

# 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**.

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

Long Range Altitude Measurement

Millimetre Altitude Measurement

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

Low Weight and Cost

View all Returned Acoustic Echos – Ideal for Ice Thickness Measurement

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

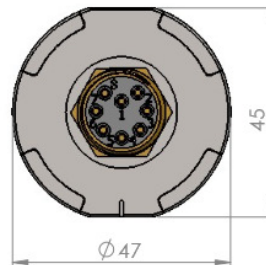
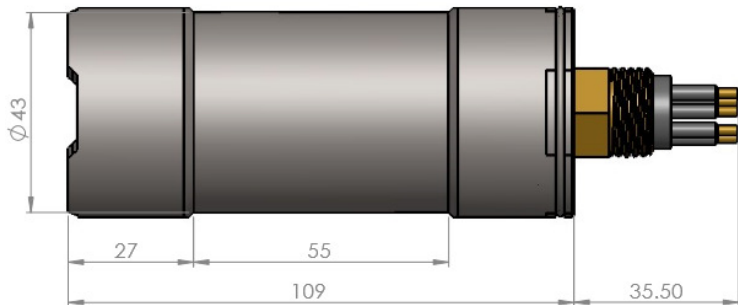
Underwater Positioning

[www.impactsubsea.com](http://www.impactsubsea.com)

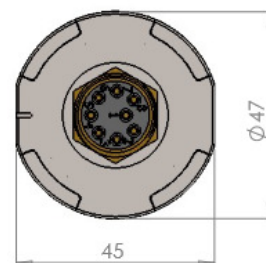
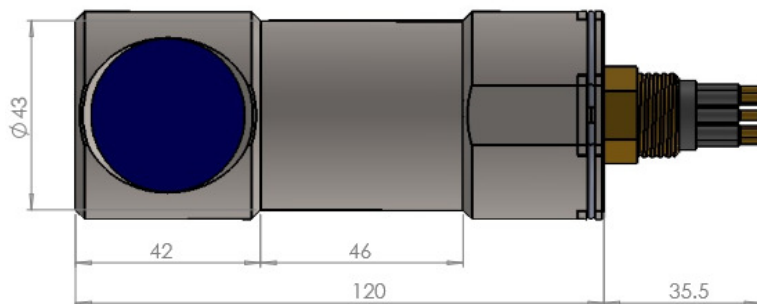
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*Forward Looking Housing*



*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	Auto/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

<b>F/L: Weight (Air / Fresh Water)</b>	0.5/0.325kg (Titanium) 0.3/0.110kg (Delrin®)
<b>R/A: Weight (Air / Fresh Water)</b>	0.520/0.350kg (Titanium) 0.325/0.125kg (Delrin®)
Depth Rating	4,000m (Titanium) 1,000m (Delrin®)
Temperature	-10 to 40° operating -20 to 50° storage
Connector	Subconn MCBH8M-SS other options available

\* 100% Tx power, 10Hz update rate.

Specifications subject to change in line with product enhancements. Rev 2.1

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