Issue v2.1

Actisense®
Connect without limits



PRO-MUX-2

PROFESSIONAL NMEA 0183 INTELLIGENT MULTIPLEXER

The Actisense PRO-MUX-2 is type approved (RINA), professional & intelligent NMEA 0183 multiplexer, with a robust design to cure many interconnectivity headaches.

Introducing the Actisense® PRO-MUX-2, the intelligent, type approved PRO range multiplexer.

The PRO-MUX-2 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 one 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 input data to be fed to all outputs.

2-part pluggable connectors on the PRO-MUX-2 means that new devices can be easily connected without needing to remove the unit from its mounted location.

The PRO-MUX-2 has the option to either mount directly to the bulkhead (with screws provided), or be DIN rail mountable with the addition of professional DIN rail brackets (sold separately).

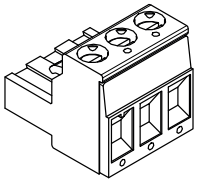
Helpful LEDs indicate power, data-in, data-out and the alarm status to aid diagnostics.

Features:

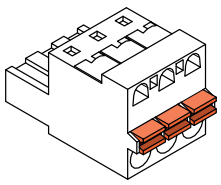
- Type-approved (RINA).
- 8x Configurable Opto-isolated inputs.
- 6x Configurable ISO-Drive isolated outputs.
- 1x Bi-directional, configurable, isolated serial port.
- Automatic baud rate matching on inputs.
- Advanced data filtering / routing.
- Free firmware updates making the device future-proof.
- 1x Alarm output relay (N/O and N/C contacts).
- Mode input pins to set operating mode without the need for a PC.
- Diagnostic LEDs on all inputs and outputs.
- Alarm status LED / Mode LED / Bi-colour status LED.
- Panel mountable.
- Stainless steel housing for added durability.

Features may change without notice.

Connector types:



Screw Terminals



A-CONPACK-PMUX2 - Screwless Terminals available as an accessory.



Easy USB connection with a USB-serial adapter kit (sold seperately).

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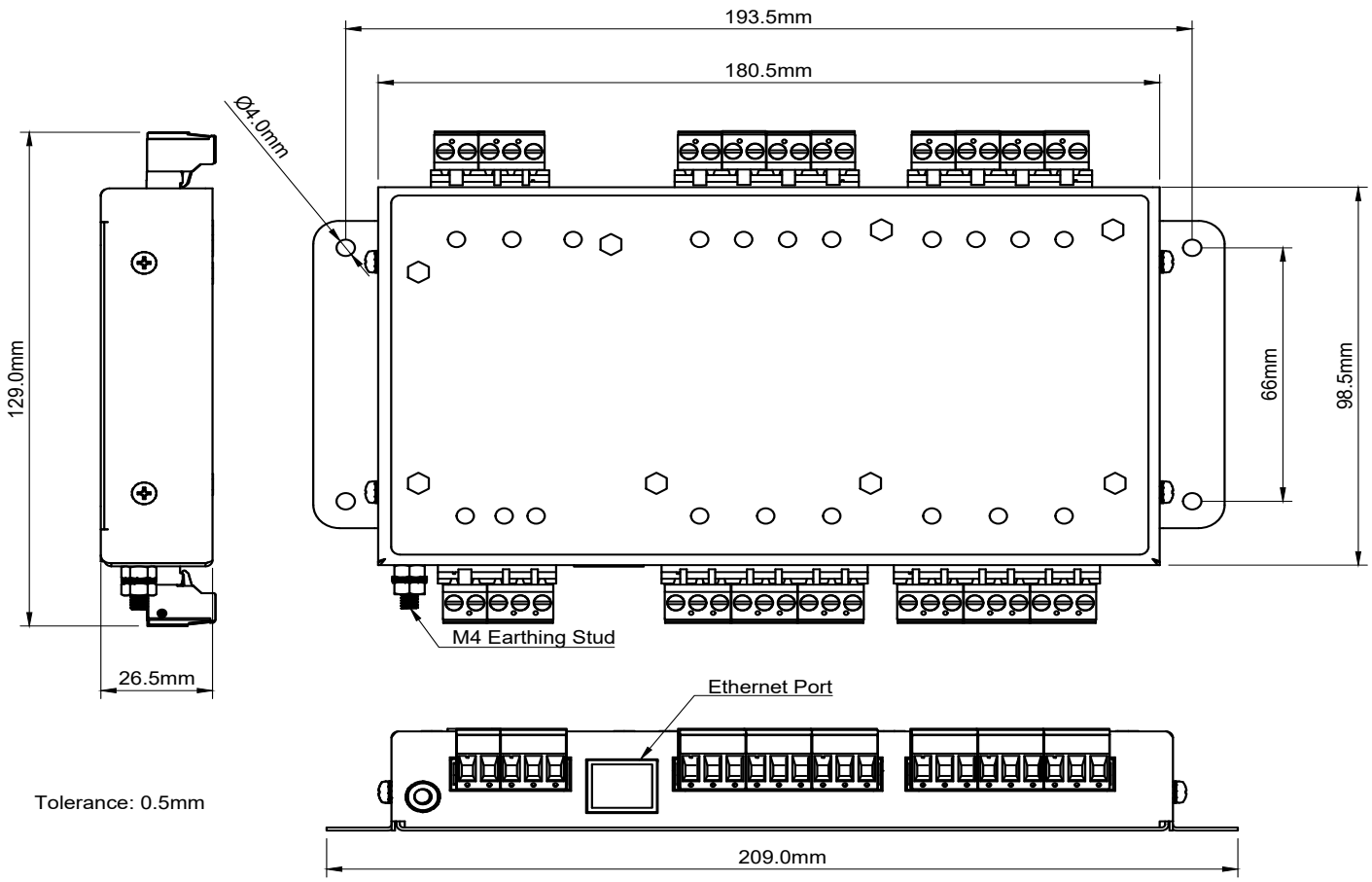
PRO-MUX-2 Specifications

