

Preliminary Datasheet

Modem 6 Mini-Dunker



Modem 6 Mini-Dunker
8244-3151 Omni-Directional



Modem 6 Mini-Dunker with
Side Protection and SIU

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-Dunker 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-Dunker is available in MF with an omni-directional transducer designed for excellent horizontal and shallow water communication.

The surface accessory kit comprises of a Modem 6 Mini-Dunker, Surface Interface Unit (SIU) and 20 m deck cable.

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.

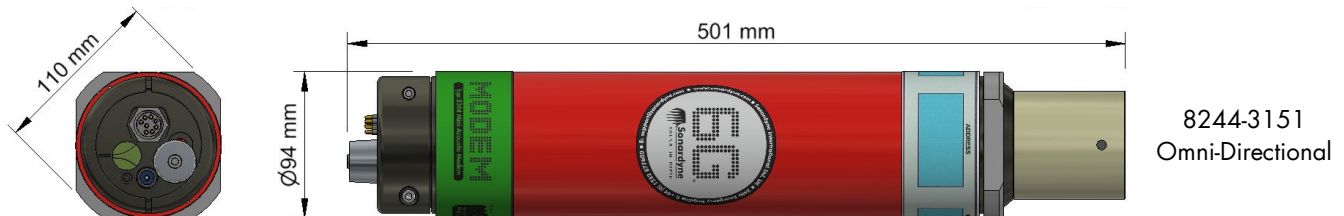
For safety, a pressure relief valve is incorporated and an external on/off switch saves the rechargeable battery when not in use.

Key Features

- MF and LMF 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

Preliminary Specifications

Modem 6 Mini-Dunker



Feature	Type 8244-3151
Depth Rating	3,000 m
Operating Frequency	MF (21–32.5 kHz)
Transducer Beam Shape	Omni-directional
Source Level	High Power 187 dB
(re 1 μ Pa @ 1 m)	Low Power 181 dB
Tone Equivalent Energy	High Power 193 dB
(TEE)* WBv2+	Low Power 187 dB
Range Precision	Better than 15 m
Depth Sensor	\pm 0.5% full scale
Serial Communications	Primary and secondary port: RS485 (half-duplex) SIU input: RS232
Modem 6 Mini-Dunker Operating Voltage	24 or 48 V dc (\pm 10%) – supplied by the SIU
SIU Operating Voltage	90–260 V ac, 50/60 Hz, 200 VA max – power out 48 V dc, 2.0 A max
External Power Consumption	Sleep <300 mW 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
Weights in Air/Water**	5.1/2.2 kg
Surface System Kit	
Surface Interface Unit (SIU)	620-7079
Deck Cable (20 m)	820-0384
Side Protection Kit	890-0104

*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.