

# **Unmanaged Industrial PoE Ethernet Switch**

8 x Gigabit 30W PSE (802.3af/at PoE+) + 2 x 1000M SFP

## **Quick Installation Guide**

## FCC MARKING

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

## CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55032/35 class A for ITE, the essential protection requirement of Council Directive 2014/30/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

## 1. Package Contents

Thank you for purchasing unmanaged industrial Ethernet switches, please open the box of unmanaged industrial Ethernet switch, your package should include the following items:

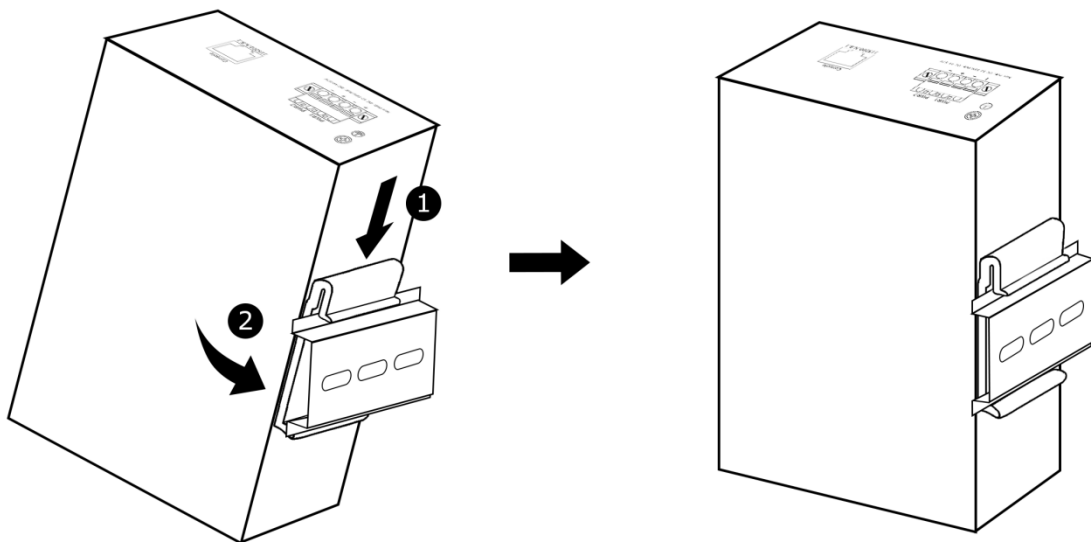
- 1 x Industrial Ethernet Switch
- 1 x Quick Installation Guide

## 2. Installing the switch

### 2.1. Installing the switch on a DIN rail

- (1) Wear an ESD wrist strap. Make sure the wrist strap makes good skin contact and is reliably grounded.
- (2) As shown in Figure 2-1 position the switch so that the spring of the DIN rail mounting bracket compresses against the upper edge of the DIN rail.
- (3) Rotate the switch down toward the DIN rail until the DIN rail mounting bracket clicks.

Figure 2-1 Installing the switch on a DIN rail



## 2.2. Connecting the grounding cable

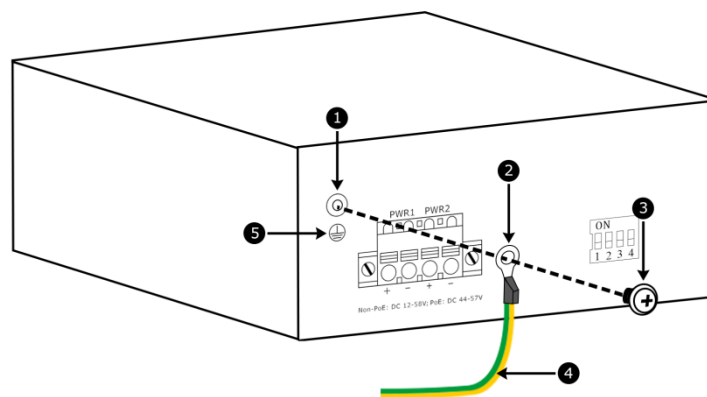
### **⚠ WARNING!**

Correctly connecting the grounding cable for the switch is crucial to lightning protection and EMI protection.

