SEA-BIRD SCIENTIFIC

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HydroCAT-EP V2

MULTIPARAMETER CTD

Overview

The Sea-Bird Scientific HydroCAT-EP is suited for extended deployments in remote, biologically rich environments. Seven field-proven sensors are factory and field calibrated for optimal accuracy and designed for long-term data stability. Unattended, the HydroCAT-EP can measure 3 months of high-quality pH data, if equipped, and retain stability for 1 year from all other sensors.

Conductivity, temperature, optical dissolved oxygen, and pH are connected via an integral pump and unique flow path that is protected by EPA-approved anti-foulant devices. The combination chlorophyll and turbidity sensor is protected by a copper face plate and wiper.

All HydroCAT-EP sensors are built with field-proven electronics and calibration methodology to optimize performance.

Features

Robust: EPA-approved anti-foulant device and pumped internal flow path for maximum bio-fouling protection. Superior electronics with low drift rate.

Accurate: Each instrument is factory calibrated in a temperature-controlled bath that operates at 2-4x the accuracy of the instrument.

Cost Effective: No in-field calibrations required. Common deployment duration of three months to one year, reducing field costs

Components

Integrated pump and EPA-approved anti-foulant devices

Integrated temperature and conductivity sensors. Modular, field-swappable pH sensor

Optional pH, Optical Dissolved Oxygen, Chlorophyll, Turbidity, and Pressure

RS-232 and SDI-12 communication

Applications

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

- Estuaries
- Lakes and reservoirs
- Rivers and streams
- Coastal and open ocean environments

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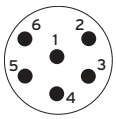
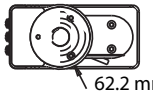
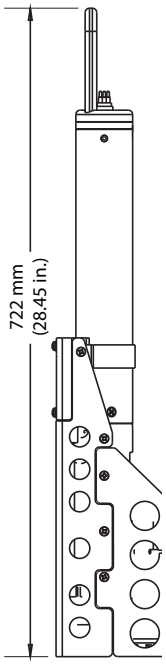
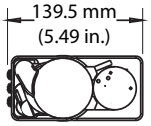


MCBH-6MP







RS-232 and SDI-12 Interface

Pin	Signal
1	Common
2	RS-232 data receive
3	RS-232 data transmit
4	SDI-12 data transmit
5	-
6	Auxiliary power in (9-24 VDC)

Features	
Housing	350 m plastic housing
Acquisition Time	6 - 33 sec/sample
Clock Stability	5 sec/month
External Power	(Optional) 0.25 Amps at 9 – 24 VDC
Communication	RS-232 / SDI-12
Connector Type	MCBH(WB)-6MP
Input voltage	9-24 VDC
Current, typical (@7V)	0.25A max (81 mA typical) at 9-24 VDC

Field Specifications

The specifications below represent the expected performance of the instrument when deployed in the field. Under controlled circumstances in a lab, we would expect the instrument to outperform these specifications.

We have chosen to display field specifications to give our users a true measure of how Sea-Bird Scientific instruments perform in harsh environments and applications. It is critical to keep this in mind when comparing specifications with instruments from other manufacturers.

Sensor	Range	Accuracy	Typical Stability	Resolution
Conductivity	0- 70 mS/cm (0- 70,000 µS/cm)	± 0.003 mS/cm (3 µS/cm)	0.003 mS/cm (3 µS/cm) per month	0.0001 mS/cm (0.1 µS/cm)
Temperature	-5 to 45°C	± 0.002°C/± 0.01°C (over 32°C)	0.0002°C per month	0.0001°C
Pressure	0- 20 m/0- 100 m/ 0- 350 m	± 0.1% of full scale range	0.05% of full scale range	0.002% of full scale range
Optical Dissolved Oxygen	200% of surface saturation in all natural waters (fresh and salt)	larger of ± 0.14 ml/L (equivalent to 0.2 mg/L) or ±2%	< 0.03 ml/L / 100,000 samples (20°C) (equivalent to 0.0429 mg/L)	0.005 ml/L (equivalent to 0.07245 mg/L)
pH	0 - 14 pH	± 0.1 pH	0.1 pH 90 Days	.01 pH
Turbidity	0 - 3,000 NTU	± 1%		0.06 - 0.17 based on range
Chlorophyll	0 - 400 ug/L	± 3% signal equivalent of Uranine		0.007 - 0.037 based on range

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