

## NMEA Data Multiplexer NDC-4/NDC-4-USB

Multiplex up to 5 NMEA devices with full input and output isolation, now with added NMEA 0183 HS...

The Actisense™ NDC-4 NMEA Data Multiplexer/ Combiner allows up to five NMEA (National Marine Electronics Association) inputs to be combined into one output.

The NDC-4 is factory preconfigured for simple plug and play installation - just wire it in and it's ready to go.

Electrical spike protection is provided on all input channels using opto-isolators to protect any connected equipment from most system faults; a particularly valuable benefit as equipment requiring the most data, such as a PC or chart plotter, is often the most expensive.

The latest ISO-Drive technology has been added to the NDC-4 so that now each output is separately isolated from each other and ground, making this a world first and the safest multiplexer on the market.

The ISO-Drive output boosts the signal current, allowing the NDC-4 to drive many bridge instruments at the same time.

The NDC-4 inputs and outputs are fully configurable, allowing NMEA 0183 HS (38400 baud) data transfer and making the unit a vital part of AIS system installation.

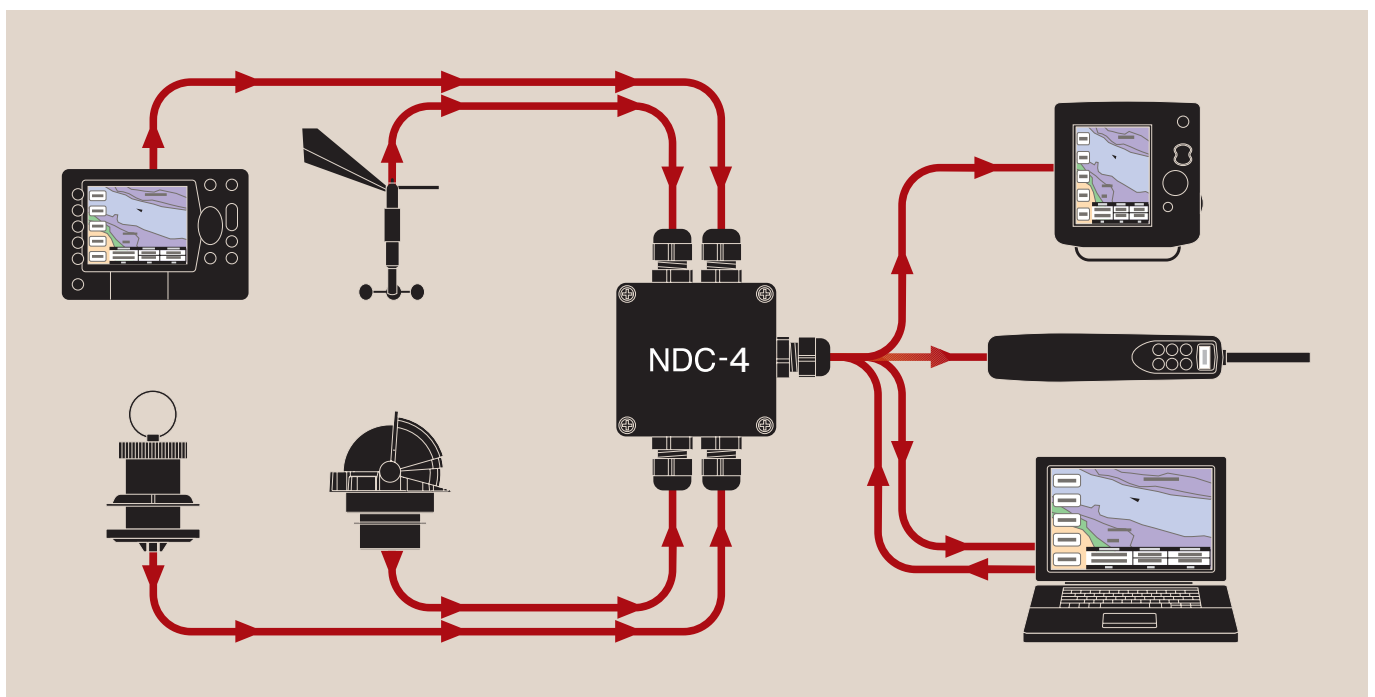
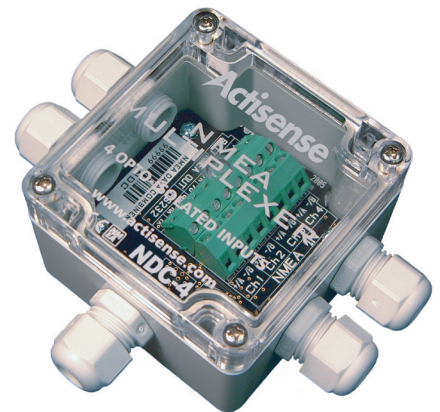
The multiplexer contains intelligent software, allowing high NMEA 0183 data rates that would overload simple multiplexers to be handled in a progressive manner, without losing the most important data.

