



TPS-1080-M12-BP2 Series

TPS-1080-M12-BP2 Series

➔ **EN50155 8-port unmanaged PoE Ethernet switch with 8x10/100Base-T(X) P.S.E., M12 connector and 2xbypass included**

Features

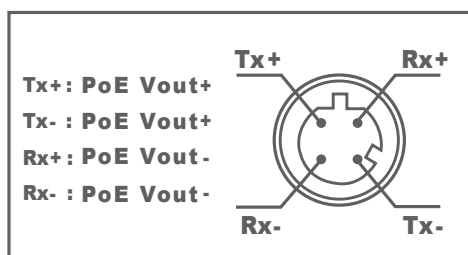
- Leading EN50155-compliant Ethernet switch for rolling stock application
- Provide 8x10/100Base-T(X) PoE (P.S.E.) ports
- Supports IEEE 802.3at compliant PoE with maximum 30Watts per port
- Support dual power inputs for power redundancy
- Support auto-negotiation and auto-MDI/MDI-X
- Support store and forward transmission
- Support flow control
- Built-in 2 sets of bypass ports
- M12 connectors to guarantee reliable operation against environmental disturbances
- Rigid IP-40 housing design
- Wall mounting enabled



Introduction

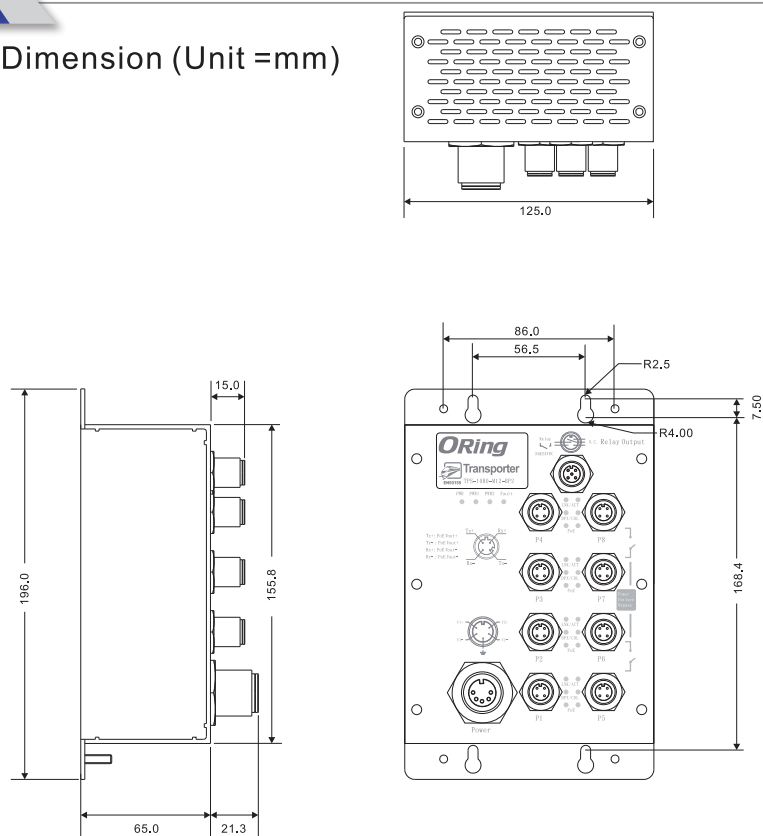
ORing's Transporter™ series un-managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TPS-1080-M12-BP2 is an un-managed PoE Ethernet switch with 8x10/100Base-T(X) P.S.E. (4 of these ports also double as 2 sets of bypass ports), which is specifically designed for the toughest and fully compliant with EN50155 requirement. TPS-1080-M12-BP2 also supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. Each TPS-1080-M12-BP2 switch has 8X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. TPS-1080-M12-BP2 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TPS-1080-M12-BP2 includes 2 sets of bypass ports that protect the network from failures and Network maintenance by ensuring network integrity during power loss. In addition, the wide operating temperature range from -40 to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock and highly-managed PoE Ethernet application.

