

IMPACT
SUBSEA
INNOVATIVE SENSORS



SUBSEA SENSORS

www.impactsubsea.com

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About Impact Subsea

At the heart of Impact Subsea is a diverse collection of people who share a passion for questioning the status quo and driving subsea technology forward.

Talented people, an excellent working environment and the latest support technology provide the foundation to create and maintain our groundbreaking range of underwater sensor solutions.

Impact Subsea designs, manufactures and supports a range of high-performance sensor solutions for underwater vehicles and associated applications.

The company's sensor solutions are used within traditional and renewable energy, underwater research and defence sectors.



ISS360

HIGH PERFORMANCE IMAGING SONARS

FEATURES & BENEFITS

- > **90 METER RANGE**
Long range imaging.
- > **6,000M DEPTH RATING**
Ideal for Shallow and Deep Waters.
- > **PITCH & ROLL***
Provides Pitch and Roll to 0.2° accuracy.
- > **SMALL FORM FACTOR**
Smallest Imaging Sonar available.
- > **BROADBAND TRANSDUCER**
Excellent image quality & range.
- > **NO SLIP RINGS**
No components to wear.



The world's fastest and most compact scanning, imaging sonar - the ISS360.

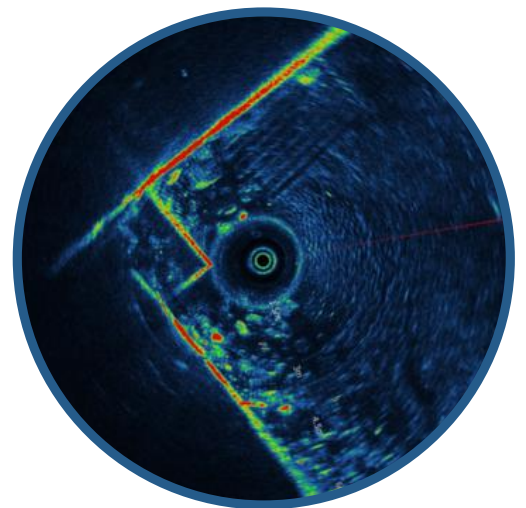
Optionally available with integrated Pitch & Roll.

Utilising a broadband composite transducer together with an advanced digital acoustic engine provides excellent range capability and image clarity.

For applications where Sonar Imaging, Pitch & Roll are required; all can be provided from a single device.

IS³ Impact Subsea Signalling Scheme uses advanced phase modulation and coding techniques to provide exceptional signal integrity, timing accuracy and range resolution.

Provided in a highly robust Titanium housing. The unit can be supplied without pitch and roll. Alternative configurations are available upon request.



APPLICATIONS INCLUDE:

ROV & AUV Navigation | Target Identification | Diver Navigation
Port Surveillance | Motion Reference | Search & Recovery

*Optional





ACOUSTIC

Frequency	700kHz Centre 600 to 900kHz Bandwidth
Range	0.15 to 90 meters
Resolution	2.5mm (minimum)
Beam Angle	23° Vertical at 700kHz 2.2° Horizontal at 700kHz
Signalling Selectable	CW, CHIRP & IS ³
Step Size Selectable	0.225°, 0.45°, 0.9°, 1.8°, 3.6° & 7.2°
Scan Angle	360° Continuous or Sector Scan

PHYSICAL

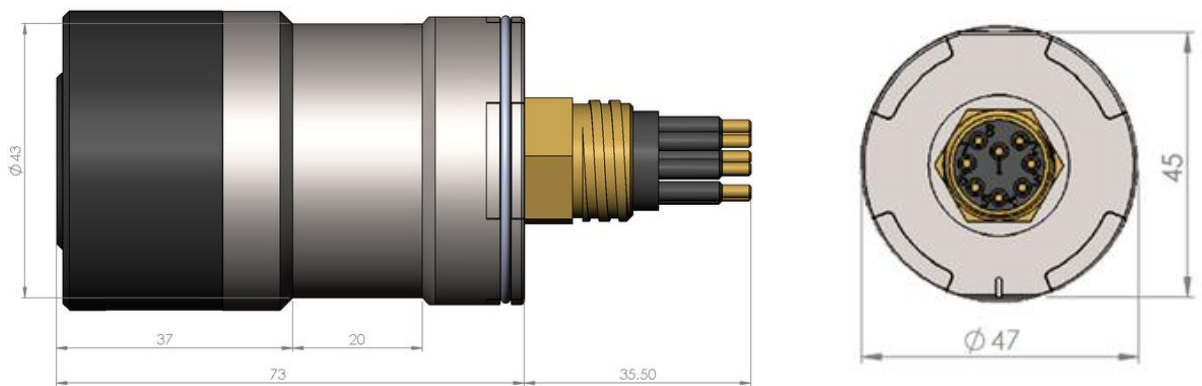
Depth Rating	6,000m
Temperature	-10 to 40°C Operating -20 to 60°C Storage
Connector	Subconn MCBH8M-SS <i>Other options available</i>
Weight <i>Air/Fresh water</i>	0.38/0.3kg (4,000m) 0.37/0.3kg (6,000m)

COMMS & POWER

Digital	RS232, RS485 & Ethernet
Protocol	9600 to 115,200 baud
Input Voltage	12 to 65V DC
Power <i>Standby</i>	95mA @ 24V DC
Power <i>Scanning¹</i>	240mA @ 24V DC

ATTITUDE*

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



*Optional

¹ Based on maximum power level and scanning speed.

Dimensions given in mm.

ISS360HD

HIGH PERFORMANCE IMAGING SONARS

FEATURES & BENEFITS

- > **100 METER RANGE**
Long range imaging.
- > **6,000M DEPTH RATING**
Ideal for shallow and deep water.
- > **PITCH & ROLL***
Provides Pitch and Roll to 0.2° accuracy.
- > **SMALL FORM FACTOR**
Highly compact high resolution imaging sonar.
- > **BROADBAND TRANSDUCER**
Excellent image quality & range.
- > **NO SLIP RINGS**
No components to wear.



Impact Subsea are proud to present the high resolution imaging sonar - the ISS360HD.

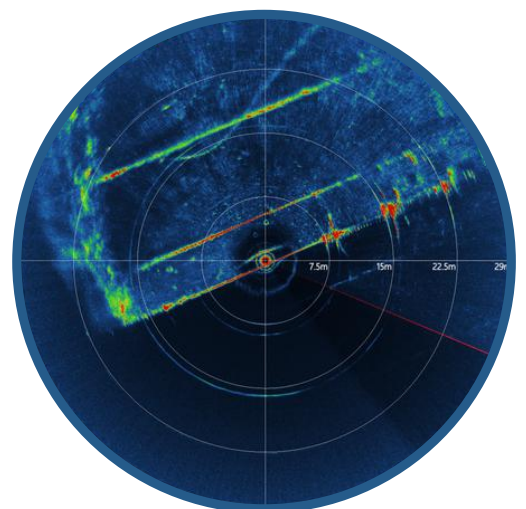
Optionally available with integrated Pitch & Roll.

