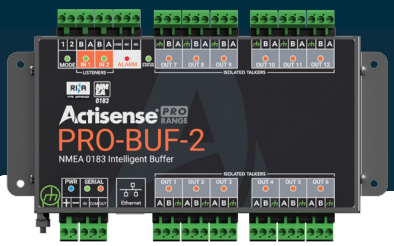
Issue v3.1

Actisense®
Connect without limits



PRO-BUF-2

PROFESSIONAL NMEA 0183 INTELLIGENT BUFFER

Type Approved, intelligent NMEA 0183 Buffer with two OPTO-isolated inputs and twelve ISO-Drive™isolated outputs. Offering device protection and excellent flexibility, all in one product.

Introducing the Actisense® PRO-BUF-2, the intelligent, Type Approved PRO range buffer.

The PRO-BUF-2 is rugged, with a stainless steel housing and provides isolation on all inputs and outputs. With two NMEA 0183 inputs, twelve NMEA 0183 outputs, a bi-directional serial port and an Ethernet port, the PRO-BUF-2 is a perfect solution for larger leisure vessels, commercial shipping and is a great addition for systems which require Type Approved devices.

The PRO-BUF-2 is designed to suit the majority of NMEA 0183 systems and ready to go 'out of the box' by simply hard-wiring the two mode inputs as required.

The manually configurable basic modes of operation include variations of buffer modes, intelligent autoswitch, and combine modes.

For all other configurations, leaving the mode inputs floating selects the 'User Configuration Mode'. The web based configuration tool allows full customisation of the PRO-BUF-2, and is compatible across all popular Operating Systems. Using the web based configuration tool allows for fine tuning of the data available on each output.

To make installation quick and simple the PRO-BUF-2 features 2-part pluggable connectors that allow use of screw terminals*, The PRO-BUF-2 is designed to be mounted on a bulkhead or alternatively it can be mounted on a DIN Rail using the optional brackets. An optional Strain Relief Bracket is available to secure cables if necessary.

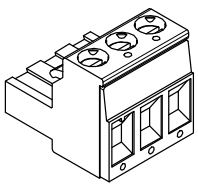
Helpful LEDs indicate power, data in, data out and the alarm status to aid diagnostics.

Features:

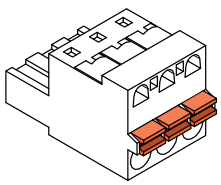
- 2 x Configurable NMEA 0183 OPTO-isolated inputs
- 12 x Configurable NMEA 0183 ISO-Drive™ isolated outputs
- 1 x bi-directional isolated serial port
- NMEA 0183 over Ethernet
- 1 x Alarm output (N/O and N/C contacts)
- Pre-defined modes of operation
- 'User Configuration Mode'
- Diagnostic LEDs (power, data in/out & alarm)
- Designed for 12 and 24 Volt supply
- Isolation to battery supply
- Advanced Data Filtering/Routing
- Automatic baud rate matching on inputs
- 'Future proof' easily upgraded firmware
- 1000V Isolation on I/O and Serial Ports

Features may change without notice.

Connector types:



