Actisense®

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

Safely multiplex up to 5 NMEA devices with full input and output isolation using ISO-Drive technology

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 pre-configured for simple plug and play installation - just wire it in and it's ready to go. Using the supplied software it is a simple process to reconfigure the **NDC-4** for specialist operation, and for use as an Autoswitch.

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 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.

Using the supplied Control Centre Software 'Inclusion Lists' can be defined to filter out any unnecessary NMEA data helping to stop the loss of vital data.
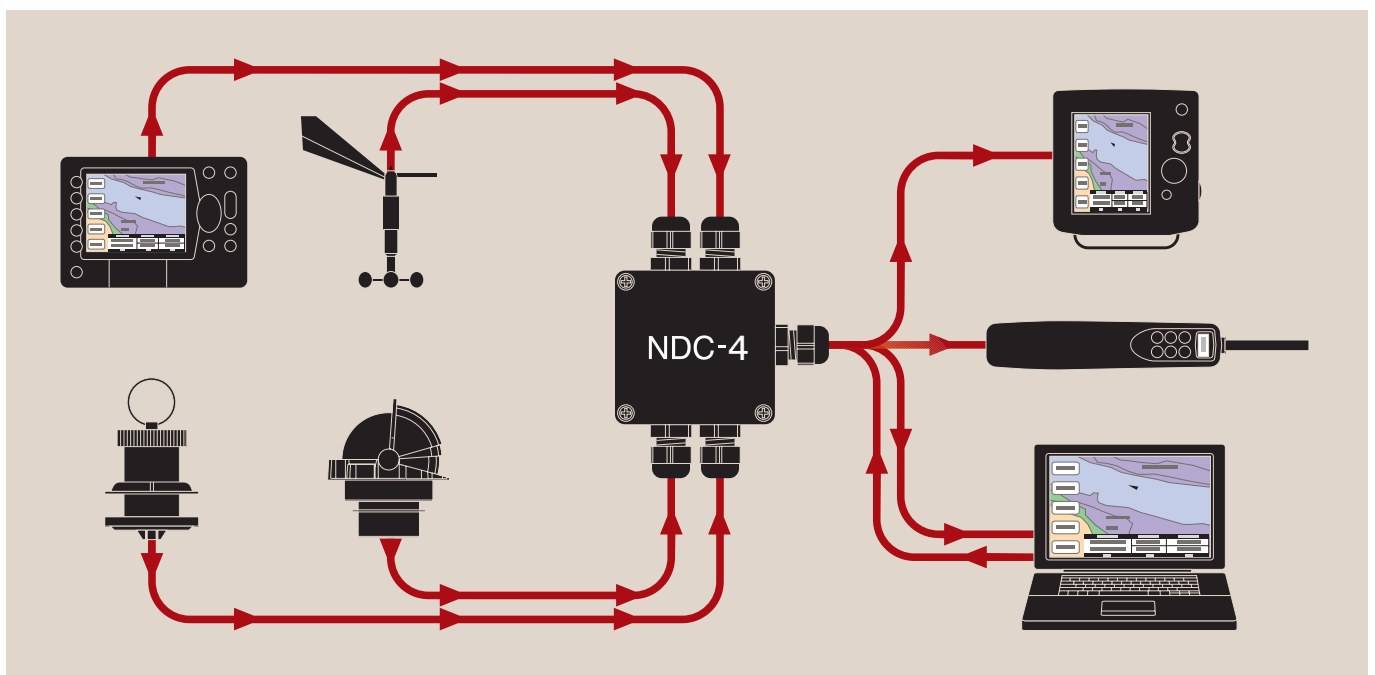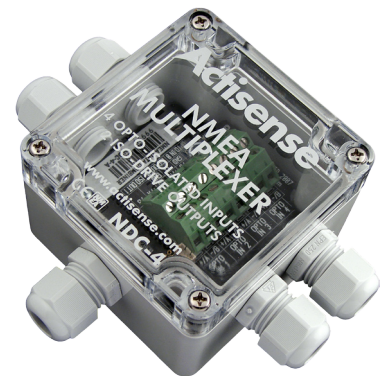
The multiplexer contains intelligent software, allowing high NMEA 0183 data rates that would overload simple multiplexers to be handled in a progressive manner, without losing the most important data.

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" or chart-plotter software.

Easy reprogramming 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.

To make installation even simpler, **Actisense** now offers pre-configured versions of the **NDC-4**. These are the **NDC-4-AIS**, pre-configured for use with AIS systems and the **NDC-4-ASW**, pre-configured as an Autoswitch. Any pre-configured settings can be modified by the user.

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

Specifications

OPTO Isolated Flexible Inputs (x5)

- 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 (x2)

- 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 57600 Baud on inputs and 115200 Baud 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, 'Inclusion Lists' and 'port priority' levels
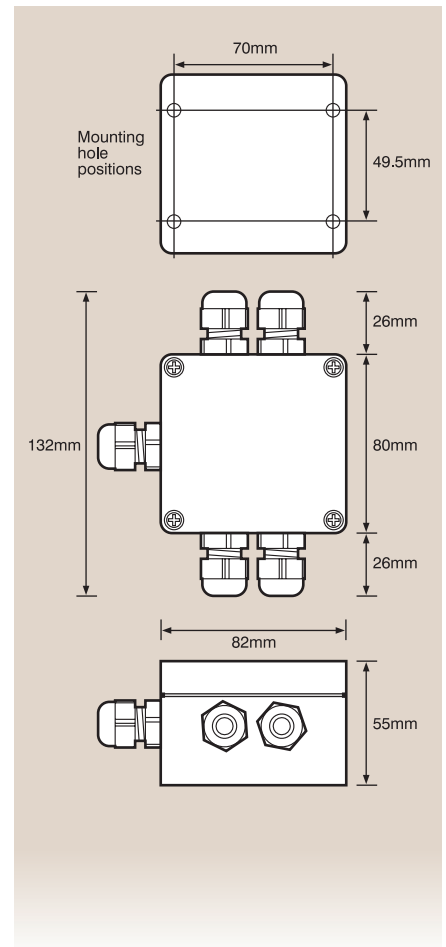
Part numbers

- **NDC-4**
- **NDC-4-USB**
- **NDC-4-AIS**
- **NDC-4-ASW**

Additional Specifications for NDC-4-USB

USB Interface

- Standard PC bi-directional connection (v1.1 and v2.0 compatible)
- 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 available using the 'ISO In 0' / 'OPTO In 0' port
- Only 4 NMEA inputs available when USB cable connected (USB becomes the fifth input)
- No-load current draw 75 mA @ 5v DC when only powered from USB port

Dimensions

70mm
Mounting hole positions
49.5mm

132mm
26mm
80mm
26mm

82mm
55mm

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