# *INJ-102GT++*

## *Industrial 2-port Gigabit High Power Plus PoE++ Injector*

### Features

- Supports 2x10/100/1000Base-T(X) for power and data Output

- 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 180Watts** for all ports usage.

- Supports Power Input range from 24Vdc to 57Vdc

- High reliability and rigid IP-30 housing

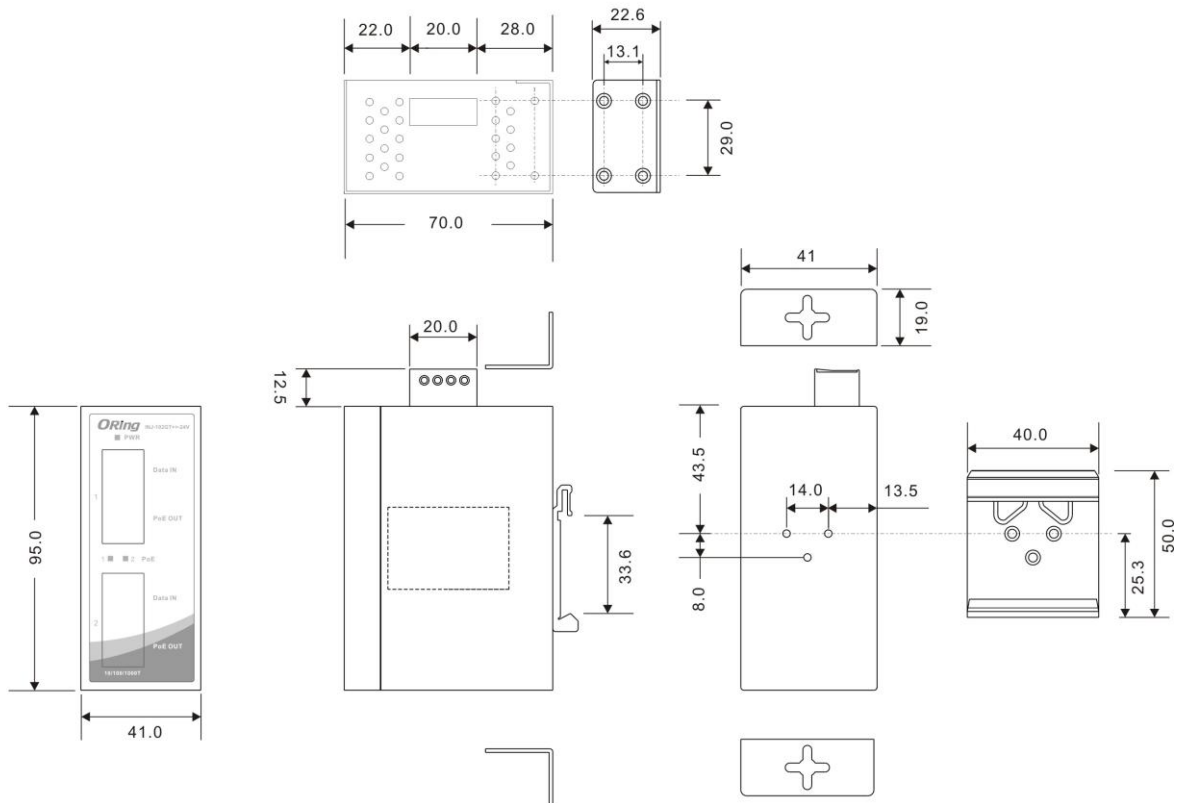- DIN-Rail and Wall Mount Design

### Introduction

The INJ-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.   Because of its 24~57Vdc power input with boosting circuit, the total output power maximum