Utilising a broadband composite transducer coupled with IS³ Impact Subsea Signalling Scheme enables a significant increase in range resolution while maintaining excellent accuracy and range capability.

For applications where Sonar Imaging, Pitch & Roll are required; all can be provided from a single device.

IS³ Impact Subsea Signalling Scheme uses advanced phase modulation and coding techniques to provide exceptional signal integrity, timing accuracy and range resolution.

Provided in a highly robust Titanium housing. The unit can be supplied without pitch and roll. Alternative configurations are available upon request.



APPLICATIONS INCLUDE:

ROV & AUV Navigation | Target Identification | Diver Navigation
Port Surveillance | Motion Reference | Search & Recovery

*Optional





ACOUSTIC

Frequency	750kHz Centre 600 to 900kHz Bandwidth
Range	0.45 to 100 meters
Resolution	2.5mm (minimum)
Beam Angle	30° Vertical at 700kHz 1° Horizontal at 700kHz
Signalling <i>Selectable</i>	CW, CHIRP & IS ³
Step Size <i>Selectable</i>	0.225°, 0.45°, 0.9°, 1.8°, 3.6° & 7.2°
Scan Angle	360° Continuous or Sector Scan

COMMS & POWER

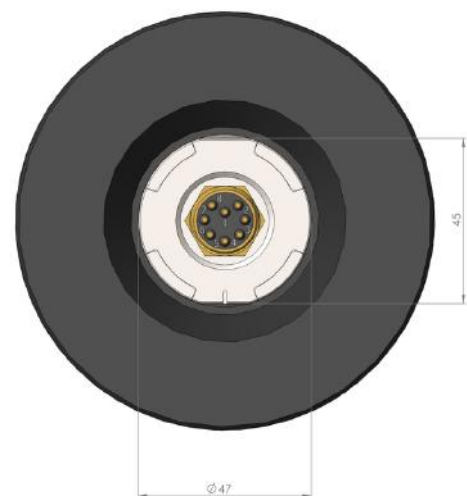
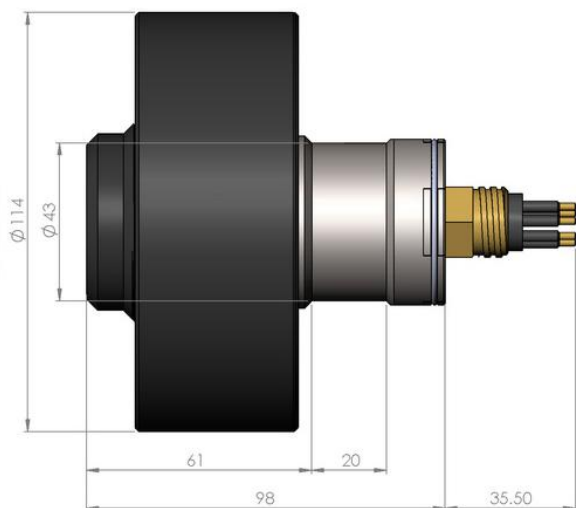
Digital	RS232, RS485 & Ethernet
Protocol	9600 to 115,200 baud
Input Voltage	12 to 65V DC
Power <i>Standby</i>	84mA @ 24V DC
Power <i>Scanning¹</i>	261mA @ 24V DC

PHYSICAL

Depth Rating	6,000m
Temperature	-10 to 40°C Operating -20 to 60°C Storage
Connector	Subconn MCBH8M-SS <i>Other options available</i>
Weight <i>Air/Fresh water</i>	0.76/0.3kg

ATTITUDE*

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



*Optional

¹ Based on maximum power level and scanning speed.

Dimensions given in mm.

ISP360

HIGH PERFORMANCE PROFILING SONARS

FEATURES & BENEFITS

- > **80 METER RANGE**
Long range profiling.
- > **4,000M DEPTH RATING**
Ideal for shallow and deep water.
- > **PITCH & ROLL***
Provides Pitch and Roll to 0.2° accuracy.
- > **SMALL FORM FACTOR**
Highly compact high resolution profiling sonar.
- > **NO SLIP RINGS**
No components to wear.
- > **IMAGING & PROFILING**
Imaging and Profiling modes of operation.



Impact Subsea are proud to present the high resolution profiling sonar - the ISP360.

Optionally available with integrated Pitch & Roll.

Utilising a broadband composite transducer coupled with IS³ Impact Subsea Signalling Scheme enables a significant increase in range resolution while maintaining excellent accuracy and range capability.

For applications where Sonar Profiling, Pitch & Roll are required; all can be provided from a single device.

The IS³ Impact Subsea Signalling Scheme also allows multiple profilers to run without the need to 'ping-sync', enabling an increase in profiling speed.

Provided in a highly robust Titanium housing. Alternative configurations are available upon request.

APPLICATIONS INCLUDE:

Pipeline Profiling | Trench Profiling | Positioning of a Vehicle in a Tank
Internal Pipe and Tank Profiling | Asset Positioning | Bridge Foundation Survey



*Optional





ACOUSTIC

Frequency	650kHz to 1.25MHz Bandwidth
Range (650kHz)	0.30 to 80 meters
Range (1.25MHz)	0.30 to 40 meters
Timing Accuracy	0.35 mm (minimum)
Beam Angle	2° Conical at 650kHz 1° Conical at 1.25MHz
Signalling <i>Selectable</i>	CW, CHIRP & IS ³
Step Size <i>Selectable</i>	0.225°, 0.45°, 0.9°, 1.8°, 3.6° & 7.2°
Scan Angle	360° Continuous or Sector Scan

ATTITUDE*

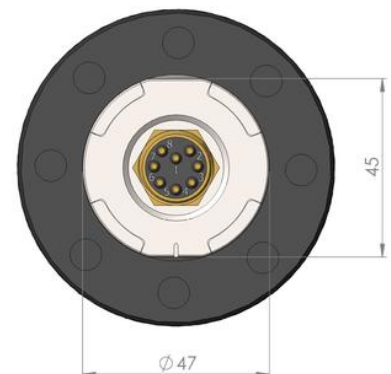
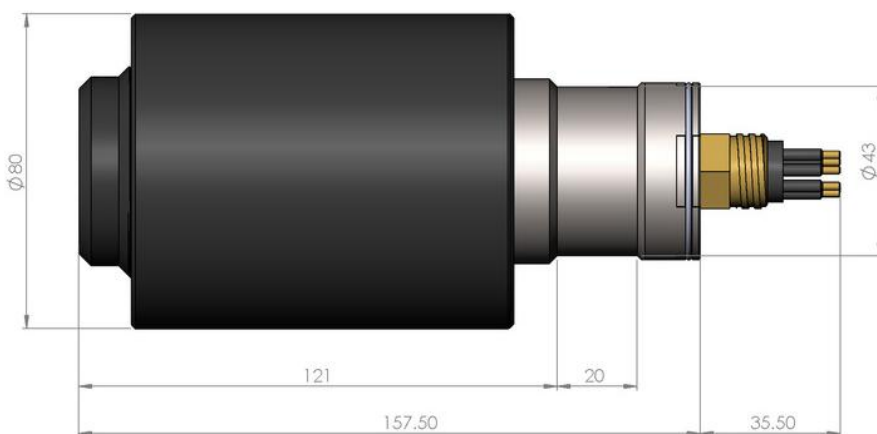
Pitch	± 90°
Roll	± 180°
Accuracy	0.2°
Resolution	0.1°

