Aquadopp Profiler 1 MHz Z-Cell - Legacy



This version of the Aquadopp Profiler Z-Cell is no longer available.

Please see the Aquadopp Profiler Z-Cell Generation 2.

This version of the Aquadopp remains functional and supported. Please visit our support center 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 when profiling; 0 m when Z-Cell enabled
Maximum number of cells	96
Measurement cell position	N/A
Default position (along beam)	N/A
Velocity range	±10 m/s
Accuracy	±1% of measured value ±0.5 cm/s
Velocity precision	Consult instrument software
Maximum sampling rate (output)	1 Hz
Internal sampling rate	6 Hz

Z-Cell Properties- FOR Z-CELL 2	
Distance to measurement volume	0.05 - 2.5 m
Cell size	0.2 - 1.5 m
Velocity range (Horizontal)	±5 m/s
Transducer acoustic frequency	2 MHz
Number of beams	2

Echo intensity (along slanted beams)	
Sampling	Same as velocity
Resolution	0.45 dB

Echo intensity (along slanted beams)

Dynamic range	90 dB
Transducer acoustic frequency	1 MHz
Number of beams	3
Beam width	3.4°

HR option (Z-Cell will be disabled)

Maximum profiling range	6 m
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	±1% of measured value ±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®).

Power

DC input	9-15 V DC
Maximum peak current	3 A
Avg. power consumption	0.05 W
Sleep current	< 100 µA
Transmit power	0.3-20 W, 3 adjustable levels

Batteries

Battery capacity	50 Wh (alkaline or Li-ion), 165 Wh (lithium), 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

Connectors

Bulkhead	MCBH-8-FS
Cable	PMCIL-8-MP on 10 m polyurethane cable

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Weight

Weight in air	2.2 kg
Weight in water	0.2 kg