



TGS-1080-M12

EN50155 8-port unmanaged Gigabit Ethernet switch with 8x10/100/1000Base-T(X), M12 connector

Features

- Leading EN50155-compliant Ethernet switch for rolling stock application
- Provide 8x10/100/1000Base-T(X) ports
- Support dual power inputs for power redundancy
- Support auto-negotiation and auto-MDI/MDI-X
- Support store and forward transmission
- Support flow control
- M12 connectors to guarantee reliable operation against environmental disturbances
- Rigid IP-40 housing design
- Wall mounting enabled

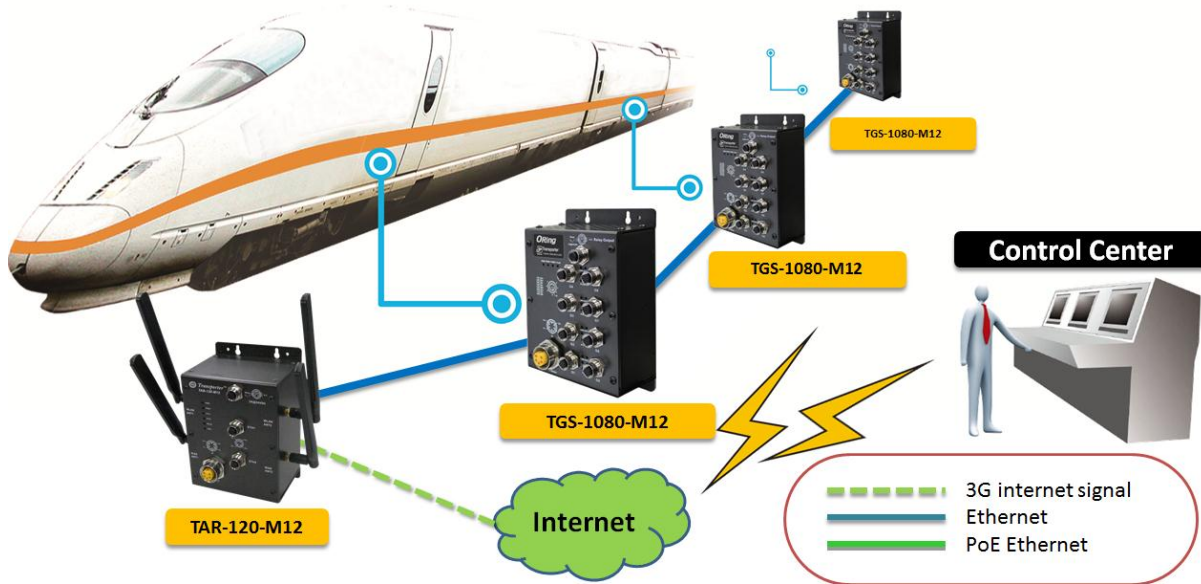


Introduction

ORing's Transporter™ series un-managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TGS-1080-M12 is an un-managed Ethernet switch with 8x10/100/1000Base-T(X) which is specifically designed for the toughest and fully compliant with EN50155 requirement. Each TGS-1080-M12 switch has 8X10/100/1000Base-T(X) ports. TGS-1080-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 -40 °C to 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock application.

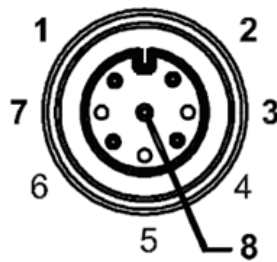
Practical Operation

TGS-1080-M12 can be used for train backbone Ethernet connection. TGS-1080-M12 has 8-port Gigabit Ethernet ports which provides high transmission rate for any Ethernet devices connected to this Ethernet Switch. The designs of rugged housing and wide operating temperature range from -40 ~ 70°C, makes TGS-1080-M12 reliable in any kinds of transporter applications



