



High Temperature Charge Output Accelerometer



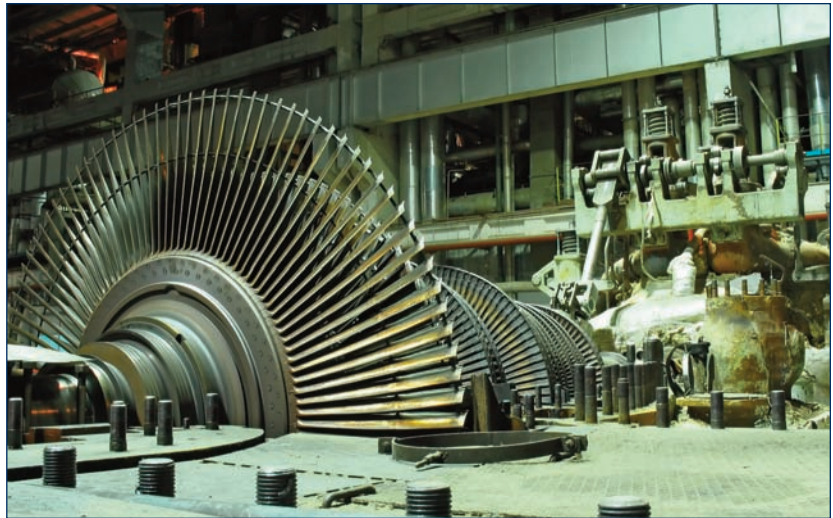
Designed to withstand application challenges of extreme heat environments such as gas turbines and nuclear power plants

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



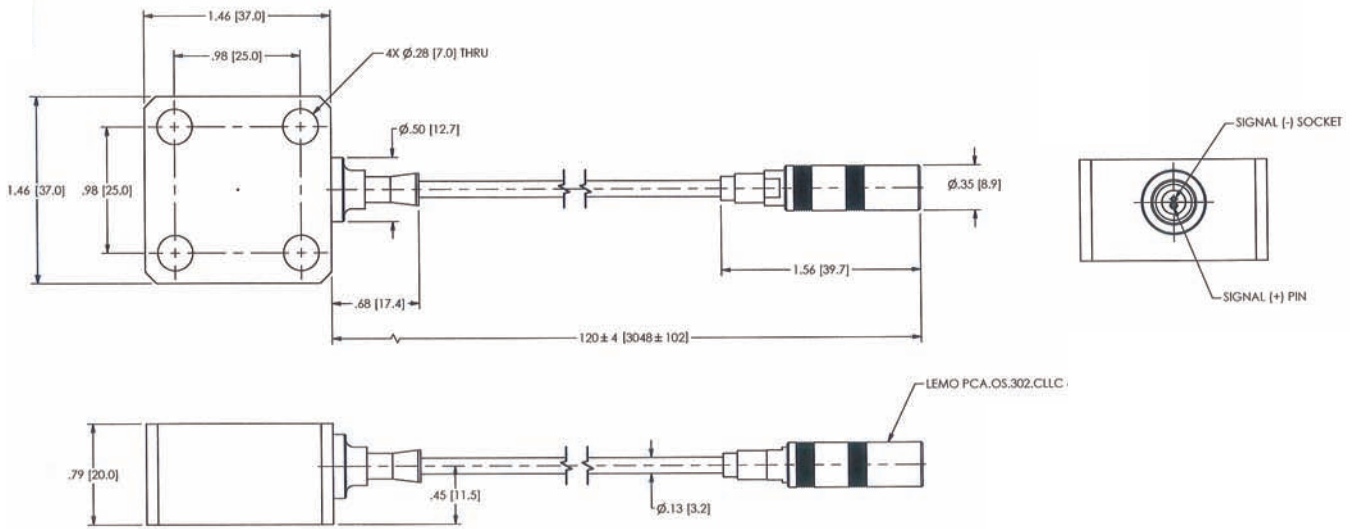
IMI® has developed this new High Temperature Charge Mode Accelerometer Model EX611A20 to be used in various gas turbine applications such as bearing health monitoring, condition monitoring, and structural damages monitoring. Other applications include commissioning of nuclear power plants. The new model 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 LEMO connector, but other cable lengths and terminating connectors are available (2 pin mini MIL).



Series EX611A20
High temperature charge mode accelerometer



High Temperature Charge Output Accelerometer



Technical Specifications

| Model Number | EX611A20 | Model Number | EX611A20 |
|--|---|---|--|
| Performance | | | |
| Sensitivity (± 5 %) | 10 pC/g 1.02 pC/(m/s ²) | Physical | |
| Measurement Range | ± 200 g pk ± 1962 m/s ² pk | Sensing Element | Single Crystal |
| Frequency Range (± 5 %) | 2.8 kHz [4] | Sensing Geometry | Shear |
| Frequency Range (± 10 %) | 3.7 kHz [4] | Housing Material | Inconel |
| Resonant Frequency | >17 kHz [1] | Sealing | Hermetic |
| Non-Linearity | ≤ 1 % [5] | Size (Height x Length x Width) | .787 in x 1.465 in x 1.456 in 20 mm x 37 mm x 37 mm |
| Transverse Sensitivity | ≤ 5 % [6] | Weight (without cable) | 6.3 oz 180 gm [1] |
| Environmental | | | |
| Overload Limit (Shock) | ± 500 g pk ± 4905 m/s ² pk | Electrical Connector | LEMO PCA.0S.302.CLLC42 |
| Temperature Range | -65 to +1300 °F -54 to +650 °C [2] | Electrical Connection Position | Side |
| Temperature Range | -165 to +1300 °F -109 to +704 °C [3] | Cable Length | 10 ft 3 m |
| Base Strain Sensitivity | 0.005 g/με 0.05 (m/s ²)/με [1] | Cable Type | MI Hardline Cable |
| Radiation Exposure Limit (Integrated Neutron Flux) | 1 E10 N/cm ² | Mounting | Through Hole |
| Radiation Exposure Limit (Integrated Neutron Flux) | 1 E8 rad | Notes | |
| Hazardous Area Approval | Ex ia IIC T6 ... T 710°C Ga | [1] Typical. | |
| Hazardous Area Approval | IECEX Ex ia IIC T6 ... T | [2] Continuous | |
| Electrical | | | |
| Capacitance(Pin to Pin) | 320 pF [1] | [3] Extreme | |
| Capacitance(Pin to Case) | 360 pF [1] | [4] Low frequency response is determined by external signal conditioning electronics. | |
| Insulation Resistance(Pin to Case 70 °F) | >10 ⁹ Ohm [1] | [5] Zero-based, least-squares, straight line method. | |
| Insulation Resistance(Pin to Pin 70 °F) | >10 ⁹ Ohm | [6] Transverse sensitivity is typically ≤ 3%. | |
| Insulation Resistance(Pin to Pin 900 °F) | >100 kohm | [7] See PCB Declaration of Conformance PS122 for details. | |
| Insulation Resistance(Pin to Pin 1200 °F) | >20 kohm | | |
| Output Polarity | Differential | | |



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IMI-EX611A20-0513

Printed in U.S.A.

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