1 Packing List

Please check the following items after unpacking, if any missing, please contact your local dealer.

No.	Items	Quantity
1	PoE Injector	1 pc
2	Mounting Accessory	1 set
3	Quick Installation Guide	1 pc

2 Safety Information

Before performing an operation, read the following operation instructions and precautions to be taken, and follow them to prevent accidents.

2.1 General Requirements

- Only qualified and skilled personnel must install, configure, and unmount the device. The device must not be disassembled.
- When operating the device, obey the local safety regulations. The safety precautions provided in the document are supplementary and shall be in compliance with the local safety regulations.
- When operating the device, in addition to the precautions (please see the notes below), follow the specific safety instructions.
- The installation and maintenance personnel need to understand the basic safety precautions to be taken.
- Do not block the ventilation while the device is running. Keep a minimum distance of 5 cm from the ventilation to the walls or the other objects that block the ventilation.
- Do not operate the device in an area that exceeds the maximum recommended ambient temperature of 75°C.
- Do not place the device in the environment that has inflammable and explosive air or fog. Do not perform any operation in this environment.

2.2 Electric Safety

- Connect the unit only to DC power source that complies with the safety extra-low voltage (SELV) requirements in IEC62368-1 based safety standards.
- Before touching the device or hand-operating parts, wear a grounded electrostatic discharge (ESD) wrist strap. It can prevent the sensitive components from damage by the static electricity in the human body.

3 Product Introduction

3.1 Overview

This series of product is Industrial 90W PoE++ Injector.

This series injector can upgrade an existing network infrastructure to IEEE802.3bt PoE++ network system without changing the existing Ethernet equipment.

This series Injector meet IEEE 802.3af/at/bt standard. The PoE output port can deliver up to 90W power. It supports 10/100/1000/2.5Gbps transmission rate, and the transmission distance is up to 100m. This product support relay function to alarm power supply break. It could provide a quick, safe and cost-effective 802.3bt PoE++ network solution for customers.

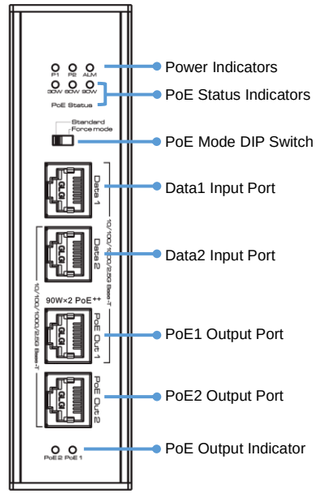
This series includes three models:

- Industrial 2-Port Multi-Gigabit 802.3bt PoE++ Injector (90W) with 12~57V DC input
- Industrial Single-Port Multi-Gigabit 802.3bt PoE++ Injector (90W) with 12~57V DC input
- Industrial Single-Port Multi-Gigabit 802.3bt PoE++ Injector (90W) with 48~57V DC input

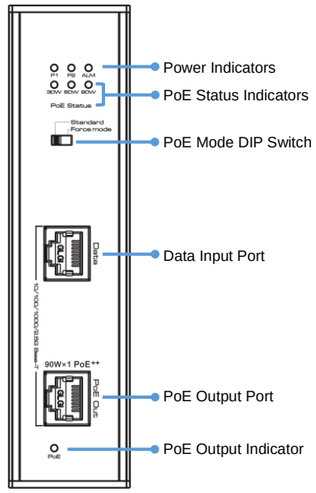
3.2 Hardware Introduction

90W PoE Injectors

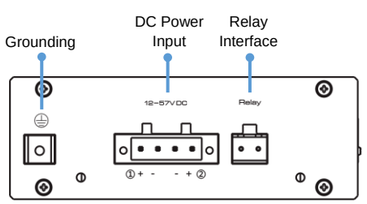
Front Panel for Industrial 2-Port PoE++ Injector