Connections of Ethernet devices

Pin Definition



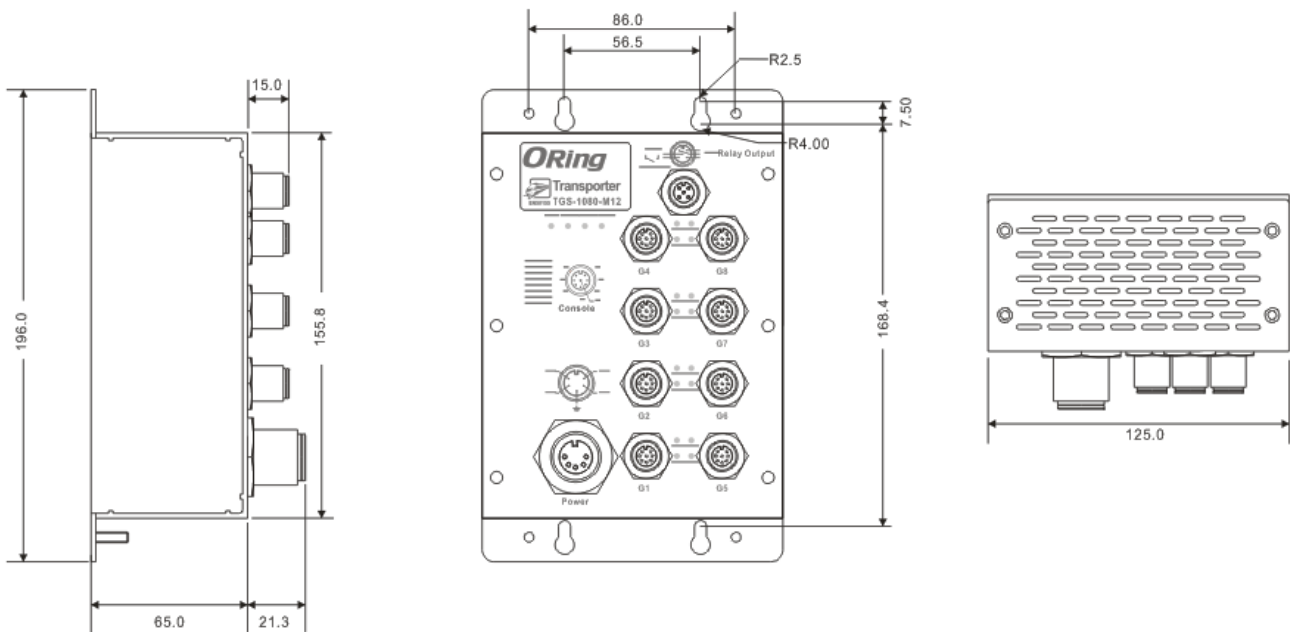
- 10/100/1000Base-T(X) M12 port

M12 Pin Definition	
Pin No.	Description
#1	BI_DC+
#2	BI_DD+
#3	BI_DD-
#4	BI_DA-

#5	BI_DB+
#6	BI_DA+
#7	BI_DC-
#8	BI_DB-

Dimension

Dimension (Unit =mm)



Specifications

ORing Switch Model	TGS-1080-M12
Physical Ports	
10/100/1000Base-T(X) Ports in M12	8 x M12 connector (8-pin 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
MAC Table	8K MAC addresses
Processing	Store-and-Forward
LED indicators	
Power indicator	Green : Power LED x 3
Fault indicator	Amber : Indicate PWR1 or PWR2 failure
10/100/1000Base-T(X) M12 port indicator	Top for port Link/Act indicator. Green for 1Gbps link, Amber for 10/100 Mbps link Bottom Amber for Duplex / Collision 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. 12~48VDC on 5-pin M23 connector
Power consumption (Typ.)	2.88 Watts
Overload current protection	Present
Reverse polarity protection	NOT Present
Physical Characteristic	
Enclosure	IP-40
Dimension (W x D x H)	125 (W) x 65 (D) x196 (H) mm
Weight (g)	967
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

TGS-1AAB-M12

Code Definition	10/100/1000Base-T(X) Port Number	Additional Port Number
Option	- 08: 8 ports	- 0: 0 port
Available Model	Model Name	Description
	TGS-1080-M12	EN50155 8-port unmanaged Gigabit Ethernet switch with 8x10/100/1000Base-T(X), M12 connector

Packing List

- TGS-1080-M12 x 1
- Quick Installation Guide x 1

Optional Accessories

- M12C : M12 cable accessories