

# INS-840G

## Unmanaged Industrial Gigabit Ethernet Switch

16-port 10/100/1000BASE-T



### Description

INS-840G, 16-port 10/100/1000Base-T is a current development of Volktek's Unmanaged Industrial Gigabit Ethernet Switch, specifically engineered with an excellent tolerance capability to withstand the harsh industrial environments like vibration, shock and extreme temperature range between -40°C~75°C. The switch is designed with a rugged IP30 aluminum housing featuring various EMC protections such as Surge and ESD. This for delivering a secure and uninterrupted operation in mission-critical applications like factory automation. INS-840G comes up with additional enhanced features such as redundant power supply, advanced QoS support, efficient link speed control, IEEE 802.3az Energy Efficient Ethernet, stable DIN-Rail and wall-mount installation. The switch proves to be cost effective, high performable and serve as a reliable solution for harsh environments of industrial applications.



### Features Highlight

#### Robust Performance

INS-840G is equipped with industrial grade components, enclosed with a rugged IP30 hardened aluminum housing to sustain in harsh industrial temperatures ranging between -40°C ~ 75°C, providing solid performance in mission-critical applications.

#### Industrial Grade EMC Protection Design

INS-840G is designed with efficient EMC protection to secure the device against electromagnetic failures occurred from various sources such as external lighting or transmission of static electricity between devices with different electrical potentials.

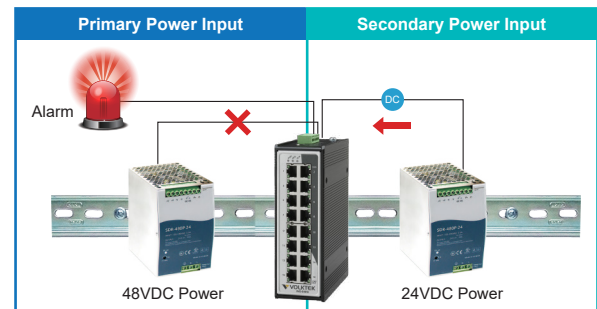
#### Strong Protection Against Electrical Threats

INS-840G is incorporated with enhanced Reverse Polarity Protection function to provide safety against wrong combinations of positive and negative poles, which prevents huge internal circuitry damage. The Over Current Protection is designed with a secured fuse component to safeguard the device during sudden increase of current flow. In addition, a Power Isolation concept is used to separate the transmitted data from grounded noise enabling steady and noise free transmission.



#### Redundant Power Supply

When taking the failure impact of mission-critical applications into consideration, the INS-840G development uses a standard of industrial terminal block along with wide-range redundant power inputs extending from 12 up to 60VDC. The redundant power provides continuous service even if the primary power fails, which results in a reliable and consistent network. In addition to this, the switch is also equipped with an alarm feature to notify the occurrence of power failure. This solution provides you with a quicker respond time and faster troubleshooting.



**Features Highlight**

**Auto Negotiable Link Speed Control**

To establish a fair and efficient communication among the devices which is having different link speeds, INS-840G provides an auto negotiation feature which balances the data transmission speed between the switch and the connected PLCs.

**Advanced QoS Support**

INS-840G is developed with comprehensive IEEE 802.1p QoS mechanism which supports tag based priority queuing mechanism. This prioritization ensures efficient transmission of time sensitive data and applications despite of heavy traffic loads.

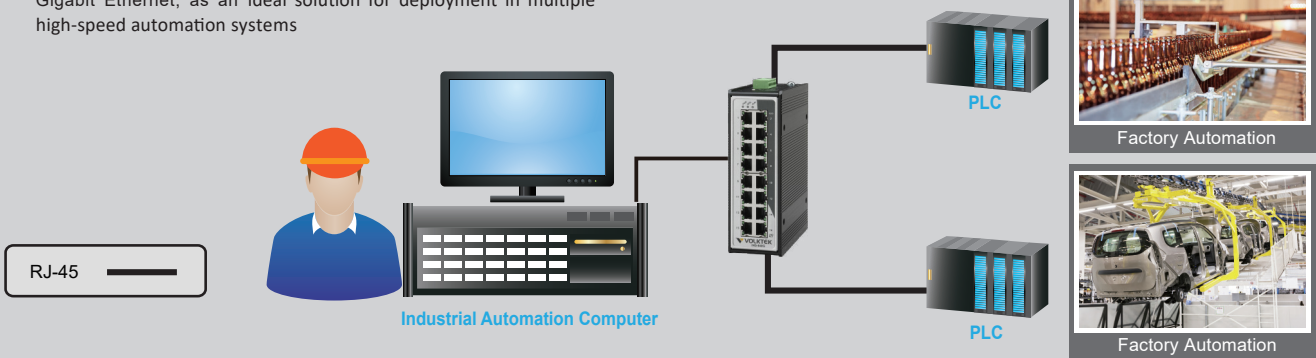
**Eco-friendly Green Ethernet Design**

To address the concerns of increasing power consumption, INS-840G implements IEEE 802.3az Energy Efficient Ethernet (EEE) compliant Green Ethernet technology. This eco-friendly design allows the switch to automatically adjust power consumption and conserve energy during the periods of low data activity. This helps you to lower the energy usage significantly and help you save operational costs.

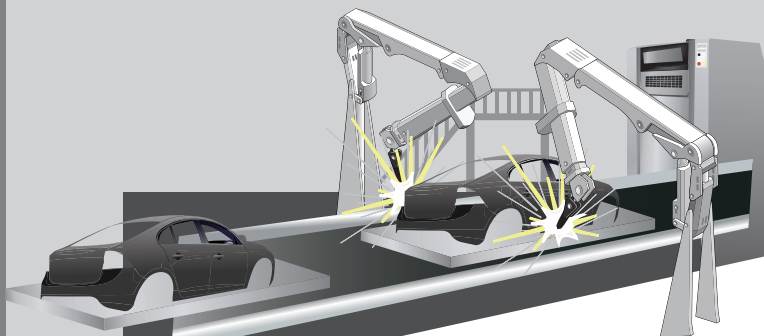


**Applications**

The INS-840G is compatible with 10/100/1000Mbps through RJ45 to guarantee a strong, stable connection of Ethernet, Fast Ethernet or Gigabit Ethernet, as an ideal solution for deployment in multiple high-speed automation systems



**Factory Automation**

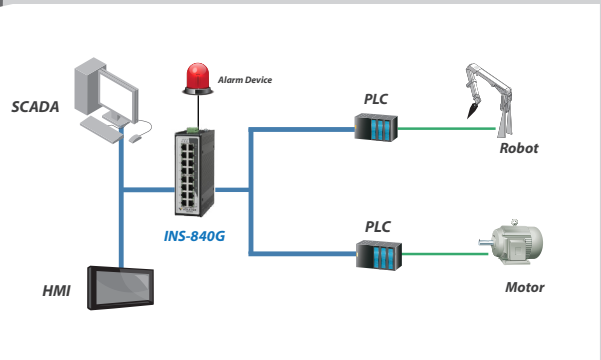


**Relay Output Alarm for Power Failure**

The INS-840G 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.

**Redundant Power input**

The INS-840G 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.



**Specifications**

Standards	
IEEE 802.3	10Base-T
IEEE 802.3u	100Base-TX
IEEE 802.3ab	1000Base-T
IEEE 802.3	Nway Auto-negotiation
IEEE 802.3x	Flow Control
IEEE 802.3az	Energy Efficient Ethernet (EEE)
IEEE 802.1p	Quality of Service(QoS)
Performance	
Throughput	14,880 pps to 10 Mbps ports 148,800 pps to 100 Mbps ports 1,488,000 pps to 1000 Mbps ports
Switch Fabric	32Gbps
Power	
Primary/Redundant inputs	12 to 60 VDC
Power Consumption	12W (12V/1A)
Protection	
Reverse Polarity	Present
Overload current	Present
Interface	
Ports	16 x 10/100/1000Base-T (RJ-45)
Connectors	One removable 6-pin terminal block
Mechanical and Environment	
Housing	Aluminum Case (IP30 protection)
Mounting	DIN-Rail, Wall Mount (Optional)
Operating Temperature	-40°C to 75°C
Storage Temperature	-40°C to 85°C
Operating Humidity	10 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	840g
Dimension (WxHxD)	50x161.5x119.9mm (1.97x6.36x4.72inch)

Standards and Certifications		
CE	EMI	FCC Part 15 Subpart B class A EN55022 : class A EN 55011 : 2009 class A EN 61000-6-4
	EMS	EN 55024 EN 61000-6-2 : IEC/EN 61000-4-2 ( ESD ) IEC/EN 61000-4-3 ( RS ) IEC/EN 61000-4-4 ( Burst ) IEC/EN 61000-4-5 ( Surge ) IEC/EN 61000-4-6 ( CS ) IEC/EN 61000-4-8 (PFMF) IEC/EN 61000-4-11
Approval & Test		
Shock	IEC 60068-2-27	
Freefall	IEC 60068-2-32	
Vibration	IEC 60068-2-6	
Ordering Information		
INS-840G	16-Port 10/100/1000Base-T Unmanaged Industrial Switch	
Optional Accessories		
Power Supply	SDR-480P-48: 480W DIN-Rail 48V DC Industrial Power Supply, -25°C~70°C	

\*Specifications subject to change without notice.

**Dimension**

