

# VE102 Series

Piezo Velocity Sensor, Side Exit 2 Pin Connector, 100 mV/in/sec, ±10%



VIBRATION ANALYSIS HARDWARE



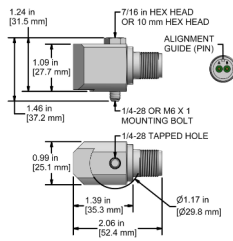
## Product Features

- 100 mV/in/sec (4 mV/mm/sec) Sensitivity
- 1,5 - 7000 Hz (90 - 420,000 CPM) Frequency Response
- ▶ ±50 in/sec, (±270 mm/sec) Peak Dynamic Range
- ▶ 2 Pin MIL Connection or Integral Option
- ▶ Integrates to Velocity in the Sensor

### VE102-1D

2 Pin Connector

| Connector Pin | Polarity         |
|---------------|------------------|
| A             | (+) Signal/Power |
| B             | (-) Common       |

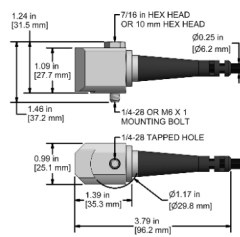


Stock Product

### VE102-2D

Integral Cable

| Conductor | Polarity         |
|-----------|------------------|
| Red       | (+) Signal/Power |
| Black     | (-) Common       |
| Shield    | Cable Drain Wire |

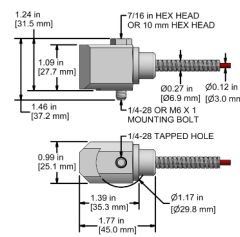


Built To Order

### VE102-3D

Armored Integral Cable

| Conductor | Polarity         |
|-----------|------------------|
| Red       | (+) Signal/Power |
| Black     | (-) Common       |
| Shield    | Cable Drain Wire |

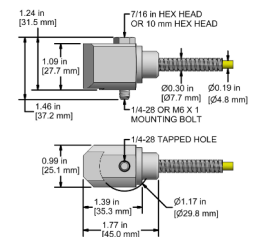


Built To Order

### VE102-6D

Heavy Duty Armored Integral Cable

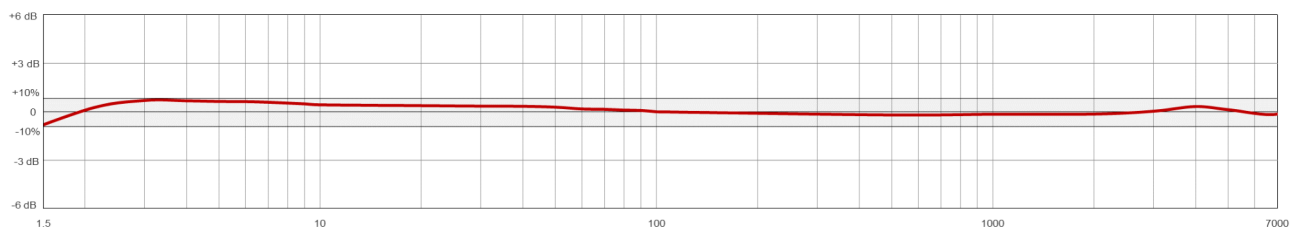
| Conductor | Polarity         |
|-----------|------------------|
| Red       | (+) Signal/Power |
| Black     | (-) Common       |
| Shield    | Cable Drain Wire |



Built To Order

| Specifications              | Standard                                   | Metric      | Specifications              | Standard             | Metric            |
|-----------------------------|--|-------------|-----------------------------|----------------------|-------------------|
| Part Number                 | VE102                                      | M/VE102     | <b>Environmental</b>        |                      |                   |
| Sensitivity (±10%)          | 100 mV/in/sec                              |             | Operating Temperature Range | -58 to 250°F         | -50 to 121°C      |
| Frequency Response (±3dB)   | 90-420,000 CPM                             | 1,5-7000 Hz | Maximum Shock Protection    | 5,000 g, peak        |                   |
| Frequency Response (±10%)   | 120-240,000 CPM                            | 2,0-4000 Hz | Electromagnetic Sensitivity | CE                   |                   |
| Dynamic Range               | ± 50 in/sec. pk<br>*Vsource ≥ 22V, 12Vbias |             | Sealing                     | Welded, Hermetic     |                   |
| <b>Electrical</b>           |  |             | Submersible Depth           | 200 ft.              | 60 m              |
| Settling Time               | <4 seconds                                 |             | <b>Physical</b>             |                      |                   |
| Voltage Source (IEPE)       | 18-30 VDC                                  |             | Sensing Element             | PZT Ceramic          |                   |
| Constant Current Excitation | 2-10 mA                                    |             | Sensing Structure           | Shear Mode           |                   |
| Spectral Noise @ 10 Hz      | 25 µIPS/√Hz                                |             | Weight                      | 5.1 oz               | 145 grams         |
| Spectral Noise @ 100 Hz     | 2 µIPS/√Hz                                 |             | Case Material               | 316L Stainless Steel |                   |
| Spectral Noise @ 1000 Hz    | 0.5 µIPS/√Hz                               |             | Connector (Non-Integral)    | 2 Pin MIL-C-5015     |                   |
| Output Impedance            | <100 ohm                                   |             | Resonant Frequency          | 1,320,000 CPM        | 22000 Hz          |
| Bias Output Voltage         | 10-14 VDC                                  |             | Mounting Torque             | 2 to 5 ft. lbs.      | 2,7 to 6,8 Nm     |
| Case Isolation              | >10 <sup>8</sup> ohm                       |             | Mounting Hardware Supplied  | 1/4-28 Captive Bolt  | M6x1 Captive Bolt |
|                             |  |             | Calibration Certificate     | CA10                 |                   |

## Typical Frequency Response



Backed by our Unconditional Lifetime Warranty & Free Annual Recalibration Service

[www.ctconline.com](http://www.ctconline.com) | [sales@ctconline.com](mailto:sales@ctconline.com) | 585-924-5900