



# Quick Start Guide

# NBF-3 NMEA Buffer

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Award Winning NMEA Specialists

## Important Notices

The device to which this manual relates complies with the Electromagnetic Compatibility requirements according to EN60945. The unit should always be used in conjunction with appropriately approved, shielded cable and connectors as per NMEA 0400 to ensure compliance. A declaration of conformity is available for download at [www.actisense.com](http://www.actisense.com).

If the device to which this manual relates is to be installed within five metres of a compass, please refer to the 'Compass Safe Distance' section in the 'Technical Specifications' table.

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## Product Registration

Please register your product via the online form at <http://actisense.com/support/prodreg.html>.

Your product package includes a unit serial number. The serial number is six digits long and can be found below the barcode on the label. Your registration will assist Actisense Support to link your product to your details, simplifying any future assistance you may require.

## Product Disposal

Please dispose of this product in accordance with the WEEE Directive. The product should be taken to a registered establishment for the disposal of electronic equipment.

## Technical Accuracy

To the best of our knowledge the information contained in this document was correct at the time it was produced. Active Research Ltd cannot accept liability for any inaccuracies or omissions.

The products described in this manual and the specifications thereof may be changed without prior notice. Active Research Ltd cannot accept any liability for differences between the product and this document. To check for updated information and specifications please check [actisense.com](http://actisense.com).

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## Product Guarantee

This product comes with a three year 'return to base' guarantee. If you suspect that the unit is faulty please refer to the Troubleshooting Section of the User Manual before contacting support.

It is a requirement of the guarantee that all installations of electronic equipment follow the NMEA 0400 specification. Any connection to a battery or power supply must meet the mandatory essential safety requirements that may be imposed by local regulatory agencies.

Actisense products are intended for use in a marine environment, primarily for below deck use. If a product is to be used in a more severe environment, such use may be considered misuse under the Active Research Ltd guarantee.

## Introduction & Features

Ground breaking and innovative 'ISO-Drive™' technology from Actisense protects up to six NMEA 0183 Listeners from damage that can be caused by hazardous ground loops. Electrical isolation on the NBF-3 input also provides protection to the connected Talker.

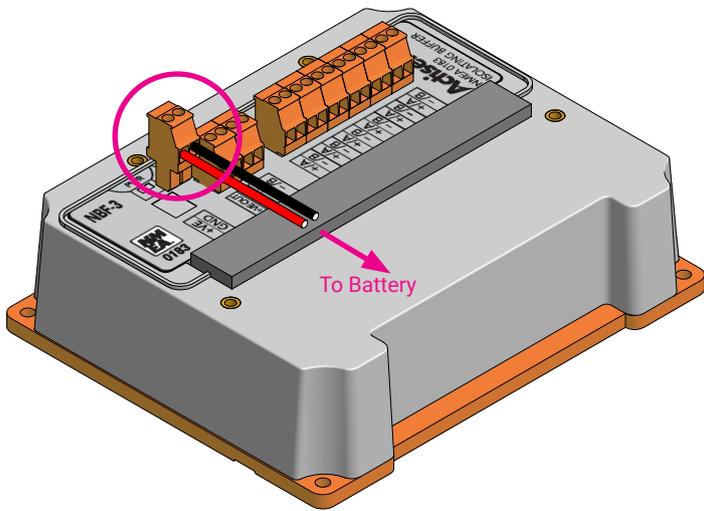
Data is distributed identically from each of the six outputs and at least the original signal voltage levels. This means that information sent by the connected Talker is reliably delivered to its intended destination, even over long cable runs. The addition of power distribution for the NMEA Talker allows a single cable to connect power and data to the Talker.

## Before getting started

The wire colours used in this quick start guide are in accordance with the NMEA 0183 specification (v.4.10, June 2014) and are for illustration purposes only. Please ensure you check the wiring colours in the installation instructions for the device you wish to interface to the NBF-3.

