METERS

O_2 °C OXY-4 SMA (G3)

This multi-channel oxygen meter is ideally suited for benchtop applications. It is compatible with non-invasive sensors, dipping probes and flow-through cells of type PSt3 (detection limit 15 ppb dissolved oxygen, 0 – 100 % oxygen). Each channel of OXY-4 SMA has separate temperature compensation, so most precise measurements in environments with changing temperatures can be taken. The oxygen meter is USB-powered and operated with the PreSens Measurement Studio 2 software, which enables simultaneous control of several devices, so measurement networks can be set up. With numerous features and additional pressure and salinity compensation, the software makes the OXY-4 SMA applicable in almost any application.

- Measurement range of 0 - 100 % O_2
- Individual temperature compensation for each channel
- Pressure & salinity compensation
- For use with non-invasive sensors, dipping probes & flow-through cells

TECHNICAL

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 CO2-1 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 conncetors 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_2 mini	All devices with ST connector, e.g. Microx 4 or OXY-1 ST series

ACCESSORIES

O_2 Vial Adapter VA-20mL

The Vial Adapter is used to attach the POF (polymer optical fiber) to a 20 mL SensorVial (special glass vial with integrated oxygen sensor foil) using a screw. It can be attached to the vial in different heights for measurement in the liquid phase and the headspace and can also be used in a water bath. The POF is available as a separate accessory.

- Non-invasive oxygen monitoring in glass vials
- Secure & exact positioning of the polymer optical fiber
- Precise sensor read-out

TECHNICAL

Specifications	
Dimensions	Outer ⌀ 41.0 mm x 11.0 mm, inner ⌀ 28.5 mm
Connector type	Slotted-head plastic screws
Compatibility	SensorVial SV-PSt3-20mL together with all oxygen meters with SMA connector (e. g. Fibox series)

SENSORS

O_2 SensorVial SV-PSt3-20mL-NST

A sensor stripe is integrated in this 20 mL glass vial. The sensor is read out with an optical fiber, which is held in place by the Vial Adapter. The Vial Adapter can be positioned in different heights. The SensorVial SV-PSt3-20mL-NST is autoclavable, and the ideal tool for respiration measurements. Since the sensor stripes are optically isolated with a black layer they are also very well suited for photosynthesis measurements. For stirred applications the SensorVial is also available with a sensor stripe that does not reach all the way to the bottom. Oxygen can be measured simultaneously in liquid and headspace.

- Non-invasive online oxygen measurements
- No consumption of oxygen
- Signal independent of flow velocity
- Oxygen measurements in liquids and gas phase
- Autoclavable

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 0.21 % O_2 ± 0.1 % O_2 at 20.9 % O_2 ±0.1 hPa at 2 hPa ± 1 hPa at 207 hPa	± 0.004 mg/L at 0.091 mg/L ± 0.04 mg/L at 9.1 mg/L ± 0.14 µmol/L at 2.83 µmol/L ± 1.4 µmol/L at 283.1 µmol/L
Accuracy*	± 0.4 % O_2 at 20.9 % O_2 ± 0.05 % O_2 at 0.2 % O_2	
Drift	< 0.03 % O_2 within 30 days (sampling interval of 1 min. / at 0% oxygen)	
Measurement temperature range	from 0 to + 50 °C	
Response time (t_{90})	< 6 sec.	< 40 sec.
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	Steam sterilization Ethylene oxide (EtO) Gamma irradiation	
Cleaning procedure	Cleaning in place (CIP, 2 % NaOH, + 80 °C, + 176 °F) 3 % H_2O_2 Acidic agents (HCl, H_2SO_4), max. 4 – 5 %	
Calibration	Two-point calibration with oxygen-free environment (nitrogen, sodium sulfite) and air-saturated environment	
Storage stability	24 months provided the sensor material is stored in the dark	

*after two-point calibration as described in the manual

GET IN CONTACT

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

PreSens Precision Sensing GmbH
Am Biopark 11, D-93053 Regensburg
Phone +49 941 942 72 100
Fax +49 941 942 72 111
info@PreSens.de