EN50155 PoE SPLITTER INDUSTRIAL

ORing

Quick Installation Guide

TSPL-101GT-M12

EN50155 Industrial PoE Splitter

Introduction

ORing's Transporter™ series PoE Splitters are designed for industrial applications, such as rolling stock, vehicle, and railway applications. **TSPL-101GT-M12 series** is high power PoE Splitter for use in Power over Ethernet systems which is compliant with EN50155 requirement. It is specifically designed for the toughest industrial environments. **TSPL-101GT-M12 series** EN50155 PoE Splitter use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. With Ethernet Input (data + power) port and Output (data only) port, **TSPL-101GT-M12 series** may split power from existing PoE connection and convert up to 24VDC/1A or 12VDC/2A for power hungry applications such as Wireless APs, Security cameras and IP Phones. The internal current limit, short-circuit and overload protection are implemented for use as a DC power supply.

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
TSPL-101GT-M12-24V or TSPL-101GT-M12-12V		1
QIG		1

Preparation

Before you begin installing the device, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

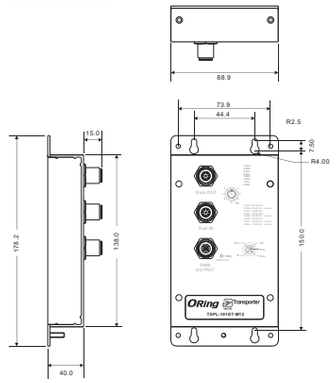
Elevated Operating Ambient: If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

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.

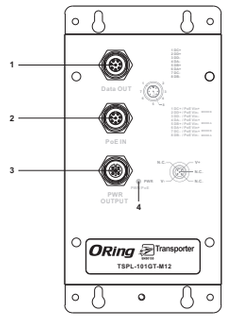
Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this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

Dimension



Panel Layouts

Front View

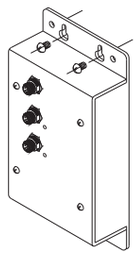


1. Gigabit data output port
2. Gigabit PoE input port
3. PoE Power output port
4. Power/PoE power indicator

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 switch between the wall and the screws.

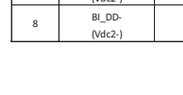
Network Connection

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
1000BASE-T	Cat. 5/Cat. 5e 100-ohm UTP	UTP 100 m (328ft)	M12

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



PoE Mode A

10/100 Base-T(X)

	RJ-45 Input (Data and Power)		RJ-45 Output (Data Only)	
Pin	Symbol	Description	Symbol	Description
1	Rx+ (**Vdc1+**)	Data Receive and Feeding power(+)	Rx+	Data Receive
2	Rx- (**Vdc1+**)	Data Receive and Feeding power(+)	Rx-	Data Receive
3	Tx+ (**Vdc1-**)	Data Transmit and Feeding power(-)	Tx+	Data Transmit
4	NC (Vdc2+)	Not Connected Feeding power(+)	NC	Not Connected
5	NC (Vdc2+)	Not Connected Feeding power(+)	NC	Not Connected
6	Tx- (**Vdc1-**)	Data Transmit and Feeding power(-)	Tx-	Data Transmit
7	NC (Vdc2-)	Not Connected Feeding power(-)	NC	Not Connected
8	NC (Vdc2-)	Not Connected Feeding power(-)	NC	Not Connected

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

1000 Base-T

	RJ-45 Input (Data and Power)		RJ-45 Output (Data Only)	
Pin	Symbol	Description	Symbol	Description
1	BI_DA+ (**Vdc1+**)	Data BI_DA+ and Feeding Power(+)	BI_DA+	Data BI_DA+
2	BI_DA- (**Vdc1+**)	Data BI_DA- and Feeding Power(+)	BI_DA-	Data BI_DA-
3	BI_DB+ (**Vdc1-**)	Data BI_DB+ and Feeding Power(-)	BI_DB+	Data BI_DB+
4	BI_DC+ (Vdc2+)	Data BI_DC+ Feeding Power(+)	BI_DC+	Data BI_DC+
5	BI_DC- (Vdc2+)	Data BI_DC- Feeding Power(+)	BI_DC-	Data BI_DC-
6	BI_DB- (**Vdc1-**)	Data BI_DB- and Feeding Power(-)	BI_DB-	Data BI_DB-
7	BI_DD+ (Vdc2-)	Data BI_DD+ Feeding Power(-)	BI_DD+	Data BI_DD+
8	BI_DD- (Vdc2-)	Data BI_DD- Feeding Power(-)	BI_DD-	Data BI_DD-

EN50155 PoE INJECTOR INDUSTRIAL

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PoE Mode B

10/100 Base-T(X)

	RJ-45 Input (Data and Power)		RJ-45 Output (Data Only)	
Pin	Symbol	Description	Symbol	Description
1	Rx+	Data Receive	Rx+	Data Receive +
2	Rx-	Data Receive	Rx-	Data Receive -
3	Tx+	Data Transmit	Tx+	Data Transmit +
4	Vdc+	Feeding power(+)	NC	Not Connected
5	Vdc+	Feeding power(+)	NC	Not Connected
6	Tx-	Data Transmit	Tx-	Data Transmit -
7	Vdc-	Feeding power(-)	NC	Not Connected
8	Vdc-	Feeding power(-)	NC	Not Connected

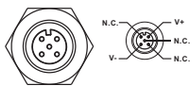
Note: pins 7 and 8 (Vdc-) should not be shorted to ground

1000 Base-T

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

Power inputs

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.



Specifications

ORing Splitter Model	TSPL-101GT-M12-24V	TSPL-101GT-M12-12V
Physical Ports		
10/100/1000Base T(X) with PoE Input in M12 Auto MDI/MDIX	**1 x M12 connector (8 pin A-coding)**	
10/100/1000Base T(X) output Port in M12 Auto MDI/MDIX	**1 x M12 connector (8 pin A-coding)**	
Power Output Connector	**1 x M12 connector (5 pin A-coding)**	
Operating Voltage		
Input Voltage	36 ~ 57 VDC	
Output Power	24V @ 1A max.	12V @ 2A max.
LED Indicato		
Power Indicator	PWR / Ready: 1 x LED	
	Green On: Power is on and functioning Normally	
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)	385g	
Environmental		
Storage Temperature	-40 to 80°C (-40 to 176°F)	
Operating Temperature	-40 to 75°C (-13 to 167°F)	
Operating Humidity	5% to 90% Non-condensing	
Regulatory Approvals		
EMC	En55032, EN55024(CE EMC), FCC Part 15B, EN61000-3-2, EN61000-3-3, EN 50121-1, EN50121-3-2, EN50155	
EMI	CISPR 32, EN55032, FCC Part 15B 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 (PFMF), EN61000-4-11 (DIP)	
Shock	IEC60068-2-27, IEC 61373(EN50155)	
Free Fall	IEC60068-2-31 (IEC 60068-2-32)	
Vibration	IEC60068-2-6, IEC 61373(EN50155)	
Safety	EN60950-1	
MTBF	2397243hrs	2403907hrs
Warranty	5 years	

Configurations

After installing the switch 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

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