



# TINJ-101GT-M12 Series

## EN50155 Industrial 1-port Gigabit High Power PoE Injector ,M12 connector

### Features

- Supports 1x10/100/1000 Base-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
- Supports Power Input range from 12Vdc to 57Vdc
- Ultra-rugged enclosure M12 connector for toughest industrial usages
- Wall mounting enabled



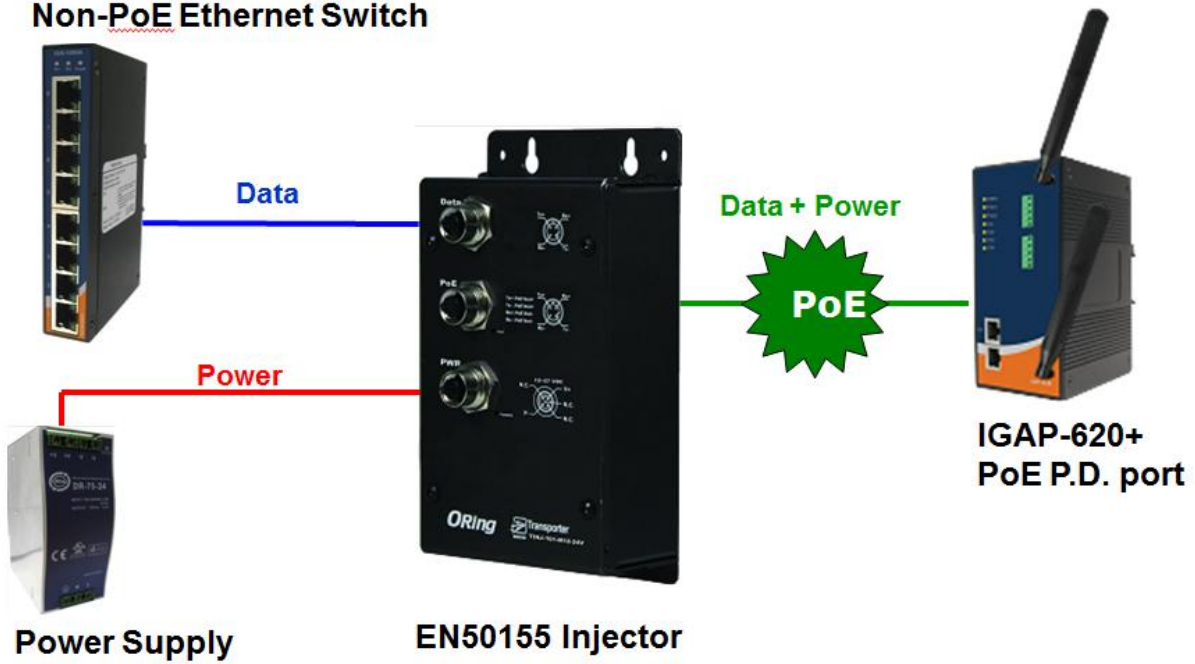
### Introduction

ORing's Transporter™ series PoE Injectors are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TINJ-101GT-M12 PoE Injector is an advanced IEEE802.3at compliant device with Intelligent Detection that provided **1-port 10/100/1000 Base-T(X)** PoE output which is compliant with EN50155 requirement. It is specifically designed for the toughest industrial environments. TINJ-101GT-M12 EN50155 PoE Injector use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. 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. Because of this intelligent detection, only an IEEE 802.3at/802.3af compliant device can be powered with the TINJ-101GT-M12 PoE Injector. Typically in Ethernet networks the maximum allowable CAT5 cable length is about 100 meters, due to the limitation of the Ethernet standards. Because of its 50V insertion, the installer doesn't need to worry about voltage drops caused by cable length. The TINJ-101GT-M12 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 supplied on Ethernet pins 4/6 (V+) and 5/8 (V-).**

