Low-Cost Industrial ICP® Accelerometers

- Ideal for permanent installations and use with continuous, on-line monitoring systems
- Promote safety when installed in hazardous or inaccessible locations
- Connect through switch or junction box for route-based data collection schemes
- NIST traceable, single point calibration at 100 Hz

Quartz, Low Cost Model 627A01
- 100 mV/g
- 10 mV/(m/s²)
- 0.3 to 10 kHz
- 20 to 600 kHz
- 80 to 600 kHz

Ceramic, Low Cost Model 601A01
- 100 mV/g
- 10 mV/(m/s²)
- 0.3 to 10 kHz
- 16 to 600 kHz
- 26 to 600 kHz

Small Size, Low Cost Model 60A11
- 100 mV/g
- 10 mV/(m/s²)
- 0.4 to 10 kHz
- 26 to 600 kHz

Low-Profile, Low Cost Model 602D01
- 100 mV/g
- 10 mV/(m/s²)
- 0.5 to 8 kHz
- 30 to 480 kHz

Ceramic, General Purpose Model 625B01
- 100 mV/g
- 10 mV/(m/s²)
- 0.2 to 10.5 kHz
- 12 to 630 kHz

Ceramic, High Sensitivity Model 626B02
- 500 mV/g
- 50 mV/(m/s²)
- 0.2 to 6 kHz
- 12 to 36 kHz

Quartz, General Purpose Model 624A01
- 100 mV/g
- 10 mV/(m/s²)
- 0.8 to 10 kHz
- 48 to 600 kHz

Ceramic, High Sensitivity Model 625B01
- 100 mV/g
- 10 mV/(m/s²)
- 0.4 to 10 kHz
- 12 to 60 kHz
- 26 to 600 kHz

Quartz, General Purpose Model 628F01
- 100 mV/g
- 10 mV/(m/s²)
- 0.3 to 12 kHz
- 20 to 720 kHz

Triaxial, General Purpose Model 629M05
- 100 mV/g (all axes)
- 10 mV/(m/s²)
- 2.0 to 10 kHz (z axis)
- 2.0 to 7 kHz (x,y axis)
- 120 to 600 kHz (z axis)
- 120 to 420 kHz (x,y axis)

Precision Industrial ICP® Accelerometers

- Ideal for roving use with route-based data collection schemes
- Utilize for effective machinery analysis and fault diagnostics
- Available with velocity output, temperature output, high temperature to 325 °F (163 °C), and hazardous area approvals (intrinsically safe)
- NIST traceable calibration through full frequency range

Ceramic, General Purpose Model 625A01
- 100 mV/g
- 10 mV/(m/s²)
- 0.2 to 10.5 kHz
- 12 to 630 kHz

Quartz, General Purpose Model 624A01
- 100 mV/g
- 10 mV/(m/s²)
- 0.8 to 10 kHz
- 48 to 600 kHz

Swivel-Mount ICP® Accelerometers

- Easy-to-install, patented, swivel mount design
- Cable rotates into any desired orientation
- Smaller and less costly than ring-style sensors
- Electrically protected from saturation problems
- Excellent for use on high-speed rotating machinery and spindles
- Available with temperature output

Spindler® Model 607A01
- 100 mV/g
- 10 mV/(m/s²)
- 0.4 to 10 kHz
- 26 to 600 kHz

Swivel-Mount Industrial ICP® Accelerometers

- Measure acceleration simultaneously in up to three axes
- Through-bolt mounting for simplified alignment
- Simultaneous radial and axial bearing vibration measurements
- Interface directly with vibration data collectors and FFT analyzers

Triaxial Model 629A61
- 100 mV/g (all axes)
- 10 mV/(m/s²)
- 2.0 to 10 kHz (z axis)
- 2.0 to 7 kHz (x,y axis)
- 120 to 600 kHz (z axis)
- 120 to 420 kHz (x,y axis)

