TPS-141TX-M12 Series

TPS-141TX-M12

EN50155 5-port unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 1x10/100Base-T(X), M12 connector

Features

- Supports 4 x 10/100 Base-T(X) with P.S.E. PoE ports
- 4 port **P.S.E.** fully compliant with IEEE802.3at standard, provide up to 30 Watts per port
- Support auto-negotiation and auto-MDI/MDI-X
- Support store and forward transmission
- Support flow control
- Support broadcast storm protection
- Ultra-rugged enclosure M12 connector for toughest industrial usages
- Wall mounting enabled

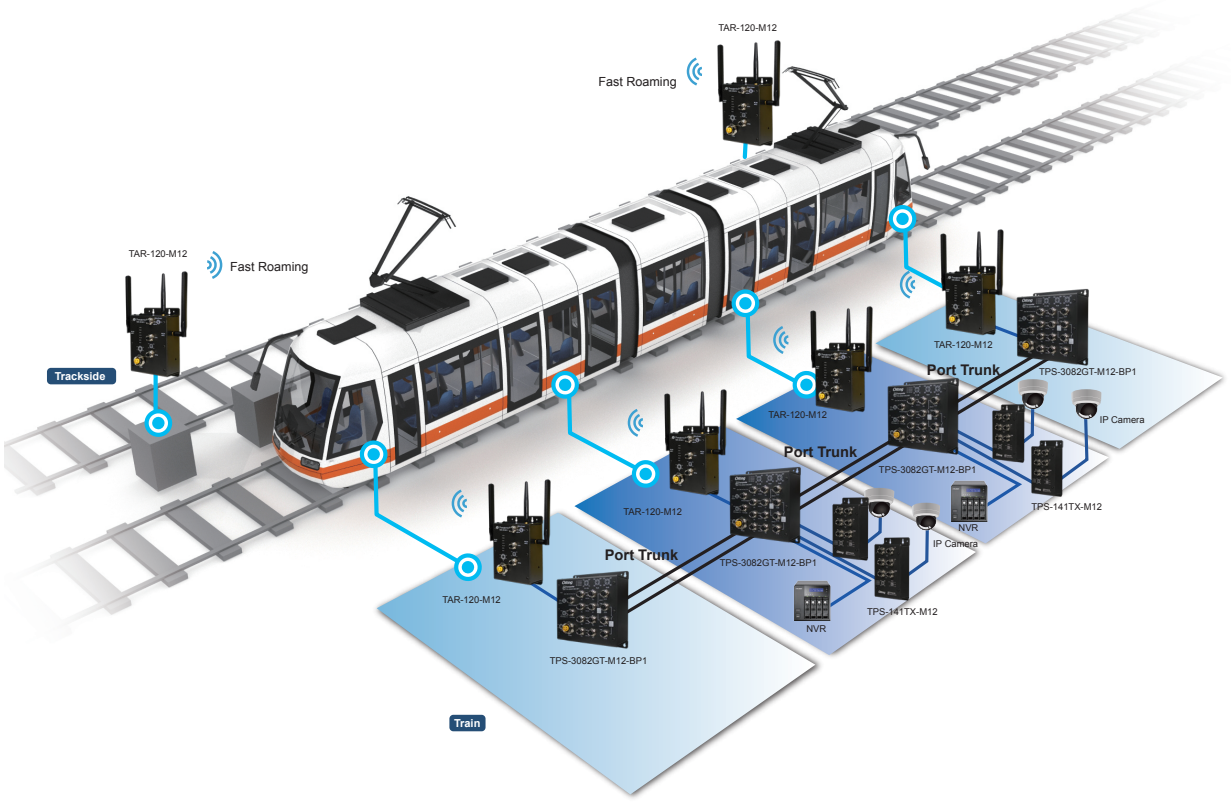
EN50155 | P.S.E. PoE IEEE802.3at | -40~70°C Temperature | RoHS Lead Free | CE | FC

