Datasheet

Dunker 6 LBL and Telemetry Transceiver System

Dunker 6 is a 6G® Sonardyne Wideband®2 Long BaseLine (LBL) and telemetry transceiver specifically designed for vessel deployment. The super duplex stainless steel housing with shock and vibration isolated electronics makes for an extremely rugged dunking system.

Its high power output and Sonardyne Wideband 2 signal processing offers improved operating range and acoustic performance in challenging conditions such as when deployed from noisy vessels or in multipath environments.

The internal Li-ion rechargeable battery pack minimises the supply current for long dunker cables. It also enables relocation of the dunker if the cable is cut.

The robust AGP connector on the Dunker 6 is identical to the ROVNav 6 and HPT USBL for compatibility and to reduce spares.

Dunker 6 is fully compatible with Sonardyne's modem and logging equipment such as AMT and Fetch products, allowing it to be used to retrieve data or configure logging regimes. It supports all Sonardyne Wideband 2 spread spectrum acoustic communication and can also be used to release the RT 6 range of acoustic releases.

The Dunker 6 system consists of 100 m of cable on a stainless steel cable drum with brake and locking mechanism. The 10 m deck cable between the 48 V Surface Interface Unit (SIU) and the cable drum allows the drum to be conveniently located. The connection to the cable drum is via an easily replaceable 8-way SubConn.

Optionally an RT 6 topside kit with 30 m of cable is available in a carrying case without a cable drum.

Key Features

- High power, long range LBL transceiver
- MF and LMF frequency band utilising Sonardyne Wideband 2 ranging and telemetry protocols
- More robust performance in shallow water and reverberant environments around structures etc.
- Real-time diagnostics available on ranges to enable quality control
- Rugged mechanics and connectors
- Shock mounted internal electronics
- Internal Li-ion battery ensures that the transmit Source Level (SL) is maintained during telemetry
- Integrated modem capability for data download from Sonardyne AMT/Fetch products at data rates from 100 to 9,000 bps
- Capability to operate as topside for RT 6 acoustic releases
- Omni or directional transducers
- Multi-user ready
- Field proven

Specifications

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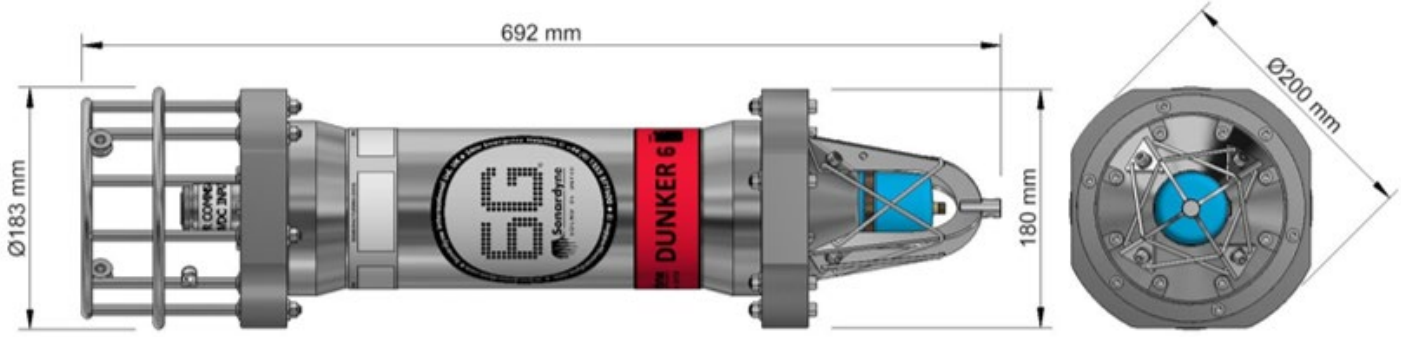

8309-1351 omni-directional shown above

Feature		Type 8309-1351	Type 8309-1353	Type 8309-1355	Type 8309-1356
Depth Rating		1,000 m	1,000 m	1,000 m	1,000 m
Operating Frequency		MF (21–32.5 kHz)	MF (21–32.5 kHz)	LMF (14–19 kHz)	LMF (14–19 kHz)
Transducer Beam Shape		Omni-directional	Directional	Omni-directional	Directional
Transmit Source Level (dB re 1 µPa @ 1 m)		187–196 dB (4 levels)	190–202 dB (4 levels)	187–196 dB (4 levels)	187–202 dB (4 levels)
Tone Equivalent Energy (TEE)[1]		193–202 dB	196–208 dB	193–202 dB	193–208 dB
Receiver Sensitivity (dB re 1 µPa)		90–120 dB (7 levels)	80–120 dB (7 levels)	90–120 dB (7 levels)	80–120 dB (7 levels)
Range Precision		Better than 15 mm			
Serial Communications (Software Programmable)		Primary port: RS485 (half-duplex) or RS232 Secondary port: RS485 (half-duplex) or RS232 or SYNC IN			
Operating Voltage		24 or 48 V dc (±10%)			
External Power	Active (listening)	<3 W typical (maximum 6W when charging)			
	Peak (during transmission)	<80 W			
Battery Life (Li-ion) (Listening)		3 days			
Connector Type		AGP (8-way female)			
Mechanical Construction		Super duplex stainless steel			
Dimensions (Length x Diameter)		692 x 200 mm	660 x 200 mm	586 x 200 mm	641 x 230 mm
Weight in Air/Water[2]		24/16 kg	26/17 kg	20/14 kg	28/17 kg

[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.