Multi-Axis Industrial ICP® Accelerometers

- Measure acceleration simultaneously in up to three axes
- Through-bolt mounting for simplified alignment
- Simultaneous radial and axial bearing vibration measurements
- Interface directly with vibration data collectors and FFT analyzers

Triaxial, Low Cost Model 604B31
- 100 mV/g (all axes)
- 10 mV/(m/s²)
- 0.4 to 10 kHz
- 26 to 600 kHz

Biaxial, Low Cost Model 605B31
- 100 mV/g (all axes)
- 10 mV/(m/s²)
- 0.43 to 5000 kHz
- 26 to 300 kHz

Every IMI Sensor Features:

- Durable, stainless steel construction
- Welded, hermetic sealing to withstand dirty, oily, industrial, and submerged environments
- Electrical protection from RFI, EMI, ESD, and mis-wiring
- Total Customer Satisfaction Guarantee
4 to 20 mA Vibration Sensors, Transmitters, and Switches

- Loop powered sensors with intrinsic safety option
- AC or DC powered transmitters
- Install permanently for round-the-clock monitoring
- Acceleration or velocity output signal versions
- Interface directly with PLC, DCS, alarm, and SCADA systems
- Effective machinery vibration monitoring with less operator training

Current Output Vibration Sensors
Series 640
- 2-wire, loop powered
- Top or side exit connector
- Intrinsically safe models available (top exit only) RFI/EMI protected
- Swivel mounting (Patented) available
- High temperature and temperature output versions available

High-Temperature, Charge Output Accelerometer Kits
- Kits include charge output accelerometer, charge converter, and high temperature cable
- Sensor temperature range to 500 °F (260 °C)
- Variety of in-line charge converters for system sensitivities of 10, 100, or 1000 mV/g
- System operates from standard ICP® sensor signal conditioner or data collector that provides ICP® sensor excitation.

Electronic Vibration Switch
Model 685A01
- Solid State
- Integral vibration sensor
- 24 VDC powered
- One, form C, 5 amp relay
- 10 g acceleration or 1 ips velocity F.S. range
- Explosion proof housing

Indicator/Alarm
Series 683A
- CE with metal surround
- 1/8 DIN, panel-mount
- Accommodates either 4 to 20 mA or ICP® accelerometer input, 4 to 20 mA retransmit optional
- Two, 5 amp, time-delayed form A relay contacts
- Fully programmable and scalable
- Operates from either AC or DC power

Vibration Transmitters and Machinery Fault Detectors
- Monitor bearing condition, gearbox health, imbalance and misalignment
- Detect faults in bearings and gears due to wear, loss of lubrication, contamination, impacting and cavitation

Machinery Fault Detector
Model 682A05 (Patented)
- US Patent No. 6,889,553
- Utilizes peak detection methodology
- Detects faults in bearings and gears
- Powers and accepts ICP® accelerometers
- 4 to 20 mA output for peak acceleration and sinusoidal vibration
- 24 VDC powered

Alarm Module
Model 682A04
- Provides two 5 amp, Form C, relay outputs
- Fixed time delay prevents false alarms
- Adjustable threshold limit for each relay
- Slim, DIN rail mounted package
- 24 VDC powered

Power Supply
Model 682A01
- Provides 24 VDC, 1000 mA power
- Powers transmitters, signal conditioners, and alarm modules
- 120 to 230 VAC powered

High-Temperature, Charge Output Accelerometer Kits
- Kits include charge output accelerometer, charge converter, and high temperature cable
- Sensor temperature range to 500 °F (260 °C)
- Variety of in-line charge converters for system sensitivities of 10, 100, or 1000 mV/g
- System operates from standard ICP® sensor signal conditioner or data collector that provides ICP® sensor excitation.