Power Supply	
Input Supply Voltage	9 to 35 V DC
Input Supply Current	220mA max @ 12V DC (all outputs @ full drive into 100 ohm loads)
Input Protection	Continuous reverse polarity, transient over-voltage and ESD protection
Power Indicator	LED, Blue - indicates unit is functioning correctly
Input Supply Connector	Pluggable 2-way screw terminal, 5.08mm pitch (12 to 30 AWG)
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
Speed / baud rate	4800 to 38400 bps
Talker Output Voltage Drive	>= 2.2V (differential) into 100 ohm
Talker Output Current Drive	20 mA maximum per output
Talker Output Protection	Short circuit and ESD
Talker Data Indicator	LED, Orange (Flashes at data rate)
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)
Connectors	Pluggable 2/3-way screw terminals, 5.08mm pitch (12 to 30 AWG)
Serial Port	
Compatibility	RS422 & RS232 compatible. RS485 Listener compatible
Speed / baud rate	4800 to 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
Data Indicators	LED's: Green = Receive, Orange = Transmit
Connectors	Pluggable 3-way screw terminals, 5.08mm pitch (12 to 30 AWG)

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
Indicators	Green = Link/Activity, Yellow = 100 Mbps
Connector	RJ45
Isolation	
NMEA 0183 Listener	OPTO-Isolated, Hi-Pot tested to 1000V
NMEA 0183 Talker	Uses IsoDrive™, Hi-Pot tested to 1000V
Serial Port	Uses IsoDrive™, Hi-Pot tested to 1000V
Alarm Relay	Hi-Pot tested to 1000V
Ethernet Port	2kV for 60s
Mode Inputs	
Input Voltage Range	0 to 35V DC
Protection	Transient overvoltage and ESD protection
Connectors	Pluggable 2-way screw terminals, 5.08mm pitch (12 to 30 AWG)
Alarm Output	
Contacts	Common, Normally Open and Normally Closed
Alarm Indicator	LED, Red indicates a valid alarm condition
Contact Ratings	35VAC / 50VDC
Connectors	Pluggable 3-way screw terminals, 5.08mm pitch (12 to 30 AWG)
Mechanical	
Housing Material	316L Stainless Steel
Dimensions	209mm (W) x 129mm (H) x 26.5mm (D)
Weight	540g
Mounting	Bulkhead mount or DIN rail mount (DIN kit 1)
Approvals and Certifications	
EMC	IEC 60945:2002-08, DNVGL-CG-0339:2019 & IACS UR E10 Rev7
Compass Safe Distance	175mm
Type Approval Certificate	RINA
Operating Temperature	-25 to +70°C
Storage Temperature	-40 to +85°C
Relative Humidity (RH)	95% @ 55°C
Environmental Protection	IP40
Guarantee	5 years

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

PRO-MUX-2 Dimensions



Tolerance: 0.5mm

Accessories	Description
DIN-KIT-1	Kit of 2 clips & 4 screws. Use with top-hat (EN 50 022) or G section (EN 50 035) rails
A-CONPACK-PMUX2	Pluggable screwless terminal pack for PRO-MUX-2
SRB-90	90mm stainless steel strain relief brackets with screws (x2)
USBKIT-PRO	USB to Serial Adapter for use with PRO range products