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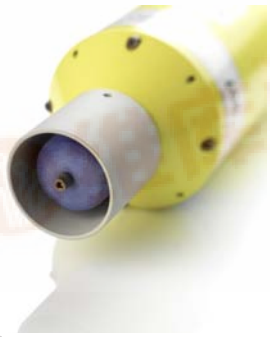
Datasheet

Autonomous Monitoring Transponder (AMT)



Description

The Type 8305 AMT is an extension to the functionality provided by Compatt 5 (extensively used for subsea survey tasks) but with unique autonomous (without surface control) acquisition of acoustic ranges and sensor data. The data is time-stamped and logged internally for recovery via the integrated high-speed acoustic telemetry modem. The autonomy allows measurements to be made over a long period of time without a surface vessel or ROV being available to command the process. This enables new applications that save vessel and survey time so reducing cost and risk.

Precision sensors (pressure, temp, sound velocity and dual-axis inclinometers) are integrated and are intelligently powered up at the requested time and sampling period, providing an ultra-low power platform for up to three years deployment, including recovery of all data via telemetry. Sampling regimes can be re-programmed remotely via the telemetry link.

The AMT has many of the same acoustic functions as Compatt5, operates in the Medium Frequency band and is fully Sonardyne Wideband® compatible.

The AMT is available with a range of transducers (omni and directional), depth ratings and pressure housings dependent on deployment duration and application. Additional sensors can be easily integrated externally 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
- Pipeline buckle monitoring
- Structure settlement monitoring

Key Features

- Autonomous operation: acquires acoustic ranges & sensor data without surface command
- Integrated precision sensors: pressure, temp, SV, inclinometers
- Options for external sensors: current meters etc.
- Easy to set-up with configuration and sampling period programmable via telemetry link
- Integrated high speed modem functions
- Sonardyne Wideband compatible navigation functions
- 3 year deployment battery life: Alkaline and lithium battery options
- HiPAP® and USBL compatible
- Depth rated to 3000 Metres: (Options for 5000 Metres and 7000 Metres)
- Aluminium bronze or hard-anodised aluminium housing options
- Integrated release mechanism option

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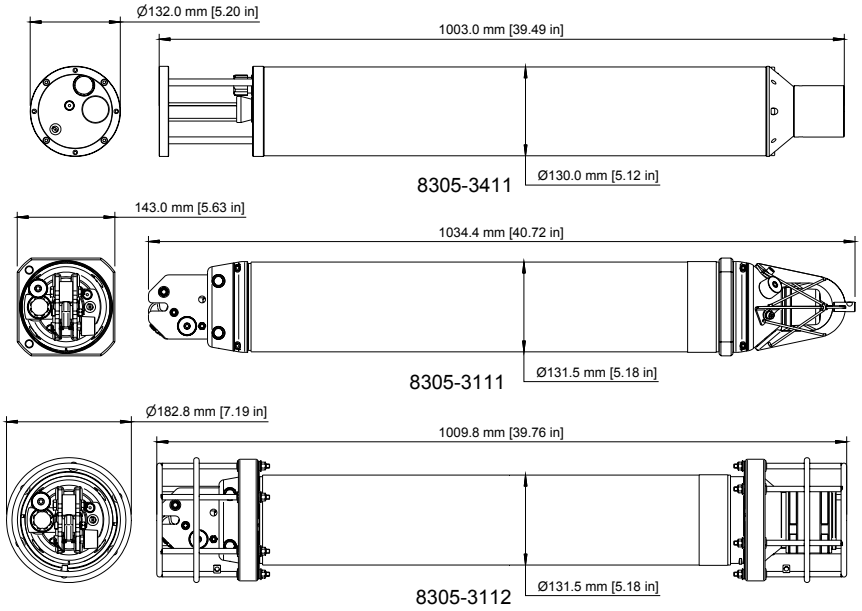
Specifications

Autonomous Monitoring Transponder (AMT)



Feature	Type 8305-3411	Type 8305-3111	Type 8305-3112
Depth Rating*	3,000 Metres	3,000 Metres	3,000 Metres
Operating Frequency	MF (18–36kHz)	MF (18–36kHz)	MF (18–36kHz)
Mechanical Construction	Aluminium-Bronze	Aluminium	Aluminium
Transducer Beamshape	Omni-Directional	Omni-Directional	Directional
Transmit Source Level (dB re 1µPa @ 1m)	185-192dB (3 Levels)	185-192dB (3 Levels)	190-202dB (3 Levels)
Receive Sensivity (dB re 1µPa)	85-120dB	85-120dB	85-120dB
Relative Positioning Accuracy*	±5cm	±5cm	±5cm
Number of Unique Addresses (Wideband)	224	224	224
Battery Life (Listening, Disabled)	833 days (Alkaline) 1390 days (Lithium)	833 days (Alkaline) 1390 days (Lithium)	833 days (Alkaline) 1390 days (Lithium)
Safe Working Load (4:1)	N/A	250kg	250kg
Dimensions (L x Dia)	1003mm x 132mm	1035mm x 143mm	1012mm x 183mm
Weight In Air/Water	43kg/30.5kg	22.8kg/11.6kg	26kg/13.6kg

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
Quartz Pressure Sensor (±0.01%) 1350m, 2000m, 3000m, 6000m	Optional	Optional	Optional
High Accuracy Inclinometer Range: ±90°, Accuracy: ±0.05° over 0 - ±15°; ±0.2° over 0 - ±45°	Optional	Optional	Optional
Sound Velocity (±0.06m/s)	Optional	Optional	Optional
Release Mechanism	Not Available	Standard	Standard

*Dependant on fitted sensor **Depends on knowledge of sound speed