

MODELS 357A63,  
357A64, & 357M168

## VERY HIGH TEMPERATURE, CHARGE MODE ACCELEROMETERS WITH UHT-12™ ELEMENT

- Electrically-isolated case prevents noise issues without the added height or weight of an accessory isolation base
- Hermetically-sealed housing prevents risk of possible liquid or particulate infiltration
- Smaller, lighter design provides higher resonant frequency, higher usable frequency range and simplified installation in even the tightest of spaces
- Three mounting styles (stud, screw tabs, weld tabs) provide installation flexibility



### PROVIDES MORE CONSISTENT SENSITIVITY OVER A WIDE TEMPERATURE RANGE

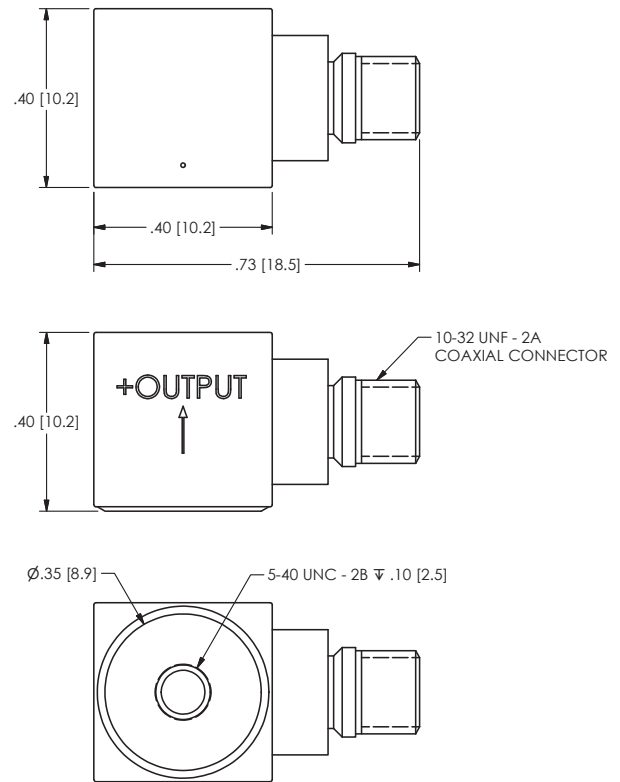
PCB Piezotronics utilizes a UHT-12™ element that features a proprietary crystal technology sealed in a hermetic package for long-term reliability. The element has no pyroelectric output that provides accurate low-frequency measurements and reduced thermal noise spikes that eliminate false alarms during monitoring. The element also has a more consistent sensitivity over a wide temperature change to provide greater accuracy. The shear mode crystals prevent base strain and transverse measurement errors.

### TYPICAL APPLICATIONS

- Aviation/Power Generation Turbine Research & Development
- Commissioning of Nuclear Power Plants
- Environmental Stress Screening
- Vehicle Exhaust System NVH

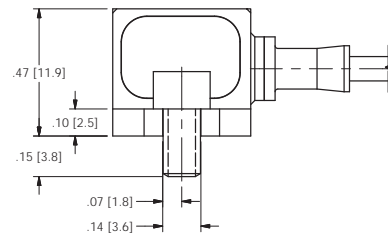
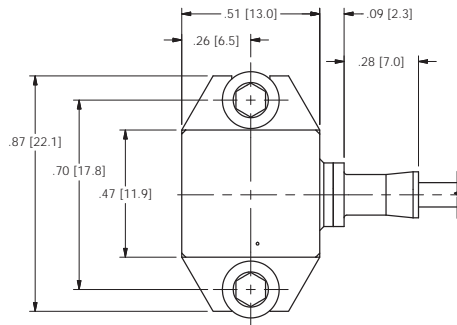


SPECIFICATIONS	
<b>Model Number</b>	<b>357A63</b>
<b>Performance</b>	
Sensitivity ( $\pm 10\%$ )	0.53 pC/g 0.054 pC/(m/s <sup>2</sup> )
Measurement Range	$\pm 5000$ g pk $\pm 49050$ m/s <sup>2</sup> pk
Frequency Range ( $\pm 10\%$ )	Up to 10 kHz
Resonant Frequency	45 kHz
Transverse Sensitivity	$\leq 3\%$
Non-Linearity	$\leq 1\%$
<b>Environmental</b>	
Overload Limit (Shock)	$\pm 5000$ g pk $\pm 49050$ m/s <sup>2</sup> pk
Temperature Range	-65 to +900 °F -54 to +482 °C
Acceleration Sensitivity	0.003 g/ $\mu\epsilon$
Base Strain Sensitivity	0.02 (m/s <sup>2</sup> )/ $\mu\epsilon$
Radiation Exposure Limit (Integrated Neutron Flux)	1 E10 N/cm <sup>2</sup>
Radiation Exposure Limit (Integrated Gamma Flux)	1 E8 rad
<b>Electrical</b>	
Capacitance (Pole-to-Pole)	60 pF
Insulation Resistance (Room Temp)	>1 GOhm
Insulation Resistance (900 °F / 482 °C)	>1 MOhm
Output Polarity	Positive
Electrical Isolation	Case Isolated
<b>Physical</b>	
Sensing Geometry	Shear
Sensing Element	UHT-12™
Housing Material	Inconel
Sealing	Hermetic Welded
Mounting Thread	5-40 Female
Electrical Connector	10-32 Coaxial Jack
Electrical Connection Position	Side
Weight	0.31 oz 8.7 g