Introduction

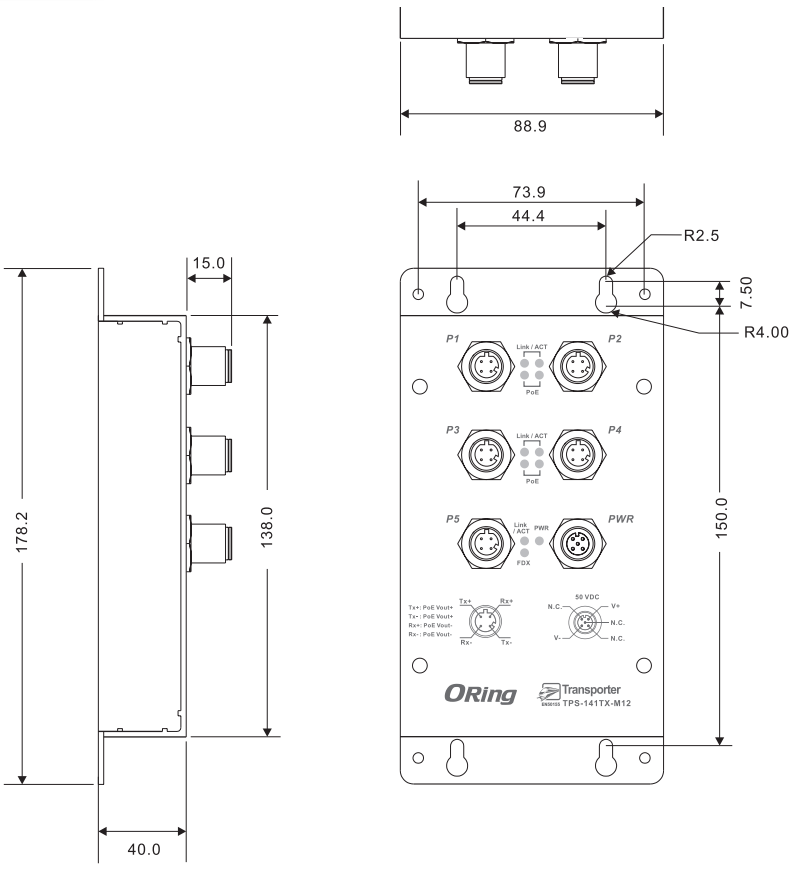
ORing's TransporterTM series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. TPS-141TX-M12 series are unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. ports and 1x10/100Base-T(X) port which is compliant with EN50155 requirement. It is specifically designed for the toughest industrial environments. TPS-141TX-M12 series EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TPS-141TX-M12 series also support Power over Ethernet, a system to transmit electrical power up to **30 watts**, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. TPS-141TX-M12 series switch has 4x10/100Base-T(X) P.S.E. (Power Sourcing Equipment) port to provide power in a PoE setup. The very wide operating temperature range from -40 oC to 70oC can satisfy most operating environment.

Practical Operation

TPS-141TX-M12 series can be used in connecting several Ethernet devices which need to operated under harsh environment requirement. The designs of rugged housing and wide operating temperature range form -40 ~ 70°C, makes TPS-141TX-M12 series reliably in any kinds of transporter applications.

