

Oxygen Optode 5730



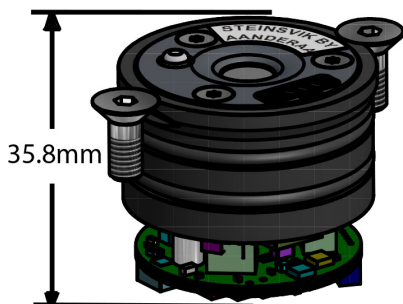
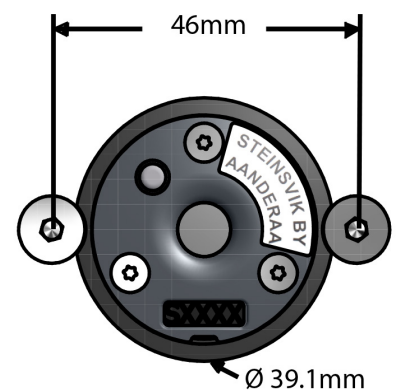
The Oxygen Optode 5730/5730O is a compact fully integrated sensor for measuring the O₂ concentration and temperature.

Advantages

- Optical lifetime-based luminescence quenching measurement principle
- Multipoint calibrated in 40 points
- Long time stability with red reference LED
- Low maintenance needs
- Not stirring sensitive (it consumes no oxygen)
- Small size and weight
- Stand-alone sensor
- Output format: RS23

Since oxygen is involved in most of the biological and chemical processes in aquatic environments and in the process industry, it is one of the most important parameters to be measured. Aanderaa revolutionized oceanographic oxygen monitoring/research with the introduction of oxygen optodes in 2002. Applications range from shallow creeks to the deepest trenches, from tropical to in-ice/in-sediment measurements. More than 200 scientific papers have so far been published using Aanderaa optodes.

Specifications OXYGEN SENSOR 4531



Pin Configuration Molex



- 1: VPWR
- 2: GND
- 3: TXD
- 4: RXD
- 5: Boot Enable

Foil Service Kit 5731



Technical Details		
Oxygen:	O₂ Concentration	Air Saturation
Measurement Range:	0 - 1000 μM ⁽¹⁾	0 - 300%
Calibration method:	40-point automatic calibration, 20-point verification, 3 fully Winkler calibrated optodes for referencing Stable and rugged FDO701 foil.	
Sensing Foils:		
Calibration Range:	0 - 500 μM ⁽²⁾	0 - 150%
Resolution:	< 0.1 μM	0.05 %
Accuracy:	< 4 μM or 2% ⁽³⁾	< 2 % ⁽⁴⁾
Response Time (63%):	< 30 sec	
Typical field drift:	< 0.5 % per year	
Temperature:		
Range:	-5 to +40°C (23-104°F)	
Resolution:	0.01°C (0.018°F)	
Accuracy:	$\pm 0.03^\circ\text{C}$ (0.054°F) ⁽⁵⁾	
Response Time (63%):	< 2 sec	
Typical field drift:	< 0.03 degC per year	
Output format:	RS-232	
Output Parameters:	O ₂ concentration in μM , Air Saturation in %, temperature in °C, Oxygen raw data and temperature raw data	
Sampling interval:	2 sec - 255 min	
Supply voltage:	5 to 14Vdc	
Current drain:		
Average:		
Model 5730:	0.16 + 48mA/S	
Model 57300:	15 + 48mA/S where S is sampling interval in seconds	
Maximum:	100 mA	
Quiescent:		
Model 5730:	0.16mA	
Model 57300:	15mA	
Operating depth:	0-100 (0-328ft)	
Electrical connection:	Molex 5pin 1.25mm Pitch Pico Blade Header	
Dimension (WxDxH):	Ø39.1 x 35.8mm (Ø1.54"x 1.41")	
Weight:	217g (7.65oz)	
Materials:	Titanium, PA	
Accessories:	Foil Service Kit 5731	

⁽¹⁾ O₂ concentration in μM = $\mu\text{mol/l}$. To obtain mg/l, divide by 31.25

⁽²⁾ other ranges available on request

⁽³⁾ requires salinity compensation for salinity variations > 1mS/cm, and pressure compensation for pressure > 100meter

⁽⁴⁾ within calibrated range 0 - 120% / 0 - 30°C

⁽⁵⁾ within calibrated range 0 - 30°C

⁽⁶⁾ at 5V power

Specifications subject to change without prior notice.

OEM version

This sensor is an OEM version of our standard oxygen optode. Please contact factory for more options and restrictions.

Misleading specifications

When Aanderaa states an absolute accuracy of e.g. ($\pm 2\%$ or $\pm 4 \mu\text{M}$) we mean the accuracy of the sensor in the field over the entire range of oxygen concentrations and temperatures, others might refer to accuracy in the laboratory just after the sensor was calibrated. When Aanderaa give response time in water others might refer to response time in air which is much faster. For more information read our [Best Practice document](#) on Oxygen Optodes.

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