

The Actisense® Professional NMEA 0183 Multiplexer (PRO-MUX-1) is a robust and highly flexible platform that cures many interconnectivity headaches.

The PRO-MUX-1 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 1 cause of product failure in NMEA 0183 networks.

The eight NMEA 0183 inputs can be routed to any of the six 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 connectors on the PRO-MUX-1 mean that new devices can easily be installed without the need to remove the PRO-MUX-1 from its mounted location. A professional DIN rail mounting mechanism keeps the PRO-MUX-1 secure in high vibration environments. Helpful LEDs indicate power, data in, data out and the alarm status to aid diagnostics.

Easy USB connection with a USB

kit lead (sold seperately)

## **Features**

Ethernet port – for configuration, diagnostics and sharing NMEA 0183 data

8 OPTO-Isolated NMEA 0183 inputs

6 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/output.

Free firmware updates make the device future-proof

Alarm output relay (N/O and N/C contacts)

Mode inputs to provide manual selection of operational mode

Diagnostic LEDs on all inputs and outputs

Alarm status LED

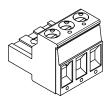
Mode LED

Bi-colour status LED

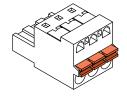
DIN rail or Panel mountable

All features and specifications are preliminary and may change without notice

## Connector types:



R - Screw Terminals



S - Screwless Terminals

| Product Code    | Description   |
|-----------------|---|
| PRO-MUX-1-BAS-R | Standard configuration with pluggable screw terminals     |
| PRO-MUX-1-BAS-S | Standard configuration with pluggable screwless terminals |



## PRO-MUX-1 Specifications



| Power Supply   |  |
|--|--|
| Input supply voltage                                 | 9 to 35 V DC   |
| Input supply current                                 | 250mA 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 - Listene                             | r & Talker   |
| Number of Listener / input ports                     | 8 isolated NMEA 0183 Listeners   |
| Number of Talker / output ports                      | 6 isolated NMEA 0183 Talkers   |
| Compatibility  | Fully NMEA 0183, RS422 & RS232 compatible. RS48<br>Listener compatible   |
| Electrical isolation                                 | 2500 V input to ground, 1000 V output to ground using ISO-Drive™   |
| Speed / baud rate                                    | In1 to In4: up to 38400 bps<br>In5 to In8: 4800 bps<br>Out1: up to 115200 bps<br>Out2 to Out6: 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 data indicator                              | LED, Green (Flashes to indicate valid input)   |
| Talker data indicator                                | LED, Orange (Flashes at data rate)   |
| Status indicator                                     | LED, Green / Yellow / Red to indicate status (see use 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<br>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  |
|  | TCP/IP for configuration and firmware updating   |
| Supported protocols                                  | TCP/IP and UDP for NMEA 0183 comms   |
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| Supported protocols  Connector  Electrical isolation | TCP/IP and UDP for NMEA 0183 comms RJ45 2kV  |

| 0 to 35V DC   |
|---|
| Transient overvoltage and ESD protection                                    |
|   |
| Normally open and normally closed   |
| 1000V between power supply and contacts                                     |
| LED, red indicates a valid alarm condition                                  |
|   |
| Polycarbonate / ABS blend   |
| UL94 - V0   |
| See diagram below (165mm (L) x 108mm (W) x 33mm (H))                        |
| 270g including all screw plugs & shield screw                               |
| DIN rail mount (35mm top hat rail EN 50 022)                                |
| 250mm   |
| Pluggable 2/3 way screw or screwless connectors,<br>5mm pitch, 12 to 30 AWG |
| ons   |
| IEC 60945 (sections 9 , 10 & 11)  |
| 2014/30/EU  |
| IP43  |
| -15°C to +55°C  |
| -40°C to +85°C  |
| 0 - 80% RH  |
| 5 years   |
|   |

## **Product Dimensions**

