OPTICAL DISSOLVED OptoDOSys:1000

Single channel fixed site transmitter & fluorescent DO sensor

Features:

Optical sensor technology Advanced microprocessor design Automatic optional Air cleaning
No replacement parts required
5 yr Warranty on sensors
Single/double/multiple channel and portable versions available
Backlit LCD display
Analogue and digital outputs + optional profibus

Benefits:

Low cost of ownership
No frequent calibrations needed
Minimal maintenance
Accurate in low DO environments
Automatic error detection
No regular sensor refurbishment

Applications:

Activated sludge monitoring & control
Final effluent monitoring
Process monitoring
River monitoring stations

OptoDOSys -1000 is an optical Dissolved Oxygen sensing system from InsiteIG, ideal for use in wastewater treatment works. The technology is based on the quenching of Ruthenium salt fluorescence by the presence of D.O. It is “Non consumptive” and therefore does not require movement of the medium past the sensor. It is also very accurate at low DO levels enabling use in anoxic and anaerobic sections. The sensor design together with optional air cleaning reduces maintenance to a very low level, and the 5 yr sensor warranty guarantees low cost of ownership. No end caps/membranes or chemicals are required. The sensor is not affected by ambient light and is not harmed by drying out. The 1000 is a single channel unit, double and multiple channel units are also available & accommodate DO, SS, pH and ORP in any combination. (See sheets: OptoDOSys I-2000, and OptoDOSys I-MPA48)

Diffused air Activated Sludge Plant monitoring and control
Sensing area is kept clean by air jet

System Specification

Operational Principle:	Based on an optical sensor utilising the measurement of fluorescence and quenching reactions of a Ruthenium complex immobilised in a sol- gel matrix
Range:	0-25 mg/l D.O., 0-60 °C
Resolution:	0.01 mg/l (for 0-3.99 mg/l), 0.1mg/l (for 4-20 mg/l), & 0.1 °C for 0-50 °C
Repeatability:	0.01 mg/l
Accuracy:	1% of reading or 0.02 mg/l DO whichever is greater Sensor
Drift:	<1% per year
Response Time:	95% in < 60 secs
Temperature compensation:	0-60 °C

Transmitter/Controller Specification

Mechanical Construction:	Dimensions lxhxd	312x225x150 mm (approx)
	Weight:	4 kg (approx)
	Materials:	Fibreglass
	Ambient conditions:	-20 to 55 °C, 0-100% HumidityWeather
	Protection:	NEMA 4X
	CE:	Compliant
Outputs:	Display:	Two line back lit LCD with extended temp range and UV resistant
	Analogue:	2 off 0/4–20 mA optically isolated, user configurable.
	Relays:	2 off formC 10/6 Amps load @ 125/250 VAC 2 off form A 10/6 Amps load@ 125/250 VAC 1 dedicated to jet clean, 3 user programmed
	Data interface:	RS 232serial and RS485 modbus
Power requirements:	Supply voltage:	115 VAC -60Hz, 230VAC -50 Hz
	Load:	30Watts With air clean: 750 Watts surge 440Watts running

Sensor assembly Specification

Mechanical Construction:	Materials:	Epoxy, silicone, Polyurethane
	Dimensions:	38mm dia(nominal), support pole 3m nominal
	Weight:	1 Kg excluding support pole + bracket
Process conditions:	Medium Temp	0-60 °C
	Medium Pressure	100PSI max
	Quality:	Must be free of abrasives

Ordering Information

When placing an order it is important to indicate the following requirements to our sales staff:

1. Are you sure you only want a single channel DO system (there are 2, 4 and 8 channel systems available capable of measuring DO and SS in any combination.
2. What cable length is required? This must take account of the length of the support pole (if in use), the distance between transmitter and sensor position and the excess free length required in order to lift the sensor pole out of the channel.
3. Do you require pole mounting? If so what pole length is required? The standard length is 3m.
4. What is the rail diameter to which the pole support bracket is to attach.
5. Do you wish to wall mount or rail mount the transmitter. If rail mount, what is the rail diameter.
6. Do you require air cleaning? If so is site air available or will you provide your own compressor. Please state if you wish us to supply an integral compressor.

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