PRO RANGE

Actisense®

PRO-MUX-1
Professional NMEA 0183 Multiplexer

Feature	Advantage	Benefit
8 Opto-isolated NMEA 0183 inputs	8 Listener inputs offer comprehensive autoswitching and combining outputs	Flexible configuration options to autoswitch and combine NMEA data
6 NMEA 0183 ISO-Drive™ outputs	Distributes the individual data required by each Listener on-board a large vessel. Each ISO-Drive output protects against ground loops	ISO-Drive separates the Listener from the Talker to protect both the PRO-MUX and each connected devices. Peace of mind and highest reliability
Bi-directional isolated serial port (optional NMEA 0183 input/output)	High (115200) baud rate supported. Standard RS232 serial port compatible	Fast bi-directional data connection to a monitor and control software application
Ethernet Port	Ethernet data link for easy configuration of the PRO-MUX	PRO-MUX can be configured using any web browser on any Operating System
Automatic baud rate detection on NMEA 0183 inputs	Changes a Listener input's baud rate to match a connected NMEA Talker's output	Allows the PRO-MUX to work out-of-the-box without baud rate configuration
Default operating modes	Default operation combines the data from all inputs and routes it to all Talker outputs	Allows the PRO-MUX to work out-of-the-box
Filtering and Routing	Can apply basic input-based and advanced sentence-based routing rules to input data	Allows each Talker output stream to only contain the required data and nothing else that could overwhelm the connected Listener
2 virtual Autoswitch modules	Any two Listener inputs can be chosen as the inputs to a virtual Autoswitch	Allows automatic data priority selection between two devices of the same type of data (e.g GPS)
Alarm output options	Relay output and NMEA sentence output can be configured to trigger under various alarm conditions	Relay output is compatible with onboard alarm system and NMEA Alarm sentence can be displayed and actioned on an MFD
Advanced statistics on web browser	Web diagnostics show the current data statistics for each input and output	Allows a user to quickly understand if an output is behaving as it should
Input and output diagnostic LEDs	Quick indication of input / output data presence to help diagnose issues	Individual diagnostic LED provides confidence that each input / output is passing data
Alarm, Mode and Status LEDs	Highly visible Alarm, Mode and bi-colour Status indictors show current device state	Three LEDs to help the user understand the current PRO-MUX operating state
Designed for 12 / 24 Volt supply	Can be powered from any standard DC power supply found on vessels	Allows use on large vessel 24V DC power supplies systems
Isolation from battery ground	Each output has 1500 volts of isolation from the DC power supply ground	Critical to keeping connected devices protected from ground loop damage
2-part pluggable connector system	Quick installation of cables and reconnection between inputs / outputs	Fast installations and supports both screw and screwless terminal types. Ideal for quick diagnostic swapping
DIN rail or Panel mountable	DIN rail mountable and supplied with a small section of DIN rail for a quick installation	Fast installation / reinstallation on both large and small vessels

Actisense®

GEEK MODE ON

PRO-MUX-1

Professional NMEA 0183 Multiplexer

The professional NMEA 0183 Multiplexer is a highly flexible platform that cures many interconnectivity headaches.

Reliable and robust, it provides industry leading iso- lation on all inputs and outputs as standard, so that connected devices safely avoid hazardous ground loops, the primary cause of product failure in NMEA 0183 networks.

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 (mm)	BAS-R: 165 x 33 x 123, BAS-S: 165 x 33 x 108
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	3 years, extending to 5 years when product registered

Part Numbers: PRO-MUX-1-BAS-R
PRO-MUX-1-BAS-S

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 compat- ible
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