aquaMeasure Sensors

When it comes to environmental monitoring in real-time, we've got you covered with our revolutionary, cable-free environmental sensors

aquaMeasures are compact, wireless sensors that monitor underwater environmental conditions to understand the effects that changes in ecosystems can have on the behavior and mortality of aquatic animals.

When used in conjunction with fish tracking studies where you learn where your animals go, aquaMeasure sensors can offer valuable insights into why your animals behave the way they do.

The aquaMeasure DO measures **dissolved oxygen** and the aquaMeasure SAL measures **salinity**. The aquaMeasure BASE houses and integrates third party sensors that measure **blue-green algae (BGA)** in fresh and salt water, **turbidity**, **chlorophyll** and **CDOM/FDOM**.

All aquaMeasure sensors measure temperature and tilt and operate in real-time. The aquaMeasure DO also comes with an optional depth sensor.

Why Measure?

- **Dissolved Oxygen** - low levels significantly affect behavior and can lead to mortality
- **Salinity** - abrupt changes can cause high stress levels and lead to mortality
- **Blue-Green Algae** - causes low DO and the production of toxins, which can lead to high levels of mortality
- **Turbidity** - increased levels raise water temperature which can be harmful to biomass and affect fish feeding behavior
- **Chlorophyll** - high levels indicates high levels of phytoplankton and possible pollutants that can impact macro-nutrients and biomass levels
- **CDOM/FDOM** - human influences such as logging, effluent discharge, agriculture, and wetland drainage can increase levels of CDOM/FDOM

Benefits

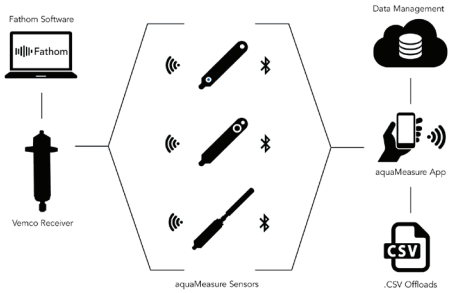
- Transmits data to Fathom Live system for real-time access or to nearby deployed Vemco receivers
- Logging capabilities for passive monitoring
- In air wireless communications for offload to a mobile device or PC
- Instant visualization of data with aquaMeasure app and Fathom Live dashboard
- Cloud-based data storage

INNOVASEA

www.innovasea.com/fish-tracking

 |

How It Works



Pair With

aquaMeasure sensors are used as a system with:

- aquaHub and Receiver
- Vemco 69 kHz Receivers
- Fathom Live Software

PRODUCT SPECIFICATIONS

Dissolved Oxygen
Optical Based Measurement
Operational Range: 0 - 150%
Resolution (logged data): 0.1%
Resolution (transmitted data): 0.55% - 1%
Accuracy: ±5%, up to 120%, from 5°C to 25°C

Salinity
Conductivity Based Measurement
Operational Range: 0 - 40 PSU
Resolution (logged data): 0.1 PSU
Resolution (transmitted data): 0.5 PSU

BGA Freshwater (Phycocyanin)
Optical Fluorescence Based
Measurement: 0 - 4500 ppb
Resolution (logged data): 1.0 ppb
Resolution (transmitted data): 30.0 ppb

BGA Marine (Phycoerythrin)
Optical Fluorescence Based
Measurement: 0 - 700 ppb
Resolution (logged data): 0.1 ppb
Resolution (transmitted data): 5.0 ppb

Turbidity (TURB)
Optical Back-Scatter Based
Measurement: 0 - 200 NTU
Resolution (logged data): 0.01 NTU
Resolution (transmitted data): 2.0 NTU

Chlorophyll (CHL) A-Blue
Optical Fluorescence Based
Measurement: 0 - 100 µg/l
Resolution (logged data): 0.01 µg/l
Resolution (transmitted data): 1.0 µg/l

Chlorophyll (CHL) A-Red
Optical Fluorescence Based
Measurement: 0 - 500 µg/l
Resolution (logged data): 0.1 µg/l
Resolution (transmitted data): 5.0 µg/l

CDOM / FDOM
Optical Fluorescence Based
Measurement: 0 - 500 ppb
Resolution (logged data): 0.1 ppb
Resolution (transmitted data): 5.0 ppb

DO Sensor Dimensions
50 mm x 274 mm
Weight Collar: 70 mm x 80 mm

DO Weight (Air/Water)
526 g / 154 g
Weight Collar: 907 g / 816 g

SAL Sensor Dimensions
64 mm x 386 mm
Weight Collar: 70 mm x 80 mm

SAL Weight (Air/Water)
820 g / 300 g
Weight Collar: 907 g / 816 g

BASE Sensor Dimensions
64 mm x 574 mm
Weight Collar: 99 mm x 106 mm

BASE Weight (Air/Water)
1300 g / 265 g
Weight Collar: 2370 g / 2170 g

Depth Sensor Option (DO only)
Pressure Transducer: 0 - 100 m (±1.5 m)
Resolution (logged data): 0.1 m
Resolution (transmitted data): 0.5 m

Operational Temperature Range (water must not freeze)
DO, SAL: -5°C to 35°C
BGA, TURB, CHL, CDOM: -2°C to 35°C
Resolution (logged data): 0.01°C
Resolution (transmitted data): 0.1°C
Accuracy: ±0.2°C

Tilt
3D Accelerometer: 0° - 180°
Resolution (logged data): 0.1°
Resolution (transmitted data): 1°

Battery Life DO and SAL
6 - 12 months

Battery Life BGA, TURB, CHL, and CDOM / FDOM
4 - 6 months

Memory
64 Mb Flash (1,000.000+ records)

Depth Range
Up to 100 m

Configuration/Offload
Via aquaMeasure App (iOS/Android)

Real-time Mode
Yes (Underwater Communications)

Logger Mode
Yes (Internal Memory)

Ready to Get Started? Contact us today.

About Innovasea
Innovasea designs the world's most technologically advanced aquatic solutions for fish tracking and builds them to withstand the toughest conditions. It's all driven by a commitment to make our ocean and freshwater ecosystems sustainable for future generations. Today. Tomorrow. For life.

INNOVASEA
www.innovasea.com/fish-tracking