pyroscience
sensor technology

Specifications

Underwater Ultra-Trace Oxygen Cap Sensor

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 µmol/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	0 – 1.4 µmol/L	0 – 44 µg/L (ppb)
Resolution at 2.8 µmol/L / 89 µg/L	±0.005 µmol/L	±0.16 µg/L
Detection Limit	0.0013 µmol/L	0.04 µg/L

1.2 General Characteristics

Response Time (t90) in Water ‡	< 5 s
Drift	< 1 % in 3 months
Minimum Lifetime	1,000,000 data points
Temperature Range	-2°C (28.4°F) to 50°C (122 °F)
Salinity Range	0 – 50 PSU
Calibration Modes	1-point in oxygen free water
Application Areas	Laboratory, industry, research. NOT for medical or any safety-critical application. NOT for application in humans. NOT 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_2SO_3

2 APPLICABILITY AND CROSS-SENSITIVITY

	Applicability	Cross-Sensitivity	NO Cross-Sensitivity
Water/Aqueous solutions	X		
Organic solvents*		X	
Chlorine gas (Cl_2), NO_2 gas, bleach		X	
pH 1-14			X
CO_2			X
CH_4			X
H_2S			X
Any ionic species			X

* Includes liquid solvents and solvent vapors

3 CLEANING & STORAGE

Cleaning	3% H_2O_2, Soap solution, short-term Ethanol
Storage	> 3 years in darkness at room temperature

Contact

PyroScience GmbH
Kackertstraße 11
52072 Aachen
Deutschland

Tel.: +49 (0)241 5183 2210
Fax: +49 (0)241 5183 2299
info@pyroscience.com
www.pyroscience.com

