UNISENSE

OXY-METER AND pH/mV-METER USER MANUAL

OXY-Meter and pH/mV-Meter user manual

Version July 2018

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UNISENSE A/S

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CONGRATULATIONS WITH YOUR NEW PRODUCT!

Support, ordering, and contact information

If you wish to order additional products or if you encounter any problems and need scientific/technical assistance, please do not hesitate to contact our sales and support team. We will respond to your inquiry within one working day.

E-mail: sales@unisense.com

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Further documentation and support is available at our website www.unisense.com.

OVERVIEW

The Unisense one-channel amplifiers are dedicated picoammeters and high-impedance millivoltmeters with a built-in A/D-converter, designed for use with Unisense Clark-type micro and mini sized sensors and electrodes.
Unisense make dedicated standard one-channel amplifiers for all our sensors and electrodes. We also make custom-built amplifiers where the customer selects parameters such as channel composition and focus sensitivity

Front and back views of OXY-Meter (top) and pH/mV-Meter (bottom)

SPECIFICATIONS

Input connectors	
Sensor	Lemo
Reference (mV channels)	Banana plug
Amplifier	
Types	O_2, pH/redox
Number	1
Polarization	Preset
Input range	± 4500 pA, ± 4500 mV, depending on type, or user-defined
Input impedance (mV)	> 10^{13} ohm
Response and Control	
Response time (90%)	200 ms
Power	
Power supply	USB
A/D-converter	
Resolution	12 bit
Sampling frequency	Up to 1.000 Hz
Interface	
Digital	USB
Data acquisition software	
SensorTrace Logger	Included
Other Unisense software	Optional: SensorTrace Profiling
Data rate (max)	10 samples/sec
Software data output	CSV formatted file (MS Excel compatible)
Physical	
Dimensions ((W x D x H)	113 x 125 x 50 mm
Weight	720 g
Environmental	
Temperature range	-10 to +70°C

GETTING STARTED

1. Install the software
2. Connect the amplifier to the USB port (USB 2.0) of the computer
3. Connect the sensor/electrodes. If relevant, ground the set-up by connecting the provided blue grounding cable
4. Start the software (consult the software manual for directions)
5. The sensor signal(s) should now be visible on the computer screen and calibrations and measurements can be performed.

Electrodes

The Unisense dedicated amplifiers are designed for use with Unisense microsensors and electrodes with LEMO connectors. If you have a microsensor or electrode with BNC connector, Unisense can supply a BNC to LEMO adaptor cable.

IMPORTANT:

Please consult the separate sensor manual for instructions about the oxygen sensor, prepolarization, and calibration.

Operating environment

The one-channel amplifiers are designed for laboratory use. Care must be taken to protect the amplifiers in humid, dusty, and corrosive environments (e.g. field conditions) since it may affect the performance, cause damage, or shorten lifetime. If the amplifier is used outdoors, it should be protected in a plastic bag or similar.

WARRANTY AND LIABILITY

Microsensors are consumable items. The sensors are tested thoroughly before packaging and shipment.

Warranty for sensors:
N_2O sensors: 60 days from shipment.
Standard Oxygen sensors: 180 days from shipment.
All other sensors excluding special sensors: 90 days from shipment.
If, within the above specified period, the sensor(s) fail to perform according to the specifications, Unisense will replace the sensor(s) free of charge.

Unisense will only replace dysfunctional sensors if they have been tested according with the instructions in the manual upon receipt of the sensor(s).The warranty does not include repair or replacement necessitated by accident, neglect, misuse, unauthorized repair, or modification of the product.
Physical damage to the tip of the sensor is not covered by the warranty.

Liability
In no event will Unisense be liable for any direct, indirect, consequential or incidental damages, including lost profits, or for any claim by any third party, arising out of the use, the results of use, or the inability to use this product.

Repair or adjustment

Sensors and electrodes cannot be repaired. Other equipment that is not covered by the warranty will, if possible, be repaired by Unisense with appropriate charges paid by the customer.
In case of return of equipment please contact us for a return authorization.
For further information please see the documents "Conditions for Sale and Delivery for Unisense" and "Warranty and Shipping Information".

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