



SERIES 660

LOW COST, EMBEDDABLE ACCELEROMETERS

- Choice of charge mode, ICP® and 3-wire low power varieties
- Mountable via adhesive or soldering with choice of integral cable or solder pin connections
- Variety of sensitivities to accommodate a wide variety of applications

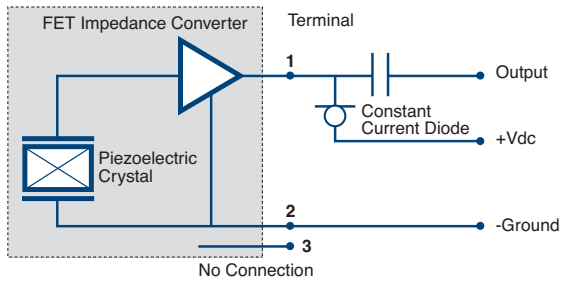


IDEAL FOR CONTINUOUS VIBRATION MONITORING IN HIGH-VOLUME AND COMMERCIAL OEM APPLICATIONS

Embeddable accelerometers offer an affordable solution for vibration and shock measurements in high-volume and commercial OEM applications. The units are particularly well suited for shock and impact detection of packages or components, as well as bearing and gear mesh vibration measurements in predictive maintenance and condition monitoring requirements. The compact designs may be imbedded into machinery at the OEM level to provide value-added monitoring protection.

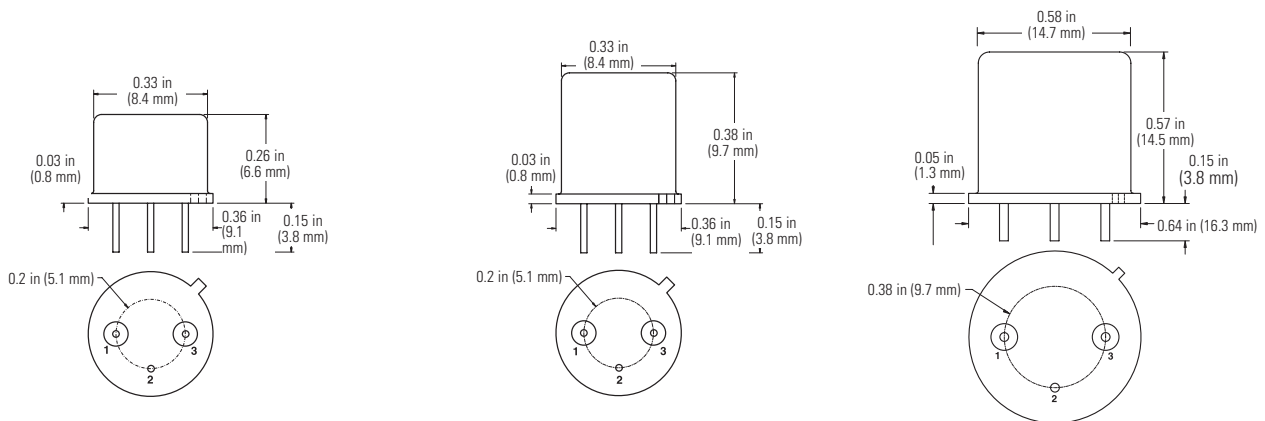
The units employ field-proven, solid-state, piezoelectric sensing elements for durability and broadband performance. Choose from either charge mode types, which achieve high operating temperatures or voltage mode ICP® types, with built-in signal conditioning microelectronics, for simplified operation and connectivity to data acquisition and vibration monitoring instrumentation.

2-Wire ICP® Configuration

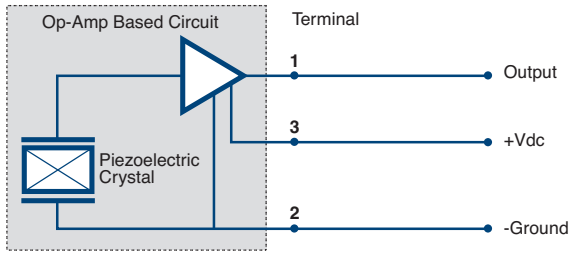


| BASE MODEL | |
|---------------------|--|
| 66 | Pellet Accelerometer |
| Sensor Input | |
| 102A | Low Profile TO-5, 10 mV/g Sensitivity, 500 g Measurement Range |
| 122A | Low Profile TO-5, 50 mV/g Sensitivity, 100 g Measurement Range |
| 162A | Low Profile TO-5, 1 mV/g Sensitivity, 5000 g Measurement Range |
| 212A | TO-5, 100 mV/g Sensitivity, 50 g Measurement Range |
| 312A | TO-8, 100 mV/g Sensitivity, 50 g Measurement Range |
| 322A | TO-8, 500 mV/g Sensitivity, 10 g Measurement Range |
| 332A | TO-8, 1000 mV/g Sensitivity, 5 g Measurement Range |
| Output | |
| PZ | Positive output along Z-axis |
| NZ | Negative output along Z-axis |
| Mounting | |
| 1 | Header Pins |
| 2 | Integral 1ft Cable |

