Mining Equipment Monitoring & Protection Solutions

Protect your assets against unscheduled downtime

Reliability, Up-Time and Safety

Mining operation involves a variety of heavy rotating machinery that is used for exploration and processing of precious metals, minerals and material extracted from the earth. This industrial machinery is subjected to moderate, and in some cases, extreme vibration levels while in use. It's critical to trend these vibration levels to ensure equipment health / reliability and to avoid unscheduled downtime.

IMI Sensors offers a full line of piezoelectric accelerometers, wireless solutions, transmitters, switches, enclosures, microphones, sound level meters, cable assemblies and accessories that are used within the mining industry to safely monitor and protect critical rotating assets.

In this brochure, you will find information on:

Reliability Vibration Solutions

- Underground (MSHA) Approved Sensors
- Hazardous Approved Sensors, Transmitters & Switches (Class I, Div. I & Class I, Div. II)
- Sensors for Harsh, Corrosive & High Temperature Environments
- Wireless Solutions for Dangerous and Hard to Reach Areas
- General Purpose Sensors, Transmitters & Switches

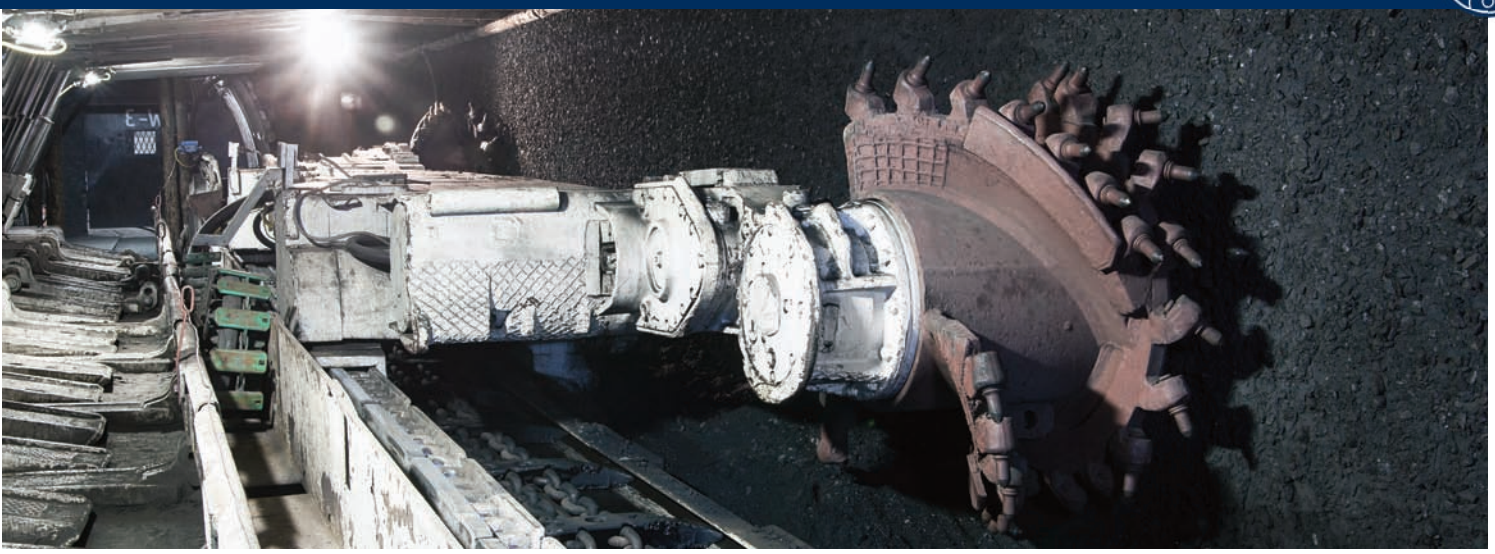
Industrial Hygiene Solutions

- Worker Safety Products
- Environmental & Handheld Equipment
- Wireless Telemetry
- Acoustic Calibrators

Accessories

- Cable Assemblies & Connectors
- Safety Equipment
- Enclosures
- Mounting Hardware
- Portable Reference and Calibration Units

☎ Toll-free in the USA 800-959-4464 ☎ 716-684-0003



Underground Mining Approved Sensors

Mining is inherently a dangerous industry where the health and safety is of the utmost importance to the miners and their organizations. Thus, the mining industry has invested a great deal of time and money to develop safety procedures and training to assure the health of their miners. Within the United States, The **M**ine **S**afety and **H**ealth **A**dministration (MSHA) is dedicated to "Protecting Miners" by developing regulations that will assure the health and safety of the US miners. Organizations like MSHA are also found in other countries and like MSHA, have developed strict regulations and guidelines to assure the safety and well being of their miners. For underground mining where methane gas can present the possibility of an explosive atmosphere, IMI Sensors offers Mine Safety and Health Administration (MSHA) and ATEX Approved intrinsically safe accelerometers.

