

## INS-806E

### Premium Unmanaged 8 x 10/100 RJ45 Industrial Switch

#### Description

The INS-806E is an 8-port Unmanaged Industrial Ethernet switch specifically designed for high-speed industrial Ethernet networks that demand both, high bandwidths and rugged connectivity. Well protected in a rugged IP30 grade housing, the switch ensures dependable and uninterrupted operations even in harsh environments, making it an ideal networking solution for Industrial applications.

Equipped with 8-port 10/100BASE-TX ports, the INS-806E supports Fast Ethernet options with Auto MDI/MDIX and Auto-negotiation to offer greater flexibility in choosing the type of connectivity you need. In addition to high-speed data transmissions, the switch supports 9K jumbo frame to increase throughput and QoS on ports-1&2 to ensure delivery of critical data. Redundant power supply with wide-range input power, built-in relay alarm for instant notification of power and port failure, DIN-Rail mounting and many more features of the INS-806E fulfill the special needs of Industrial Ethernet networks.



**RoHS** **CE** **FC** **cUL** **us**  
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#### Features Highlight

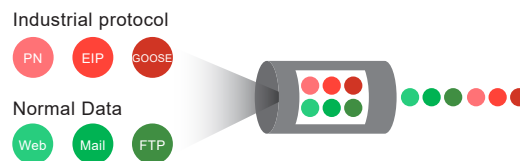
##### Robust Performance and Protection

Built with field-hardened components and enclosed in rugged IP30 grade casing, the INS-806E can withstand harsh industrial environments such as constant vibration, heavy shocks, humidity and extreme temperatures ranging from -40°C to 75°C. The switch supports Surge protection and ESD protection to deliver increased level of immunity against industrial voltage transients. Along with wide-range redundant power inputs extending from 12~48VDC, the INS-806E integrates robust design and solid performance to ensure continuous operation of mission-critical applications even in tough and unstable industrial environments.



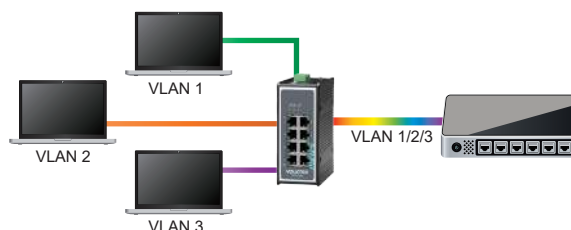
##### Prioritize your manufacturing data using iQoS

In modern factory automation, heavy data traffic can be realized and need to prioritize based on the industrial communication protocols. Volktek introduced iQoS (industrial QoS) to prioritize your industrial type data packets including EIP (EtherNet/IP), PROFINET, and GOOSE (Generic Object Oriented Substation Events). It allows real-time data transmission irrespective of the vendor and device type under time-constrained applications.



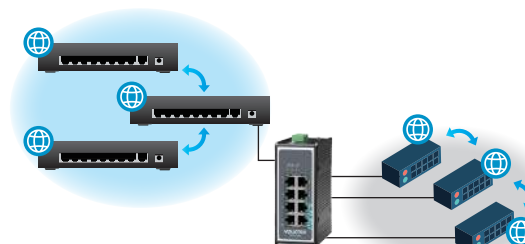
##### VLAN Passthru

Usually, the VLAN packets cannot identify or transmit over unmanaged devices in the network as missing the VLAN tagging information. By using VLAN Passthru, VLAN packets can easily be forwarded through the unmanaged devices in the network without dropping or blocking which allows users to access the device seamlessly.



##### LLDP Filter

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.

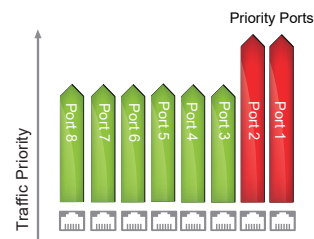




## Features Highlight

### Optimal Bandwidth Utilization

Understanding the need of smoother data transmissions for specific industrial applications, the INS-806E has two built-in VIP ports (ports 1, 2) that support Quality of Service (QoS). These two ports classifies and sends traffic only from highest priority queues as it arrives to ensure that high priority traffic is forwarded with least delay possible. Thereby, the INS-806E enhances bandwidth utilization to ensure time sensitive data gets delivered efficiently to mission-critical applications connected to its two VIP ports, even during burst of high traffic.

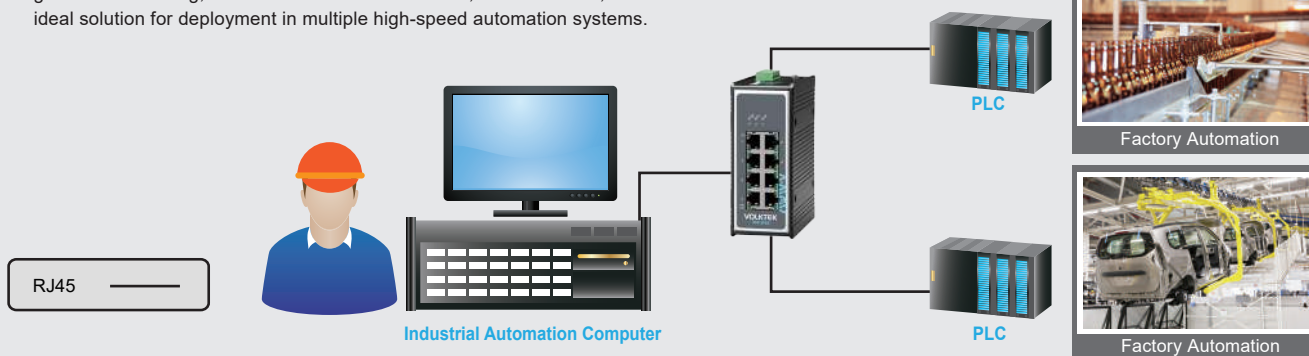


### Redundant Power by industrial Terminal Block

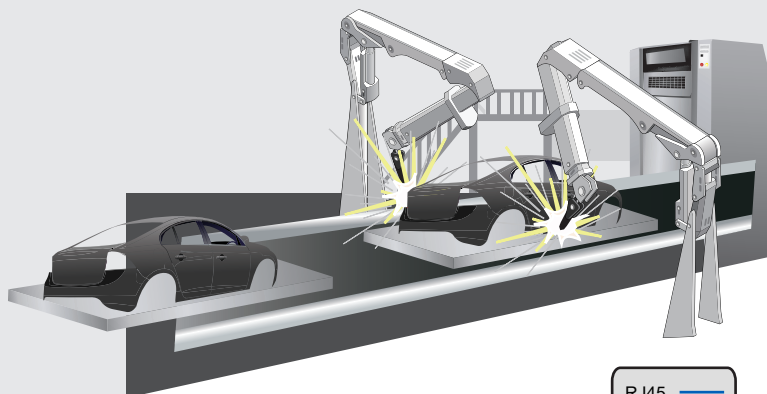
The INS-806E is designed with an impressive, much more compact and safer industrial terminal block for redundant power, offering a low-cost, simple solution to the problem of unexpected power failures. In case the primary power supply fails, the INS-806E's terminal block immediately powers switch with redundant power supply, and enables to provide continuous network services to mission-critical applications in industrial environments. Thus protecting the network from a single failure of a network device power supply and resulting in more reliable network.

## Applications

The INS-806E 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.



### Factory Automation

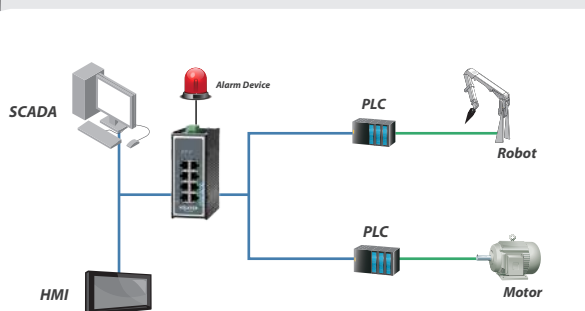


#### ▶ Redundant Power input

The INS-806E 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-806E 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                 | MAC Table size: 4K<br>Throughput: 14,880 pps to 10 Mbps ports<br>148,800 pps to 100 Mbps ports   |
| Switch Fabric               | 1.6Gbps  |
| Forwarding Rate             | 1.2Mpps  |
| Function                    | LLDP Filter, Flow Control, Storm Control,<br>Port Priority (Port 1, Port 2), 802.1p CoS/QoS,<br>VLAN Passthru, iQoS (EIP/PROFINET/GOOSE QoS) |
| Power                       |  |
| Input Voltage               | Primary input 12~48VDC<br>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                     | Aluminum (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 (1.0 lb)  |
| 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<br>CISPR 32 Class A<br>EN 55032 / BS EN 55032 Class A<br>EN 55011 / BS EN 55011 Class A<br>EN IEC 61000-6-4 / BS EN IEC 61000-6-4  |
|----------------------|---|--|
|                      | EMS   | EN 55035 / BS EN 55035 Class A<br>EN IEC 61000-6-2 / BS EN IEC 61000-6-2<br>EN 61000-4-2 ( ESD )<br>EN 61000-4-3 ( RS )<br>EN 61000-4-4 ( Burst )<br>EN 61000-4-5 ( Surge )<br>EN 61000-4-6 ( CS )<br>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-806E             | 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