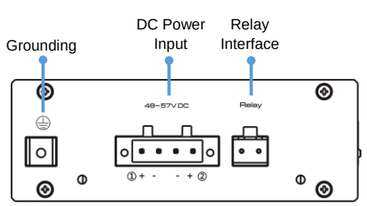
Front Panel for Industrial Single-Port PoE++ Injector



Rear Panel for 12~57V DC Input PoE++ Injector



Rear Panel for 48~57V DC Input PoE++ Injector



Indicators

Port Indicators		Status	Descriptions
P1	Indicator of Power 1	On	The device is connected to power 1(main)
		Off	Device disconnect power supply 1(main)
P2	Indicator of Power 2	On	The device is connected to power 2(standby)
		Off	Device disconnect power supply 2(standby)
ALM	Alarm Indicator	On	The equipment works abnormally
		Off	The equipment is working properly
30W/60W/90W	PoE Status Indicator	Green	0-30W Power supply
		Orange	30-60W Power supply
		Red	60-90W Power supply
PoE1	PoE Indicator	On	PoE Out1 Power supply
		Off	PoE Out2 Disconnect
PoE2	PoE Indicator	On	PoE Out2 Power supply.
		Off	PoE Out2 Disconnect

PoE Mode DIP Switch

This series of injector supports two PoE modes. Users can change mode by switching the DIP switch.

Status	Descriptions
Standard	In this mode, the PoE injector provides power to the PD devices that follow the IEEE802.3af/at/bt standard.
Force mode	In this mode, the PoE injector outputs 54V DC constantly. **Note: Do not connect PD devices with the Max working voltage lower than 54V DC.**

Relay Interface

This series of injector supports relay alarm function. The input port of the relay interface adopts a removable 2-position terminal block. The interface can be connected with a warner device, such as a buzzer.

Please observe the following specifications:

Items	Specifications
wire range	0.32mm² to 2mm² (22~14AWG)
Solid wire (AWG)	14~22
Stranded wire (AWG)	14~22
Torque	0.4Nm
Wire strip length	7~8mm
Voltage/Current	24V DC/1A

In the following two cases This series of injector will alarm and the ALM Indicator will turn red:

Alarm case	Description
Power Alarm	The main power supply or backup power supply is off. In this case, the PWR indicator of the working power supply is off. Please check the main and/or redundant power supply.
PoE Alarm	An Ethernet copper port stops supplying PoE power. In this case, the port PoE indicator is off. Please check the PoE function of the respective port.

4 Installations and Wiring

The installation steps and wiring are the same for the whole series injector. Following takes 60W PoE Injector as example.

Turn off the system's power before the installation or wiring.

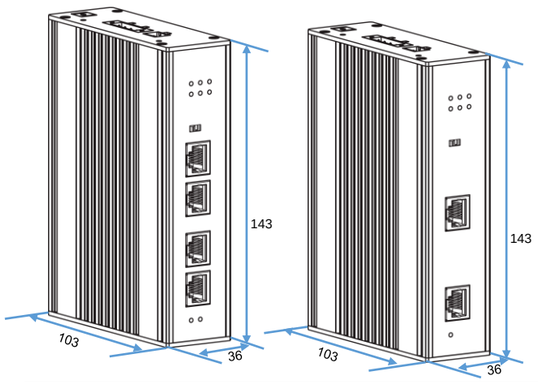
4.1 Installation steps

This series of injector suppoort two installation modes:

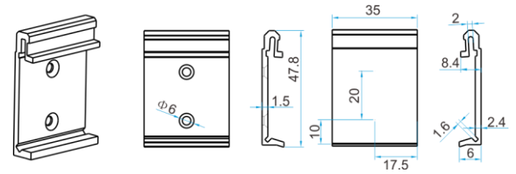
- DIN-rail installation
- Desktop installation

Dimensions (mm)

