

Datasheet

Small Seismic Transponder 6 (SST 6) OEM



The Type 8325 Small Seismic Transponder 6 OEM (SST 6 OEM) has been specifically designed for acoustic positioning of ocean bottom seismic cables and nodes, where high-performance, small-size, low-cost, ease of programming and rugged design are all important operational factors.

SST 6 OEM comprises an electronics PCB and directional or omni-directional acoustic transducer options for integration and use within an Ocean Bottom Node.

The SST 6 OEM operates in the Medium Frequency (MF) band and is compatible with Sonardyne's Ranger 2 Wideband® Nodal USBL systems.

These USBL systems measure both range and bearing to SST 6 OEM in the same operation so an accurate position of the node or cable can be determined very quickly and at a high update rate.

Combining the use of Ranger 2 USBL and SST 6 OEM in this way results in considerable savings in vessel time and gives new standards of efficiency for seismic operations.

Sonardyne Wideband acoustic signal processing offers improved performance in challenging conditions such as at long range, high elevation and deep water tracking, with performance diagnostics provided for quality control.

Another benefit of the SST 6 OEM is its programming ease and flexibility. Any one of 16 group interrogation addresses and 95 reply channels provide more than 1,520 unique acoustic identities which can be quickly programmed into each transponder using the serial interface.

This lends itself to the marking of seismic cables/nodes and other applications demanding dense transponder coverage.

The serial command interface provides the ability to enter SST 6 OEM into a storage mode when not in use, meaning the unit draws no power from the external power supply.

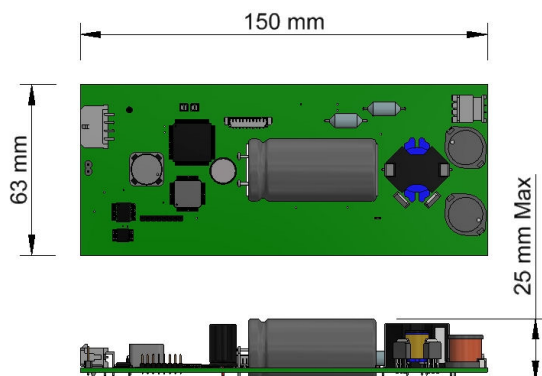
Battery status and other node parameter data can be acoustically uploaded to a surface vessel for quality control purposes.

Key Features

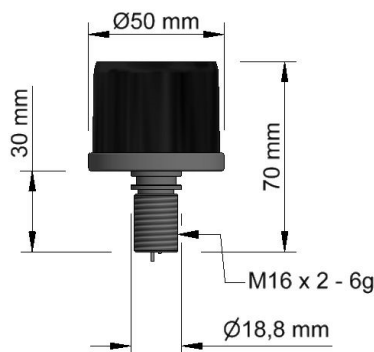
- MF frequency band utilising Sonardyne Wideband Nodal protocol
- Compatible with Sonardyne's MF frequency USBL systems
- Programmable to any one of 16 group interrogations and 95 reply channels, providing 1,520 unique acoustic identities
- Serial command interface
- Bi-directional acoustic telemetry capabilities for status upload
- Group interrogation of up to 95 transponders in one acoustic operation allows fast and efficient node position updates
- Storage mode eliminates power consumption when not in use
- Compact and rugged design

Specifications

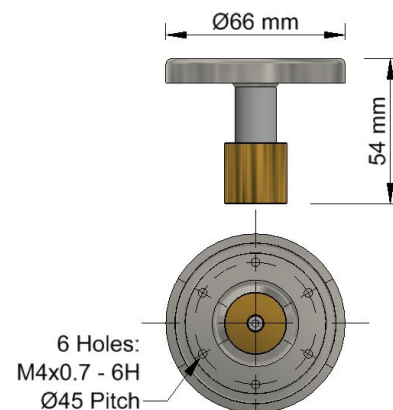
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Transceiver Electronics:
8325-038-01



Omni-Directional Transducer
8052-001-05



Directional Transducer:
8325-095

Feature		Type 8325 OEM
Operating Range		Up to 3,500 m
Operating Band		MF (19–34 kHz)
Transducer Beam Shape	Omni-directional	±130°
	Directional	±50° (at 28 kHz)
Source Level (re 1 µPa @ 1 m)	Omni-directional	187 dB
	Directional	193 dB
Communication Interface		UART (3.3 V CMOS) / Serial RS232 (optional)
MEMS Tilt Sensor (Optional)		±90°
Power Supply ¹		3.1–5.0 V dc 0 mW storage mode 4 mW quiescent current (listening) 3 W peak power following transmission
Transducer Wire Length ²		150 mm
Operating Temperature		-5 to 40°C
Storage Temperature		-20 to 55°C
Board Dimensions (Length x Width x Height)		150 x 63 x 25 mm
PCB Weight in Air		125 g
Transducer Weight in Air	Omni-directional	200 g
	Directional	220 g

¹ Any noise on the external dc power supply will have an effect on the acoustic performance of the instrument.

² Alternative transducer wire lengths and connector arrangements can be specified; contact Sonardyne for more information.