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INS-802E

Premium Unmanaged 8 x 10/100 RJ45 & 2 x FX/GbE SFP Industrial Switch

Description

The INS-802E is an unmanaged industrial switch equipped with 8-port 10/100Base-TX, and 2-port FX/GbE SFP, dual fiber uplinks and redundant DC power inputs, an ideal solution for deployment in multiple high-speed automation systems. With its dry-contact smart alarm, the INS-802E initiates an alarm function that can be seen and heard on the factory floor in the event of any malfunction. The INS-802E operates in wide temperatures ranging from -40°C to 75°C and absorbs higher than normal degrees of vibration and shock, making it perfectly suitable and safe choice for harsh industrial environments.

The INS-802E is designed to deliver high performance in industrial environments where vibration, shock, heat, and RF interference is commonplace. Small and compact design of the switch makes DIN-rail mounting and installation very easy, especially in places where space is limited. The switch can be expanded by cascading two or more switches together in a 'daisy-chain' fashion. The switch combines dynamic memory allocation with store-and-forward switching to ensure that the buffer is effectively allocated for each port, while controlling the data flow between the transmit and receive nodes to guarantee against all possible packet loss.

RoHS CE FC c UL us LISTED

Features Highlight

Ruggedized Components Designed for Harsh Industrial Environments

Built with industrial-grade components, good thermal conductivity, and enclosed in an IP40 metal case, this Ethernet switch is resistant to extreme environments, vibration, EMI (electromagnetic interference), ESD (electrostatic discharge), power surge, over-voltage, over-current, and reverse polarity. It withstands operation at extreme temperatures between -40°C~75°C (-40°F~167°F). It follows international safety standards like CE, FCC, and ROHS for safe operation.

Quick and Convenient Installation with Auto-negotiation

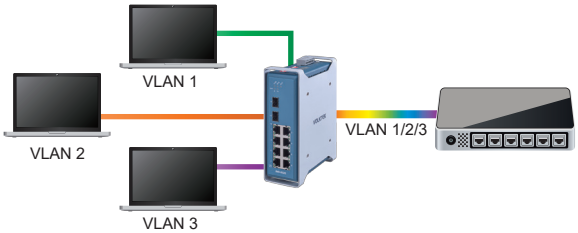
INS-802E works as soon as it is connected and makes installation convenient. One 12~48VDC power supply connects to the 3-pin terminal block for power. The 10/100 Mbps ports use auto MDI/MDI-X connection for auto-negotiation to work as soon as connected to other network devices at the required speed without extra software installation needed. The LED light displays when the device is in operation. The slim and small design allows it to fit at different locations for many devices to operate in the same network and can be mounted to a standard TH35 DIN rail.

Traffic Control Mechanisms to Optimize Bandwidth Usage

Traffic control mechanisms regulate excessive traffic to avoid delay, data loss and connection issues between devices. This unmanaged switch offers mechanisms such as Flow and Storm Control that prevent devices from overwhelming each other during the exchange of data and to keep the flux at a tolerable rate, hence keeping devices working within their capacity and avoiding the network from collapsing.

Intelligent VLAN Data Forwarding

INS-802E is aware enough to read the source and destination of VLAN tagged data packets. This unmanaged switch delivers VLAN packets without changing or dropping them assuring operational data in industrial fields is delivered safely across devices.



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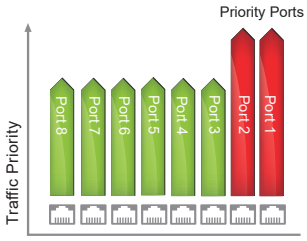
Features Highlight

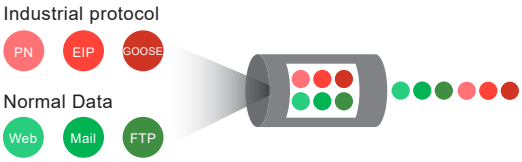
Critical Data Transmission Priority

INS-802E streamlines the execution of time-sensitive applications with the 802.1p Tag QoS by classifying data into high and low priority. Additionally mission-critical applications in industrial automation like manufacturing and monitoring can be done without delay through port priority on port #1 even during high traffic.



