Quick Installation Guide

Industrial 2 Port Gigabit PoE+ Injector - ETH-INJ-2AT-1

QS-018 2026A

Introduction

The **ETH-INJ-2AT-1 Flex PoE Injector** integrates **two completely independent IEEE 802.3af/at–compliant PoE injectors** within a single unit. Each line operates autonomously and includes **one Ethernet data input port and one corresponding PoE output port**, forming two separate and isolated PoE channels.

Each PoE port independently performs IEEE 802.3af/at signature detection and will only apply power after a valid powered device (PD) is detected. This design ensures that the operation, power delivery, and fault conditions of one port have no impact on the other, allowing two PoE devices to be powered independently from the single unit.

Intelligent PoE detection protects non-PoE equipment from accidental damage and ensures compatibility with IEEE 802.3af/at– compliant devices. Power is supplied on Ethernet pins **1/2 (V+) and 3/6 (V−)** in accordance with the IEEE end span standard. With a wide **12~57 VDC input range using Flex Power technology**, the ETH-INJ-2AT-1 is ideal for many applications where 24VDC is readily available, boosting the voltage up to the IEEE 802.3af/at standard of 48-52VDC.

Note: Only IEEE 802.3af/at–compliant powered devices can be used, as each injector must detect a valid PoE signature before enabling power output.

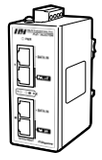
Features

- **Two injectors with each having 1 Ethernet port and 1 PoE port**
- **Fully compliant with IEEE 802.3af/at standard**
- **Auto protection for Over Voltage Power Input and over current output**
- **Provides up to 30W per port PoE output**
- **Wide range power input from 12 to 57VDC**
- **Rigid IP-30 housing design**
- **DIN-rail and wall mountable**

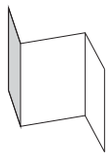
Package Contents

Model	Description	Accessory
ETH-INJ-2AT-1	2-Port Industrial PoE Injector, 10/100/1G PoE+ (30 Watt), Unmanaged, Flex Power Input 12-57VDC	(1) X 1 (2) X 1 (3) X 1 (4) X 2

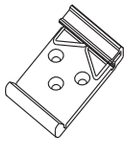
(1) ETH-INJ-2AT-1



(2) QIG



(3) DIN Rail Kit



(4) Wall Mount Kit

Important Information

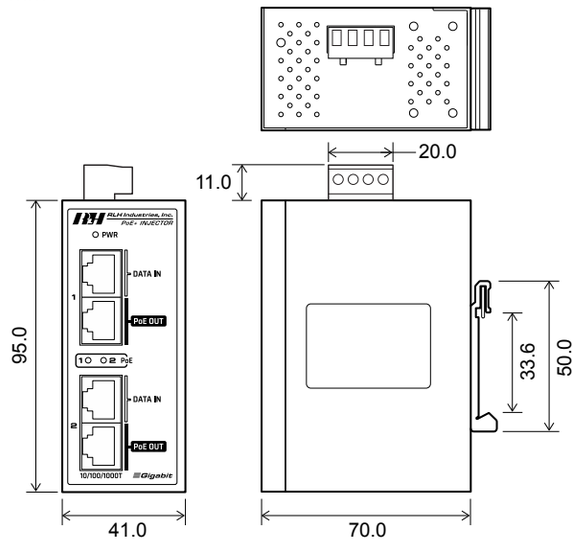
- **Elevated Operating Ambient Temperature:** If installed in a closed environment, verify that the ambient temperature is compatible with the Maximum Operating Temperature listed in the product specifications.
- **Adequate Air Flow:** Make sure the amount of air flow required for safe operation of the equipment is not compromised during installation. Do not block ventilation holes.
- **Mechanical Loading:** Make sure to mount the equipment securely to avoid any hazards due to insecure or uneven mechanical loading.
- **Circuit Overloading:** Do not connect this equipment to a power circuit that may become overloaded, as this could affect overcurrent protection and wiring integrity.