COMMS & POWER

Digital	RS232, RS485 & Ethernet
Protocol	9600 to 115,200 baud
Input Voltage	12 to 65V DC
Power <i>Standby</i>	260mA @ 24V DC
Power <i>Scanning¹</i>	380mA @ 24V DC

PHYSICAL

Depth Rating	4,000m
Temperature	-10 to 40°C Operating -20 to 60°C Storage
Connector	Subconn MCBH8M-SS <i>Other options available</i>
Weight <i>Air/Fresh water</i>	0.88/0.31kg



*Optional

¹ Based on maximum power level and scanning speed.

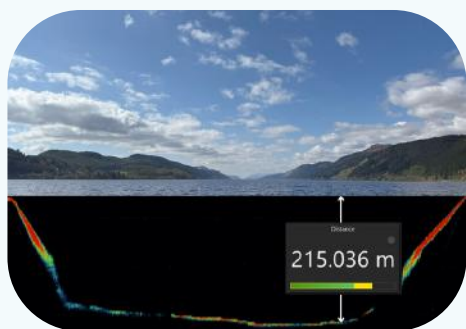
Dimensions given in mm.

ISA200

ALTIMETERS & SINGLE BEAM ECHOSOUNDERS

FEATURES & BENEFITS

- > **250 METER RANGE**
Proven long range measurement.
- > **1MM ACCURACY**
Proven millimetre accuracy.
- > **INTEGRATED AHRS***
Provides Magnetic Heading to $\pm 1^\circ$
Pitch & Roll to 0.2° accuracy.
- > **ECHOGRAM***
Visualise sonar backscatter data.
Up to 2,000 samples per ping.



- > **EMULATE ANY DEVICE**
Direct replacement of existing equipment.
- > **VARYING DEPTH RATINGS**
Available in 1000m & 6000m depth ratings.



Impact Subsea are proud to present the ground breaking ISA200 family of underwater altimeters and single beam echosounders. Highly robust, with optional integrated Attitude and Heading Reference System (AHRS).

The ISA200 utilises an advanced digital acoustic engine to provide the highest level of stability and range available from a 200kHz Altimeter.

With integrated AHRS, the ISA200 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.

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 INCLUDE:

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

*Optional





ACOUSTIC

Frequency	200kHz
Range	0.2 to 250 meters <i>Dependent on seabed type</i>
Accuracy	1mm
Resolution	1mm
Beam Angle	15.2° conical at 200kHz
Signalling	Monotonic
Pulse Length	User Defined

PHYSICAL

Depth Rating	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>	0.525/0.37kg (Titanium) 0.27/0.1kg (Acetal)
Weight (Right Angled) <i>Air/Fresh water</i>	0.545/0.38kg (Titanium) 0.3/0.125kg (Acetal)

COMMS & POWER

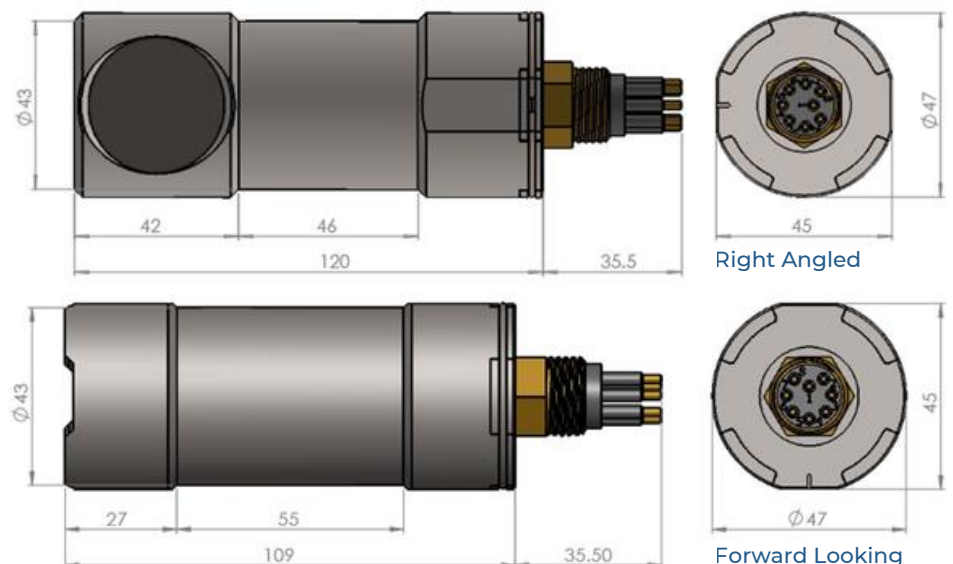
Digital	RS232 & RS485
Protocol	4800 to 115,200 baud
Analogue	0 to 5V DC, 0 to 10V DC or 4-20mA*
Data	Continuous or on demand
Data Rate	Up to 100Hz
Input Voltage	9 to 36V DC
Power <i>No Altitude</i>	26mA @ 24V DC
Power <i>With Altitude¹</i>	52mA @ 24V DC

ATTITUDE*

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

HEADING*

Accuracy	± 1°
Resolution	0.1°
<i>Heading provided to Magnetic North</i>	



*Optional

¹ 100% Tx power, 10Hz update rate.

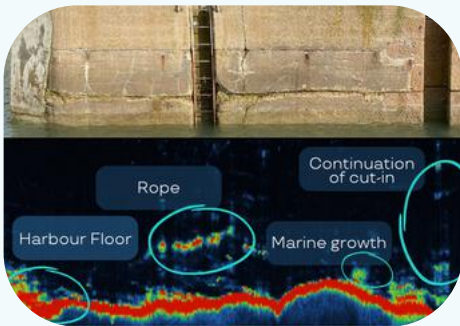
Dimensions given in mm.

