Datasheet
Gyro Compatt 6+

Gyro Compatt 6+ is the new industry standard, Wideband®2 and Wideband 3 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 Ultra-Short BaseLine (USBL) and Long BaseLine (LBL) positioning systems, the Lodestar Gyro Compatt 6+ provides real time motion data for structure deployment during navigation (utilising Wideband 3 technology).

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 Remotely Operated Vehicle (ROV) installed and a mechanical stab enables precision alignment to any structure.

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

The stab, gyro and transducer are pre-aligned, 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

- Medium Frequency (MF) band utilising Sonardyne Wideband 2 and 3 telemetry protocols

- 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 (al 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 pre-aligned 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 12 V available for ROV displays

Specifications
Gyro Compatt 6+

8 Holes:
M8x1.25 10 mm deep
Ø155 Pitch

Ø248

918

Feature			Type 8084
Depth Rating			3,000 m
Operating Temperature			-5 to +40°C
Storage Temperature			-20 to +55°C
Operational Shock Rating			22 g, 11 ms half sine
External Battery Pack / ROV Supply			24 V (20–50 V)
Battery Life	Acoustic Navigation Standby		3 months
	Lodestar Permanently Powered On		28 hours
Acoustic	Compatt 6+	Operating Frequency	MF (19–34 kHz) Sonardyne Wideband 3
		Transmit Source Level (dB re 1 µPa @ 1m)	185–192 dB (5 Levels)
		Ranging Precision	Better than 15 mm
		Telemetry Protocol	Sonardyne SMS and modem
		Ranges Tracked	14 simultaneous replies
Lodestar AHRS	Heading	Range	0–360°
		Accuracy	0.04 to 0.1° secant latitude
		Settle Time	<5 minutes
		Follow Up Speed	500° / second
		Resolution	0.01°
	Roll and Pitch	Range	±180° (no physical limit)
		Accuracy	0.01°
		Resolution	0.01°
	Heave	Range	±99 m
		Accuracy (Real Time)	5 cm or 5% (whichever is the greater)
		Bandwidth	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			8 GB (expandable to 32 GB) internal memory to allow post processing
Remote Transducer - For ROV Applications, a Remote Transducer is Available			
Sensors	Sound Speed Sensor		±0.03 m/s
	Pressure - Strain Gauge or Digiquartz		0.01% FS
Physical	Dimensions (Diameter x Length)		248 x 918 mm
	Weight in Air/Water		45/17 kg

Specifications subject to change without notice – 06/2021