

3000 m “High Resolution” Geared Sonar Head Digital Telemetry



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This version of the 1071-Series Sonar has been specifically designed to produce the highest resolution scanning sonar images possible with 675 kHz. Its design is targeted at bottom clearance, body recovery, underwater construction and applications where data clarity supercedes any other requirement.

This sonar head should also be considered in conditions where the in-water temperatures are lower than 4° C, or higher than 20° C. Domed, oil-filled heads may acoustically defocus beyond these temperature ranges. This sonar head incorporates the electronic advantages increased sampling rates, wider receiver bandwidth, increased power output, and a very narrow horizontal beam pattern with the fan transducer. The telemetry is RS 485 and RS 232 compatible, and is automatically sensed and configured. The transducer is of a bare-shaft design, but the motor-end is oil compensated to prevent water ingress into the main electronic stack via the transducer shaft.

The sonar head is compatible with the MS1000 and MS900D Surface Processors. To take full advantage of the advanced features and high resolution this head has to be operated with the MS1000 processor.

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| Operating Frequency | 675 kHz |
| Beam Width | 0.9° X 30° Fan (nominal) |
| Range | 0.5 - 100 Metres typical; 150 Metres obtainable |
| Range Resolution | ≥ 19 mm (@ 1500m/sec speed of sound, 25 μs transmit pulse) |
| Sampling Resolution | ≥ 2.5 mm |
| Scan Angle | 360° continuous |
| Mechanical Step Size | ≥ 0.225° |
| Scan Speed | nom 11 sec/360° @ 10 m and 1.8° step size (@ 230 kbits/sec.) nom 36 sec/360° @ 100m and 1.8° step size (@ 230 kbits/sec.) |
| Transmit Pulse Lengths | 25 - 2500 μs |
| Transmit Power | OFF, 50 W nom, 500 W nom |
| Receiver Bandwidth | 12/100 kHz |
| TVG Control | -20 to +100 dB |
| Telemetry | RS 485/RS 232 auto switching asynchronous serial data |
| Telemetry Rates | Downlink: 9600 Baud Uplink selectable: 230K, 115K, 57K, 38K, 19K, 9600 bits/sec automatic (to suit cable telemetry) |
| Power Requirements | 33W, 22 - 60VDC |
| Temperature Ranges | -10 to +40° C operating -30 to +40° storage |
| Operating Depth | 3000 meters |
| Connector | Seacon RMG-4-BCL (optional connectors; inquire to factory) |
| Materials | Aluminum 6061-T6, 300-Series SS |
| Dimensions | Diameter 3.5"/89 mm Length 19.2"/488 mm Transducer width 5.5"/140 mm |
| Weight | In air 12.5 lbs/5.7 kg In water 6.0 lbs/2.7 kg |
| Options: | -7801 Built-in Security Key |

