

ARGES CDOM/fDOM Sensor

Protecting Our Waterways: Track Organic Material with Confidence

The **ARGES CDOM/fDOM Sensor** is an intelligent submersible fluorometer manufactured by Keynes Controls. It is a single-channel instrument capable of detecting and reporting CDOM levels from 0 to 1000 QSU, while also measuring temperature in degrees Celsius for reliable, real-time water quality monitoring enabling:

- Early detection of water quality changes
- More informed environmental decision-making

Why Measure CDOM and fDOM: Measuring CDOM and fDOM gives you a reliable way to track dissolved organic material across rivers, reservoirs, and bays. These measurements reveal how water quality shifts over time, helping you spot the impact of pollution from sources like agriculture and effluent discharge.

Pollution Detection: Rising levels of dissolved organic material often act as an early warning sign that pollution is entering a water body. When agricultural runoff, sewage, or industrial discharge reaches rivers, reservoirs, and bays, they carry organic compounds that push CDOM concentrations up quickly. By tracking these shifts, you can pinpoint contamination events and trace them back to their source. Since only part of CDOM fluoresces, fDOM, the fluorescent fraction, serves as a reliable proxy for detecting these changes in real time.



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

The ARGES CDOM/fDOM Sensor - Fast, Simple CDOM/fDOM Monitoring!



Constructed from high-grade stainless steel tubing, the **ARGES CDOM/ fDOM 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.



CDOM/fDOM Technical Features

Type	Range
Solid state ISE sensor	
Concentration range:	0.0 to 1000 NDSA ppb - Other ranges on request.
Resolution:	0.01 NDSA ppb
Excitation	365 nm
Storage	Long term dry storage capable
Calibration Period	1 year typical
Warranty Period	2 years
pH Range	0 - 14
Operation	Fluorescence
Built-in Digital Communications	SDI12 / RS485 / MODBUS Digital Communications
Depth	50 m - Default
Simple Calibration	Multi-point Calibration Point Optional
SI Units SDI12 V1.4	NDSA ppb, Degree C - Automatically assigned
Analogue Output - Optional 0-2 V DC	Output proportional to Concentration / Temperature

Turbidity and Temperature effects on Hydrocarbon measurements

Temperature and turbidity increase error in dissolved hydrocarbon 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 CDOM/fDOM Sensor includes free Q-LOG software for Windows to configure sensors and view real-time Measurements.



Measurement Integrity The ARGES CDOM/ fDOM sensor can report background light levels, which are used to ensure that CDOM/fDOM measurements are accurate. Excess background light can introduce errors in results. Without background light data available for examination, there is no way to post-process measurements to confirm the validity of any individual reading.

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