Sonardyne Global Headquarters
T. +44 (0) 1252 872288
F. +44 (0) 1252 876100
E. sales@sonardyne.com
www.sonardyne.com

Datasheet

Compatt 6 – USBL / LBL Transponder and Modem

Description

Compatt 6 offers significant time saving using faster and more robust Wideband® 2 acoustic ranging and telemetry protocols. This makes any system operating with Compatt 6 significantly easier to operate therefore de-risking operations, reducing vessel time and reducing training requirements for offshore personnel. For example, in one transmission, Compatt 6 tells the navigation system what sensors and functionality it has available as well as its complete configuration.

Sonardyne Wideband® 2 advanced signal processing offers improved acoustic performance in challenging conditions, longer range, improved multipath rejection around structures and real-time range diagnostics for quality control. Wideband® 2 also reduces the interference to and from adjacent Sonardyne and other acoustic positioning systems.

Compatt 6 is fully compatible with all 6G® equipment and Sonardyne latest 6G® LBL and USBL systems.

The integrated communications and navigation technology allows the transponder to be used as a multi-purpose modem, autonomous data logger and navigation reference transponder.

The Type 8300 Compatt 6 is the standard length version and is based on the field proven mechanics of Compatt 5 with improvements to the end-cap closure mechanisms. The design offers the perfect balance between size, acoustic output and battery life. Several depth ratings are available: 3000 m, 5000 m and 7000 m all hard anodised aluminium alloy with protective polyurethane sleeve. Midi and Maxi (long endurance) options are also available.

Key Features

- MF frequency band utilising Sonardyne's latest Wideband® 2 ranging and telemetry protocols
- Dramatically faster and easier to set-up, calibrate and operate
- More robust performance in shallow water and reverberant environments around structures etc
- Real time diagnostics available on ranges to enable quality control
- Reduced mutual interference to further improve simultaneous ops
- Advanced multi-user / multi-vessel capability
- More than 600 unique Wideband® 1 and 2 addresses
- Sonardyne Wideband® 1 and HPR400 navigation compatible
- Automatic power-down if not used for a programmable period
- Integrated modem mode with data rates ranging from 100 to 6000 bits per second in multiple frequency bands
- Highly reliable release mechanism
- Omni or Directional transducer
- Standard sensors – Temperature, Depth and MEMS inclinometer
- Optional sensors – Paroscientific DigiQuartz pressure sensor, inclinometer and sound velocity
- Field proven

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Specifications

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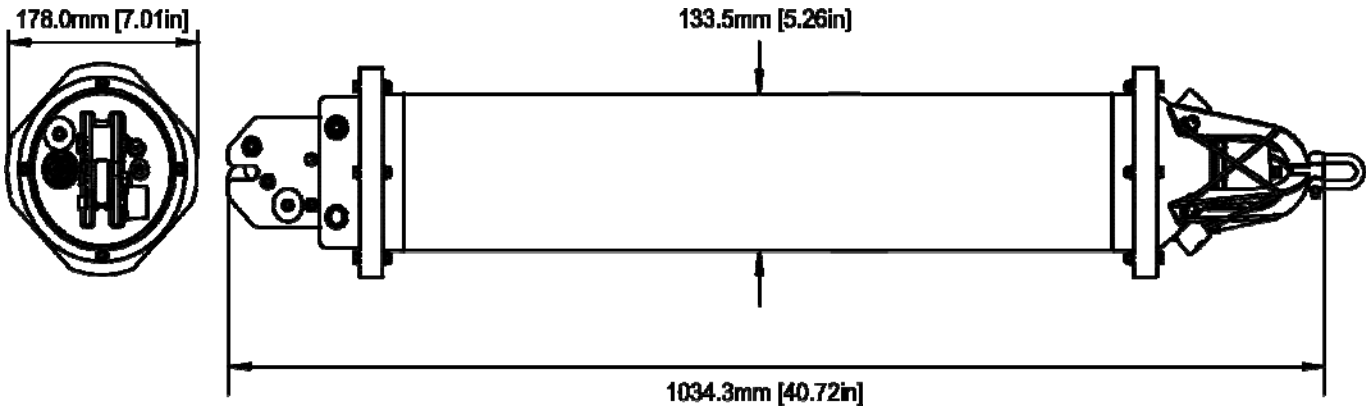

Feature		Type 8300-3111	Type 8300-3113	Type 8300-5213
Depth Rating		3,000 metres	3,000 metres	5,000 metres
Operating Frequency		MF (19–34kHz)	MF (19–34kHz)	MF (19–34kHz)
Transducer Beamshape		Omni-Directional	Directional	Directional
Transmit Source Level (dB re 1µPa @ 1m)		187-196dB (4 Levels)	190-202dB (4 Levels)	190-202dB (4 Levels)
Tone Equivalent Energy (TEE*)		193-202dB	196-208dB	196-208dB
Receive Sensitivity (dB re 1µPa)		90-120dB (7 Levels)	80-120dB (7 Levels)	80-120dB (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	833 days	833 days
	Lithium	1390 days	1390 days	1390 days
External Power Supply		24 V	24 V	24 V
Safe Working Load (4:1)		250 kg	250 kg	250 kg
Dimensions Length x Diameter		1035 mm x 134 mm	1018 mm x 134 mm	1010 mm x 143 mm
Weight in Air (Water)		23.8 kg (11.8 kg)	27 kg (14 kg)	28 kg (15 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%) Presens or Keller	Optional	Optional	Optional
Paroscientific DigiQuartz Pressure Sensor 1350 m, 2000 m, 4130 m, 6800 m (±0.01%)	Optional	Optional	Optional
Inclinometer (Tilt sensor) Range ±90°, Accuracy: ±1°	Standard	Standard	Standard
High Accuracy Inclinometer Range: ±90°, Accuracy: ±0.05° over 0 - ±15°; ±0.2° over 0 - ±45°	Optional	Optional	Optional
Sound Velocity 100 mm (±0.017 m/s) Sound Velocity 50 mm (±0.19 m/s)	Optional	Optional	Optional
Release Mechanism	Standard	Standard	Standard
Power for External Sensors	Standard	Standard	Standard
Gyro Input	Standard	Standard	Standard

*TEE – WBv2+ signals are 4x the duration (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