DIGITAL YACHT

SAIL BOAT   **SPORT FISHING**   **MOTOR BOAT**
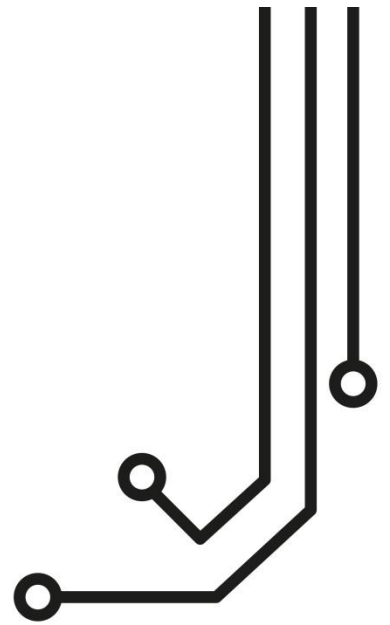
NS8 EIGHT PORT NETWORK SWITCH

Installation and instruction Manual

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1. Introduction

Congratulations on the purchase of your NS8 10/100/1000Mb Network Switch. It is recommended that this unit is installed by a professional installer.

ⓘ **This User Manual will provide basic information on the NS8 to allow you to install and get the NS8 working. We recommend reading and familiarising yourself with the manuals of the equipment you wish to connect to NS8.**

2. Before you start

You will need the following items and tools to complete the installation:
- NS8 Network Switch
- Network cable
- A spare wired LAN network connection on the vessel's Router
- Access to 12V or 24v DC power supply where the unit is to be installed
- Two or more M4 screws or other fixings appropriate to the mounting location

To test the unit you will need:
- A device that can be connected via a network cable to the NS8 to check it is working

3. Installation

Before starting installation select a suitable location for the NS8. The unit should be installed below deck in a dry location. When locating the unit, you should consider:

- Routing of power cables to the unit.
- Provision of sufficient space around the unit for cable connections.
- Maintaining the compass safe distance of 0.5m.
- Routing of network cable to the unit.

Installation Step 1 - Cabling

- NS8 is designed to be connected directly to the vessel's 12v or 24v DC system. You will need to route a suitable power cable to the location where the NS8 will be installed. The supply to the NS8 should be fused with a 1A fuse/circuit breaker in the positive supply lead.

- The NS8 features a dual redundancy power supply and can have two separate power connections. Should one connection fail, it will automatically take power from the second power connection. It is not mandatory to install two power supply feeds to the NS8 and it will happily work with a single power connection to either the P1 or P2 terminals.
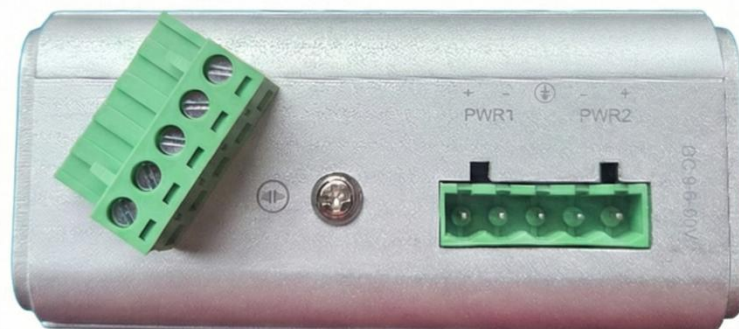
- The case of the NS8 can be grounded by connecting the ground screw connection shown in the previous image to a suitable point in the vessel's ground circuit.

- The NS8 is fitted with eight standard RJ45 network sockets. To connect the NS8 to the vessel's existing network, you should route a standard Cat5 (or better) network cable from the vessel's network router (LAN connection) through to the location where the NS8 is installed. This cable can be plugged in to any one of the NS8's eight network sockets.

- If you wish to install more than one NS8, you will need to "daisy chain" them together using a standard network patch cable. You can join any one of the eight sockets on one NS8 to any one of the eight sockets on the second NS8.

