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PRO-NDC-1E

Quick Start Guide

Intelligent Type Approved NMEA Multiplexer



Important Notices

The device to which this manual relates complies with the Electromagnetic Compatibility requirements according to: IEC60945:2002-08, DNVGL-CG-0339:2019 & IACS UR E10 Rev7. The unit should always be used in conjunction with appropriately approved, shielded cable and connectors as per NMEA 0400 to ensure compliance. A declaration of conformity is available for download at www.actisense.com.

If the device to which this manual relates is to be installed within five metres of a compass, please refer to the 'Compass Safe Distance' section in the 'Technical Specifications' table.

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Product Disposal

Please dispose of this product in accordance with the WEEE Directive. The product should be taken to a registered establishment for the disposal of electronic equipment.

Product Registration

Please register your product via the online form at www.actisense.com/support/prodreg.

Your product package includes a unit serial number. The serial number is six digits long and can be found below the barcode on the label. Your registration will assist Actisense Support to link your product to your details, simplifying any future assistance you may require.

Product Guarantee

All Actisense products are provided with a 3 year guarantee as standard. To activate the 5-year guarantee offered with this product please complete product registration either online at www.actisense.com/support/prodreg or by completing and returning the warranty card supplied in the box with the product.

If you suspect that the unit is faulty please refer to the Troubleshooting Section of the User Manual before contacting support.

It is a requirement of the guarantee that all installations of electronic equipment follow the NMEA 0400 specification. Any connection to a battery or power supply must meet the mandatory essential safety requirements that may be imposed by local regulatory agencies.

Actisense products are intended for use in a marine environment, primarily for below deck use. If a product is to be used in a more severe environment, such use may be considered misuse under the Active Research Ltd guarantee.

Introduction & Features

PRO-NDC-1E is a reliable, robust, type approved device which provides industry leading isolation on all inputs and outputs as standard, enabling safe connection of all devices and avoiding hazardous ground loops. With five NMEA 0183 inputs, two NMEA 0183 outputs, a bi-directional serial port and an Ethernet port, the PRO-NDC-1E is a perfect solution for complex networks on commercial shipping, class society vessels and leisure vessels.

Before getting started

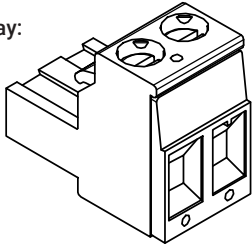
The wire colours used in this quick start guide are in accordance with the NMEA 0183 specification (v.4.10, June 2014) and are for illustration purposes only. Please ensure you check the wiring colours in the installation instructions for the devices you wish to interface to the PRO-NDC-1E.

Terminals

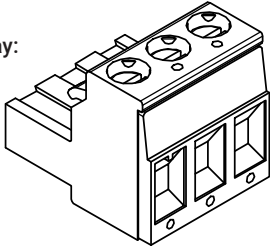
The PRO-NDC-1E comes with 2-way and 3-way screw connectors. Screwless connectors are available as an accessory.

Screw Connector

2-way:



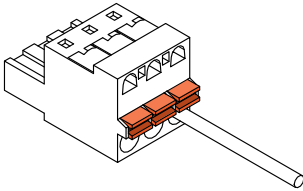
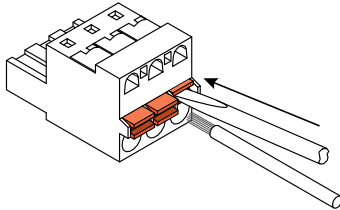
3-way:





Screwless connector

Open the clamp inside the screwless connector by pressing down on the orange button with a small (2mm) flat headed screwdriver. This will allow the wire to be inserted. For best connections do not twist the wire strands.

Release the orange button to lower the clamp on to the wire strands for a secure termination.



RF Ground

The shield from each Listener should be connected to the  terminal on the PRO-NDC-1E 'Isolated Talkers' ports. All  terminals are connected internally and form a common bonding point at the RF ground stud.

The RF ground stud should be connected to the vessels RF ground plate using a minimum conductor size of 8 AWG (10mm²) in accordance with NMEA 0400, (in version 3.1, this is in section 3.2).

LED functions

| Name | Description |
|-----------------|---|
| 'PWR' | Pulses blue to indicate presence of power. |
| 'Out' | Flashes at a rate determined by baud rate and data length. |
| 'In' | Flashes on receipt of valid data. |
| "Serial" In/Out | As 'In' & 'Out' above. |
| 'Ethernet' | Green LED for activity, yellow LED for line speed: off = 10Mbps, on = 100Mbps. |
| 'Status' | LED changes colour depending on multiplexer state. Refer to User Manual for full details. |

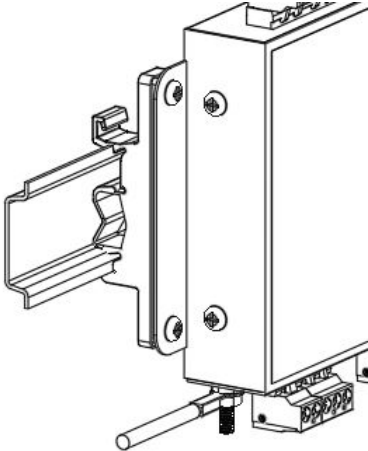
DIN rail fixing

Install the DIN rail in the desired location.

Attach the PRO-NDC-1E to the DIN rail as shown in the diagrams below.

Ensure the PRO-NDC-1E sits flush against the Actisense DIN-KIT-1 clips, and that the rail clips are securely fastened to the DIN Rail.*

Please note, the Actisense DIN-KIT-1 is an accessory, and is not supplied with the PRO-NDC-1E.



Web browser configuration tool

The Configuration Tool for the PRO-NDC-1E is built-in and can be accessed via the Ethernet connection. An internet connection is not required to access the Configuration Tool. The factory default log-in for both username and password is "admin".

Standard Ethernet networks

If the PRO-NDC-1E is connected to an Ethernet network containing both DHCP and DNS servers, launch any popular web browser and enter '//prondc-xxxxxx' in to the address bar (replacing 'xxxxxx' with the product's serial number).

Direct connections or basic Ethervnet networks

If the PRO-NDC-1E is connected directly to a PC (or the Ethernet network does not have a DHCP server), the PRO-NDC-1E will communicate using auto-IP by default. The auto-IP process can take up to 60 seconds to complete.