TXES-150-M12

➤ EN50155 5-port unmanaged Ethernet switch with 5x10/100/500Base-T(X), M12 connector

Features

- Leading EN50155-compliant Ethernet switch for rolling stock application
- Provided 5x10/100/500Base-T(X) ports
- Supports auto-negotiation and auto-MDI/MDI-X
- Supports store and forward transmission
- Supports flow control
- M12 connectors to guarantee reliable operation against environmental disturbances
- Rigid IP-30 housing design
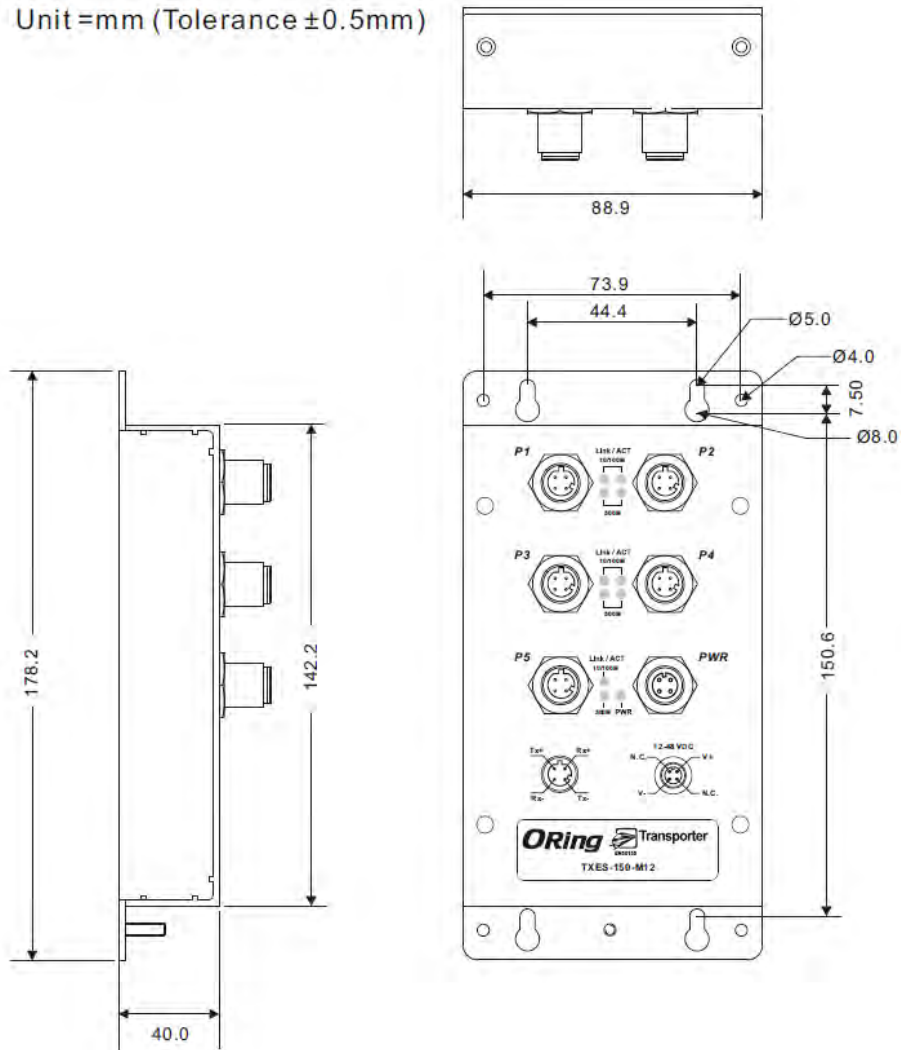- Wall mounting enabled

Introduction

ORing's Transporter™ series un-managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications.   The TXES-150-M12 is an unmanaged Ethernet switch with 5x10/100/500Base-T(X) which is specifically designed for the toughest and fully compliant with EN50155 requirements.   TXES-150-M12 EN50155 Ethernet switch uses M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. In addition, the wide operating temperature range from -40oC to 75oC can satisfy most of the operating environment.   The TXES-150-M12 can be easily adopted in all kinds of applications and provides the most rugged solutions for your network.   Therefore, the switch is one of the most reliable choices for rolling stock Ethernet applications.

