PCB PIEZOTRONICS
AN AMPHENOL COMPANY

SERIES **660**

LOW COST, EMBEDDABLE ACCELEROMETERS

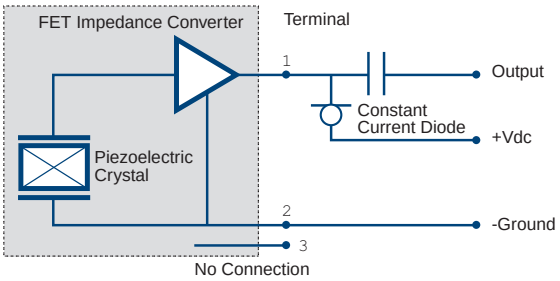
- Choice of charge mode, ICP® and 3-wire low power varieties
- Mountable via adhesive or soldering with choice of integral cable or solder pin connections
- Variety of sensitivities to accommodate a wide variety of applications

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.

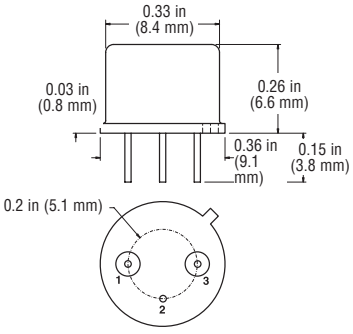
The units employ field-proven, solid-state, piezoelectric sensing elements for durability and broadband performance. Choose from either charge mode types, which achieve high operating temperatures or voltage mode ICP® types, with built-in signal conditioning microelectronics, for simplified operation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

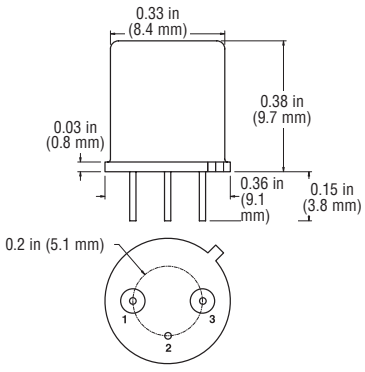
2-Wire ICP® Configuration

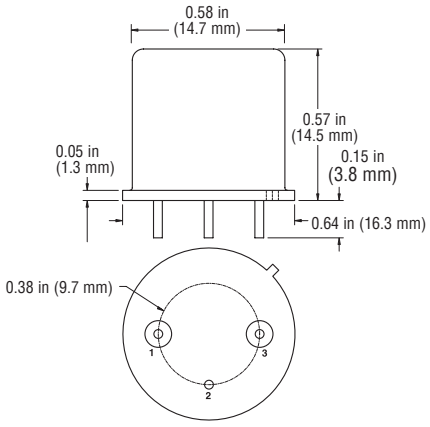


BASE MODEL			
66	Pellet Accelerometer		
	Sensor Input		
	102A	Low Profile TO-5, 10 mV/g Sensitivity, 500 g Measurement Range	
	122A	Low Profile TO-5, 50 mV/g Sensitivity, 100 g Measurement Range	
	162A	Low Profile TO-5, 1 mV/g Sensitivity, 5000 g Measurement Range	
	212A	TO-5, 100 mV/g Sensitivity, 50 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

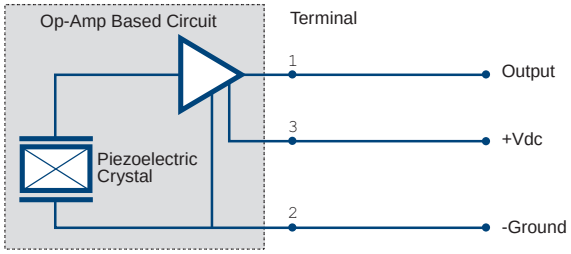
SPECIFICATIONS			
Package Size	**Low Profile TO-5**	**TO-5**	**TO-8**
Performance			
Sensitivity	See “Base Model” Table		
Measurement Range	See “Base Model” Table		
Frequency Range	0.5 to 10,000 Hz		0.5 to 5000 Hz
Resonant Frequency	>25 kHz		>16 kHz
Broadband Resolution	1800 µg rms	350 µg rms	35 µg rms
Non-Linearity	≤1%		
Transverse Sensitivity	≤7%		
Environmental			
Overload Limit (Shock)	5000 g pk 49050 m/s² 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





