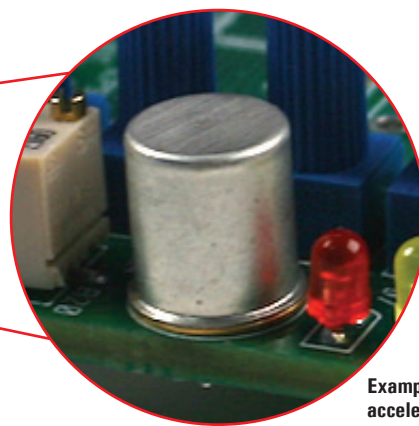
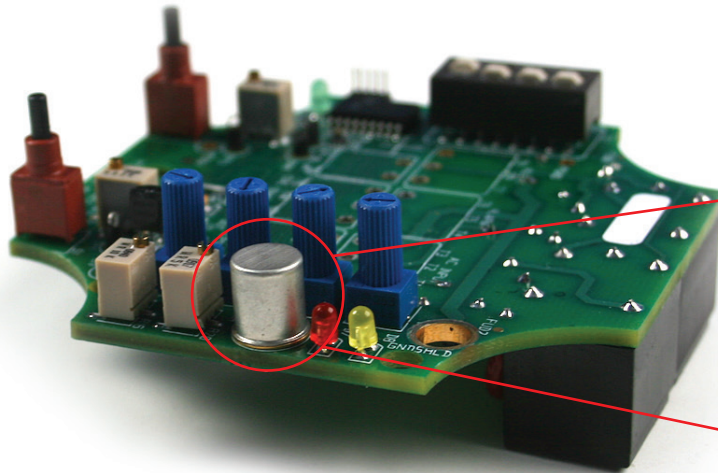




Low Cost, Embeddable Accelerometers

Ideal for Continuous Vibration Monitoring in High-Volume and Commercial OEM Applications



Example of a TO-5 accelerometer mounted on a circuit board

Highlights

- Choice of Charge Mode Piezoelectric, Voltage Mode ICP®, and 3-Wire Low Power Varieties
- Mountable via Adhesive or Soldering and Choice of Either Integral Cable or Solder Pin Electrical Connections
- Variety of Sensitivities to Accommodate a Wide Variety of Applications
- Broad Bandwidth, High Shock Survivability, Wide Operating Temperature Range, High Resolution, and Large Dynamic Range



The Series 660 low cost 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.

As with all instrumentation from IMI, these sensors are complemented with toll-free applications assistance, 24-hour customer service, and are backed by a Total Customer Satisfaction guarantee.



