

# 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 300m range at 325kHz, with increased image intensity and with improved mid-water target discrimination capability at 650kHz.

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

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

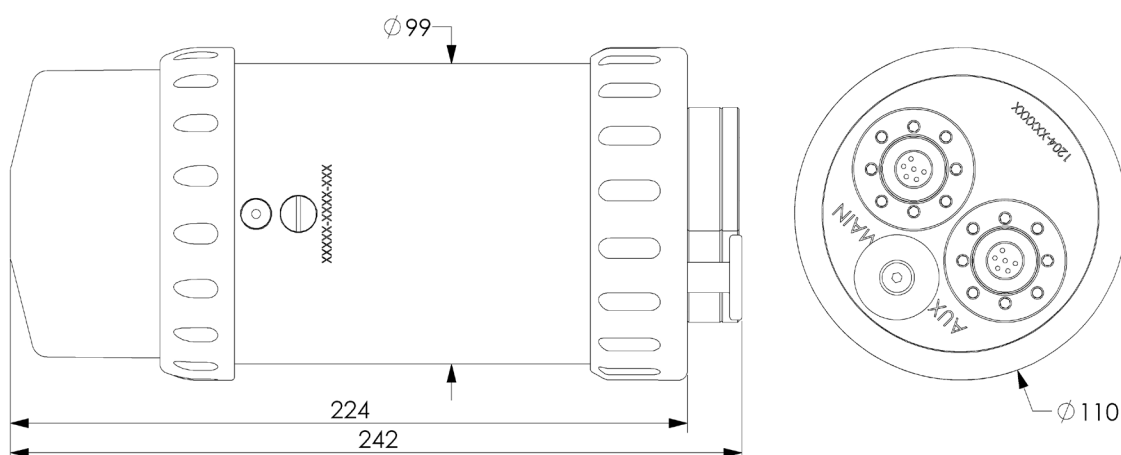
Electrical and Communications	ARCNET variant	Ethernet variant
Power requirement	20 to 72VDC at 12W	
Main port communications	ARCNET or Serial (RS232 / RS485)	Ethernet or Serial (RS232 / RS485)
Aux port communications	ARCNET or Serial (RS232 / RS485)	Serial (RS232 / RS485)
Maximum data rate <sup>1</sup>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

Physical specification	Aluminium	Titanium	Titanium
Depth rating	4000m / 13,124ft	4000m / 13,124ft	6800m / 22,310ft
Weight in air	3.00kg / 6.62lbs	4.10kg / 9.04lbs	4.80kg / 10.53lbs
Weight in water	1.40kg / 3.10lbs	2.50kg / 5.51lbs	2.90kg / 6.40lbs
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

<sup>1</sup> ARCNET Line driver: 1500m at 156kbit-s, 2500m at 78kbit-s

<sup>2</sup> 6800m sonar fitted with Seacon Connector



Not to scale. Measurements in mm.