



ITP-500

5x 10/100Base-TX Ethernet Switch (Slim)

ITP-800

8x 10/100Base-TX Ethernet Switch



These models are unmanaged, industrial grade Fast Ethernet switches with 5(8) 10/100Base-TX Fast Ethernet ports. This series of unmanaged Ethernet switches is designed for industrial applications in harsh environments. These switches Ethernet ports utilize M12 connectors to ensure water tight, robust connections and guarantee reliable operation against environmental disturbances such as vibration and shock.

These switches are compliant with EN50155, covering operating temperature, power input voltage, surge, ESD, vibration, and shock, thus making these switches suitable for industrial applications in vehicle, rolling stock and railways.

Features

- 8-Port 10/100Base-TX Ethernet Switch (ITP-800)
- 5-Port 10/100Base-TX Ethernet Switch (ITP-500)
- Use M12 connector anti vibration and shock for vehicle, rolling stock, and railway applications
- Supports flow control
- Slim design (ITP-500, figure 5)
- Fanless design
- DIN rail or wall mounting installation
- Supports broadcast storm protection
- Supports auto-negotiation and auto-MDI/MDI-X
- Build-in 2 bypass port to avoid one or more nodes power fail in a bus structure to collapse the network (ITP-800)
- Redundant dual DC input power 12/24/48VDC (8.4~60VDC) (ITP-800)
- DC input power 12/24/48VDC (8.4~60VDC) (ITP-500)
- Very low power consumption
- IP67 water proof grade rugged housing for against water, dust, and and oil (Figure 2)
- Wide operating temperature -40~75°C (ITP-500-E, ITP-800-E)
- CE, FCC, EN50155 and EN50121-4 for railway certified
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified

Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE802.3x Flow Control and Back Pressure
Switch Architecture	Back-plane (Switching Fabric): 1Gbps (ITP-500) Back-plane (Switching Fabric): 1.6Gbps (ITP-800) (Full wire-speed)
Data Processing	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Provides Broadcast Storm Protection	Supported
MAC Address Table	1 K
Packet Buffer Size	448Kbits
Network Connector	5x M12 D-code Female (ITP-500) 8x M12 D-code Female (ITP-800) 10/100Base-TX auto negotiation speed Auto MDI/MDI-X function Full/Half duplex Built in 2 bypass port (ITP-800)
Network Cable	10Base-T: 2-pair UTP/STP Cat. 5e cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5e cable EIA/TIA-568 100-ohm (100m)
Protocols	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green) (ITP-800) Per unit: Power (Green) (ITP-500) Per port: Link/Active (Green)
Reverse Polarity Protection	Present for power input
Overload Current Protection	Supported

Power Supply	Redundant Dual DC 12/24/48V (8.4~60VDC) Input power (ITP-800) DC 12/24/48V (8.4~60VDC) Input power (ITP-500)		
Power Connector	5 Pin Male A-Code M12		
Power Consumption	Input Voltage	ITP-500	ITP-800
	12VDC	0.8W	1.8W
	24VDC	1.0W	2.2W
	48VDC	1.9W	3.4W
Operating Temperature	-40°C~75°C		
Operating Humidity	5% to 95% (Non-condensing)		
Storage Temperature	-40°C~85°C		
Housing	IP67 water-proof grade rugged housing, and fanless (Figure 2)		
Dimensions	43 x 30 x 206.5 mm (D x W x H) (ITP-500) 39 x 65.1 x 191.5 mm (D x W x H) (ITP-800)		
Weight	260g (ITP-500) 410g (ITP-800)		
Installation Mounting	Wall mounting, or DIN rail (optional)		
MTBF	2,315,383 Hours (ITP-500) 1,492,660 Hours (ITP-800) (MIL-HDBK-217)		
Warranty	5 years		
Certification			
EMC	CE		
EMI	FCC, FCC Part 15 Subpart B Class A, CE		
Railway Traffic	EN50155, EN50121-4		
Immunity for Heavy Industrial Environment	EN61000-6-2		

