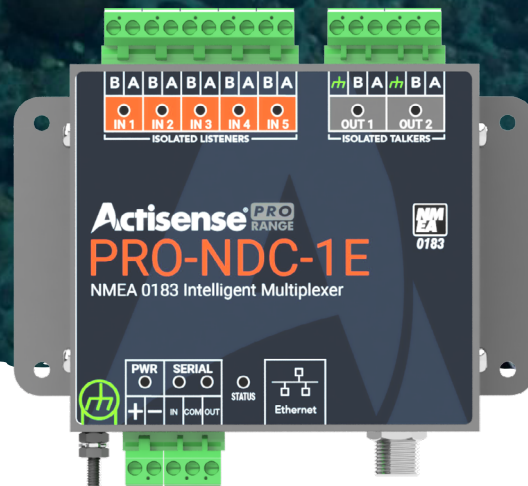


PRO-NDC-1E

NMEA 0183 INTELLIGENT MULTIPLEXER



The Actisense NMEA 0183 Multiplexer (PRO-NDC-1E) is a Type Approved (pending), intelligent and robust platform that cures many interconnectivity headaches.

Introducing the Actisense® PRO-NDC-1E, the intelligent, Type Approved (pending) PRO range multiplexer.

The PRO-NDC-1E is reliable, robust and provides industry leading isolation on all inputs and outputs as standard, so that connected devices safely avoid hazardous ground loops, the number one cause of product failure in NMEA 0183 networks.

The five NMEA 0183 inputs can be routed to either of the two NMEA 0183 outputs, providing a highly customisable network. A bi-directional serial port and an Ethernet port allow for simple configuration and diagnostics using Actisense software.

The configuration tool is accessible via any popular web browser (using the Ethernet port) so there are no PC operating system

compatibility issues to contend with. Using the web based configuration tool will allow the user to finely tune the exact data available on each output. The default setup is for all data to go to all outputs.

2-part pluggable rising clamp connectors on the PRO-NDC-1E means that new devices can easily be connected without the need to remove the unit from its mounted location.

A professional DIN rail mounting kit (sold separately) keeps the PRO-NDC-1E secure in high vibration environments.

Helpful LEDs indicate power, data in, data out and the alarm status to aid diagnostics.

Features:

- Type-approved (pending).
- 5 Opto-Isolated NMEA 0183 inputs.
- 2 ISO-Drive NMEA 0183 outputs.
- Advanced Data Filtering / Routing.
- Configurable Input and Output baud rates.
- Serial Port - for configuration, diagnostics or as an additional NMEA 0183 input or output port.
- Free Firmware updates making the device future-proof.
- Alarm output relay (N/O and N/C contacts).
- Mode inputs to provide manual selection of operational mode without using a PC.
- Diagnostic LEDs on all inputs and outputs.
- Alarm status LED.
- Mode LED.
- Bi-colour status LED.
- DIN rail or panel mountable.
- Stainless Steel housing for added durability.

Features may change without notice.

Model variants	Features
PRO-NDC-1	
PRO-NDC-1E	
PRO-NDC-1N2K	

PRO-NDC-1E Specifications

GEEK MODE ON



Power Supply	
Input supply voltage	10 to 35 V DC
Input supply current	150mA max @ 12V DC (all outputs @ full drive into 100 ohm loads)
Input protection	Continuous reverse polarity, transient overvoltage and ESD protection
Power indicator	LED, Blue - indicates unit is functioning correctly
Input Supply connector	Pluggable 2-way screw terminal, 5.08mm pitch (12 to 30 AWG)

NMEA 0183 Port - Listener & Talker

Number of Listener / Input Ports	5 isolated NMEA 0183 Listeners
Number of Talker / Output Ports	2 isolated NMEA 0183 Talkers
Compatibility	Fully NMEA 0183, RS422 & RS232 compatible. RS485 Listener compatible
Speed / baud rate	4800 to 38400 bps
Talker Output Voltage Drive	>= 2.2V (differential) into 100 ohm
Talker Output Current Drive	20 mA maximum per output
Talker Output Protection	Short circuit and ESD
Talker Data Indicator	LED, Orange (Flashes with data rate)
Listener Input Voltage Tolerance	-15 V to +15 V continuous, -35 V to +35 V short term (< 1 second)
Listener Input Protection	Current limited, overdrive protection to 40 VDC and ESD protection
Listener Data Indicator	LED, Green (Flashes with data rate)
Connectors	Pluggable 2/3 way screw terminals, 5.08mm pitch (12 to 30 AWG)