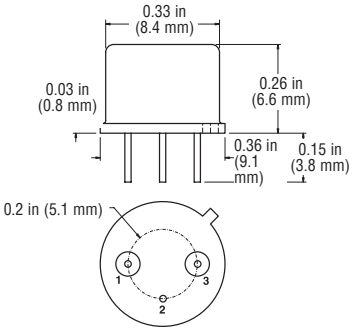


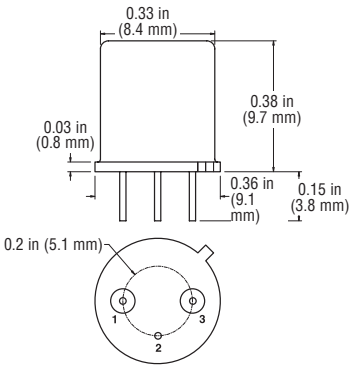
3-Wire Low Power Configuration

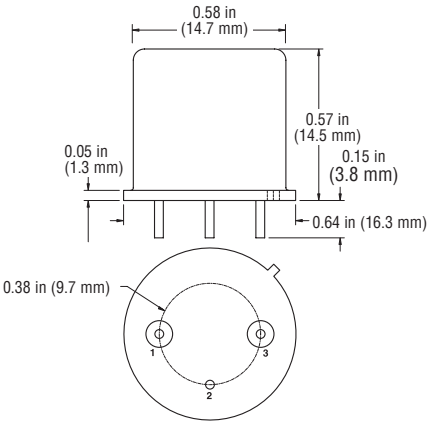


BASE MODEL			
66	Pellet Accelerometer		
	Sensor Input		
	103P	Low Profile TO-5, 10 mV/g Sensitivity, 200 g Measurement Range	
	203P	TO-5, 50 mV/g Sensitivity, 20 g Measurement Range	
	213P	TO-5, 100 mV/g Sensitivity, 20 g Measurement Range	
	313P	TO-8, 100 mV/g Sensitivity, 20 g Measurement Range	
	323P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

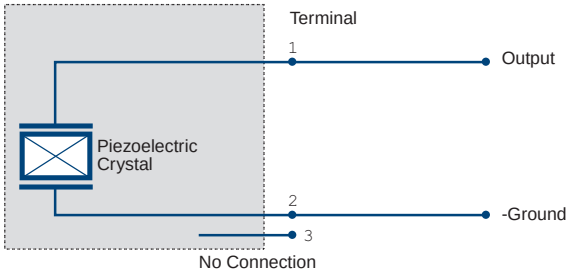
SPECIFICATIONS			
Package Size	**Low Profile TO-5**	**TO-5**	**TO-8**
Performance			
Sensitivity	See "Base Model" Table		
Measurement Range	$\frac{(0.5 \times \text{Excitation Voltage}) - 0.5\ \text{V}}{\text{Sensitivity (V/g)}}$		
Frequency Range	0.5 to 10000 Hz		0.5 to 5000 Hz
Resonant Frequency	>25 kHz		>16 kHz
Broadband Resolution	4900 µg rms	1700 µg rms	1040 µg rms
Non-Linearity	≤1%		
Transverse Sensitivity	≤7%		
Environmental			
Overload Limit (Shock)	5000 g pk 49050 m/s² 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		
Current Draw	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





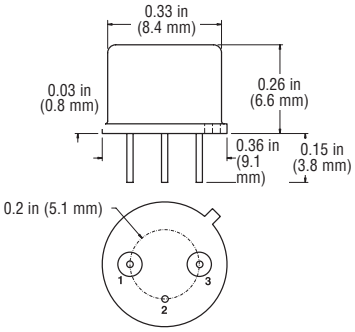


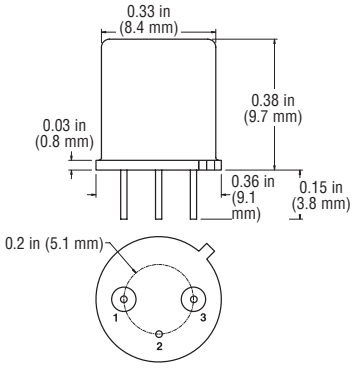
2-Wire Charge Mode

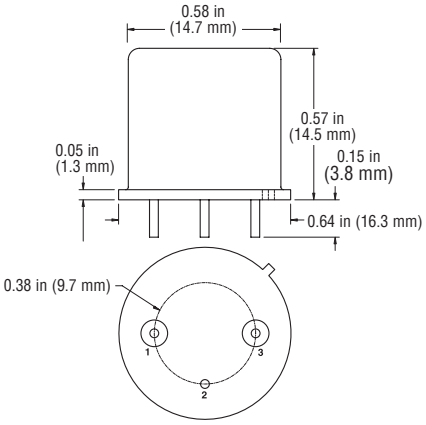


BASE MODEL			
66	Pellet Accelerometer		
	Sensor Input		
	192C	Low Profile TO-5, 5 pC/g Sensitivity	
	292C	TO-5, 11 pC/g Sensitivity	
	392C	TO-8, 100 pC/g Sensitivity	
		Output	
		PZ	Positive output along Z-axis
		NZ	Negative output along Z-axis
		Mounting	
			1 Header Pins
			2 Integral 1ft Cable

SPECIFICATIONS			
Package Size	**Low Profile TO-5**	**TO-5**	**TO-8**
Performance			
Sensitivity	See "Base Model" Table		
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/s² 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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