



TPS-141TX-M12 Series

TPS-141TX-M12 Series

➔ **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

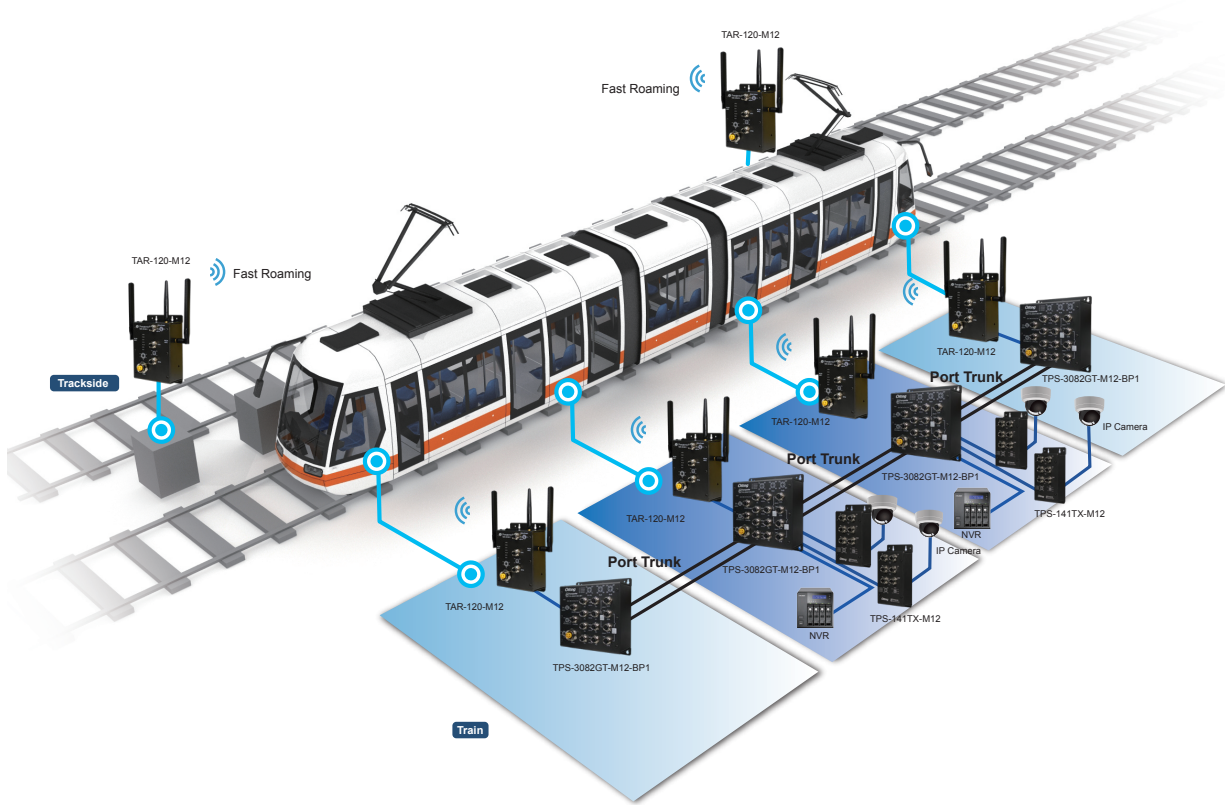


Introduction

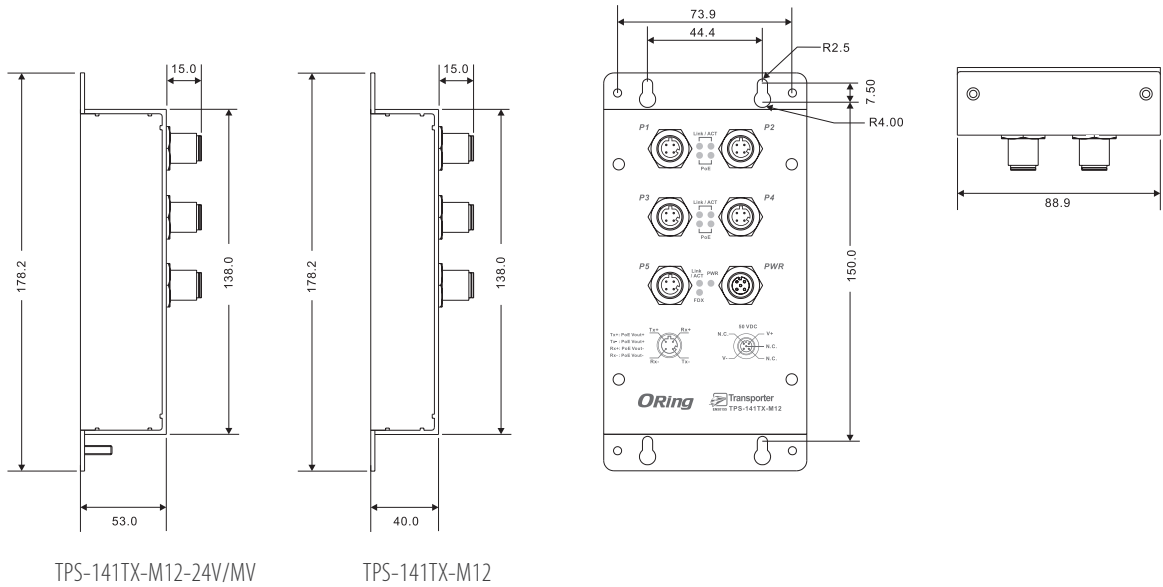
ORing's Transporter™ series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. TPS-141TX-M12 series are unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. ports and 1x10/100Base-T(X) port which is compliant with EN50155 requirement. 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°C to 70°C can satisfy most operating environment.

Practical Operation

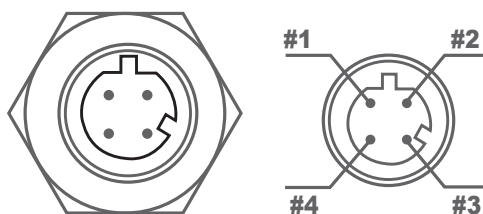
TPS-141TX-M12 series can be used in connecting several Ethernet devices which need to operated under harsh environment requirement. The designs of rugged housing and wide operating temperature range form -40 ~ 70°C, makes TPS-141TX-M12 series reliably in any kinds of transporter applications.



Dimensions



PoE Pin Definition



| M12 D-coding Pin Definition | |
|-----------------------------|--------------------|
| Pin No. | Description |
| #1 | TX+ with PoE Vout+ |
| #2 | RX+ with PoE Vout- |
| #3 | TX- with PoE Vout+ |
| #4 | RX- with PoE Vout- |

Specifications

| ORing Switch Model | TPS-141TX-M12-24V | TPS-141TX-M12 | TPS-141TX-M12-MV |
|---|--|--|---|