ISA500

ALTIMETERS & SINGLE BEAM ECHOSOUNDERS

FEATURES & BENEFITS

- > **120+ METER RANGE**
Proven long range measurement.
- > **1MM ACCURACY**
Proven millimetre accuracy.
- > **INTEGRATED AHRS***
Provides Magnetic Heading to $\pm 1^\circ$
Pitch & Roll to 0.2° accuracy.
- > **ECHOGRAM***
Visualise sonar backscatter data.
Up to 2,000 samples per ping.



- > **EMULATE ANY DEVICE**
Direct replacement of existing equipment.
- > **VARYING DEPTH RATINGS**
Available in 1000m, 6000m and 11,000m depth ratings.



Impact Subsea are proud to present the ground breaking ISA500 family of altimeters and single beam echosounders. 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.

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.



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

APPLICATIONS INCLUDE:

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

*Optional





ACOUSTIC

Frequency	500kHz Standard 400 to 600kHz selectable in 1kHz steps
Range	0.1 to 120m+ <i>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

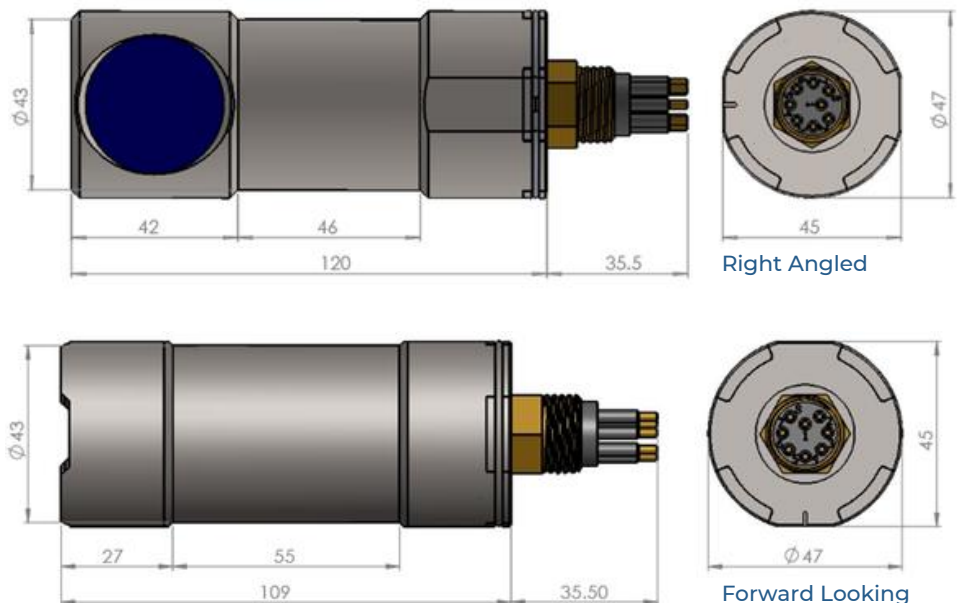
Digital	RS232 & RS485
Protocol	4800 to 115,200 baud
Analogue	0 to 5V DC, 0 to 10V DC or 4-20mA*
Data	Continuous or on demand
Data Rate	Up to 100Hz
Input Voltage	9 to 36V DC
Power <i>No Altitude</i>	26mA @ 24V DC
Power <i>With Altitude¹</i>	52mA @ 24V DC

ATTITUDE*

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

HEADING*

Accuracy	± 1°
Resolution	0.1°
<i>Heading provided to Magnetic North</i>	



*Optional

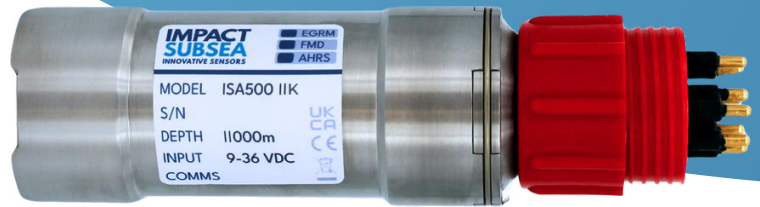
¹ 100% Tx power, 10Hz update rate.

² Also available in 11,000m, see ISA500-11K Datasheet.

Dimensions given in mm.

ISA500 11K

ALTIMETERS & SINGLE BEAM ECHOSOUNDERS



FEATURES & BENEFITS

- > **11,000 METER DEPTH RATING**
Ground breaking full ocean depth.
- > **120+ METER RANGE**
Proven long range measurement.
- > **1MM ACCURACY**
Proven millimetre accuracy.
- > **INTEGRATED AHRS***
Provides Magnetic Heading to $\pm 1^\circ$
Pitch & Roll to 0.2° accuracy.
- > **ECHOGRAM***
Visualise sonar backscatter data.
Up to 2,000 samples per ping.
- > **EMULATE ANY DEVICE**
Direct replacement of existing
equipment.

Impact Subsea are proud to present the ground breaking full ocean depth ISA500 Underwater Altimeter. Depth rated to 11,000 meters.

Based on the ISA500 architecture, the full ocean depth ISA500 is optionally available with 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.

World's smallest full ocean depth Altimeter. Ideal for deep-water applications where space and weight are critical considerations. Can be supplied without integrated AHRS.



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

APPLICATIONS INCLUDE:

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

*Optional





ACOUSTIC

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

COMMS & POWER

Digital	RS232 & RS485
Protocol	4800 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 100Hz
Input Voltage	9 to 36V DC
Power <i>No Altitude</i>	26mA @ 24V DC
Power <i>With Altitude¹</i>	52mA @ 24V DC

PHYSICAL

Depth Rating ²	11,000m
Temperature	-10 to 40°C Operating -20 to 60°C Storage
Connector	Subconn BH8M-SS <i>Other options available</i>
Weight <i>Air/Fresh water</i>	0.62/0.41kg

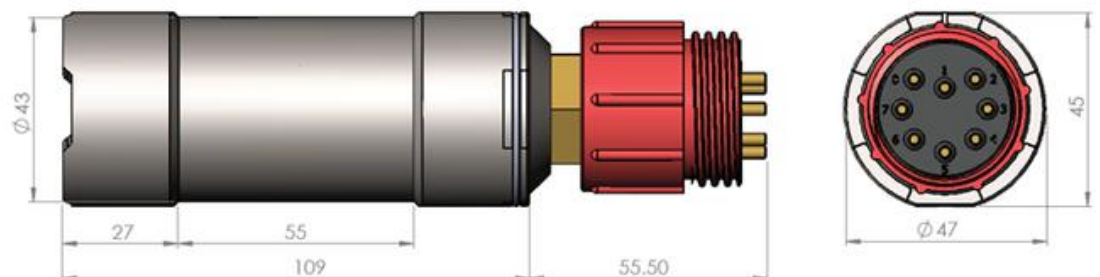
ATTITUDE*

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

Heading provided to Magnetic North

HEADING*

Accuracy	± 1°
Resolution	0.1°



*Optional

¹ 100% Tx power, 10Hz update rate.

