GIGABIT PoE INJECTOR INDUSTRIAL

ORing Industrial Networking Corp.

Version 1.0

Quick Installation Guide

INJ-102GT Industrial Gigabit Injector

Introduction

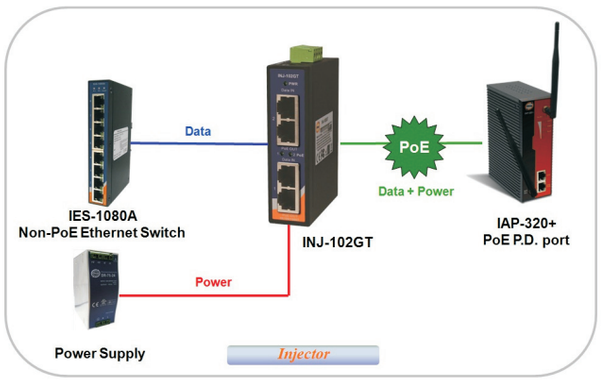
The **INJ-102GT** PoE Injector is an advanced IEEE802.3at compliant device with intelligent detection, that provided 2-ports 10/100/1000Base-T(X) PoE outputs. The device does not turn on power until it detects a valid PoE signature from the PoE devices attached. This protection against damage to non-PoE compliant equipment which may be connected to the Ethernet cable. Because of this intelligent detection, 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 50~57V insertion, 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.

Note: 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 connected on Ethernet pins 1/2(V+) and 3/6(V-).

Features

- Supports 2x10/100/1000Base-T(X) for power and data Output
- Fully compliant with IEEE802.3at/802.3af
- Auto protection for Over Voltage Power Input and over current output
- Supports Power Output up to 30Watts at 50VDC input
- High reliability and rigid IP-30 housing
- DIN-Rail and wall-mount enabled

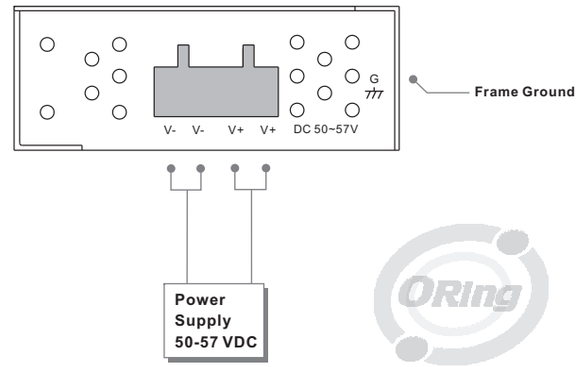
Connections



Specifications

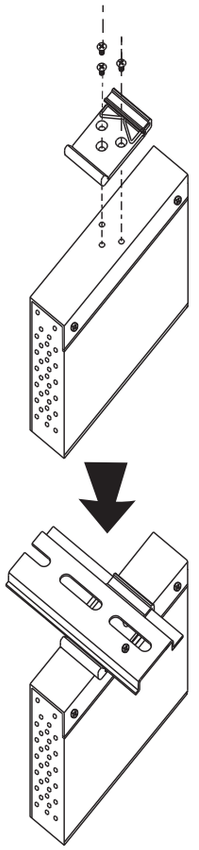
ORing PoE Injector Model	INJ-102GT
Physical Ports	
10/100/1000 Base-T(X) Ports in RJ45 Auto MDI/MDIX	2
10/100/1000Base-T(X) P.S.E. Port in RJ45 Auto MDI/MDIX	2
Operating Voltage	
Input Voltage	50 ~ 57 VDC on 4-pin terminal block
Output Power	50V / 600mA, 30 Watts max. Per port
LED indicators	
Power indicator	PWR / Ready: 1 x LED Green On: Power is on and functioning Normally.
PoE Indicators	2 x LED Blue On: PoE Device Link Blue Blinking: Detecting PoE Device Blue Off: None PoE Device Detected
Protection	
Short Circuit Protection	Present
Over Load Protection	Present
High Voltage 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.)
Weight (g)	250 g
Environmental	
Storage Temperature	-40 to 80°C (-40 to 176°F)
Operating Temperature	-40 to 70°C (-40 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	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	2 years

