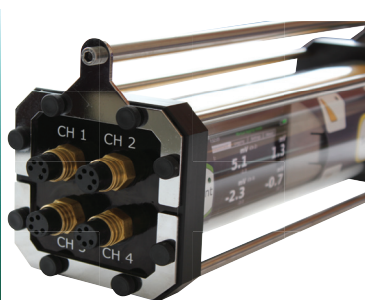


ENABLING  
SCIENTIFIC  
RESEARCH



## Unisense UnderWater Meter

Versatile amplifier and data logger system for field and under water applications

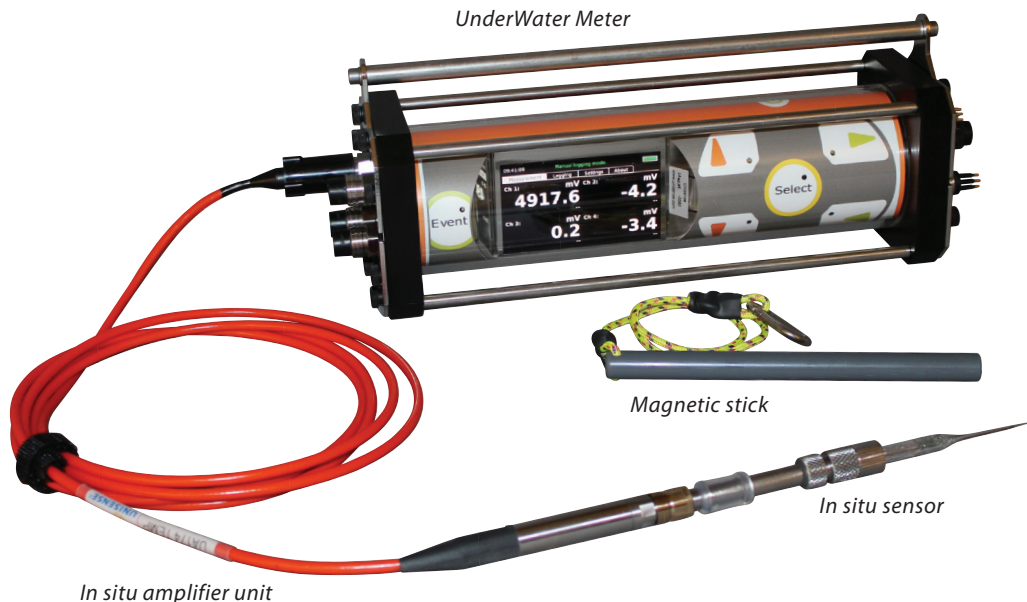
The Unisense UnderWater Meter is an excellent tool that enables you to take your research into the field. While laboratory equipment is not suitable for humid or rainy conditions, the robust UnderWater Meter can be used in humid rain forests or wetlands, as well as by scuba divers under water on **coral reefs**, in **aquatic plant beds**, in fast flowing **streams** or in muddy **estuaries**.

- Designed for scuba diving and field measurements
- Robust and waterproof to 30 m
- Easy to operate using magnetic keys
- Four channels for use with all Unisense sensors
- Read directly from OLED display and log data
- Logs up to 200 million data points
- Digital outputs for data extraction
- Analog outputs for external data acquisition

### Design your own system

- In Situ Amplifiers (ISA) - choose amplifiers and sensors to match your study requirements
- Battery package - an extra battery package can be added to prolong your study time up to 100 hours
- "Sensor garage" - extra housing similar to the UnderWater Meter to store your sensors and/or tools
- 16 bit A/D-converter - get analog output signals for real time data monitoring and logging

UnderWater Meter



THE UNDERWATER METER CAN BE USED WITH ALL UNISENSE MICRO- AND MACROSENSORS:

O <sub>2</sub>
H <sub>2</sub>
H <sub>2</sub> S
N <sub>2</sub> O
NO
NO <sub>2</sub> <sup>-</sup>
NO <sub>3</sub> <sup>-</sup>
pH
Redox
Temperature

**Microsensors** are sensitive and extremely accurate measuring tools. To avoid that the minute sensor signals (pA or mV) are influenced by background noise, the Unisense **in Situ Amplifiers (ISA)** convert the sensor signals to a robust voltage signal already at the electrode base. The in situ amplifiers thus function as miniaturized pA- or mV-meters and ensure high quality signals.

The ISAs are sensor type specific and facilitate polarization of the sensor and amplification of the signal. All four channels of the UnderWater Meter can therefore be connected to any ISA. Amplifiers can easily be interchanged between channels giving you total flexibility for future studies.

The microsensor signals can be read from the **OLED display** and are automatically stored in the **logging unit**.

Data are logged either in one-shot or in continuous data acquisition mode. The logging mode can at any time be manually changed using the magnetic stick. USB output enables easy upload of data to a PC after deployment. Data can be monitored online and in real time on a PC using the optional analog output cable together with an A/D converter.

When used for microscale measurements **in the field**, the microsensors should be mounted in a micromanipulator (MM33) on a stable stand (IS19). For measurements in incubation bottles or bulk water, the sensors can be held by hand or mounted in a frame structure.

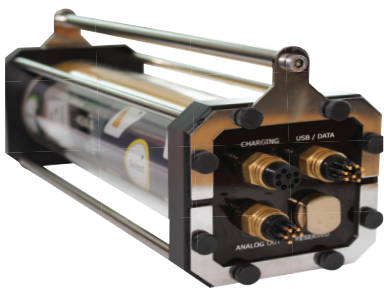
The Unisense UnderWater Meter System with accessories is an excellent choice for in situ studies giving you flexibility and a world of possibilities.

UNDERWATER METER SPECIFICATIONS	
No. of channels	4
Waterproof depth	30 m
Connections	SubConn
Power	Internal re-chargeable battery (26 hrs at 25°C) Optional: external battery pack (100 hrs) or power supply
Analog output range	± 5 V
Log memory	200 million samples
Log sampling rate	Up to 1 Hz
Dimensions	400*115*140 mm (W*D*H)

AVAILABLE IN SITU AMPLIFIERS	
ISA-POT	pH and Redox
ISA-OX	Oxygen
ISA-H <sub>2</sub> S	Sulfide
ISA-H <sub>2</sub>	Hydrogen
ISA-N <sub>2</sub> O	Nitrous oxide
ISA-DIFF	Diffusivity
ISA-FLOW	Flow velocity
ISA-TEMP	Temperature



Left side picture: magnetic stick used for easy operating of the UnderWater Meter.  
Right side picture: in situ amplifier unit without sensor



FOR MORE INFORMATION  
[WWW.UNISENSE.COM](http://WWW.UNISENSE.COM)  
[INFO@UNISENSE.COM](mailto:INFO@UNISENSE.COM)