² Other options available, see ISA500 Datasheet.

Dimensions given in mm.

ISD4000

DEPTH & TEMPERATURE SENSORS

FEATURES & BENEFITS

> $\pm 0.01\%$ FS ACCURACY

Optional 0.005% FS*
Survey Grade Pressure Accuracy.

> $\pm 0.1^\circ\text{C}$ ACCURACY

Optional 0.05°C*
Survey Grade Temperature Accuracy.

> INTEGRATED AHRS*

Provides Magnetic Heading to $\pm 1^\circ$
Pitch and Roll to 0.2° accuracy.

> MAINTENANCE FREE

Non-block pressure port.

> TITANIUM OR ACETAL HOUSING

Robust and long lasting.

> EMULATE ANY DEVICE

Direct replacement of existing equipment.



Impact Subsea are proud to present the ground breaking ISD4000 family of depth sensors.

Compact, lightweight and highly robust, the ISD4000 is ideal for ROV, AUV and other underwater Depth and Temperature measurement applications with optional integrated Attitude and Heading Reference System (AHRS).

The ISD4000 utilises the latest in sensing technology to provide a Depth accuracy of 0.01% FS and optionally to $\pm 0.005\%$ FS. Temperature accuracy to 0.1°C and optionally available to 0.05°C accuracy.

With an optional integrated AHRS, the ISD4000 provides a clear understanding of the position of the sensor at all times - ideal for asset deployment monitoring.

Provided in a highly robust Titanium or Black Acetal housing. The sensor can be provided without the AHRS. Alternative OEM configurations are available upon request.

APPLICATIONS INCLUDE:

Pipeline Surveys | Real Time Depth | Motion Reference | Asset Deployment
Echosounder Surveys | ROV & AUV Depth Sensor | Temperature Measurement

*Optional





DEPTH

Accuracy ¹	± 0.01% Full Scale
Resolution	0.001% Full Scale
Pressure Range	10, 30, 50, 100, 300, 400 or 600 Bar
Type	Temperature Compensated Piezo-Resistive

TEMPERATURE

Accuracy ²	0.1°C
Resolution	0.001°C

COMMS & POWER

Digital	RS232, RS485
Protocol	4800 to 115,200 baud
Data	Continuous or On Demand
Data Rate	Up to 100Hz
Input Voltage	7 to 32V DC
Power	32mA @ 24V DC

PHYSICAL

Depth Rating	6,000m (Titanium) 500m (Acetal)
Temperature	-5 to 35°C Calibrated -10 to 60°C Operation -20 to 70°C Storage
Connector	Subconn MCBH8M-SS <i>Other options available</i>
Weight <i>Air/Fresh water</i>	0.42/0.28kg (Titanium) 0.20/0.10kg (Acetal)

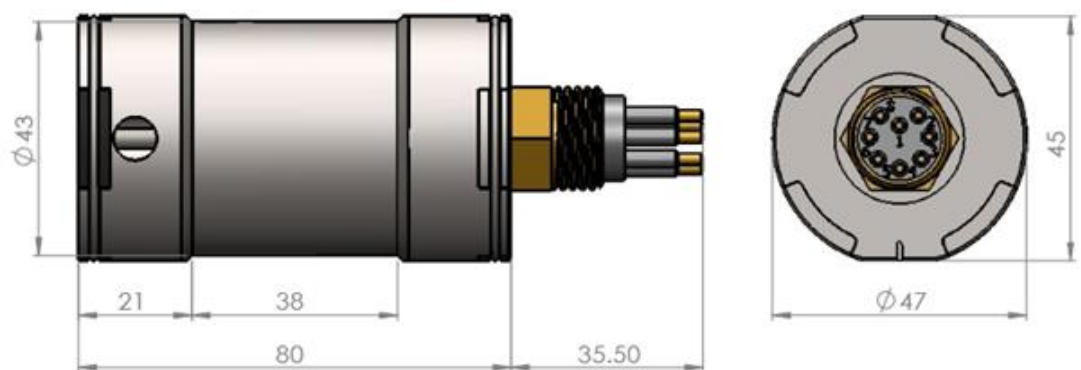
ATTITUDE*

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

HEADING*

Accuracy	± 1°
Resolution	0.1°

Heading provided to Magnetic North



*Optional

¹ Upgrade available to ± 0.005% FS

² Upgrade available to ± 0.05°C

Dimensions given in mm.

ISM3D

ATTITUDE & HEADING REFERENCE SYSTEM

FEATURES & BENEFITS

> HEADING

Provides Heading to $\pm 1^\circ$ of Local Magnetic North.

> PITCH & ROLL

Provided to $\pm 0.07^\circ$ accuracy.

> TITANIUM HOUSING

Robust & depth rated to 6,000m.

> ACETAL HOUSING

Low weight & depth rated to 1,000m.

> EMULATE ANY DEVICE

Direct replacement of existing equipment.

> SEAVIEW SOFTWARE

Configure sensor, view & log data.



Impact Subsea are proud to present the ground breaking ISM3D family of Underwater Attitude and Heading Reference System (AHRS) sensors.

Highly Robust, compact and lightweight, the ISM3D is ideal for ROV, AUV and other underwater Heading, Pitch and Roll applications.

With a selectable 'Inertial' Mode, the ISM3D Heading is highly resilient against temporary magnetic interference.

The ISM3D utilises MEMS based Accelerometers, Angular Rate Gyroscopes and Magnetometers.

The outputs from each sensor are processed by an advanced fusion algorithm to provide highly stable and accurate Heading, Pitch and Roll.

Provided in a highly robust Titanium or Black Acetal housing. Alternative OEM configurations are available upon request.