The power input end of the switch has a noise filter, whose central ground is directly connected to the chassis to form the chassis ground. You must securely connect this chassis ground to the earth so the faradism and leakage electricity can be safely released to the earth to minimize EMI susceptibility of the switch. To connect the grounding cable for the switch:

- (1) Remove the grounding screw from the switch.
- (2) Use the grounding screw to attach the ring terminal of the grounding cable to the grounding screw hole. Fasten the screw.
- (3) Connect the other end of the grounding cable to the grounding system.

**Figure2-2 Connecting the grounding cable for the switch**



- |                                          |                     |
|------------------------------------------|---------------------|
| (1) Grounding screw hole                 | (4) Grounding cable |
| (2) Ring terminal of the grounding cable | (5) Grounding sign  |
| (3) Grounding screw                      |                     |

## 2.3. Connecting a DC power cord

**⚠ CAUTION:** To avoid connection mistakes, identify the positive (+) and negative (-) marks above the DC power receptacle for the terminal block connection.

Installation procedure as follows :

- (1) Make sure the switch power off.
- (2) Correctly connecting the grounding cable for the switch (please refer to Figure 2-2).
- (3) Connect the DC power to the positive(+) and negative(-) of the terminal block(red cord connect "+", black cord connect "-"), then fasten the screws through the screw-drive. Shown on the Figure 2-3.
- (4) Turn on and check the power indicator on the front panel of the device. If the power indicator is on, the power supply is working normally.



**Remark:** Din-rail industrial Ethernet switches support redundant dual DC power supply. You can connect one or two DC power supply according to your requirement.

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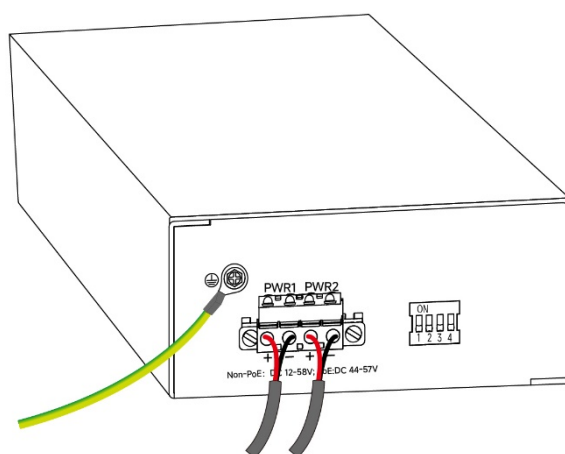


Figure 2-3

## 2.4. Verifying the installation

After you complete the installation, verify the following information:

- There is enough space around the switch for heat dissipation.
- The DIN rail/mounting ears are securely installed.
- The grounding cable is connected correctly.
- The power source is as required by the switch.
- The power cords are correctly connected.
- If an interface cable for a port is routed outdoors, verify that a network port lightning protector is used for the port.
- If a power line is routed from outdoors, verify that a surge protected power strip is used for the switch



**WARNING:** Always turn off the power source before connecting the power wire.



**WARNING:** Always ground the power source to ensure a stable and clean power input.

Low-quality power supplies may generate excessive electrical noise, causing power fluctuations when connected to this unit. To prevent this, ensure proper grounding of the power source.