- Ideal for route-based PdM data collection
- High frequency response up to 15 kHz (±3dB)
- 2-pin MIL or integral cable options available

U.S. Department of Labor MSHA Mine Safety & Health Administration

MSHA Approved Precision ICP® Accelerometer

Model MS622A01 & MS622A11

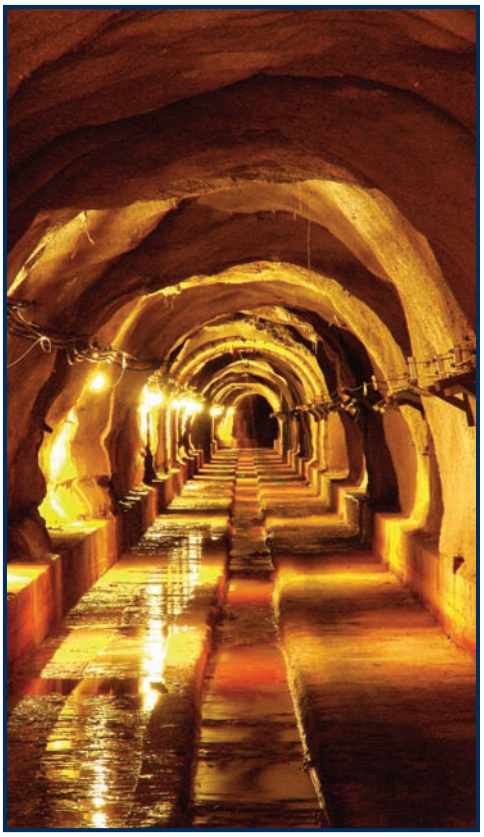
- MSHA compliant limits for sensor power, temperature and seal
- Certified to MSHA Designation: Sensor Class K

CE Ex

ATEX Mining Approved Precision ICP® Accelerometer

Model MX622A01 & MX622A11

- ATEX compliant limits for sensor power, temperature and seal
- Certified to ATEX Designation: I M1 Ex ia I



Sensors for Hazardous and Extreme Environments

Mining equipment reliability monitoring now requires instrumentation that is approved for hazardous environments. In addition to underground mining approved sensors (MSHA), IMI® has a full line of PdM sensors and related technologies, such as intrinsic safety barriers that, when used together, will meet CSA and ATEX IS approvals.

All ICP® Sensors Below Have CE, CSA, EX and IECEx Hazardous Area Approvals. CE CSA Ex IECEx

Sensors below may also be available in Temperature Output versions (prefix "TO").

Route Based Hazardous Approved Precision Accelerometers

Model EX622A01

- High frequency response 15 kHz (+/- 3dB)
- Sensitivity (+/-5%) 100 mV/g

Model CS625B01

- High frequency response 15 kHz (+/- 3dB)
- Sensitivity (+/-5%) 100 mV/g
- **Does not have Ex or IECEx approvals**

Permanently Installed Hazardous Approved Accelerometers

Series EX602D

- Low profile thru bolt design
- IMI's most popular side-exit low cost general purpose accelerometer

Series EX603C

- Small installation footprint
- IMI's most popular top-exit low cost general purpose accelerometer

Series EX607A

- Submersible / extremely low profile
- Patented swivel mount

Series EX608A

- Submersible / extremely small installation footprint
- IMI's most economical sensor

Series EX628F

- Quartz sensing element
- Thermo stability (sudden temperature change)

Series CS604B

- Triaxial design (horizontal, vertical & axial measurement directions)
- Low profile thru bolt design

Hazardous Area Approvals

For use in hazardous areas, the "EX" prefix designates a vibration sensor compliant with the National Electric Code (North America) and the ATEX directive (Europe), when used with a properly installed, intrinsic safety barrier in environments shown on the table below.