Serial Port

Compatibility	RS422 & RS232 compatible. RS485 Listener compatible
Speed / baud rate	115200 bps
Output voltage drive	>= 2.1V (differential) into 100 ohm
Output current drive	20 mA max.
Output protection	Short circuit and ESD
Input voltage tolerance	-15 V to +15 V continuous, -35 V to +35 V short term (< 1 second)
Input protection	Current limited, overdrive protection to 40 VDC and ESD protection
Data Indicators	LED's: Green = Receive, Orange = Transmit
Connectors	Pluggable 3-way screw terminals, 5.08mm pitch (12 to 30 AWG)

Ethernet Port

Host interface	10/100BaseT, automatic polarity detection
Supported protocols	TCP/IP for configuration and firmware updating TCP/IP and UDP for NMEA 0183 comms
Connector	RJ45
Indicators	Green - Link, Yellow - 100 Mbps

NMEA 2000 Port

Compatibility	Fully NMEA 2000 Certified
Speed / baud rate	250 kbps
Connectivity	M12 male (A-coded) connector

Isolation

NMEA 0183 Listener	Uses IsoDrive™, Hi-Pot tested to 1000V
NMEA 0183 Talker	Uses IsoDrive™, Hi-Pot tested to 1000V
Serial Port	Uses IsoDrive™, Hi-Pot tested to 1000V
Ethernet Port	2kv for 60s
NMEA 2000 Port	OPTO-Isolated, Hi-Pot tested to 1000V

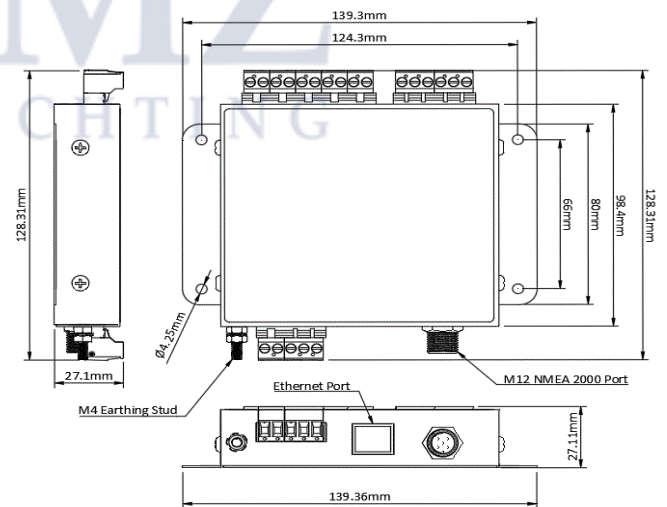
Mechanical

Housing Material	316 Stainless Steel
Dimensions	139mm (W) x 98mm (H) x 26mm (D)
Weight	360g
Mounting	Bulkhead mount or DIN rail mount (DIN kit 1)

Approvals and Certifications

EMC	IEC 60945:2002-08, DNVGL-CG-0339:2019 & IACS UR E10 Rev7
Compass Safe Distance	TBD
Type Approval Certificate	TBD
Operating Temperature	-25 to +70°C
Storage Temperature	-40 to +85°C
Relative Humidity (RH)	95% @ 55°C
Environmental Protection	IP40
Guarantee	5 Years

Product Dimensions



Part Number Description

PRO-NDC-1	
PRO-NDC-1E	
PRO-NDC-1N2K	

Accessories

DIN-KIT-1	Kit of 2 Clips & 4 Screws. Use with top-hat (EN 50 022) or G Section (EN 50 035) rails.
A-CONPACK-NDC2	Screwless Terminal pack for PRO-NDC-1.
SRB-90	Kit of 2 x 90mm Stainless Steel Strain Relief brackets.
USBKIT-PRO	USB to Serial Adapter for use with PRO range of products.