APPLICATIONS INCLUDE:

Auto Heading | Motion Reference Unit (MRU) |
ROV & AUV Heading & Attitude | Equipment Deployment Monitoring
Replacement for Flux Gate Compass | Replacement for Magnetically Slaved Gyro

*Optional





HEADING

Accuracy	$\pm 1^\circ$ of Local Magnetic North
Resolution	0.1°

ATTITUDE

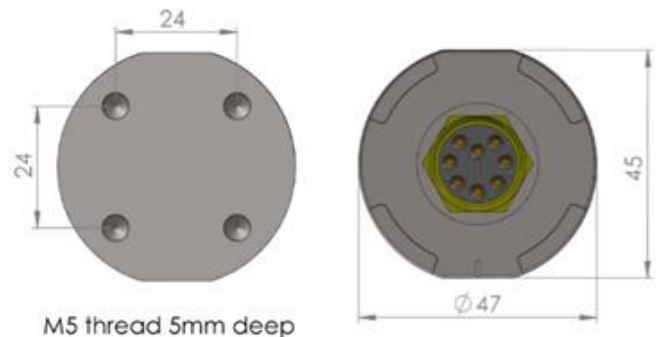
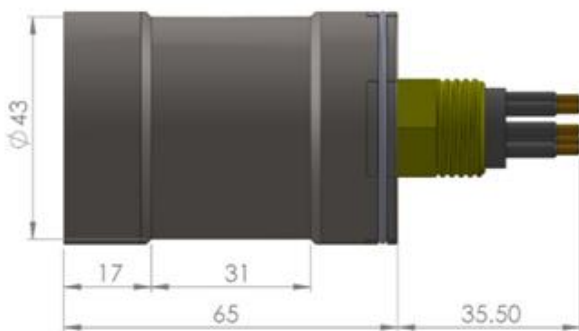
Pitch	$\pm 90^\circ$
Roll	$\pm 180^\circ$
Accuracy	$\pm 0.07^\circ$
Resolution	0.01°

COMMS & POWER

Digital	RS232 & RS485
Protocol	4800 to 115,200 baud
Data	Continuous or on demand
Data Rate	Up to 100Hz
Input Voltage	7 to 32V DC
Power	45mA @ 24V DC

PHYSICAL

Depth Rating	6,000m (Titanium) 1,000m (Acetal)
Temperature	-10 to 50°C Operating -20 to 70°C Storage
Connector	Subconn MCBH8M-SS <i>Other options available</i>
Weight	0.33/0.225kg (Titanium) <i>Air/Fresh water</i> 0.20/0.10kg (Acetal)



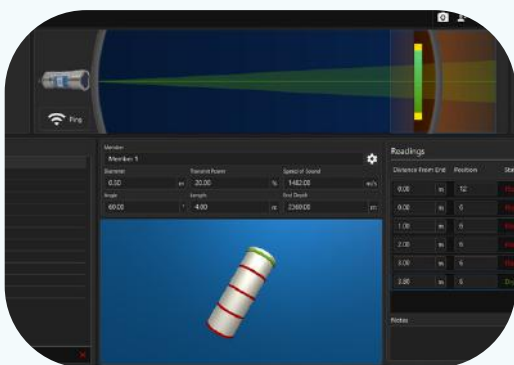
Dimensions given in mm.

ISFMD

FLOODED MEMBER DETECTION SYSTEM

FEATURES & BENEFITS

- > **SEAVIEW SOFTWARE**
Visualise all readings & generate survey reports.
- > **ISA500 ALTIMETER**
Can operate as altimeter when FMD App is not in use.
- > **TITANIUM PROBE**
Highly robust and long lasting sensor probe.
- > **INTEGRATED AHRS**
Understand exact orientation of probe at time of contact reading.
- > **MULTI-ECHO OUTPUT**
Visualise return if Flooded Member is detected.
- > **DEPTH**
Using the ISD4000, log the Depth & Temperature at time of reading.



Impact Subsea are proud to present the ground breaking ISFMD: the smallest, most advanced and reliable acoustic Flooded Member Detection System available today.

Suitable for Diver or ROV use, the ISFMD utilises a broadband composite transducer probe together with an advanced acoustic engine to provide the highest level of accuracy and reliability in readings.

Through the use of advanced acoustics, the ISFMD system removes the logistical and health & safety issues commonly associated with gamma-ray based Flooded Member Detection Systems.

An optional ISD4000 Depth Sensor can be added to the system to automatically record depth of each checkpoint.

All readings are shown visually in the seaView software package. A final report of all readings taken is automatically generated, ensuring all data is accurately recorded.

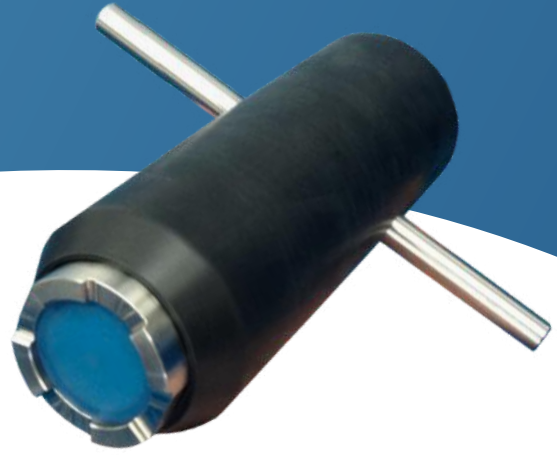
The ISFMD Flooded Member Detection System is available for ROV & Diver deployment. The system provides all that is required to conduct a FMD survey in one compact case.

SYSTEM COMPONENTS:

ISA500 Probe | Probe Holder | seaView FMD App | ISD4000 Depth Sensor*
100 or 200m Cable* | Aluminium Transport Case* | Topside Power Supply*

*Optional





ACOUSTIC

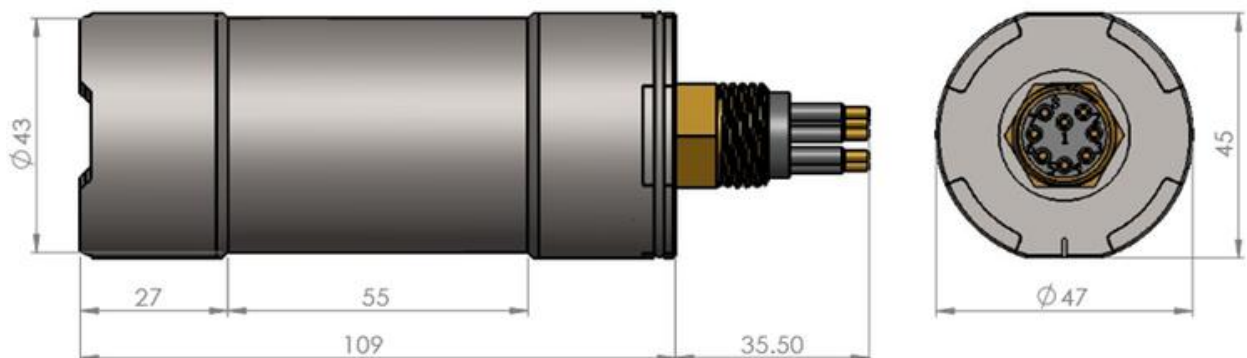
Frequency	500kHz
Range	0.1 to 30m <i>Dependent on member type</i>
Resolution	1mm
Beam Angle	6° conical at 500kHz
Signalling	Monotonic
Pulse Length	Automatic

PROBE PHYSICAL

Depth Rating	6,000m
Temperature	-10 to 40°C Operating -20 to 60°C Storage
Connector	Subconn MCBH8M-SS <i>Other options available</i>
Weight	0.5/0.325kg <i>Air/Fresh water</i>

COMMS & POWER

Digital	RS232 & RS485
Protocol	4800 to 115,200 baud
Data	On demand
Input Voltage	9 to 36V DC
Power <i>Standby</i>	26mA @ 24V DC
Power <i>On Ping</i>	52mA @ 24V DC



Dimensions given in mm.

