



# TES-180-M12

## EN50155 Compact Size 8-port unmanaged Ethernet switch with 8x10/100Base-T(X), M12 connector

### Features

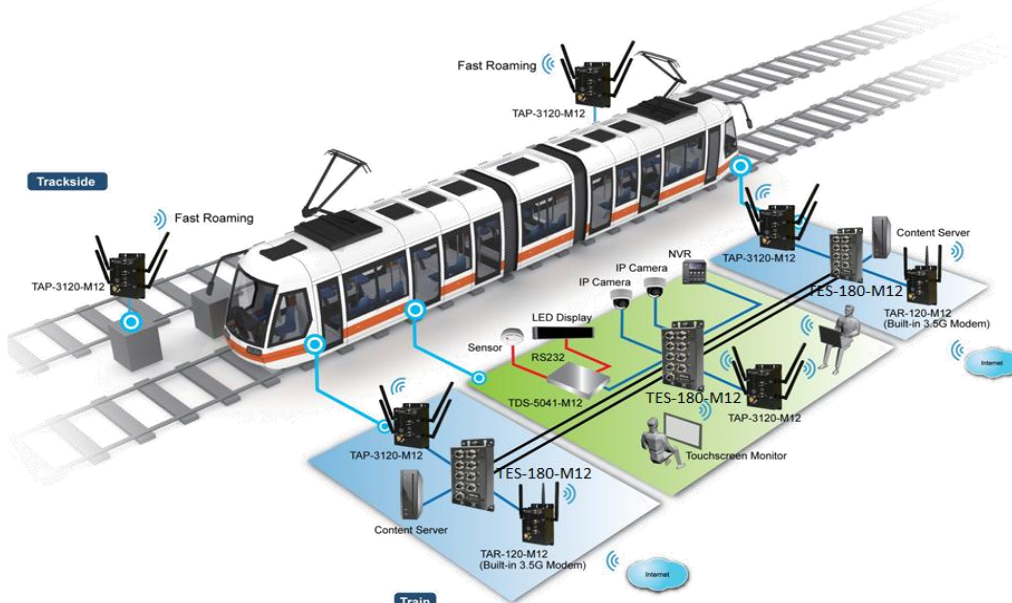
- Leading EN50155-compliant Ethernet switch for rolling stock application
- Support auto-negotiation and auto-MDI/MDI-X
- Support store and forward transmission
- Support flow control
- Warning system by relay output
- Ultra-rugged enclosure for toughest industrial usages
- Wall mounting enabled



### Introduction

ORing's Transporter™ series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TES-180-M12 is an unmanaged Ethernet switch with 8x10/100Base-T(X) ports which is passes through EN50155 certification. TES-180-M12 is constructed of a rugged aluminum case and designed with Ethernet ports (M12 type connector), which provide a dust-tight connection. TES-180-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 °C to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock Ethernet application.

