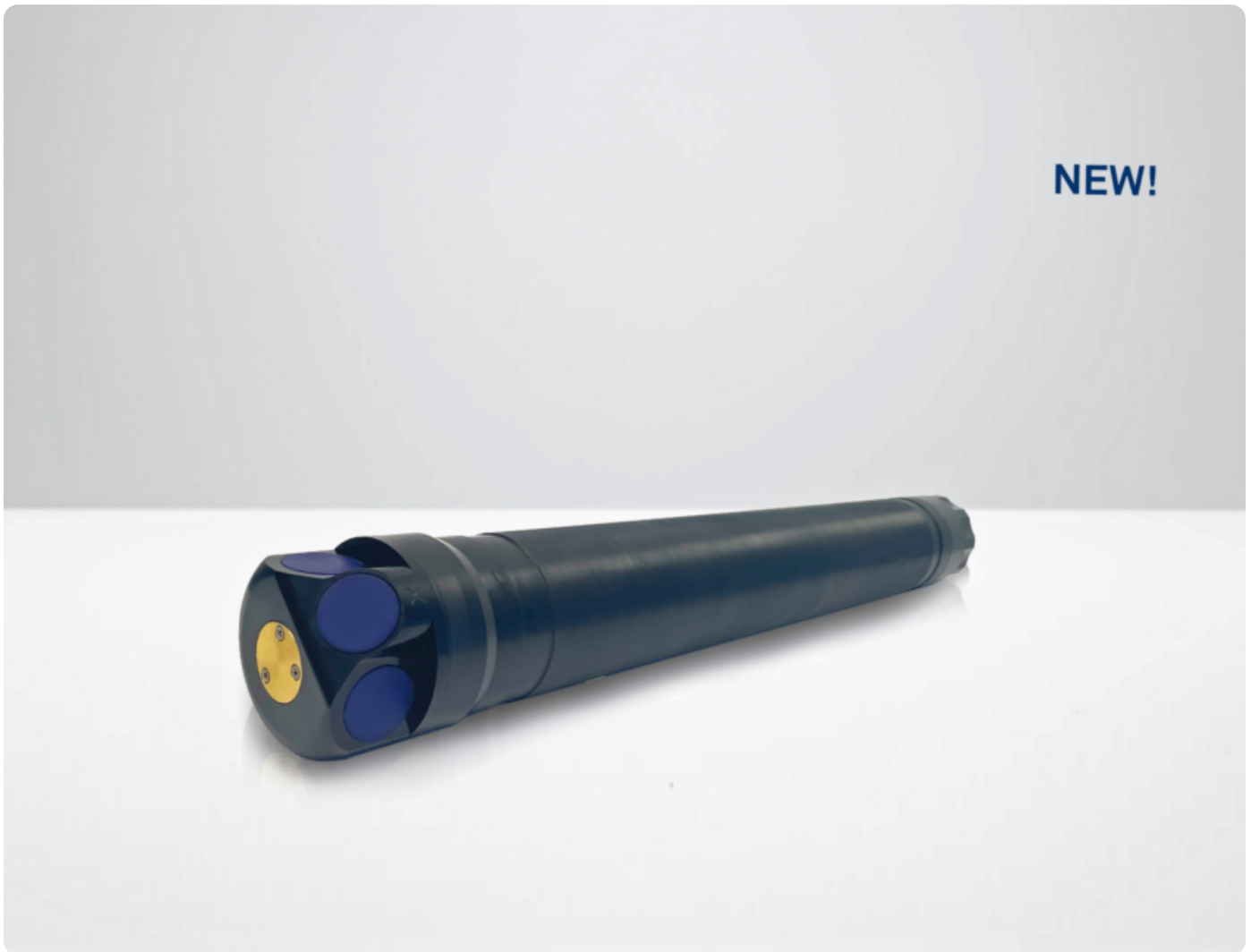


Aquadopp - 500 m, Generation 2



Highly versatile single-point current meter with the option to perform PUV wave measurements

The Aquadopp 500 m is a compact, accurate and affordable single-point current meter for applications where a current profile is not needed. Designed for use in several deployment scenarios, from mooring lines to bottom-mounted structures, it also has the option to perform PUV-based directional wave measurements, making it a cost-effective and simple solution.

