Datasheet

Dynamic Positioning Transponder 6 (DPT 6) – Midi

DPT 6 – Midi is designed primarily to be used as a seabed reference transponder by Ultra-Short BaseLine (USBL) and Long and Ultra-Short BaseLine (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 a Remotely Operated Vehicle (ROV).

The DTP – 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.

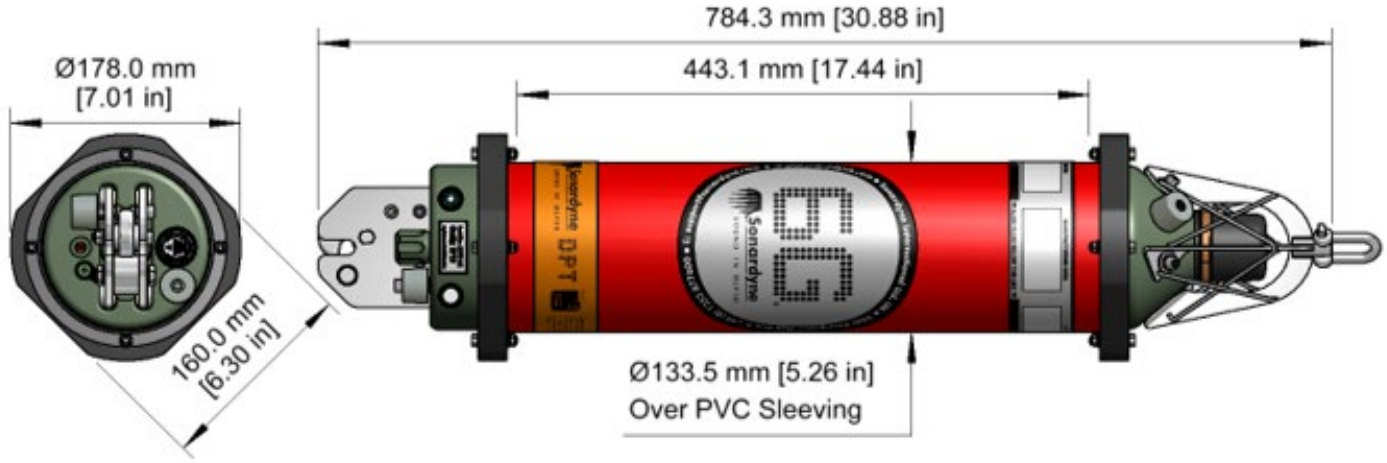
DPT 6 - Midi is fully compatible with all of Sonardyne's latest 6G® equipment including Sonardyne's Marksman LUSBL and Ranger 2 USBL systems.

Key Features

- Medium Frequency (MF) 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



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

Feature	Type 8301-3141	Type 8301-3143
Depth Rating	3,000 m	3,000 m
Operating Frequency	MF (19–34 kHz)	MF (19–34 kHz)
Transducer Beam Shape	Omni-directional	Directional
Transmit Source Level (dB re 1 µPa @ 1 m)	187–196 dB (4 levels)	190–202 dB (4 levels)
Tone Equivalent Energy (TEE)[1]	193–202 dB	196–208 dB
Receive Sensitivity (dB re 1 µPa)	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 x 178 mm	768 x 200 mm
Weight in Air/Water[2]	16/7.4 kg	19/9.6 kg
Endcap Sensors and Options		
Temperature (±0.1°C)	Standard	Standard
Tilt Switch (±30–45°)	Standard	Standard
Strain Gauge Pressure Sensor (±0.1%)	Standard	Standard
High Precision Strain Gauge (±0.01%) Presens or Keller	Optional	Optional
Paroscientific DigiQuartz Pressure Sensor 1,350 m, 2,000 m, 4,130 m, 6,800 m (±0.01%)	Optional	Optional
Inclinometer (Tilt Sensor) Range ±90°, Accuracy: ±1°	Standard	Standard
High Accuracy Inclinometer Range: ±90°, Accuracy: ±0.05° over 0 - ±15°; ±0.2° over 0 - ±45°	Optional	Optional
Sound Velocity Sensor ±0.02 m/s Accuracy Under Calibration Conditions	Optional	Optional
Release Mechanism	Standard	Standard

[1] 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.
[2] Estimated Weights.