Series 660

Case Options

Product shown at actual size



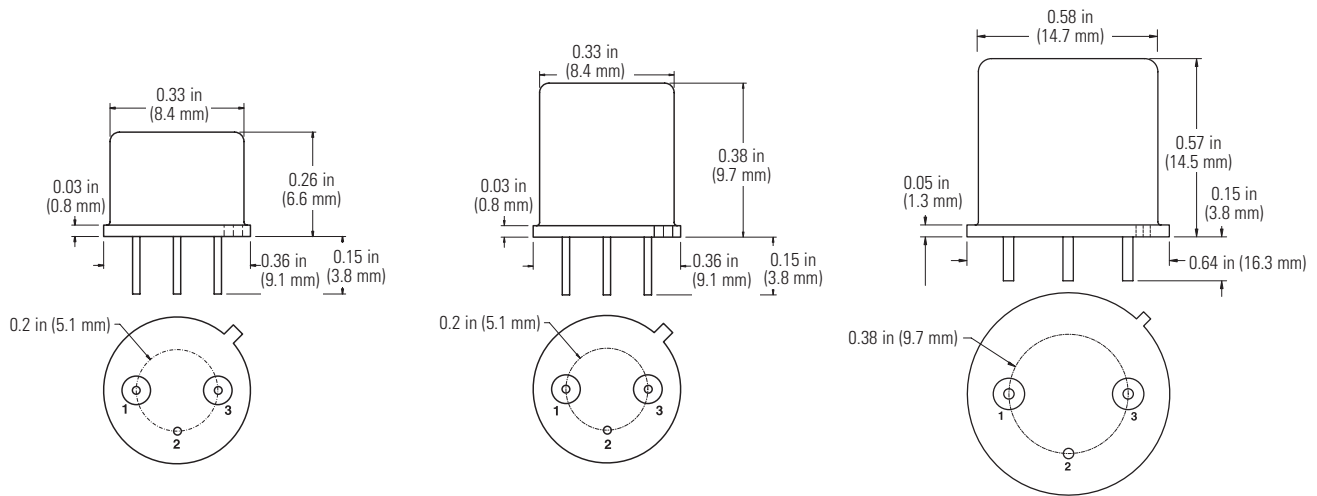
Low Profile TO-5



Standard TO-5



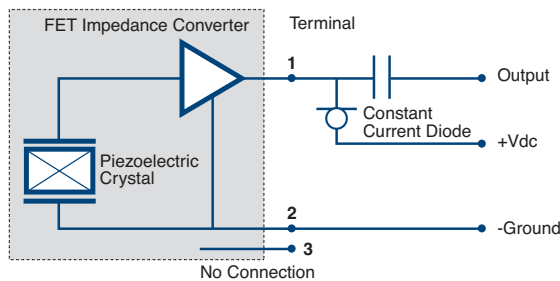
Standard TO-8



Technical Specifications

Package Size	Low Profile TO-5	TO-5	TO-8
Common Specifications			
Transverse Sensitivity	≤ 5%		
Non-linearity	≤ 1%		
Temperature Coefficient	0.10 %/°F 0.18 %/°C		
Shock Limit	7,000 g pk		6,000 g
	70k m/s ² pk		60k m/s ² pk
Housing Material	Stainless Steel		
Mounting	Adhesive or Solder		
Sealing (welded)	Hermetic		
Size	0.36 × 0.26 in	0.36 × 0.38 in	0.64 × 0.57 in
	9.1 × 6.6 mm	9.1 × 9.7 mm	16.3 × 14.5 mm

2-Wire ICP® Configuration



Technical Specifications

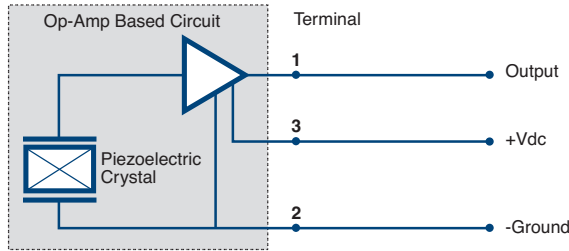
Package Size	Low Profile TO-5	Standard TO-5	Standard TO-8
2-Wire ICP® Configuration			
	5,000 m/s ²	500 m/s ²	50 m/s ²
Frequency Range (± 3 dB)	0.5 to 10 k Hz	0.5 to 10 kHz	0.25 to 5 kHz
Resonant Frequency	>25 kHz	>25 kHz	>16 kHz
Broadband Resolution	0.0018 g pk	0.0003 g pk	0.00003 g pk
Excitation Voltage	18 to 28 VDC		
Excitation Constant Current	2 to 20 mA		
Output Impedance	<100 ohm		
Output Bias Voltage	8 to 12 VDC		
Discharge Time Constant	≥0.3 sec	≥0.3 sec	≥0.65 sec
Settling Time	2 sec	2.5 sec	12 sec
Operating Temperature Range	-65 to +185 °F		
	-54 to +85 °C		
Weight	0.08 oz	0.1 oz	0.88 oz
	2.2 gm	3 gm	25 gm
Other Available Sensitivities	1 mV/g	N/A	100 mV/g, 500 mV/g
	0.102 mV/m/s ²		10.2 mV/m/s ²
			51 mV/m/s ²

2-Wire ICP® Options

Style	Size	Measurement	Part Number	Orientation/Polarity (Choose One)	Wire Number (Choose One)
ICP®	Low Profile TO-5	10 mV/g	66102A	PZ = Positive output for acceleration along Z-axis <i>(Example: 66102APZ)</i> OR NZ = Negative output for acceleration along Z-axis <i>(Example: 66102ANZ)</i>	1 = Header pins <i>(Example: 66102APZ1)</i> OR 2 = Integral one foot (0.3 meter) cable <i>(Example: 66102APZ2)</i>
ICP®	Low Profile TO-5	1.0 mV/g	66162A		
ICP®	TO-5	100 mV/g	66212A		
ICP®	TO-8	100 mV/g	66312A		
ICP®	TO-8	500 mV/g	66322A		
ICP®	TO-8	1000 mV/g	66332A		



