Hazardous Area Approved Triaxial Accelerometer

Designed to withstand the challenges of route-based PdM in hazardous environments

**Highlights**

- Ability to take measurements on three axes (horizontal, vertical and axial) at one time from a single mounting location allows for increased speed of data collection and more consistent readings.
- Hazardous area approval provides an intrinsically safe, non-sparking sensor to be used with similarly-certified data collectors and analyzers.
- Coiled cable better recoils to its original length, even after repeat use at route-based data collection points.
- Configurable terminating connector allows for easy integration of sensor with a wide variety of multi-channel data collectors and analyzers.
- Top-exit cable orientation and though-bolt mounting design is ideal for spaces with limited clearance.

**Typical Applications**

- Machinery foundation troubleshooting
- Multi-axis monitoring of machinery with limited access to mounting areas
- Radial vs. axial motor bearing vibration monitoring
- Structural impulse and response studies

**Hazardous Area Approvals:**

**CSA (Canada & US)**
- Ex ic IIC T4 Class I, Div.2, Groups A, B, C, D
- AEx ic IIC T4 Class I, Div.2, Groups A, B, C, D

**ATEX**
- Ex ic IIC T4 Gc
- Ex nA IIC T4 Gc

IMI Sensors has developed Model EX629A11A/006CC, a hazardous area-approved triaxial accelerometer to be used in route-based predictive machinery maintenance in hazardous environments for vibration monitoring. This new model utilizes a shear mode geometry ceramic piezoelectric element in an epoxy-sealed, stainless steel housing with an integral 6ft. polyurethane coiled cable and choice of terminating connector.
### Technical Specifications

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<th>Performance</th>
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<td>EX629A11A/006CC</td>
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- **Sensitivity (± 10%)**: 100 mV/g
- **Measurement Range**: ±490.5 m/sec² pk
- **Frequency Range (± 3dB) (Z Axis)**: 2 to 10,000 Hz
- **Frequency Range (± 3dB) (X or Y Axis)**: 2 to 7,000 Hz
- **Resonant Frequency**: 17,000 Hz
- **Broadband Resolution**: 560 µg
- **Non-Linearity**: ±1%
- **Transverse Sensitivity**: ≤7%

### Environmental

- **Overload Limit (Shock)**: 5,000 g pk
- **Temperature Range (Operating)**: -40 to +176 °F
- **Temperature Range (Operating)**: -40 to +80 °C
- **Hazardous Area Approval**: CSA (C-US)
- **Hazardous Area Approval**: ATEX

### Electrical

- **Settling Time**: ≤ 3.0 sec
- **Discharge Time Constant**: ≥ 0.1 sec
- **Excitation Voltage**: 18 to 28 VDC
- **Constant Current Excitation**: 2 to 20 mA
- **Output Impedance**: < 350 ohm
- **Output Bias Voltage**: 8 to 12 VDC
- **Spectral Noise (10Hz)**: 40 µg/√Hz
- **Spectral Noise (100Hz)**: 10 µg/√Hz
- **Spectral Noise (1kHz)**: 6 µg/√Hz
- **Electrical Isolation (Case)**: ≥10⁶ ohm

### Physical

- **Sensing Geometry**: Shear
- **Sensing Element**: Ceramic
- **Housing Material**: Stainless Steel
- **Sealing**: Epoxy
- **Mounting Through Bolt**: 10-32 Screw
- **Mounting Torque**: 2 to 5 ft-lb
- **Electrical Connector**: Configurable; see Model Matrix
- **Cable Length (Maximum Extended) and Type**: 8 ft Polyurethane
- **Size**: 1.49 x 0.69 in
- **Weight (Without Cable)**: 3.8 oz

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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 [www.imi-sensors.com](http://www.imi-sensors.com) to locate your nearest sales office.