

# Specifications

## Underwater Oxygen Cap Sensor with Antifouling Layer

### 1 OXYGEN SENSOR SPECIFICATIONS

**Only valid in water for calibrated sensors at 20°C, 1013mbar absolute pressure, using default measuring parameters/modes.**

Specifications are valid for underwater oxygen cap sensor with antifouling layer (item no.: **OXCAP-AF-SUB**).

#### 1.1 Dissolved Oxygen

Oxygen dissolved in water can be expressed in % air saturation and in concentration units like  $\mu\text{mol/L}$ , mg/L (ppm), and mL/L. For details on calculation of dissolved oxygen units from partial pressure readings (interpolation formula based on temperature, atmospheric pressure and salinity), please see the respective sensor/oxygen meter manuals.

Specifications		
Measuring Range	% air saturation	mg/L (ppm)
	0-50%	0-5 mg/L
<b>Accuracy</b> at 95% a.s. / 8.8 mg/L at 5% a.s. / 0.44 mg/L at 5% a.s. / 0.44 mg/L	2% a.s. (1-point air calibrated) 1.5% a.s. (1-point air calibrated) 0.2% a.s. (2-point calibrated)	0.2 mg/L (1-point air calibrated) 0.15 mg/L (1-point air calibrated) 0.02 mg/L (2-point calibrated)
<b>Resolution</b> at 95% a.s. / 8.8 mg/L at 5% a.s. / 0.44 mg/L	0.5% a.s. 0.1% a.s.	0.05 mg/L 0.01 mg/L
<b>Detection Limit</b>	1.5% a.s. (1-point air calibrated) 0.2% a.s. (2-point calibrated)	0.15 mg/L (1-point air calibrated) 0.02 mg/L (2-point calibrated)

## 1.2 General Characteristics

<b>Response Time (t90) in Water ‡</b>	< 30 s
<b>Temperature Range</b>	0°C (32 °F) to 50°C (122 °F)
<b>Calibration Modes</b>	1-point in air and 2-point calibration in water
<b>Application Areas</b>	Laboratory, industry, research. <b>NOT</b> for medical or any safety-critical application. <b>NOT</b> for application in humans. <b>NOT</b> for application in food intended for human consumption.

‡ Typical response times for 90% signal. Measured for the transition from air into a stirred solution of 3% Na<sub>2</sub>SO<sub>3</sub>

Important: Please note that the -AF versions are sensor caps with an antifouling layer containing **zineb**. It is strongly recommended to wear gloves during handling, especially in case of a known contact allergy. If your application involves a closed chamber with living organisms, be aware that exposure to zineb may cause adverse effects such as toxicity, allergic reactions, or respiratory irritation, potentially harming the organisms.  
**Handle with care.**

## 2 APPLICABILITY AND CROSS-SENSITIVITY

	Applicability	Cross-Sensitivity	NO Cross-Sensitivity
Water/Aqueous solutions	X		
Organic solvents		X	
Chlorine gas (Cl <sub>2</sub> ), NO <sub>2</sub> gas, bleach		X	
pH 1-14			X
CO <sub>2</sub> ,			X
CH <sub>4</sub>			X
H <sub>2</sub> S			X
Any ionic species			X

## 3 CLEANING & STORAGE

<b>Cleaning</b>	3% H <sub>2</sub> O <sub>2</sub> , soap solution, soft brushing
<b>Storage</b>	> 3 years in darkness at room temperature

### Contact

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