



CS511-L Dissolved Oxygen Sensor



Widely Compatible

Submersible, rugged, low-maintenance DO sensor

Overview

The CS511, manufactured by Sensorex, is a submersible, rugged, low-maintenance sensor that senses dissolved oxygen in a medium (typically water). 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).

Benefits and Features

- › In-line thermistor provides automatic temperature compensation
- › Compatible with most Campbell Scientific dataloggers
- › Agitator available that keeps the sensor clean and moves water across membrane for more accurate readings

Detailed Description

Oxygen diffuses through the CS511's membrane onto a cathode that 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.

Because the CS511 is shipped dry, DO electrolyte needs to be added before using the sensor. DO electrolyte as well as spare membranes are included in the sensor's shipping kit.

Currently, the CS511 is Sensorex's Model DO6400/T. Prior to June 2008, the CS511 was Sensorex's Model DO6200/T. Programming, wiring, and most specifications are the same for these two sensors. However, they use different accessories and look different. Replacement parts remain available for the older DO6200/T. (See the [Ordering Info](#) on the web page.)

For an image of the older DO6200/T, see the [retired version of the CS511 manual](#). Contact Campbell Scientific for more information.

Specifications

Operating Temperature Range 0° to 50°C

Measurement Range 0.5 to 50 ppm (for O₂)

Accuracy	±2%
Output	33 mV ± 9 mV (100% saturation); < 2 mV (0% saturation)
Response Time	5 min from 100% to 0% oxygen
Minimum Water Velocity	5 cm s ⁻¹ (2 in. s ⁻¹) across membrane
Minimum Submersion Depth	6.35 cm (2.5 in.)

Pressure	0 to 100 psig
Temperature Compensation	Automatic from 4° to 40°C
Probe Electrolyte	NaCl + glycerol (prevents freezing)
Diameter	5.72 cm (2.25 in.)
Height	17.78 cm (7 in.) from bottom of sensor to end of cable strain relief
Shipping Weight	0.8 kg (1.75 lb) including sensor and shipping kit

For comprehensive details, visit: www.campbellsci.com/cs511-l 



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