WARNING: Hot Surfaces

- **Clean only with dry cloth**
- **Do not block air ventilation holes**
- **This is open type equipment and should be installed in a suitable enclosure where the ambient temperature does not exceed 75˚C (167˚F)**

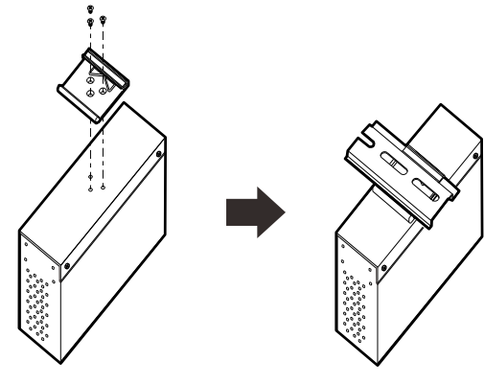
Dimensions

Unit = mm

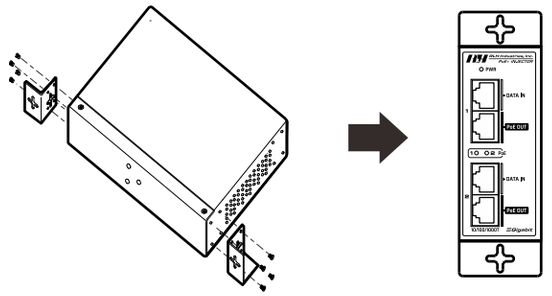


Installation

- **DIN Rail**
  - **Step 1:** Attach the DIN rail clip using the screws included in the DIN Rail kit.
  - **Step 2:** Attach the device to the DIN rail, hooking the spring wires over the top of the rail, then pressing down until the device clicks into the rail firmly.



- **Wall Mount**
  - **Step 1:** Attach the two backplane mount brackets to the top and bottom panels of the device. A total of eight screws (M3x3) are required, as shown below.
  - **Step 2:** Use the device with wall mount plates attached as a guide to mark the correct location for mounting.
  - **Step 3:** Insert an appropriately sized screw through middle of the keyhole-shaped aperture on the plate, and then slide the device downwards. Tighten the screw head for added stability.



- Note: 10cm minimum safe clearance above and below device

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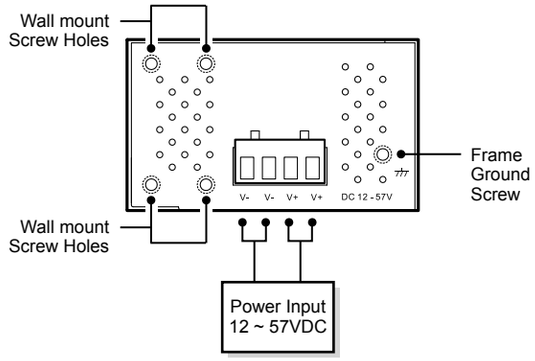
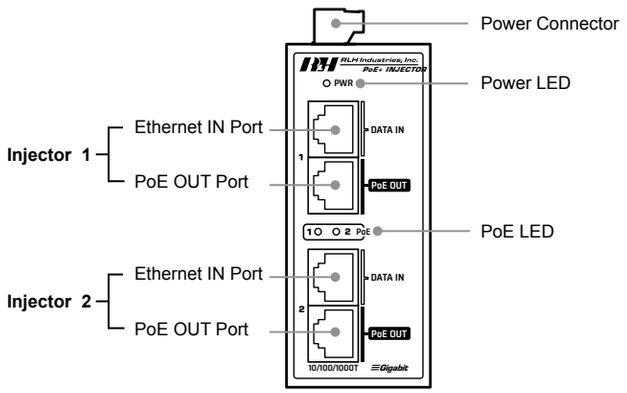
Top Panel



Front Panel



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

LED	Color	Status	Description
Power	Green	ON	Power is Functioning Normally
PoE	Blue	ON	PoE Device Link
		OFF	PoE Device Not Detected