| 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 | 12~57VDC power input on M12 connector (5-pin M12 A-coding) | 50 ~ 57VDC power input on M12 connector (5-pin M12 A-coding) | 72~110VDC power input on M12 connector (5-pin M12 A-coding) |
| Power Consumption (Typ.) | 3.8 Watts (PoE outputs not included) | 3 Watts (PoE outputs not included) | 7 Watts (PoE outputs not included) |
| PoE Output Power | 60 Watts (12~24VDC) / 120 Watts (24~57VDC) | 120 Watts | 60 Watts |
| Overload Current Protection | Present | | |
| Reverse Polarity Protection | Present | | |
| Physical Characteristic | | | |
| Enclosure | IP-40 | | |
| Dimension (W x D x H) | 88.9 x 53 x 178.2 mm | 88.9 x 40 x 178.2 mm | 88.9 x 53 x 178.2 mm |
| Weight (g) | 450 g | 363 g | 573 g |
| 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 |

| Available Model | Model Name | Description |
|-----------------|-------------------|---|
| | 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-MV | EN50155 5-port unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 1x10/100Base-T(X), M12 connector, middle-voltage power input |

| | |
|--|---|
| Packing List <ul style="list-style-type: none"> TPS-141TX-M12 series x 1 Quick Installation Guide x 1 | Optional Accessories <ul style="list-style-type: none"> M12 cables series |
|--|---|