

HydroCAT

Conductivity, Temperature, Depth, and Optical Dissolved Oxygen

The Sea-Bird Scientific Hydrocat is ideally suited for extended deployments in remote, biologically rich environments. Field proven sensors measure and record conductivity, temperature, pressure and optical dissolved oxygen ensuring long term data stability. Depending on the application, the HydroCAT can collect high quality data for several months up to a year.

Excellent bio-fouling protection is provided by EPA-approved anti-foulant devices, an integral pump, and a unique internal flow path, which minimizes flow between samples and provides stable measurements throughout a deployment.

Conductivity and temperature sensors are based on field-proven SBE CTD products. The aged and pressure-protected thermistor has a long history of exceptional stability and accuracy. The oxygen sensor was designed by SBE to meet the demand for a low maintenance and high accuracy sensor for use in applications such as hypoxia monitoring. All HydroCAT sensors are built with careful choices of materials and geometry combined with superior electronics and calibration methodology to optimize field performance.



Features

- Robust - Excellent anti-fouling capability - EPA-approved anti-foulant device and pumped internal flow path for maximum bio-fouling protection
- Accurate- High initial accuracy and low drift rate
- Cost Effective- No in-field calibrations required, common deployment duration of three plus months, reducing field costs
- Each instrument is factory calibrated in a temperature-controlled bath that operates at 2-4 times the accuracy of the instrument.

Applications

For continuous or real-time measurement of conductivity, temperature, depth, and dissolved oxygen in:

- Estuaries
- Lakes and reservoirs
- Rivers and streams

Sensors	Range	Accuracy	Typical Stability	Resolution
Conductivity	0- 70 mS/cm (0- 70,000 μ S/cm)	\pm 0.003 mS/cm (3 μ S/cm)	0.003 mS/cm (3 μ S/cm) per month	0.0001 mS/cm (0.1 μ S/cm)
Temperature	-5 to 45°C	\pm 0.002°C/ \pm 0.01°C (over 32°C)	0.0002°C per month	0.0001°C
Pressure	0- 20 m/0- 100 m/ 0- 350 m	\pm 0.1% of full scale range	0.05% of full scale range	0.002% of full scale range
Optical Dissolved Oxygen	120% of surface saturation in all natural waters	\pm 0.1 mg/L (3 μ mol/kg) or \pm 2% whichever is greater	< 0.03 mg/L (1 μ mol/kg)/ 100,000 samples (20°C)	0.007 mg/L (0.2 μ mol/kg)

Mechanical

Housing	350 m plastic housing
Acquisition Time	2.3 – 3.2 sec/sample (see manual)
Clock Stability	5 sec/month
External Power	(optional) 0.25 Amps at 9 – 24 VDC
Communication	RS232/ SDI 12

