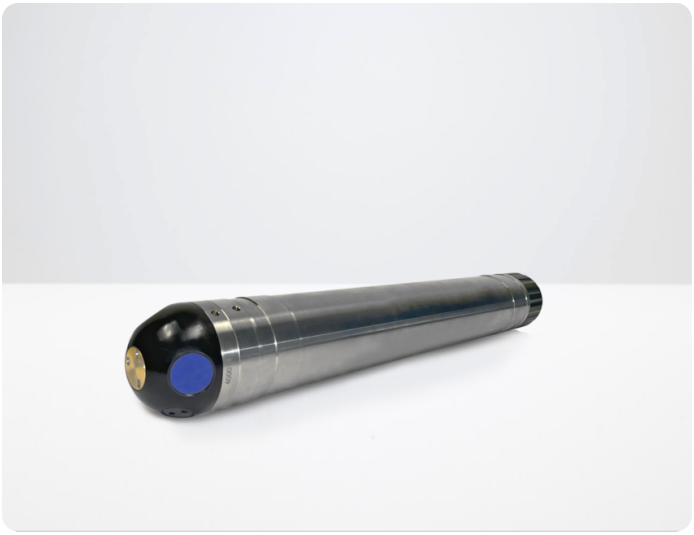
Aquadopp 2

6000 m

Courantomètre ponctuel grands fonds conçu pour les longs déploiements avec corps en titane



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	
Cell size	0.75 m
Maximum number of cells	1
Distance to measurement	1.0-6.0 m (user-selectable)
Velocity range	±1 m/s, ±2.5 m/s, ±5 m/s

Water velocity measurements

Accuracy	±1% of measured value ±0.5 cm/s
Horizontal velocity precision (consult instrument SW)	Typ. 1 cm/s
Maximum sampling rate (output)	2 Hz
Internal sampling rate	4 Hz

Echo intensity

Sampling	Same as velocity
Resolution	0.5 dB
Dynamic range	90 dB
Transducer acoustic frequency	2 MHz
Number of beams	3
Beam width	1.7°

Sensors

Temperature:	
Temp. range	-4 to +40 °C
Temp. accuracy/resolution	0.1 °C/0.01 °C
Temp. time response	<1 min
Compass:	Solid State Magnetometer
Accuracy/resolution	<2° for tilt < 30° / 0.01°
Tilt:	Solid state accelerometer
Accuracy/resolution	0.2° for tilt < 30° / 0.01°
Maximum tilt	3D
Up or Down	Automatic detect
Pressure:	Piezoresistive
Range	6000 m
Accuracy/precision	0.25% FS / 0.005% of full scale

Digital inputs

No. of channels	1
Digital Input format	MicroCat CTD

Data recording

Capacity	16 GB

Real-time clock

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

Data communications

I/O	RS-422
Communication Baud Rate	9600 Baud- 1.2 Mbaud (default 115200 Baud)
User control	Nortek Deployment Software or direct ASCII commands, with binary or ASCII data output

Software

Operating system	Agnostic
Functions	Deployment planning, instrument configuration, data retrieval and conversion. Online data display.

Power

DC input	9-24 VDC
Absolut maximum DC input	26 VDC
Maximum peak current	4.5 A
Power consumption	Consult Nortek Deployment Software
Sleep current	< 40 uA
Transmit power	0.45-45 W, adjustable over 20 dB

Batteries

Internal battery capacity	1-3 x 50 Wh (Alkaline); 1-3 x 165 Wh (Lithium); 1-3 x 76 Wh (Li-ion)
Battery weight	430g per 50 Wh (Alkaline); 380g per 165 Wh (Lithium); 300g per 76 Wh (Li-ion)
New battery voltage	13.5 VDC

Environmental

Operating temperature	-5 to +40 °C
Storage temperature	-20 to +60 °C
Shock and vibration	Shock: IEC 60068-2-27, Vibration: IEC 60068-2-64
EMC approval	EN IEC 61000-6-2:2019, EN IEC 61000-6-4:2019
Depth rating	6000m

Connectors

Bulkhead (Impulse)	MCBH-8-FS titanium
Cable	PMCIL-8-MP on 5m (default) polyurethane cable

Materials

Standard model	Titanium Gr. 5, POM, Naval Brass, epoxy

Dimensions (see drawings for details)

Maximum housing diameter	84 mm
Maximum length	623 mm

Weight

Weight in air (without batteries)	7600 g
Weight in water (without batteries)	4350 g

Arrangements

D2VC	Deep water, 2Mhz, Vertical orientation, Current meter