1171-Series Scanning Sonar

High Resolution, Multi-frequency Fan/Cone Beam Transducer with Tilt Block and Internal Compass

(*SEACON 4-pin, RMG/XSG Series Connector* configuration)

P/N 975-23800000

This 1171-series sonar head uses new transducer construction techniques optimized to provide low noise, high-resolution sonar operation at frequencies from 600 kHz to 1.5 MHz. This wide-frequency, dual transducer configuration is **ideal for both imaging and profiling applications** where data clarity supersedes any other requirement at operating ranges from 25 m out to more than 150 m. This 1171 sonar head is well suited for bottom clearance, body recovery, underwater construction support, pipeline and cable surveys, bridge and pier inspection applications. The open face transducer design is ideal for all water temperatures, and the beam pattern is not affected by thermal defocusing. The adjustable tilt block allows the operator to mechanically set the transducer tilt up to +/- 30°, as required for optimal imaging data acquisition. In addition to heading information, the internal compass module also provides pitch and roll information. This sonar head is operated using the MS 1000 software.

Operating Frequency: (presets)	600 kHz	675 kHz	900 kHz	1 MHz kHz	1.2 MHz	1.5 MHz
FAN Beam Width: (nom)	45° x 1.0°	38° x 0.9°	30° x 0.6°	25° x 0.6°	28° x 0.6°	
CONE Beam Width (nom)	2.5°	2.4°	1.8°	1.6°	1.3°	1.0°
Range: (typical with LFM)	150 m +	150 m	100 m	75 m	40 m	25 m

Range Resolution:	≥ 7.5mm @10μs pulse length @ 1500m/s speed of sound	
Range Sampling:	≥1mm	
Scan Speed:	nom 8 sec/360° @ 10 m and 1.8° step size (@ 460 kbits/sec.) nom 18 sec/360° @ 50m and 1.8° step size (@ 460 kbits/sec.)	
Scan Angle:	360° continuous and user-sectored	
Step Size:	0.225° (minimum) - 7.2° (user-selectable)	
Transmit Pulse Widths:	0 to 2500μs (manual or auto-selected for optimized operation)	
Receive Bandwidth:	200kHz max. (auto selected to suit pulse length & sample rate)	
Telemetry :	RS485 or RS232 asynchronous serial data	
Telemetry configurations:	Fixed	Downlink: 9600 bps to 460 kbps (user selected for compatibility with other serial communication equipment) Uplink: same speed as downlink
	Optimized	Downlink: 9600 bps to 460 kbps (auto set to highest rate allowed by the quality of the telemetry link) Uplink: same speed as downlink
Power Requirement:	22-60 VDC, 28W	
Temperature Range:	-10 to +40°C operating -30 to +40°C storage	
Operating Depth:	3000 m	
Weight in Air:	15.3 lb/6.9 kg (estimated)	
Weight in Water:	7.9 lb/3.5 kg (estimated)	
Connector:	Seacon 4-pin, RMG/XSG Series Connector	
Compass sensor specifications:	See Compass specification sheet	
Materials	Aluminum 6061-T6, 300-Series SS	
Options:	-7801 Built-in Security Key	

Specifications subject to change without notice
P/N 975-23807901 Iss 1.0
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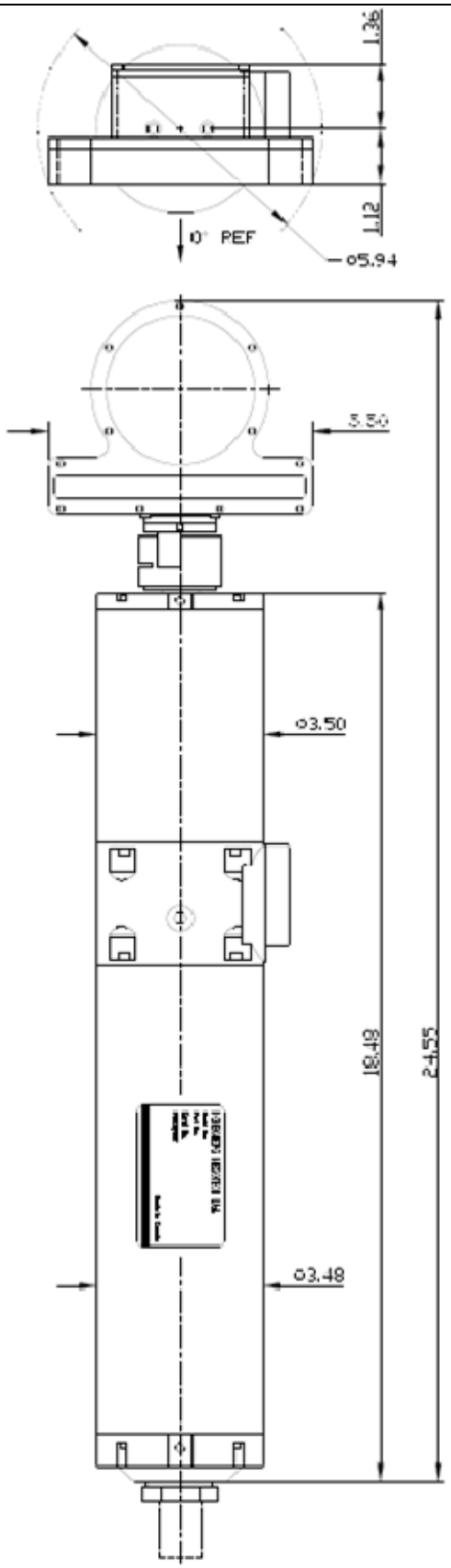

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