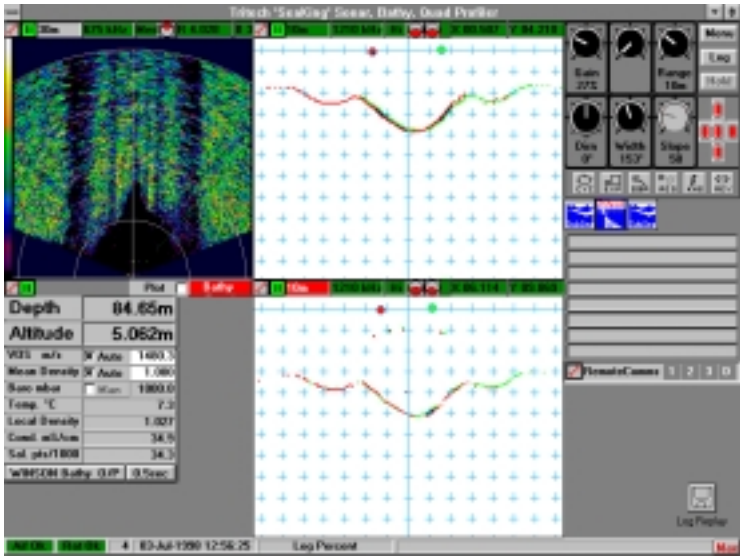
Tritech International Limited

SeaKing DFP

Dual Frequency Profiling Sonar



Display shown with Tritech SeaKing sonar and bathymetric system

The advanced Tritech SeaKing suite of subsea sensors comprises a range of fully integrated acoustic and oceanographic sensors designed to satisfy the requirements of an evermore demanding ROV and survey market.

Included in this advanced nnew product range is the **SeaKing Dual Frequency Profiling Sonar Head, the DFP**.

All products in the SeaKing family of professional acoustic and oceanographic sensors can be run simultaneously on one communications link, using the same processor and the same display. The potential savings in terms of processors, monitors and VCRs are considerable.

*All SeaKing products may be controlled from the **Tritech SeaKing Surface Control Unit (SCU)** processor. The SeaKing SCU is a rugged surface processor designed for use in harsh offshore environments. The SCU features the **RAT - Remote Access Terminal** - an ergonomically designed and detachable control panel which allows a full suite of sonar and survey sensors to be controlled from a single hand held control unit. The RAT allows the main processor to be mounted in a protected position. In the cluttered control cabins where this equipment is typically used, the attractions of a single, compact, controller for most of the sensory packages coupled to a single monitor are quite significant.*

Features

- Offers users not one but **two** mechanically scanned profiling sonars in a **single** subsea pressure housing
- **0.58MHz** profiler for use in water containing suspended particles or when longer range profiling is required.
- **1.2MHz** profiler for shorter range work or for use in clearer water.
- Scan rate of up to **180° per second** depending on the range and the selected resolution.

Applications

- Cross sectional profiling of subsea trenches and pipelines.
- Cross sectional profiling of rivers, canals and harbours.
- Inspection of dams and hydro-electric inlets and outlets.
- Inspection of drains, culverts and sewers.
- Precision positioning of mattresses over pipelines.
- Precision positioning of rock-dumping systems over pipelines.
- Underwater surveying of road and rail bridge foundations
- Nuclear storage tanks survey

Tritech SeaKing DFP

Specification

Operating frequency	580 kHz & 1.2 MHz
Beamwidth	3° Conical [580 kHz]
Beamwidth	1.4° Conical[1.2 MHz]
Maximum range	50 m [580 kHz]
Maximum range	30 m [1.2 MHz]
Minimum range	0.3 m
Timing resolution	1 mm
Source level	210 dB re 1uPA @ 1 m
Pulse length	20 - 300 microsec
System bandwidth	12 kHz
Scan modes	Combinations of speed and resolution available
Mechanical step sizes	0.45°,0.9°, 1.35° & 1.8°
Mechanical resolution	0.45°
Scanned sector	Variable to 360°
Continuous 360° mode available	Yes
Sector offset mode available	Yes

Mechanical

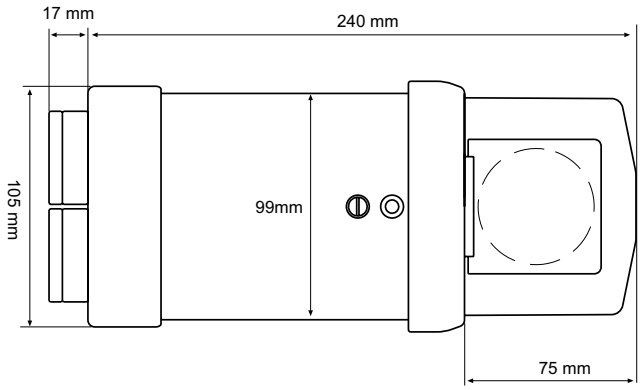
Overall maximum diameter	110 mm
Maximum length	259 mm
Weight in air	3.0 kg
Weight in water	1.4 kg
Maximum operational depth	4,000 m
Materials	Aluminium alloy-HE30, RPU
Finish	Hard anodised black
Standard connector	Tritech 6 pin with water-block
Connector options	Various upon request
Operating temperature	-10°C to +35°C
Storage temperature	-20°C to +50°C

Electrical

Power requirements	18 to 36 VDC @ 6VA
Optional power supplies	9 to 18 VDC and 36 to 72 VDC @ 6VA
Data communication rate	156 kBits/sec
Option	78 kBits/sec
Communication requirements	Twisted pair, modem or coax

Surface Controls and Displays *(SeaKing SCU or PC kit)*

Display	SVGA up to 1280 x 1024 x 256



Software Features

Range Selection	1 to 50 m
Gain	Full manual and auto controls
Scanned Sector	Fully variable in direction and width to 360°
Resolution Selection	0.45° to 1.8° steps
Head Position and Rotation Offsets	To 1 mm / 0.09° resolution
Lockout Control	
Frequency Switch	
Trigger Mode	Continuous or Manual
Cursor	x-y measurement

- Support for single, dual and quadruple head operations.
- Support for all other Tritech sensors - sonar, bathymetric and sidescan.
- Time stamped data logging and replay to hard disk
- Interface to TSS and Innovatum pipetrackers, to display and record data.
- Support for up to three remote RS232 channels for survey data.
- Full remote control and data logging via SK-V4 protocol.

All specifications are subject to change in line wiith Tritech's policy of continual product development.

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