



**TYPE APPROVAL CERTIFICATE**  
No. ELE175121XG

**This is to certify** that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	<b>Connecting devices</b>
<i>Type</i>	<b>PRO-BUF-2 NMEA Buffer, PRO-NBF-1 NMEA Buffer</b>
<i>Applicant</i>	<b>Active Research Ltd. Actisense, 21 Harwell Road BH17 0GE Poole UNITED KINGDOM</b>
<i>Manufacturer</i>	<b>Active Research Ltd.</b>
<i>Place of manufacture</i>	<b>Actisense, 21 Harwell Road BH17 0GE Poole UNITED KINGDOM</b>
<i>Reference standards</i>	<b>- Rules for the Classification of Ships- Part C - Machinery, Systems and fire protection - Ch.3 ; Sect. 6 ; Tab. 1 .</b>

Issued in **Hamburg** on **October 14, 2021**. This Certificate is valid until **October 13, 2026**

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**RINA Services S.p.A.**  
**Giuseppe Russo**

This certificate consists of this page and 1 enclosure

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**Enclosure - Page 1 of 1**  
**PRO-BUF-2 NMEA Buffer, PRO-NBF-1 NMEA Buffer**

**PRO-BUF-2**

An intelligent NMEA0183 buffer designed to take up to 2 NMEA0183 signals from Talkers and distribute these signals to up to 12 Listeners. The PRO-BUF-2 has the ability to auto switch it's inputs, filter data and has a configurable alarm output. The device has the possibility to be configured from the built in web utility accessed via the Ethernet connection. The device contains Opto-Isolation on the data inputs, and Actisense's ISO-Drive™ on the output. This ensures that all inputs and outputs are galvanically isolated from the power supply and each other.

**PRO-NBF-1**

An NMEA0183 buffer can take 1 NMEA0183 signal from a Talker and distribute this signal to up to 6 Listeners. The device contains Opto-Isolation o the data inputs, and Actisense's ISO-Drive™ on the output. This ensures that all inputs and outputs are galvanically isolated from the power supply and each other.

**Rating:**

Power supply: 24 V DC (9 to 35 V DC)

Power consumption: 325 mA at 12 V DC (PRO-BUF-2), 150 mA at 12 V DC (PRO-NBF-1)

Power Supply protection: Continuous reverse polarity, transient over voltage and ESD protection

Isolation: Opto-isolated inputs and Actisense ISO-Drive™ outputs

Ambient temperature: -25 ° C to +70° C

Degree of protection: IP40

**Reference Documents :**

PRO-BUF-2 Datasheet, issue 2

PRO-NBF-1 Datasheet, issue 4

Eurofins - EMC Test Report, 2869 CR, dated 07 May 2021

Eurofins - EMC Test Report, 2649 CR, dated 06 May 2021

MS Testing - Test Report, TL21044, dated 21 April 2021

**Hamburg October 14, 2021**

