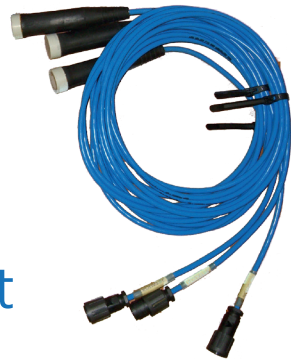


DATASHEET

AQUAscat® 1000L

Suspended sediment profiler



Suspended sediment in the lab

IDEAL FOR LABORATORY BASED SEDIMENT RESEARCH

KEY FEATURES

- Uses acoustic backscatter method
- Up to 4 different frequencies
- Cabled transducers for flexible experiments

APPLICATIONS

- Flume tanks
- Laboratory based transport studies

SPECIFICATION

Sediment range	Sensitive to a wide range of grain sizes Size inversion typically feasible for 20 µm to 500 µm radius Typically 0.01 g/l to 20 g/l over 1 m, or more over shorter range
Frequencies	Up to 4 frequencies, from 500 kHz to 5 MHz
Transducers	Typically Ø10-25mm ceramic discs (beam width according to frequency), with other optional configurations.
Transducer arrangement	Individual cabled transducers
Gain	Software controlled transmitter and receiver gain adjustment
Range	150 cm (typical), up to 10 m below 2MHz depending on options.
Transmitted signal	1 W rms typical transmit CW pulse, pulse length to match cell size.
Transmission rate	128 Hz max pulse rate for each frequency (i.e. 512 pulses per second for four), subject to acoustic range limits. Minimum rate 1 Hz for calibration.
Data averaging	Cell ensembles averaged over time by powers of 2 up to 64 before storage
Range cells	256 cells, 10 mm standard (at 1500 m/s speed of sound). Options for 2.5 mm, 5 mm, 20 mm and 40 mm. Start/end range set by software
Burst duration	Defined by number of profiles requested.
Burst trigger	Either external hardware trigger when required or internal software trigger at regular intervals
Burst interval	Internally generated from once every minute to once every 255 minutes, user definable start time of first burst.
Trigger output	A digital output allows triggering of external instruments
Power requirement	12V power supply
Additional sensors	Cabled temperature, pressure, turbidity
Disk storage	Compact Flash (proprietary format). 2 GB standard.
Data comms	RS232 up to 115 kbaud; USB 1.1 typically 2-3 Mbaud
Housing options	Plastic IP68 weatherproof instrument case

Contact us

t +44 (0)1256 416010 (UK) **t** 1-281-220-6035 (USA)
e inquiry@aquatecgroup.com www.aquatecgroup.com

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De Hoogjens 22
4254 XWSleeuwijk
The Netherlands
T.+31-183-307900 F.+31-183-307910
E. Info@seascape.nl www.seascape.nl