Installation Step 2 – Mechanical Fixings

Dimensioned Drawing
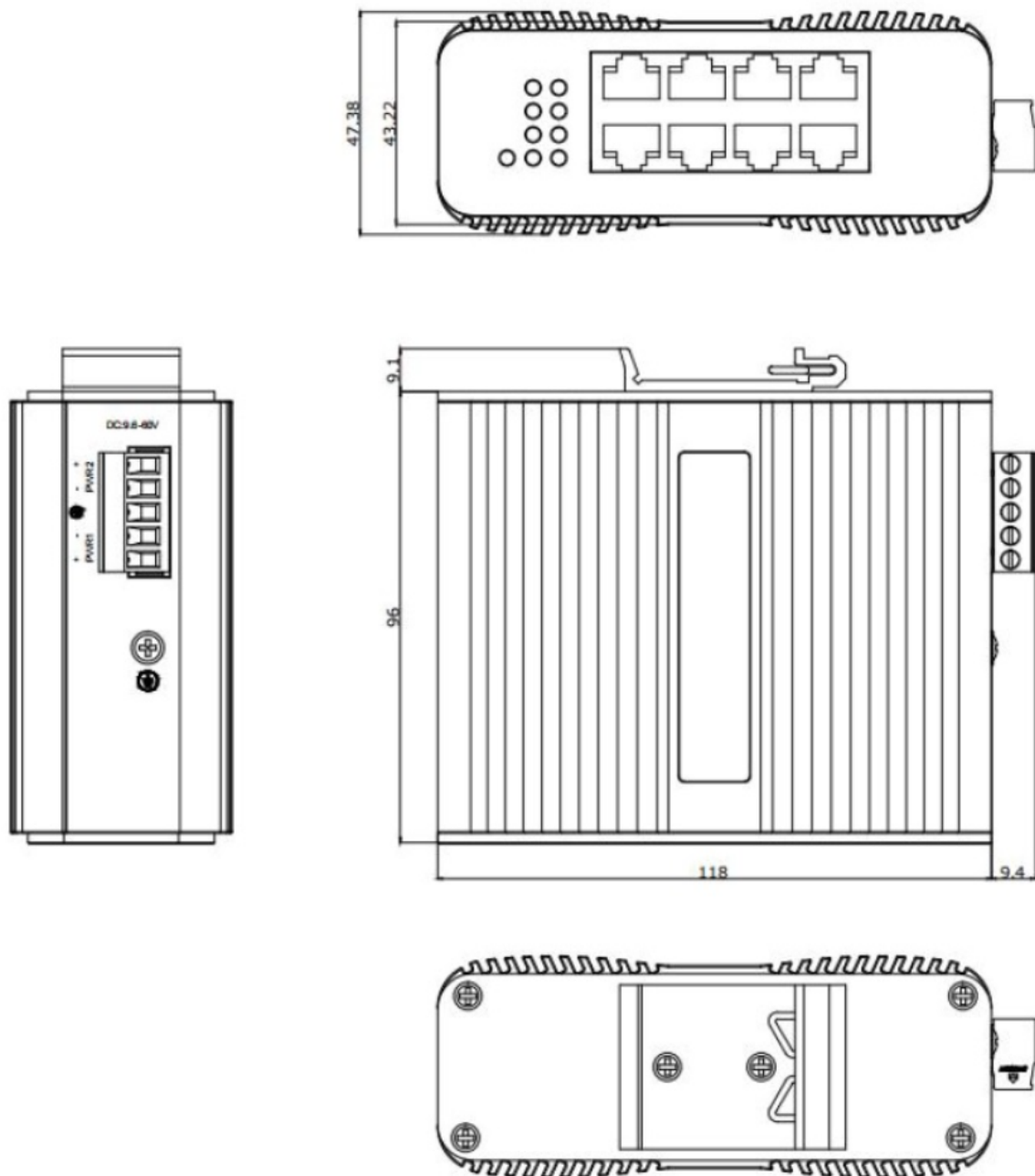
- The NS8 is designed to be mounted on a DIN rail system. If your vessel does not have a suitable DIN rail system, use the supplied 100mm length of DIN rail. Secure the DIN rail to a flat surface in the selected location. Use two M4 wood screws or other fixings suited to the material the unit is being fixed to. The unit may be installed in any orientation
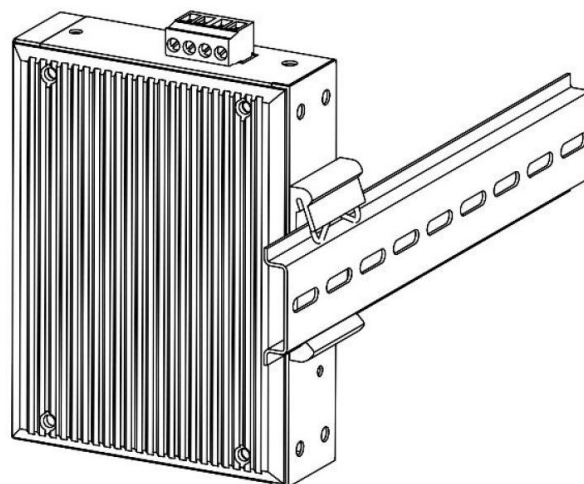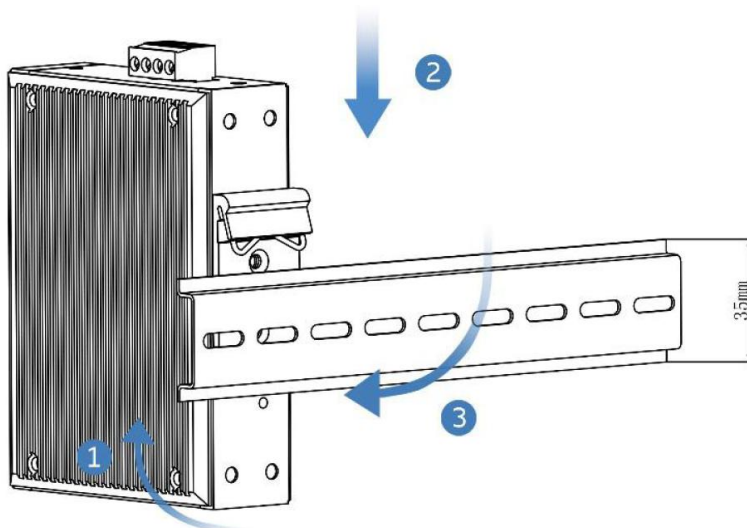
Installation Step 3 - Power

