

## Datasheet

# NATRIX

## underwater digital acoustic modem



### DESCRIPTION:

NATRIX are the series of wireless underwater digital communications modems that implement a transparent transmission channel.

NATRIX modems have an unsurpassed correlation of such parameters as power consumption, dimensions, speed and transmission distance.

One-piece housing unified with RedNODE devices allows you to use standard solutions for integration.

Small size, low power consumption and ease of use make NATRIX ideal solution both for small ROV/ AUV and larger devices.

Subscribers code division feature allows solving efficiently the data transfer tasks for several devices.

### KEY FEATURES:

- Subscribers code division
- Reliable and noise-immune technology of digital broadband acoustic communication
- Low power consumption (Rx / Tx) 0.4 / 10 W
- Open configuration protocol
- Can be applied in underwater digital acoustic sensor networks
- Reliable data transmissions with up to 1200 bit/s
- Minimum dimensions
- Operating range up to 2500 m

## **NATRIX**

underwater digital acoustic modem



### **TECHNICAL SPECIFICATION:**

<b>DIMENSIONS</b>	Ø64x62 mm
<b>WEIGHT (dry)</b>	0.36 kg
<b>DEPTH RATING</b>	300 m
<b>FREQUENCY BAND</b>	10-45 kHz
<b>BIT ERROR RATE</b>	10 <sup>-5</sup>
<b>START-UP TIME</b>	100 ms
<b>SNR<sup>1</sup></b>	-1 dB
<b>WIRE LENGH<sup>2</sup></b>	1.5 m
<b>MAX RELATIVE VELOCITY</b>	+/- 1.8 m/s
<b>OPERATING TEMPERATURE RANGE</b>	-5..50 °C
<b>MAX OPERATING RANGE</b>	2500 m
<b>PAYLOAD DATA RATE</b>	560/1200 bit/s <sup>3</sup>
<b>POWER CONSUMPTION Rx/Tx</b>	0.4/10 W
<b>POWER SUPPLY</b>	12 V
<b>INTERFACE<sup>4</sup></b>	UART 9600 bit/s
<b>DIALOGUE PROTOCOL</b>	NMEA 0183 PTNT
<b>DATA LINES VOLTAGE</b>	0..3.3 V

1.This value is obtained without the presence of the multiple effects

2.Length can be increased by special request

3.Optional. Speed 560 bit/s is recommended for water areas with more complex hydrology

4.Port speed can be changed by special request