#### Railway Application

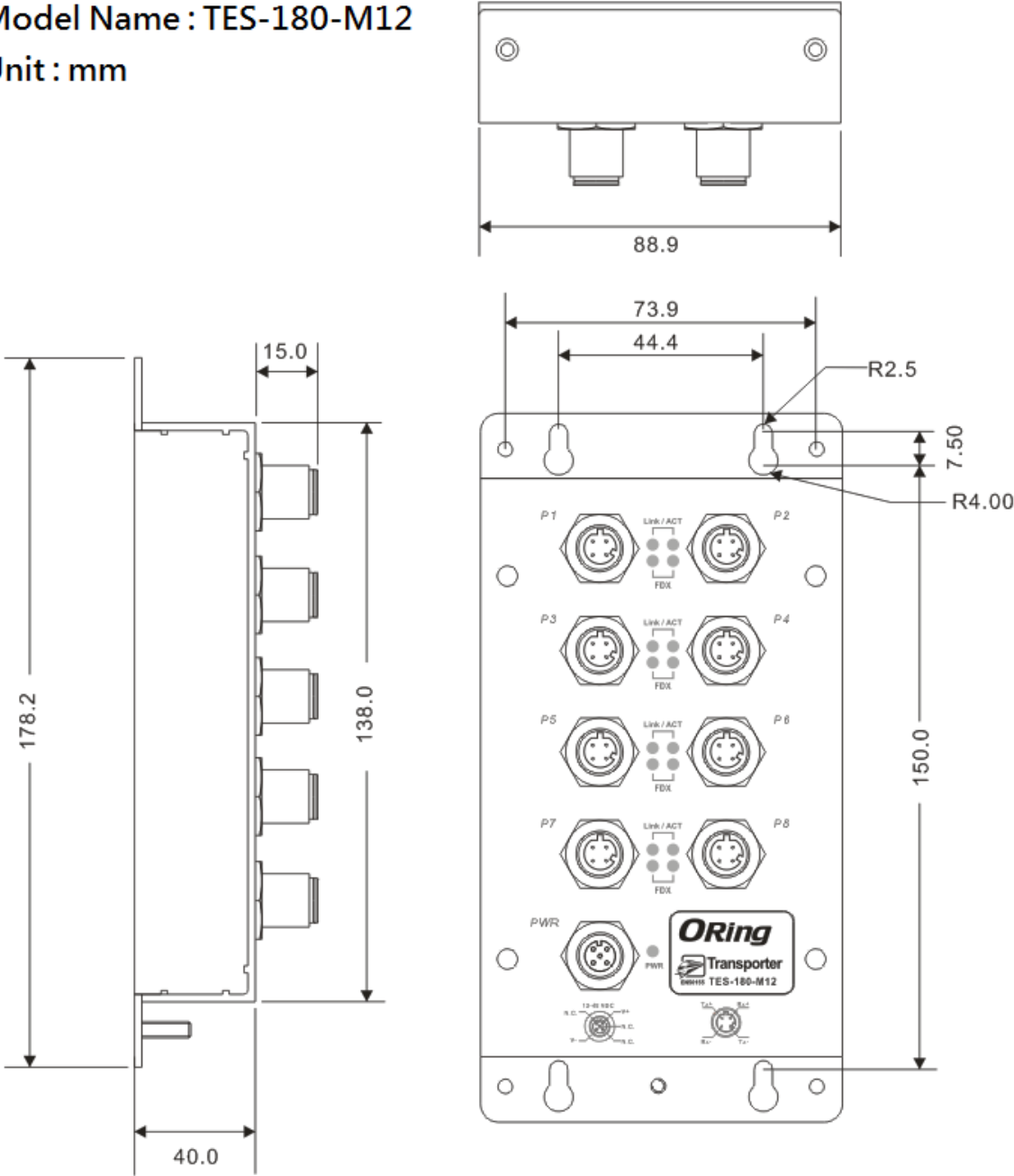


Network connection

**Dimension**

Model Name : TES-180-M12

Unit : mm



## Specifications

<b>ORing Switch Model</b>	TES-180-M12
<b>Physical Ports</b>	
10/100 Base-T(X) Ports in M12 Auto MDI/MDIX	<b>8 x M12 connector (D-coding)</b>
<b>Technology</b>	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control
MAC Table	8192 MAC addresses
Processing	Store-and-Forward
<b>LED Indicators</b>	
Power Indicator	Green : Power LED
Fault Indicator	Amber : Indicate power failure event
10/100Base-T(X) M12 Port Indicator	Green for port Link/Act. Amber for Duplex/Collision
<b>Power</b>	
Input Power	12~48VDC on M12 connector
Power Consumption (Typ.)	4.32 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present
<b>Physical Characteristic</b>	
Enclosure	IP-40
Dimension (W x D x H)	88.9 (w) x 40 (D) x178.2 (H) mm
Weight (g)	510 g
<b>Environmental</b>	
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
<b>Regulatory approvals</b>	
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, EN61000-4-9, EN61000-4-11
Shock	IEC60068-2-27, EN61373
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6, EN61373
Safety	EN60950-1
<b>Warranty</b>	5 years

## Ordering Information

### TES-1AA-M12

<b>Code Definition</b>	10/100Base-T(X) Port Number	
<b>Option</b>	- 80: 8 ports	
<b>Available Model</b>	<b>Model Name</b>	<b>Description</b>
	TES-180-M12	EN50155 compact size 8-port unmanaged Ethernet switch with 8x10/100Base-T(X), M12 connector

## Packing List

- TES-180-M12 x 1
- Quick Installation Guide x 1

## Optional Accessories

- DR-45 series : 45 Watts DIN-Rail power supply
- DR-75 series : 75 Watts DIN-Rail power supply
- DR-120 series : 120 Watts DIN-Rail power supply