

PRO-MUX-1 PROFESSIONAL NMEA MULTIPLEXER



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.

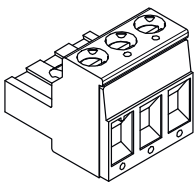
The eight NMEA 0183 inputs can be routed to any of the six NMEA 0183 outputs, providing a highly customisable network. A bi-directional serial port and an Ethernet port allow for simple configuration and diagnostics using Actisense software.

The configuration tool is accessible via any popular web browser (using

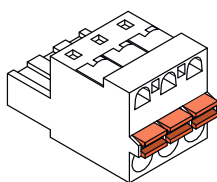
the Ethernet port) so there are no PC operating system compatibility issues to contend with. Using the web based configuration tool will allow the user to finely tune the exact data available on each output. The default setup is for all data to go to all outputs.

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.

Connector types:



R - Screw Terminals



S - Screwless Terminals

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



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

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

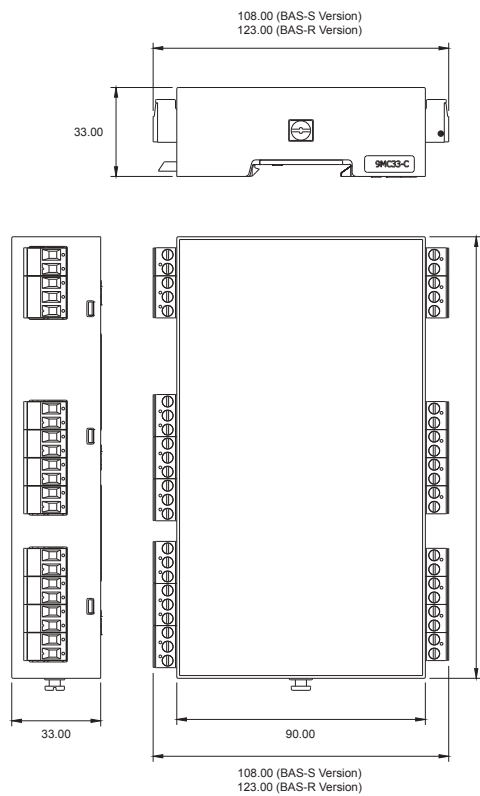
PRO-MUX-1 Specifications



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 - Listener & 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. RS485 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 In5 to In8: 4800 bps Out1: up to 115200 bps 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 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
Alarm indicator	LED, red indicates a valid alarm condition
Mechanical	
Housing material	Polycarbonate / ABS blend
Flame retardancy	UL94 - V0
Dimensions	See diagram below (165mm (L) x 108mm (W) x 33mm (H))
Weight	270g including all screw plugs & shield screw
Mounting	DIN rail mount (35mm top hat rail EN 50 022)
Compass safe distance	250mm
Wiring terminals	Pluggable 2/3 way screw or screwless connectors, 5mm pitch, 12 to 30 AWG
Approvals and Certifications	
EMC	IEC 60945 (sections 9 , 10 & 11)
CE	2014/30/EU
Environmental protection	IP43
Operating temperature	-15°C to +55°C
Storage temperature	-40°C to +85°C
Relative Humidity (RH)	0 - 80% RH
Guarantee	5 years

Product Dimensions



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