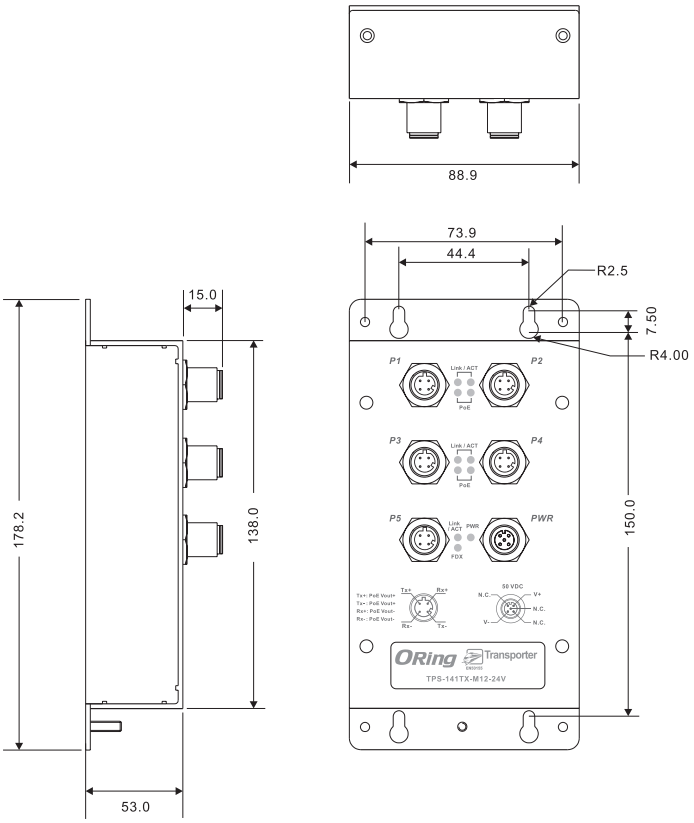


Dimensions



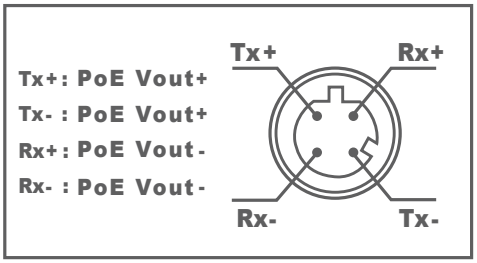
TPS-141TX-M12

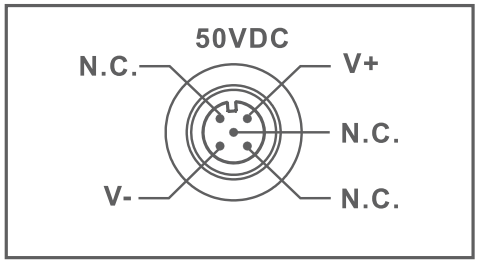
Dimensions



TPS-141TX-M12 -24V

PoE Pin Definition





Specifications

ORing Switch Model	TPS-141TX-M12-24V	TPS-141TX-M12	TPS-141TX-M12-HV Preliminary
Physical Ports			
10/100 Base-T(X) with P.S.E. Ports in M12 Auto MDI/MDIX	4 x M12 connector (4-pin M12 D-coding)		
10/100 Base-T(X) Port in M12 Auto MDI/MDIX	1 x M12 connector (4-pin M12 D-coding)		
Technology			
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control IEEE 802.3at PoE specification (up to 30 Watts per port for P.S.E.)		
Processing	Store-and-Forward		

LED Indicators			
Power Indicator	Green : Power LED x 1		
10/100Base-T(X) M12 port with P.S.E. indicator	Green for port Link/Act. Blue for PoE indicator		
10/100Base-T(X) M12 port indicator	Green for port Link/Act. Amber for port Duplex/Collision		
Power			
Input Power	24VDC voltage power input in M12 connector (5-pin M12 A-coding)	50 ~ 57 VDC voltage power input in M12 connector (5-pin M12 A-coding)	110VDC/220VAC voltage power input in M12 connector (5-pin M12 A-coding)
Power Consumption (Typ.)	3.8 Watts (PoE outputs not included)	3 Watts (PoE outputs not included)	TBD
Overload Current Protection	Present		
Reverse Polarity Protection	Not Present		
Physical Characteristics			
Enclosure	IP-40		
Dimensions (W x D x H)	88.9 x 53 x 178.2 mm	88.9 x 40 x 178.2 mm	TBD
Weight (g)	450g	363g	TBD
Environmental			
Storage Temperature	-40 to 85°C (-40 to 185°F)		
Operating Temperature	-40 to 70°C (-40 to 158°F)		
Operating Humidity	5% to 95% Non-condensing		
Regulatory Approvals			
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, EN61373		
Free Fall	IEC60068-2-32		
Vibration	IEC60068-2-6, EN61373		
Safety	EN60950-1		
Warranty	5 years		

Ordering Information

TPS-1 A B TX -M12

Code Definition	10/100Base-T(X) P.S.E. Port Number	Additional Port Number with 10/100Base-T(X)
Option	**- 4:** 4 ports	**- 1:** 1 port

	Model Name	Description
Available Model	TPS-141TX-M12-24V	EN50155 5-port unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 1x10/100Base-T(X), M12 connector, 24VDC power input
	TPS-141TX-M12	EN50155 5-port unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 1x10/100Base-T(X), M12 connector
	TPS-141TX-M12-HV **Preliminary**	EN50155 5-port unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 1x10/100Base-T(X), M12 connector, high-voltage power input

Packing List

- TPS-141TX-M12 x 1
- Quick Installation Guide

Optional Accessories

- M12 cables series