Dissolved oxygen sensor

S423 C OPT

Applications

- Drinking water
- Wastewater
- Fish farming

General features

S423 C OPT is an oxygen measuring sensor with an integrated temperature probe. The measuring technique is based on the following optical principle: a diode emits a blue light towards a support on which a fluorescent substrate is applied. The substrate reacts by emitting initially a red light (luminescence), then returns to its initial state.

The intensity of the produced red light and the return rate to the initial state are related to the present oxygen concentration. This innovative method allows reliable, accurate measurements with no drift over time, so that system calibration is no longer necessary.

No maintenance is required except for the replacement of the luminescent support about every two years. The system does not consume oxygen, therefore it is suitable for the most varied fields of application, including those in which the measuring liquid is almost stationary.

Applications

Surface waters, fish farms, drinking water, wastewater, sea water

Available versions with PVC body, with 4...20mA outputs

Technical Specifications

	S423 C OPT	S423 C OPT T
Measuring range	0...20 mg/l	
Measuring method	Optical measure by luminescence	
Accuracy	± 0,2 mg/l when < 5mg/l ± 0,3 mg/l when > 5mg/l	
Response	T_{90} < 60s	
Refresh time	< 1s	
Temp. compensation	With internal NTC probe	
Operating temperature	0...50°C	
Maximum pressure	5 bar	
Body material	SS316 (PVC body optional)	Titanium
Electrode material	Special optical glasses	
O-Rings	NBR and silicone	
Mechanical protection	IP68 sensor & cable	
Power supply	12...24Vdc	5...24Vdc
Power consumption	Max. 2W	max. 0,5W
Cable	10 m integral with the sensor	
Signal interface	RS 485 Modbus RTU Protocol	