

Datasheet

Fetch AZA – Self-Calibrating Bottom Pressure Recorder



Fetch Ambient-Zero-Ambient (AZA) is a long-life subsea sensor logging node that enables data to be wirelessly extracted via its integrated high speed acoustic modem.

The high quality pressure sensor is automatically recalibrated in-situ, by periodically taking it to one atmosphere and measuring the sensor bias against a low pressure sensor of similar quality. In essence, the ± 0.2 mbar accuracy of the low pressure sensor is transferred to the high pressure sensors. Potentially, barring any other errors, the post-processed data may be up to 150 times better accuracy, for the duration of the deployment.

Other supported sensors include high precision temperature and sound velocity as well as inclination.

The 9,000 bps modem transfer rate enables logged data to be extracted in minimal vessel time, reducing operational costs.

The ultra-low power platform powers up sensors only when required and logs and timestamps the data to an internal SD memory card.

High capacity primary lithium battery packs enable deployments of many years, dependent on sensor selection and sampling rate.

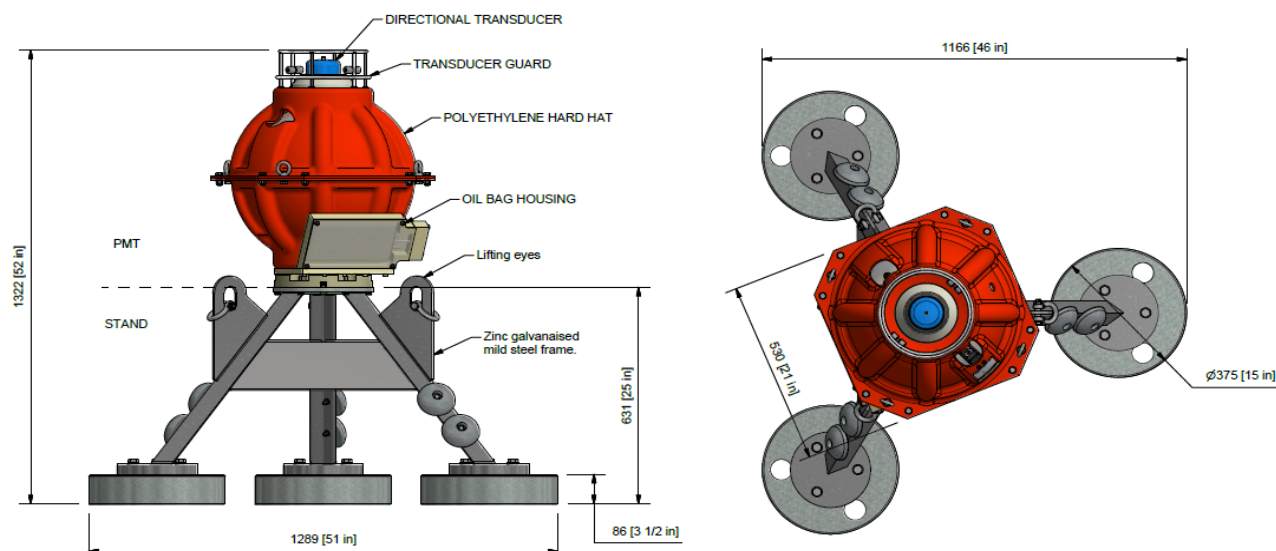
Fetch is compatible with Sonardyne's Ultra-Short BaseLine (USBL) positioning systems for positioning during deployment/recovery.

Key Features

- Pressure data with drift-elimination
- Autonomous sensor logging with acoustic telemetry of data
- Low data recovery costs
- 3,000/6,000 m depth options
- Ultra long-life – 10+ years with excellent corrosion resistance
- Integrated modem with data rates ranging from 100 to 9,000 bps in multiple frequency bands
- Easy to set-up with configuration and sampling period programmable via telemetry link
- Sonardyne Wideband[®]1, Wideband 2, Wideband 2+ and HPR 400 USBL mode compatible
- Battery disconnect fob to disconnect battery for transport and storage

Specifications

Fetch AZA – Self-Calibrating Bottom Pressure Recorder



Feature		Type 8306
Depth Rating		3,000 m
Operating Frequency		MF
Transducer Beam Shape		Directional/omni-directional
Transmit Source Level (dB re 1 μ Pa @ 1 m)		190–202/187–196 dB
Receive Sensitivity (dB re 1 μ Pa)		<85 dB
Communications		Acoustic modem & Bluetooth wireless
Battery Life (Lithium)		10 years typical, (504 Ah) (dependent on sensors and sampling interval)
Mechanical Construction		Glass sphere, duplex s/steel guard, PVC shell and titanium ports
Operating Temperature		-5 to +35°C
Storage Temperature	With Batteries	0 to +30°C
	Without Batteries	-5 to +35°C
Mass	With Stand	145 kg
	Without Stand	62 kg
Weight in Water	With Stand	830 N
	Without Stand	25 N (negative buoyancy)
Sensors and Options		
AZA In-situ Self-Calibration Mechanism		Standard
High Precision Temperature Sensor ($\pm 0.015^\circ\text{C}$)		Standard
Transfer Pressure Sensor	Quartz, ($\pm 0.01\%$)	Standard
	2nd Quartz	Option
Ambient Pressure Sensor	Strain Gauge, ($\pm 0.01\%$)	Standard
	Strain Gauge, ($\pm 0.19\%$)	Option
Low-Range Pressure Sensor (Strain Gauge, 2 bar ($\pm 0.01\%$))		Standard
Sound Velocity Sensor ± 0.02 m/s Accuracy Under Calibration Conditions		Option
MEMS Inclinometer ($\pm 1^\circ$)		Standard
High Precision Inclinometer ($\pm 0.05^\circ$)		Option
Acoustic Baseline Ranging ¹		Option
Release Mechanism (Screw-off)		Option
Battery Disconnect Fob		Standard
Stand/Mud Feet		Option

¹ Available for omni-directional transducer beam shapes only.