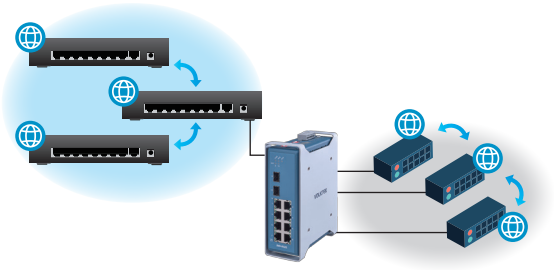
Prioritizes Industrial Standard Protocols

Industrial automation applications employ packet protocols that focus on delivering data under tight time constrains. This unmanaged switch is configured with iQoS to prioritize industrial application protocols and deliver time-sensitive data used in industrial applications first, including Ethernet/IP, PROFINET, and GOOSE (Generic Object Oriented Substation Events).



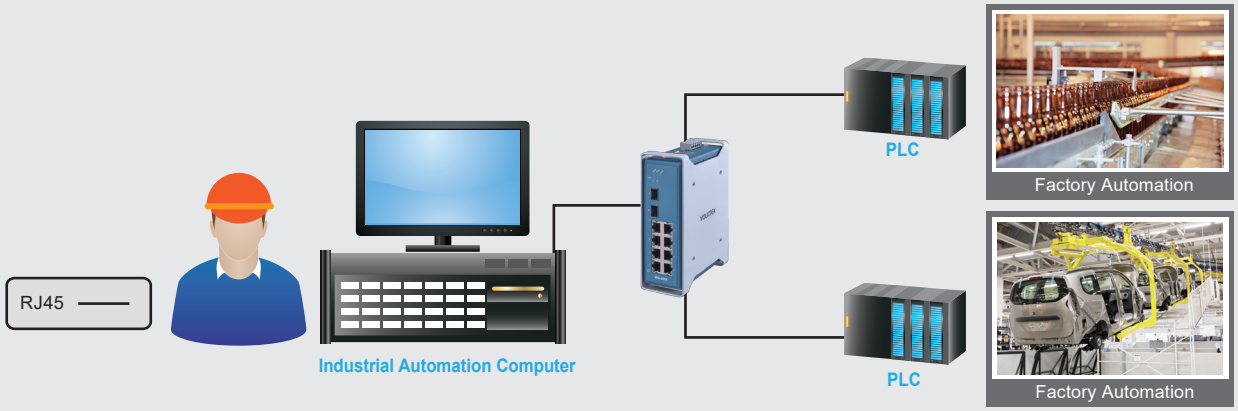
Connects Large Network Groups and Facilitates Data for Monitoring Systems

During the network discovery process device flapping issue can be occurred when the peripheral devices are connected to an unmanaged switch in the network. The Link Layer Discovery Protocol (LLDP) Filter blocks the LLDP packets exchange at unmanaged devices only without disturbing managed groups to avoid the device flapping issue. However, the LLDP works well It provides precise device information and avoids false alarms in your network.



Applications

The INS-802E is compatible with 10/100Mbps through RJ45 transceivers to guarantee a strong, stable connection of Ethernet, Fast Ethernet, as an ideal solution for deployment in multiple high-speed automation systems.



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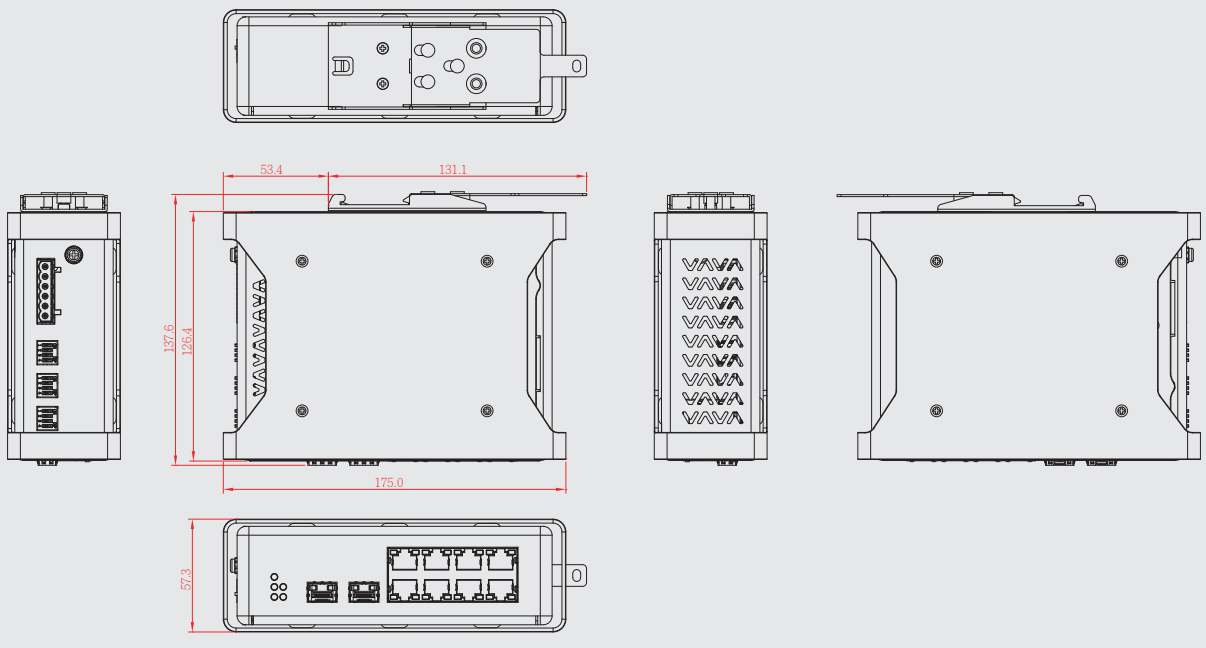
Specifications

