# AC165 Series

**Premium, Negative Voltage Accelerometer, Top Exit 3 Pin Connector, 100 mV/g, ±5%**

VIBRATION ANALYSIS HARDWARE




## Product Features

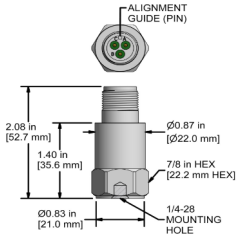
**Comparable to Bently™ 330400**

**Three-Wire, Negative-Voltage Sensor**

- 100 mV/g Nominal Sensitivity
- ± 5% Sensitivity Tolerance
- ± 80 g, Peak Dynamic Range

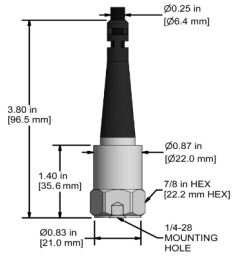
### AC165-1A
3 Pin Connector

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




### AC165-2C
CB105 Integral Cable

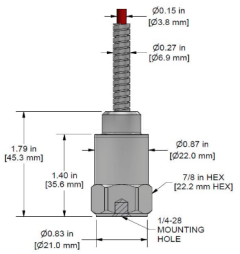
| Conductor | Polarity |
|---|---|
| Red | (+) Signal |
| Black | (-) Power-Negative |
| White | (+) Common/Power |
| Shield | Cable Drain Wire |




**Built To Order**

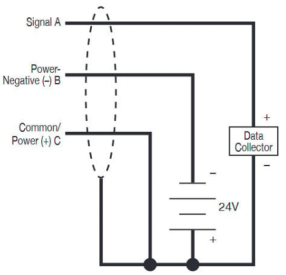
### AC165-3C
CB218 Armored Integral Cable

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




**Built To Order**

### AC165
Wiring Diagram




| Specifications | Standard | Metric |
|---|---|---|
| Part Number | AC165 | M/ or M8/AC165 |
| Sensitivity (±5%) | 100 mV/g | |
| Frequency Response (±3dB) | 300-900,000 CPM | 5,0-15000 Hz |
| Frequency Response (±10%) | 120-360,000 CPM | 2,0-6000 Hz |
| Dynamic Range | ± 60 g, peak<br>*Vsource ≤-20V, 8.5Vbias | |
| **Electrical** | | |
| Settling Time | <2 Seconds | |
| Voltage Source | -20 to -28 VDC | |
| Constant Current Excitation | <1 mA | |
| Broadband Noise Floor (10 to 15k Hz) | .002 g RMS | |
| Output Impedance | <5 ohm | |
| Bias Output Voltage | -8.5 VDC Nominal | |
| Case Isolation | >$10^8$ ohm | |

| Specifications | Standard | Metric |
|---|---|---|
| **Environmental** | | |
| Operating Temperature Range | -58 to 250 °F | -50 to 121 °C |
| Maximum Shock Protection | 5,000 g, peak | |
| Sealing | Welded, Hermetic | |
| SIL Rating | SIL 2 | |
| **Physical** | | |
| Sensing Element | PZT Ceramic | |
| Sensing Structure | Shear Mode | |
| Weight | 3.2 oz | 90 grams |
| Case Material | 316L Stainless Steel | |
| Mounting Thread | 1/4-28 Blind Tapped Hole | |
| Connector (Non-Integral) | 3 Pin MIL-C-5015 | |
| Resonant Frequency | 1,380,000 CPM | 23000 Hz |
| 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

