

## METERS

O<sub>2</sub> °C

### Microx 4



The Microx 4 is a completely stand-alone, portable fiber optic oxygen meter. It can be used with non-invasive sensors & probes (1 mm fiber), and oxygen microsensors (200 µm fiber) in different designs. This oxygen meter is compatible with the wide range of sensors type PSt7 (detection limit 15 ppb, 0 – 100 % oxygen). With its integrated barcode reader the Microx 4 can easily recognize and assign calibration data to sensors in just one scan. The implemented sensor management system allows storing data of up to 100 sensors. Microx 4 has 16 GB internal memory which allows prolonged computer-independent operation. It is delivered with the PreSens Datamanager software: sensor, user and measurement data is easily transferred between the PC and the oxygen meter. The data management and easy data export will facilitate and speed up your analysis.

- For use with non-invasive sensors, probes & microsensors
- Straightforward measurement due to unique sensor ID
- Simple calibration via barcode scan
- 16 GB internal memory
- Compensation of temperature, pressure and salinity
- Energy management for long term measurements
- Optional database supported software offers simultaneous control of multiple devices

## TECHNICAL

Specifications	
Oxygen sensor	PSt7 (optical ST connector)
Temperature sensor	Pt100 temperature connector (sensor not included)
Temperature performance	from 0 °C to + 50 °C, Resolution $\pm 0.1$ °C
Power supply	4 AA nickel-metal hybrid cells (min. 2,200 mAh) Use only AC Adapter (5 VDC / min. 1 A) supplied for recharging
Max. battery operating time	16 hrs. (3 sec. interval measurement, Default LED intensity, Display backlight OFF, at room temperature)
Temperature: operating / storage	from 0 °C to + 50 °C / from - 20 °C to + 70 °C
Relative humidity	up to 80 % (non condensing)
Dimensions	37 mm x 180 mm x 119 mm
Weight	0.65 kg (w/o batteries & protection kit) 0.78 kg (with batteries & protection kit)
Digital interface	USB Interface (cable included)
Display	3,5 " color TFT, 320 x 240 pixel
Internal memory	16 GB Memory (~ 40,000,000 data sets) Export via included software

## ACCESSORIES

### Polymer Optical Fiber POF



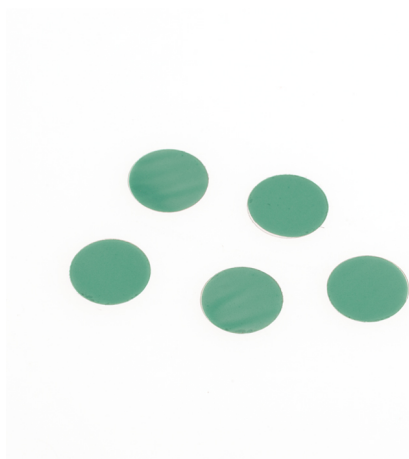
A polymer optical fiber (POF) is needed to transfer excitation light to the sensor and the sensor response back to the meter. We offer different versions for different meters depending on their optical connector type. A POF enables non-invasive and non-destructive measurements to be made from the outside through the wall of a transparent or slightly colored container. The POF with SMA connector is compatible with meters of the Fibox, OXY-1 SMA, OXY-1 WM, OXY mini and pH-1 SMA series, as well as the CO<sub>2</sub>-1 SMA. The POF with ST connector is compatible with meters of the Microx 4 and OXY-1 ST series. Different standard lengths are offered, e. g. 2.5 m, and fibers with connectors on one or both ends are available, depending on your adapter or sensor application.

- Enables contactless measurement
- Versatile light guide
- Different lengths available

## TECHNICAL

Specifications	SMA	ST
Dimensions	Optical diameter: 2 mm Outer diameter (incl. black cladding): approx. 2.7 mm Min. bending radius: 40 mm	Optical diameter: 1 mm Outer diameter (incl. black cladding): 2.2 mm Min. bending radius: 17 mm
Connector type	SMA connectors on one or both ends available for use with SOA or ARC	ST connectors on one or both ends available for use with SOA or ARC-1 ST
Length of fiber	Available standard lengths 1.0, 2.5 and 5.0 m; for lengths of more than 5 m, please contact our service team	
Compatibility	All devices with SMA connector, e.g. Fibox, OXY-1 SMA, pH mini series, pCO <sub>2</sub> mini	All devices with ST connector, e.g. Microx 4 or OXY-1 ST series

## SENSORS



O<sub>2</sub>

### Oxygen Sensor Spot SP-PSt7-NAU

The oxygen sensor spot SP-PSt7-NAU can be integrated in any transparent or semi-transparent vessel, or optical window while measurements are then taken contactless from the outside – through the vessel wall. Due to their small size these sensors are most versatile and can be implemented in manifold applications for measuring dissolved and gaseous O<sub>2</sub>. These oxygen sensor spots have a measurement range from 0 – 100 % O<sub>2</sub>, with a detection limit of 0.03 % O<sub>2</sub>. The SP-PSt7-NAU does not stand autoclaving.

- Non-invasive measurements through the vessel wall
- No consumption of oxygen
- Signal independent of flow velocity
- Measures oxygen in liquids as well as in gas phase




## TECHNICAL

Specifications	Gaseous & Dissolved O <sub>2</sub>	Dissolved O <sub>2</sub>
Measurement range	0 – 100 % O <sub>2</sub> 0 – 1000 hPa	0 – 45 mg/L 0 – 1400 µmol/L
Limit of detection	0.03 % oxygen	15 ppb
Resolution	± 0.01 % O <sub>2</sub> at 1 % O <sub>2</sub> ± 0.05 % O <sub>2</sub> at 20.9 % O <sub>2</sub>	± 0.005 mg/L at 0.4mg/L ± 0.025 mg/L at 9.06 mg/L
Accuracy at + 20 °C*	± 0.05 % O <sub>2</sub> or ± 3 % rel.	
Measurement temperature range	from 0 to + 50 °C	
Response time (t <sub>90</sub> )	< 6 sec.	< 40 sec.
Properties		
Compatibility	Aqueous solutions, ethanol, methanol	
No cross-sensitivity	pH 1 – 14 CO <sub>2</sub> , H <sub>2</sub> S, SO <sub>2</sub> Ionic species	
Cross-sensitivity	Organic solvents, such as acetone, toluene, chloroform or methylene chloride Chlorine gas	
Sterilization procedure	Ethylene oxide (EtO) Gamma irradiation	
Cleaning procedure	3 % H <sub>2</sub> O <sub>2</sub> Ethanol Aqueous solutions	
Calibration	Two-point calibration with oxygen-free environment (nitrogen, sodium sulfite) and air-saturated environment	
Storage stability	60 months provided the sensor material is stored in the dark at room temperature	
*after two-point calibration as described in the manual		



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## GET IN CONTACT

-  **Request more info**
-  **Request a quote**
-  **Rent-a-meter**

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