



Single-point current meter designed for very long-term deployments

With all the features and capabilities of the standard Aquadopp, the deepwater Aquadopp 3000 m current meter has been used and proven by oceanographers around the world for almost 20 years. Thanks to innovative data diagnostic features for challenging environments, it provides exceptionally high-quality 3D currents in a form factor that is easy to install in any type of mooring line configuration, or simply attached to a bottom or surface platform.

Raw magnetometer data can be stored for post calibration of compass when used without the inductive modem option.



Highlights

- Single-point current meter
- Designed for very long-term deployments
- Diagnostics mode for mooring performance evaluation

Applications

- Studies of deep-water currents
- Studies of tidal currents
- Attached to mooring lines
- In conjunction with riser monitoring systems
- Measurements of unaffected currents from physical structures
- Alternative to conventional current meters with errors due to fouling
- Combination of currents and highaccuracy CTD data
- Near-bed current measurements from landers
- Deep ocean mining support



Technical specifications

→ Water velocity measurements	
Maximum profiling range	N/A
Cell size	0.75 m
Minimum blanking	0.50 m
Maximum number of cells	1
Measurement cell position	0.5-5.0 m (user-selectable)
Default position (along beam)	0.50-2.0 m
Velocity range	±5 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	23 Hz
> Echo intensity	
Sampling	Same as velocity
Resolution	0.45 dB
Dynamic range	90 dB
Transducer acoustic frequency	2 MHz
Number of beams	3
Beam width	3.4°
→ 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 Temp. time response 10 min Compass: Magnetometer Accuracy/resolution 2º/0.1° for tilt < 20° Titt: Liquid level Accuracy/resolution 0.2º/0.1° Maximum tilt 30° Up or Down Automatic detect Pressure: Piezoresistive Range 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analogoutput devices Voltage input 0.5 V Resolution 10-5 V Resolution 10-5 V Resolution 10-5 V Data recording Capacity 9 MB, can add 4/16 GB Data record 40 bytes Diagnostics record 40 bytes Diagnostics record 40 bytes Diagnostics record N/A Mode Stop when full (default) or wrap mode → Real-time clock Accuracy 2 1 min/year Backup in absence of power → Data communications I/O RS-232 or RS-422 Communication baud rate 800/1200 RBd for both RS-232 and RS-422 User control MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable → Software	→ Sensors	
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 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analogoutput devices 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 40 bytes Diagnostics record 40 bytes Wave record N/A 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 directocmands with binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable		0.1 °C/0.01 °C
Compass: Magnetometer Accuracy/resolution 2°/0.1° for tilt < 20°	· · · · ·	
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 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analogoutput devices 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 40 bytes Diagnostics record 40 bytes Wave record N/A 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 direct commands with binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable		
Tit: Liquid level Accuracy/resolution 0.2°/0.1° Maximum tilt 30° Automatic detect Pressure: Piezoresistive Range 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analogoutput devices Voltage input 0.5 V Resolution 16-bit A/D → Data record 40 bytes Diagnostics record 40 bytes Wave record N/A 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 RBd for both RS-232 and RS-422 User control #Cennectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	·	· ·
Accuracy/resolution 0.2°/0.1° Maximum tilt 30° Up or Down Automatic detect Pressure: Piezoresistive Range 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analogoutput devices Three options selectable through firmwarecommands: 1) 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 40 bytes Diagnostics record 40 bytes Wave record N/A 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 binaryor ASCII data outpu	•	
Maximum tilt 30° Up or Down Automatic detect Pressure: Piezoresistive Range 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analogoutput devices Three options selectable through firmwarecommands: 1) 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 40 bytes Wave record N/A 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 N/A Sc.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 binaryor ASCII data output → Connectors		·
Up or Down Automatic detect Pressure: Piezoresistive Range 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale ➤ Analog inputs No. of channels 2 Supply voltage to analogoutput devices Three options selectable through firmwarecommands: 1) 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 Capacity 9 MB, can add 4/16 GB Data record 40 bytes Wave record N/A Mode Stop when full (default) or wrap mode → Real-time clock 2 Accuracy ±1 min/year Backup in absence of power 4 weeks → Data communications V/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 binaryor ASCII data output → Connectors <	•	
Pressure: Piezoresistive Range 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analogoutput devices Three options selectable through firmwarecommands: 1) 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 40 bytes Diagnostics record 40 bytes Wave record N/A Mode Stop when full (default) or wrap mode → Real-time clock Accuracy 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 600/1200 kBd for both RS-232 and RS-422 User control Handled via "Aquadopp" software, ActiveX®function calls, or direct commands with binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10		
