

VOLKTEK

INS-8008E

Premium Unmanaged 8 x 10/100 RJ45 Industrial Switch

Description

INS-8008E is an unmanaged industrial Fast Ethernet switch with 8 auto-negotiation 10/100 Mbps downlink ports to expand Ethernet networks in factory floors and for high demanding environments with simple requirements and limited space.

The switch offers various in-built traffic optimization and network performance features to prioritize important industrial data packets, prevent the loss of data during communication, and stable transmission; like Flow, Storm control and VLAN Passthru. It prioritizes industrial protocols for industrial applications, like Ethernet/IP, PROFINET, and GOOSE packets. Additionally, it offers per-port and 802.1p Tag Quality of Service to ensure the delivery of high priority data.

This networking device is built with industrial grade components to protect it from hazards like vibration, shock, free fall, interference, and extreme temperatures that make it resistant to harsh industrial environments. The device also uses a Redundant Power Supply and Alarm System to ensure it works uninterruptedly, even during power outages and alert technicians if one power source fails.



RoHS **CE** **FCC** **cUL** **US LISTED**



Features Highlight

Ruggedized Components Designed for Harsh Industrial Environments

Built with industrial-grade components, good thermal conductivity, and enclosed in an IP30 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

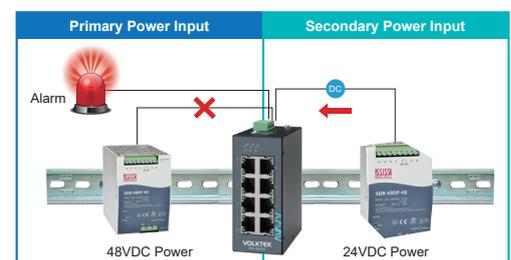
INS-8008E works as soon as it is connected and makes installation convenient. Two 12~48VDC power supplies and one alarm connect to the 6-pin terminal block for power and notifications. The 10/100 Mbps ports use MDI/MDI-X connection for auto-negotiation to work as soon as connected to other network devices at the required speed without extra software installation needed. The LED light displays when the device is in operation. The compact design and short height 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. INS-8008E 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.

Redundant Power Supply and Alarm System

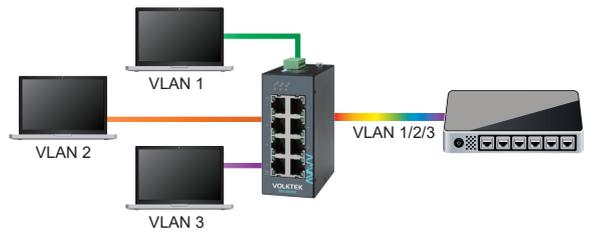
Two power supplies and one alarm connect to the 6-pin terminal block of this device to ensure it is powered all the time. When one of the connected power supplies stops working or in case of power outage, the device feeds power from the alternative power source and switches the alarm on. The alarm also notifies about link down status. The Alarm signal on the LED panel lights up. The alarm notifications can be activated through the DIP switch on its physical interface.



Features Highlight

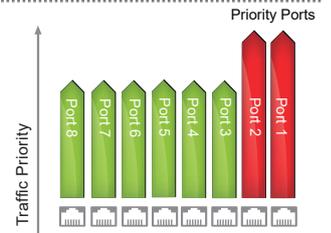
Intelligent VLAN Data Forwarding

INS-8008E 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.



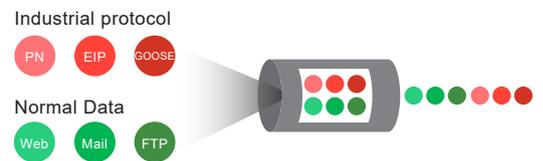
Critical Data Transmission Priority

INS-8008E 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 ports #1 and #2 even during high traffic.



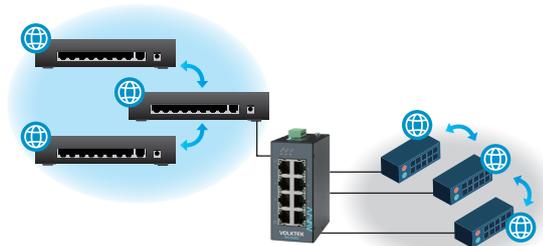
Prioritizes Industrial Standard Protocols