UNITY

TOPSIDE CONTROL SYSTEM

FEATURES & BENEFITS

> SEAVIEW SOFTWARE

Operate Impact Subsea sensors and configure outputs to Survey.

> 4 COMMUNICATION PORTS

Multiple sensor and third party system interface options.

> ETHERNET & VDSL CONNECTION

For connection to seaMux.

> SMALL FORM FACTOR

1U High 19" Rack Mountable.

> INTERCONNECT CABLES

Standard length interconnect cables available.

> POWERS SENSORS

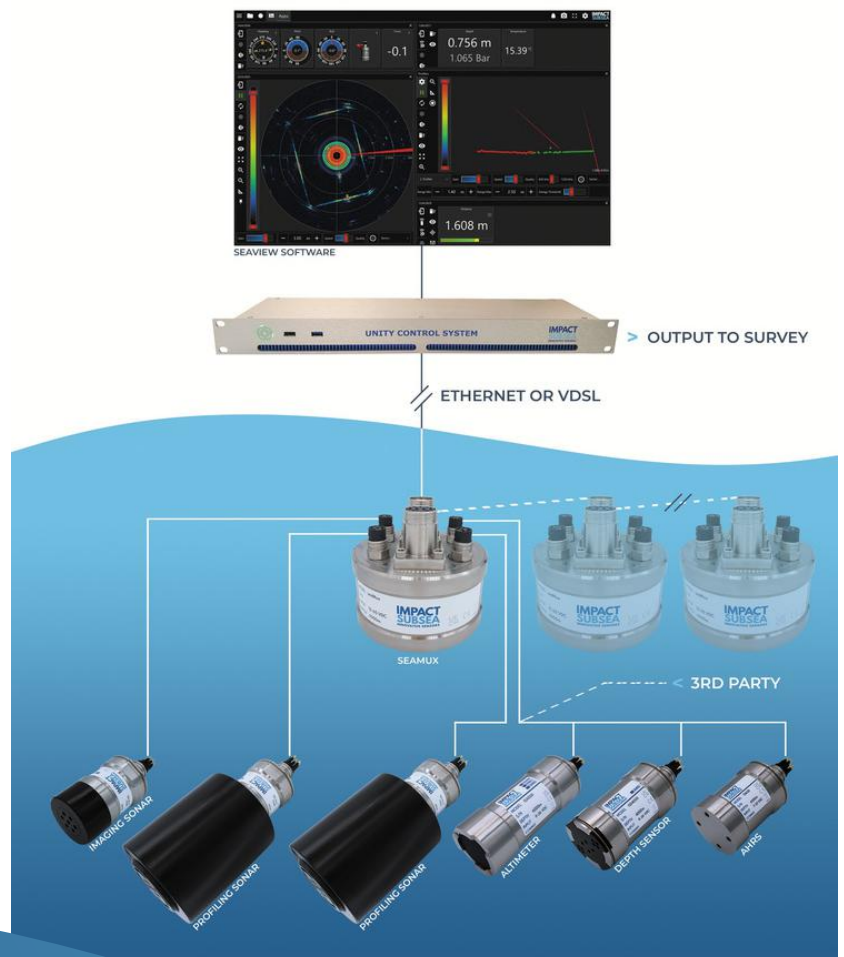
24VDC output for powering sensors.



Impact Subsea are proud to present the Unity Control System. Unity provides a 1U high, 19" rack mountable computer running seaView software together with a communications interface.

seaView facilitates operation of Impact Subsea sensors together with passing third party serial data through the system.

Unity has four communications ports which can operate on RS232, RS485 or Ethernet. The ports are available for connection to sensors or to third party systems. Each of the four ports is also equipped with a software controllable power output to locally power sensors.



APPLICATIONS INCLUDE:

ROV Integration | Survey Suite Integration | Stand Alone System Integration | Sensor Networking



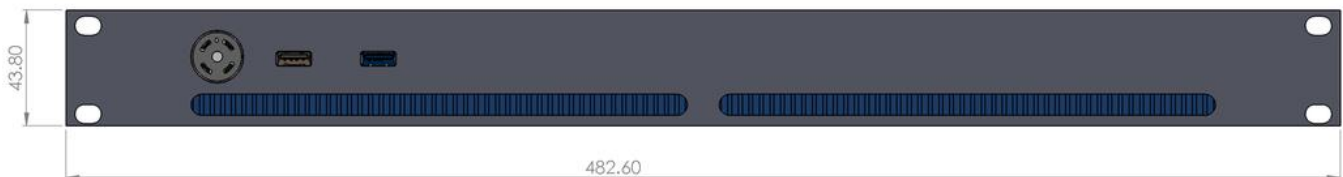
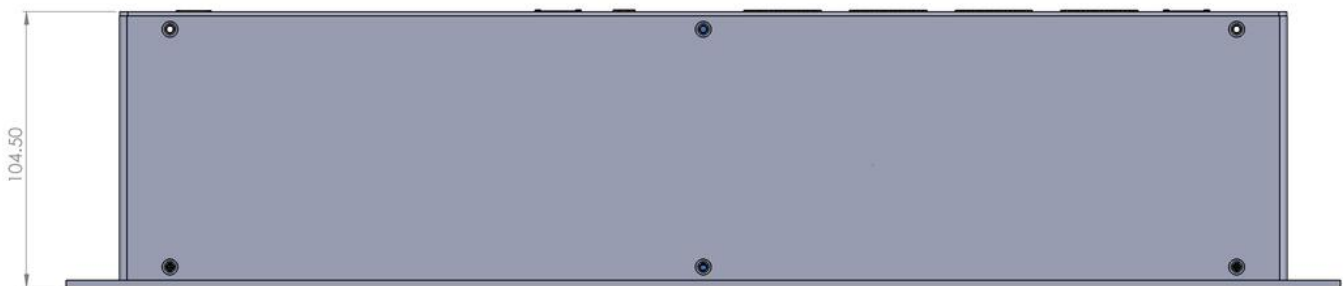


COMMS & POWER

Input Voltage	12VDC (PSU supplied with Unity)
Port to seaMux	Ethernet or VDSL
Ports	4 x Data Channels
Port Communication	Ethernet, RS232 or RS485
Port Power	24V @ 0.5A (12W per port)

PHYSICAL

Temperature	-10 to 40°C Operating -20 to 60°C Storage
Form Factor	1U High 19" Rack Mountable, 100mm deep



Dimensions given in mm.

seaMux

HIGH PERFORMANCE SUBSEA MULTIPLEXER

FEATURES & BENEFITS

> 4 COMMUNICATION PORTS

Multiple sensor connection options.