High-Temperature, Charge Output Industrial Accelerometer
Model 612A02
- 26 pC/g
- 2.6 pC/(m/s²)
- Response to 10 kHz, 600k cpm

Armored Teflon Cable
Model 04SM 06
- 10 ft (3 m length)
- 2-pin, military-style connectors

In-Line Charge Converters
Series 422E20
- Welded, stainless steel construction
- Hermetically sealed
- 2-pin, military-style input connector

Kit Model | Sensitivity | Cable Type
--- | --- | ---
600A06 | 10 mV/g (1 mV/(m/s²)) | Teflon
600A08 | 10 mV/g (1 mV/(m/s²)) | Armored Teflon
600A02 | 100 mV/g (10 mV/(m/s²)) | Teflon
600A03 | 100 mV/g (10 mV/(m/s²)) | Armored Teflon
600A07 | 1000 mV/g (100 mV/(m/s²)) | Teflon
600A09 | 1000 mV/g (100 mV/(m/s²)) | Armored Teflon
# Switch Boxes, Enclosures and Intrinsic Safety Barriers

- Simplify data collection by routing sensor cables to one central location
- Promote data collection safety by keeping workers out of hazardous areas
- Access more data points in less time

<table>
<thead>
<tr>
<th>Model 691A50/12 BNC Termination Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>For use with data collectors that supply ICP® sensor power</td>
</tr>
<tr>
<td>12 input channels via terminal strip</td>
</tr>
<tr>
<td>12 output channels via BNC's</td>
</tr>
<tr>
<td>NEMA A-4X (IP66) enclosure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 691B47 Rotary Switch Box</th>
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<td>For use with data collectors that supply ICP® sensor power</td>
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<tr>
<td>12 input channels via terminal strip</td>
</tr>
<tr>
<td>BNC output connector for switched vibration signal</td>
</tr>
<tr>
<td>NEMA A-4X (IP66) enclosure</td>
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<tr>
<th>Model 691B42 Rotary Switch Box</th>
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<td>For use with data collectors that supply ICP® sensor power</td>
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<tr>
<td>12 input channels via terminal strip</td>
</tr>
<tr>
<td>BNC output connectors for switched vibration and temperature signals</td>
</tr>
<tr>
<td>Versions to accommodate up to 48 channels</td>
</tr>
<tr>
<td>NEMA A-4X (IP66) enclosure</td>
</tr>
</tbody>
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<tr>
<th>Intrinsic Safety Barriers (Zener Barriers)</th>
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<tbody>
<tr>
<td>Utilize Zener diodes to limit amount of electrical energy at sensor</td>
</tr>
<tr>
<td>Designed for use with ICP® sensors or loop powered 4 to 20 mA sensors</td>
</tr>
<tr>
<td>Eliminate the risk of an electrical arc, or spark, at the hazardous location</td>
</tr>
<tr>
<td>Up to 24 modules per enclosure</td>
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**Cables, Magnets, Mounting Hardware, Accessories**

**Magnetic Mounting Bases**

- For temporary installations during route data collection
- Styles for flat or curved surface mounting
- Versions to accommodate virtually any size sensor

**Model 687A01 Portable Vibration Meter**

- Measures overall rms vibration levels in g or in/sec pk
- 3 1/2 digit LCD display
- Includes ICP® accelerometer, installation magnet, and headphones for audible monitoring of structure borne noise

**Cable Assemblies for Industrial Accelerometers**

- General purpose polyurethane or high temperature Teflon
- Rugged military-style connectors in metal or plastic
- Made-to-order lengths
- Overnight delivery

**Custom Cable Assemblies**

- Styles for virtually any installation requirement
- Versions to interface with most data collectors
- Shielded for noise immunity

**Model 699A02 Hand Held Shaker**

- Verifies vibration sensor operation and sensitivity
- Delivers a controlled, 1 g rms or 1 g pk vibration at 159.2 Hz
- Battery powered
- Tests sensors weighing up to 250 grams

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The IMI Sensors Division of PCB® Piezotronics, Inc. specializes in the development, application, and support of industrial vibration sensors, transmitters, meters, and accessories for machinery condition monitoring and predictive maintenance requirements. This product focus, coupled with the strengths and resources of PCB, permits the IMI Sensors Division to offer exceptional customer service, 24-hour technical assistance, and a Total Customer Satisfaction guarantee.