GIGABIT PoE INJECTOR INDUSTRIAL

ORing

Quick Installation Guide

INJ-102GT++ Series

Industrial Gigabit PoE++ Injector

Introduction

The I**NJ-102GT++ PoE Injector series** is not only an IEEE802.3at compliant device but also an advanced high power PoE injector. It is intelligent detection that provided 2-ports 10/100/1000Base-T (X) PoE outputs. The device does not turn on power until it detects a valid PoE signature from the PoE devices attached downstream on the Ethernet cable. This protection against damage to non-PoE compliant equipment which may be connected to the Ethernet cable. Therefore, only an IEEE 802.3at/802.3af compliant device can be powered with the **INJ-102GT++** PoE Injector. Typically in gigabit networks the maximum allowable CAT5 cable length is about 100 meters, due to the limitation of the Ethernet standards. The **INJ-102GT++** PoE Injector can function with any PoE P.D. equipment which is fully compliant with the IEEE 802.3at/802.3af PoE standards

***NOTE1:The equipment being powered must be fully IEEE 802.3at/802.3af compliant in order for the power supply to be able to sense the PoE devices signature and apply power. Power is supplied on Ethernet pins 1/2/4/5 (V+) and 3/6/7/8 (V-).**

Features

- **PoE++ Injector for 2x10/100/1000Base-T(X)**
- **Fully compliant with IEEE802.3at/802.3af standard**
- **Auto protection for Over Voltage Power Input and over current output**
- **Supports totally Power Output up to 90 Watts for all ports usage.**
- **High reliability and rigid IP-30 housing**
- **DIN-Rail and wall-mount enabled**

Package Contents

The device is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

Contents	Pictures	Number
INJ-102GT++ or INJ-102GT++-24V		X 1
QIG		X 1
For INJ-102GT++		
25mm DIN-rail kit		X 1
Wall-Mount Kit		X 2
For INJ-102GT++-24V		
40mm DIN-rail kit		X 1
Wall-Mount Kit		X 2

Preparation

Before installation, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

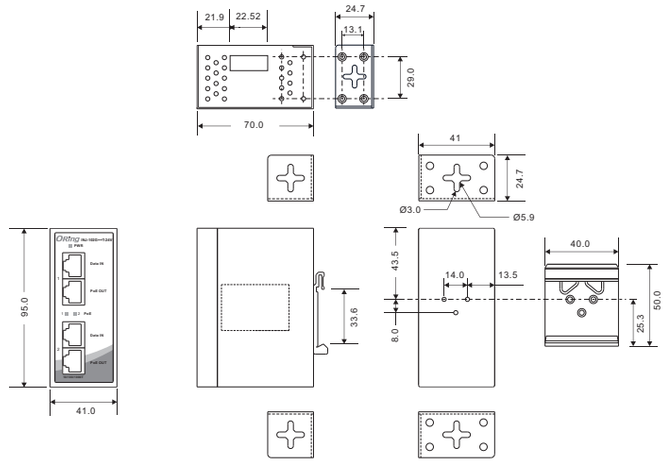
Elevated Operating Ambient: If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

Reduced Air Flow: Make sure the amount of air flow required for safe operation of the equipment is not compromised during installation.

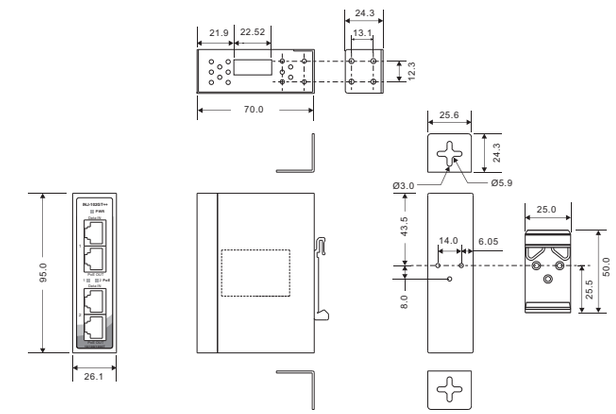
Mechanical Loading: Make sure the mounting of the equipment is not in a hazardous condition due to uneven mechanical loading.

Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Dimension Unit =mm (Tolerance ±0.5mm)



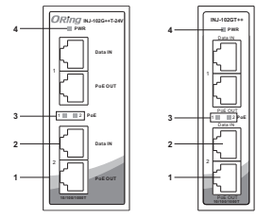
INJ-102GT++-24V



INJ-102GT++

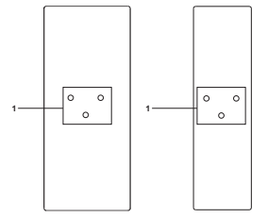
Panel Layouts

Front Panel



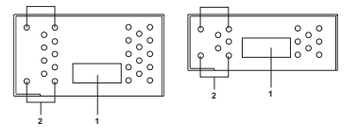
1. Gigabit PoE port
2. Gigabit Data port
3. PoE indicator
4. PoE power indicator

Rear Panel



1. Din-rail screw holes

Top Panel

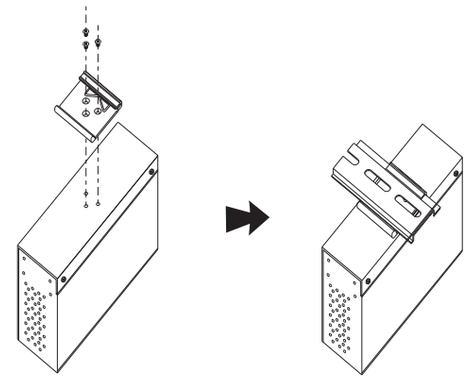


1. Terminal block
2. Wall-mount screw holes

Installation

DIN-rail

Step 1 : Slant the device and screw the Din-rail kit onto the back of the device, right in the middle of the back panel.
Step 2 : Slide the device onto a DIN-rail from the Din-rail kit and make sure the device clicks into the rail firmly.



Backplane-Mount

Step 1: Screw the two pieces of backplane-mount kits to the top and bottom panels of the device. A total of eight screws (mertric 3 x3) are required, as shown below.
Step 2: Use the device, with wall mount plates attached, as a guide to mark the correct locations of the four screws.
Step 3: Insert a screw head through middle of the keyhole-shaped aperture on the plate, and then slide the device downwards. Tighten the screw head for added stability.

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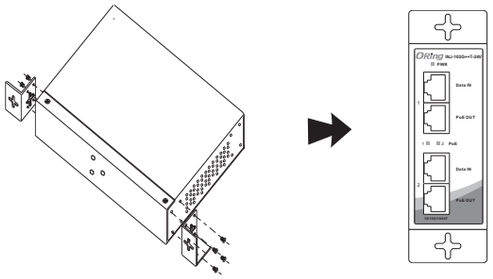

Network Connection

The device has standard Ethernet ports. According to the link type, the AP uses CAT 3, 4, 5, 5e, 6 UTP cables to connect to any other network device (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable	Type	Max. Length	Connector
10BASE-TX	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45
1000BASE-T	Cat. 5/Cat. 5e 100-ohm UTP	UTP 100 m (328ft)	RJ-45

For pin assignments for different types of cables, please refer to the following tables.

1000 Base-T

	RJ-45 Input (Data Only)		RJ-45 Output (Data and Power)	
Pin	Symbol	Description	Symbol	Description
1	BI_DA+	Data BI_DA+	BI_DA+ (**Vdc1+**)	Data BI_DA+ and Feeding Power(+)
2	BI_DA-	Data BI_DA-	BI_DA- (**Vdc1+**)	Data BI_DA- and Feeding Power(+)
3	BI_DB+	Data BI_DB+	BI_DB+ (**Vdc1-**)	Data BI_DB+ and Feeding Power(-)
4	BI_DC+	Data BI_DC+	BI_DC+ (Vdc2+)	Data BI_DC+ Feeding Power(+)
5	BI_DC-	Data BI_DC-	BI_DC- (Vdc2+)	Data BI_DC- Feeding Power(+)
6	BI_DB-	Data BI_DB-	BI_DB- (**Vdc1-**)	Data BI_DB- and Feeding Power(-)
7	BI_DD+	Data BI_DD+	BI_DD+ (Vdc2-)	Data BI_DD+ Feeding Power(-)
8	BI_DD-	Data BI_DD-	BI_DD- (Vdc2-)	Data BI_DD- Feeding Power(-)

