
SmartHydro Sensor

Key Features

- Wide Frequency Range
- High Sensitivity
- Intrinsically Safe
- Multiple km Signal Integrity

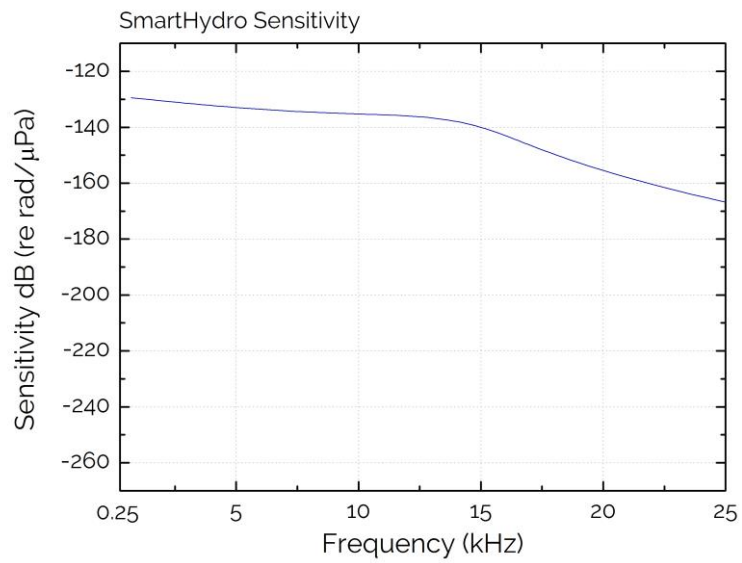
About SmartHydro

SmartHydro is a FBG based hydrophone, suitable for the measurement of underwater acoustic signals. The sensor is ideal for condition monitoring of submerged machinery such as pumps, turbines and motors.

A high-resolution, high-speed interrogator such as the Smart Fibres SmartSonic is required in order to read SmartHydro. It is easy to connect to the SmartSonic Interrogator; connect the two optical connections provided on the hydrophone directly to the SmartSonic Interrogator; connect a reference FBG array to the reference connections on the SmartSonic Interrogator. It is important to make sure that cable lengths on both the optical hydrophone and the reference FBG array are the same.

Specifications

Parameter	Value
Usable Frequency Range	50 Hz to 30 kHz
Operating Environment	Fresh or seawater
Receiving Sensitivity	-140 dB (re rad/uPa) at 15 kHz
Directivity Pattern	Omnidirectional
Operating Depth	As required
Dynamic Range	130 dB*
Operating Temperature Range	-2 to +120 °C
Storage Temperature Range	-10 to +120 °C
Mass	~ 150 g
Dimensions	Length 23 cm x diameter 3.5 cm
Cable Length	Up to multiple Kms
Encapsulating Material	Polyurethane Elastomer
Colour	Off-White



* assumes 1% optical path difference (OPD) of a 2 m measurable zone and noise level of 5 nm RMS over 300 kHz bandwidth

Specifications may change without notice