

SediMeter™ SM4 Specifications

<i>Parameter</i>	<i>Specifications</i>
Length	80 cm
Mass	280 g
Diameter	20 mm turbidimeter and battery house, 15 mm SediMeter sensor
Intended Use	
Stationary Monitoring (SediMeter)	Mount in screw-down holder tube provided with the SM4-kit, salt or fresh water
Data	
Data output	Bottom level (cm) NIR backscatter, 945 nm, at 36 levels (FBU) NIR sidescatter, 945 nm, at 35 levels Turbidity 90° nephelometric, 850 nm (ISO 7027-type; FNU) Turbidity 90° nephelometric, white light (EPA-type; NTU) Fluorescence 90° (UVA 367 nm, measures white light; FFU) Light level (lux) Background NIR light Temperature (cK) User-configurable 3D-Accelerometer, 20 or 30 samples per record Battery voltage (mV)
Optical sensors resolution	1 FTU, 1 FNU, 1 NTU, 1 FFU, 1 lux
Bottom level resolution	0.01 mm
Sedimentation detection threshold	0.1 mm
Bottom level linearity	1 mm
Thermometer resolution	0.01°C, calibrated to ±0.2°C
Thermometer time constant	100 s
Fluorescence meter	Excitation 367 nm, FWHP 15 nm. Emission 570 nm, range λ10% 400...900 nm
3D-Accelerometer, configurable	±2g/±4g/±8g/±16g; 1Hz/10Hz/25Hz/50Hz/100Hz/200Hz/400Hz; filtering. Vibration detection, free-fall detection: detection threshold; event duration.
Logger	
Measurement interval	User selectable from 1 second to 24 hours; burst sampling available
Records per measurement (bursts)	1...255 records; 0.125 Hz...20 Hz (some functions are disabled at rates >1 Hz)
Memory	32,768 records of 264 bytes each
Conditions-based monitoring (CBM)	User selectable vibration and/or free-fall detection, and/or timed logging.
Accelerometer trigger event	A FIFO memory captures 20 or 30 accelerometer measurements
Continuous accelerometer data	Can record 10-bit 3D accelerometer data at 400 Hz for >10 s
Communication	
Computer interface, protocol	RS-485, LogDator Communication Protocol (binary, 4 byte header)
Baud rates	9600 baud; 28.8k, 56.6k, 115.2k, 230.4k (N, 8, 1)
Network	Up to 255 units in a daisy-chained cable
Power	
Input voltage range, current	5 to 15 V, can use from 30 to 500 mA
Battery	Lithium rechargeable
Battery Duration, max	6 months
Recharge Time, ca	3 hours
User interface	
Indicator LEDs	Blue for power connected, red for charging, green for full, yellow for receiving, green for transmitting
Control	Using PC software ver. 6 and USB cable; Reset with magnet
Anti-fouling	
UVA light	2 UV LEDs in the ISO/EPA turbidimeter window, automatic
Copper	User-applied copper tape significantly limits fouling
Environmental	
Depth rating	Tested 1 to 50 m. Deeper rating on request.
Temperature	From 0°C to 50°C. Avoid strong sunlight.





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Specifications subject to change without prior notice.