

# AC133 Series

Low Frequency Accelerometer, Top Exit 2 Pin Connector, 500 mV/g,  $\pm 10\%$



## Product Features

Designed for Low-Speed Rotors, Main Bearings, and Gear Box Inputs, but Can Also be Used for High Frequency Detection

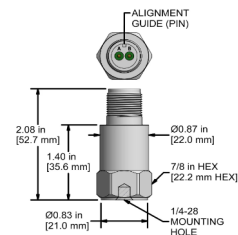
May be Used With Any Application That Requires Low and High Frequency Measurements

- ▶ 500 mV/g Sensitivity,  $\pm 10\%$  Sensitivity
- ▶ 0.1 Hz for Low-Frequency Measurements
- ▶ 10,000 Hz for High-Frequency Detection

### AC133-1D

2 Pin Connector

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

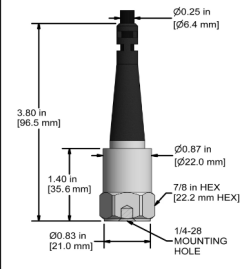


Stock Product

### AC133-2D & -7A

2D = CB103 Integral Cable  
7A = CB124 Integral Cable

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

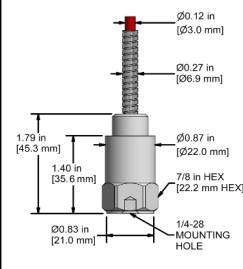


Built To Order

### AC133-3D

CB206 Armored Integral Cable

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

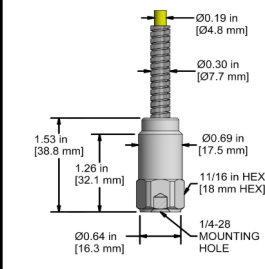


Built To Order

### AC133-6D

CB611 Heavy Duty Armored Integral Cable

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

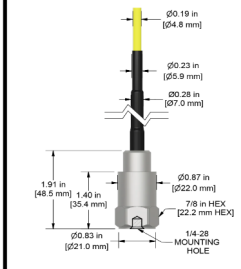


Built To Order

### AC133-6N

CB111 FEP Jacketed Integral Cable

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



Built To Order

| Specifications                          | Standard                                                 | Metric         | Specifications              | Standard                 | Metric                       |
|-----------------------------------------|----------------------------------------------------------|----------------|-----------------------------|--------------------------|------------------------------|
| Part Number                             | AC133                                                    | M/ or M8/AC133 | <b>Environmental</b>        |                          |                              |
| Sensitivity ( $\pm 10\%$ )              | 500 mV/g                                                 |                | Operating Temperature Range | -58 to 250 °F            | -50 to 121 °C                |
| Frequency Response ( $\pm 3\text{dB}$ ) | 6-600,000 CPM                                            | 0.1-10000 Hz   | Maximum Shock Protection    | 5,000 g, peak            |                              |
| Frequency Response ( $\pm 10\%$ )       | 36-180,000 CPM                                           | 0.6-3000 Hz    | Electromagnetic Sensitivity | CE                       |                              |
| Dynamic Range                           | $\pm 16$ g, peak<br>*Vsource $\geq 22\text{V}$ , 12Vbias |                | Sealing                     | Welded, Hermetic         |                              |
| Transverse Sensitivity                  | $\leq 5\%$                                               |                | Submersible Depth           | 200 ft.                  | 60 m                         |
| <b>Electrical</b>                       |                                                          |                | SIL Rating                  | SIL 2                    |                              |
| Settling Time                           | <2 Seconds                                               |                | <b>Physical</b>             |                          |                              |
| Voltage Source                          | 18-30 VDC                                                |                | Sensing Element             | PZT Ceramic              |                              |
| Constant Current Excitation             | 2-10 mA                                                  |                | Sensing Structure           | Shear Mode               |                              |
| Spectral Noise @ 10 Hz                  | 1.7 $\mu\text{g}/\sqrt{\text{Hz}}$                       |                | Weight                      | 3.4 oz                   | 92 grams                     |
| Spectral Noise @ 100 Hz                 | 0.2 $\mu\text{g}/\sqrt{\text{Hz}}$                       |                | Case Material               | 316L Stainless Steel     |                              |
| Spectral Noise @ 1000 Hz                | 0.12 $\mu\text{g}/\sqrt{\text{Hz}}$                      |                | Mounting Thread             | 1/4-28 Blind Tapped Hole |                              |
| Output Impedance                        | <100 ohm                                                 |                | Connector (Non-Integral)    | 2 Pin MIL-C-5015         |                              |
| Bias Output Voltage                     | 10-14 VDC                                                |                | Resonant Frequency          | 1,080,000 CPM            | 18000 Hz                     |
| Case Isolation                          | >10 <sup>8</sup> ohm                                     |                | Mounting Torque             | 2 to 5 ft. lbs.          | 2.7 to 6.8 Nm                |
|                                         |                                                          |                | Mounting Hardware Supplied  | 1/4-28 Stud              | M6x1 or M8x1.25 Adapter Stud |
|                                         |                                                          |                | Calibration Certificate     | CA10                     |                              |

## Typical Frequency Response