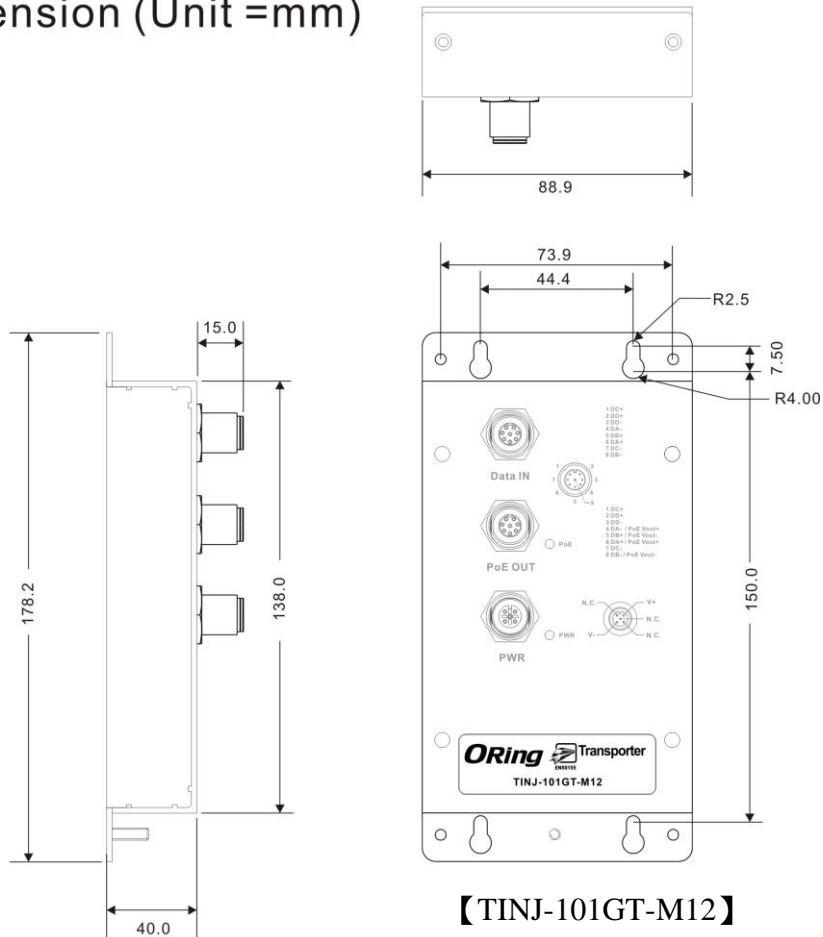
## Connection

IGS-1080A Gigabit  
Non-PoE Ethernet Switch

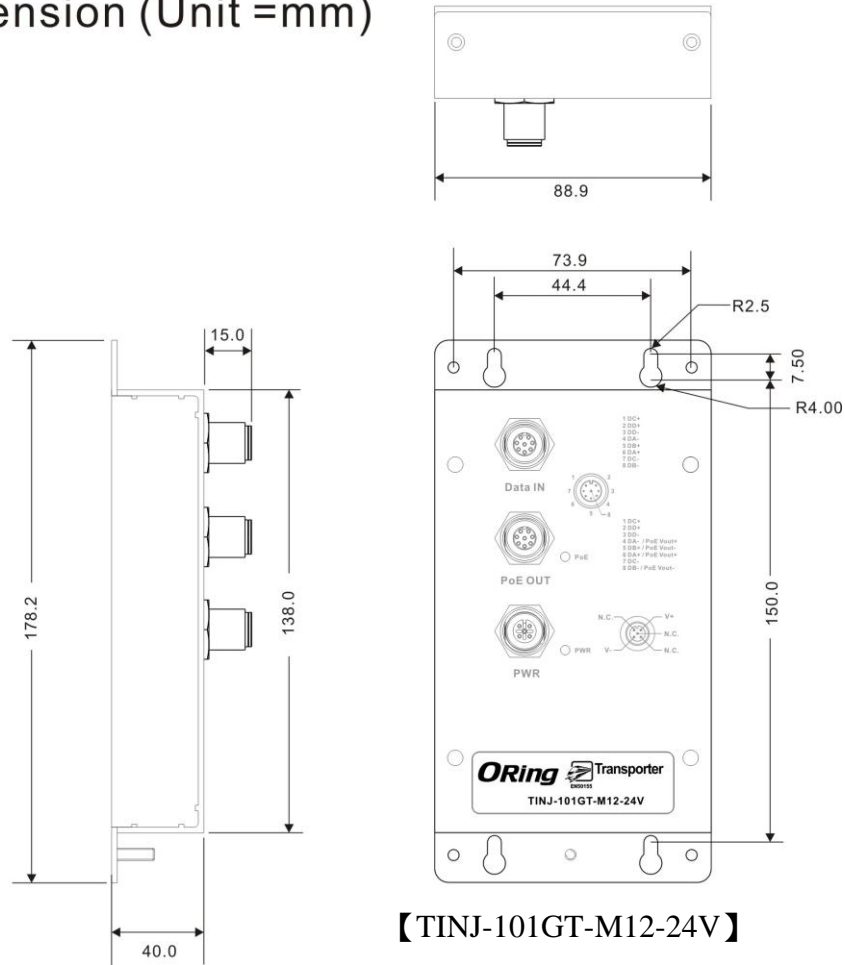


## Dimension

Dimension (Unit = mm)

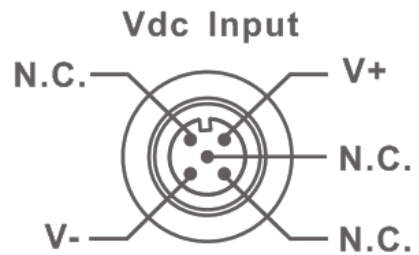


Dimension (Unit =mm)