> DAISY CHAIN SEAMUX

Add additional seaMux units as required using the daisy chain port.

> DAISY CHAIN SENSORS

Multiple serial sensors on each port using y-splice cable.

> ETHERNET & VDSL CONNECTION

For connection to the surface.

> SMALL FORM FACTOR

Compact design.

> 6000M DEPTH RATING

Suitable for shallow and deep water applications.

> TITANIUM HOUSING

Long lasting and robust construction.

> INTERCONNECT CABLES

Standard length interconnect cables available.



Impact Subsea are proud to present the seaMux.

seaMux provides a highly compact underwater multiplexer for use with Impact Subsea Sonars, Profilers, Altimeters, Depth and AHRS sensors.

In addition to Impact Subsea sensors, the seaMux also facilitates the connection of third party serial or Ethernet based devices.

Data is transmitted from the seaMux to the topside either via Ethernet or over a screened twisted pair using VDSL communications.

At the topside the connection from seaMux interfaces to the Unity Control System. Unity allows the viewing, logging and output of data from the subsea sensor suite. It also allows the onward sending of serial or Ethernet data from third party sensors connected to the seaMux.

Each port on the seaMux can be enabled / disabled within Unity. The current draw and data through each port is also available to view from the seaView software running on Unity.



Unity Topside Control System

APPLICATIONS INCLUDE:

ROV & AUV Integration | Survey Suite Integration |
Stand Alone System Integration | Sensor Networking



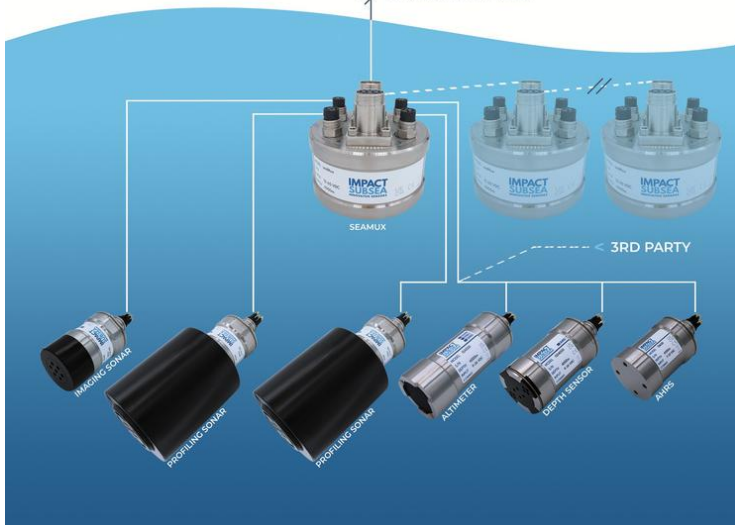
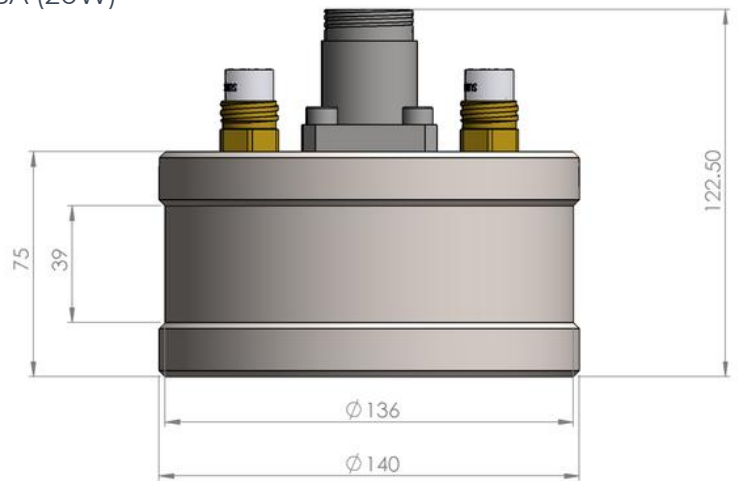
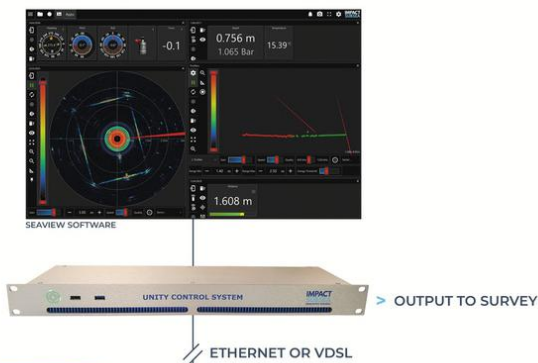


COMMS & POWER

Input Voltage	12 to 65V DC
Port to Surface	Subconn D/FCR2013M
Port to Further seaMux	Subconn D/FCR2013F
Connection to Surface	Ethernet or VDSL
Connection to Sensors	Ethernet, RS232 or RS485
Port to Sensors	4 x Subconn MCBH8F-SS
Sensor Port Power	Port 1: 24VDC @ 1.25A (30W) Port 2, 3 & 4: 24VDC @ 0.835A (20W) All ports isolated

PHYSICAL

Depth Rating	6,000 meters / 19,685 feet
Temperature	-10 to 40°C Operating -20 to 60°C Storage
Weight <i>Air/Fresh water</i>	4.0/2.9kg
Material	Titanium Body, Stainless Steel 316 Connectors



Dimensions given in mm.

Support

From selecting the perfect sensor to providing expert support, Impact Subsea is your trusted partner.

- ▶ **Sensor Selection:** Helping choose the right sensor for your project.
- ▶ **Training:** Providing knowledge and training on our sensor solutions.
- ▶ **Support:** Assistance to sensor users.

Service & Maintenance

Sensors and systems can be returned for service or repair by our qualified engineers. Service of a sensor will include:

- ▶ Check of all sensing capabilities
- ▶ Physical check of all components
- ▶ Cleaning of all body parts
- ▶ Replacement of all o-rings
- ▶ Calibration of the sensor (if requested)



Calibration

All Impact Subsea sensors which require calibration can be returned for calibration by our qualified engineers. The Impact Subsea calibration laboratory is equipped with all equipment required to conduct and verify:

- ▶ Pressure Calibration to 0.01% or 0.005% Full Scale Accuracy (ISD4000 & ISD4000-L)
- ▶ AHRS Calibrations (ISA200, ISA500, ISD4000 & ISM3D)
- ▶ ARS Calibrations (ISS360, ISS360HD & ISP360)

To book your sensor in for a **service** or **calibration** please contact: support@impactsubsea.co.uk or telephone: +44 (0)1224 460 850





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INNOVATIVE SENSORS

*Specifications subject to change
in line with product enhancements*

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