Lodestar Gyro Compatt 6

Lodestar GyroCompatt 6 integrates Sonardyne's Wideband®2 acoustic positioning and Lodestar AHRS technology in one small, highly versatile and robust instrument. This provides high update rate wireless attitude, heading, heave, surge,sway, temperature, pressure, SV and acoustic positioning of any subsea object. Compatible with USBL and LBL positioning systems, the Lodestar GyroCompatt 6 provides real time motion data for structure deployment via the integrated high speed acoustic modem.

The internal high capacity rechargeable battery pack enables quick charge times and up to 28 hours of continuous operation with the ability to turn the gyro on and off to save battery life giving over two months of transponder life. The instrument is small and light enough to be ROV installed and a mechanical stab enables precision alignment to any structure.

Specifications

Product	Compatt 6+ USBL/LBL transponder and modem
Country of origin	UK
Manufacturer	Sonardyne

Typical applications

- Long baseline positioning
- Spool piece metrology
- Pipeline lay-down
- Subsea structure placement

Structure position and orientation can be accurately determined during lowering, set-down and as-built surveys. Using the Lodestar GyroCompatt 6 for metrology delivers the measurements required for pipe-end coupling.

The stab, gyro and transducer are pre-aligned and this speeds up spot measurements as only single observations are required. Autonomous logging negates the need for a vessel and ROV to be on standby taking measurement during long term settlement observations. Modular construction allows for upgrade and service access to the transponder module.

Key Features

- Sonardyne Wideband®2 acoustic positioning transponder and Lodestar AHRS unit in a single unit
- Rechargeable 28 hr internal battery pack; option for external power
- Acoustic, serial and manual ROV On/Off switch for Lodestar AHRS
- Sonardyne Wideband® and Kongsberg HPR 400 compatible
- Autonomous data logging mode (All sensor data and ranges)
- Faster command and configuration
- Simultaneous ranging and sensor data telemetry in one transmission
- Integrated sound speed & high accuracy pressure sensor with a port for additional auxiliary sensors
- Real time diagnostics on range measurements for quality control
- Optional calibrated stab prealigned to all instrument axes
- Compact size for ease of handling and ROV deployment/recovery
- INS data logged internally for post processing via 10/100 Ethernet
- High speed acoustic modem
- Data telegram output and 12V available for ROV displays

Specifications

Feature			Type 8084-000-3164
Depth rating			3,000 m
Operating temperature			-10ºC to +50ºC
Operational Shock Rating			22 g, 11 ms half sine
External Battery Pack / ROV Supply			24 V (20 – 50 V)
Battery life (listening)	**Acoustic Navigation Standby**		3 Months
	Lodestar Permanently Powered On		28 Hours
Acoustic	**Compatt 6**	**Operating frequency** **Transmit Source Level** **Ranging Precision**	MF (19-34kHz) Sonardyne Wideband®2 185-192dB re 1µPa @ 1m (5 Levels) Better than 15 mm
		Telemetry Protocol **Ranges Tracked**	Sonardyne SMS and Modem 14 Simultaneous Replies
Lodestar AHRS	**Heading**	**Range transmit** **Accuracy** **Settle time**	0-360º 0.1º Secant Latitude <5 Minutes
		Follow Up Speed **Resolution**	500º / Second 0.01º
	Roll and pitch	**Range** **Accuracy** **Resolution**	±180º (No physical limit) 0.01º 0.01º
	Heave	**Range** **Accuracy (Real Time)** **Bandwidth**	±99 m 5 cm or 5% (Whichever is the greater) User selectable
		Resolution	0.01 m
Digital output	**Output telegram (e.g. For ROV LED display)**		Yes
ROV switch	**Contact closure**		Yes
Data Back-up	**Data logger**		8GB (expandable to 32GB) internal memory to allow post processing
Remote Transducer	**For ROV applications, a remote transducer is available**		
Sensors	**Sound speed sensor** **Pressure – strain gauge or digiquartz**		±0.03 m/s 0.01% FS
Physical	**Size (Dia x Length)** **Weight in Air / Weight in Water**		250 mm x 900.2 mm 45 kg / 17 kg