

Datasheet

MF Sensor Logging Transponder (SLT)



Description

The Type 8308 SLT is a long-endurance Compatt 6 based transponder that is extensively used for subsea survey tasks and is capable of autonomously acquiring sensor data without surface control. The data is time-stamped and logged internally for recovery via the integrated high-speed acoustic telemetry modem. This autonomy allows measurements to be made over a long period of time without requiring a surface vessel or ROV to command the process. This enables new applications that save vessel and survey time so reducing cost and risk.

Precision pressure, temperature, sound velocity and dual-axis inclinometer sensors are integrated and are intelligently powered up at the requested time and sampling period, providing an ultra-low power platform for up to five years deployment. Sampling regimes can be re-programmed and recovery of all data can be achieved via the acoustic telemetry link.

The SLT has many of the same acoustic functions as Compatt 6. It operates in the Medium Frequency (MF) band and is fully Sonardyne Wideband[®]2 compatible.

The SLT is available with a range of Omni and directional transducers, depth ratings and pressure housings dependent on deployment duration and application. Additional external sensors can be easily integrated via the power and communications port.

Typical Applications

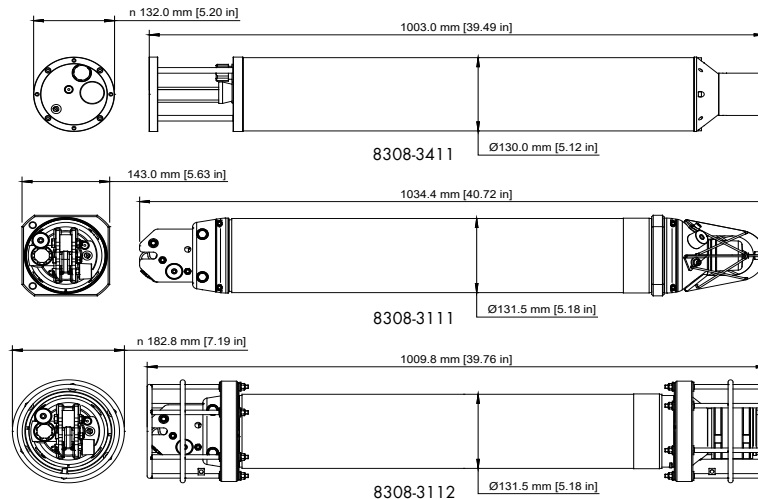
- Metocean platform: Subsea acquisition of current profile, temperature, sound velocity and tidal height record
- AUV survey and metrology reference, acoustic position reference, SV and tidal height correction station

Key Features

- Autonomous operation: acquires sensor data without surface command
- Integrated precision sensors: pressure, temperature, sound velocity and inclinometers
- Options for external sensors: current meters, turbidity etc.
- Easy to set-up with configuration and sampling period programmable via telemetry link
- Integrated high speed modem functions
- Sonardyne Wideband[®] compatible navigation functions
- 5 year deployment battery life possible with Maxi version
- Alkaline and lithium battery options
- HiPAP[®] and USBL compatible
- Depth rated to 3000 metres: (Options for 5000 metres and 7000 metres)
- Corrosion resistant aluminium bronze or hard-anodised aluminium housing options
- Optional integrated release

Specifications

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Feature	Type 8308-3411	Type 8308-3111	Type 8308-3112
Depth Rating	3,000 metres	3,000 metres	3,000 metres
Operating Frequency	MF (19–34 kHz)	MF (19–34 kHz)	MF (19–34 kHz)
Transducer Beamshape	Omni-directional	Omni-directional	Directional
Transmit Source Level (dB re 1 µPa @ 1 m)	187-196 dB (4 Levels)	187-196 dB (4 Levels)	190-202 dB (4 Levels)
Tone Equivalent Energy (TEE*)	193-202 dB	193-202 dB	196-208 dB
Receive Sensitivity (dB re 1 µPa)	90-120 dB (7 levels)	90-120 dB (7 levels)	80-120 dB (7 levels)
Ranging Precision	Better than 15 mm	Better than 15 mm	Better than 15 mm
Number of Unique Addresses Wideband 1 & 2	>600	>600	>600
Battery Life Listening, Disabled	Alkaline 833 days Lithium 1390 days	833 days 1390 days	833 days 1390 days
Safe Working Load (4:1)	N/A	250kg	250kg
Mechanical Construction	Aluminium-Bronze	Aluminium	Aluminium
Dimensions Length x Diameter	1003 x 135 mm	1035 x 135 mm	1010 x 135 mm
Weight in Air/Water**	43 kg/30.5 kg	22.8 kg/11.6 kg	26 kg/13.6 kg
Endcap Sensors and Options			
Temperature (±0.1°C)	Standard	Standard	Standard
Tilt Switch (±30-45°)	Standard	Standard	Standard
Strain Gauge Pressure Sensor (±0.1%)	Standard	Standard	Standard
High Precision Strain Gauge (±0.01%)	Optional	Optional	Optional
Presens or Keller			
Paroscientific DigiQuartz Pressure Sensor 1350 m, 2000 m, 4130 m, 6800 m (±0.01%)	Optional	Optional	Optional
High Accuracy Inclinometer Range: ±90°, Accuracy: ±0.05° over 0 - ±15°; ±0.2° over 0 - ±45°	Optional	Optional	Optional
Sound Velocity Sensor ±0.02 m/s accuracy under calibration conditions	Optional	Optional	Optional
Release Mechanism	Not Available	Standard	Standard

*TEE – WBv2+ signals are 4x the duration of (WBv1 & WBv2 are twice) of Sonardyne tone signals, therefore the TEE figure is to give the user an idea of the operational performance when comparing Wideband and Tone systems.

**Estimated Weights