10/100 Base-TX

	RJ-45 Input (Data Only)		RJ-45 Output (Data and Power)	
Pin	Symbol	Description	Symbol	Description
1	Rx+	Data Receive	Rx+ (**Vdc1+**)	Data Receive and Feeding power(+)
2	Rx-	Data Receive	Rx- (**Vdc1+**)	Data Receive and Feeding power(+)
3	Tx+	Data Transmit	Tx+ (**Vdc1-**)	Data Transmit and Feeding power(-)
4	NC	Not Connected	NC (Vdc2+)	Not Connected Feeding power(+)
5	NC	Not Connected	NC (Vdc2+)	Not Connected Feeding power(+)
6	Tx-	Data Transmit	Tx- (**Vdc1-**)	Data Transmit and Feeding power(-)
7	NC	Not Connected	NC (Vdc2-)	Not Connected Feeding power(-)
8	NC	Not Connected	NC (Vdc2-)	Not Connected Feeding power(-)

Configurations

After installing the device and connecting cables, the green power LED should turn on. Please refer to the following table for LED indication.

LED	Color	Status	Description
Power	Green	On	Power is on and functioning Normally
PoE	Blue	On	PoE Device Link
		Off	None PoE Device Detected

Specifications

ORing PoE Injector Model	**INJ-102GT++**	**INJ-102GT++-24V**
Physical Ports		
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	**2**	
10/100/1000Base-T(X) P.S.E. Port in RJ45 Auto MDI/MDIX	**2**	
Operating Voltage		
Input Voltage	50 ~ 57 Vdc	12 ~ 57 Vdc
Output Power	57VDC / 1.6A, 90 Watts per port max. ***NOTE2** (Total of 2 ports)	12~24VDC power input: 60 Watts totally 24~57VDC power input: 90 Watts totally ***NOTE2** (Total of 2 ports)
LED Indicators		
Power indicator	PWR: 1 x LED Green On: Power is on and functioning Normally.	
PoE Indicators	2 x LED Blue On: PoE Device Link Blue Off: None PoE Device Detected	
Protection		
Short Circuit Protection	Present	
Over Load Protection	Present	
Physical Characteristic		
Enclosure	IP-30	
Dimension (W x D x H)	26.1(W) x 70(D) x 95(H)mm (1.03x 2.76 x 3.74inch.)	41(W) x 70(D) x 95(H)mm (1.61x 2.76 x 3.74inch.)
Weight (g)	300 g	369 g
Environmental		
Storage Temperature	-40 to 80°C (-40 to 176°F)	
Operating Temperature	-20 to 70°C (-4 to 158°F)	
Operating Humidity	5% to 90% Non-condensing	
Regulatory Approvals		
EMC	CE EMC (EN 55024, EN 55032), FCC Part 15B	
EMI	EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15B class A	
EMS	EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS), IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8(PFMF), IEC/EN 61000-4-11 (DIP))	
Shock	IEC60068-2-27	
Free Fall	IEC60068-2-31	
Vibration	IEC60068-2-6	

Safety	EN60950-1	
MTBF	2947356 hrs	2255178 hrs
Warranty	5 years	

***NOTE2: LTPOE++™ PSE technology is applied on this product, only when an LTPoE++ ™ Powered Device (PD) is attached can the PSE port deliver more than 30 watts output power.**

ORing Industrial Networking Corp.
TEL: +886-2-2218-1066 Website: www.oringnet.com
FAX: +886-2-2218-1014 E-mail: support@oringnet.com