

ImpactSubsea



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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** has the ability to compensate for pitch and roll – providing a 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 Delrin® housing. The housing is available in forward looking or right angle configurations. The unit can be supplied without the AHRS. Alternative OEM configurations are available upon request.

Features

120+ Meter Range

1 mm Accuracy

Integrated AHRS

Optional Delrin Housing

Multi-Echo Output

Emulate Any Device

Benefits

Proven Long Range Measurement

Proven Millimetre Accuracy

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

Low Weight and Cost

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

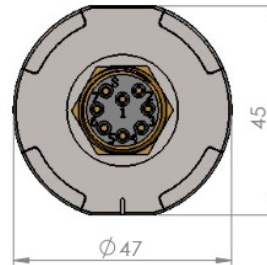
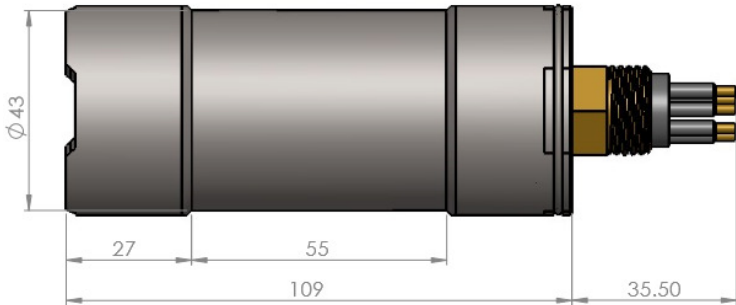
Underwater Positioning

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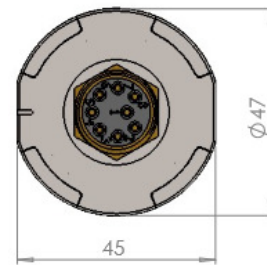
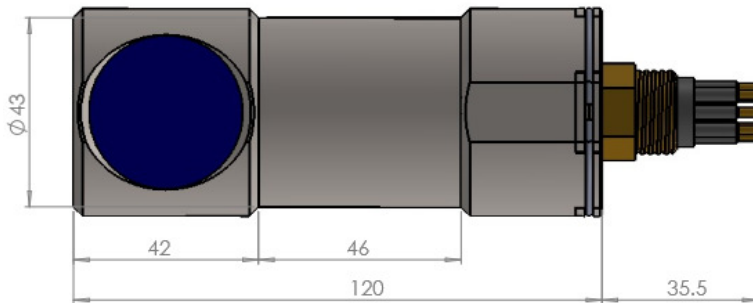
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Forward Looking Housing



Right Angle Housing

Other housing and connector options are available.

All dimensions are in mm.

Acoustic

<i>Frequency</i>	500kHz Standard 400 to 600kHz Selectable
<i>Range</i>	0.1 to 120m (Maximum range dependant on seabed type)
<i>Resolution</i>	1mm
<i>Beam Angle</i>	6° conical at 500kHz
<i>Signalling</i>	Monotonic
<i>Pulse Length</i>	Auto/User Defined

Communications & Power

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

Heading

<i>Accuracy</i>	± 1°
<i>Resolution</i>	0.1°

Attitude

<i>Pitch</i>	± 90°
<i>Roll</i>	± 180°
<i>Accuracy</i>	0.2°
<i>Resolution</i>	0.1°

Physical

<i>F/L: Weight (Air / Fresh Water)</i>	0.5/0.325kg (Titanium) 0.3/0.110kg (Delrin®)
<i>R/A: Weight (Air / Fresh Water)</i>	0.520/0.350kg (Titanium) 0.325/0.125kg (Delrin®)
<i>Depth Rating</i>	4,000m (Titanium)** 1,000m (Delrin®)
<i>Temperature</i>	-10 to 40° operating -20 to 60° storage
<i>Connector</i>	Subconn MCBH8M-SS other options available

* 100% Tx power, 10Hz update rate.

** 6,000m rated option available

Specifications subject to change in line with product enhancements. Rev 2.2

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