3-Wire Low Power Configuration

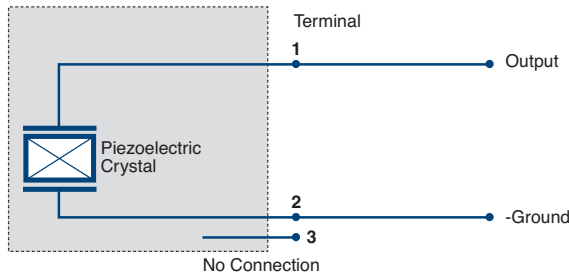


Technical Specifications			
Package Size	Low Profile TO-5	Standard TO-5	Standard TO-8
3-Wire, Low-Power Configuration			
Primary Model Sensitivity (± 20%)	10 mV/g	100 mV/g	1,000 mV/g
	1.02 mV/m/s ²	10.2 mV/m/s ²	102 mV/m/s ²
Measurement Range *	200 g	20 g	2 g
	2,000 m/s ²	200 m/s ²	20 m/s ²
Frequency Range (± 3 dB)	0.32 to 10 kHz	0.32 to 10 kHz	0.32 to 8 kHz
Resonant Frequency	>30 kHz	>25 kHz	>20 kHz
Broadband Resolution	0.003 g pk	0.001 g pk	0.0003 g pk
	0.03 m/s ² pk	0.01 m/s ² pk	0.003 m/s ² pk
Excitation Voltage	3 to 12 VDC		
Current Draw	0.75 mA		
Output Impedance	< 100 ohm		
Output Bias Voltage (±10%)	0.5 × Excitation Voltage		
Discharge Time Constant	≥0.5 sec		
Settling Time	2.5 sec	2.5 sec	15 sec
Operating Temperature Range	-65 to +185 °F		
	-54 to +85 °C		
Weight	0.08 oz	0.1 oz	0.88 oz
	2.2 gm	3 gm	25 gm

3-Wire Low Power Options					
Style	Size	Measurement	Part Number	Orientation/Polarity (Choose One)	Wire Number (Choose One)
Voltage	Low Profile TO-5	10 mV/g	66103P	PZ = Positive output for acceleration along Z-axis (Example: 66103PPZ) OR NZ = Negative output for acceleration along Z-axis (Example: 66103PNZ)	1 = Header pins (Example: 66103PNZ1) OR 2 = Integral one foot (0.3 meter) cable (Example: 66103PNZ2)
Voltage	TO-5	50 mV/g	66203P		
Voltage	TO-5	100 mV/g	66213P		
Voltage	TO-8	100 mV/g	66313P		
Voltage	TO-8	500 mV/g	66323P		
Voltage	TO-8	1000 mV/g	66333P		

* Measurement range achieved is dependent upon excitation voltage supplied, i.e.: $\text{Measurement Range} = \frac{(0.5 \times \text{Excitation Voltage}) - 0.5 \text{ V}}{\text{Sensitivity (V/g)}}$

2-Wire Charge Mode



Technical Specifications			
Package Size	Low Profile TO-5	Standard TO-5	Standard TO-8
2-Wire Charge Configuration			
Sensitivity (± 20%)	5 pC/g	11 pC/g	100 pC/g
	0.51 pC/m/s ²	1.12 pC/m/s ²	10.2 pC/m/s ²
Frequency Range (± 3 dB)	10 kHz		8 kHz
Resonant Frequency	>30 kHz	>25 kHz	>20 kHz
Operating Temperature Range	-65 to +185 °F		-65 to +250 °F
	-54 to +85 °C		-54 to +121 °C
Capacitance	350 pF		3,600 pF
Weight	0.08 oz	0.1 oz	0.88 oz
	2.2 gm	3 gm	25 gm

2-Wire Charge Mode Options					
Style	Size	Measurement	Part Number	Orientation/Polarity (Choose One)	Wire Number (Choose One)
Charge	Low Profile TO-5	5 pC/g	66192C	PZ = Positive output for acceleration along Z-axis (Example: 66192CPZ) OR NZ = Negative output for acceleration along Z-axis (Example: 66192CNZ)	1 = Header pins (Example: 66192CPZ1) OR 2 = Integral one foot (0.3 meter) cable (Example: 66192CPZ2)
Charge	TO-5	11 pC/g	66292C		
Charge	TO-8	100 pC/g	66392C		



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