**Pin Definition**

- 1 BI\_DC+
- 2 BI\_DD+
- 3 BI\_DD-
- 4 BI\_DA- / PoE Vout+
- 5 BI\_DB+ / PoE Vout-
- 6 BI\_DA+ / PoE Vout+
- 7 BI\_DC-
- 8 BI\_DB- / PoE Vout-



## Connector and Pin Definition

### 1000 Base-T

Pin	M12 Input (Data Only)		M12 Output (Data and Power)	
	Symbol	Description	Symbol	Description
1	BI_DC+	Data BI_DC+	BI_DC+	Data BI_DC+
2	BI_DD+	Data BI_DD+	BI_DD+	Data BI_DD+
3	BI_DD-	Data BI_DD-	BI_DD-	Data BI_DD-
4	BI_DA-	Data BI_DA-	BI_DA- (Vdc+)	Data BI_DA- and Feeding Power(+)
5	BI_DB+	Data BI_DB+	BI_DB+ (Vdc-)	Data BI_DB+ and Feeding Power(-)
6	BI_DA+	Data BI_DA+	BI_DA+ (Vdc+)	Data BI_DA+ and Feeding Power(+)
7	BI_DC-	Data BI_DC-	BI_DC-	Data BI_DC-
8	BI_DB-	Data BI_DB-	BI_DB- (Vdc-)	Data BI_DB- and Feeding Power(-)

### 10/100 Base-T(X)

Pin	M12 Input (Data Only)		M12 Output (Data and Power)	
	Symbol	Description	Symbol	Description
1	NC	Not Connected	NC	Not Connected
2	NC	Not Connected	NC	Not Connected
3	NC	Not Connected	NC	Not Connected
4	Rx-	Data Receive	Rx- (Vdc+)	Data Receive and Feeding power(+)
5	Tx+	Data Transmit	Tx+ (Vdc-)	Data Transmit and Feeding power(-)
6	Rx+	Data Receive	Rx+ (Vdc+)	Data Receive and Feeding power(+)
7	NC	Not Connected	NC	Not Connected
8	Tx-	Data Transmit	Tx- (Vdc-)	Data Transmit and Feeding power(-)

**Note:** pins 5 and 8 (-Vdc) should not be shorted to ground

## Specifications

ORing Injector Model	TINJ-101GT-M12	TINJ-101-M12-24V
<b>Physical Ports</b>		
10/100/1000 Base-T(X) with P.S.E. Ports in M12 Auto MDI/MDIX	1 x M12 connector (8-pin M12 A-coding)	
10/100/1000 Base-T(X) Port in M12 Auto MDI/MDIX	1 x M12 connector (8-pin M12 A-coding)	
<b>Operating Voltage</b>		
Input Voltage	<b>50 ~ 57 VDC on 4-pin terminal block</b>	<b>12 ~ 57 VDC on 4-pin terminal block</b>
Output Power	<b>50V / 600mA, 30 Watts max.</b>	
<b>LED Indicators</b>		
Power Indicator	PWR / Ready: 1 x LED Green On: Power is on and functioning Normally.	
PoE Indicators	1 x LED Blue On: PoE Device Link Blue Blinking: Detecting PoE Device Blue Off : None PoE Device Detected	
<b>Protection</b>		
Short Circuit Protection	Present	
Over Load Protection	Present	
<b>Physical Characteristic</b>		
Enclosure	IP-40	
Dimension (W x D x H)	<b>88.9 (W) x 40 (D) x 150 (H)mm (3.5 x 1.57 x 5.9 inch)</b>	
Weight (g)	385g	446g
<b>Environmental</b>		
Storage Temperature	-40 to 80°C (-40 to 176°F)	
Operating Temperature	-25 to 75°C (-13 to 167°F)	
Operating Humidity	5% to 90% Non-condensing	
<b>Regulatory approvals</b>		
EMI	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)	
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	
<b>Warranty</b>	5 years	

## Ordering Information

**TINJ-101GT-M12-24V**

<b>Code</b>	10/100/1000Base-T(X) P.S.E.	<b>VDC Input</b>
<b>Definition</b>	Port Number	
<b>Option</b>	- 1: 1 port	<b>None:</b> 50 ~ 57 VDC <b>-24:</b> 12 ~ 50 VDC

Available Model	Model Name	Description
	TINJ-101GT-M12	EN50155 Industrial 1-port Gigabit High Power PoE Injector, M12 connector
	TINJ-101GT-M12-24V	EN50155 Industrial 1-port Gigabit High Power PoE Injector, 12V~50V Input Support, M12 connector

## Packing List

- TINJ-101GT-M12 x 1
- QIG x 1

## Optional Accessories

- M12 cable series