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Aquadopp Profiler - 600 kHz





Jusqu'à 40 m de portée. Facile à configurer et mettre en œuvre.

The Aquadopp Profiler is a highly versatile Acoustic Doppler Current Profiler (ADCP) available in four profiling range options, from < 1 m to > 85 m. The 600 kHz version has a current profiling range of up to 40 m. Designed for simple yet powerful operation, this current profiler is packed with features used by engineers and researchers to enable accurate and effective hydrodynamic data collection in a variety of environmental conditions.

Highlights

- ✓ Up to 40 m current profiling range
- ✓ Ideal for mean current measurements
- ✓ Easy to operate and deploy

Applications

- Mean flow measurements with high focus on ease of use and simplicity
- Measurements in flow regimes with strong variations in flow speeds
- ✓ Studies of tidal currents
- Measurements of combinations of waves and currents
- ✓ Suitable for wave buoys

Technical specifications

→ Water velocity measurements	
Maximum profiling range	30-40 m
Cell size	1-4 m
Minimum blanking	0.50 m
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	4 Hz
→ Echo intensity (along slanted be	eams)
Sampling	Same as velocity
Resolution	0.45 dB
Dynamic range	90 dB
Transducer acoustic frequency	600 kHz
Number of beams	3
Beam width	3.0°
→ HR option	
Maximum profiling range	N/A
Cell size	N/A
Minimum blanking	N/A
Maximum number of cells	N/A
Range/Velocity limitations	N/A
Accuracy	N/A
Max. sampling rate	N/A
→ Z-Cell option	
Cell zero acoustic frequency	N/A
Maximum profiling range	N/A
Number of beams	N/A
→ 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 → Analog inputs No. of channels 2 Supply voltage to analog output devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0.5 V Resolution 16-bit A/D → 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 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC Maximum peak current 3 A	→ Sensors	
Accuracy/resolution 0.2°/0.1° Maximum tilt 30° Up or Down Automatic detect Pressure: Piezoresistive Analog inputs No. of channels 2 Supply voltage to analog output devices Battery voltage/f500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0-5 V Resolution 16-bit A/D → 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 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 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Power DC input 9-15 V DC	Accuracy/resolution	2°/0.1° for tilt < 20°
Maximum tilt Up or Down Automatic detect Pressure: Piezoresistive Range 0-100 m (inquire for options) Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analog output devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0.5 V Resolution 16-bit A/D → 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 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 ∨ DC	Tilt:	Liquid level
Up or Down Pressure: Piezoresistive Range O-100 m (inquire for options) Accuracy/precision O.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analog output devices Battery voltage/500 mA. 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input O-5 V Resolution 16-bit A/D → 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 V/O RS-232 or RS-422 Communication baud rate 300-115200 Bd Recorder download baud rate User control Handled via "Aquadopp* software, ActiveX®function calls, or direct commands with binary or ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Accuracy/resolution	0.2°/0.1°
Pressure: Plezoresistive Range 0-100 m (inquire for options) Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analog output devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0-5 V Resolution 16-bit A/D → 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Maximum tilt	30°
Range 0-100 m (inquire for options) Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analog output devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0-5 V Resolution 16-bit A/D → 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC Input 9-15 V DC	Up or Down	Automatic detect
Accuracy/precision Analog inputs No. of channels 2 Supply voltage to analog output devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0-5 V Resolution 16-bit A/D Data recording Capacity 9 MB, can add 4/16 GB Data 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 Data communications I/O RS-232 or RS-422 Communication baud rate 600/1200 kB 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 Cable PMCIL-8-MP on 10m polyurethane cable PC input Power DC input 9-15 V DC	Pressure:	Piezoresistive
No. of channels 2 Supply voltage to analog output devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0-5 V Resolution 16-bit A/D → Data recording Capacity 9 MB, can add 4/16 GB Data record 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 N/O RS-232 or RS-422 Communication baud rate 600/1200 kB 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Power Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®)	Range	0-100 m (inquire for options)
No. of channels Supply voltage to analog output devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0-5 V Resolution 16-bit A/D 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 Backup in absence of power Data communications V/O RS-232 or RS-422 Communication 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 Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable Power Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) Power DC input 9-15 V DC	Accuracy/precision	0.5% FS / 0.005% of full scale
Supply voltage to analog output devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0-5 V Resolution 16-bit A/D 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 Backup in absence of power Data communications V/O RS-232 or RS-422 Communication 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 Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable Power Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) Power DC input 9-15 V DC	→ Analog inputs	
devices Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA Voltage input 0-5 V Resolution 16-bit A/D → 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	No. of channels	2
Resolution 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 Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) Power DC input 9-15 V DC		•
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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Voltage input	0-5 V
Data record Data record Data record 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 Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) Power DC input 9-15 V DC	Resolution	16-bit A/D
Data record Diagnostics record N/A Wave record Nsamples * 24 + 60 bytes Mode Stop when full (default) or wrap mode → Real-time clock Accuracy Backup in absence of power → 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	→ Data recording	
Diagnostics record Wave record Nsamples * 24 + 60 bytes Stop when full (default) or wrap mode Real-time clock Accuracy Backup in absence of power Values Valu	Capacity	9 MB, can add 4/16 GB
Wave record Nsamples * 24 + 60 bytes Mode Stop when full (default) or wrap mode → Real-time clock ±1 min/year Accuracy ±1 min/year Backup in absence of power 4 weeks → Data communications I/O 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Data record	9*Ncells + 32 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Diagnostics record	N/A
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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Wave record	Nsamples * 24 + 60 bytes
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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Mode	Stop when full (default) or wrap mode
Backup in absence of power → 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	→ Real-time clock	
Data communications NO 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 Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) Power DC input 9-15 V DC	Accuracy	±1 min/year
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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Backup in absence of power	4 weeks
Communication baud rate 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 → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	→ Data communications	
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 Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) Power DC input 9-15 V DC	I/O	RS-232 or RS-422
User control Handled via "Aquadopp" software, ActiveX®function calls, or direct commands with binary or ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Communication baud rate	300-115200 Bd
direct commands with binary or ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Recorder download baud rate	600/1200 kBd for both RS-232 and RS-422
Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	User control	· · · · ·
Cable PMCIL-8-MP on 10m polyurethane cable → Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	→ Connectors	
→ Software Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Bulkhead	MCBH-8-FS
Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) → Power DC input 9-15 V DC	Cable	PMCIL-8-MP on 10m polyurethane cable
and conversion (for Windows®) → Power DC input 9-15 V DC	→ Software	
DC input 9-15 V DC	Functions	
•	→ Power	
Maximum peak current 3 A	DC input	9-15 V DC
	Maximum peak current	3 A

→ Power	
Avg. power consumption	0.06 W
Sleep current	< 100 μΑ
Transmit power	0.3-20 W, 3 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 721-3-6
EMC approval	IEC 61000
Depth rating	300 m
→ Materials	
Standard model	POM and polyurethane plastics with titanium fasteners
→ Dimensions	
Maximum diameter	100 mm
Maximum length	\sim 550 mm (single battery), +110 mm (double battery) depending on head configuration
→ Weight	
Weight in air	2.9 kg
Weight in water	0.4 kg
→ Options	

1) Alkaline, lithium or Li-ion external batteries, 2) Inquire for different head configurations