Actisense®
Award Winning NMEA Specialists

NDC-5 NMEA MULTIPLEXER

The NDC-5 is more than just an NMEA 0183 Combiner/Multiplexer; it provides an installer with a highly flexible platform that can be used to solve many NMEA 0183 interconnectivity headaches.

The five NMEA 0183 inputs can be routed to any of the two NMEA 0183 outputs, as well as the serial and Ethernet ports providing a highly customisable network. The bi-directional serial port and Ethernet port also 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.

Industry leading isolation is provided 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. This makes the NDC-5 robust enough to handle any NMEA 0183 installation.

Pluggable connectors allow new devices to be easily installed without the need to remove the NDC-5 from its mounted location. A professional DIN rail mounting mechanism keeps the NDC-5 secure in high vibration environments. Helpful LEDs indicate power, data in, and status conditions to aid diagnostics.

Features

Ethernet port – for configuration, diagnostics and sharing NMEA 0183 data (future update)

5 OPTO-Isolated NMEA 0183 inputs

2 ISO-Drive NMEA 0183 outputs

Advanced Data Filtering/Routing Configurable Input and output baud rates

Autoswitch mode available to offer system redundancy

Serial port – for configuration, diagnostics or as an additional NMEA 0183 input/output

Free firmware updates make the device future-proof

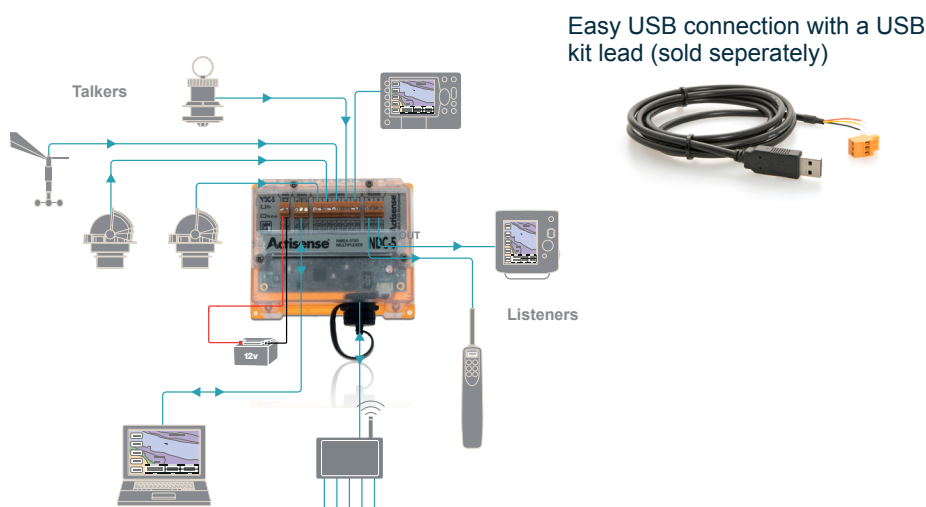Power LED to indicate operational state

Rx LED to indicate data on inputs

Status LED (bi-colour) to indicate output Data Overload or a range of other states

DIN rail or Panel mountable

Pluggable screw terminal connectors for quick and easy installation

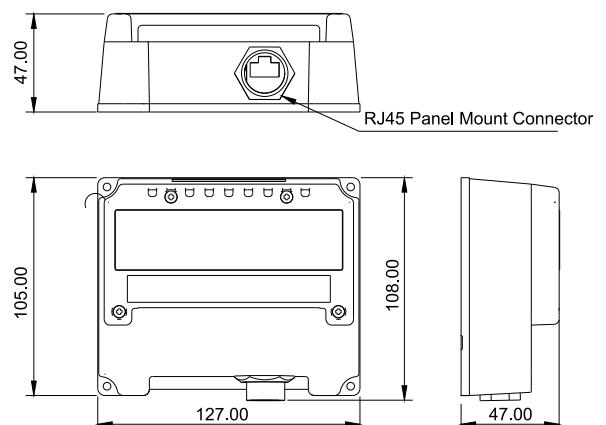All features and specifications are preliminary and may change without notice

Easy USB connection with a USB kit lead (sold seperately)

Talkers

Listeners

Power Supply	
Input supply voltage	9 to 35 V DC
Input supply current	110mA 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
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
Electrical isolation	2500 V input to ground, 1500 V output to ground using ISO-Drive™
Speed / baud rate	In1 to In4: up to 38400 bps In5: 4800 bps Out1: up to 115200 bps Out2: up to 38400 bps
Talker output voltage drive	>= 2.1V (differential) into 100 ohm
Talker output current drive	20 mA maximum per output
Talker output protection	Short circuit and ESD
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 (Rx) data indicator	LED, Green (Flashes to indicate valid input)
Status indicator	LED, Green / Yellow / Red to indicate status (see user manual)
Serial Port	
Number of input ports	1 isolated input
Number of output ports	1 isolated output
Compatibility	RS422 & RS232 compatible. RS485 Listener compatible
Electrical isolation	2500 V input to ground 1500 V output to ground using ISO-Drive™
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

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
Electrical isolation	2kV
Indicators	Green - Link, Yellow - 100 Mbps
Mode Inputs	
Input voltage range	0 to 35V DC
Protection	Transient overvoltage and ESD protection
Alarm Output	
Contacts	Normally open and normally closed
Electrical isolation	1000V between power supply and contacts
Mechanical	
Housing Material	Polycarbonate
Protective Lid Material	Polycarbonate
Sealing Materials	Expanded silicone foam gasket, closed cell polyurethane splash guard and ePTFE waterproof vent
Dimensions	127mm (L) x 106mm (W) x 48mm (H)
Weight	230g including screw terminals and RJ45 cap
Mounting	4 x 3.5mm lugs to allow panel mount with self tapping screws (included), optional DIN rail mount available on request.
Compass safe distance	TBD
Wiring terminals	Pluggable 2/3 way screw terminal, 3.5mm pitch, 14 to 30 AWG
Approvals and Certifications	
EMC	IEC 60945 (sections 9 & 10)
CE	2014/30/EU
Environmental protection	IP65
Operating temperature	-15°C to +55°C
Storage temperature	-40°C to +85°C
Relative Humidity (RH)	0 - 93% RH
Guarantee	3 years

Product Dimensions

47.00

RJ45 Panel Mount Connector

105.00

127.00

108.00

47.00

Issue 1.1

All specifications are taken with reference to an ambient temperature of 25°C unless otherwise specified.
All specifications correct at time of print.