| SPECIFICATIONS | | | |
|-----------------------------|--|-----------------|-----------------|
| Package Size | Low Profile TO-5 | TO-5 | TO-8 |
| Performance | | | |
| Sensitivity | See "Base Model" Table | | |
| Measurement Range | See "Base Model" Table | | |
| Frequency Range | 0.5 to 10,000 Hz | | 0.5 to 5000 Hz |
| Resonant Frequency | >25 kHz | | >16 kHz |
| Broadband Resolution | 1800 µg rms | 350 µg rms | 35 µg rms |
| Non-Linearity | ≤1% | | |
| Transverse Sensitivity | ≤7% | | |
| Environmental | | | |
| Overload Limit (Shock) | 5000 g pk 49050 m/s ² pk | | |
| Temperature Range | 65 to +185 °F -54 to +85 °C | | |
| Electrical | | | |
| Settling Time | ≤2 sec | | ≤10 sec |
| Discharge Time Constant | ≥0.3 sec | | ≥1 sec |
| Excitation Voltage | 18 to 28 VDC | | |
| Constant Current Excitation | 2 to 20 mA | | |
| Output Impedance | <100 ohm | <150 ohm | <550 ohm |
| Output Bias Voltage | 8 to 12 VDC | | |
| Physical | | | |
| Sensing Element | Ceramic | | |
| Sensing Geometry | Shear | | |
| Housing Material | Stainless Steel | | |
| Sealing | Hermetic | | |
| Mounting | Adhesive or Solder | | |
| Weight | 0.08 oz 2.2 g | 0.1 oz 3.0 g | 0.88 oz 25 g |

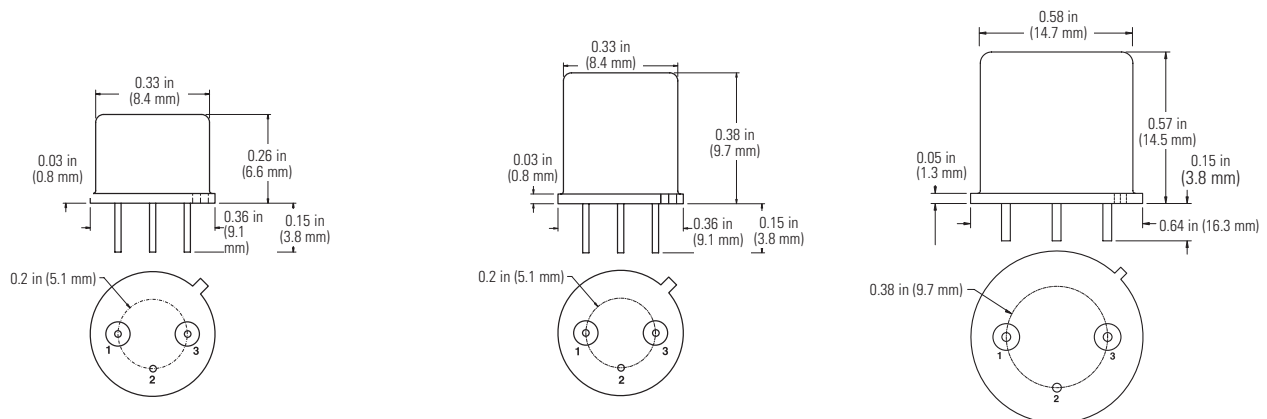


3-Wire Low Power Configuration

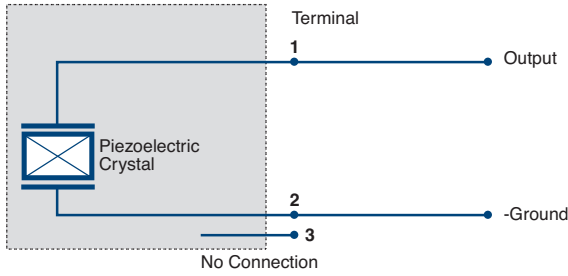


| BASE MODEL | |
|---------------------|--|
| 66 | Pellet Accelerometer |
| Sensor Input | |
| 103P | Low Profile TO-5, 10 mV/g Sensitivity, 200 g Measurement Range |
| 203P | TO-5, 50 mV/g Sensitivity, 20 g Measurement Range |
| 213P | TO-5, 100 mV/g Sensitivity, 20 g Measurement Range |
| 313P | TO-8, 100 mV/g Sensitivity, 20 g Measurement Range |
| 323P | TO-8, 500 mV/g Sensitivity, 4 g Measurement Range |
| 333P | TO-8, 1000 mV/g Sensitivity, 2 g Measurement Range |
| Output | |
| PZ | Positive output along Z-axis |
| NZ | Positive output along Z-axis |
| Mounting | |
| 1 | Header Pins |
| 2 | Integral 1ft Cable |