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



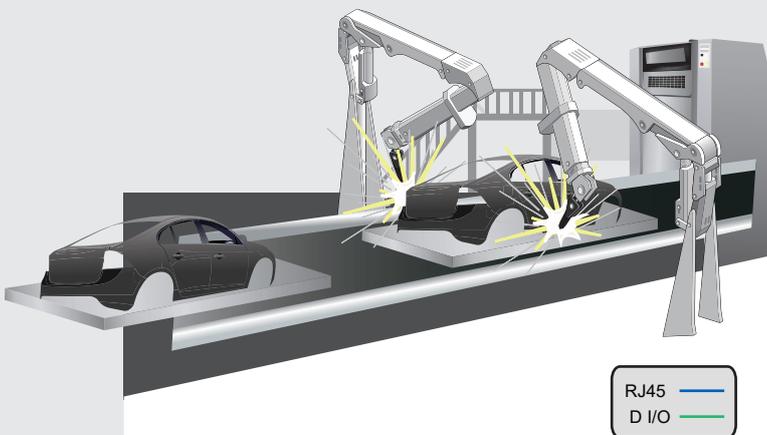
Connects Large Network Groups and Facilitates Data for Monitoring Systems

During network discovery unmanaged switches can cause device flapping and make it difficult for monitoring systems to access device data. INS-8008E avoids device flapping when connected to a managed switch. Using the LLDP Filter feature the device can be used in large networks. It allows other devices in the network to exchange identifiable data for accurate monitoring without concerns from detecting erroneous messages and false alerts in the presence of an unmanaged switch.



Applications

Factory Automation

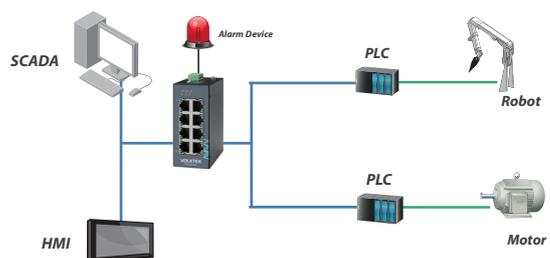


▶ Redundant Power input

The INS-8008E has dual power inputs to provide a redundant system against power supply disruptions. In case of one power source failure, the other acts as a backup to remain continuous network power for critical industrial applications.

▶ Relay Output Alarm for Power Failure

The INS-8008E is built with relay contact outputs that trigger alarms to notify network engineers in the event of power failure, and enables them to quickly respond and resolve high priority issues.



Specifications

Standards	
IEEE 802.3	10BASE-T
IEEE 802.3u	100BASE-TX
IEEE 802.3	Nway Auto-negotiation
IEEE 802.3x	Flow Control
IEEE802.1p	Class of Service
Interface	
Ports	8 x 10/100BASE-TX (RJ45)
DIP Switch	PWR, RPS, P1 ~ P8
LED Indicator	PWR, RPS, ALM, 100, LNK/ACT
Features	
Performance	Jumbo Frame Size: 9216 Bytes
	MAC Table size: 4K
	Throughput: 14,880 pps to 10 Mbps ports 148,800 pps to 100 Mbps ports
Switch Fabric	1.6Gbps
Forwarding Rate	1.2Mpps
Function	LLDP Filter, Flow Control, Storm Control, Port Priority (Port 1, Port 2), 802.1p CoS/QoS, VLAN Passthru, iQoS (EIP/PROFINET/GOOSE QoS)
Power	
Input Voltage	Primary input 12~48VDC Redundant input 12~48VDC
Connector	Terminal Block
Max Power Consumption	5W
Alarm Relay	One relay output, 1A @ 24V DC
Reverse Polarity Protection	Present
Over Load Protection	Present

Mechanical and Environment		
Housing	Metal (IP30 protection)	
Mounting	DIN-Rail	
Operating Temperature	-40°C~75°C (-40°F~167°F)	
Storage Temperature	-40°C~85°C (-40°F~185°F)	
Operating Humidity	5 to 95% RH (non-condensing)	
Storage Humidity	5 to 95% RH (non-condensing)	
Weight	480g	
Dimension (WxHxD)	50 x 115.8 x 99.6mm (1.97 x 4.56 x 3.92in)	
Standards and Certifications		
CE	EMI	FCC Part 15 Subpart B Class A EN 55011 / BS EN 55011 Class A EN 55032 / BS EN 55032 Class A EN 61000-6-4 / BS EN 61000-6-4
	EMS	EN 55035 / BS EN 55035 EN 61000-6-2 / BS EN 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) EN 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-8008E	Premium Unmanaged 8 x 10/100 RJ45 Industrial Switch	
Optional Accessories		
Power Supply	SDR-120-48: 120W DIN-Rail 48VDC Industrial Power Supply, -25°C~70°C (-13°F~158°F)	

*Specifications subject to change without notice.

Dimension

