



TGXPS-141GX-M12 Series

EN50155 5-port unmanaged Gigabit PoE Ethernet switch with 4x10/100/500/1000Base-T(X) P.S.E. and 1x10/100/500/1000Base-T(X), M12 connector

Features

- Supports 4 x 10/100/500/1000 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

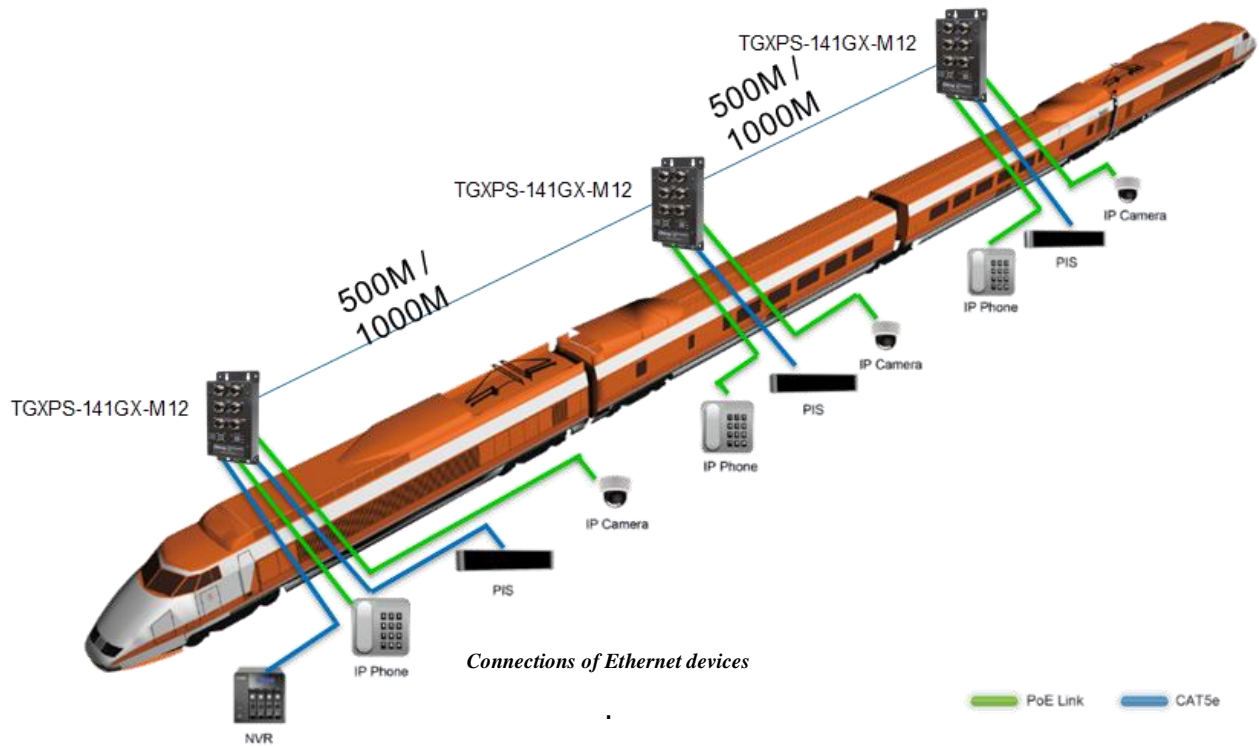


Introduction

ORing's Transporter™ series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. TGXPS-141GX-M12 series are unmanaged PoE Ethernet switch with 4x10/100/500/1000Base-T(X) P.S.E. ports and 1x10/100/500/1000Base-T(X) port which is compliant with EN50155 requirement. It is specifically designed for the toughest industrial environments. TGXPS-141GX-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. TGXPS-141GX-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. TGXPS-141GX-M12 series switch has 4x10/100/500/1000Base-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 75°C can satisfy most operating environment.