Emission for Heavy Industrial Environment	EN61000-6-4
EMS (Electromagnetic Susceptibility) Protection Level	EN61000-4-2 (ESD) Level 3, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (Burst) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A EN 61000-4-11 Voltage Dips

Safety	UL60950-1 (Pending)
Shock	IEC 61373
Freefall	IEC 60068-2-32
Vibration	IEC 61373

Application

Figure 1 : ITP Series in Onboard Train Application

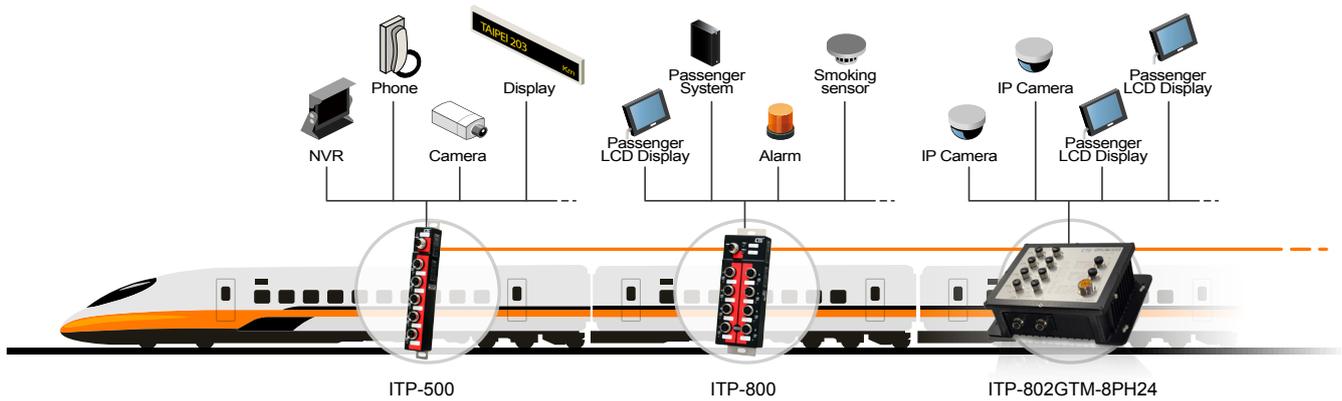


Figure 2 : IP67 Protection

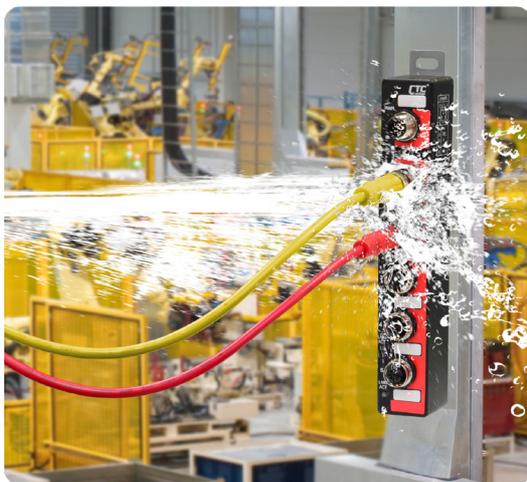


Figure 3 : Wide Range Temperature



Figure 4 : ITP Series for Industrial Automation

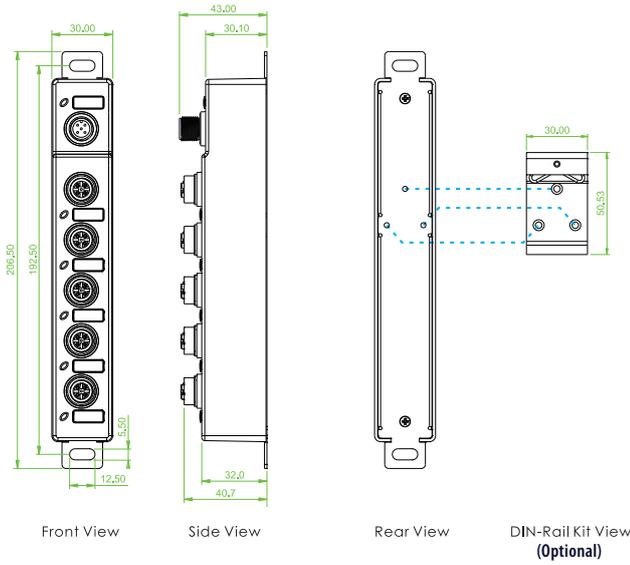


Figure 5 : Slim and Compact Size

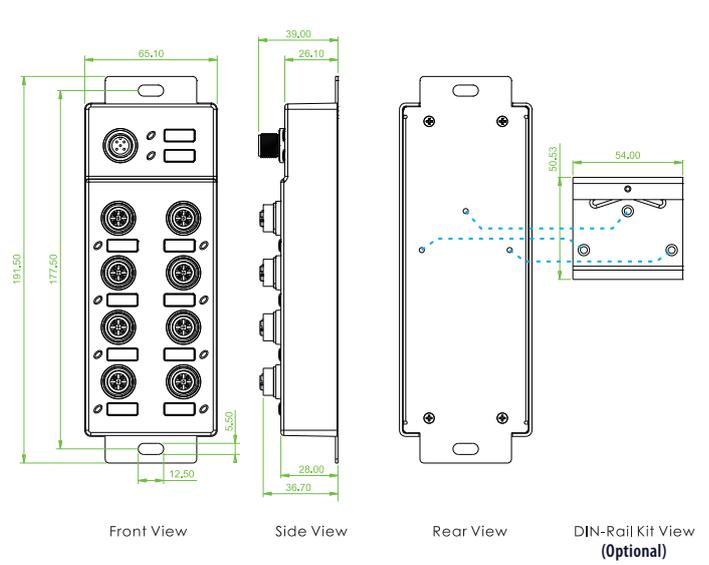


Dimensions

▶ ITP-500



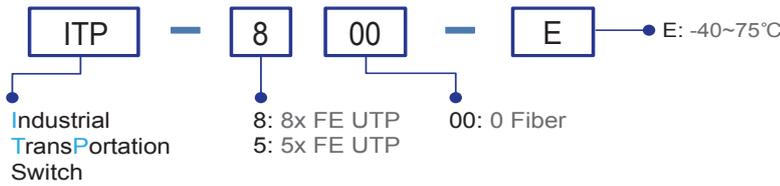
▶ ITP-800



Ordering Information

Model Name	IP67	Total Port	UTP Port M12	Power Supply	Certification				Shock Vibration	Operating Temperature
			10/100 Base-TX	12/24/48VDC (8.4~60VDC)	EN50155	EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC	IEC61373	
ITP-500-E	V	5	5	1	V	V	V	V	V	-40~75°C
ITP-800-E	V	8	8	2	V	V	V	V	V	-40~75°C

Model Naming Rule



Package List

- ITP-500-E or ITP-800-E device
- Protective caps for UTP port and power
- Wall mount (bound with switch device)
- Quickly installation guide

Optional Accessories

Optional Cable/Connector

P/N: CAB-M12DM4-RJ45

M12 D-code Male (4-Pin) to RJ-45, AWG 24, IP67, 1 meter



For FE UTP

P/N: CAB-M12AF5-OPEN

M12 A-code Female (5-Pin) to open wire, AWG 22, IP67, 1 meter



For Power

P/N: M12D-M4

M12 D-code Male (4-Pin) connector, IP67



For FE UTP

P/N: M12A-F5

M12 A-code Female (5-Pin) connector, IP67



For Power