

Datasheet

Wideband Sub-Mini 6 Plus (WSM 6+) Release Transponder



Description

The Wideband Sub-Mini 6 Plus (WSM 6+) Release transponder is an extension to Sonardyne's latest generation of versatile USBL transponders/responders that support Wideband[®]2 signals. The WSM 6+ release is designed for rapid free fall deployment and recovery, ideal for a temporary seabed reference. The integrated screw release mechanism is based on the field proven LRT design and suitable for deployment up to 4000 m.

The compact and rugged design is based on the field proven WSM mechanics and is available in MF Directional and MF Omni-Directional versions. The latest Sonardyne Wideband 2 signal technology has been incorporated, which offers superior ranging accuracy and fast USBL position updates.

The WSM 6+ improves on its predecessors by offering full two-way Wideband support – interrogation and reply signals. All Wideband 2 signals are supported. Legacy support is also available for Wideband V1 and HPR 400. The configuration is programmable using supplied software and a serial link or it can be configured acoustically via iWAND. This allows the WSM 6+ to be configured for use with all of the popular MF frequency acoustic navigation systems.

The Type 8370-1171 WSM 6+ is equipped with an Omni-directional transducer and is depth rated to 1,000 m making it suitable for a wide range of general USBL tracking applications.

The Type 8370-4172 WSM 6+ is depth rated to 4,000 m and features a higher power directional transducer.

Both types of WSM 6+ have a depth sensor fitted as standard to aid USBL positioning accuracy and an external on/off switch to save the battery when not in use.

WSM 6+ variants are available with acoustically controlled output lines suitable for external motor drive, burnwire or contact closure releases.

Typical Applications

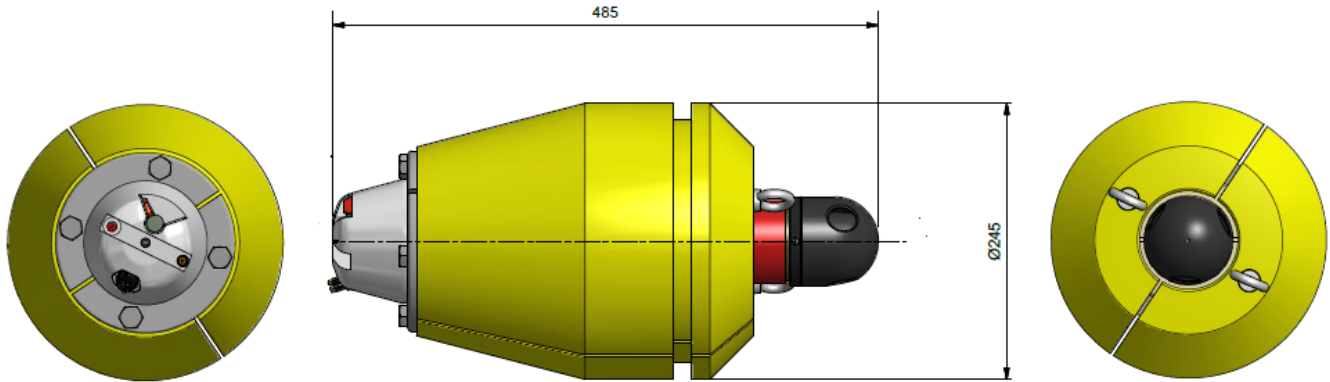
- USBL Calibration transponder
- Short term reference transponder

Key Features

- Full two-way Sonardyne Wideband 2 interrogation and reply – mitigates interference and multi-path issues
- More than 500 unique Sonardyne Wideband 1 and 2 addresses
- Sonardyne Wideband 1 and HPR 400 navigation compatible
- Choice of 1,000 m and 4,000 m depth rating
- Choice of Omni-Directional or Directional beam-shape
- Transponder or Responder operating modes
- Depth sensor for improved USBL positioning performance
- Rechargeable NiMH battery
- External on/off switch for saving battery when not in use
- Compact and rugged design
- Release variants available

Specifications

Wideband Sub-Mini 6 Plus (WSM 6+) Release Transponder



Feature	Type 8370-1171	Type 8370-4172
Depth Rating	1,000 Metres	4,000 Metres
Maximum Release Load	125 kg	125 kg
Flotation Buoyance (up thrust)	4 kg	3.7 kg
Operational Frequency	MF (19–34 kHz)	MF (19–34 kHz)
Transceiver Beamshape	Omni-Directional	Directional
Transmit Source Level (19–34 kHz) (External Power)	187 dB	196 dB
(re. 1 µPa @ 1 m) (Battery)	184 dB	193 dB
Tone Equivalent Energy (TEE*) (External Power)	193 dB	202 dB
Receive Sensitivity (dB re 1 µPa)	<85 dB	<80 dB
Power Supply	Rechargeable NiMH battery or ext. 24 V via ROV umbilical	Rechargeable NiMH battery or ext. 24 V via ROV umbilical
Operating Channels	All Sonardyne Wideband HPR 400 Channels	All Sonardyne Wideband HPR 400 Channels
Depth Sensor	±0.5% Full Scale (100 Bar)	±0.5% Full Scale (400 Bar)
Operating life (1 s update rate, max. power, WB2)	>6 days	>3 days
Maximum Update Rate	>2 Hz	>2 Hz
Quiescent Life (Battery)	>35 Days	>35 Days
Battery Charger	8370-011-01	8370-011-01
Connector		
5-Way (Standard)	Subconn MCBH5M	Subconn MCBH5M
8-Way (Burnwire/Motor Release)	Subconn MCBH8F	Subconn MCBH8F
Operating Temperature	-5 to 40°C	-5 to 40°C
Storage Temperature	-20 to 55°C	-20 to 55°C
Mechanical Construction	Aluminium Alloy, Anodised	Aluminium Alloy, Anodised
Dimensions (Without Float) Length x Diameter	437 mm (17.2") x 75 mm (2.95")	436 mm (17.2") x 88 mm (3.45")
Weight in Air (Without Float)**	3.7 kg	6.0 kg

*TEE – WBv2 & WBv1 signals are 2x the duration of Sonardyne tone signals, therefore the TEE figure gives the user an idea of the operational performance when comparing Wideband and Tone systems.

**Estimated Weights