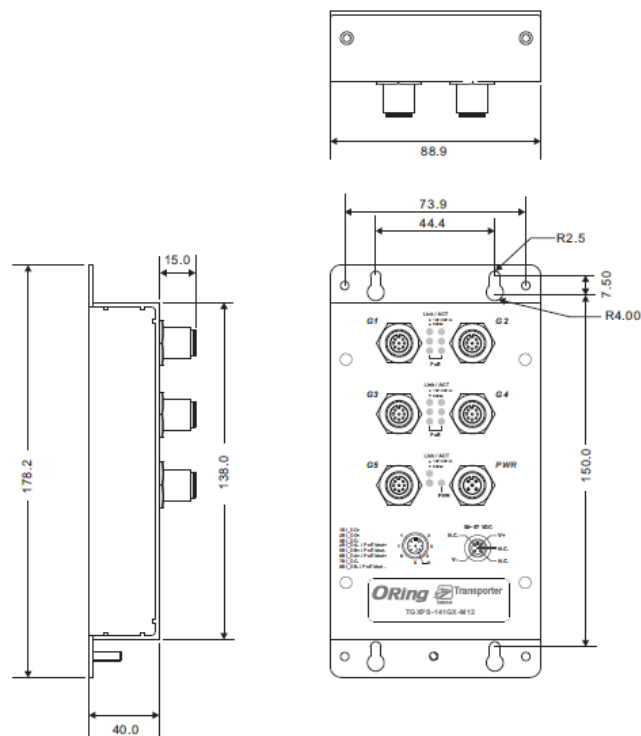
Practical Operation

TGXPS-141GX-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 from $-40 \sim 75^{\circ}\text{C}$, makes TGXPS-141GX-M12 series reliably in any kinds of transporter applications.



Dimension

Dimension (Unit = mm)



TGXPS-141GX-M12

Pin Definition



- | M12 Pin Definition | |
|--------------------|-----------------------|
| Pin No. | Description |
| #1 | BI_DC+ |
| #2 | BI_DD+ |
| #3 | BI_DD- |
| #4 | BI_DA- with PoE Vout+ |
| #5 | BI_DB+ with PoE Vout- |
| #6 | BI_DA+ with PoE Vout+ |
| #7 | BI_DC- |
| #8 | BI_DB- with PoE Vout- |

Specifications

ORing Switch Model	TGXPS-141GX-M12	TGXPS-141GX-M12-24V	TGXPS-141GX-M12-MV
Physical Ports			
10/100/500/1000Base-T(X) with P.S.E. Ports in M12 Auto MDI/MDIX	4 x M12 connector (8-pin M12 A-coding)		
10/100/500/1000Base-T(X) Port in M12 Auto MDI/MDIX	1 x M12 connector (8-pin M12 A-coding)		
Technology			
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T 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		
10/100/500/1000Base-T(X) M12 port with P.S.E. indicator	Top dual color LED for 10/100/1000Mbps Link/ACT indicator : Green LED for 1000Mbps, Amber for 10/100Mbps Middle Green for port Link/Act at 500Mbps Bottom Blue for PoE indicator		
10/100/500/1000Base-T(X) M12 port indicator	Top dual color LED for 10/100/1000Mbps Link/ACT indicator : Green LED for 1000Mbps, Amber for 10/100Mbps Bottom Green for port Link/Act at 500Mbps		
Power			
Input Power	50 ~ 57VDC power input on M12 connector (5-pin M12 A-coding)	12~57VDC 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 Watts (power consumption of P.S.E. is not included)	3 Watts (power consumption of P.S.E. is not included)	6 Watts (power consumption of P.S.E. is not included)
PoE Output Power	120 Watts	60 Watts (12~24VDC) / 120 Watts (24~57VDC)	60 Watts
Overload Current Protection	Present		
Reverse Polarity Protection	Present		
Physical Characteristic			
Enclosure	IP-40		
Dimension (W x D x H)	88.9 x 40 x 178.2 mm	88.9 x 55 x 178.2 mm	88.9 x 55 x 178.2 mm
Weight (g)	511	643	771
Environmental			
Storage Temperature	-40 to 85°C (-40 to 185°F)		
Operating Temperature	-40 to 75°C (-40 to 167°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

TGXPS-1ABGX-M12

Code	10/100/500/1000Base-T(X) P.S.E.	
Definition	Port Number	Additional Port Number with 10/100/500/1000Base-T(X)
Option	- 4: 4 ports	- 1: 1 port

Available Model	Model Name	Description
	TGXPS-141GX-M12	EN50155 5-port unmanaged Gigabit PoE Ethernet switch with 4x10/100/500/1000Base-T(X) P.S.E. and 1x10/100/500/1000Base-T(X), M12 connector
	TGXPS-141GX-M12-24V	EN50155 5-port unmanaged Gigabit PoE Ethernet switch with 4x10/100/500/1000Base-T(X) P.S.E. and 1x10/100/500/1000Base-T(X), M12 connector, 24VDC power input
	TGXPS-141GX-M12-MV	EN50155 5-port unmanaged Gigabit PoE Ethernet switch with 4x10/100/500/1000Base-T(X) P.S.E. and 1x10/100/500/1000Base-T(X), M12 connector, 110VDC power input

Packing List

- TGXPS-141GX-M12 series
- Quick Installation Guide x 1

Optional Accessories

- M12 cable series