Datasheet

Super SeaKing DST

Dual Frequency Digital CHIRP Sonar

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.

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.

Benefits

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

Features

- Two operating frequencies
- Digital CHIRP
- 4000 m or 6800 m depth rating
- Ethernet, ARCNET, RS232 and RS485
- Composite material transducer
- Reliable, robust, proven design
- Easy integration

Key Specification	Low Frequency Mode	High Frequency Mode
Operating frequency	CHIRP centred on 325 kHz	CHIRP centred on 650 kHz
Range	0.4 - 300 m / 1.32 - 984 ft	0.4 - 100 m / 1.32 - 328 ft
Depth rating	4000 - 6800 m / 13123 - 22310 ft	
Power requirements	20 to 72 Vdc at 8 W	
Main port protocol	ARCNET / Ethernet / Serial (RS232 / RS485)	

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 µs	200 µs
Range	0.4 - 300 m / 1.32 - 984 ft	0.4 - 100 m / 1.32 - 328 ft
Range resolution	Approx. 15 mm / 0.59 in (min)	
Mechanical resolution	0.45˚, 0.9˚, 1.8˚, 3.6˚	
Source level	210 dB re 1 µPa at 1 m	
Scanning sector	Variable up to 360˚	

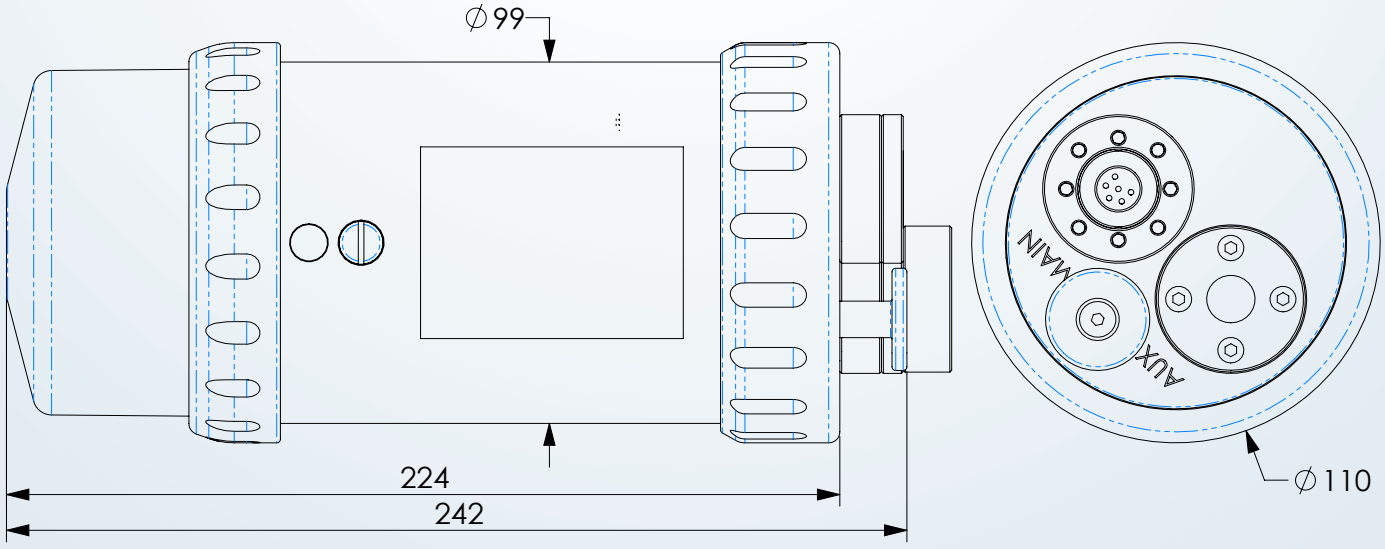
Electrical and Communications	ARCNET	Ehernet
Power requirement	22 to 72 Vdc at 8 W	
Main port communications	ARCNET or Serial (RS232 / RS485)	Ethernet or Serial (RS232 / RS485)
Aux port communications	ARCNET or Serial (RS232 / RS485)	Serial (RS232 / RS485)
Maximum data rate [1]	ARCNET: 156 kbit-s Serial (RS232 / RS485): 115.2 kBd	Ethernet: 100 Mbit-s Serial (RS232 / RS485): 115.2 kBd
Connector options [2]	Tritech 6-pin waterblock (others available on request)	

Physical Specification	Aluminium	Titanium	Titanium
Depth rating	4000 m / 13123 ft	4000 m / 13123 ft	6800 m / 22310 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 to +35 ˚C /-14 to +95 ˚F		
Temperature rating (storage)	-20 to +50 ˚C / -4 to +122 ˚F		

[1] ARCNET Line driver: 1500 m at 156 kbit-s, 2500 m at 78 kbit-s

[2] ARCNET Line driver: 1500 m at 156 kbit-s, 2500 m at 78 kbit-s

Specification subject to change in line with Tritech's policy of continual product development



Not to scale. Measurements in mm.