

## Datasheet

# Compatt 6 Mini – USBL/LBL Transponder and Modem



### Description

The Type 8300 Mini is the smallest in the range of Compatt 6 transponders. The design offers the user a lightweight unit with the same acoustic output power as a standard sized unit, but without the integrated sensor system. The mechanical design is based on the field proven Compatt 5. Its size is perfectly suited to deep water vehicle navigation and telemetry applications.

Compatt 6 offers significant time saving using faster and more robust Sonardyne 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.

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. Sonardyne 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 and navigation reference transponder.

The mini version is particularly suited to smaller ROVs and Towed bodies as well as metrology applications due to shorter lever arms between sensors and the acoustic transducer.

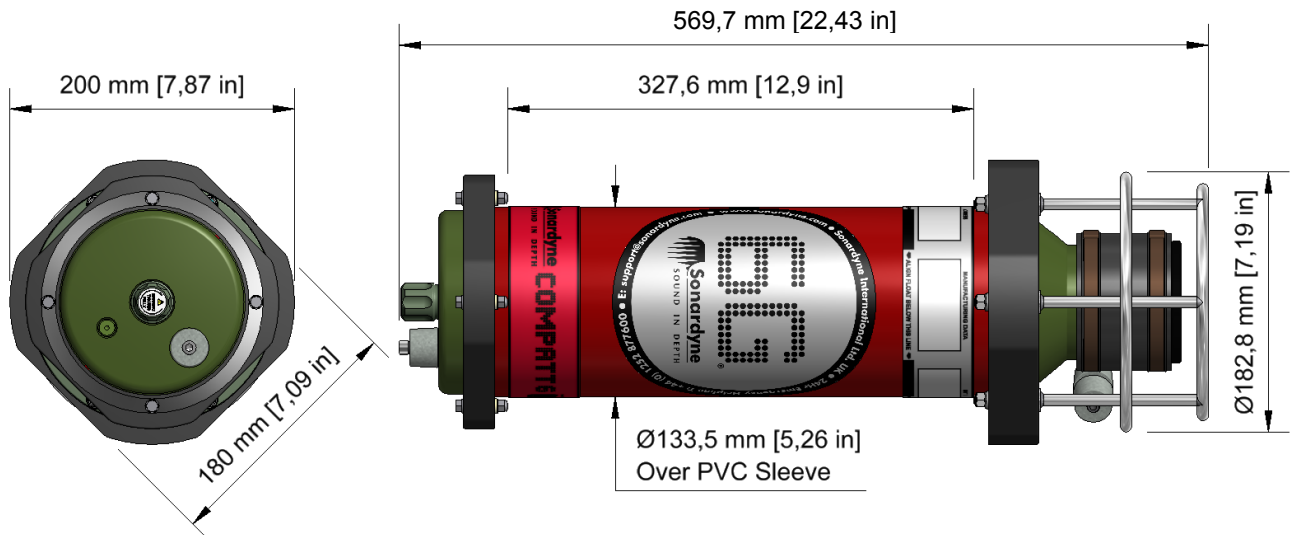
Several depth ratings are available: 3000 m, 5000 m and 7000 m, all hard anodised aluminium alloy with protective polyurethane sleeve.

### Key Features

- MF frequency band utilising Sonardyne Wideband 2 ranging and telemetry protocols
- 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 500 unique Sonardyne Wideband 1 and 2 addresses
- Sonardyne Wideband 1 and HPR 400 navigation compatible
- Automatic power-down if not used for a programmable period
- Integrated modem mode with data rates ranging from 100 to 9000 bits per second in multiple frequency bands
- Omni-directional or directional transducers
- Battery disconnect fob allows quick battery disconnection.
- Field proven

## Specifications

# Compatt 6 Mini– USBL/LBL Transponder and Modem



3 km Depth Rated MF Directional Version Shown (8300-3133)

Feature	Type 8300-3131	Type 8300-3133	Type 8300-7233
Depth Rating	3,000 Metres	3,000 Metres	7,000 Metres
Operating Frequency	MF (19–34 kHz)	MF (19–34 kHz)	MF (19–34 kHz)
Transducer Beam Shape	Omni-Directional	Directional	Directional
Transmit Source Level (dB re 1 $\mu$ Pa @ 1 m)	187-196 dB (4 Levels)	190-202 dB (4 Levels)	190-202 dB (4 Levels)
Tone Equivalent Energy (TEE)*	193-202 dB	196-208 dB	196-208 dB
Receive Sensitivity (dB re 1 $\mu$ Pa)	90-120 dB (7 Levels)	80-120 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	>500	>500	>500
Battery Life (Listening)	Lithium 400 Days	400 Days	400 Days
Operating Temperature	-5 to 40°C	-5 to 40°C	-5 to 40°C
Storage Temperature	-20 to 55°C	-20 to 55°C	-20 to 55°C
Dimensions; Length x Diameter	595 mm x 134 mm	570 mm x 134 mm	570 mm x 140 mm
Weight in Air/Water**	11.9/5.2 kg	13.9/5.6 kg	13.9/5.6 kg

### End Cap Options

Option	Type 8300-3131	Type 8300-3133	Type 8300-7233
Tilt Switch ( $\pm$ 30-45°)	Standard	Standard	Standard
Power for External Sensors (VBatt ~15 V or Regulated 12 V)	Standard	Standard	Standard
Sync Input (Responder 5 to 24 V)	Standard	Standard	Standard
Modem Port	Standard	Standard	Standard
External Power (24 V)	Standard	Standard	Standard

\*TEE – WBv2+ signals are 4x the duration of Sonardyne tone signals (WBv1 & WBv2 are 2x). The TEE figure shows the operational performance when comparing wideband and tone systems.

\*\*Estimated Weights.