

Micron Modem

Underwater Acoustic Modem



Applications

- Through water communications
- AUV control and data collection

The Micron Modem has been designed to provide a reliable data link for through water communications where there are limitations on space and/or power. Suitable for use as a standalone system or part of an AUV control system.

Benefits

- Multipath noise rejection
- Compact size
- Easy to install

Features

- Low error rate
- Low power consumption
- 500m horizontal range
- 150m vertical range

The Micron Modem provides robust spread spectrum data transmission from an extremely compact and low cost unit. Due to its miniature size and low weight, the Micron Modem is suitable for a host of potential sub-sea data transfer applications that were previously impractical or uneconomic with larger, more expensive systems.

The system is able to transmit a maximum data rate of 40 bits per second, making it suitable for a range of through-water, low data rate transfer requirements.

The Micron Modem can also be configured as a transponder or responder, to operate with a Tritech USBL transducer as part of a MicronNav 200 positioning system.

The Micron Modem is also available as a battery powered option in the Tritech Micron Battery Modem about which more information can be found on the Tritech website.

Key Specification	
Range	500m/ 1641ft horizontal, 150m / 493ft vertical
Doppler tolerance	±5m/s
Depth rating	750m / 2460ft
Weight in water	0.08kg / 0.18lbs

Acoustic specification

Frequency band	20 - 28kHz
Data rate	40bits/s or 100bits/s (spread spectrum)
Range	500m horizontal, 150m vertical
Minimum signal to noise ratio	-6dB (in band)
Multipath rejection	Maximum delay spread of 10 - 100ms
Transmitter source	169dB re 1μPa at 1m
Doppler tolerance	±5m/s

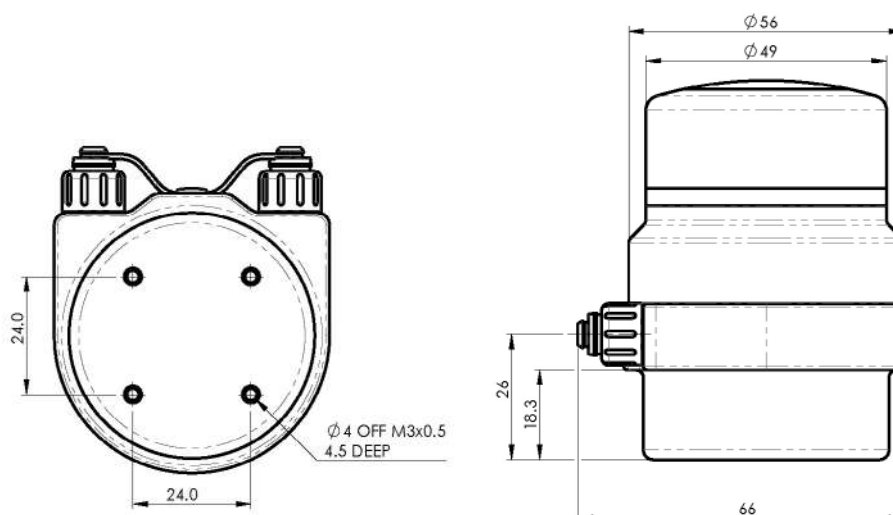
Electrical and Communication

Communications protocol	RS232 or RS485
Power supply	12 - 48V DC
Power consumption	3.5W transmitting 0.28W receiving

Physical specification

Weight in air	0.24kg / 2.00lbs
Weight in water	0.08kg / 1.00lbs
Depth rating	750m / 2460ft
Temperature rating (operational)	-10°C to 35°C / 14°F to 95°F
Temperature rating (storage)	-20°C to 50°C / 4°F to 122°F

*1 Battery Modem operational temperature limited to no less than 10°C during charging or while on external power.
Specification subject to change in line with Trittech's policy of continual product development



Not to scale. Measurements in mm.