While installed in the train, TXES-150-M12 is mainly used for in-train monitoring and Entertainment service due to its high-speed Ethernet connection. Devices connected will be IP camera or CCTV for the use of train surveillance. As an unmanaged Ethernet Switch, TXES-150-M12 is not able and will not be used for any control-related application. Its main function is simply forwarding the Ethernet packet from one Ethernet-based device to another Ethernet device which is all connected to the Switch.
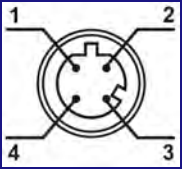
Dimensions

Unit =mm (Tolerance ±0.5mm)

88.9

73.9
44.4
Ø5.0
Ø4.0
7.50
Ø8.0

178.2

142.2

150.6

40.0

P1   Link / ACT 10/100M   P2
      100M

P3   Link / ACT 10/100M   P4
      100M

P5   Link / ACT 10/100M   PWR
      100M   PWR

Tx+   Rx+   12-48 VDC
            N.C.   V+
Rx-   Tx-   N.C.
            V-

ORing Transporter
TXES-159-M12

Pin Definition

	10/100/500Base-T(X) M12 port	
	Pin No.	Description
D-Coding M12	#1	Tx+
	#2	Rx+
	#3	Tx-
	#4	Rx-

Specifications

ORing Switch Model	TXES-150-M12
Physical Ports	
10/100/500Base-T(X) Ports in M12 Auto MDI/MDIX	5 (4-pin female D-coding)
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control
MAC Table	4k
Packet buffer	1.5Mbits
Processing	Store-and-Forward
Switch Properties	Switching latency: 7 µs Switching bandwidth: 1Gbps Throughput (packet per second): 744Mpps@64Bytes packet
LED indicators	
Power Indicator (Power)	Green: Power LED x 1
10/100/500Base-T(X) M12 Port Indicator	Top green LED for 10/100Mbps port Link/Act indicator: On for link-up, Off for link-down, Blinking for active. Bottom green LED for 500Mbps port Link/Act indicator: On for link-up, Off for link-down, Blinking for active.
Power	
Input power	12-48 VDC on 4-pin M12 A-coded male connector ***NOTICE: For EN50155 applications, it supports 24VDC power input only.**
Power consumption (Typ.)	2 Watts Max.
Overload current protection	Present
Reverse Polarity Protection	Present
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	88.9 (W) x 40 (D) x178.2 (H) mm 3.5 (W) x 1.57 (D) x 7.02 (H) inch
Weight (g)	488 g
Environmental	
Storage Temperature	–40 to 85ºC (–40 to 185ºF)
Operating Temperature	–40 to 75ºC (–40 to 167ºF)
Operating Humidity	5% to 95% non-condensing
Regulatory approvals	
EMC	CE EMC (EN 55035, EN 55032), FCC Part 15 B, EN 50155(EN 50121-1, EN 50121-3-2)
EMI	EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A
EMS	EN 55035 (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/EN 61000-4-11 (DIP))
Shock	IEC60068-2-27
Free Fall	IEC60068-2-31
Vibration	IEC60068-2-6
Safety	EN 62368-1 (LVD)
Other	EN 50155 (IEC 61373)
MTBF	1,585,397 hrs.
Warranty	5 years

TXES-1 A B -M12

Code Definition	10/100/500Base-T(X) Port Number	Additional Port Number
Option	**- 5:** 5 ports	**- 0:** 0 ports

Available Model	Model Name	Description
	TXES-150-M12	EN50155 5-port unmanaged Ethernet switch with 5x10/100/500Base-T(X), M12 connector

Packing List
- TXES-150-M12 x 1
- Quick Installation Guide x 1

Optional Accessories
- M12 cable series
- Power supply series: SDR/NDR series