Screw Terminals



A-CONPACK-PBUF2 - Screwless Terminals available as an accessory

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



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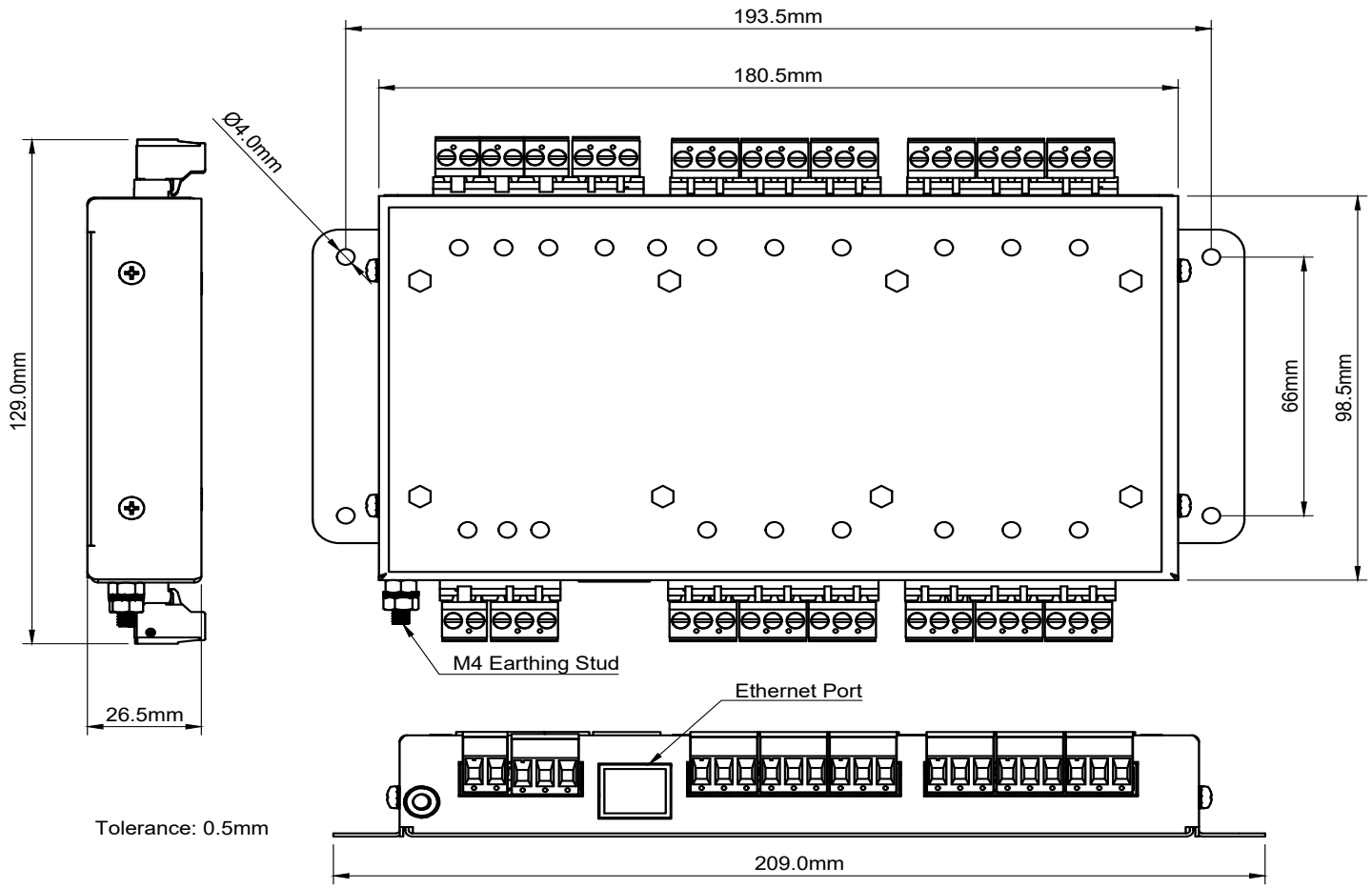
PRO-BUF-2 Specifications

Power Supply	
Input Supply Voltage	9 to 35 V DC
Input Supply Current	325mA 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
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	2 isolated NMEA 0183 Listeners
Number of Talker / Output Ports	12 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	530g
Mounting	Bulkhead mount or DIN rail mount (DIN kit 1)
Approvals and Certifications	
EMC	IEC 60945:2002-08, DNV-GL-CG-0339:2019 & IACS UR E10 Rev7
Compass Safe Distance	750mm
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-BUF-2 Dimensions



Tolerance: 0.5mm

Part Number	Description
PRO-BUF-2	2 OPTO input, 12 ISO-Drive outputs professional Type Approved Buffer
	Accessory 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-PBUF2	Pluggable Screwless Terminal pack for PRO-BUF-2
SRB-90	Kit of 2 x 90mm Stainless Steel Strain Relief Brackets
USBKIT-PRO	USB To Serial Adapter for use with PRO range products