Vectrino

Sample 3D velocity at up to 200 Hz for use in hydraulic models and laboratory flumes



This instrument is no longer available.

Highlights

Applications

Technical specifications

Water velocity measurements	
Maximum profiling range	N/A
Distance from probe	0.05 m, 0.1 m (field probe)
Sampling volume diameter	6 mm
Sampling volume height (user-selectable)	3-15 mm
Cell size	N/A
Velocity range*	±0.03, 0.1, 0.3, 1, 2.5, 4 m/s (software-selectable)
Adaptive ping interval	N/A
Accuracy	±0.5% of measured value ±1 mm/s
Velocity precision	N/A
Sampling rate (output)	1-25 Hz (Std firmware),1-200 Hz (Plus firmware)
Internal sampling rate	N/A

* The velocity range is not the same in the horizontal and vertical direction. Please refer to the configuration software.

Distance measurements	
Minimum range	N/A
Maximum range	N/A
Cell size	N/A
Accuracy	N/A
Sampling rate	N/A

Echo intensity	
Acoustic frequency	10 MHz
Resolution	Linear scale
Dynamic range	25 dB

Sensors

Temperature:	Thermistor embedded in probe
Temp. range	-4 to +32 °C
Temp. accuracy/resolution	1 °C/0.1 °C
Temp. time response	5 min
Compass:	N/A
Accuracy/resolution	N/A
Tilt:	N/A
Accuracy/resolution	N/A
Maximum tilt	N/A
Up or Down	N/A
Pressure:	N/A
Standard range	N/A
Accuracy/precision	N/A

Analog inputs

No. of channels	N/A
Supply voltage to analog output devices	N/A

Data recording

Capacity (standard):	N/A
Data record	N/A

Real-time clock

Accuracy	N/A
Backup in absence of power	N/A

Data communications

I/O	RS-232
Communication baud rate	300-115 200 Bd
Recorder download baud rate	N/A
User control	Handled via ”Vectrino” software, ActiveX® function calls, or direct commands
Analog outputs	3 channels standard, one for each velocity component
Output range	0–5 V, scaling is user-selectable0
Synchronization	RS-485, start on sync, sample on sync,transmit on sync (Plus Firmware)

Connectors

Bulkhead	MCBH-12-FS, bronze
Cable	PMCIL-12-MP – see also options below

Software

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

Multi unit operation

Software	Polysync

Multi unit operation

I/O	RS 232–USB support for devices with 1, 2, 4, and 8 serial ports

Power

DC input	12-48 V DC
Maximum peak current	2.5 A at 12 V DC (user-selectable)
Max. consumption	1.5 W at 200 Hz
Typical consumption, 4 Hz	N/A
Sleep consumption	N/A
Transmit power	N/A

Batteries

Battery capacity	N/A
New battery voltage	N/A
Data collection capacity	N/A

Environmental

Operating temperature	-4 to +40 °C
Storage temperature	-15 to +60 °C
Vibration	IEC 60068-1/IEC60068-2-64
Depth rating	20 m

Materials

Standard model	POM housing. Stainless steel (316) probe and fasteners

Dimensions

Maximum diameter	66 mm
Maximum length	350 mm (housing only), 365 mm (fixed stem)

Weight

Weight in air	1.2 kg (1.3 kg with field probe)
Weight in water	Neutral (0.1 kg with field probe)

Options

4-beam down-looking probe or side-looking probe. Fixed stem or 1 m flexible cable
10, 20, 30 or 50 m cable with Impulse underwater connector
RS 232–USB converter (one-to-one, four-to-one or eight-to-one)
Standard or Vectrino Plus firmware
Combined transportation and storage case