OT-PLC101POE & OT-PLC101-DC
## Quick Installation Guide

Ourten®

Overview

OT-PLC101POE / OT-PLC101-DC PoE Extender is a high speed Ethernet transmission device. It transmits Ethernet and PoE signal over single pair 2-wire cable. This device supports both PoC and PoE function.
This device contains one Receiver unit and one Transmitter unit, and can be connected to the existing cabling infrastructure for IoT devices including IP phones, cameras, access control, speakers and etc.
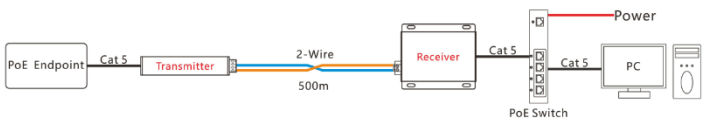
Connection

The product supports two power supply methods: PoE and power adapter.
1. When the Receiver unit is powered by 48 ~ 56VDC, the Transmitter unit and PoE devices can be powered without external power supply.
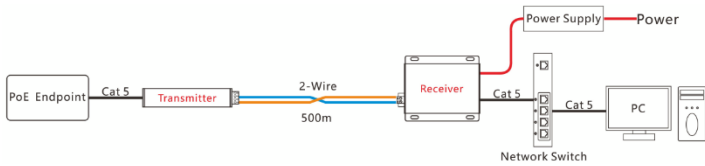
2. When the Receiver unit is powered by PoE switch, the Transmitter unit and PoE devices can be powered without external power supply.
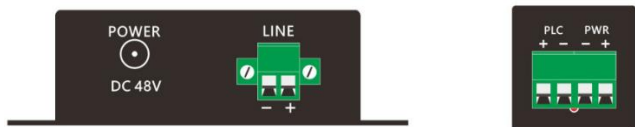

Note: The product does not support simultaneous input of PoE power and 48~56VDC power.

LED Indicators

Category	Color	Normal	Fault condition
Power	Red	Steady on	Off or flashing
Line	Green	Steady on or flashing	Off
Network	Yellow	Flashing	Off

Power Connection

● The LINE port of the OT-PLC101-DC outputs DC power and is connected to the PLC port of the OT-PLC101POE product. Please pay attention to the polarity, reversing the polarity won't supply power and communicate.
● The power port of the OT-PLC101POE is to remain idle, please do not connect to power.

Installation Steps

Confirm the installation location based on the product information on the label. Install OT-PLC101-DC at one end of the machine room and OT-PLC101POE at the front-end network device.

Receiver		Transmitter	

Step	Installation Instruction	Step	Installation Instruction
1	Connect PoE power supply equipment to RJ45 terminal of Receiver unit (1)	7	Connect network equipment to RJ45 port of Transmitter unit (7)
2	Positive and negative connection terminal of 2-wire cable (2)	8	This port is idle and it is strictly prohibited to connect to the power supply (8)
3	Spare terminal for external power adaptor (3)	9	Power indicator is always on (9)
4	Power indicator is always on (4)	10	Positive and negative connection terminal of 2-wire cable (10)
5	Line indicator is flashing after successful connection (5)	11	Network data indicator quickly blinks when data is normal (11)
6	Network data indicator quickly blinks when data is normal (6)	12	Line indicator is flashing after successful connection (12)

Specifications

Category		Description
Power Input (Receiver)	RJ45/PoE Input	Standard 48 ~ 56VDC; IEEE802.3af/at/bt
	DC Port Input	48 ~ 56VDC
	Power Consumption	≤1.5W / PC
Power Output (Transmitter)	RJ45/PoE Output	Standard 48VDC; IEEE802.3af/at
	Power Consumption	≤1.5W / PC
Ethernet	IEEE 802.3, IEEE802. 3u	Full duplex 10/100Mbps
Physical Characteristic	Dimension (L × W × H)	Receiver: 98×86.5×25mm Transmitter: 123×26×26mm
	Material	Aluminum Alloy
	Net Weight	Receiver: 240g Transmitter: 105g
Operating Environment	Working Temperature	-20℃～60℃
	Working Humidity	＜95% (Non-condensation)

