

NBF-3

NMEA® Buffer

Connect up to six NMEA 0183 Listeners to a single Talker. Isolation between all devices eliminates ground loops. Talker power is provided for single cable Talker connection.

Introduction

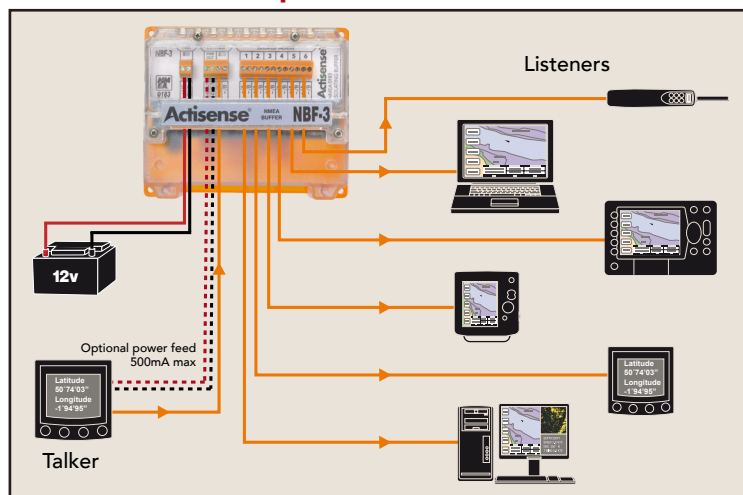
The Actisense NMEA Buffer (NBF-3) distributes up to six identical data streams from the same source. Signals are buffered to ensure each Listener receives the required voltage levels. Isolation on the input and each output allows non-isolated devices to be connected safely. The addition of power distribution for the NMEA Talker allows a single cable to connect power and data to the Talker.

Features

- Galvanic opto-isolation on the NMEA 0183 input
- **ISO-Drive™** NMEA 0183 outputs provide galvanic isolation to prevent ground loops
- Compatible with all NMEA 0183 versions without requiring configuration
- NMEA 0183 outputs compatible with RS422, RS232 and RS485 type Listeners
- NMEA 0183 input compatible with RS422 and RS232 type Talkers
- DIN Rail mountable
- Pluggable screw terminals for quick and easy installation and diagnostics
- Power and input indicator LEDs
- Works automatically up to 115200 Baud
- Amplification of weak input signals
- Power feed for single cable installation to the NMEA Talker



Connection Example



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NMEA Buffer

Technical Specifications

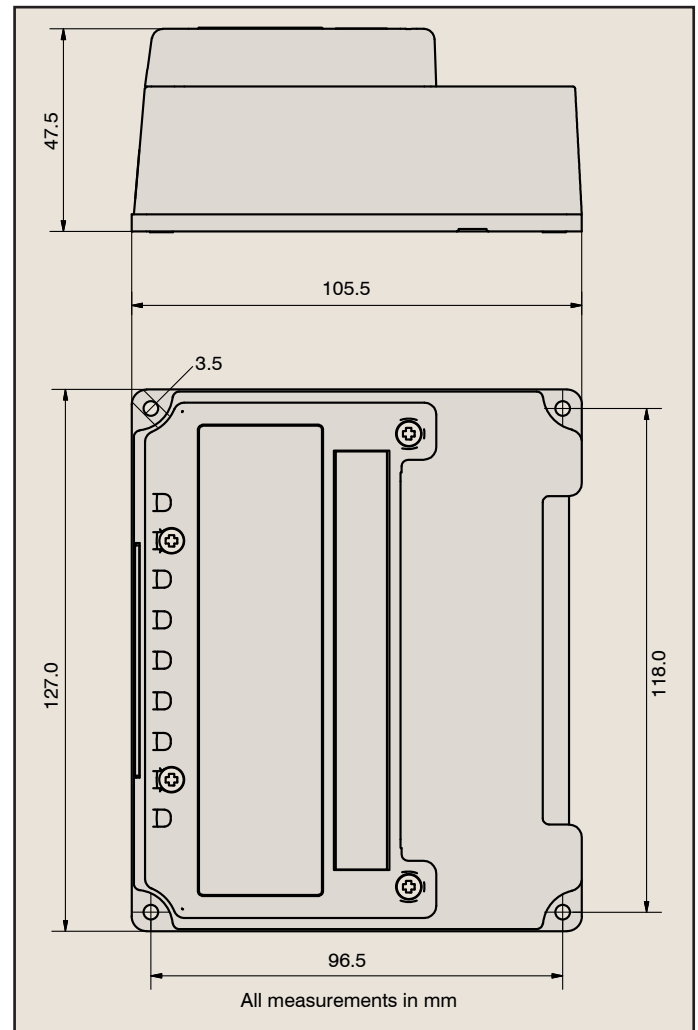
Power Supply	
Input Supply Voltage	10 to 35V DC
Input Supply Current (NBF-3 only)	100mA max @ 12V DC (all outputs @ full drive into 100Ω loads)
Input Supply Connector	Pluggable 2 way screw terminal, 3.5mm pitch
Input Protection (NBF-3 only)	Continuous reverse polarity and ESD protection
Power Indicator	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	IP66
Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +85°C
Relative Humidity	0 to 80% RH
Guarantee	3 years

All specifications are taken with reference to an ambient temperature (TA) of +25°C.

*Higher temperatures may cause the fuse to trip at less than 500mA.

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.

Dimensions



Part Number	Description
NBF-3-BAS	NMEA Buffer with an OPTO input, 6 ISO-Drive outputs and Talker power feed
Accessory Description	
DIN-KIT-1	DIN Rail mounting kit suitable for use with rail types: Top hat rail EN 50 022 or G section rail EN 50 035