SeaBat® T50-S

Subsea Multibeam Echosounder

The SeaBat T50-S delivers superior image quality, engineered for the demanding marine environment and built from the ground up to evolve with your business.

Combined with a Subsea Sonar Processor (SSP), the T50-S produces unprecedented clean data, providing faster operational surveys and reduced processing time in a fully integrated sonar processing and data storage unit housed in a subsea pressure vessel.

The SSP provides internal data storage for self-contained survey solution and interfacing via standard Ethernet to reduce integration time.

Product features

- Tracker – powerful tool for automated control
- Selectable Beam Density – you define what you need to get the job done. Minimize data storage rates to only what you require.
- Multi-Detect - Multiple detections for enhanced detail over complex features and water column targets.

For detailed description see relevant Feature Description document

Optional extra features

- FlexMode – increase data density where you need it most
- X-Range – improve range and reduce the impact of external noise
- Pipe Detection & Tracking – unique to SeaBat, optimize detection of pipes and automated steering of FlexMode sector.

T50-S sonar head assembly

- 200/400kHz
- Robust titanium housing
- High resolution, maximum performance

T50-S Standard configuration

- EM7218-1 Receiver array
- TC2160 (400kHz) Projector
- TC2163 (200kHz) Projector
- Subsea Sonar Processor
- 6000m titanium pressure housing
- 22- 60V DC input
- Wet cable set
- Survey data storage 2.0 TB for approx. 600 hours

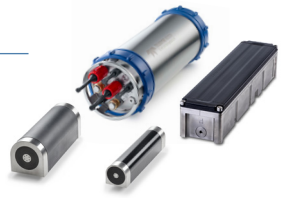
Options

- Wet-end brackets (customized)
- Motion and positioning sensors
- Teledyne RESON Sound Velocity Probes
- Teledyne PDS Survey Package
- Teledyne RESON Service Level Agreements
- Available without pressure housing

TELEDYNE MARINE
RESON
Everywhereyoulook™

TELEDYNE MARINE

SeaBat® T50-S Subsea Multibeam Echosounder



T50 ACOUSTIC PERFORMANCE

Sonar operating frequency:	400kHz	200kHz
Across-track receiver beam width (nominal values[1]):	0.5° (center)	1° (center)
Along -track trasmit beam width (nominal values[1]):	1°	2°
Number of beams:	Min 10, Max 1024	
Swath coverage (up to):	150° Equi -Distant (170° Equi-Angle)	
Typical depth (CW)[2]:	0.5-150m	300m
Max depth (CW)[3]:	225m	400m
Typical depth (FM)[2]:	0.5-180m	450m
Max depth (FM)[3]:	300m	575m
Ping rate (depth dependent):	Up to 50 pings/s	Up to 50 pings/s
Pulse length:	15-300µs (CW) 300µs – 20ms (FM)	
Depth resolution:	6mm	6mm
Depth rating:	6000m	6000m

For relevant tolerances for dimensions above and detailed outlined drawings see Product Description

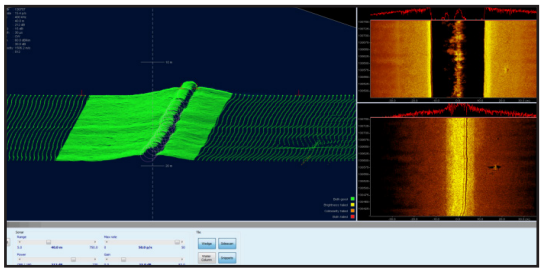
[1] All beam widths measured at -3dB, unsteered with a sound velocity of 1480m/s.

[2] This is the range within which the system is normally operated. It consists of the minimum range below the sensor to a range value corresponding to max swath -50%

[3] This is a single value corresponding to the range at which the swath has reduced to 10% of its maximum value.

POWERFUL FEATURE SET

The systems provides uncompromised data quality combined with a range of powerful software features at an attractive price, with options for future feature expansions to grow with your needs.



T50-S SYSTEM SPECIFICATIONS

Input voltage:	22- 60V DC
Power (approx):	Average 130W. Peak 390W
Transducer cable lenght:	3m standard (1m, 10m optional)
Temperature (operational / storage):	Subsea Sonar Processor: -2°C to +36°C / -30°C to +70°C Sonar wet-end: -2°C to +36°C / -30°C to +70°C

	height [mm]	width [mm]	depth [mm]	weight [kg/air]	weight [kg/water]
T50 Rx (EM7218-1):	102.0	460.0	90.7	8.2	3.9
T50 Tx 400kHz (TC2160):	77.0	62.0	285	2.75	1.7
T50 Tx 200kHz (TC2163):	115	100	280	7.5	5.0
Subsea Sonar Processor (with pressure housing):	538	174	n/a	24.4	12.0

For relevant tolerances for dimensions above and detailed outlined drawings see Product Description or contact Teledyne RESON Engineering Services for more information.

TELEDYNE MARINE
RESON
Everywhereyoulook™

www.teledynemarine.com/reson

Tel. +45 4738 0022 (Europe) • Tel: +1 805 964 6260 (USA)

Email: reson@teledyne.com