



High Temperature Charge Output Accelerometer



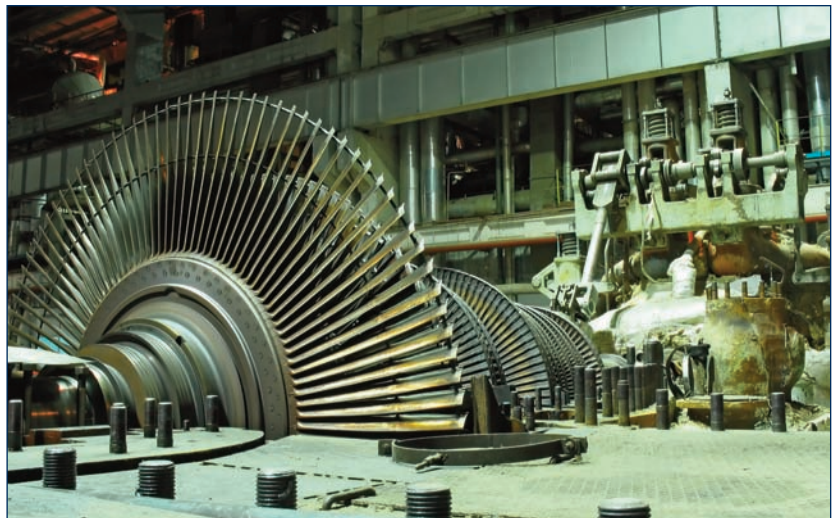
Designed to withstand application challenges of extreme heat environments such as gas turbines and nuclear power plants

Highlights

- Featuring shear mode sensing element vs. compression mode
- Less sensitivity to thermal transients
- Extended temperature survivability range to 1300 °F (704 °C)
- Warranty, pricing, lead time, and height advantage over the competition
- Hazardous location approvals

Typical Applications

- Gas Turbine Bearing Health Monitoring
- Commissioning of Nuclear Power Plants
- Condition Monitoring of Power Generation Turbines
- Machinery Protection in Extremely High Temperature Environments
- Turbine Health Management
- Structural Damages on Gas Turbines



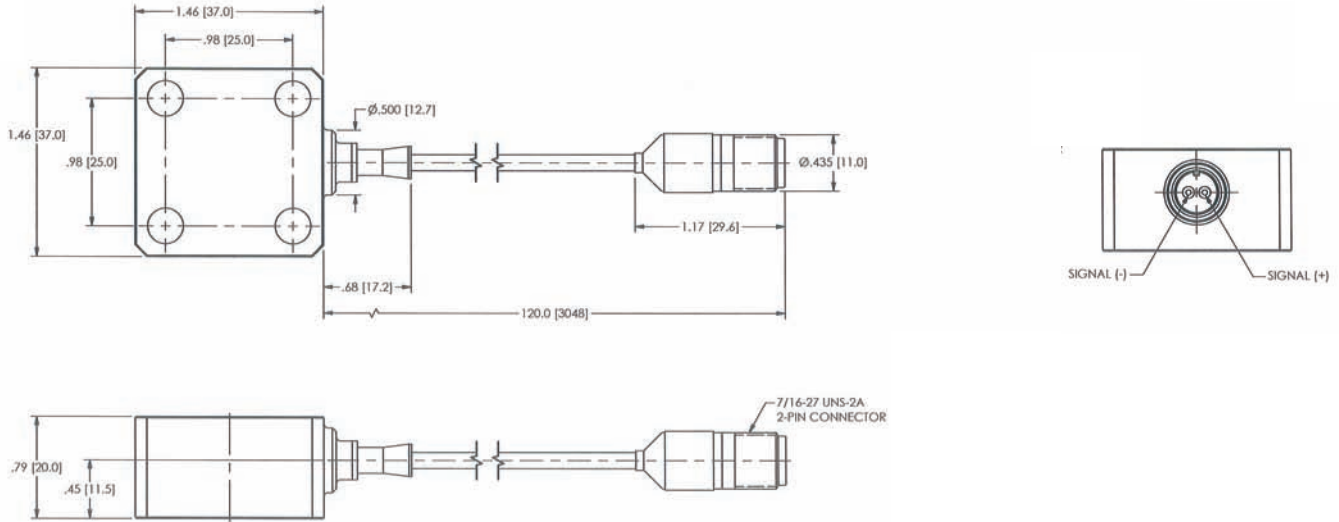
IMI® has developed this new High Temperature Charge Mode Accelerometer Model EX611A00 to be used in various gas turbine applications such as bearing health monitoring, condition monitoring, and structural damages monitoring. Other applications include commissioning of nuclear power plants. The new model extends temperature survivability range to 1300 °F (704 °C) in an industrial housing. The unit comes standard with a 10 foot (3 meter) integral hard-line cable terminating in a 2 pin mini MIL connector, but other cable lengths and terminating connectors are available (LEMO connector).



Series EX611A00
High temperature charge mode accelerometer



High Temperature Charge Output Accelerometer



Technical Specifications

Model Number	EX611A00	Model Number	EX611A00
Performance		Physical	
Sensitivity ($\pm 5\%$)	10 pC/g 1.02 pC/(m/s ²)	Sensing Element	Single Crystal
Measurement Range	± 200 g pk ± 1962 m/s ² pk	Sensing Geometry	Shear
Frequency Range ($\pm 5\%$)	2.8 kHz [4]	Housing Material	Inconel
Frequency Range ($\pm 10\%$)	3.7 kHz [4]	Sealing	Hermetic
Resonant Frequency	>17 kHz [1]	Size (Height x Length x Width)	.787 in x 1.465 in x 1.456 in 20 mm x 37 mm x 37 mm
Non-Linearity	$\leq 1\%$ [5]	Weight (without cable)	6.3 oz 180 gm [1]
Transverse Sensitivity	$\leq 5\%$ [6]	Electrical Connector	7/16-27 2-Pin
Environmental		Electrical Connection Position	Side
Overload Limit (Shock)	± 500 g pk ± 4905 m/s ² pk	Cable Length	10 ft 3 m
Temperature Range	-65 to +1300 °F -54 to +650 °C [2]	Cable Type	MI Hardline Cable
Temperature Range	-165 to +1300 °F -109 to +704 °C [3]	Mounting	Through Hole
Base Strain Sensitivity	0.005 g/ $\mu\epsilon$ 0.05 (m/s ²)/ $\mu\epsilon$ [1]	Notes	
Radiation Exposure Limit (Integrated Neutron Flux)	1 E10 N/cm ²	[1] Typical.	
Radiation Exposure Limit (Integrated Neutron Flux)	1 E8 rad	[2] Continuous	
Hazardous Area Approval	Ex ia IIC T6 ... T 710°C Ga	[3] Extreme	
Hazardous Area Approval	IECEX Ex ia IIC T6 ... T	[4] Low frequency response is determined by external signal conditioning electronics.	
Electrical		[5] Zero-based, least-squares, straight line method.	
Capacitance(Pin to Pin)	320 pF [1]	[6] Transverse sensitivity is typically $\leq 3\%$.	
Capacitance(Pin to Case)	360 pF [1]	[7] See PCB Declaration of Conformance PS122 for details.	
Insulation Resistance(Pin to Case 70 °F)	>10 ⁹ Ohm [1]		
Insulation Resistance(Pin to Pin 70 °F)	>10 ⁹ Ohm		
Insulation Resistance(Pin to Pin 900 °F)	>100 kohm		
Insulation Resistance(Pin to Pin 1200 °F)	>20 kohm		
Output Polarity	Differential		



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IMI-EX611A00-0215

Printed in U.S.A.



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