
Dissolved Oxygen Sensor

Model CS511

The CS511 is a rugged, low-maintenance sensor that is manufactured by Sensorex. It consists of a self-polarizing galvanic cell that generates a millivolt signal proportional to the amount of oxygen present in the measured medium (typically water). Oxygen diffuses through its membrane onto a cathode which produces a chemical reaction. An electrical current is produced by this reaction which is converted from microamps to millivolts by an in-line resistor. An in-line thermistor provides automatic temperature compensation.



Options

The PT4 agitator is for applications where the water velocity is less than 1 inch per second (2.5 cm s^{-1}). Service kits are available for easy replacement of sensor components in the field; contact a CSI water resources applications engineer for details.

Ordering Information

CS511-L	Dissolved oxygen sensor. Enter lead length in feet after the L.
14056	Membrane Replacement Tool
14055	DO Electrolyte, 500 ml
14054	Teflon Membrane, 5 pack
14053	Teflon Membrane, 25 pack
PT4-L	Agitator with repeat cycle timer and bracket. Specify cable lead length in feet.



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Specifications

Range:	0 to 20 mg l ⁻¹ dissolved oxygen, 0 to 200% sat
Output:	1.65 mV ±0.45 mV per mg l ⁻¹
Accuracy:	±2%
Response Time:	After equilibration, 1 minute for 95% of final value
Minimum Water Velocity:	2 in s ⁻¹ (5 cm s ⁻¹) across membrane
Minimum Submersion Depth:	2.5 in (6.35 cm)
Operating Temperature Range:	32° to 122° F (0° to 50°C)
Pressure:	0 - 100 psig
Temperature Compensation:	Automatic from 40° to 104°F (4° to 40°C)
Electrode Materials:	Ag cathode/Zn anode
Probe Electrolyte:	NaCl
Dimensions:	diameter: 2.2 in (5.59 cm); probe height: 3.5 in (8.89 cm)
Weight:	1.1 lbs. (0.50 kg); (includes 10 feet of 2-conductor, 16-gage cable)
Power Requirements for optional PT4 Agitator:	12 Vdc, 0.9 A
Datalogger Compatibility:	CR510, CR10X, CR1000, CR23X, CR5000, CR7, CR9000(X); call for compatibility with older dataloggers.



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