can be up to 180Watts[Note2] for all ports usage. The installer doesn't need to worry about voltage drops caused by cable length.   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.
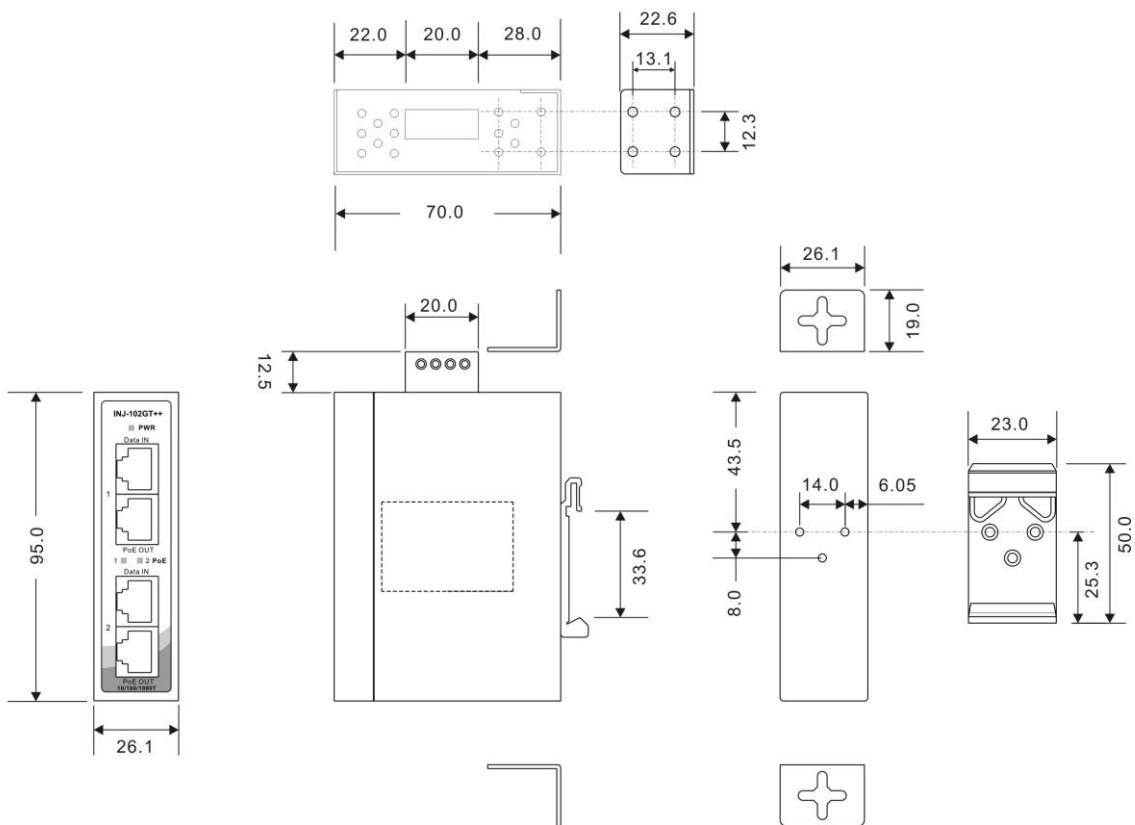
**Note1: The equipment being powered must be fully IEEE 802.3at/802.3af compliant in order for the power supply to be able to sense the PoE devices signature and apply power. Power is supplied on Ethernet pins 1/2 (V+) and 3/6 (V-).**

## Dimension

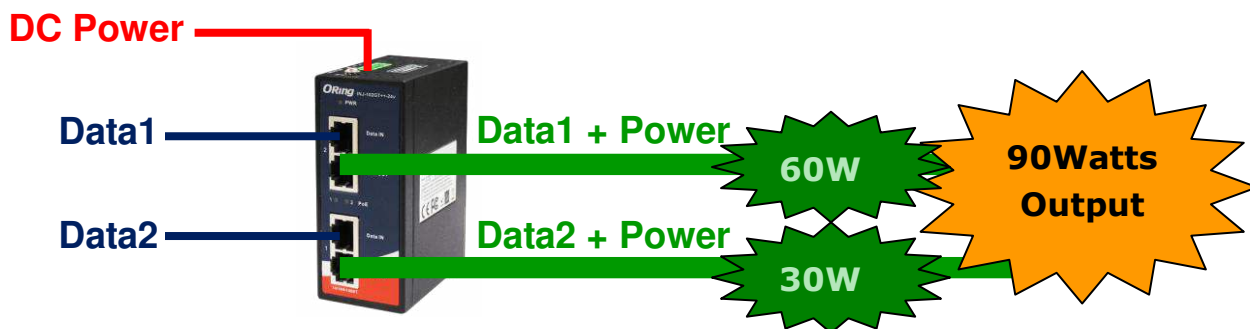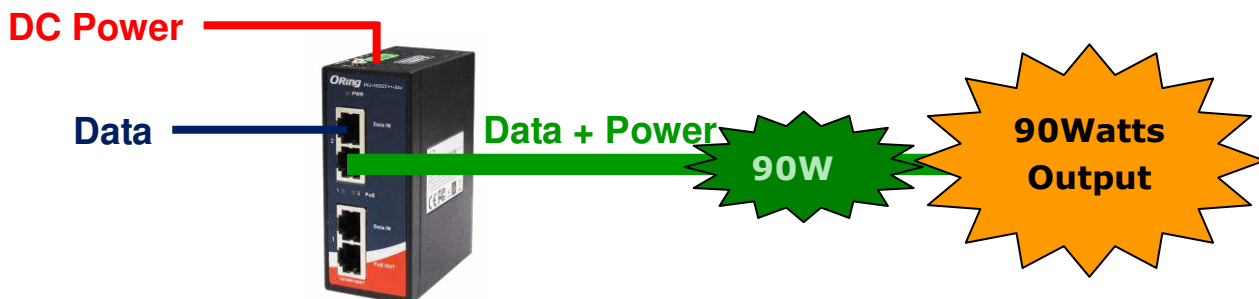### Dimension (Unit =mm)