| SPECIFICATIONS | | | |
|-----------------------------|---|------------------------|------------------------|
| Package Size | Low Profile TO-5 | TO-5 | TO-8 |
| Performance | | | |
| Sensitivity | See "Base Model" Table | | |
| Measurement Range | $(0.5 \times \text{Excitation Voltage}) - 0.5 \text{ V}$ Sensitivity (V/g) | | |
| Frequency Range | 0.5 to 10000 Hz | 0.5 to 5000 Hz | |
| Resonant Frequency | >25 kHz | | >16 kHz |
| Broadband Resolution | 4900 $\mu\text{g rms}$ | 1700 $\mu\text{g rms}$ | 1040 $\mu\text{g rms}$ |
| Non-Linearity | $\leq 1\%$ | | |
| Transverse Sensitivity | $\leq 7\%$ | | |
| Environmental | | | |
| Overload Limit (Shock) | 5000 g pk 49050 m/s^2 pk | | |
| Temperature Range | 65 to +185 °F -54 to +85 °C | | |
| Electrical | | | |
| Settling Time | ≤ 2.5 sec | ≤ 2 sec | |
| Discharge Time Constant | ≥ 0.3 sec | ≥ 0.4 sec | |
| Excitation Voltage | 3 to 12 VDC | | |
| Constant Current Excitation | 0.75 mA | | |
| Output Impedance | <100 ohm | | |
| Output Bias Voltage | 0.5 x Excitation Voltage | | |
| Physical | | | |
| Housing Material | Stainless Steel | | |
| Sealing | Hermetic | | |
| Mounting | Adhesive or Solder | | |
| Weight | 0.08 oz 2.2 g | 0.1 oz 3.0 g | 0.88 oz 25 g |

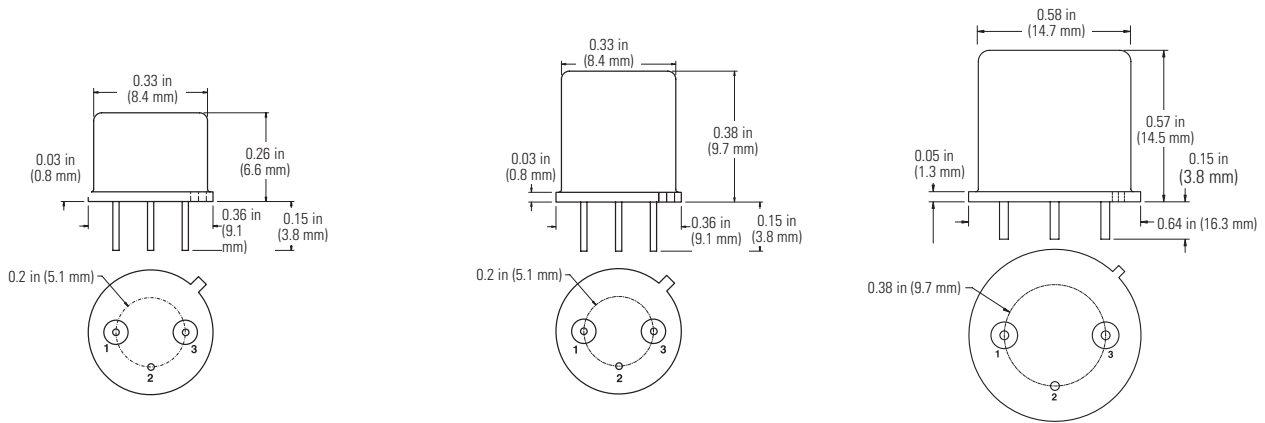


2-Wire Charge Mode



| BASE MODEL | |
|---------------------|--------------------------------------|
| 66 | Pellet Accelerometer |
| Sensor Input | |
| 192C | Low Profile TO-5, 5 pC/g Sensitivity |
| 292C | TO-5, 11 pC/g Sensitivity |
| 392C | TO-8, 100 pC/g Sensitivity |
| Output | |
| PZ | Positive output along Z-axis |
| NZ | Positive output along Z-axis |
| Mounting | |
| 1 | Header Pins |
| 2 | Integral 1ft Cable |

| SPECIFICATIONS | | | |
|------------------------|--|---------------------------------|-----------------|
| Package Size | Low Profile TO-5 | TO-5 | TO-8 |
| Performance | | | |
| Sensitivity | See "Base Model" Table | | |
| Frequency Range | 10 kHz | 5 kHz | |
| Resonant Frequency | >25 kHz | >16 kHz | |
| Non-Linearity | ≤1% | | |
| Transverse Sensitivity | ≤7% | | |
| Environmental | | | |
| Overload Limit (Shock) | 5000 g pk 49050 m/s ² pk | | |
| Temperature Range | 65 to +185 °F -54 to +85 °C | 65 to +250 °F -54 to +121 °C | |
| Electrical | | | |
| Capacitance | 350 pF | 2700 pF | |
| Physical | | | |
| Housing Material | Stainless Steel | | |
| Sealing | Hermetic | | |
| Mounting | Adhesive or Solder | | |
| Weight | 0.08 oz 2.2 g | 0.1 oz 3.0 g | 0.88 oz 25 g |



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IMI-VIB-Series660-0720



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