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# Preliminary Datasheet

## Modem 6 Mini


Modem 6 Mini 8244-3111 Omni-Directional

### Description

The Modem 6 range, based on existing 6G equipment provides a reliable and cost-effective method of wirelessly transferring underwater sensor data in real-time.

The Modem 6 Mini is compact, easy-to-mount and suitable for transmission of data from a wide range of sensors including: current profilers, temperatures, depth and custom instrumentation.

The Modem 6 Mini is available in MF with an omni-directional or Directional transducer designed for excellent horizontal and shallow water communication.

The Modem 6 is a flexible range of instruments, supporting specific communication settings for a variety of link types such as low latency data, fire and forget, question & answer and large data uploads. A 512 kB modem buffer stores data when a modem link is not active.

All Modem 6 products utilise Sonardyne Wideband® signal processing and standard 6G control language. They can be programmed using the supplied software and a serial link.

This technology is field proven and provides unprecedented levels of robustness and flexibility in challenging acoustic environments.

Data transfer rates range from 9,000 bps down to 200 bps depending on the environment. Advanced communication protocols and intelligent data packet stitching ensure latency is minimised and data is delivered error free.

With the capability to achieve ranges in excess of 3 km, greater distances are also possible (20+ km) using Sonardyne's repeater functionality.

For safety, a pressure relief valve is incorporated and an external on/off switch saves the rechargeable battery when not in use.

### Key Features

- Omni-directional and directional option
- Sonardyne Wideband® telemetry provides up to 9,000 bps true user data rate
- Compatible with all Modem 6 instruments
- Full two-way Sonardyne Wideband 2 interrogation and reply – mitigates interference and multi-path issues
- Incorporates field proven communication technology used within critical subsea applications
- More than 500 unique Sonardyne addresses
- Robust performance in noisy and reverberant environments
- Internal back-up battery with external trickle charge

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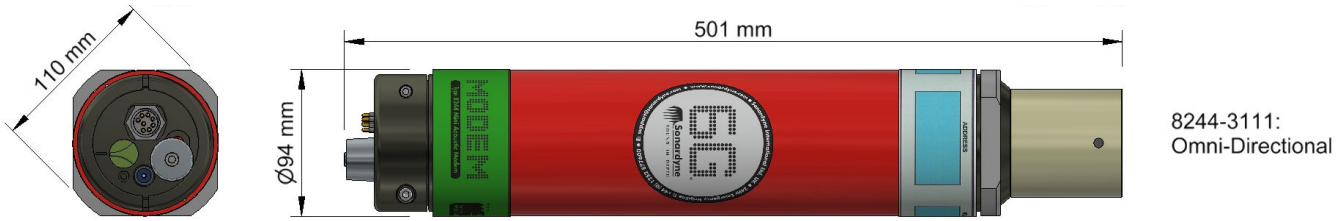
# Preliminary Specifications

## Modem 6 Mini




| Feature | | Type 8244-3111 | Type 8244-3112 |
|---|---|---|---|
| Depth Rating | | 3,000 m | 3,000 m |
| Operating Frequency | | MF (21–32.5 kHz) | MF (21–32.5 kHz) |
| Transducer Beam Shape | | Omni-directional | Directional |
| Source Level | High Power | 187 dB | 193 dB |
| (re 1 µPa @ 1 m) | Low Power | 181 dB | 187 dB |
| Tone Equivalent Energy | High Power | 193 dB | 199 dB |
| (TEE)* WBv2+ | Low Power | 187 dB | 193 dB |
| Range Precision | | Better than 15 mm | |
| Depth Sensor | | ± 0.5% full scale | |
| Communications Interface | | RS232 (2,400–115,200 baud) | |
| Operating Voltage | | 24 or 48 V dc (± 10%) | |
| External Power | Sleep | <300 mW | |
| Consumption | Wideband Listening | <500 mW | |
| | Battery Charging | 6 W | |
| | Peak (Transmission) | <50 W | |
| External Power Switch | | Yes | |
| Battery Life (li-ion 15 V) - Listening | | 30 Days | |
| Operating Temperature | | -5 to 40°C | |
| Storage Temperature | | -20 to 55°C | |
| Mechanical Construction | | Anodised aluminium alloy and plastics | |
| Dimensions: Length x Diameter | | 501 x 94 mm | 513 x 97 mm |
| Weights in Air/Water** | | 5.1/2.2 kg | 7.0/3.5 kg |

*TEE – WBv2+ signals are 4x the duration of Sonardyne tone signals (WBv1 & WBv2 are 2x). The TEE figure shows the operational performance when comparing wideband and tone systems.
**Estimated Weights.