

Datasheet

Modem 6 Mini-Dunker (surface)



8244-3151
MF omni



8244-3155
LMF omni

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 and LMF bands with an omni-directional/directional transducer designed for excellent horizontal and shallow water communication.

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

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, acknowledged 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 or any third-party terminal software.

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.

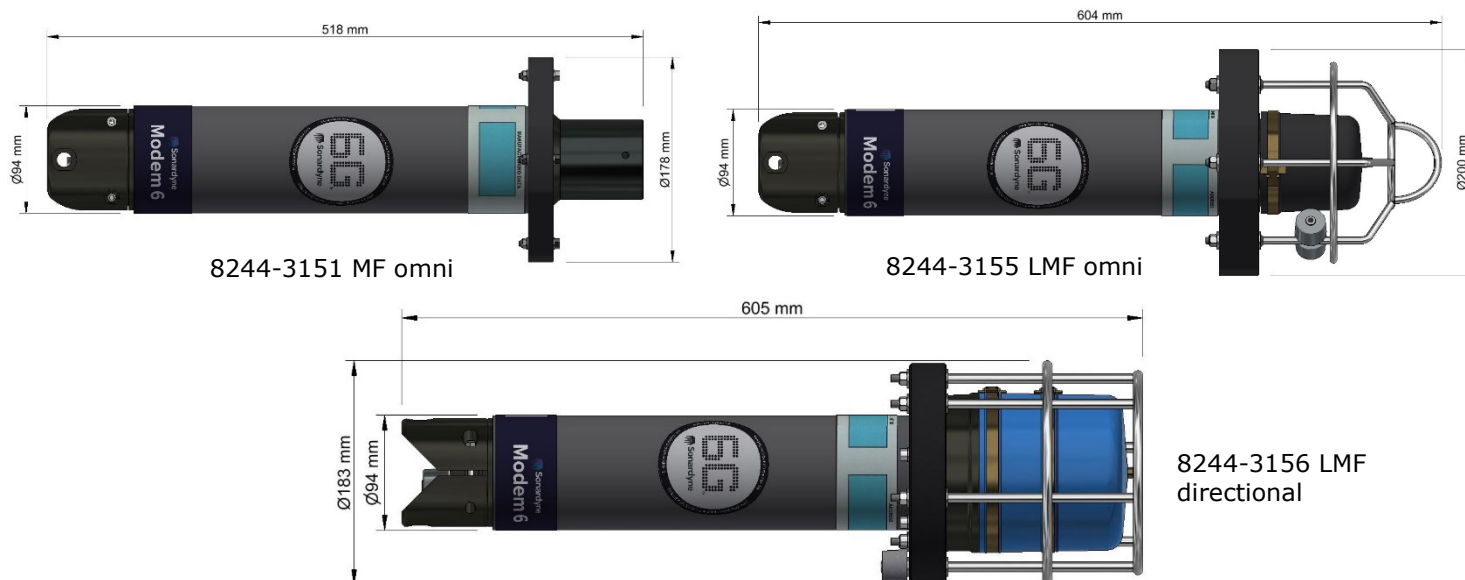
An external on/off switch saves the rechargeable battery when not in use.

Key features

- MF/LMF, omni/directional options
- Sonardyne Wideband telemetry provides up to 9,000 bps actual acoustic 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
- Capable of achieving ranges in excess of 3 km

Specifications

Modem 6 Mini-Dunker (surface)



Feature		Type 8244-3151	Type 8244-3155	Type 8244-3156
Depth rating		3,000 m	3,000 m	3,000 m
Operating frequency		MF (20–34 kHz)	LMF (14–19 kHz)	LMF (14–19 kHz)
Transducer beam shape		Omni-directional	Omni-directional	Directional
Source level (re 1 μ Pa @ 1 m)	High power	187 dB	190 dB	196 dB
	Low power	181 dB	187 dB	190 dB
Tone equivalent energy (TEE) ¹ WBv2+	High power	193 dB	196 dB	202 dB
	Low power	187 dB	193 dB	196 dB
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 maximum		
External power consumption	Sleep	~650 mW	~650 mW	~650 mW
	Wideband listening	~1 W	~1 W	~1 W
	Battery charging	6 W	6 W	6 W
	Peak (transmission)	<50 W	<50 W	<50 W
External power switch		Yes	Yes	Yes
Battery life (li-ion 15 V) (listening)		30 days	30 days	30 days
Operating temperature		-5 to 40°C	-5 to 40°C	-5 to 40°C
Storage temperature		-20 to 55°C	-20 to 55°C	-20 to 55°C
Mechanical construction		Anodised aluminium alloy and plastics		
Dimensions (length x diameter)		518 x 94 mm	604 x 94 mm	605 x 94 mm
Bump guard diameter		178 mm	200 mm	183 mm
Weights in air/water ²		5.1/2.2 kg	7.0/3.5 kg	7.0/3.5 kg
Surface System Kit		602-0123	602-0129	602-0150
Mini-Dunker		8244-3151	8244-3155	8244-3156
Surface Interface Unit (SIU)		620-7079	620-7079	620-7079
Deck cable (20 m)		820-0384	820-0384	820-0384

¹ 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.

² Estimated weights.