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 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 Optical Dissolved Oxygen, Chlorophyll, Turbidity, and Pressure sensors

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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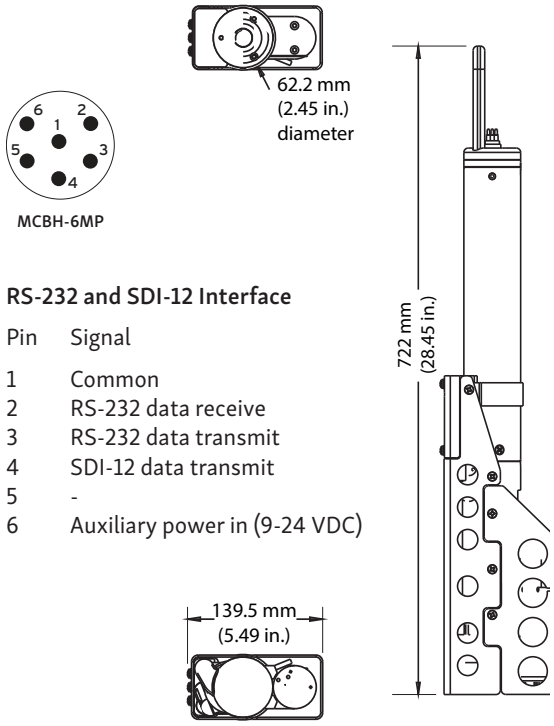

RS-232 and SDI-12 Interface

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	7–15 volts
Current, typical (@7V)	81 mA

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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