

ISA500 Altimeter & AHRS Sensor



Impact Subsea is proud to present the ground-breaking ISA500 family of Underwater Altimeters. Highly robust Altimeters with optional integrated Attitude & Heading Reference System (AHRS).

The ISA500 utilises a broadband composite transducer together with an advanced digital acoustic engine to provide the highest level of stability and range available from a 500kHz Altimeter.

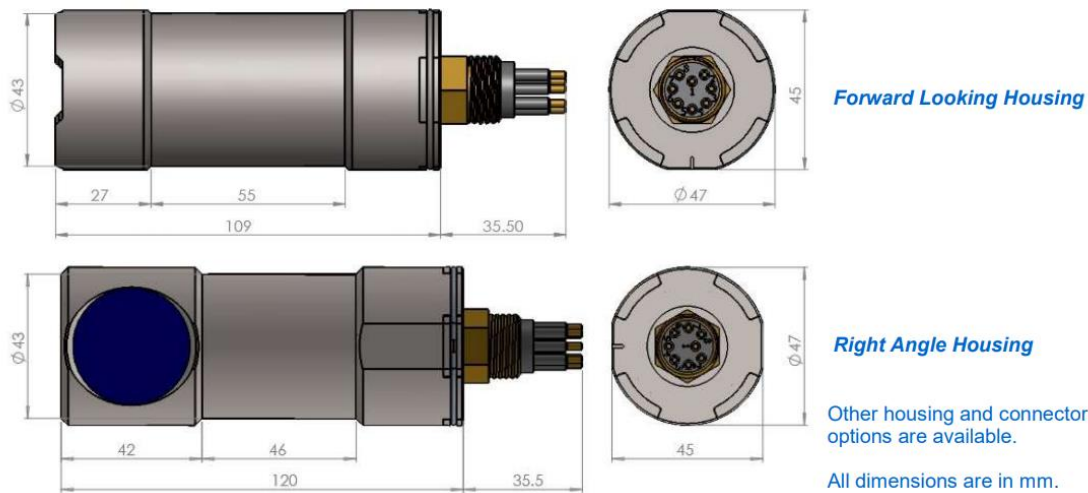
With an integrated AHRS, the ISA500 can compensate for pitch and roll to provide true altitude reading at all times. For applications where Altitude, Heading, Pitch & Roll are required; all can be provided from a single device.

The ISA500 is provided in a highly robust Titanium or Black Acetal housing. The housing is available in forward looking or right angle configurations. The unit can be supplied without the integrated AHRS. Alternative OEM configurations are available upon request.

Features	Benefits
120+ Meter range	Proven long range measurement
1 mm accuracy	Proven millimeter accuracy
Integrated AHRS	Provides heading to $\pm 1^\circ$, pitch & roll to 0.2° accuracy
Robust & compact	Ideal for all underwater applications
Multi-echo output	View all returned acoustic echos - ideal for measuring between objects
Emulate any device	Direct replacement of existing equipment

Applications

ROV & AUV Altitude, Heading & Attitude
 Scour Monitoring
 Hydro-graphic Survey
 Touchdown Monitoring
 Wave Height Measurement
 Equipment Deployment
 Motion Reference
 Underwater Positioning



Specifications

Acoustic

Frequency	500kHz Standard 400 to 600kHz Selectable
Range	0.1 to 120m (Maximum range dependant on seabed type)
Resolution	1 mm
Beam angle	6° conical at 500kHz
Signalling	Monotonic
Pulse length	User defined

Communications & Power

Digital	RS232 & RS485
Protocol	300 to 115,200 baud
Analogue	0 to 5V DC, 0 to 10V DC or 4-20mA
Data	Continuous or on demand
Data rate	Up to 10Hz
Input voltage	9 to 36V DC
Power (No Altitude)	25mA @ 24V DC
Power (With Altitude)*	51mA @ 24V DC

* 100% Tx power, 10Hz update rate.

** 11,000m rated option available – see ISA500 Full Ocean Datasheet
Specifications subject to change in line with product enhancements

Specifications

Heading

Accuracy $\pm 1^\circ$

Resolution 0.1°

Attitude

Pitch $\pm 90^\circ$

Roll $\pm 180^\circ$

Accuracy 0.2°

Resolution 0.1°

Physical

F/L: Weight (Air /
Fresh Water) 0.5/0.325kg (Titanium)
0.3/0.110kg (Acetal)

R/A: Weight (Air /
Fresh Water) 0.520/0.350kg (Titanium)
0.325/0.125kg (Acetal)

Depth Rating 6,000m (Titanium)**
1,000m (Acetal)

Temperature -10 to 40° operating
-20 to 60° storage

Connector Subconn MCBH8M-SS
Other options available

* 100% Tx power, 10Hz update rate.

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