Power Connection Guide

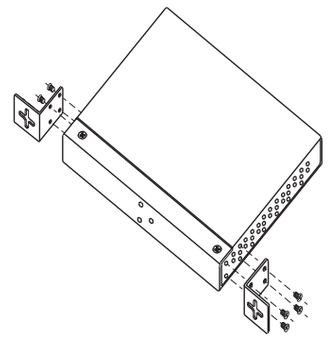


Installation

Din-Rail Install Step



Wall-mounted Install Step



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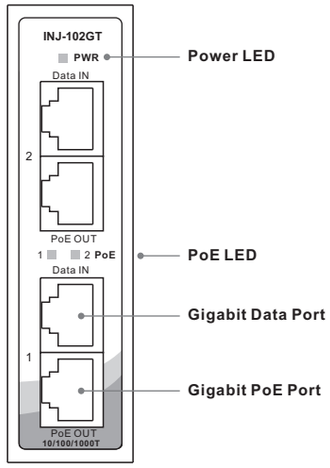
Industrial Gigabit Injector

Front Panel



Connector and Pin Definition

1000Base-T

	RJ-45 Input (Data Only)		RJ-45 Output (Data and Power)	
	Symbol	Description	Symbol	Description
1	BI_DA+	Data BI_DA+	BI_DA+ (Vdc+)	Data BI_DA+ and Feeding power(+)
2	BI_DA-	Data BI_DA-	BI_DA- (Vdc+)	Data 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-

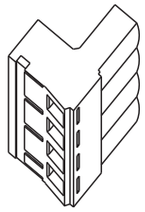
10/100 Base-T(X)

	RJ-45 Input (Data Only)		RJ-45 Output (Data and Power)	
	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 and Feeding power(-)
7	NC	Not Connected	NC	Not Connected
8	NC	Not Connected	NC	Not Connected

Note: pins 3 and 6 (-Vdc) should not be shorted to ground

Accessory

① 4-Pin Terminal block

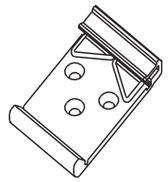


② Dust Cover (RJ-45)

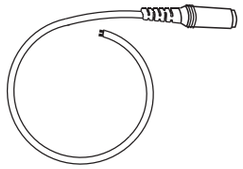
③ Screw (M3 X3)

④ Wall-mounted kit

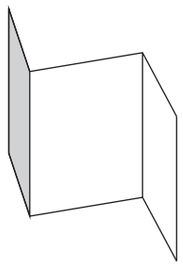
⑤ 25mm DIN-Rail kit



⑥ Power Cable with power jack



⑦ QIG



Packing list

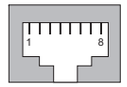
Model name	Model Description	Accessory
INJ-102GT	Industrial 2-port Gigabit High Power PoE Injector	①X 1, ②X 4, ③X 8, ④X 2, ⑤X 1, ⑥X 1, ⑦X 1

Communication Connections

1000Base-T Ethernet Port Connection

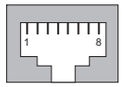
■ RJ45 (8-pin, MDI) Port Pinouts

Pin	MDI
1	BI_DA+
2	BI_DA-
3	BI_DB+
4	BI_DC+
5	BI_DC-
6	BI_DB-
7	BI_DD+
8	BI_DD-



■ RJ45 (8-pin, MDI-X) Port Pinouts

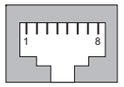
Pin	MDI-X
1	BI_DB+
2	BI_DB-
3	BI_DA+
4	BI_DD+
5	BI_DD-
6	BI_DA-
7	BI_DC+
8	BI_DC-



10/100Base-T(X) Ethernet Port Connection

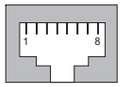
■ RJ45 (8-pin, MDI) Port Pinouts

Pin	Single
1	Tx+
2	Tx-
3	Rx+
6	Rx-

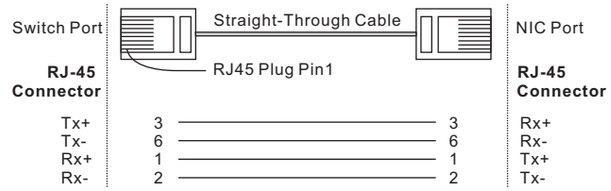


■ RJ45 (8-pin, MDI-X) Port Pinouts

Pin	Single
1	Rx+
2	Rx-
3	Tx+
6	Tx-



■ RJ45 (8-pin) to RJ45 (8-Pin) Straight-Through Cable Wiring



■ RJ45 (8-pin) to RJ45 (8-Pin) Cross-Over Cable Wiring