

Hydroscat-2 Specifications

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Mechanical

- Diameter: 11.7 cm (4.6")
- Length: 23cm (9.1") excluding connector
- Weight: 4.0 kg dry, 1.5 kg submerged

Optical

- Standard wavelengths: 470, 676 nm (2 channels elastic backscatt 1 channel fluorescence)
- Available wavelengths: 420, 442, 470, 488, 510, 532, 555, 590, 676, or 852 nm
- Spectral Bandwidth: 10 nm (676 nm bandwidth is 20 nm)
- Nominal Backscattering Angle: 140 degrees
- Noise in bb: depending on wavelength, 2×10^{-5} to $2 \times 10^{-4} \text{ m}^{-1} \text{ R}$ (dark noise at 1 sample/s)
- Offset uncertainty of bb: depending on wavelength, 5×10^{-5} to 5

Electrical

- Internal rechargeable batteries provide up to 20 hours continuous
- Optional external power supply: 10V to 15V, 1.0W typical
- Power/Data Connector: Subconn MCBH8M; Mate MCIL8F
- Pin Assignments:
 - Pin 1: External supply voltage (10-15V)
 - Pin 2: Common
 - Pin 3: RS232 Receive
 - Pin 4: RS232 Transmit
 - Pin 5: Battery charge voltage (18-24V)
 - Pin 6: Shutter control (optional)
 - Pin 7: Shutter control (optional)
 - Pin 8: Battery Disable (not connected on older units)
- Data Interface: RS232 (RS485 optional), 9600 to 57600 baud

Environmental

- Operating Temperature: 0 to 35 C
- Maximum Depth: 300 m (500 m option available; 4,000 m option available)

Data Logging

- Standard 256K memory stores 14,000 samples of optical channel depth (1 MB memory option available).
- Variable, programmable sampling rates.
- Max sampling rate 10 Hz.
- Continuous or burst-mode sampling controlled by real-time clock manual switch.