CSA Indicates products with CSA Certifications

Ex Indicates products with ATEX Certifications

North American Hazardous Classifications
Division 1
Continuous or Intermittent presence of ignitable substances under normal operating conditions
Division 2
Unlikely presence of ignitable substances under normal operating conditions

North American Hazardous Classifications	
Class 1	**Gases, Vapors and Liquids**
Group A	Acetylene
Group B	Hydrogen
Group C	Ethylene
Group D	Propane
Class 2	**Dusts**
Group E	Metals
Group F	Coal
Group G	Grain
Class 3	**Fibers**

IMI SENSORS A PCB PIEZOTRONICS DIV.

Complete specifications available at www.imi-sensors.com

☎ Toll-free in the USA 800-959-4464 ☎ 716-684-0003

Sensors for Corrosive and High Temperature Environments

Industry Exclusive!

Industry Exclusive Temperature Response Up to 325 ºF (162 ºC)

In harsh, caustic, or high temperature areas, IMI Sensors offers a series of industrial ICP® sensors and cable assemblies that will withstand these rigorous environments. Cables and connectors made of material such as PTFE and FKM are available for higher temperature and/or caustic mining environments. Industry exclusive, ICP® sensors are available with temperature ratings up to 325 °F (162 °C). For temperatures greater than 325 °F (162 °C), IMI® has designed charge output sensors with inline electronics and appropriate cable assemblies that can hold up to temperatures up to 1200 °F (649 °C).

All Sensors Below Are CE Certified. CE

Route Based High Temperature Precision Accelerometers

Model HT622A01

- High frequency response 8 kHz (+/- 3dB)
- Sensitivity (+/-5%) 100 mV/g

Model HT625B01

- High frequency response 10 kHz (+/- 3dB)
- Sensitivity (+/-5%) 100 mV/g

Permanently Installed High Temperature Accelerometers

Model HT628F01

- Quartz sensing element
- Thermo stability (sudden temperature change)

Model HT602D

- Low profile thru bolt design
- Series offered in:
  - 2-Pin MIL: **HT602D01**
  - Integral PTFE Cable: HT602D11
  - Integral PTFE Cable with Armor Jacketing: HT602D61

High Temperature or Corrosive Resistant Cable Assemblies

Molded Composite 2-socket MIL-style to Blunt Cut

Model 055PAXXXBZ

- 2-conductor twisted pair, shielded
- 2-Pin MIL molded straight composite connector with blunt cut termination

Molded Composite Right Angle 2-socket MIL-style to Blunt Cut

Model 055PBXXXBZ

- 2-conductor twisted pair, shielded
- 2-Pin MIL molded right angle composite connector with blunt cut termination

FKM Environmental Push-On Boot 2-socket MIL-style to Blunt Cut

Model 055M05/XXX

- 2-conductor twisted pair, shielded
- 2-pin MIL FKM boot connector
- Ideal for corrosive environments
- Temperature rating up to 250 ºF (121 ºC)

IMI Sensors Platinum Stock Products represent some of our most popular models. These models are indicated with the "Platinum Shield" icon (right) and with **RED Model Numbers (i.e: Model 607A11)**. **For complete information, visit www.imi-sensors.com/platinum.**

Platinum Stock Products
LIFETIME WARRANTY
Delivery Now!
Over 10,000 Sensors In-Stock Ready to Ship

Now Class 1, Division 2 Approved For Use in Hazardous Areas!

Wireless Vibration Monitoring for Mining

Wireless Sensors for Dangerous Areas

Why have people risk injury and venture into unsafe areas to collect vibration data on healthy machines? **IMI Sensors offers the Echo® Wireless Vibration Monitoring System that can automatically collect machinery health data in dangerous areas without having a miner venture into those areas. Using this alarm based system, personal intervention is only required when the system identifies a problem.**

