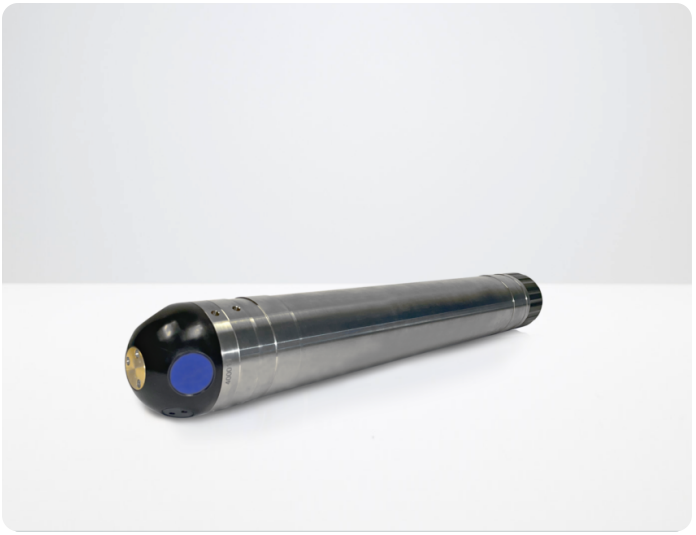
Aquadopp 6000 m

High-performance full ocean depth, single-point current meter with titanium housing



With all the features and capabilities of the standard Aquadopp, the deepwater Aquadopp 6000 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

- Full ocean-depth single-point current meter
- Titanium housing
- Diagnostics mode for mooring performance evaluation

Applications

- Studies of deep-water currents
- Studies of tidal currents
- Attached to mooring lines
- Measurements of unaffected currents from physical structures
- In conjunction with riser monitoring systems
- 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

Water velocity measurements	
Maximum profiling range	N/A
Cell size	0.75 m
Minimum blanking	0.50 m
Maximum number of cells	1

Water velocity measurements

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°

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	6000 m
Accuracy/precision	0.5% FS / 0.005% of full scale

Analog inputs

No. of channels	2
Supply voltage to analog output 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	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

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 µA
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 721-3-4
EMC approval	IEC 61000
Depth rating	6000 m

Connectors

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

Materials

Standard model	Titanium and POM

Dimensions

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

Weight

Weight in air	7.6 kg
Weight in water	4.8 kg

Options

1) Alkaline, lithium or Li-ion external batteries, 2) Inquire for different head configurations, 3) Inductive modem