EN50155
Switch
INDUSTRIAL

Quick **I**nstallation **G**uide

TES-150-M12

EN50155 5-port unmanaged Ethernet switch

Introduction

ORing's TransporterTM series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. **TES-150-M12** is an unmanaged Ethernet switch with 5x10/100Base-T(X) ports which is compliant with EN50155 request. It is specifically designed for the toughest industrial environments. **TES-150-M12** EN50155 Ethernet switch use 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 -40℃ to 70℃ can satisfy most of operating environment. The **TES-150-M12** can be easily adopted in almost 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 application.
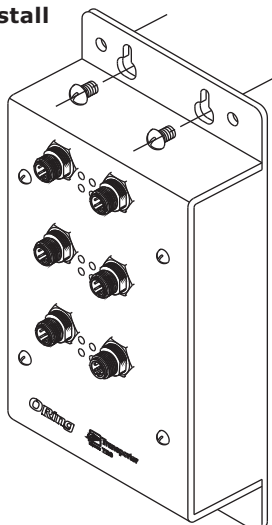
EN50155   -40~70℃ Temperature

Features

> **Leading EN50155-compliant Ethernet switch rolling stock application**
> **Supports 5 ports 10/100 Base-T(X)**
> **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**
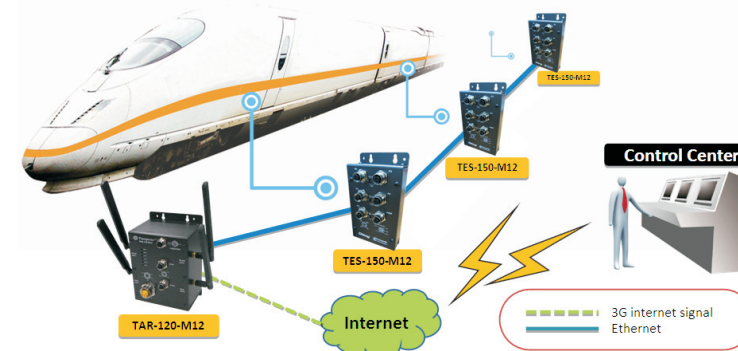
Installation

● **Wall-mounted Install Step**

Specifications

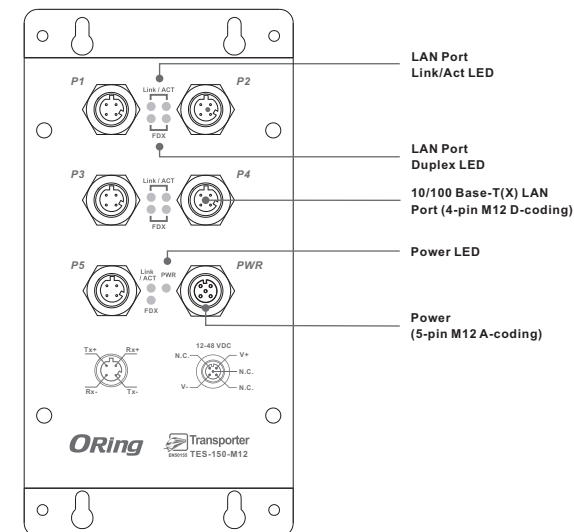| ORing Switch Model	TES-150-M12
Physical Ports	
10/100 Base-T(X) Ports in M12 Auto MDI/MDIX	5 x M12 connector (4-pin M12 D-coding)
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control
Processing	Store-and-Forward
LED Indicators	
Power Indicator	Green: Power LED x 1
10/100Base-T(X) M12 Port Indicator	Green for port Link/Act. Amber for port Duplex/Collision
Power	
Input Power	12~48 VDC power input in M12 connector (5-pin M12 A-coding)
Power Consumption(Typ.)	3 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present
Physical Characteristic	
Enclosure	IP-40
Dimension (W x D x H)	88.9(W) x70(D) x 178.2(H) mm (3.5 x 2.79 x 7.02 inch.)
Weight (g)	360 g
Environmental	
Storage Temperature	-40 to 85℃ (-40 to 185℉)
Operating Temperature	-40 to 70℃ (-40 to 158℉)
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
Safety	EN60950-1
Warranty	5 years

ORing Industrial Networking Corp.

Practical Operation

TES-150-M12 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℃, makes TES-150-M12 reliably in any kinds of transporter applications.

● **Network connection**

Front Panel

LAN Port Link/Act LED

LAN Port Duplex LED

10/100 Base-T(X) LAN Port (4-pin M12 D-coding)

Power LED

Power (5-pin M12 A-coding)

Packing list

Model name	Description	Accessory
TES-150-M12	EN50155 5 port unmanaged Ethernet switch with 5x10/100Base-T(X), M12 connector	QIG X 1