Echo® Wireless Vibration Monitoring System

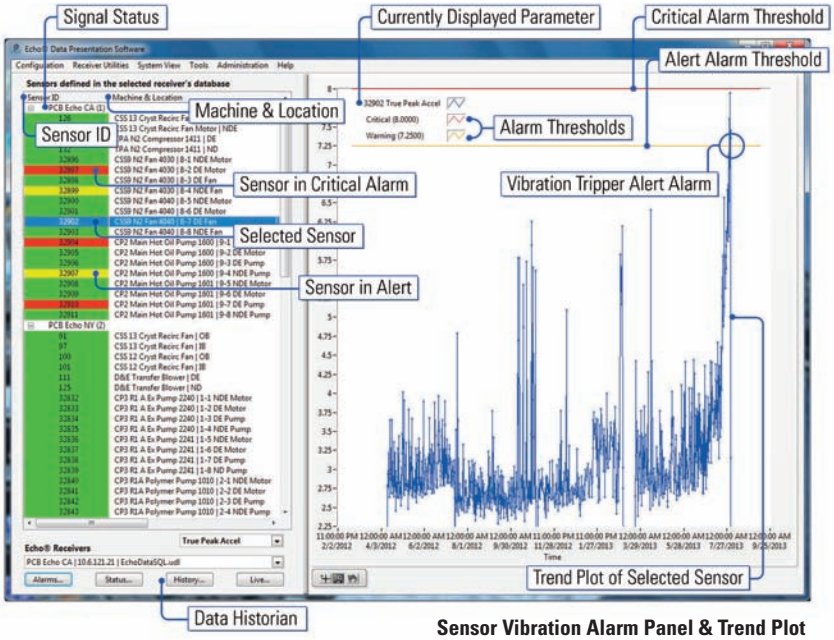
- Easily integrates with legacy vibration and plant monitoring systems via Modbus®
- Eliminates expensive cable runs
- Transmits distances of 1/3 - 1/2 miles in typical industrial environments,through obstructions (Up to 5 mile radius in direct line-of-sight tests)
- Runs stand alone or with junction box
- Stores data in an ODBC compliant database
- Requires no repeaters, gateways, or mesh

Echo® Wireless Monitoring Software

The Echo® Wireless Monitoring Software provides the user with several tools to monitor vibration points. RMS Velocity, RMS Acceleration, and True Peak Acceleration are some of the key parameters that users can view using various windows:

- **Vibration Alarm Panel –** See your machine health at-a-glance for all vibration sensors from a single receiver, as well as machine name and location details.
- **Vibration Trend Plot –** View and analyze the trend history and alarm levels of a single parameter for any sensor.
- **System Overview –** See your machine health and sensor status at-a-glance in a graphical presentation for all sensors and receivers.
- **Email Alerts –** Receive alerts about your machine's health and vibration level wherever you are, so you can always be on top of the situation.

This data is also stored in a Microsoft SQL database and can also be input to a PLC or DCS using a Modbus®communication interface. Contact IMI® to discuss software feature details and additional data interface options.



Sensor Vibration Alarm Panel & Trend Plot

Microsoft is a registered trademark of Microsoft Corporation

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Complete specifications available at www.imi-sensors.com

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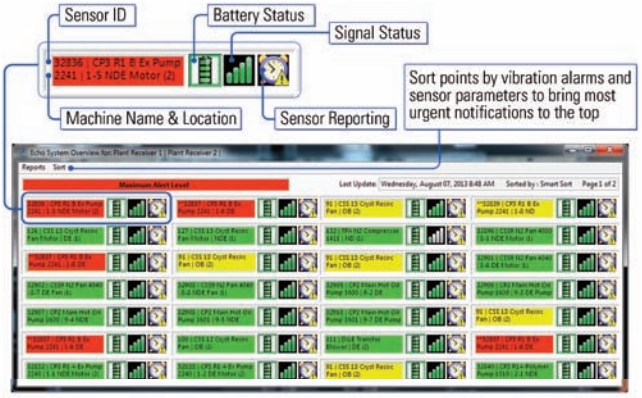
EchoPlus® REMOTE TRIGGER Get Wireless Measurements ON-DEMAND!

The Perfect Method to Collect Vibration Data On:

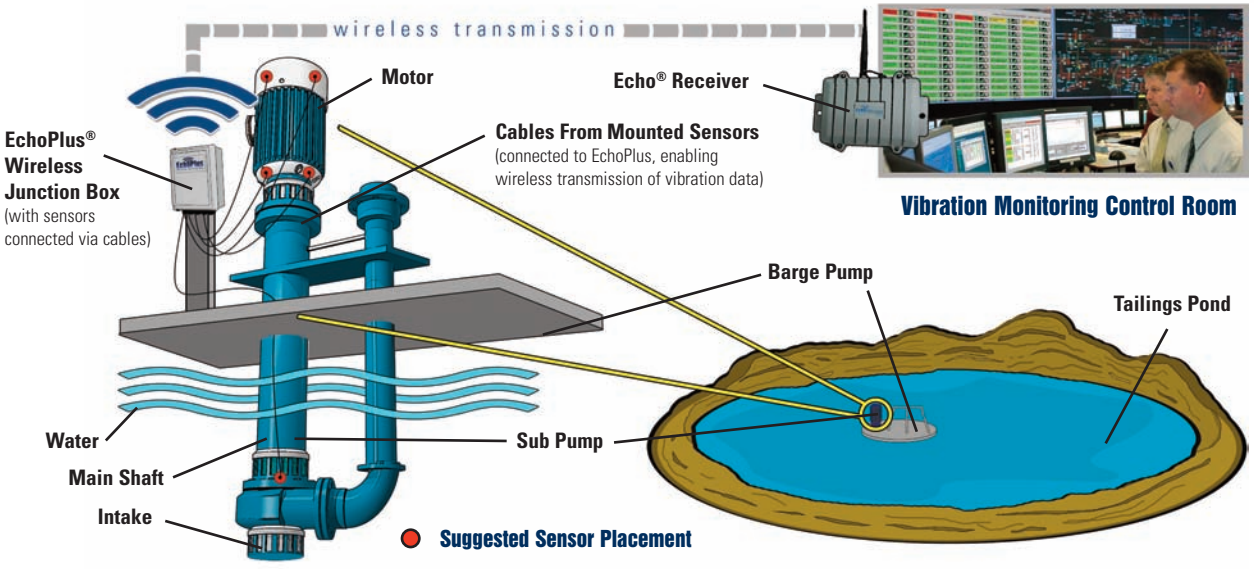
- Overhead cranes
- Intermittent machines
- Equipment in hard-to-reach areas
- Pumps in tailings ponds
- Machines in restricted areas

Wireless Monitoring of Pumps in Tailings Ponds

Barge pumps in tailings ponds are critical to the operation of a mine. These ponds can be very acidic and dangerous, as well as inaccessible, which is why most plants don't monitor them. Because it takes a host of people, safety gear, and a lot of time to get a crew safely to the pump to take vibration readings, the Echo® Wireless Vibration Monitoring System can be used to safely collect machinery health data.



Echo® Monitoring System Overview



General Purpose Vibration Sensors

Rugged, Robust, Accurate and Dependable!

All Sensors Below Are CE Certified. CE

Route Based Precision Accelerometers

Model 622B01

- High frequency response 15 kHz (+/- 3dB)
- Sensitivity (+/-5%) 100 mV/g

Model 625B01

- High frequency response 10 kHz (+/- 3dB)
- Low profile, thru bolt design

Model 629A31

- Triaxial design (horizontal, vertical & axial measurement directions)
- High frequency response 8 kHz (+/- 3dB)

Model 626B01

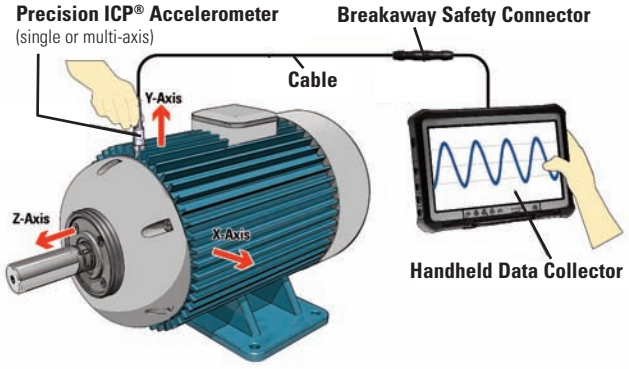
- Low frequency response down to 12 cpm (+/- 3dB)
- Velocity output (VO) option available

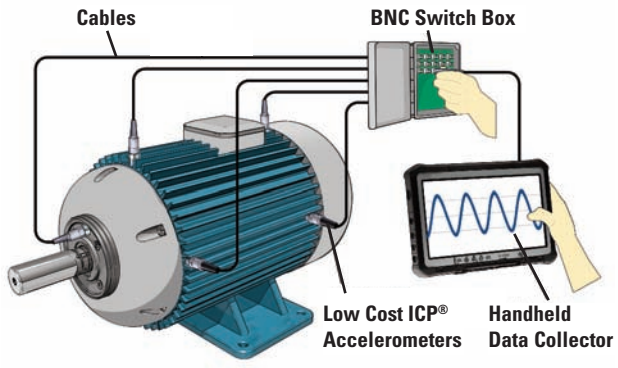
Model 600A12

- High frequency response to 30 kHz (+/- 3dB) even with magnet
- Ideal for measurements on high-speed compressors and gearboxes
- Kit includes 621B40 accelerometer, 080A157 magnet and 081C05 cable assembly

Tips From Techs

Methods for Predictive Maintenance: Route-Based Data Collection vs. Permanent Installation Measurements





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A PCB PIEZOTRONICS DIV.