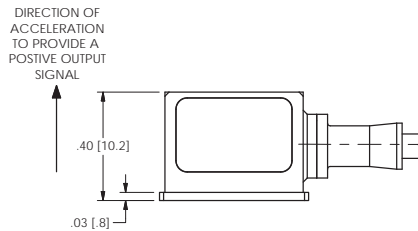
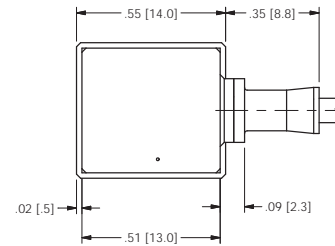


**Model 357B63**

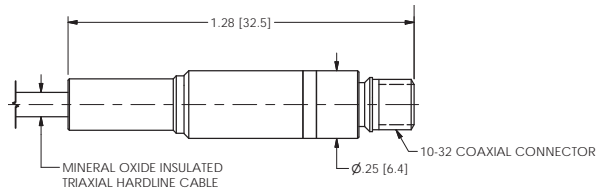
<b>SPECIFICATIONS</b>		
<b>Model Number</b>	<b>357A64</b>	<b>357M168</b>
<b>Performance</b>		
Sensitivity ( $\pm 10\%$ )	1.15 pC/g 0.117 pC/(m/s <sup>2</sup> )	
Measurement Range	$\pm 1000$ g pk $\pm 9800$ m/s <sup>2</sup> pk	
Frequency Range ( $\pm 10\%$ )	Up to 10 kHz	
Resonant Frequency	45 kHz	
Transverse Sensitivity	$\leq 5\%$	
Non-Linearity	$\leq 1\%$	
<b>Environmental</b>		
Overload Limit (Shock)	$\pm 2000$ g pk $\pm 19600$ m/s <sup>2</sup> pk	
Operating Temperature Range	-67 to +1200 °F -55 to +649 °C	
Operating Temperature Range (Terminating Connector)	-67 to +900 °F -55 to +482 °C	
Base Strain Sensitivity	N/A	
Radiation Exposure Limit (Integrated Neutron Flux)	1 E10 N/cm <sup>2</sup>	
Radiation Exposure Limit (Integrated Gamma Flux)	1 E8 rad	
<b>Electrical</b>		
Capacitance (Pole-to-Pole)	1000 pF	
Insulation Resistance (Room Temp)	$\geq 30$ kohm	
Insulation Resistance (1000 °F / 538 °C)	>1 GOhm	>100 MOhm
Output Polarity	Positive	
Electrical Isolation	Case Isolated	
<b>Physical</b>		
Sensing Geometry	Shear	
Sensing Element	UHT-12™	
Housing Material	Nickel 600	
Sealing	Hermetic Welded	
Mounting Thread	Two 6-32 Thru-hole screws	5-40 female Weld tabs
Cable Length	10.0 ft 3.0 m	
Cable Type	Hardline	
Electrical Connector	10-32 Coaxial Jack	
Weight	0.54 oz 15.0 g	0.35 oz 10.0 g



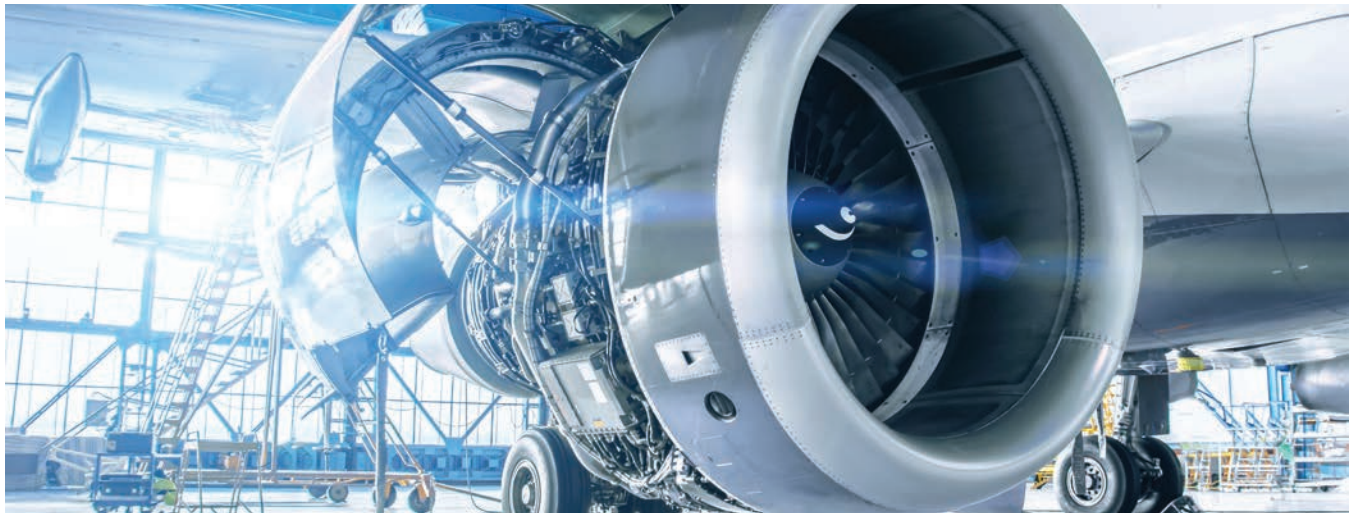
**Model 357A64 (Sensor)**










**Model 357M168 (Sensor)**



**Models 357A64 & 357M168 (Connector)**



SENSOR CHAIN COMPONENTS			
	NON-RADIATION ENVIRONMENT	RADIATION ENVIRONMENT	
Sensor	 357B63	 357A64	 357M168
Hardline Cable	 023RPXXXGA		
Softline Cable	 003EBXXXEB (003A10 = 10FT)		
Charge Amplifier	 422E35 (1 MV/PC) 422E36 (10 MV/PC)	 422E65/A (1 MV/PC) 422E66/A (10 MV/PC)	



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