Injector



DIN-rail Hanger

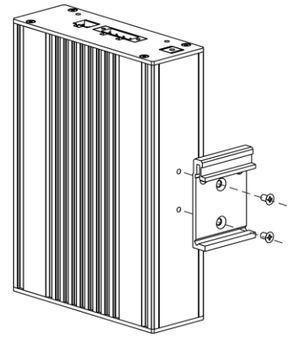


DIN-rail Installation

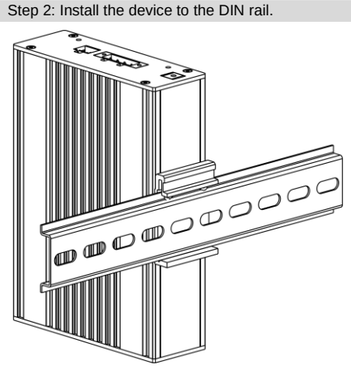
Please follow the steps below.

Step 1: Fix the provided DIN-rail hanger to the backside of the device with 2 screws.

Accessories



Step 2: Install the device to the DIN rail.



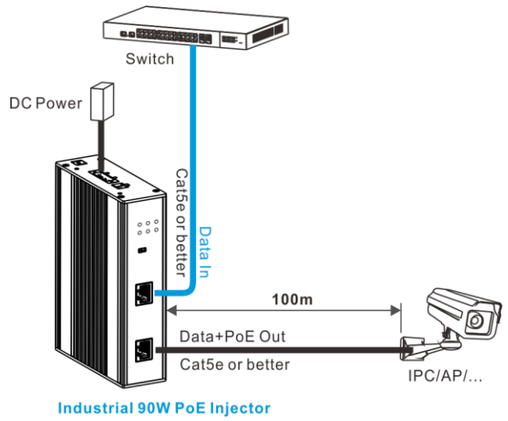
Desktop Installations

This series injector supports desktop installation. Users can put this product on clean, stable, grounded workbench.

4.2 Wiring

Connect the PoE Output Port of This series of injector with PoE IP Camera. And connect the Data Input Port of This series of injector with switch.

Connecting Diagram



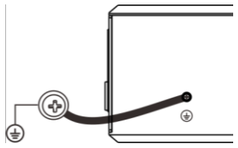
5 Connect the Power Supply

Note:

The equipment is intended to be grounded to comply with emission and immunity requirements. Ensure that This series of injector functional ground screw is connected to earth ground during normal use.

Use one end of GND cable to connect the M3 grounding connector of This series of injector, the other end to a ground point. The GND of This series of injector is shorted to the copper protection ground bar provided by the user. The GND cable used is recommended to be plastic insulating one with copper core, with cross-sectional area greater than 1.5mm².

Ground This series of injector housing



This series of injector could be powered by 12~57V DC or 48~57V DC power connection, and supports redundant power .

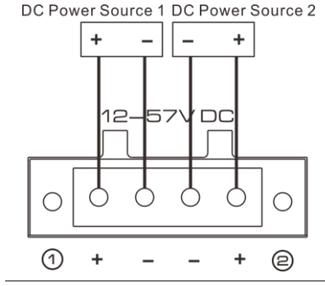
The power supply connectors are equipped with 4-pin plug connectors. Please observe the polarity.

Use DC power cable to connect positive/negative wires of DC power separately to the “+” and “-” power terminals, using a screw driver to screwing stably. Connect the mains supply to the building’s power supply network.

12~57V DC Supply

90W Wide Power Range PoE Injector supports 12~57V DC power.

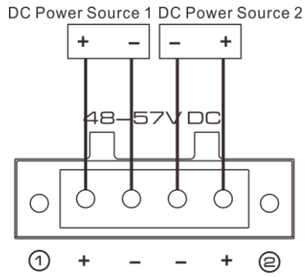
Connect DC power to the DC Power Connector



48~57V DC Supply

90W PoE Injector supports 48~57V DC power.