Range 3000 m Accuracy/precision 0.5% FS / 0.005% of full scale → Analog inputs No. of channels 2 Supply voltage to analogoutput devices Three options selectable through firmwarecommands: 1) 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 9 MB, can add 4/16 GB Data record 40 bytes Diagnostics record 40 bytes Wave record N/A Mode Stop when full (default) or wrap mode → Real-time clock 4 weeks 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable <td>·</td> <td></td>	·	
Accuracy/precision 0.5% FS / 0.005% of full scale Analog inputs No. of channels 2 Supply voltage to analogoutput devices 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 40 bytes Diagnostics record 40 bytes Wave record N/A 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 binaryor ASCII data output —> Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable		
No. of channels 2 Supply voltage to analogoutput devices 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 40 bytes Diagnostics record 40 bytes Wave record N/A 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 binaryor ASCII data output —> Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	•	
No. of channels Supply voltage to analogoutput devices Three options selectable through firmwarecommands: 1) 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 40 bytes Diagnostics record 40 bytes Wave record N/A 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 binaryor ASCII data output Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	, ·	0.5% F3 / 0.003% of full scale
Supply voltage to analogoutput devices Voltage input O-5 V Resolution 16-bit A/D Data recording Capacity 9 MB, can add 4/16 GB Data record 40 bytes Diagnostics record 40 bytes Wave record N/A 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 600/1200 kBd for both RS-232 and RS-422 User control Handled via "Aquadopp" software, ActiveX®function calls, or direct commands with binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable		
Supply Voltage to analogoutput devices 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 PMCIL-8-MP on 10 m polyurethane cable Capacity 9 MB, can add 4/16 GB Data record 40 bytes Diagnostics record 40 bytes Wave record N/A 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 VO RS-232 or RS-422 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	No. of channels	
Resolution 16-bit A/D Data recording Capacity 9 MB, can add 4/16 GB Data record 40 bytes Diagnostics record 40 bytes Wave record N/A 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Supply voltage to analogoutput devices	· · · · · · · · · · · · · · · · · · ·
Capacity 9 MB, can add 4/16 GB Data record 40 bytes Diagnostics record 40 bytes Wave record N/A 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Voltage input	0-5 V
Capacity 9 MB, can add 4/16 GB Data record 40 bytes Diagnostics record 40 bytes Wave record N/A 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Resolution	16-bit A/D
Data record 40 bytes Diagnostics record 40 bytes Wave record N/A 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	→ Data recording	
Diagnostics record Wave record N/A Mode Stop when full (default) or wrap mode Real-time clock Accuracy Backup in absence of power Value Val	Capacity	9 MB, can add 4/16 GB
Wave record N/A 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Data record	40 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Diagnostics record	40 bytes
Accuracy ±1 min/year Backup in absence of power 4 weeks To 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 binaryor ASCII data output Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Wave 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Mode	Stop when full (default) or wrap mode
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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	→ Real-time clock	
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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	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 binaryor ASCII data output Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	→ 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 binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	I/O	RS-232 or RS-422
User control Handled via "Aquadopp" software, ActiveX®function calls, or direct commands with binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Communication baud rate	300-115200 Bd
direct commands with binaryor ASCII data output → Connectors Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	Recorder download baud rate	600/1200 kBd for both RS-232 and RS-422
Bulkhead MCBH-8-FS Cable PMCIL-8-MP on 10 m polyurethane cable	User control	• • • • • • • • • • • • • • • • • • • •
Cable PMCIL-8-MP on 10 m polyurethane cable	→ Connectors	
. ,	Bulkhead	MCBH-8-FS
→ Software	Cable	PMCIL-8-MP on 10 m 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
Avg. power consumption	0.015 W
Sleep current	< 100 ?A
Transmit power	20 W
→ 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 721-3-2
EMC approval	IEC 61000
Depth rating	3000 m
→ Materials	
Standard model	POM housing
→ Dimensions	
Maximum diameter	84 mm
Maximum length	~500 mm (single battery) or +110 mm (double battery) depending on head configuration
→ Weight	
Weight in air	3.6 kg
Weight in water	1.2 kg
> Options	

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