## 2000 m Multi-Frequency Imaging Sonar Head with Composite Transducer



## P/N 975-21520000

The 2000 m 1171 series of sonar heads has been optimized to meet the requirements of deep-ocean applications. These sonar heads provide a high level of image quality. The wide-band composite transducer is protected within an oil-filled, pressure-compensating dome. The multi-frequency design allows optimization of the imaging frequency for different applications. The telemetry is RS485 and RS232 compatible and is automatically sensed and configured at startup. The sonar head is configured and controlled using the MS1000 Software.

Frequency Range: Tunable in 5 kHz steps from 600 kHz - 1100 kHz in both CW and LFM modes

Preset Frequencies: 625 kHz 675 kHz 800 kHz 900 kHz 1000 kHz

Beam Widths: 1.7° x 41° 1.6° x 38° 1.3° x 32° 1.2° x 28° 1.1° x 22°

Maximum Ranges: 100 m @ 675 kHz, 75 m @1000 kHz

Minimum Range: 0.5 m

Range Resolution:  $\geq 3.75$  mm (variable, determined by transmit-pulse width)

Range Sample Options: 238, 476, 952, 1904 (Low Resolution, High Resolution, Zoomx2, Zoomx4)
Sampling Resolution: 0.26 mm (0.5 m range @ 1904 samples), 21 mm (10 m range @ 476 samples)

Scan Speed: Typical: 3.7 sec/360° @ 5 m and 1.8° step size (@ 460 kbps)

Nominal: 34 sec/360° @ 100 m and 1.8° step size (@ 460 kbps)

Scan Angle: 360° continuous (user adjustable for limited sector scans)

Step Size: 0.45° - 7.2° (user selectable)

Transmit Pulse Widths: 5μs to 1000μs (auto selected for optimized operation)

Receive Bandwidth: Based on 'Wide' setting: 493 kHz (0.5 m range), 109 kHz (10 m range)

Telemetry: RS485 or RS232 asynchronous serial data

Fixed Downlink: 9600 bps to 921 kbps (user selected for compatibility with other serial

communication equipment)
Uplink: same speed as downlink

Optimized Downlink: 9600 bps to 921 kbps (auto set to highest rate allowed by the quality of

the telemetry link)

Uplink: same speed as downlink

Power Requirement: 22 - 26 VDC @ ≤ 0.8A

Temperature Range: -10° to +40°C operating, -30° to +40°C storage

Operating Depth: 2000 m

Connector: Seacon RMG-4-BCL; optional connectors based on customer request

Materials: Aluminum 6061-T6, 300-Series S.S., Urethane
Finish: Anodized, Black/Blue MIL-A-8625 type II
Diameter (Bulkhead): 4.22 in/107 mm
Diameter (Housing): 3.25 in/83 mm

Length: 9.9 in/251 mm (excluding connector)

Weight: In Air: 6.1 lb/2.8 kg

In Seawater: 2.9 lb/1.3 kg

Ø 3.25[83]