TSPL-101GT-M12 Series

TSPL-101GT-M12 Series

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

Features

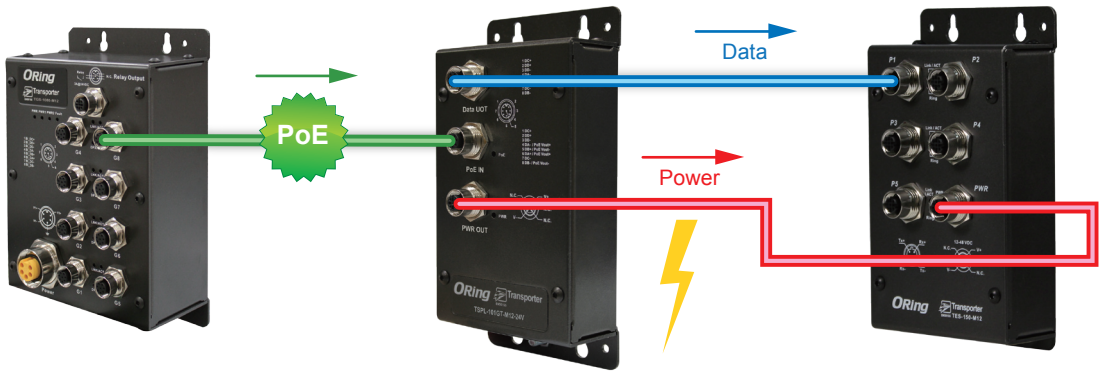
- Leading EN50155-compliant Ethernet switch for rolling stock application
- Fully compliant with IEEE802.3at standard
- Supports 10/100/1000Base-T(X) for PoE In and Data Out
- Power Short Circuit Protection for Power Output
- Auto protection for Over Voltage Power Input
- Supports Power Outputs up to 24Watts Max.
- Ultra-rugged enclosure M12 connector for toughest industrial usages
- Wall Mounting enabled

EN50155 | Full | PoE/PD | -40~75°C Temperature | RoHS Lead Free | CE | FC

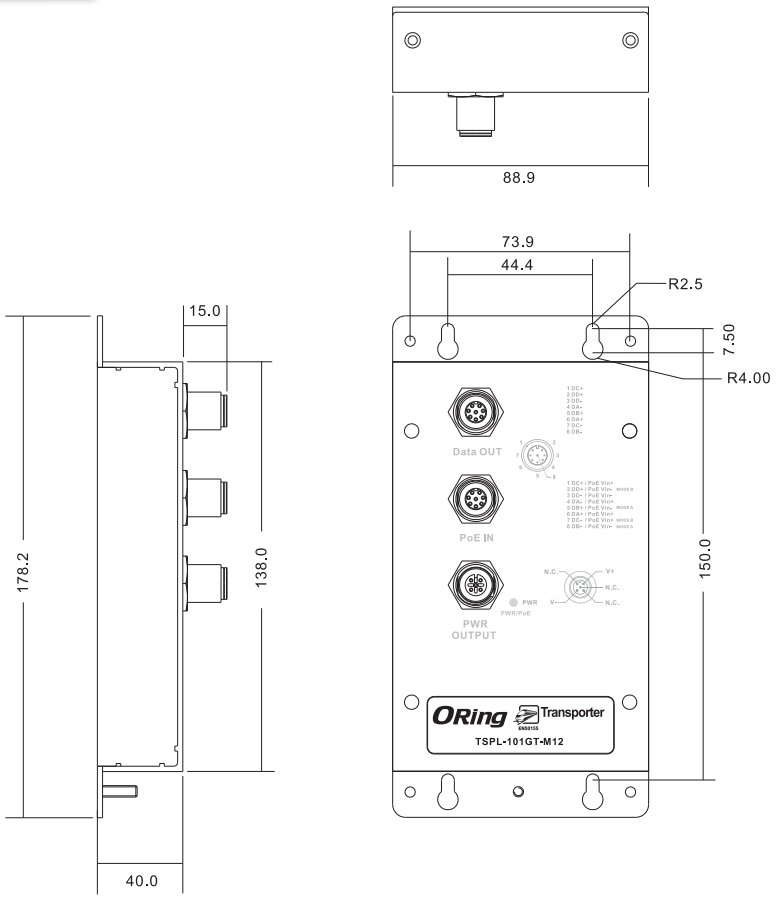
Introduction

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.

