

## **Aquadopp Profiler 1 MHz - Legacy**



This version of the Aquadopp Profiler is no longer available.

Please see the **Aquadopp Profiler 2**.

This version of the Aquadopp remains functional and supported. Please visit our <u>support center</u> if you require assistance.

**Highlights** 

## **Applications**

## **Technical specifications**

Water velocity measurements		
Maximum profiling range	12-25 m	
Cell size	0.3-4 m	
Minimum blanking	0.20 m	
Maximum number of cells	96	
Measurement cell position	N/A	
Default position (along beam)	N/A	
Velocity range	±10 m/s	
Accuracy	$\pm 1\%$ of measured value $\pm 0.5$ cm/s	
Velocity precision	Consult instrument software	
Maximum sampling rate (output)	1 Hz	
Internal sampling rate	7 Hz	

Echo intensity (along slanted beams)		
Sampling	Same as velocity	
Resolution	0.45 dB	
Dynamic range	90 dB	
Transducer acoustic frequency	1 MHz	
Number of beams	3	
Beam width	3.4°	

HR option		
Maximum profiling range	6 m	

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HR option	
Cell size	20-300 mm
Minimum blanking	0.2 m
Maximum number of cells	128
Range/Velocity limitations	Product of profiling range and velocity should not exceed 1.0 m2/s
Accuracy	$\pm 1\%$ of measured value $\pm 0.5$ cm/s
Max. sampling rate	1 Hz (continuous mode), 8 Hz (burst mode)
Sensors	
Temperature:	Thermistor embedded in head
Temp. range	-4 to +40 °C
Temp. accuracy/resolution	0.1 °C/0.01 °C
Temp. time response	10 min
Compass:	Magnetometer
Accuracy/resolution	2°/0.1° for tilt < 20°
Tilt:	Liquid level
Accuracy/resolution	0.2°/0.1°
Maximum tilt	30°
Up or Down	Automatic detect
Pressure:	Piezoresistive
Range	0-100 m (inquire for options)
Accuracy/precision	0.5% FS / 0.005% of full scale
Data recording	
Capacity	9 MB, can add 4/16 GB
Data record	9*Ncells + 32 bytes
Diagnostics record	N/A
Wave record	Nsamples * 24 + 60 bytes
Mode	Stop when full (default) or wrap mode
Real-time clock	
Accuracy	±1 min/year
Backup in absence of power	4 weeks
Data communications	
I/O	RS-232 or RS-422
Communication baud rate	300-115200 Bd
Recorder download baud rate	600/1200 kBd for both RS-232 and RS-422
User control	Handled via "Aquadopp" software, ActiveX®function calls, or direct commands with binary or ASCII data output
Software	
Functions	Deployment planning, instrument configuration, data retrieval and conversion (for Windows $\ensuremath{\$}$ )
Power	
DC input	9-15 V DC

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Power	
	2.4
Maximum peak current	3 A 0.05 W
Avg. power consumption Sleep current	< 100 μA
	0.3-20 W, 3 adjustable levels
Transmit power	0.5-20 W, 5 adjustable levels
Batteries	
Battery capacity	1) 50 Wh (alkaline or Li-ion), 2) 165 Wh (lithium), 3) Single or dual
New battery voltage	13.5 V DC (alkaline)
Environmental	
Operating temperature	-5 to +40 °C
Storage temperature	-20 to +60 °C
Shock and vibration	IEC 721-3-7
EMC approval	IEC 61000
Depth rating	300 m (3000 m option)
Connectors	
Bulkhead	MCBH-8-FS
Cable	PMCIL-8-MP on 10 m Polyurethane cable
Materials	
Standard model	POM and polyurethane plastics with titanium fasteners
Dimensions	
Maximum diameter	75 mm
Maximum length	~550 mm (single battery), +110 mm (double battery) depending on
	head configuration
Weight	
Weight in air	2.2 kg
Weight in water	0.2 kg

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