Connect DC power to the DC Power Connector



The specifications of DC power connector of this series injector are of the same. Please observe the following specifications:

Items	Specifications
wire range	24~12AWG
Solid wire (AWG)	12~24
Stranded wire (AWG)	12~24
Torque	0.4Nm (3.5Lb.in)

5.1 Starting Up

After connection to the power supply, This series of injector starts automatically and is ready for operation after approx. 90 s.

LED indicators “P1” or “P2” turns green.

Note:

To power off the device, always disconnect both the main and redundant power supply.

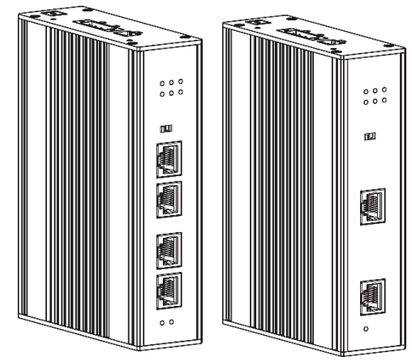
6 Specifications

Items	2-Port PoE++ Injector (12~57V DC)	Single-Port PoE++ Injector(12~57V DC)	Single-Port PoE++ Injector (48~57V DC)
Hardware Specifications			
Copper Ports	2*10/100/1000/2.5G Base-T RJ-45 Data input ports 2*10/100/1000/2.5G Base-T RJ-45 PoE output ports	1*10/100/1000/2.5G Base-T RJ-45 Data input port 1*10/100/1000/2.5G Base-T RJ-45 PoE output port	
Connector	Removable 4-pin terminal block for DC power: pins 1 and 2 for power 1, pins 3 and 4 for power 2 Removable 2-pin terminal block for relay alarm		
Cable	Cat5e or better		
Transmission Rate	10/100/1000/2.5 Gbps		
Transmission Distance	100m (Max)		
Dimensions (W*D*H)	143mm*103mm*36mm		
Net Weight	0.665kg		
Power Requirements	12~57V DC	12~57V DC	48~57V DC
Installation	DIN-rail / Wall-mount / Desktop		
Material	Metal shell		
PoE			
Device Type	PSE (Power Sourcing Equipment)		
PoE Type	Mid-Span, End-Span		
PoE Standard	IEEE 802.3af/at/bt (PSE)		
PoE Pin Assignment	3/6/4/5(+), 1/2/7/8(-)		
PoE Power Output	54V DC	54V DC	48~57V DC
PoE Budget	180W (max)	90W (max)	90W (max)
	12V/60W	12V/60W	/
	24V/90W	24V/90W	/
	48V/180W	48V/90W	48V/90W
EMC			
EMC	FCC 47 CFR Part 15 Class A EN55032 Class A IEC61000-4-2, Level 3: Contact Discharge: ±6kV, Air Discharge: ±8kV IEC61000-4-3, Level 2: 3V/m IEC61000-4-4, Level 2: 1kV IEC61000-4-5, line to earth: 6kV IEC61000-4-6, Level 2, (0.15MHz~80MHz)		

LVD	
LVD	EN 62368-1:2020 EN 62328-A11:2020
Environments	
Operating	Temperature: -40℃~75℃ Relative Humidity: 5%~95% (Non-condensation)
Storage	Temperature: -40℃~85℃ Relative Humidity: 5%~95% (Non-condensation)
Certifications	
Certifications	CE, FCC

Industrial 90W PoE Injector

Quick Installation Guide



Announcement

The information in this document is subject to change without notice.

The document is only used as operation guide, except for other promises. No warranties of any kind, either express or implied are made in relation to the description, information or suggestion or any other contents of the manual.

The images shown here are indicative only. If there is inconsistency between the image and the actual product, the actual product shall govern.

Version

V1.0. Released on 2023.11.6.

Change History

Updates between document issues are cumulative. Therefore, the latest document issue contains all updates made in previous issues.

Version	State	Release Date	Description
V1.0	Release.	2023.11.6	Initial commercial release.