

Aquadopp 3000 m [logo] found or type unknown

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

- [image not found] 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 high-accuracy CTD data
- [/] Near-bed current measurements from landers
- [/] Deep ocean mining support

Technical specifications

[arrow] 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

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Water velocity measurements

Maximum sampling rate (output) 1 Hz

Internal sampling rate 23 Hz

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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°

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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

[arrow]

Z-Cell option

Cell zero acoustic frequency N/A

Maximum profiling range N/A

Number of beams N/A

[arrow]

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

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Sensors

Pressure: Piezoresistive
Range 3000 m
Accuracy/precision 0.5% FS / 0.005% of full scale
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Analog inputs

No. of channels 2
Supply voltage to analog output devices Three options selectable through firmware commands: 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
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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
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Real-time clock

Accuracy ± 1 min/year
Backup in absence of power 4 weeks
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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
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Connectors

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

Software

Functions Deployment planning, instrument configuration, data retrieval and conversion (for Windows®)
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Power

DC input 9-15 V DC
Maximum peak current 3 A
Avg. power consumption 0.015 W
Sleep current < 100 μ A
Transmit power 20 W
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Batteries

Battery capacity 50 Wh (alkaline or Li-ion), 165 Wh (lithium), Single or dual
New battery voltage 13.5 V DC (alkaline)
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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
[arrow]

Materials

Standard model POM housing
[arrow]

Dimensions

Maximum diameter 84 mm
Maximum length ~500 mm (single battery) or +110 mm (double battery) depending on head configuration
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Weight

Weight in air 3.6 kg
Weight in water 1.2 kg
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Options

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