Standards	
IEEE 802.3	10Base-T
IEEE 802.3u	100Base-TX/FX
IEEE 802.3z	1000Base-SX/LX
IEEE 802.3	Nway Auto-negotiation
IEEE 802.3x	Flow Control
IEEE802.1p	Class of Service
Interface	
Ports	8 x 10/100Base-TX (RJ45)
	2 x FX/GbE (SFP)
Features	
Performance	Jumbo Frame Size: 9216 Bytes
	MAC Table size: 8K
	Throughput: 14,880 pps to 10 Mbps ports
	148,800 pps to 100 Mbps ports
	148,8000 pps to 1000 Mbps ports
	Switch Fabric: 5.6Gbps
Functions	LLDP Filter, Flow Control, VLAN Passthru, Port Priority (Port 1, Port 2), 802.1p CoS/QoS, Storm Control, iQoS (EIP/PROFINET/GOOSE QoS)
Power	
Input Voltage	Primary inputs: 12~48VDC Redundant inputs: 12~48VDC
Connection	Terminal block
Power Input Polarity Protection	Present
Power Voltage Drop Alarm	Present
Power Consumption	12W (Max)
Alarm Relay	One relay output, 1A @ 24V DC
ESD Protection	Present
Mechanical and Environment	
Housing	Aluminum (IP40 protection)
Mounting	DIN-Rail
Operating Temperature	-40°C to 75°C
Storage Temperature	-40°C to 85°C
Operating Humidity	5 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	791 g (1.74 lb)
Dimension (WxHxD)	57.3 x 175 x 126.4 mm (2.26 x 6.89 x 4.98 in)

Standards and Certifications		
CE	EMI	FCC Part 15 Subpart B Class A CISPR 32 Class A EN 55032 / BS EN 55032 Class A EN 55011 / BS EN 55011 Class A EN IEC 61000-6-4 / BS EN IEC 61000-6-4
	EMS	EN 55035 / BS EN 55035 Class A EN IEC 61000-6-2 / BS EN IEC 61000-6-2 EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (Burst) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) IEC 61000-4-8 (PFMF)
Safety		UL 61010-1 / UL 61010-2-210
Shock		IEC 60068-2-27
Freefall		IEC 60068-2-31
Vibration		IEC 60068-2-6

Ordering Information	
INS-802E	Premium Unmanaged 8 x 10/100 RJ45 & 2 x FX/GbE SFP Industrial Switch

Optional Accessories	
Power Supply	SDR-120-48: 120W DIN-Rail 48VDC Industrial Power Supply, -25°C~70°C
FPM-107	100Base-FX Multi-mode SFP, 2Km
FPM-107-30	100Base-FX Single mode SFP, 30Km
GBM-132TS	100Base-FX, Bi-Di SFP TX:1310/RX:1550, Single mode, 20KM
GBM-132RS	100Base-FX, Bi-Di SFP TX:1550/RX:1310, Single mode, 20KM
GBM-104	1000BASE-SX 1.25G, Multi-mode SFP, 500m
GBM-123TS	1000BASE-LX, Bi-Di SFP TX:1310/RX:1550 Single Mode, 10Km, 0°C~70°C (32°F~158°F)
GBM-123RS	1000BASE-LX, Bi-Di SFP TX:1550/RX:1310 Single Mode, 10Km, 0°C~70°C (32°F~158°F)

Note:
** The highest degree of temperature operation certified by UL is -40˚C~75˚C (-40°F~167°F).*
** Specifications subject to change without notice.*

Dimension