PreSens
PRECISION SENSING

METERS

O₂ ℃

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

www.PreSens.de/product-finder/1000011-203

TECHNICAL

Specifications	
Oxygen sensor	PSt7 (optical ST connector)
Temperature sensor	Pt100 temperature connector (sensor not included)
Temperature performance	from 0 ℃ to + 50 ℃, Resolution ± 0.1 ℃
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 ℃ to + 50 ℃ / from - 20 ℃ to + 70 ℃
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

SENSORS

O₂ Needle-Type Oxygen Microsensor NTH-PSt7

The glass fiber with its oxygen-sensitive tip (< 50 µm with tapered sensor tip TS, < 230 µm with flat-broken sensor tip TF) is protected inside a stainless steel needle and can be extended for measurements. As long as the sensor tip is retracted and sheltered inside this needle the microsensor can be pierced through septum rubber or any other harsh material. With its small tip size and fast response time ($t_{90} < 3$ s) this sensor is ideally suited for research and packaging applications, where micro-invasive and small sensors are needed.

- High spatial resolution (down to < 50 µm)
- High temporal resolution ($t_{90} < 3$ sec.)
- No consumption of oxygen
- Signal independent of flow velocity
- Measures in liquids as well as in gas phase

TECHNICAL

Specifications*	Gaseous & Dissolved O_2	Dissolved O_2
Measurement range	0 – 100 % O_2 0 – 1000 hPa	0 – 45 mg/L 0 – 1400 µmol/L
Limit of detection	0.03 % oxygen	15 ppb
Resolution	± 0.01 % O_2 at 1 % O_2 ± 0.05 % O_2 at 20.9 % O_2	± 0.005 mg/L at 0.4mg/L ± 0.025 mg/L at 9.06 mg/L
Accuracy at + 20 °C**	± 0.05 % O_2 or ± 3 % rel.	
Measurement temperature range	from 0 to + 50 °C	
Response time (t_{90})	< 3 sec. (gas)	< 10 sec. (liquid)
Properties		
Compatibility	Aqueous solutions, ethanol, methanol	
No cross-sensitivity	pH 1 – 14 CO_2, H_2S, SO_2 Ionic species	
Cross-sensitivity	Organic solvents, such as acetone, toluene, chloroform or methylene chloride Chlorine gas	
Sterilization procedure	Ethylene oxide (EtO)	
Cleaning procedure	3 % H_2O_2 Ethanol Soap solution	
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	

*data for microsensor TF = flat-broken sensor tip with 230 µm diameter

**after two-point calibration as described in the manual

PRODUCT FINDER

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