

# Submersible DO Sensor with Optical cell or Electrochemical Electrode



Optical



Electrochemical

## ■ DUO Concept – your choice!

Optical cell or Electrochemical electrode, they both fit in the same O2X sensor. Both with temperature compensation.

Optical cell – uses new Phase Shift Technology which improves stability and has quicker response.

Electrochemical electrode – Teflon Membrane minimized fouling. The electrode has an absolute zero which is an advantage in the measurement at low oxygen levels. The 0 never needs a calibration.

## ■ Long Life

**Electrochemical** 18-24 months dependent on DO concentration

**Optical** 2-3 years for luminophore & 5-10 years for electrode

## ■ Low Maintenance

- Automatic built-in flush nozzle cleaning system
- Cleaning with compressed air or water
- Field replaceable electrodes

## ■ Easy to Install

- Telescopic rod mounts to handrail
- Slide rail or Chain mounting also available

**Dissolved Oxygen Sensor O2X** for continuous measurement of dissolved oxygen in SBR systems, aeration basins, aerobic digesters and final effluent with temperature output at no additional cost. The O2X is essential in saving energy associated with running blowers in aeration basins. The measurement of dissolved oxygen also assists in controlling nitrification/denitrification and leads to better process control. The oxygen electrode provides stable and reliable readings.

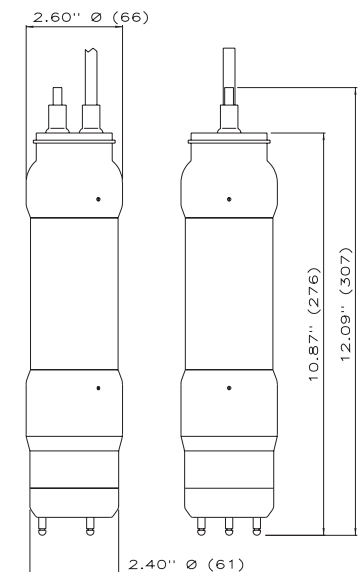
New Optical electrode with Phase Shift Technology offers improved stability of DO readings and quicker response time. New cap coating is not damaged by UV light like current optical electrode designs. Cleaning of electrode with automatic cleaning feature using compressed air or water at max 2 bar alleviates the need for frequent manual cleaning. No moving parts offers accurate measurement and very little maintenance.

## Technical specifications

<b>Material</b>	<b>316SS (2343)</b>	The sensor is manufactured in 316 stainless steel which resists corrosion. Body and head are designed for highest self-cleaning effect.
<b>Weight</b>	<b>2.1 kg</b>	
<b>Connection</b>	<b>10 m</b>	5-pin Hytrel cable with M12 digital connector. Highly resistant to aggressive liquid.
<b>Mounting bracket</b>	<b>Spring loaded</b>	316SS Spring loaded mounting bracket – heavy duty design
<b>Rating</b>	<b>IP 68</b>	
<b>Process Temp</b>	<b>0–50°C</b>	
<b>Interface</b>	<b>RS 485</b>	The sensor is "intelligent", all information are stored in the sensor. Can be pre-calibrated from factory.
<b>Options and accessories</b>		Telescopic rod 4 m incl holder. Flexible mounting bracket. Protective coating for abrasive applications. Mounting plate, solenoid valve and mounting rail.



Measuring Principles	Optical	Electrochemical
<b>Technology</b>	Newest Phase Shift technique Luminophore with durable layer	Active gold/silver (cathode/ anode) with Teflon membrane, 0.025 mm
<b>Measuring range</b>	0-20 mg/l	0-20 mg/l
<b>Accuracy</b>	+/- 0,1 mg/l O <sub>2</sub> < 5 mg/l +/- 0,2 mg/l O <sub>2</sub> > 5 mg/l	+/- 1% of Full scale
<b>Life</b>	2-3 years for luminophore & 5-10 years for electrode	18-24 months dependent on DO concentration
<b>Cleaning – Built-in</b>	Prepared for cleaning with air or water max 2 bars with 10 m flushing tube	Prepared for cleaning with air 2 bar and water 3 bar with 10 m flushing tube
<b>Calibration</b>	At installation then not necessary	Every 6 – 9 months



## O2X

**BB1/BB2 Control Box** All our sensors in the X-series can be combined and connected to a Control Box; BB1/BB2. The Control Box is equipped with communication protocols for compatibility with a wide array of automation systems. The control boxes comes with two 4 - 20 mA outputs as standard.

BB1 support one sensor. BB2 can support up to four sensors with 4 - 20 mA or Profibus DP output signals. Relay outputs in the BB1/BB2 are used for high and low alarms or to provide a pulse for automatic cleaning of sensors. Further information may be found in our leaflets for BB1/BB2.