The NDC-4 has a very low power consumption which is an advantage in small vessel installations.

A PC RS232 or USB port can connect with the NDC-4 to view the NMEA data on a laptop or PC. The NDC-4 also enables the PC to talk back to connected marine

hardware, allowing it to control on board equipment from "virtual cockpit" software.

Easy reprogrammability is assured through the NDC-4's built-in "flash memory" that can be updated with the latest changes in interfacing standards using free update software available from the Actisense™ website.



# NMEA Data Multiplexer NDC-4/NDC-4-USB

## Specifications

### OPTO Isolated Flexible Inputs (5)

- Exceeds all NMEA 0183 input voltage specifications
- Capable of receiving 1.8v differential signal levels
- Current limited (protects from cable short circuits)
- Over voltage protected to 40 volts DC
- Will also receive RS232 signal levels
- Full galvanic Opto-isolation (between input and both outputs) offering up to 2.5kV DC protection

### ISO-Drive Flexible Outputs (2)

- Electrically isolated from input power, OPTO input and other output to 1.5kV ground potential difference
- Exceeds all NMEA 0183 output drive specifications
- Capable of driving more than 10 NMEA 0183 compliant listeners
- Can send data to PC (RS232) or Marine (NMEA 0183) listeners
- Short circuit protected
- Static discharge protected

### Baud rates

- Baud rates are configurable to 57.6 kBaud on inputs and 115.2 kBaud on outputs - for full compatibility with NMEA 0183 version 3.0 (HS) and beyond
- Capable of multiplexing data from various NMEA devices at different baud rates

### Data Latency

- Input to output data delay maximum is 0.1 seconds with total output loading factor below 100%

### Built-in Firmware / Software

- Free software updates available on Actisense™ website
- Simple one button reprogramming utility
- Future-proof design
- Custom programming service available

### Power supply

- Supply Voltage range: 10 to 35 volts DC
- Power Consumption under no-load conditions : 360mW
- 33 mA @ 12v DC
- 17 mA @ 24v DC

### Environmental

- Recommended operating temperature: -20°C to +70°C
- Sealed case and grommets provide IP66 protection

### General

- Weight: 200 grams
- Dimensions: see diagram
- Guarantee: 3 years

### PC Software

- The Control Centre software features basic configuration of Baud rate and port priority levels

### Part numbers

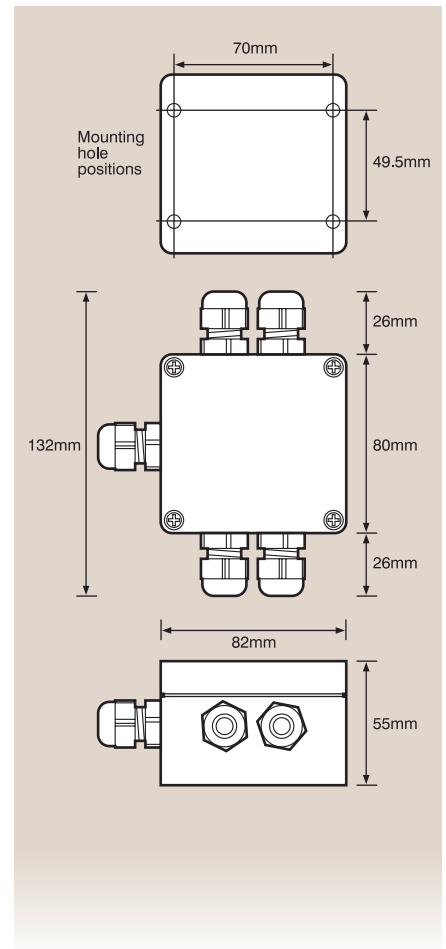
- NDC-4
- NDC-4-USB

## Additional Specifications for NDC-4-USB

### USB Interface

- Standard PC bi-directional connection (v1.1 compatible with v2.0)
- Windows™ driver supplied on CD
- Automatically switches to USB power when no battery supply is present
- When USB cable is unplugged, bi-directional communication is then available using the RS232 port
- No-load current draw 75 mA @ 5v DC when USB port powered

## Dimensions



Active Research Limited  
 Unit 5, Wessex Trade Centre  
 Ringwood Road, Poole  
 Dorset UK BH12 3PF

t: +44 (0)1202 746682  
 f: +44 (0)1202 746683  
 e: sales@actisense.com  
**www.actisense.com**

