

Vector 300 m - Legacy



This version of the Vector is no longer available.

Please see the [Vector Generation 2](#).

This version of the Vector remains functional and supported. Please visit our [support center](#) if you require assistance.

Highlights

Applications

Technical specifications

| Water velocity measurements | |
|--|---|
| Maximum profiling range | N/A |
| Distance from probe | 0.15 m |
| Sampling volume diameter | 15 mm |
| Sampling volume height (user-selectable) | 5-20 mm |
| Cell size | N/A |
| Velocity range | ±0.01, 0.1, 0.3, 1, 2, 4, 7 m/s (software-selectable) |
| Adaptive ping interval | N/A |
| Accuracy | ±0.5% of measured value ±1 mm/s |
| Velocity precision | typ. 1% of velocity range (at 16 Hz) |
| Sampling rate (output) | 1-64 Hz |
| Internal sampling rate | 100-250 Hz |
| 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 | 6 MHz |

Echo intensity

| | |
|---------------|---------|
| Resolution | 0.45 dB |
| Dynamic range | 90 dB |

Sensors

| | |
|---------------------------|--|
| Temperature: | Thermistor embedded in end bell |
| 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 |
| Standard range | 0-10 m (inquire for options) |
| Accuracy/precision | 0.5% FS / Better than 0.005% of full scale |

Analog inputs

| | |
|---|--|
| No. of channels | 2 |
| Supply voltage to analog output devices | Three options selectable through firmware commands: 1) Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA |

Data recording

| | |
|------------------------|---|
| Capacity (standard): | 16 GB |
| Data record (Standard) | 24 bytes at sampling rate + 28 bytes/second |
| Data record (IMU) | 72 bytes at sampling rate |

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 "Vector" software, ActiveX® function calls, or direct commands. |
| Analog outputs | 3 channels standard, one for each velocity component or two velocities and pressure. |
| Output range | 0-5 V, scaling is user-selectable. |
| Synchronization | TTL (5V tolerant) sync in/sync out, start on sync, sample on sync |

Connectors

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

Software

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

Multi unit operation

| | |
|----------|-----|
| Software | N/A |
| I/O | N/A |

Power

| | |
|---------------------------|---------------------|
| DC input | 9-15V DC |
| Maximum peak current | 3 A |
| Max. consumption | 1.5 W at 64 Hz |
| Typical consumption, 4 Hz | 0.6 - 1 W |
| Sleep consumption | < 100 µA |
| Transmit power | 2 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) |
| Data collection capacity | Refer to planning section in software |

Environmental

| | |
|-----------------------|---------------------------|
| Operating temperature | -4 to +40 °C |
| Storage temperature | -20 to +60 °C |
| Vibration | IEC 60068-1/IEC60068-2-64 |
| Depth rating | 300m |

Materials

| | |
|----------------|---|
| Standard model | POM housing, titanium probe and fasteners |
|----------------|---|

Dimensions

| | |
|------------------|--|
| Maximum diameter | 75 mm |
| Maximum length | 468 mm (housing only), 246 mm (fixed stem) add 110 mm for double battery |

Weight

| | |
|--------------|---|
| No batteries | Weight in air: 2.32 kg, in water: buoyant |
| 2 batteries | Weight in air: 3.20 kg, in water: 0.54 kg |

Options

| |
|--|
| Probe mounted on fixed stem or on 2 m cable |
| Vertical or horizontal probes |
| Alkaline, lithium or Li-ion external batteries |
| IMU - Inertial Measurement Unit |