Complete specifications available at www.imi-sensors.com

☎ Toll-free in the USA 800-959-4464 ☎ 716-684-0003

All Sensors Below Are CE Certified. CE

Permanently Installed Economical Accelerometers

Series 602D

- Low profile thru bolt design
- IMI's most popular side-exit low cost general purpose accelerometer

Series 603C

- Small installation footprint
- IMI's most popular top-exit low cost general purpose accelerometer

Series 601A

- Low noise
- Low frequency response down to 16 cpm (+/- 3dB)

Series 608A

- IMI's most economical sensor
- Submersible with extremely small installation footprint

Series 607A

- Submersible / extremely low profile
- Patented swivel mount

Series 604B

- Triaxial design (horizontal, vertical & axial measurement directions)
- Low profile thru bolt design

IMI Sensors Platinum Stock Products represent some of our most popular models. These models are indicated with the "Platinum Shield" icon (right) and with **RED Model Numbers (i.e: Model 607A11)**. **For complete information, visit www.imi-sensors.com/platinum.**

Platinum Stock Products
LIFETIME WARRANTY
Delivery Now!
Over 10,000 Sensors In-Stock Ready to Ship

4-20 mA Transmitters & Vibration Switches

Continuous monitoring and protection of critical assets has become a common practice in today's mining industry.

IMI Sensors meet these continuous monitoring needs by offering a series of Transmitters, Switches and Detectors that can be integrated within a facility's control room to monitor critical machinery parameters 24-7.

All Transmitter and Detectors Below Are CE Certified. CE

Industry Exclusive! **Fully USB Programmable**

4-20 mA Transmitters

Series 640X

- 24v loop powered that interfaces directly with a PLC, DCS and SCADA systems
- Multiple ranges available
- Peak or RMS, acceleration or velocity output options
- Intrinsically Safe / explosion proof versions available

Series 694A

- Detects impacting and mechanical looseness within reciprocating compressors
- Programmable compressor startup & operation delays
- Continuous trending, with alarm & alert levels for early warning detection
- Explosion Proof versions available

Model 682B03

- Outputs 4-20mA signal proportional to acceleration, velocity, or displacement
- Requires ICP® accelerometer input
- Analog vibration output via BNC allows point to be used in PdM route
- DIN rail mount
- **Not USB Programmable**

Model 653A01

- Industry exclusive low frequency response
- Accurate down to 90 cpm (+/- 3dB)
- Measures absolute p-p displacement
- **Not CE Certified**

Bearing Fault Detectors

Model 682B05

- Provides early warning of rolling element bearings (RFB) faults
- Outputs 4-20 mA signals for peak acceleration and overall plant unbalance vibration
- Requires ICP® accelerometer input
- Analog vibration output via BNC allows point to be used in PdM route
- **Not USB Programmable**

Model 649A03

- Provides early warning of rolling element bearings (RFB) faults
- Works on constant or variable frequency drives
- Normalizes output using compensated peak

