Valid for instruments delivered before 2024!

NORTEK

Aquadopp, 300 m

Current meter

The Aquadopp 300 m is a compact, accurate and affordable single-point current meter for applications where a current profile is not needed. Designed for use in a number of deployment scenarios from mooring lines to bottom-mounted structures, it comes with PUV-based directional wave measurement capability as standard, making it the best value in the industry.

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

Highlights

→ Single-point current meter
→ Perfect for mooring lines
→ PUV-based directional wave measurements

Applications

→ Attached to mooring lines
→ In conjunction with riser monitoring systems
→ Measurements of unaffected currents from physical structures
→ Shallow-water wave and current measurements
→ Alternative to mechanical current meters with errors due to fouling
→ Near-surface current measurements from surface buoys
→ Studies of tidal currents
→ Suitable for wave buoys

Technical specifications

Aquadopp, 300 m

→ Water velocity measurements	
Maximum profiling range	N/A
Cell size	0.75 m
Minimum blanking	0.35 m
Maximum number of cells	1
Measurement cell position	0.35-5.0 m (user-selectable)
Default position (along beam)	0.35-1.85 m
Velocity range	± 5 m/s [1]
Accuracy	± 1 % of measured value ± 0.5 cm/s
Velocity precision	Consult instrument software
Maximum sampling rate (output)	1 Hz, 4 Hz on request
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	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	300 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 firmware commands: • Battery voltage/500 mA • +5 V/250 mA • +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	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	300-115,200 Bd
Recorder download baud rate	600/1200 kBd for both RS-232 and RS-422
User control	Handled via "AquaPro" software, ActiveX® function calls, or direct commands with binary or ASCII data output

→ Connectors	
Bulkhead (Impulse)	MCBH-8-FS
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 [2]	0.01 W
Sleep current	< 100 µA
Transmit power	0.3-20 W, 3 adjustable levels

→ 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	300 m

→ Materials	
Standard model	POM housing with titanium fasteners

→ Dimensions	
Maximum diameter	75 mm
Maximum length	~500 mm (single battery) +110 mm (double battery) depending on head configuration

→ Weight	
Weight in air	2.3 kg
Weight in water	Neutral

→ Options	
	• Alkaline, lithium or Li-ion external batteries • Inquire for different head configurations • Inductive modem

[1] Inquire for higher ranges, [2] Default configuration, see instrument SW for details and other setups