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Specifications

Physical Ports	
RJ-45 10/100/1000Base-T(X) Ethernet Data Port	2
RJ-45 10/100/1000Base-T(X) PoE Port	2
Operating Voltage	
Input Voltage	Input Voltage 12~57VDC
LED Indicators	
Power Indicator (PWR)	Green: Power LED x 1
PoE Indicator	Blue: PoE Enable x 2
Power	
Redundant Input power	Dual 12~57Vdc on 4-pin terminal block * Supplied by SELV source evaluated by UL 61010-1 or 61010-2-201 power supply only. ⚠ **Warning** Note the the following guidelines before wiring the device 1. Terminal block accepts 12-24AWG wire. (15A) Torque value: 4.5 lb-in. 2. Use only wiring rated higher than 105°C
Power consumption (Typ.)	1W (Not including linked PoE Devices/PDs)
PoE Power budget	30W max. at 12VDC, 60W max. at 24-57VDC
Overload current protection	Present
Short Circuit Protection	Present
Physical Characteristic	
Enclosure	IP-30 Metal
Dimension (W x D x H)	41(W) x 70(D) x 95(H)mm (1.61x 2.76 x 3.74inch.)
Weight (g)	370 g
Environmental	
Storage Temperature	-40˚ to 85˚C (-40˚ to 185˚F)
Operating Temperature	-40 to 75 C (-40 to 167 F)
Operating Humidity	5% to 90% Non-condensing
Operating Altitude	Up to 2000m
MTBF	**3,165,390 hrs**

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Specifications

Regulatory Approvals	
EMC	CE EMC (EN 55024, EN 55032), FCC Part 15 B
EMI	EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A
EMS	EN 55024 (IEC/EN 61000-4-2 (ESD: Contact 4KV, Air 8KV), IEC/EN 61000-4-3 (RS:3V), IEC/EN 61000-4-4 (EFT Power 0.5KV), IEC/EN 6100-4-5 (Surge: Power 0.5KV, Signal 1KV), IEC/EN 61000-4-6 (CS:3V), IEC/EN 61000-4-8 (PFMF),
Physical	IEC60068-2-27, IEC60068-2-31, IEC60068-2-6
Safety	EN 60950-1 (LVD), UL61010-1, UL61010-2-201, File Number E480850
Warranty	5 years

Connector and Pin Definitions

This device features standard Ethernet ports and supports CAT5e or CAT6 UTP cabling, depending on the link type, for connection to PCs, servers, switches, routers, or hubs. See the table below for cable specifications.

Cable	Type	Max. Length	Connector
10BASE-T	Cat. 5e, 6, 100-ohm	UTP 100 m (328 ft.)	RJ-45
100BASE-TX	Cat. 5e, 6, 100-ohm UTP	UTP 100 m (328 ft.)	RJ-45
1000BASE-T	Cat. 5e, 6, 100-ohm UTP	UTP 100 m (328 ft.)	RJ-45

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

10/100 Base-TX

RJ-45 Input (Data Only)			RJ-45 Output (Data and PoE Power)	
PIN	Symbol	Description	Symbol	Description
#1	RX+	Data Receive	RX+ (Vdc+)	Data Receive and Feeding power (+)
#2	RX-	Data Receive	RX- (Vdc+)	Data Receive and Feeding power (+)
#3	TX+	Data Transmit	TX+ (Vdc-)	Data Transmit and Feeding power (-)
#4	NC	Not connected	NC	Not connected
#5	NC	Not connected	NC	Not connected
#6	TX-	Data Transmit	TX- (Vdc-)	Data Transmit andFeeding power (-)
#7	NC	Not connected	NC	Not connected
#8	NC	Not connected	NC	Not connected

Note: pin3 and 6 (Vdc-) should not be shorted to ground

1000 Base-T

RJ-45 Input (Data Only)			RJ-45 Output (Data and PoE Power)	
PIN	Symbol	Description	Symbol	Description
#1	BI_DA+	Data BI_DA+	BI_DA+ (Vdc+)	Data BI_DA+ and Feeding power (+)
#2	BI_DA-	Date BI_DA-	BI_DA- (Vdc+)	Date BI_DA- and Feeding power (+)
#3	BI_DB+	Data BI_DB+	BI_DB+ (Vdc-)	Data BI_DB+ and Feeding power (-)
#4	BI_DC+	Data BI_DC+	BI_DC+	Data BI_DC+
#5	BI_DC-	Data BI_DC-	BI_DC-	Data BI_DC-
#6	BI_DB-	Data BI_DB-	BI_DB- (Vdc-)	Data BI_DB- and Feeding power (-)
#7	BI_DD+	Data BI_DD+	BI_DD+	Data BI_DD+
#8	BI_DD-	Data BI_DD-	BI_DD-	Data BI_DD-