Practical Operation



Dimensions



(Unit=mm)

Connector and Pin Definition

[PoE Mode A]

1000 Base-T

1000 Base-T				
	RJ-45 Input (Data and Power)		RJ-45 Output (Data Only)	
Pin	Symbol	Description	Symbol	Description
1	BI_DA+ (Vdc+)	Data BI_DA+ and Feeding Power(+)	BI_DA+	Data BI_DA+
2	BI_DA- (Vdc+)	Data BI_DA- and Feeding Power(+)	BI_DA-	Data BI_DA-
3	BI_DB+ (Vdc-)	Data BI_DB+ and Feeding Power(-)	BI_DB+	Data BI_DB+
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- (Vdc-)	Data BI_DB- and Feeding Power(-)	BI_DB-	Data BI_DB-
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)

10/100 Base-T(X)				
	RJ-45 Input (Data and Power)		RJ-45 Output (Data Only)	
Pin	Symbol	Description	Symbol	Description
1	Rx+ (Vdc+)	Data Receive and Feeding power(+)	Rx+	Data Receive
2	Rx- (Vdc+)	Data Receive and Feeding power(+)	Rx-	Data Receive
3	Tx+ (Vdc-)	Data Transmit and Feeding power(-)	Tx+	Data Transmit
4	NC	Not Connected	NC	Not Connected
5	NC	Not Connected	NC	Not Connected
6	Tx- (Vdc-)	Data Transmit and Feeding power(-)	Tx-	Data Transmit
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

[PoE Mode B]

1000 Base-T

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-

10/100 Base-T(X)

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

Specifications

ORing Injector Model	TSPL-101GT-M12-24V	TSPL-101GT-M12-12V
Physical Ports		
10/100/1000Base-T(X) Port with PoE Input in M12 Auto MDI/MDIX	**1 x M12 connector (8-pin M12 A-coding)**	

10/100/1000Base-T(X) Output Port in M12 Auto MDI/MDIX	**1 x M12 connector (8-pin M12 A-coding)**	
Power Output Connector	**1 x M12 connector (5-pin M12 A-coding)**	
Operating Voltage		
Input Voltage	36 ~ 57 VDC	
Output Voltage	24V @ 1A max.	12V @ 2A max.
LED Indicator		
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) x 178.2 (H)mm (3.5 x 1.57 x 7.0 inch)	
Weight (g)	385 g	
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	CE EMC (EN 55024, EN 55032), FCC Part 15 B EN 61000-3-2, EN 61000-3-3, EN 50155 (EN 50121-1, EN 50121-3-2)	
EMI	EN 55032, CISPR 32, FCC Part 15B class A	
EMS	EN55024, (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/ EN61000-4-11 (DIP))	
Shock	IEC 60068-2-27,	
Free Fall	IEC 60068-2-31	
Vibration	IEC 60068-2-6,	
Safety	IEC/ EN 60950-1	
MTBF	2397243hrs	2403907hrs
Warranty	5 years	

Ordering Information

TSPL-101GT–M12-AA

Code Definition	Networking Port Number	
Option	**- 24V:** 24VDC output **- 12V:** 12VDC output	

	Model Name	Description
Available Model	TSPL-101GT-M12-24V	EN50155 Industrial 1-port Gigabit High Power PoE Splitter, IEEE802.3at standard compliant, 24VDC output, M12 connector
	TSPL-101GT-M12-12V	EN50155 Industrial 1-port Gigabit High Power PoE Splitter, IEEE802.3at standard compliant, 12VDC output, M12 connector

Packing List

- TSPL-101GT-M12 x 1
- QIG x 1

Optional Accessories (Can be purchased separately)

- M12 cable series