

# VOLKTEK

## INS-8405M

### Unmanaged 5 x 10/100/1000 RJ45 Industrial Switch, DNV Marine Approval

#### Description

Volktek's INS-8405M unmanaged industrial gigabit ethernet switch is a 5-port 10/100/1000BASE-T switch delivered in a rugged, hardened case and components able to withstand a high degree of vibration and shock and an operating temperature from -40°C to 75°C. Not an ordinary industrial switch, the INS-8405M is engineered and designed especially for harsh and extreme industrial type applications. With its hardened case, DC power inputs and high performance components, the INS-8405M is perfectly suited for your extreme industrial automation environment.

The INS-8405M provides varied choice of deployment locations even in harsh environments with wall-mount and Din-Rail options in a quick and easy way with no configuration required. Every INS-8405M is equipped with auto MDI/MDI-X on all ports for simple connection to other switches and hubs. Each port of INS-8405M has 2 LEDs to show the link status transmission speed 10/100Mbps and 1000Mbps status. It also provides a relay output for an event alarm. In the event of a power failure, the built-in LED will activate the alarm to notify administrators which making troubleshooting the device a simple task.



#### Features Highlight

##### Robust Performance and Protection

With IP30 metal case, surge protection, power voltage drop alarm, and ESD protection, the INS-8405M provides a high level of immunity against electromagnetic interference and heavy electrical surges which are easy to deploy in industrial environments. Furthermore, the INS-8405M offers high performance switch architecture with 5 ports of 10/100/1000Based-T to meet the requirements of high-bandwidth access Ethernet, Fast Ethernet or Gigabit Ethernet in tough operating temperatures.



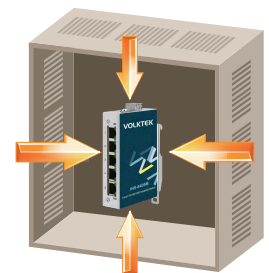
##### Industrial Grade EMC Protection Design

- Volktek industrial switches are built with robust protection features including surge and ESD protection to deliver increased level of immunity against industrial voltage transients.
- Volktek industrial switches comply with Industry tandards EN61000-6-2 and EN61000-6-4 to withstand up to 8KV high ESD protection level and dual power inputs to provide a very high reliable system.



##### Simplified Installation with Compact Size

The INS-8405M provides varied choice of deployment locations even in small places, harsh environments with its wall-mount, rack-mount and desktop options in a quick and easy way by its compact size and no configuration required. Every INS-8405M is equipped with auto MDI/MDI-X on all ports for simple connection to other switches and hubs. With diagnostic LEDs panel, the INS-8005M allows you to know switch status and simplify troubleshooting.



