

# AC234-M12A Series

Premium, Low Frequency Accelerometer, Side Exit 4 Pin M12 Connector, 500 mV/g,  $\pm 5\%$



VIBRATION ANALYSIS HARDWARE



## Product Features

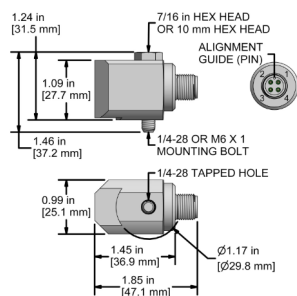
Designed for Low-Speed Rotors, Main Bearings, and Gear Box Inputs, but Can Also be Used for High Frequency Detection

- ▶ 500 mV/g Sensitivity,  $\pm 5\%$  Sensitivity
- ▶ 0.1 Hz for Low Frequency Measurements  
8,000 Hz for High Frequency Detection
- ▶ Standard 2 Pin MIL Connection or Integral Cable  
Note: Integral Cable Options are Only for Permanent Monitoring Applications

## AC234-M12A

4 Pin Connector

| Connector Pin | Polarity         |
|---------------|------------------|
| 1             | (+) Signal/Power |
| 2             | (-) Common       |
| 3             | Not Used         |
| 4             | Not Used         |



Built To Order

| Specifications                          | Standard                                                 | Metric      | Specifications              | Standard             | Metric            |
|-----------------------------------------|----------------------------------------------------------|-------------|-----------------------------|----------------------|-------------------|
| Part Number                             | AC234-M12A                                               | AC234       | <b>Environmental</b>        |                      |                   |
| Sensitivity ( $\pm 5\%$ )               | 500 mV/g                                                 |             | Operating Temperature Range | -58 to 250 °F        | -50 to 121 °C     |
| Frequency Response ( $\pm 3\text{dB}$ ) | 6-480,000 CPM                                            | 0.1-8000 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                      | 5.7 oz               | 160 grams         |
| Spectral Noise @ 100 Hz                 | 0.2 $\mu\text{g}/\sqrt{\text{Hz}}$                       |             | Case Material               | 316L Stainless Steel |                   |
| Spectral Noise @ 1000 Hz                | 0.12 $\mu\text{g}/\sqrt{\text{Hz}}$                      |             | Connector (Non-Integral)    | 4 Pin M12            |                   |
| Output Impedance                        | <100 ohm                                                 |             | Resonant Frequency          | 1,080,000 CPM        | 1,080,000 CPM     |
| 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

