

Datasheet

Dynamic Positioning Transponder 6 (DPT 6) – Midi



Description

DPT 6 – Midi is designed primarily to be used as a seabed reference transponder by USBL and LUSBL acoustic positioning systems, installed on many Dynamically Positioned (DP) vessels.

The DPT 6 – Midi supports Sonardyne Wideband[®]2 acoustic ranging and telemetry providing high accuracy positioning, robust performance in noisy and multipath conditions and easy set-up and use. With hundreds of channels, less interference to and from other acoustic systems and multi-user capability, Sonardyne Wideband[®]2 enables easier SIMOPS vessel capability. These features of the DPT 6 – Midi help de-risk subsea operations and save vessel time and cost.

When size is an operational factor, the DPT 6 – Midi offers all the functionality and performance of a standard-sized DPT, but in a shorter housing that can be easily deployed by ROV.

The DPT – Midi has a hard anodised aluminium alloy housing with protective polyurethane sleeve, and is depth rated to 3000 m. The DPT - Midi is fitted as standard with a highly reliable release mechanism to enable the unit to be deployed in a floatation collar and recovered to the surface without ROV intervention.

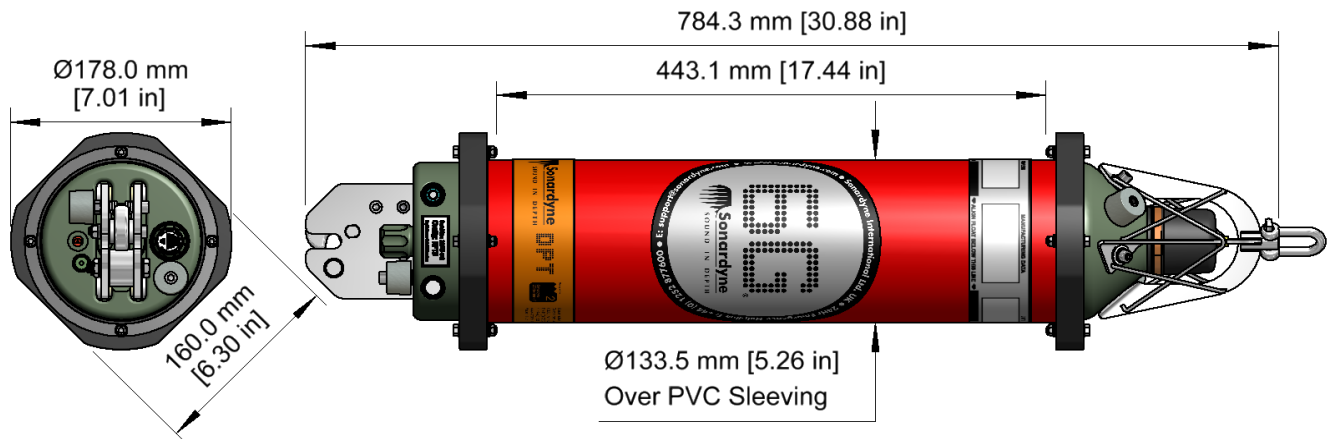
DPT 6 - Midi is fully compatible with all of Sonardyne's latest 6G[®] equipment including Sonardyne's Marksman LUSBL and Ranger 2 USBL systems.

Key Features

- MF frequency band utilising Sonardyne Wideband[®]2 ranging and telemetry protocols
- Dramatically faster and easier to set-up and operate
- Robust acoustic performance in noise and multipath conditions
- 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 channels
- Sonardyne Wideband[®]1 and HPR400 USBL mode compatible
- Automatic power-down if not used for a programmable period
- Highly reliable release mechanism
- Omni or directional transducer
- Standard sensors: temperature, pressure and MEMS inclinometer
- Optional sensors: Paroscientific DigiQuartz pressure sensor, inclinometer and sound velocity
- Real time diagnostics available on ranges to enable quality control
- Field proven

Specifications

Dynamic Positioning Transponder 6 (DPT 6) – Midi



3km Depth Rated MF Omni version shown (8301-3141)

Feature	Type 8301-3141	Type 8301-3143
Depth Rating	3,000 Metres	3,000 Metres
Operating Frequency	MF (19–34 kHz)	MF (19–34 kHz)
Transducer Beam Shape	Omni-Directional	Directional
Transmit Source Level (dB re 1 μ Pa @ 1 m)	187-196 dB (4 Levels)	190-202 dB (4 Levels)
Tone Equivalent Energy (TEE)*	193-202 dB	196-208 dB
Receive Sensitivity (dB re 1 μ Pa)	90-120 dB (7 Levels)	80-120 dB (7 Levels)
Ranging Precision	Better Than 15 mm	Better Than 15 mm
Number of Unique Addresses Wideband 1 & 2	>500	>500
Battery Life (Listening) Lithium	400 Days	400 days
Safe Working Load (4:1) (Release Mechanism)	250 kg	250 kg
Dimensions; Length x Diameter	784 mm x 178 mm	768 mm x 200 mm
Weight in Air (Water)**	16 kg (7.4 kg)	19 kg (9.6 kg)

End Cap Sensors and Options

Temperature ($\pm 0.1^\circ\text{C}$)	Standard	Standard
Tilt Switch ($\pm 30-45^\circ$)	Standard	Standard
Strain Gauge Pressure Sensor ($\pm 0.1\%$)	Standard	Standard
High Precision Strain Gauge ($\pm 0.01\%$) Presens or Keller	Optional	Optional
Paroscientific DigiQuartz Pressure Sensor 1350m, 2000m, 4130m, 6800m ($\pm 0.01\%$)	Optional	Optional
Inclinometer (Tilt Sensor) Range $\pm 90^\circ$, Accuracy: $\pm 1^\circ$	Standard	Standard
High Accuracy Inclinometer Range: $\pm 90^\circ$, Accuracy: $\pm 0.05^\circ$ over $0 - \pm 15^\circ$; $\pm 0.2^\circ$ over $0 - \pm 45^\circ$	Optional	Optional
Sound Velocity 100m (± 0.017 m/s)	Optional	Optional
Sound Velocity 50mm (± 0.03 m/s)		
Release Mechanism	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.