EN50155 PoE INJECTOR INDUSTRIAL

ORing

Quick Installation Guide

TINJ-101-M12-24V

EN50155 Industrial PoE Injector

Introduction

The **TINJ-101-M12-24V** is a PoE injector designed for industrial environments, especially for rolling stock, vehicle, and railway applications due to its EN50155 compliance and M12 connectors. The **TINJ-101-M12-24V** with one 10/100Base-T(X) port meets IEEE802.3at/af standards and is equipped with intelligent detection function. As a result, the device will not turn on power until it detects a valid PoE signature from the connected PoE device. This function can protect non-PoE compliant equipment connected to the same Ethernet cable from damage and allow only IEEE 802.3at/802.3af compliant devices to be powered by the PoE injector. The PoE injector can function with any P.D. equipment which is fully compliant with IEEE 802.3at/802.3af PoE standards.

Package Contents

The product 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
TINJ-101-M12-24V		1
QIG		1

Preparation

Before you begin installing the device, make sure you have all of the package contents available.

Safety & Warnings

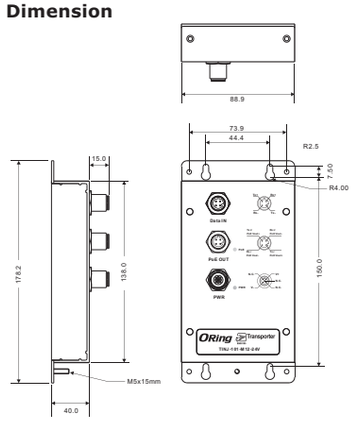
Elevated Operating Ambient: If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

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.

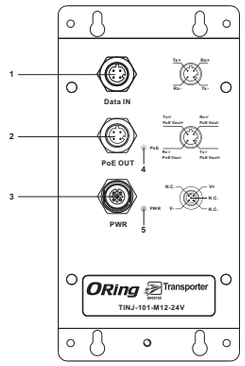
Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this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

Dimension



Panel Layouts

Front View



1. Data input port
2. PoE output port
3. Power input port
4. PoE status LED
5. Power status LED

Installation

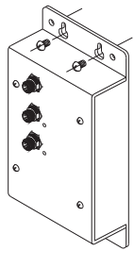
Wall-mount

The device can be fixed to the wall. Follow the steps below to install the device on the wall.

Step 1: Hold the device upright against the wall

Step 2: Insert four screws through the large opening of the keyhole-shaped apertures at the top and bottom of the unit and fasten the screw to the wall with a screwdriver.

Step 3: Slide the device downwards and tighten the four screws for added stability.



Instead of screwing the screws in all the way, it is advised to leave a space of about 2mm to allow room for sliding the PoE injector between the wall and the screws.

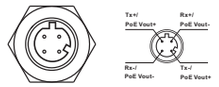
Network Connection

The device provides one data input port and one PoE data output port in M12 connector. According to the link type, the device uses CAT 3, 4, 5, 5e UTP cables to connect to any other network devices (Pcs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications:

Cable	Type	Max. Length	Connector
10BASE-TX	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	M12
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	M12

For pin assignments of the LAN ports, please refer to the following tables.



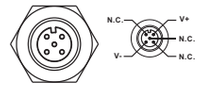
10/100 Base-T(X)

	M12 Input (Data Only)		M12 Output (Data and Power)	
Pin	Symbol	Description	Symbol	Description
1	Rx+	Data Receive	Rx+ (Vdc-)	Data Receive and Feeding power(-)
2	Tx+	Data Transmit	Tx+ (Vdc+)	Data Transmit and Feeding power(+)
3	Rx-	Data Receive	Rx- (Vdc-)	Data Receive and Feeding power(-)
4	Tx-	Data Transmit	Tx- (Vdc+)	Data Transmit and Feeding power(+)

Note: pins 1 and 3 (-Vdc) should not be shorted to ground

Power input

The device provides one set of power supply using the M12 5-pin female connector on the front panel. Please refer to the following figure for pin assignments.



Configurations

After installing the device and connecting cables, start the device by turning on power. The green power LED should turn on. Please refer to the following tablet for LED indication.

LED	Color	Status	Description
Power	Green	On	Power is on
PoE	Blue	On	PoE device is detected
		Blinking	Detecting PoE device
		Off	No PoE device is detected

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Specifications

ORing Model	TINJ-101-M12-24V
Physical Ports	
10/100Base T(X) with P.S.E. Ports in M12 Auto MDI/MDIX	**1 (4-pin female D-coding)**
10/100Base T(X) Ports in M12 Auto MDI/MDIX	**1 (4-pin female D-coding)**
Operating Voltage	
Input Voltage	Railway 24VDC (12 ~ 57VDC) on 5-pin female A-coding connector
Output Power	50V / 600mA, 30 Watts max.
Protection	
Short Circuit Protection	Present
Over Load Protection	Present
Physical Characteristic	
Enclosure	IP-40
Dimension (W x D x H)	88.9 (w) x 40 (D) x178.2 (H) mm (3.5 x 1.57 x 7.02 inch.)
Weight (g)	446g
Environmental	
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
Regulatory Approvals	
EMC	CE EMC (EN 55035, EN 55032), FCC Part 15 B, EN 50155(EN 50121-1, EN 50121-3-2)
EMI	EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A
EMS	EN 55035, 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)(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	EN 62368-1
Other	EN 50155
MTBF	3,513,152 hrs
Warranty	5 years

ORing

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