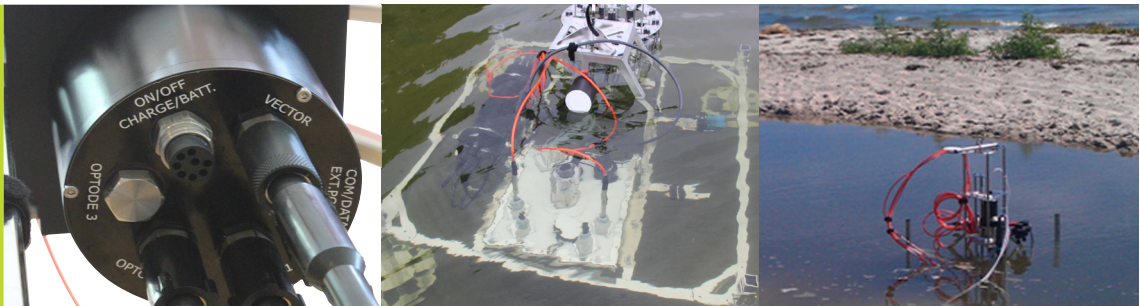


ENABLING
MICROSCALE
RESEARCH



Field Opto UniAmp Portfolio

Plug’N’Play solutions for underwater optodes

The NEW Field Opto UniAmp portfolio is powered by in-house technology and delivers unparalleled performance within our core application segments:

Small chamber incubations

Fast responding sensors

Monitoring

MicroProfiling

Eddy Covariance

- Utilizing the latest optode technology with RadiSurf™ proprietary adhesion technology
- Ambient Light Filtering Technology: Improved performance under fluctuating ambient light conditions, e.g. in situ
- Bleach-protection: Novel multi-component modulation improves lifetime with 50%
- Zero-Noise Temperature Compensation: Accurate oxygen quantification by unmatched temperature compensation

Unisense Field Opto UniAmp Portfolio adds optode technology to a our field systems including the MiniProfiler MP4/8 System, Eddy Covariance System and the Field MicroProfiling System.

Exploiting the latest near infrared optical technology for improved performance, better signal to noise ratio, ambient light filtering, bleach protection and faster response times, the Field Opto UniAmp allows you to add profiling or bulk measurements with Micro-Optodes to your field system.

We offer a 2-channel shallow water version and a 2- or 4-channel deep sea version, and sensors ranging from 50µm tip size for profiling application to robust 3mm optical fibers for monitoring applications.

Connection to our field systems is via direct serial communication. The user interface is designed for easy two-point calibration of the sensors.



FIELD OPTO UniAMP PORTFOLIO		
GENERAL SPECIFICATIONS		
	Shallow	Deep sea
Channels	2 optode channels, 2 temperature channels	2 or 4 optode channels, Temp built-in
Sensor power supply	Powered by Field DataLogger or Field Microsensor Multimeter serial port	Powered by Field DataLogger, Field DataLogger Mini or Field Microsensor Multimeter serial port
Comm. interface	RS-232, 115200 baud	RS-232, 115200 baud
Depth Range	10 m	6000 m
Temperature, operation	0 °C to 50 °C	0 °C to 50 °C
Temperature, storage	-20 °C to 70 °C	-20 °C to 70 °C
Default sampling rate	Adjustable 1-60 sec. Optional 0.1 sec.	Adjustable 1-60 sec. Optional 0.1 sec.
Max. sampling rate	-	16 Hz (EC mode 8 or 16 Hz)
MECHANICAL SPECIFICATIONS		
Dimensions	21x14x6 cm	9.5 cm OD x 28 cm
Material, housing	POM	Aluminum 6083-T6
Weight	App. 1.4 kg	App. 4.3 kg
Volume	-	1.98 L
CALIBRATION		
2-point calibration	Via Web interface on Field DataLogger or Field Microsensor Multimeter Salinity and fixed temperature calibration stored on the Field Opto UniAmp	
OUTPUT VALUES		
O2 concentrations	µM Temperature compensated	
Δφ	°	
Temperature	°C	
MICROOPTODE PROPERTIES		
MicroOptodes	50 µm, 430 µm, 3000 µm	
Plastic shaft protection diameter	11 mm	
Connector	Underwater connector	
Waterproof	Yes	
Pressure tolerant sensing tip	Yes	
Guaranteed lifetime	Opto-430: 1 year or 1.5 million datapoints, whichever comes first Opto-430 fast and Opto-50: 1 year or 1.0 million datapoints, whichever comes first Opto-3000 1 year or >3.0 million datapoints, whichever comes first	
Expected lifetime	+ 3 years in darkness at room temperature	
Response	Linear when calibrated	
Sensor oxygen consumption	No consumption	
Response time	t ₉₀ : 50 µm < 2 sec., 430 µm < 10 sec., Opto-3000 < 0.3 sec.	
Measuring range	0-100% O ₂ (0-45 mg/L), optimal 0-50% O ₂ (0-23 mg/L)	
Detection limit	0.02% (0.01 mg/L)	



FOR MORE INFORMATION:

WWW.UNISENSE.COM

INFO@UNISENSE.COM