## Certificates & Approvals

# Marine

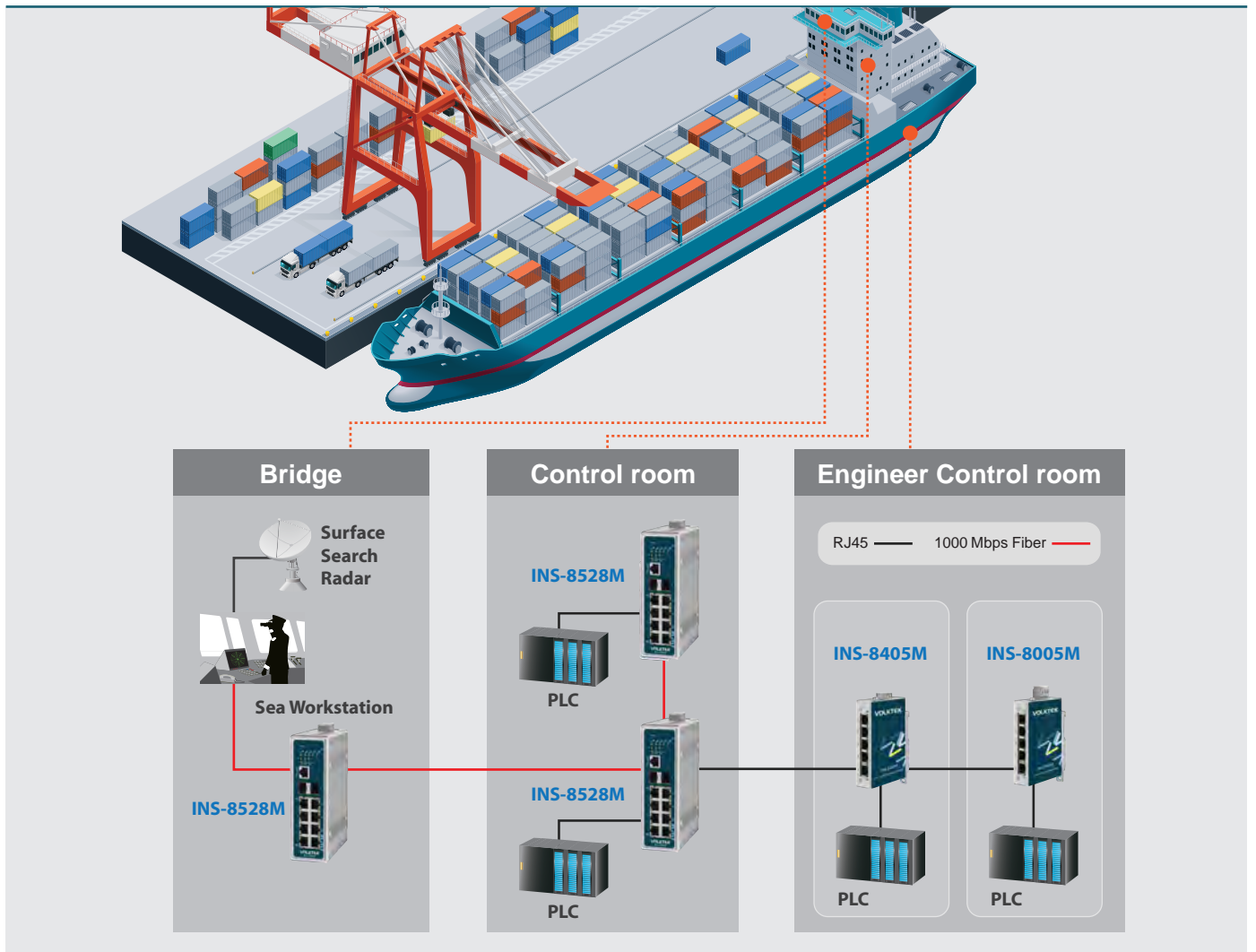
## Type Approval



### 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	5 x 10/100/1000BASE-T (RJ45)
LED Panel	PWR, 1000, 10/100
Features	
Performance	Jumbo Frame Size: 9K
	MAC Table size: 2K
	Throughput: 14,880 pps to 10 Mbps ports
	148,800 pps to 100 Mbps ports
Switch Fabric: 10Gbps	
Power	
Input Voltage	9~48VDC
Connection	Terminal block
Power Consumption	4W (Max)
Surge Protection	6KV
ESD Protection	8KV
Mechanical and Environment	
Housing	Aluminum (IP30 Protection)
Mounting	DIN-Rail, Wall Mount
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	160 g (0.35 lb)
Dimension (WxHxD)	23.6 x 111.5 x 73.8 mm (0.93 x 4.39 x 2.90 in)

Standards and Certifications	
EMI	FCC Part 15 Subpart B class A
	EN 55022
	EN 55011
EMS	EN 61000-6-4
	EN 55024
	EN 61000-6-2
	EN 61000-4-2 (ESD): Level 3
	EN 61000-4-3 (RS): Level 3
	EN 61000-4-4 (Burst): Level 3
	EN 61000-4-5 (Surge): Level 2
	EN 61000-4-6 (CS): Level 3
EN 61000-4-8 (PFMF)	
Marine	DNV-CS-0339:2016
	DNV-RU-SHIP-Pt4Ch9:2018
	IEC-60945, IACS E10 (Rev.6 2014)
Shock Test	IEC 60068-2-27
Freefall Test	IEC 60068-2-32
Vibration	IEC 60068-2-6
Ordering Information	
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## 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