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## Application

**DC Power**

**Data**

**Data + Power**

**90W**

**90Watts Output**

**DC Power**

**Data1**

**Data1 + Power**

**60W**

**90Watts Output**

**Data2**

**Data2 + Power**

**30W**

## Connector and Pin Definition

### 1000 Base-T

| Pin | RJ-45 Input (Data Only) | | RJ-45 Output (Data and Power) | |
| :-: | :-: | :-: | :-: | :-: |
| | 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

| Pin | RJ-45 Input (Data Only) | | RJ-45 Output (Data and Power) | |
| :-: | :-: | :-: | :-: | :-: |
| | 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(-) |

# Specifications

| ORing Injector Model | INJ-102GT++ | INJ-102GT++-24V |
|---|---|---|
| **Physical Ports** | | |
| RJ-45 Ethernet Port Input | 2 | |
| RJ-45 Ethernet Port with P.S.E. Output | 2 | |
| **Operating Voltage** | | |
| Input Voltage | **50 ~ 57 Vdc** | **24 ~ 50 Vdc** |
| Output Power | 57V / 1579mA, 180 Watts max[Note2]. <br> **(Total of 2 ports)** | 50V / 1800mA, 90 Watts max[Note2]. <br> **(Total of 2 ports)** |
| **LED Indicators** | | |
| Power Indicator | PWR: 1 x LED <br> Green On: Power is on and functioning Normally. | |
| PoE Indicators | 2 x LED <br> Blue On: PoE Device Link <br> 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)x70(D)x95(H)mm (1.03 x 2.76 x 3.74 inch) | 41(W)x70(D)x95(H) mm (1.61 x 2.75 x 3.74 inch.) |
| Weight (g) | 300g | 369g |
| **Environmental** | | |
| Storage Temperature | -40 to 80°C (-40 to 176°F) | |
| Operating Temperature | -25 to 70°C (-13 to 158°F) | |
| Operating Humidity | 5% to 90% Non-condensing | |
| **Regulatory Approvals** | | |
| EMI | FCC Part 15, CISPR (EN55022) class A | |
| EMS | EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 | |
| Shock | IEC60068-2-27 | |
| Free Fall | IEC60068-2-31 | |
| Vibration | IEC60068-2-6 | |
| Safety | EN60950-1 | |
| **Warranty** | 5 years | |

**Note 2: LTPoE++$^{TM}$ PSE technology is applied on this product. Only when an LTPoE++ $^{TM}$ Powered Device (PD) is attached can the PSE port deliver up to 90W of output power.**

## Ordering Information

### INJ-102GT++

| | Model Name | Description |
|---|---|---|
| **Available Model** | **INJ-102GT++** | Industrial 2-port Gigabit High Power PoE++ Injector |
| | **INJ-102GT++-24V** | Industrial 2-port Gigabit High Power PoE++ Injector, 24VDC Input |

## Packing List

- **INJ-102GT++ x 1**
- **DIN-Rail Kit x 1**
- **Wall-mount Kit x 1**

## Optional Accessories

- **DR-75-48 : 75 Watts DIN-Rail power supply**
- **DR-120-48 : 120 Watts DIN-Rail power supply**