

# Specifications

## Underwater Ultra-Trace Oxygen Cap Sensor

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### 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 ultra-trace oxygen cap probe (item no.: UTROXCAP-SUB).

#### 1.1 Dissolved Oxygen

Oxygen dissolved in water can be expressed in % air saturation and in concentration units like  $\mu\text{mol/L}$ ,  $\text{mg/L}$  (ppm), and  $\text{mL/L}$ . 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		
<b>Measuring Range</b>	0 - 1.4 $\mu\text{mol/L}$	0 - 44 $\mu\text{g/L}$ (ppb)
<b>Resolution</b> at 2.8 $\mu\text{mol/L}$ / 89 $\mu\text{g/L}$	$\pm 0.005$ $\mu\text{mol/L}$	$\pm 0.16$ $\mu\text{g/L}$
<b>Detection Limit</b>	0.0013 $\mu\text{mol/L}$	0.04 $\mu\text{g/L}$

## 1.2 General Characteristics

<b>Response Time (t90) in Water ‡</b>	< 5 s
<b>Drift</b>	< 1 % in 3 months
<b>Minimum Lifetime</b>	1,000,000 data points
<b>Temperature Range</b>	-2°C (28.4°F) to 40°C (104°F)
<b>Salinity Range</b>	0 - 50 psu
<b>Calibration Modes</b>	1-point in oxygen free 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>

## 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

\* Includes liquid solvents and solvent vapors

## 3 CLEANING & STORAGE

<b>Cleaning</b>	3% H <sub>2</sub> O <sub>2</sub> , Soap solution, short-term Ethanol
<b>Storage</b>	> 3 years in darkness at room temperature

### Contact

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