



ISA500

ALTIMETER WITH AHRS



Impact Subsea are proud to present the ground breaking ISA500 family of altimeters. Highly robust, with optional integrated Attitude and 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 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 and Roll are required; all can be provided from a single device.

In 2021, the ISA500 gained recognition from the UK's most prestigious business awards, winning a Queens Awards for Enterprise in the innovation category.

FEATURES BENEFITS

- 120+ Meter Range** Proven long range measurement.
- 1mm Accuracy** Proven millimetre accuracy.
- Integrated AHRS*** Provides Magnetic Heading to $\pm 1^\circ$ Pitch and Roll to 0.2° accuracy.
- Multi-Echo Output** View all returned acoustic echoes.
- Emulate Any Device** Direct replacement of existing equipment.
- Varying Depth Ratings** Available in 1000m, 6000m and 11,000m depth ratings.

Provided in Titanium or Acetal Housing, available in forward looking or right angled configurations. Can be supplied without integrated AHRS. Alternative configurations available on request.



APPLICATIONS

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

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ACOUSTIC

Frequency	500kHz Standard 400 to 600kHz selectable
Range	0.1 to 120m+ <i>Maximum range dependent on seabed type</i>
Accuracy	1mm
Resolution	1mm
Beam Angle	6° conical at 500kHz
Signalling	Monotonic
Pulse Length	User Defined

PHYSICAL

Depth Rating ²	6,000m (Titanium) 1,000m (Acetal)
Temperature	-10 to 40°C Operating -20 to 60°C Storage
Connector	Subconn MCBH8M-SS <i>Other options available</i>
Weight (Forward Looking) <i>Air/Fresh water</i>	0.5/0.325kg (Titanium) 0.3/0.110kg (Acetal)
Weight (Right Angled) <i>Air/Fresh water</i>	0.520/0.350kg (Titanium) 0.270/0.125kg (Acetal)

COMMS & POWER

Digital Protocol	RS232 & RS485 4800 to 115,200 baud
Analogue Data	0 to 5V DC, 0 to 10V DC or 4-20mA Continuous or on demand
Data Rate	Up to 10Hz
Input Voltage	9 to 36V DC
Power <i>No Altitude</i>	28mA @ 24V DC
Power <i>With Altitude¹</i>	51mA @ 24V DC

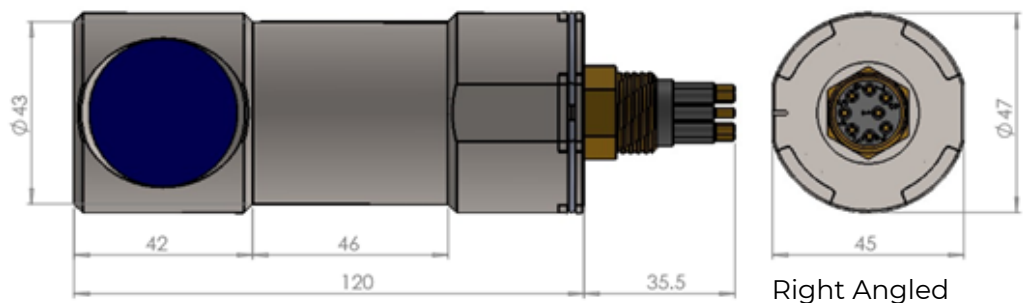
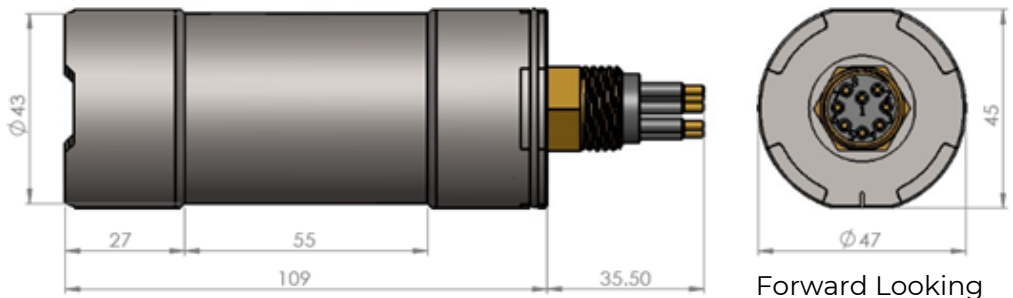
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ATTITUDE*

Pitch	± 90°
Roll	± 180°
Accuracy	0.2°
Resolution	0.1°

HEADING*

Accuracy	± 1°
Resolution	0.1°



Dimensions given in mm.

* Optional - Heading provided for Magnetic North

¹ 100% Tx power, 10Hz update rate.

² 11,000m rated option available - see ISA500-11K Datasheet.