The Aquadopp now offers 6% broadband measurements and “hibernation mode” between measurements, enabling precise data collection with lower power consumption. Combined with mechanical improvements allowing for more internal battery storage, the modern Aquadopp design extends potential deployment duration.

See the details of the Generation 2 Aquadopp updates in the release notes [here](#).

Highlights

- ✓ Single-point current meter
- ✓ Simple and robust operation
- ✓ Ideal for mooring lines
- ✓ LED blinks when pinging for peace of mind during deployment

Applications

- ✓ Shallow-water current measurements
- ✓ Attached to mooring lines
- ✓ Combined with riser monitoring systems
- ✓ Studies of tidal currents
- ✓ Near-bed current measurements

Technical specifications

→ Water velocity measurements

Cell size	0.75 m
Maximum number of cells	1
Blanking distance	0.1-5.0 m (user-selectable)
Velocity range	±1 m/s, ±2.5 m/s, ±5 m/s
Velocity range (horizontal)	±2.3 m/s, ±5.75 m/s, ±11.5 m/s
Accuracy	±1% of measured value ±0.5 cm/s
Horizontal velocity precision (consult instrument SW)	Typ. 1 cm/s
Maximum sampling rate (output)	1 Hz
Wave measurements	PUV (optional)

→ Echo intensity

Sampling	Same as velocity
Resolution	0.5 dB
Dynamic range	90 dB
Transducer acoustic frequency	2 MHz
Number of beams	3 (see GA drawings for angles)
Beam width	0.85° (1.7° total)

→ 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 Full 3D

Up or Down Automatic detect

Pressure: Piezoresistive

Range 30 m/100 m/500 m

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

→ Digital inputs

No. of channels	1
Digital input format	MicroCat CTD

→ Data recording

Capacity	16 GB
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→ Real-time clock

Accuracy ±1 min/year

Backup in absence of power 4 weeks

→ Data communications

I/O RS-422 (inquire for RS-232)

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 Cross platform

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

→ Power

DC input 9-24 VDC

Absolute maximum DC input 26 VDC

Maximum peak current 4.5 A

Power consumption Consult Nortek Deployment Software

Sleep current < 40 uA

Transmit power Adjustable

→ Batteries

Internal battery capacity 1-3 x 50 Wh (Alkaline), 2-3 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)

→ 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 EN IEC 61000-6-2:2019, EN IEC 61000-6-4:2019

Depth rating 500 m

→ Connectors

Bulkhead (Impulse) MCBH-8-FS Brass

Cable PMCIL-8-MP on 5 m (default) polyurethane cable

→ Materials

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

→ Dimensions (see drawings for details)

Maximum housing diameter 75 mm

Maximum length 3 battery housing: S2VC: 593mm, S2VPC: XXXmm, S2SPC: 634mm

1 battery housing: S2VC: 593mm, S2VPC: XXXmm, S2SPC: 634mm

→ Weight

Weight in air (without batteries) S2VC: 2480 g

Weight in water (without batteries) S2VC: -150 g

Weight in air, short housing (without batteries) 1880 g

Weight in water, short housing (without batteries) 300 g

→ Head configurations

S2VC Shallow water, 2MHz, Vertical orientation, Current meter

→ Online cable configurations

Cable length 0-10m; 10-50m; 50-500m

Power wire gauge 20AWG; 20AWG; 18AWG

Hardware Standard; Standard; Long cable kit

Input voltage 9-24VDC; 24VDC +/-0,5; 48VDC +2/-5

Absolut maximum DC input 26 VDC; 26 VDC; 51 VDC

Communication RS232/RS422/115200; RS232/RS422/115200; RS422/115200