Power, Bandwidth & Distance Table

Receiver <- -> Transmitter		Cable 2×0.75 mm²			
Receiver power supply type		PoE 30 W	PoE 90 W	48-56VDC (30 W)	48-56VDC (60 W)
Distance 100 M	Bandwidth (Mbps)	83	83	83	83
	PoE (W)	27	27	28.5	28.5
Distance 200 M	Bandwidth (Mbps)	82	82	82	82
	PoE (W)	26.5	27	28	28.5
Distance 300 M	Bandwidth (Mbps)	80	80	80	80
	PoE (W)	26.3	27	27.8	28.5
Distance 400 M	Bandwidth (Mbps)	78.2	78.2	78.2	78.2
	PoE (W)	22.8	27	24.3	28.5
Distance 500 M	Bandwidth (Mbps)	76	76	76	76
	PoE (W)	18.2	27	19.7	28

| Receiver <- -> Transmitter		Coaxial cable			
Receiver power supply type		PoE 30 W	PoE 90 W	48-56VDC (30 W)	48-56VDC (60 W)
Distance 100 M	Bandwidth (Mbps)	84.2	84.2	84.2	84.2
	PoE (W)	26.6	27	28.5	28.5
Distance 200 M	Bandwidth (Mbps)	83.4	83.4	83.4	83.4
	PoE (W)	26.2	27	28.5	28.5
Distance 300 M	Bandwidth (Mbps)	82	82	82	82
	PoE (W)	26	27	27.5	28.5
Distance 400 M	Bandwidth (Mbps)	80	80	80	80
	PoE (W)	22.2	27	23.7	28.5
Distance 500 M	Bandwidth (Mbps)	79	79	79	79
	PoE (W)	17.8	27	19.3	28

Note:

The actual data speed and PoE performance can vary by the environmental conditions and the cable qualities.

Installation Method

（1）OT-PLC101-DC can be installed on the desktop. Use 4mm screws to fix it in the designated position through the mounting holes as shown in the diagram.
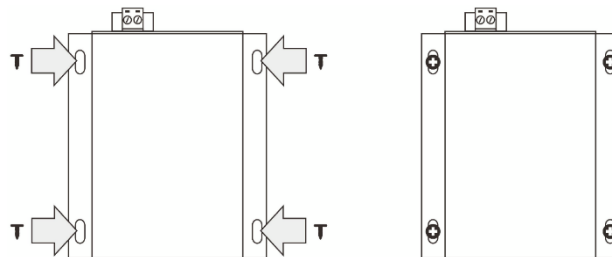
（2）OT-PLC101POE can be installed on a rail, directly snapped onto a 35mm rail as shown in the diagram.
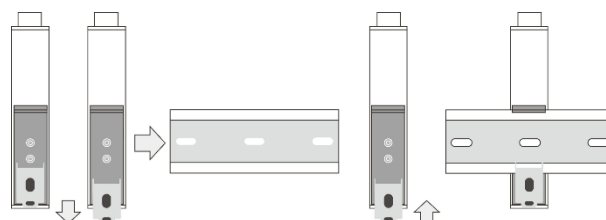
Troubleshooting

1. Confirm whether the device is compatible with PoE power supply and whether the power supply's output meets the device requirements.

2. Do not reverse the 2-wire during transmission; otherwise, there will be no power input at the receiving end, and the power indicator will not light up.

3. Check if the grouping codes on the product labels match. Products with different pairing codes cannot communicate with each other.

4. PoE endpoint must be activated before connecting to the transmitter unit to avoid the situation where the line is normal but the signal is not transmitted.

5. If there is no communication between products, swap with a different set to quickly identify the source of the fault.

More Information

1. Installation video:

2. Company website: