

# VOLKTEK

## INS-840GM

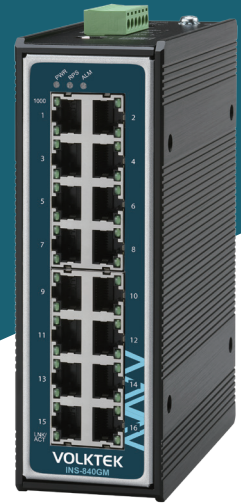
Unmanaged 16 x 10/100/1000 RJ45 Industrial Switch,  
DNV Marine Approval

### Description

INS-840GM, 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.

DNV (Det Norske Veritas) and Lloyd's Register Group certified for Industrial switch, the INS-840GM suits your anti-corrosion harsh environments in marine and offshore applications and contains all the standard features of a industrial switch. The switch is designed with a rugged IP30 aluminum housing featuring various EMC protections such as Surge and ESD.

INS-840GM offers additional enhanced features to an improved and efficient transmission of data and its protection, including advanced QoS support (IEEE 802.1p), efficient link speed control, Energy Efficient Ethernet (IEEE 802.3az), and Redundant Power inputs for continuous transmission. The switch proves to be cost-effective, high performable and serves as a reliable solution for harsh environments of industrial applications.



**RoHS CE FC**



### Features Highlight

#### Robust Performance and Protection

INS-840GM 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.

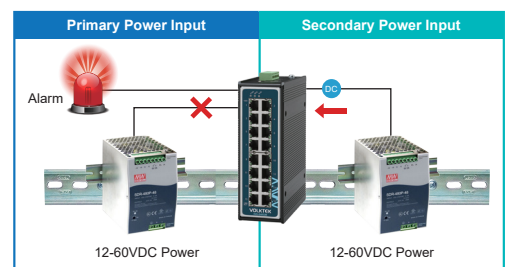


#### Industrial Grade EMC Protection Design

INS-840GM 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.

#### Redundant Power Input System

When taking the failure impact of mission-critical applications into consideration, the INS-840GM development uses a standard of industrial terminal block along with wide-range redundant power inputs. 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.



#### Eco-friendly Green Ethernet Design

To address the concerns of increasing power consumption, INS-840GM 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.



#### Auto Negotiable Link Speed Control

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

## Certificates & Approvals

# Marine

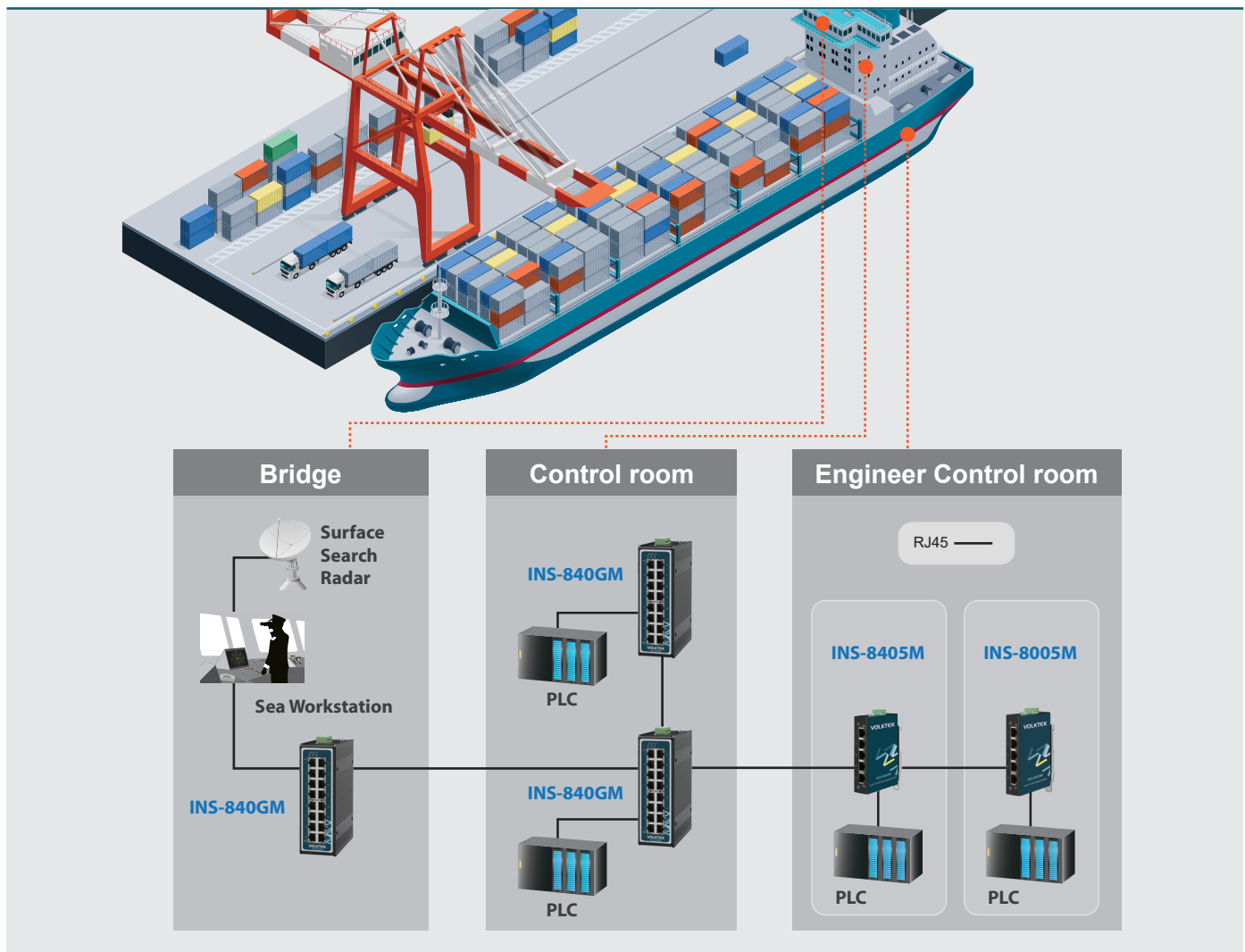
## Type Approval



### EN 60945

Marine Certifications Ensure Secure Communication Networks for Offshore Environments

## 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
Interface	
Ports	16 x 10/100/1000BASE-T (RJ45)
Connectors	Terminal Block
DIP Switch	PWR, RPS, ALM, 1000, LNK/ACT
Features	
Performance	Jumbo frame Size: 10KBytes
	MAC Table Entries: 8K
	L2 Forwarding Rate: 23.8Mpps
QoS	Switch Fabric: 32Gbps
	8 Hardware Queues
Support priority tagged frame (VID=0)	
Power	
Primary/Redundant inputs	12~60VDC
Connection	Terminal Block
Power Consumption	18W (12V/1A)
Reverse Polarity	Present
Overload current	Present
Mechanical and Environment	
Housing	Aluminum (IP30 protection)
Mounting	DIN-Rail
Operating Temperature	-40°C~75°C (-40°F~167°F)
Operating Humidity	5~95% RH (non-condensing)
Storage Humidity	5~95% RH (non-condensing)
Weight	840 g (1.8 lb)
Dimension (WxHxD)	50 x 165 x 120 mm (1.97 x 6.50 x 4.72 in)
Certifications	
EMI	FCC Part 15 Subpart B Class A
	EN 55011 class A
	EN 55032 class A
EMS	EN 61000-6-4
	EN 61000-6-2
	EN 55035
	EN 61000-4-2 (ESD)
	EN 61000-4-3 (RS)
	EN 61000-4-4 (Burst)
	EN 61000-4-5 (Surge)
Marine	EN 61000-4-6 (CS)
	EN 61000-4-8 (PFMF)
	DNV-CS-0339: 2016
	DNV-RU-SHIP-PI4Ch9:2018
	IEC-60945, IACS E10 (Rev.6 2014)
LR certify environmental category ENV1, ENV2, and ENV3	
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Ordering Information	
INS-840GM	Unmanaged 16 x 10/100/1000 RJ45 Industrial Switch, DNV Marine Approval
Optional Accessories	
Power Supply	SDR-480P-48: 480W DIN-Rail 48V DC Industrial Power Supply, -25°C~70°C (-13°F~158°F)

## Note :

- \* The SFP communication distance upon the request.
- \* Industrial SFP with wide operating temperature from -40°C~85°C (-40°F~185°F) is available upon request.
- \* The highest degree of temperature operation certified by DNV is (Class D) -25°C~70°C (-13°F~158°F), and the nominal voltage of 24VDC for DNV type approval is specified.
- \* Specifications subject to change without notice.

## Dimension