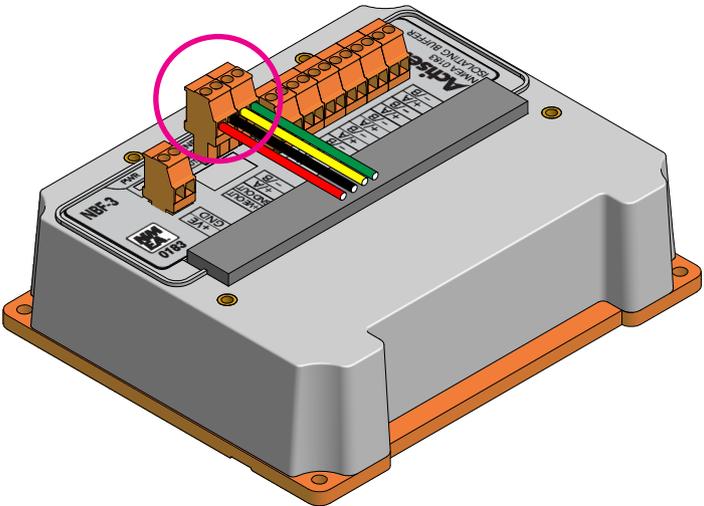
## Powering the NBF-3

The NBF-3 is compatible with 12V and 24V power supplies and should be connected to the battery in accordance with the diagram below:

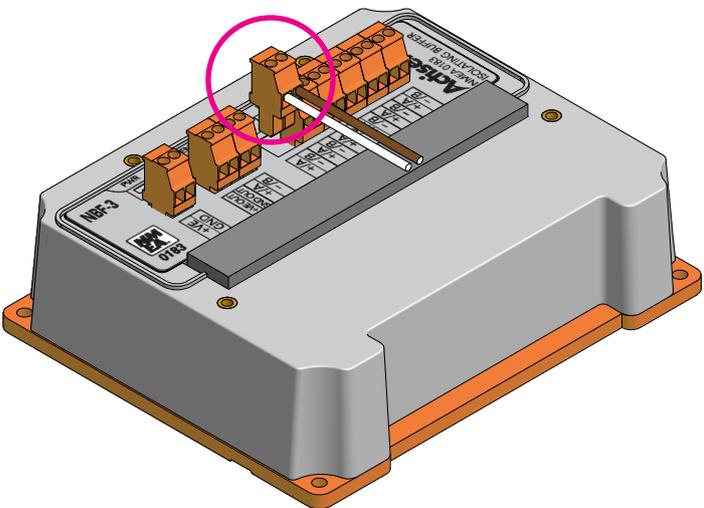


## Connecting to Devices

Strands of wire must not be twisted before inserting in to the connector, this will ensure a much more secure termination than if the wires are twisted. A small flat headed screwdriver (2-3mm) is needed to loosen the screws on the pluggable connectors for the wires to be inserted or removed.



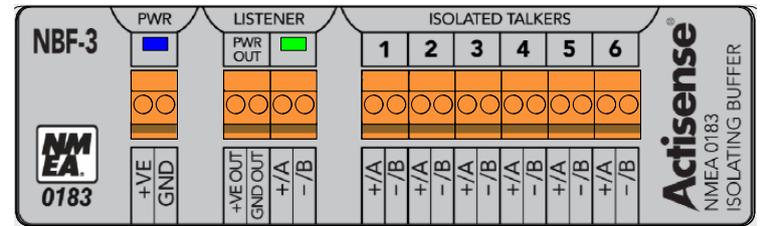
The NBF-3 power connection is routed to the Listener port PWR OUT connection via a self-resettable fuse. This provides the option to power the NMEA 0183 Talker from the NBF-3.



## NMEA 0183 and RS232 (serial PC) connections

NBF-3 Label:	Talker A/+	Talker B/-	Listener A/+	Listener B/-
NMEA 0183 device label:	NMEA 0183 Listener 'RX A/+' or 'NMEA IN A/+'	NMEA 0183 Listener 'RX B/-' or 'NMEA IN B/-'	NMEA 0183 Talker 'TX A/+' or 'NMEA OUT A/+'	NMEA 0183 Talker 'TX B/-' or 'NMEA OUT B/-'
Standard RS232 label:	Pin 2	Pin 5	Pin 3	Pin 5

## LED Behaviour



Colour	Blue	Green
Name	Power indicator	Listener Port Data

## Mounting the NBF-3

The NBF-3 can be mounted on a DIN rail or directly to a bulkhead via the screw holes in each corner. We recommend the DIN rail mount option for the convenience of removing and re-installing the NBF-3 at a later date if needed.

