

Model 624B01 | Model 627A01 | Model 628F01

ICP[®] ACCELEROMETERS WITH QUARTZ ELEMENT

- Naturally piezoelectric for excellent long-term stability and repeatability.
- Non-pyroelectric for production of accurate output regardless of temperature.
- Low temperature coefficient for delivery of a linear sensitivity in thermally-active environments.

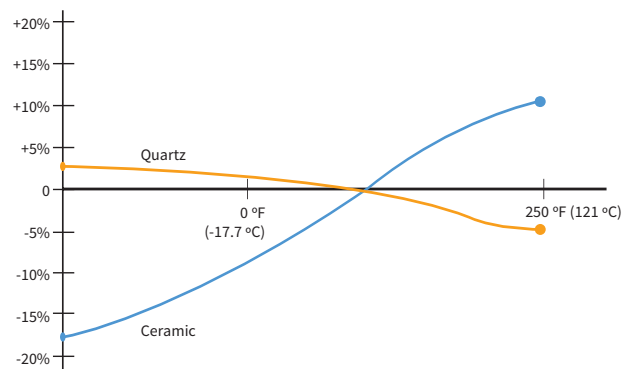
Typical Applications

- Permanent Installations for Long-Term Monitoring
- Thermally Active Environments:
 - Conveyors
 - Outdoor Installations
 - Paper Mills
 - Power Plants
 - Submersible Pumps



Provide Long-Term, Stable Sensitivity in a Wide Range of Temperatures

IMI Sensors is the industry leader in industrial ICP[®] accelerometers with a quartz sensing element. Quartz sensors are available in a wide variety of configurations to meet specific application requirements, including top and side connector versions, integral cable versions, high temperature versions (up to 325 °F [162 °C]) and dual output (vibration/temperature) versions.

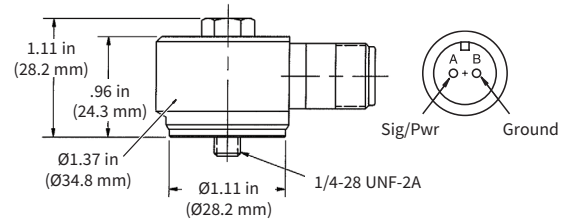


Typical Sensitivity Deviation vs Temperature

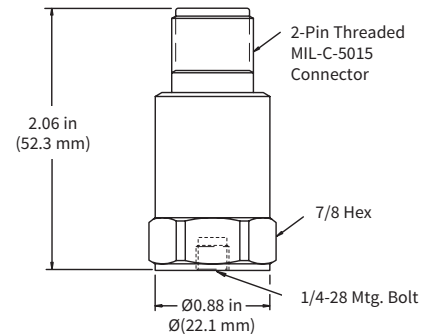
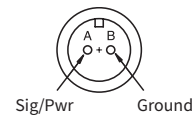




SPECIFICATIONS			
Model Number	624B01	627A01	628F01
Performance			
Sensitivity (±20%)	100 mv/g	100 mv/g	100 mv/g
Sensitivity (±20%)	10.2 mV/(m/s ²)	10.2 mV/(m/s ²)	10.2 mV/(m/s ²)
Measurement Range	± 50 g	± 50 g	± 50 g
	± 490 m/s ²	± 490 m/s ²	± 490 m/s ²
Frequency Range (±5%)	2.4 to 5,000 Hz	N/A	1 to 4,000 Hz
Frequency Range (±10%)	1.7 to 7,000 Hz	N/A	0.67 to 6,500 Hz
Frequency Range (±3 dB)	0.8 to 10,000 Hz	0.33 to 10,000 Hz	0.33 to 12,000 Hz
Resonant Frequency	18 kHz	18 kHz	18 kHz
Broadband Resolution	1,000 µg	1,000 µg	1,000 µg
	9,810 µm/s ²	9,810 µm/s ²	9,810 µm/s ²
Non-Linearity	±1 %	±1 %	±1 %
Transverse Sensitivity	≤5 %	≤5 %	≤5 %
Environmental			
Overload Limit (Shock)	5,000 g pk	5,000 g pk	5,000 g pk
	49,050 m/s ² pk	49,050 m/s ² pk	49,050 m/s ² pk
Temperature Range	-65 to +250 °F	-65 to +250 °F	-65 to +250 °F
	-53 to +121 °C	-53 to +121 °C	-53 to +121 °C
Enclosure Rating	IP68	IP68	IP68
Electrical			
Settling Time	≤10.0 s	≤10.0 s	≤10.0 s
Discharge Time Constant	≥0.2 s	≥0.5 s	≥0.5 s
Excitation Voltage	18 to 28 VDC	18 to 28 VDC	18 to 28 VDC
Constant Current Excitation	2 to 20 mA	2 to 20 mA	2 to 20 mA
Output Impedance	<100 Ohm	<100 Ohm	<100 Ohm
Output Bias Voltage	8 to 12 VDC	8 to 12 VDC	8 to 12 VDC
Spectral Noise (10 Hz)	50 µg/√Hz	50 µg/√Hz	50 µg/√Hz
Spectral Noise (100 Hz)	20 µg/√Hz	20 µg/√Hz	20 µg/√Hz
Spectral Noise (1 kHz)	6 µg/√Hz	6 µg/√Hz	6 µg/√Hz
Electrical Isolation (Case)	>10 ⁸ ohm	>10 ⁸ ohm	>10 ⁸ ohm
Physical			
Sensing Element	Quartz	Quartz	Quartz
Sensing Geometry	Shear	Shear	Shear
Housing Material	Stainless Steel	Stainless Steel	Stainless Steel
Sealing	Welded Hermetic	Welded Hermetic	Welded Hermetic
Mounting Thread	1/4-28 Male	1/4-28 Female	1/4-28 Female
Mounting Torque	2 to 5 ft-lb	2 to 5 ft-lb	2 to 5 ft-lb
	2.7 to 6.8 N-m	2.7 to 6.8 N-m	2.7 to 6.8 N-m
Electrical Connector	2-Pin MIL-C-5015	2-Pin MIL-C-5015	2-Pin MIL-C-5015
Electrical Connector Position	Side	Top	Top
Size	1.37 x 0.96 in	0.88 x 2.06 in	0.88 x 2.06 in
	34.8 x 24.3 mm	22.0 x 52.3 mm	22.0 x 52.3 mm
Weight	4.2 oz	3.3 oz	3.3 oz
	120 g	94 g	94 g



Model 624B01
Technical Drawing



Model 627A01 | Model 628F01
Technical Drawing



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IMI SENSORS designs and manufactures a full line of accelerometers, sensors, vibration switches, vibration transmitters, cables and accessories for predictive maintenance, continuous vibration monitoring, and machinery equipment protection. Products include rugged industrial ICP® accelerometers, 4-20 mA industrial vibration sensors and transmitters for 24/7 monitoring, electronic and mechanical vibration switches, the patented Bearing Fault Detector, high temperature accelerometers to +1300 °F (+704 °C), 2-wire Smart Vibration Switch, and the patented Reciprocating Machinery Protector. CE approved and intrinsically safe versions are available for most products. Visit us at www.IMI-SENSORS.com for more information.