

PRO-BUF-1

Professional NMEA 0183 Buffer

Adaptable NMEA 0183 Buffer with two OPTO-isolated inputs and twelve ISO-Drive™ isolated outputs, making ground loops a thing of the past and keeping devices safe from damage.

Introducing the Actisense® Professional NMEA 0183 Buffer (PRO-BUF-1), the first product in the new Actisense 'PRO' range.

PRO-BUF-1 is reliable, robust and provides isolation on all inputs and outputs as standard. With two NMEA 0183 inputs, twelve NMEA 0183 outputs, a bi-directional serial port and an Ethernet port, the PRO-BUF-1 is a perfect solution for larger leisure vessels and commercial shipping.

The PRO-BUF-1 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, autoswitch modes,

Connector types:

and combine modes. For all other configurations, leaving the mode inputs floating selects the 'User Configuration Mode'. The web browser based configuration tool allows full customisation of the PRO-BUF-1, and is compatible across all popular Operating Systems.

The PRO-BUF-1 supports a direct Ethernet connection to a PC without the need for a specialised Ethernet crossover cable.

To make installation quick and simple the PRO-BUF-1 features 2-part pluggable connectors that allow use of screw or screwless terminals, and a professional DIN rail mounting mechanism (DIN rail included). Helpful LEDs indicate power, data in, data out and the alarm status to aid diagnostics.

Features

- 2 x NMEA 0183 OPTO-isolated inputs
- 12 x NMEA 0183 ISO-Drive[™] isolated outputs

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- 1 x bi-directional isolated serial port
- 1 x Ethernet port
- 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
- Pluggable connector system supports both screw and screwless terminals
- Isolation to battery supply
- Browser based configuration tool
- Automatic baud rate matching on inputs
- Independently configurable outputs
- 'Future proof' easily upgraded firmware

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S - Screwless Terminals

R - Screw Terminals

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

Features may change without notice.

Actisense

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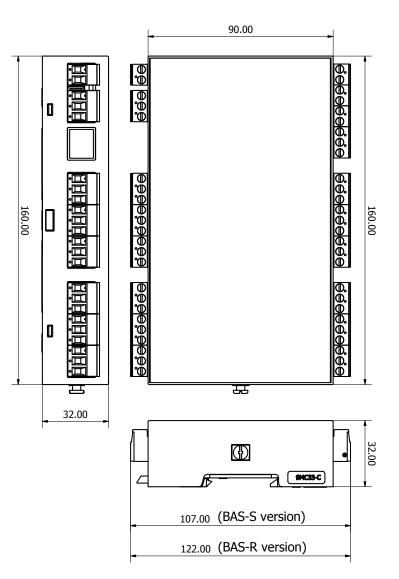
PRO-BUF-1: Specifications



Input supply current 325mA max @ 12V DC (all outputs @ full drive into 100 ohm loads) Input protection 20		
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Compatibility Compatibility Compatible	Number of output ports	1 isolated output
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Output protection Short circuit and ESD -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 TCP/IP and UDP for NMEA 0183 comms* Connector RJ45 Electrical isolation Indicators Green - Link, Yellow - 100 Mbps Mode Inputs Input voltage range 0 to 35V DC Protection Alarm Output Contacts Normally open and normally closed* Electrical isolation 1000V between power supply and contacts	Output voltage drive	>= 2.1V (differential) into 100 ohm
Input voltage tolerance -15 V to +15 V continuous, -35 V to +35 V short term (< 1 second) 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 TCP/IP and UDP for NMEA 0183 comms* Connector RJ45 Electrical isolation 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	Output current drive	20 mA max.
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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	Supported protocols	TCP/IP for configuration and firmware updating
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	Supported protocols	TCP/IP and UDP for NMEA 0183 comms*
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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	Indicators	Green - Link, Yellow - 100 Mbps
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Alarm Output Contacts Normally open and normally closed* Electrical isolation 1000V between power supply and contacts	Input voltage range	0 to 35V DC
Contacts Normally open and normally closed* Electrical isolation 1000V between power supply and contacts	Protection	Transient overvoltage and ESD protection
Electrical isolation 1000V between power supply and contacts	Alarm Output	
1 117	Contacts	Normally open and normally closed*
Alarm indicator LED, red indicates a valid alarm condition	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	
Weight	250g	
Mounting	DIN rail mount (35mm top hat rail EN 50 022)	
Compass safe distance	TBD	
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)	
CE	2004/108/EC	
Environmental protection	IP44	
Operating temperature	-20°C to +70°C	
Storage temperature	-40°C to +85°C	
Relative Humidity (RH)	0 - 80% RH	
Guarantee	5 years	

Product Dimensions.



^{*}Available on future release.