Dual Frequency Echosounder

Custom Engineering

Applications

- Low cost hydrographic Survey
- Monitoring of scouring on bridge supports
- Integration with oceanographic sensors
- ASVs

Using the field-proven Tritech PA200 and PA500 Digital Precision Altimeter technology, the dual frequency echosounder benefits from the same full digital synthesis of transmit and receive frequencies, as well as the advanced input dynamic range of the PA Altimeter family.

Benefits

- 200kHz and 500kHz frequencies
- Hypack compatibility
- Integrated Attitude & Heading Reference Sensor (AHRS)

Features

- Digital output for echosounder data
- Separate digital output for AHRS data
- Industry standard output data strings
- Optional low operating voltage

The dual frequency echosounder has been designed to provide a single compact unit that can be utilised for shallow water surveys, with fewer third party sensors required to complete a detailed survey. The integrated Attitude and Heading Reference System (AHRS) within the dual frequency echosounder provides the additional information required to support a more detailed seabed survey, with separate serial outputs for the echosounder and AHRS.

The latest Genesis data acquisition and logging software, for use with a wide range of Tritech products, can be used to configure and operate the echosounder as well as access the AHRS calibration process. Genesis can be configured to provide a digital readout for both range to seabed and AHRS readings or a graphical representation of the AHRS with scrolling profile for range to the seabed.

The integrated AHRS allows for pitch & roll data compensation of the echosounder data, while the data is provided in industry standard serial data strings formats which is compatible with survey packages such as the industry recognised Hypack Survey Software.

An integral pole mount socket allows for easy installation of the echosounder on any small boat or Autonomous Surface Vessel (ASV).

Key specification	
Depth rating	30m
Operating frequencies	200kHz & 500kHz
Weight in water	1.7kg
Dimension	190mm x 73mm x 161mm

Acoustic specification	PA200	PA500
Operating frequency	200kHz	500kHz
Beamwidth	20˚ conical	6˚conical
Range	0.7m - 50m or 1.0m - 100m	0.1m - 10m or 0.3m - 50m
Digital resolution	1mm	

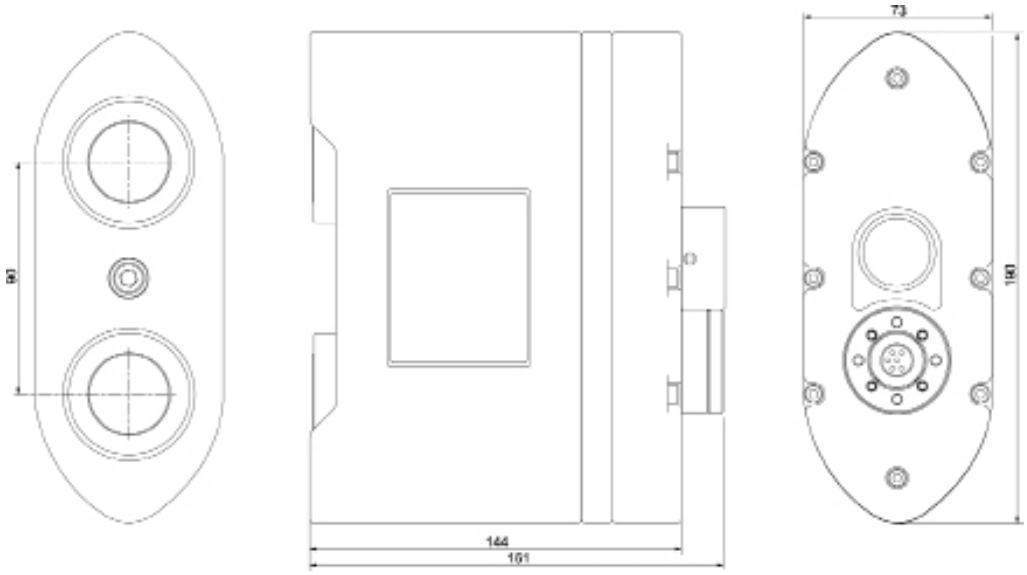
AHRS	AHRS-1	AHRS-2
Roll/pitch accuracy (static)	0.5˚RMS	0.2˚RMS
Roll/pitch accuracy (dynamic)	0.8˚ RMS	0.5˚ RMS
Yaw accuracy (dynamic)	2˚ RMS	1˚ RMS

Electrical and communication	Altimeter	AHRS
Communications protocol	RS232 or RS485 (internally set)	
Serial output format	Yxxx.xxxm<cr><lf> where Y is the node number	$HCHDM, $HEHDT, $PASHR, $PHTRH, $PHTRO, $PRDID, TSS1, TSS2
Topside control	Interrogate only	Free running on Pin 5* or interrogate on Pin 1 + 2
Power requirements	21-28VDC (standard) or 10.5-21VDC (hardware selectable), ~5W	

Physical specification	
Depth rating	30m
Weight in air	3.4kg
Weight in water	1.7kg
Temperature rating	-10˚C to 35˚C (operating), -20˚C to 50˚C (storage)

*RS232 only

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



Not to scale. Measurements in mm.

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