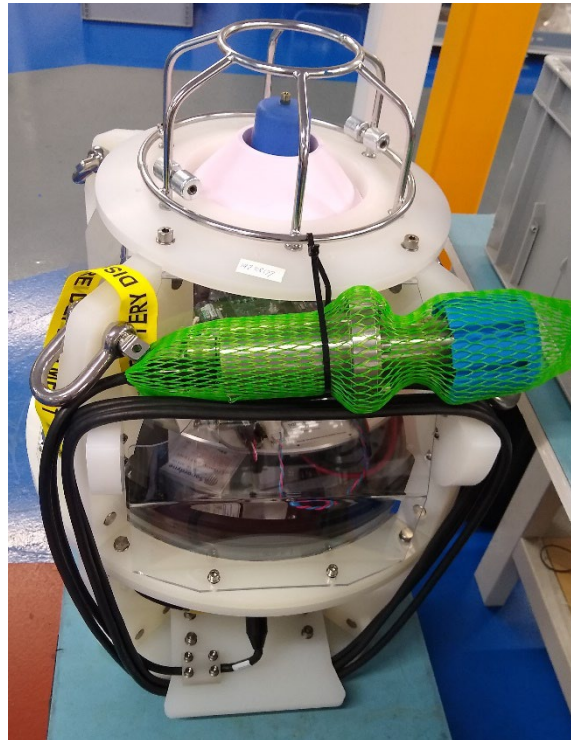


Datasheet

Wired Fetch – Self-calibrating Bottom Pressure Recorder 8306-9931



Fetch is a long-life subsea sensor node that can be connected to ocean observatory infrastructure to provide real-time readings via an optional wet-mate ROV connector.

The BPR uses a high-resolution quartz-based pressure sensor.

The Ambient-Zero-Ambient (AZA) option permits the quartz pressure sensor to be 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.

Other fitted sensors measure high precision temperature and inclination.

A fully isolated Ethernet command port allows communication from the shore via the cabled network. The unit is initialised on command from the shore station. Sensor readings are generated autonomously by the instrument, and also on command.

The omni-directional acoustic beam pattern allows the unit to interrogate other autonomous Fetch units in the array to collect sensor readings and baseline range measurements.

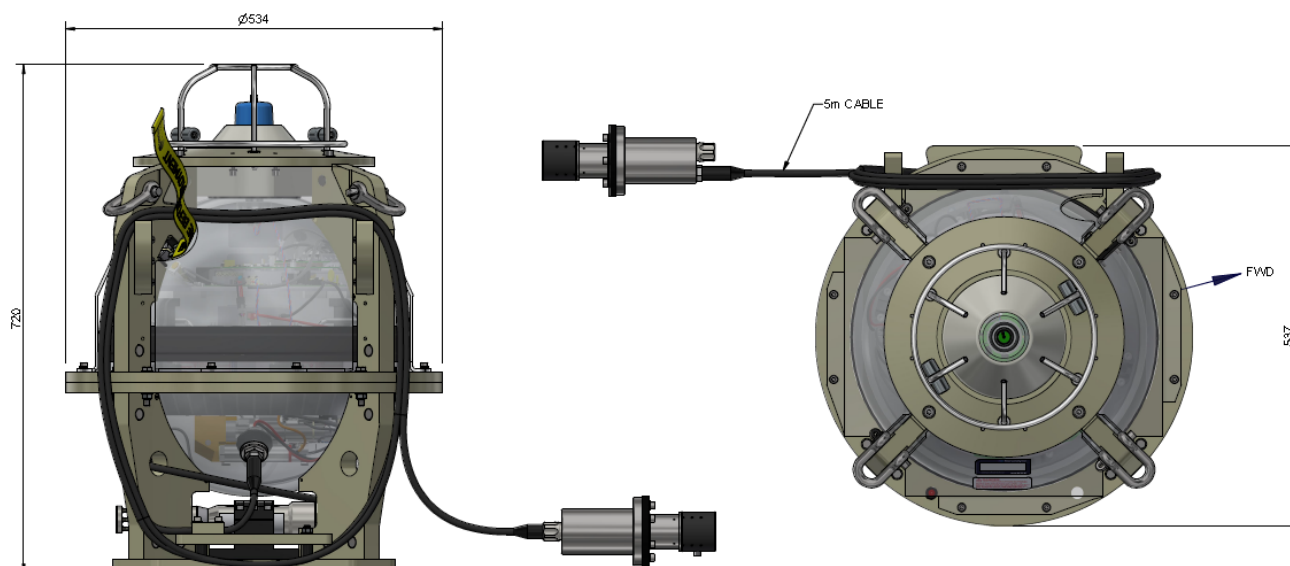
Fetch is compatible with Sonardyne's Wideband® acoustic positioning systems and can be boxed-in periodically as required.

Key Features

- Pressure data with drift-elimination in AZA version
- Ultra long-life – 20 year design life with excellent corrosion resistance
- Sonardyne Wideband 2 and 2+ acoustic signal technology
- Ethernet command port
- External dc power supply with full internal isolation

Specifications

Wired Fetch – Self-calibrating Bottom Pressure Recorder 8306-9931



Feature		Type 8306-9931 AZA
Depth Rating		3,000 m
Operating Frequency		MF (19–34 kHz)
Transducer Beam Shape		Omni-directional $\pm 130^\circ$
Transmit Source Level (dB re 1 μ Pa @ 1 m)		193 dB
Receive Sensitivity (dB re 1 μ Pa)		<85 dB
Design Life		20 years
Communications	Acoustic modem	100 to 9,000 baud
	Ethernet	100 Base T, via wet-mate connector
External Power Supply		22 to 48 V dc, 15 W
Internal Auxiliary Battery		Lithium primary, 180 Ah
Electrical Connection		Flying 12-way ROV wet-mate receptacle, with 5 m cable Dry mate 8-way test connector
Mechanical Construction		Glass sphere, duplex stainless-steel guard, polypropylene skeleton and titanium ports
Operating Temperature		-5 to +35°C
Storage Temperature (Without Batteries)		-5 to +35°C
Mass		60 kg (132 lb)
Weight in Water		0 N (neutral buoyancy)
Dimensions		Height 720 mm (28.3") Diameter 534 mm (21.0")
Sensors and Options		
AZA in-situ Self-Calibration Mechanism		Fitted
High Precision Temperature Sensor (Pt100, $\pm 0.015^\circ\text{C}$)		Fitted
Transfer Pressure Sensor (Quartz, $\pm 0.01\%$)		Fitted, 300 bar
Ambient Pressure Sensor (Strain Gauge, $\pm 0.01\%$),		Fitted, 300 bar strain gauge
Low-Range Pressure Sensor (Strain Gauge, 2 bar, $\pm 0.01\%$)		Fitted
MEMS Inclinometer ($\pm 1^\circ$)		Fitted
Sound Velocity (External, ± 0.017 m/s accuracy, 100mm leg)		Fitted (via External Connector)
Tripod Stand		Several options available

Specifications subject to change without notice – 07/2022

For further information, contact us at