

ImpactSubsea

Innovative Underwater Products

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

120+ Meter Range

1 mm Accuracy

Integrated AHRS

Robust & Compact

Multi-Echo Output

Emulate Any Device

Benefits

Proven Long Range Measurement

Proven Millimeter Accuracy

Provides Heading to $\pm 1^\circ$, Pitch & Roll to 0.2° Accuracy

Ideal for all underwater applications

View all Returned Acoustic Echos – Ideal for Measuring Between Objects

Direct Replacement of Existing Equipment

Applications

ROV & AUV Altitude, Heading & Attitude

Scour Monitoring

Hydro-graphic Survey

Touchdown Monitoring

Wave Height Measurement

Under Ice Measurement

Equipment Deployment

Motion Reference

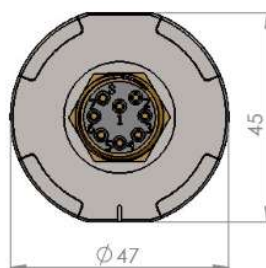
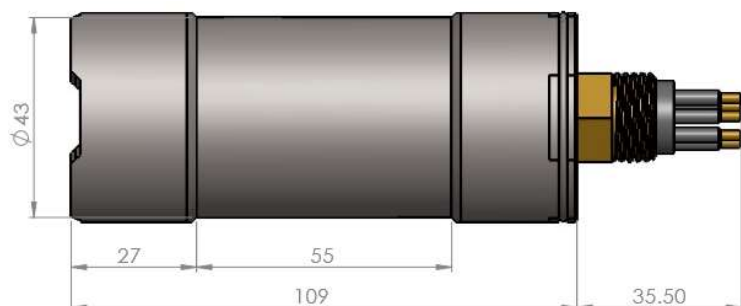
Underwater Positioning

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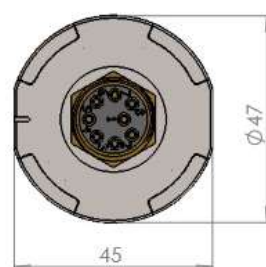
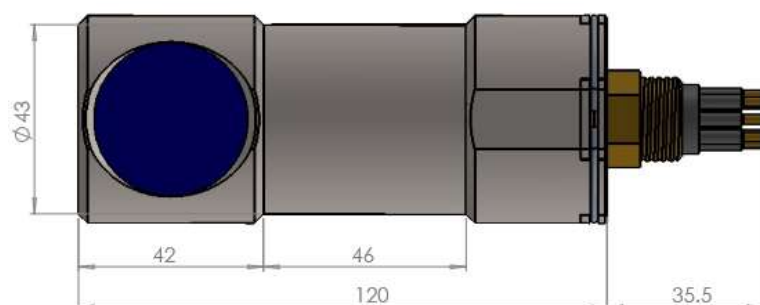
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Forward Looking Housing



Right Angle Housing

Other housing and connector options are available.

All dimensions are in mm.

Acoustic	
Frequency	500kHz Standard 400 to 600kHz Selectable
Range	0.1 to 120m (Maximum range dependant on seabed type)
Resolution	1mm
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

Heading	
Accuracy	± 1°
Resolution	0.1°
Attitude	
Pitch	± 90°
Roll	± 180°
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.

** 11,000m rated option available – see ISA500 Full Ocean Datasheet

Specifications subject to change in line with product enhancements. Rev 2.4

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