# Super SeaKing DST

## Dual Frequency Digital CHIRP Sonar


**Applications**

- **ROV/AUV obstacle avoidance**
- **Target recognition**
- **Harbour surveillance**
- **Port security**

The V7 Super SeaKing DST mechanical scanning sonar now offers enhanced performance and the option of Ethernet communication for high speed scanning over short ranges. Retaining dual frequency capability, the Super SeaKing DST can achieve 300 m range at 325 kHz, with increased image intensity and with improved mid-water target discrimination capability at 650 kHz.

### Benefits

- Multiple communications options
- Reliable, robust, proven design
- Two operating frequencies
- Easy integration
- Tuneable frequency ranges

### Features

- Ethernet, ARCNET, RS232 and RS485
- Composite material transducer
- 4000 m or 6800 m depth rating
- Digital CHIRP

The SeaKing is further enhanced with a software controlled power isolation switch for Auxiliary Port output. Ideally suited for ROV/AUV obstacle avoidance, target recognition and harbour surveillance, the Super SeaKing DST can be supplied to operate down to 4000 m or 6800 m. Aluminium and Titanium housings are available as well as a number of connector options.

The default configuration of the Super SeaKing DST utilises Tritech's propriety connector, upgraded to provide Ethernet communication capability while retaining all of the benefits of this industry recognised connector.

With the option of Ethernet, ARCNET, RS232 and RS485 communications, the Super SeaKing DST is simple to install on ROV/AUVs of all types.

| Key Specification | Low Frequency Mode | High Frequency Mode |
|---|---|---|
| Operating frequency | CHIRP centred on 325 kHz | CHIRP centred on 650 kHz |
| Range | 0.4 m - 300 m / 1.32 ft - 984 ft | 0.4 m - 100 m / 1.32 ft - 328 ft |
| Power requirement | 20 to 72 VDC at 12 W | |
| Main port protocol | ARCNET / Ethernet / Serial (RS232/ RS485) | |
| Dimensions | 242 mm x 99 mm / 9.53 in x 3.90 in | |
| Depth rating | 4000 m - 6800 m / 13,124 ft - 22,310 ft | |
| Weight in air (al.) | 3.00 kg / 6.62 lbs | |
| Weight in water (al.) | 1.40 kg / 3.10 lbs | |

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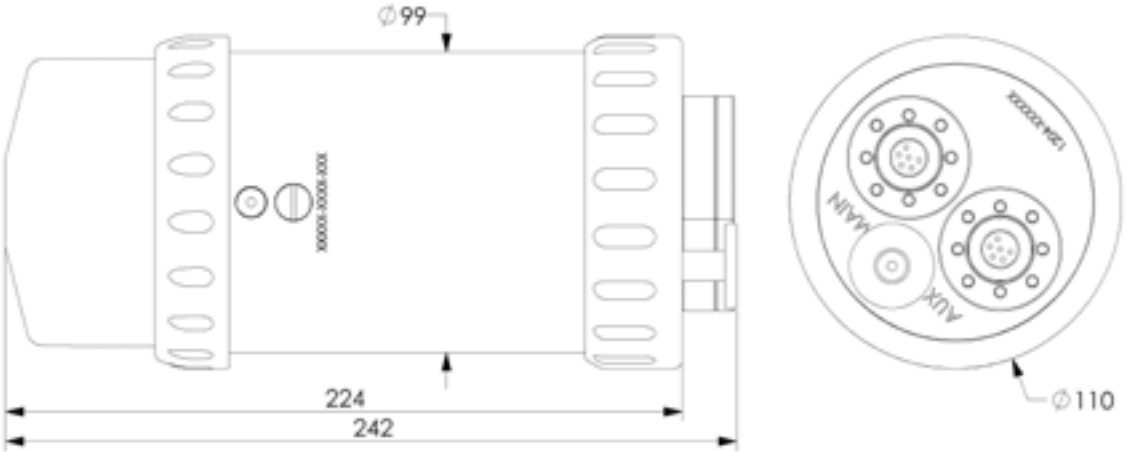
| Acoustic Specifications | Low Frequency Mode | High Frequency Mode |
|---|---|---|
| Operating frequency | CHIRP centred on 325 kHz | CHIRP centred on 650 kHz |
| Beamwidth | 20˚ Vertical, 3.0˚ Horizontal | 40˚ Vertical, 1.5˚ Horizontal |
| Pulse length | 400 µ | 200 µs |
| Range | 0.4 m - 300 m / 1.32 ft - 984 ft | 0.4 m - 100 m / 1.32 ft - 328 ft |
| Range resolution | Approximately 15 mm (minimum) | |
| Mechanical resolution | 0.45˚, 0.9˚, 1.8˚, 3.6˚ | |
| Source level | 210 dB re 1 µPa a 1 m | |
| Scanning sector | Variable up to 360˚ | |

| **Electrical and Communications** | ARCNET variant | Ethernet variant |
|---|---|---|
| Power requirement | 20 to 72 VDC at 12 W | |
| Main port communications | ARCNET or Serial (RS232 / RS485) | Ethernet or Serial (RS232 / RS485)l |
| Aux port communications | ARCNET or Serial (RS232 / RS485) | Serial (RS232 / RS485) |
| Maximum data rate[1] | ARCNET: 156 kbit-s<br>Serial RS232/485: 115.2 kBd | Ethernet: 100 Mbit-s<br>Serial RS232/485: 115.2 kBd |
| Connector options[2] | Tritech 6-pin waterblock (Others available on request) | |

| Physical specification | Aluminium | Titanium | Titanium |
|---|---|---|---|
| Depth rating | 4000 m / 13,124 ft | 4000 m / 13,124 ft | 6800 m / 22,310 ft |
| Weight in air | 3.00 kg / 6.62 lbs | 4.10 kg / 9.04 lbs | 4.80 kg / 10.53 lbs |
| Weight in water | 1.40 kg / 3.10 lbs | 2.50 kg / 5.51 lbs | 2.90 kg / 6.40 lbs |
| Temperature rating (operating) | -10 ˚C to 35 ˚C / 14 ˚F to 95 ˚F | | |
| Temperature rating (storage) | -20 ˚C to 50 ˚C / 4 ˚F to 122 ˚F | | |

Specification subject to change in line with Tritech's policy of continual product development
[1] ARCNET Line driver: 1500 m at 156 kbit-s, 2500 m at 78 kbit-s
[2] 6800 m sonar fitted with Seacon Connector




Not to scale. Measurements in mm.

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