



ARGES Dissolved Oxygen Sensor

Protecting Our Waterways: Smarter Pollution Monitoring

The **ARGES Dissolved Oxygen Sensor** by Keynes Controls is a submersible single-channel instrument that **measures dissolved oxygen levels from 0–250%** using the **Stern-Volmer equation**, enabling:

- The **detection of dissolved oxygen levels** in rivers, drains, and estuaries

Why Measure Dissolved Oxygen: Dissolved oxygen is one of the clearest indicators of water health, and both extremes carry real risk. Too little oxygen leaves fish and other organisms struggling to survive, while too much oxygen—known as supersaturation—can be just as deadly, triggering gas bubble disease that harms and kills aquatic life. The ARGES Dissolved Oxygen Sensor by Keynes Controls tracks these levels across rivers, drains, and effluent discharge points, working alongside Submersible pH Sensors and Submersible Fluorometers to give you a complete picture of water quality.

Pollution Detection: Changes in dissolved oxygen often signal a pollution event, and the ARGES Dissolved Oxygen Sensor by Keynes Controls catches them early. Low oxygen, or hypoxia, from sewage, algal blooms, or industrial runoff starves aquatic life and disrupts ecosystems. High oxygen from supersaturation is just as dangerous and can be fatal to fish. Both threaten ecosystems and human health, which is why continuous monitoring with the ARGES Dissolved Oxygen Sensor matters.



OPC-UA Communications - (Open Platform Communications Unified Architecture) Contact Keynes Controls for further details.

The ARGES Dissolved Oxygen Sensor - Simple, Accurate Monitoring!



Constructed from high-grade stainless steel tubing, the **ARGES Dissolved Oxygen Sensor** is designed for use as a stand-alone laboratory instrument or as part of a multi-parameter device within a SONDE, making it ideal for fixed installation monitoring applications.

The sensor is purely digital in operation and offers high performance measurements. The advanced power saving design ensures the sensor is ideal for remote operations. The sensor can be used as a standalone sensor or as part of a multiparameter system. **Easy to use, fairly priced, and built to deploy in minutes.**

All ARGES fluorometers have built-in temperature sensors that can be used to record the sample temperature.



Dissolved Oxygen Technical Features

Type	Range
Solid state ISE sensor	Optical Fluorescent
Concentration range:	0. to 16.5 mg/L 0-200% - at 25 Deg C
Resolution:	0.001 mg/L
Accuracy:	+/- 2 % of reading - Typical
Multi-parameter Housings	7 / 3 Port Options - others on request
Calibration Period	Long term stability - 12 month calibration period.
pH range	0 - 14
SDI12 V1.4	Automatically assigned SI Units - %DO, Temperature Deg C
Sensor Material	Stainless-steel body - Gold plated Connector pins
Digital Communications	SDI12 / RS485 / MODBUS Digital Communications
Temperature Sensor	NTC 0 - 50 Deg C / 0.2 % accuracy
Simple Calibration	Two points - Multipoint Calibration Point Option
SI Units	mg/L / % Dissolved H2O - Degrees Celsius - User adjustable
Analogue Output - Optional	0-2 V DC - proportional to concentration and temperature.

Turbidity and Temperature effects on Hydrocarbon measurements

Temperature and turbidity increase error in dissolved oxygen measurements, and other contaminants in real-world water sources can reduce accuracy further. Since dissolved hydrocarbons are toxic to aquatic species, accurate monitoring is especially important when hydrocarbons are visible on the water's surface.

Communications

All ARGES chemical sensors support SDI12, RS485 and MODBUS operations. The sensor acts as a slave unit when used compatible controllers and SCADA systems, the sensor supports 16- and 32-bit register addressing. A range optional USB converters are available to connect the sensor a Windows PC connection. The media converts can power the sensor directly from a PC USB port.

Product Size

Small enough to fit into outlet pipes. Dimensions Length x Diameter: 22 x 205 mm

Q-LOG Product Application Software

The ARGES Oxygen Sensor includes free Q-LOG software for Windows to configure sensors and view real-time Measurements.



Measurement Integrity

The ARGES Dissolved Oxygen sensor can report the background light levels and this is used to ensure that the Dissolved Oxygen measurements are accurate. Excess background light causes errors in results. There is no way to post process measurements to confirm the validity of any measurement without the background light being available for examination.

For more information, please visit the website: www.keynes-controls.co.uk