
Stor Temp	-40℃ — 85℃	
Stor Humid	10%-90%，non-condensing	

Compliance Certifications

Safety Standard: IEC 60950-22 (Information Technology Equipment Safety)

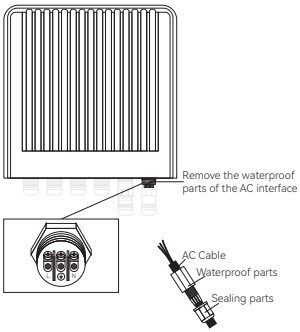
EMC Standards: CE、FCC（Electromagnetic Compatibility）

Environmental Standard: RoHS（Restriction of Hazardous Substances）

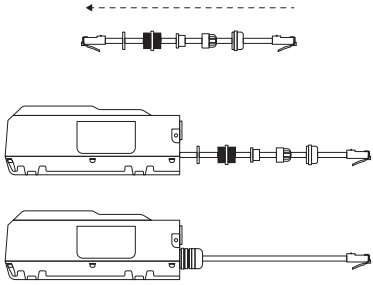
Connection and Installation

• Connection

AC Connection: Use 4.5-12mm AC Cable connect to the AC Input Port follow the below figure, then slide the waterproof gland and tighten it.



RJ45 Connection: Slip the metal sealing part accessories onto the RJ45 cable in the following order. Tighten all the sealing sleeves until the rubber plugs tightly wrap the cable.



• Installation

Wall Mounting: Mark the hole positions on the wall, drill holes, insert expansion screws, and secure the device.