PoE Pin Definition



Dimensions

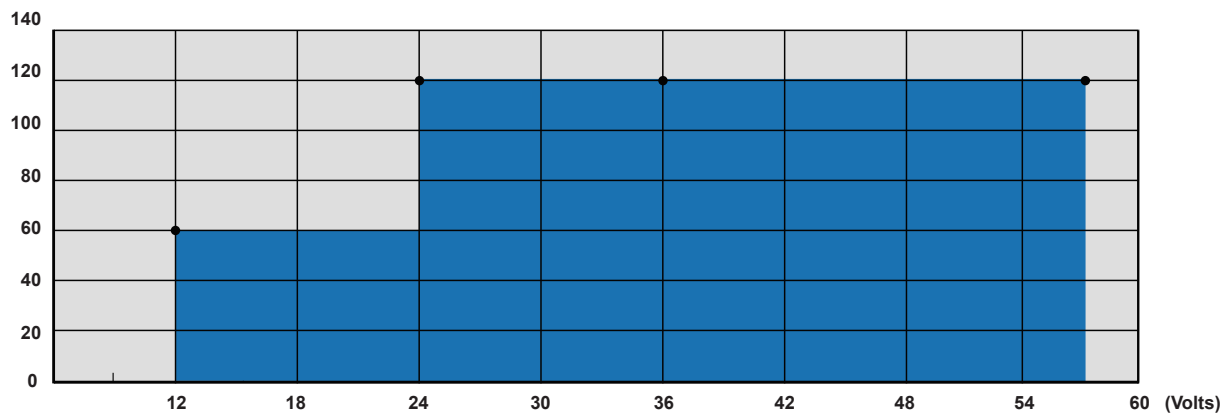
Dimension (Unit =mm)



TPS-1080-M12-BP2

PoE Power Distribution

(Watts)



TPS-1080-M12-BP2-24V model PoE Power Distribution

Specifications

| ORing Switch Model | TPS-1080-M12-BP2 | TPS-1080-M12-BP2-24V |
|--|--|--|
| Physical Ports | | |
| 10/100Base-T(X) Ports in M12 With P.S.E. | 8 x M12 connector (4-pin D-coding, bypass function included by last 4 ports) | |
| Technology | | |
| Ethernet Standards | IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control IEEE 802.3at compliant PoE specification (Maximum 30Watts per port) | |
| Processing | Store-and-Forward | |
| MAC Table | 8K MAC addresses | |
| LED Indicators | | |
| Power Indicator | Green : Power LED x 3 | |
| Fault indicator | Amber : Indicate PWR1 or PWR2 failure | |
| 10/100Base-T(X) M12 port indicator and PoE indicator | Top for port Link/Act indicator. Green for 100Mbps link, Amber for 10 Mbps link Middle Amber for Duplex / Collision indicator Bottom blue for PoE Injected indicator | |
| Fault contact | | |
| Relay | Relay output to carry capacity of 3A at 24VDC on M12 connector (5-pin A-coding) | |
| Power | | |
| Redundant Input power | Dual DC inputs. 50~57VDC on 5-pin M23 connector | Dual DC inputs. 24 (12~57VDC) VDC on 5-pin M23 connector |
| Power Consumption (Typ.) | 2.5 Watts (power consumption of P.S.E. is not included) | 7.5 Watts (power consumption of P.S.E. is not included) |
| PoE Output Power | 240 Watts | 60 Watts (12~24VDC) / 120 Watts (24~57VDC) |
| Overload Current Protection | Present | |
| Reverse Polarity Protection | Present | |
| Physical Characteristics | | |
| Enclosure | IP-40 | |
| Dimensions (W x D x H) | 125 (W) x 65 (D) x196 (H) mm | |
| Weight (g) | 1018 g | 1076 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 | |
| Free Fall | IEC60068-2-32 | |
| Vibration | IEC60068-2-6 | |
| Warranty | 5 years | |

Ordering Information

TPS-1 **AA** **B** -M12- **CCC**

| Code Definition | 10/100 Base-T(X) P.S.E. Port Number | Additional Port Number with 10/100Base-T(X) | Bypass Function |
|--|-------------------------------------|---|---|
| Option | - 08 : 8 ports | - 0 : 0 port | - BP2 : 2xbypass function included |
| Available Model | Model Name | Description | |
| | TPS-1080-M12-BP2 | EN50155 8-port unmanaged PoE Ethernet switch with 8x10/100Base-T(X) P.S.E., M12 connector and 2xbypass included | |
| | TPS-1080-M12-BP2-24V | EN50155 8-port unmanaged PoE Ethernet switch with 8x10/100Base-T(X) P.S.E., M12 connector and 2xbypass included, 24VDC power inputs | |
| Packing List <ul style="list-style-type: none"> TPS-1080-M12-BP2 Quick Installation Guide | | Optional Accessories <ul style="list-style-type: none"> M12C : M12 cable accessories | |

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