



Tritech SeaKing 700 Series Integrated Bathymetric and Oceanographic Sensor suites

Features

- Conductivity and temperature module eliminates the need to take daily "dips"
- Real time, on line monitoring of seawater conductivity and temperature
- Correct velocity of sound may be applied in real time to devices such as the SeaKing profiling sonar and the altimeter
- Corrected temperature and salinity parameters can be passed to the Digiquartz depth sensor

Applications

- Pipeline, site and route surveys
- Multi-beam echo sounder surveys



Oceanographic sensor complete with protective shroud

The Tritech SeaKing 700 Series comprises of up to four high resolution sensors:

- Tritech PA500 Precision altimeter
- Paroscientific Digiquartz Precision depth sensor
- Falmouth Scientific Conductivity probe
- Falmouth Scientific Temperature probe

There are two standard configurations available:

- SeaKing 701 Bathymetric system comprising depth and altitude sensors
- SeaKing 704 Oceanographic system - as 701 but with temperature and conductivity sensors

Other configurations can be supplied on request.

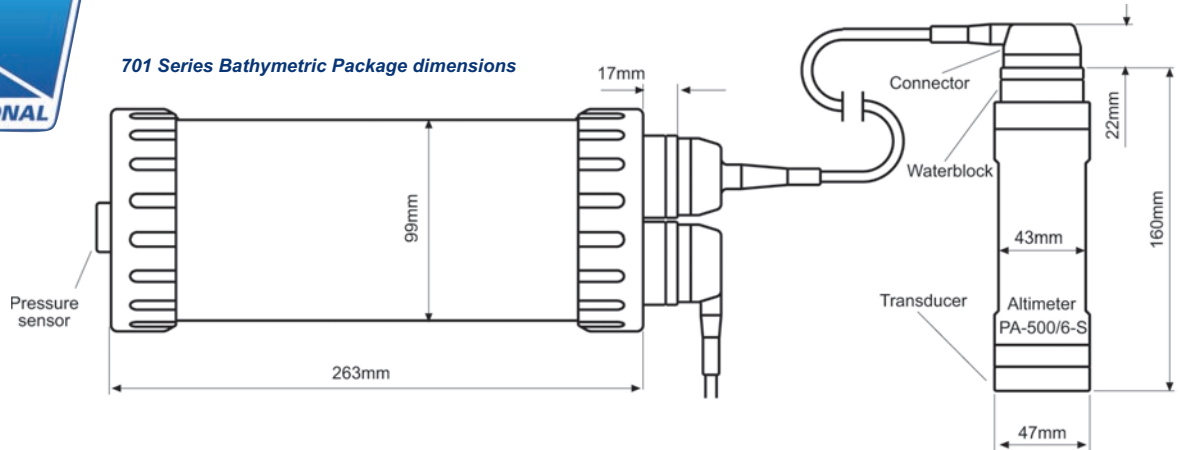
The units are available in four standard depth ratings: 700, 1400, 2000, 4000 metres

Although the sensors form an integrated package, the altimeter may be mounted separately on the ROV. This allows positioning of the individual sensors away from areas of masking or disturbance such as vehicle structure or thruster wash.

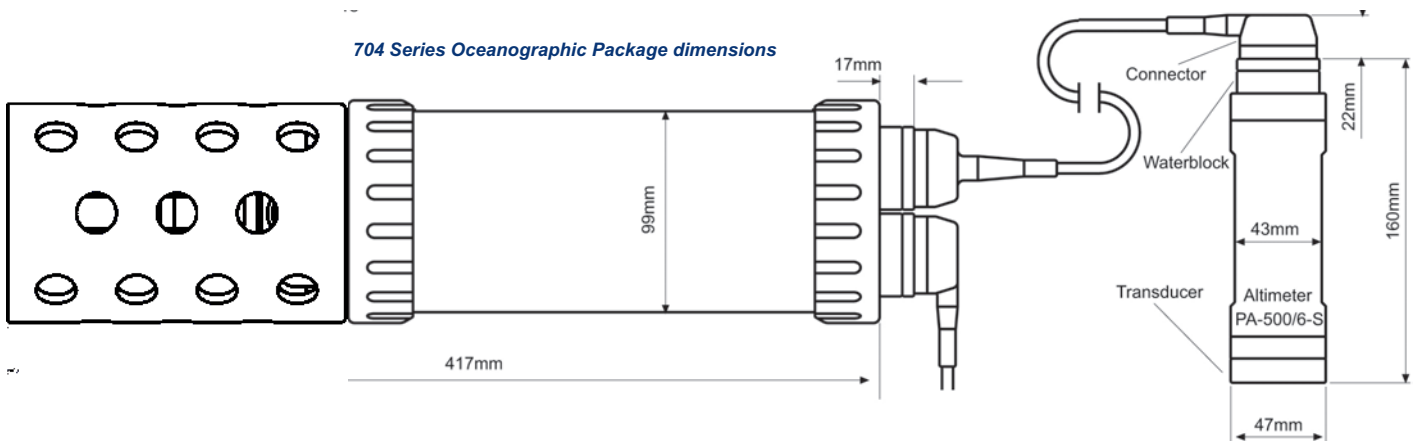
Full water column density profiling for the 704 systems is achieved by dynamically modifying a "look-up" table which contains all measured parameters versus depth. This table may be stored by the surveyors and re-loaded as required.

Whatever configuration of the bathymetric package is selected, it operates as a single subsea node on the SeaKing SCU data network and shares the same twisted pair wiring as the SeaKing DFP sea-bed profiling sonars and the SeaKing DFS imaging sonar heads. Vehicle integration is very simple as only a single pair of conductors is required on the ROV.

701 Series Bathymetric Package dimensions



704 Series Oceanographic Package dimensions



Precision Depth Sensor

Sensor type	Paroscientific® Digiquartz
Repeatability	0.01% FSD
Hysteresis	0.015% FSD
Drift	0.015% FSD
Calibration	Class A Dead Weight Tester
Operating temperature	-10°C to +35°C
Storage temperature	-20°C to +50°C

Temperature & Conductivity Sensor

Conductivity sensor	Falmouth Scientific
Range	0 to 65 mmho/cm (0 to 6.5 S/m)
Accuracy	± 0.025 mmho/cm
Stability	± 0.005 mmho/cm/month
Temperature sensor	Platinum resistance
Range	-5° to +35° Celsius
Accuracy	± 0.050° Celsius
Stability	± 0.005° Celsius/month

Weights and Dimensions of Sensors

Overall length	262 mm
Overall length with C&T probe	417 mm
Body tube diameter	99 mm
Maximum diameter	110 mm
Weight in air	3.5 kg
Weight in air with C&T probe	4.2 kg
Weight in water	1.5kg
Weight in water with C&T probe	2.1 kg
Materials	HE30 Alloy, Acetal, SS316, GF nylon
Electrical	
Input voltage	24 - 28 VDC @ 8VA
Communications	ARCNET
Single head	RS232

PA500 Precision Altimeter

Frequency	500 kHz
Beam width	6° conical
Range resolution	± 1 mm
Minimum range	300 mm
Maximum range	50 metres
Overall length	148 mm
Diameter	47 mm
Weight in air	0.75 kg
Weight in water	0.45 kg
Material	316 stainless steel
Operating temperature	-10°C to +35°C
Storage temperature	-50°C to +50°C
System Recalibration Tolerances	
Pressure	0.015% FSD
Conductivity	0.1% FSD
Temperature	0.5% FSD

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

Ref: EDS-BAT-001.11