### 3. LED Status Indicators

|                                             |                                                   |
|---------------------------------------------|---------------------------------------------------|
| <b>P</b> (Power indicator)<br>Green         | Off: the device is power off or failed            |
|                                             | On: the device power on is normal                 |
| <b>S</b> (System status indicator)<br>Red   | Off: total PoE usage < rated 50%                  |
|                                             | Blinking: rated 50% < total PoE usage < rated 90% |
|                                             | Normal on: total PoE usage ≥ rated 90%            |
| Copper ports indicators<br>Green            | Off: ports link down                              |
|                                             | On: ports link up                                 |
|                                             | Blinking: data on TX/RX                           |
| Copper speed/PoE state indicators<br>Yellow | Off: PoE not working                              |
|                                             | On: PoE working                                   |
| Fiber ports indicators<br>Green             | Off: ports link down                              |
|                                             | On: ports link up                                 |
|                                             | Blinking: data on TX/RX                           |

### 4. DIP switch Setting

| Pin No# | Status |                                          |
|---------|--------|------------------------------------------|
| Pin 1   | ON     | To enable the Port isolation             |
|         | OFF    | To disable the Port isolation            |
| Pin 2   | ON     | 250m long distance mode (10M, 1-2 ports) |
|         | OFF    | 100m distance mode                       |
| Pin 3   | ON     | To enable the QoS (1-2 ports)            |
|         | OFF    | To disable the QoS                       |
| Pin 4   | ON     | PoE watchdog turn on                     |
|         | FF     | PoE watchdog turn off                    |

## 5. Technical Specifications

|                             |                                                                                                                                                                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                   | IEEE 802.3 10Base-T Ethernet<br>IEEE 802.3u Fast Ethernet<br>IEEE 802.3ab Gigabit Ethernet<br>IEEE 802.3x Full-Duplex Flow Control<br>IEEE 802.3az Energy Efficient Ethernet<br>IEEE 802.3af Power-Over-Ethernet<br>IEEE 802.3at Power Over Ethernet plus PSE |
| Interface                   | 8 x 10/100/1000Base-T PoE<br>2 x 1000Base-X SFP slot                                                                                                                                                                                                          |
| Switching capacity          | 20G                                                                                                                                                                                                                                                           |
| Packet forwarding rate      | 29.7Mpps                                                                                                                                                                                                                                                      |
| MAC address table           | 16K                                                                                                                                                                                                                                                           |
| VLAN                        | 4K                                                                                                                                                                                                                                                            |
| Buffer                      | 2M                                                                                                                                                                                                                                                            |
| Forwarding delay            | <5us                                                                                                                                                                                                                                                          |
| Jumbo Frame                 | 10Kbytes                                                                                                                                                                                                                                                      |
| MDX/MIDX                    | Support                                                                                                                                                                                                                                                       |
| Watchdog                    | Support                                                                                                                                                                                                                                                       |
| Network Topology            | Support Star topology<br>Support Bus topology<br>Support Tree Topology                                                                                                                                                                                        |
| Input voltage               | 44-57VDC, redundant power input                                                                                                                                                                                                                               |
| Input current               | 5.6A Max                                                                                                                                                                                                                                                      |
| Total power consumption     | Full loading without PoE $\leq 7.5W$<br>PoE power budget $\leq 240W$                                                                                                                                                                                          |
| Connector                   | Removable 4-pin terminal block                                                                                                                                                                                                                                |
| Reverse polarity protection | Support                                                                                                                                                                                                                                                       |
| Over-voltage protection     | Support                                                                                                                                                                                                                                                       |
| Case protection             | IP40                                                                                                                                                                                                                                                          |
| Installation method         | Din-rail                                                                                                                                                                                                                                                      |
| Dimension                   | 130 x 48 x 98 mm (LxWxD)                                                                                                                                                                                                                                      |
| Environment                 | Operating temperature: -40°C~+75°C<br>Storage temperature -40°C~+85°C<br>Operating Humidity: 5 to 95% (Non-Condensing)                                                                                                                                        |
| Safety                      | LVD (EN62368-1)                                                                                                                                                                                                                                               |
| EMC/EMS                     | CE, FCC, EN55032                                                                                                                                                                                                                                              |
| EMI                         | FCC Part 15 Subpart B Class A                                                                                                                                                                                                                                 |

6. Dimension Illustration

