UNDERWATER
COMMUNICATION & NAVIGATION
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Datasheet

RedGTR

underwater digital acoustic modem

DESCRIPTION:

RedGTR are the series of wireless underwater digital communications modems that provide short code messages exchange in a network organized between such devices.

The device uses a fixed-length code-division signal to provide a point-to-point network consisting of 25 devices located in the same water area up to 8000x8000 meters.

Up to 40 code messages in a network of 25 subscribers.

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

Small size, low power consumption and ease of use make RedGTR ideal solution for the implementation of control channels, as well as signaling devices for various actuators, circuit breakers and other actuators.

KEY FEATURES:

- Minimum dimensions
- Operating range up to 8000 m
- 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
- Working depth up to 400 m (option with built-in depth sensor is available up to 300 m)
- 40 code messages/ 25 subscribers

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TECHNICAL SPECIFICATION:

DIMENSIONS	Ø64x62 mm
WEIGHT (dry)	0.33 kg
DEPTH RATING	400 m
FREQUENCY BAND	5-15 kHz
BIT ERROR RATE	10^-6
START-UP TIME	100 ms
SNR [1]	-6 dB
WIRE LENGTH [2]	1.5 m
MAX RELATIVE VELOCITY	+/- 1.8 m/sec
OPERATING TEMPERATURE RANGE	-5..50 ˚C
MAX OPERATING RANGE [3]	8000 m
PAYLOAD DATA RATE	88 bit/sec
POWER CONSUMPTION Rx/Tx	70 mA/3 A
POWER SUPPLY	5 V
INTERFACE [4]	UART 9600 bit/s
DIALOGUE PROTOCOL	NMEA 0183 PTNT
DATA LINES VOLTAGE	0..3 V
CODE DIVISION SCHEME (commands/subscribers) [5]	40/25
NOMINAL DEPTH ERROR [6]	0.1 m
BUILT-IN TEMPERATURE SENSOR ACCURACY [7]	0.1 ˚C

1. This value is obtained without the presence of the multiple effects
2. Length can be increased by special request
3. Energy range - for an ideal deep water channel
4. Port speed can be changed by special request
5. Different code division schemes are available
6. Built-in depth/temperature option is available
7. Option with built-in depth sensor