Actisense®

NBF-3

NMEA 0183 Buffer

Feature	Advantage	Benefit
One OPTO-isolated input	Meets isolation requirements of protecting talker devices	Peace of mind and highest reliability
Six ISO-Drive™ outputs	Isolates and buffers up to six listeners distributing identical data to each Listener, protecting against ground loops	ISO-Drive separates the Listener from the Talker to protect both the NBF-3 and each connected device
Compatible with RS422, RS232 and RS485 connections	Wide input voltage range and powerful output current drive	Easy installations due to wide compatibility
Up to 115200 baud	Covers all commonly used baud rates	Wide compatibility meaning simplified installation
Outputs automatically track the input baud rate	Automatic autobaud, no configuration required	Quick, easy installation
Protocol independent	Passes all data, no configuration required	Simple installation saves time and money and provides peace of mind
Wide operating voltage	Allows operation on 12V or 24V systems	Compatible with all common power systems
Input Protection	Protects against reverse polarity and transients	Protects against faults
Separate Power Feed (500 mA)	Allows Talker to be powered using a single multicore cable	Quick and cost effective installation
Isolation from battery ground	Each output has 1500V of isolation from the DC power supply ground	Critical to keeping connected devices protected from ground loop damage
Power LED	Clear feedback of power status for ease of debugging	See power is connected correctly
Input indicator LED	Confirms correct connection and presence of data	Clear feedback of input status for ease of debugging
Pluggable 2-Part screw terminal connectors	Quick installation of cables and easy debugging by simple unplug operation	Fast and simple installation, saving the overall cost
Durable waterproof casing	Custom designed IP65 rated polycarbonate enclosure	Able to withstand wet environments
Panel or Optional DIN rail mount	Can mount to bulkhead or DIN rail using optional mounting brackets	Flexible installation options to save time and money

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NBF-3 ISO Drive

NMEA 0183 Buffer

Safely drive up to six NMEA Listeners, with power distribution for the connected Talker.

The NBF-3 NMEA Buffer isolates and buffers NMEA 0183 data, with the power to drive multiple devices. Able to distribute up to six identical, amplified streams of data from one source, the NMEA signals are buffered to ensure that each Listener receives the data at the required voltage levels, providing consistent data quality.

Part Number: A-NBF-3

Mechanical	
Housing Material	Polycarbonate
Protective Lid Material	Polycarbonate
Sealing Materials	Expanded silicone foam gasket, closed cell polyurethane splash guard and ePTFE waterproof vent
Dimensions	127mm (L) x 106mm (W) x 48mm (H)
Weight	210g
Mounting	4 x 3.5mm lugs to allow panel mount with self tapping screws (included), optional DIN rail mount available on request.

Power Supply	
Input Supply Voltage	10 to 35V DC
Input Supply Current (NBF-3 only)	100mA max @ 12V DC (all outputs @ full drive into 100Ω loads)
Input Supply Connector	Pluggable 2 way screw terminal, 3.5mm pitch
Input Protection (NBF-3 only)	Continuous reverse polarity and ESD protection
Power Indicator	LED, blue (lit constantly indicates correct operation when input supply connected)
Listener Power Output Voltage	10 to 35V DC derived directly from the input supply voltage
Listener Power Output Current	500mA max @ <= 30°C (see note)* (PTC self-resettable fuse)
Listener Power Output Connector	Pluggable 2 way screw terminal, 3.5mm pitch

NMEA 0183 Port - Listener & Talkers	
Number of Listener / Input Ports	One isolated NMEA 0183 Listener
Number of Talker / Output Ports	Six isolated NMEA 0183 Talkers
Compatibility	Fully NMEA 0183, RS422 & RS232 compatible. RS485 Listener compatible
Galvanic Isolation	2500V input to ground 1500V output to ground using ISO-Drive
Speed / baud rate	4800 to 115200 bps
Talker Output Voltage drive	>= 2.1V (differential) into 100Ω
Talker Output Current drive	20mA max.
Talker Output Protection	Short circuit and ESD
Listener Input Voltage Tolerance	-15V to +15V continuous, -35V to +35V short term (<1 second)
Listener Input Protection	Current limited, overdrive protection to 40V DC and ESD protection
Listener Data Indicator	LED, green (flashes at data rate)
Connectors	Pluggable 2-way screw terminals, 3.5mm pitch

Approvals and Certifications	
EMC	EN 60945 (sections 9 & 10)
Environmental Protection	IP65
Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +85°C

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