- The NS8 has a removable 5 way screw terminal, where the DC power connection should be made. The NS8 has a wide input voltage range from 9v to 60v, so can be used on 12v, 24v or 48v systems.

- NS8 takes a maximum current of 400mA (network activity dependent) of current at 12v ~ 5 Watts. We recommend using suitably rated power cable to connect to the nearest source of primary 12V/24V/48V DC power. **Ensure that the supply is connected via a 1A fuse or suitable circuit breaker.** Add the fuse in the positive power connection to the unit if necessary.

- If you wish to use the dual redundancy power supply feature of the NS8, you will need to provide two separate power feeds one connected to P1+ and P1- and the other connected to P2+ and P2-. Should one feed lose power, the NS8 will automatically switch to the second feed. The NS8 will work quite happily with a single DC power feed connected to P1 or P2 and for most installations this is the normal method of powering the NS8.

4. Operation

The NS8 has no configuration settings that need to be setup before using it.

Apply power to the NS8 and check that the Green Power LED comes ON. Turn on all network devices that are plugged in to the NS8 and ensure that the Green LEDs for each active port are flashing.

5. Specification

NS8 Network Switch	
Switch Property	
Backplane bandwidth	16G
Transmission mode	Store and forward
MAC address	4K
Packet Buffer Size	1 Mbits
Ethernet Ports	
No.	8 x 10/100/1000Mbps
Interface	RJ45 ports, auto MDI/MDIX, auto negotiation
Network Media (Cable)	UTP Category 5 cable
Standards	IEEE 802.3 10BaseT IEEE 802.3u100BaseTX IEEE 802.3x for flow control IEEE802.3ab 1000BaseTX
Power Supply	
Connector	1 removable 5-pin terminal blocks
Input voltage	DC 9.6-60V
Power consumption	<5W
Overload Current Protection	Supported
Anti-reverse connection protection	Supported
Physical Characteristic	
Installation	DIN-rail mounting, desktop
Housing	IP40 protection, aluminum
Dimension	118*96*47.5 mm
Weight	430g
Environmental Limit	
Operating temperature	-40~+85℃
Storage temperature	-40~+85℃
Relative humidity	5% to 95% (non-condensing)
EMC	
ESD	IEC 61000-4-2 (ESD), Level 3 Air discharge: ±8kV Contact discharge: ±6kV
EFT	IEC 61000-4-4 (EFT), Level 3
Surge	IEC 61000-4-5 (Surge), Level 3
Certification	
CE	Supported