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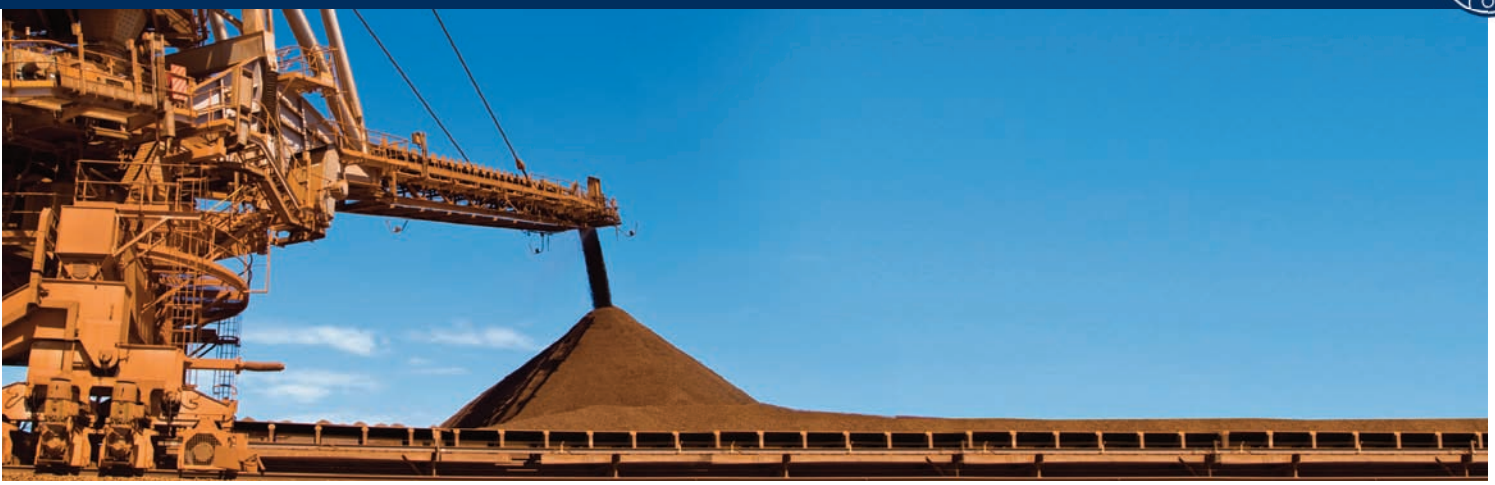
☎ Toll-free in the USA 800-959-4464 ☎ 716-684-0003



Vibration Switches

Series 685A

- Patent pending linear trip adjustment
- Provides better control over trip sensitivity than traditional mechanical vibration switches
- Manual and remote reset options available

Series 685B

- Dual set points with individual alert and alarm relays
- On-board or external ICP® accelerometer options available
- Optional analog vibration output via BNC allows point to be used in PdM routes
- **Explosion proof options available**

Product Spotlight

USB Programmable Smart Switch

Series 686C

- Programmable alarm thresholds, relay action (NO, NC) and 3 time delays
- Hermetically sealed to hold up to harsh environments
- 2-wire operation utilizes existing mechanical switch wires
- Competitively priced compared to mechanical switches
- Hazardous area approvals available

IMI Sensors Platinum Stock Products represent some of our most popular models. These models are indicated with the "Platinum Shield" icon (right) and with **RED Model Numbers (i.e: Model 607A11)**. **For complete information, visit www.imi-sensors.com/platinum.**

Platinum Stock Products
LIFETIME WARRANTY
Delivery Now!
Over 10,000 Sensors In-Stock Ready to Ship

LARSON DAVIS
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Noise Exposure & Monitoring

Worker Exposure - MSHA and OSHA Compliance

Mines can be a very noisy environment where employers have a responsibility to protect workers from noise induced hearing damage. To help access the noise exposure risk and verify the effectiveness of a hearing protection program, Larson Davis offers a line of noise dosimeters, sound level meters, and software to measure noise exposure. Because exposure to vibration has also been shown to be a health risk, we offer the HVM100 with all the necessary sensors to measure human exposure to vibration.

Intrinsically Safe Noise Dosimeters

Model 706RC, Model 705+, Model 703+

- UL913 and MSHA approvals
- Proven, reliable technology
- Durable, strong metal housing (Model 705+)

Human Vibration Monitor

Model HVM100

- Whole body vibration monitoring
- Hand-arm vibration monitoring
- Complete line of sensors and software

Mining Noise Monitoring - Noise Emission into Residential Areas

NoiseTutor NMS

NMS021

- Class 1 sound level meter compliant with IEC 61672-1 and ANSI S1.4
- Demonstrate compliance with noise emission requirements
- WiFi or cellular network access for real time data
- Fast and simple deployment
- Publish noise data to your website
- Email and SMS alerts for noise events
- Data automatically sent to your server
- Options to record event sound and/or continuous sound
- Tools for remote administration
- Work where it's convenient for you

SoundTrack LxT

LXT1

- Available in Class 1 or Class 2
- Dose and exposure computation included
- SLM Utility G3 software included
- USB interface to control and data download
- Easy to use

Designed with the needs of the safety officer in mind, SoundTrack includes the features you need to ensure your hearing protection program is adequate for protecting workers and complying with regulations. Because SoundExpert is fully compliant with sound level meter standards and ships fully calibrated, you can trust the results.

Complete specifications available at www.larsondavis.com

☎ Toll-free in the USA 888-258-3222 ☎ 716-926-8243

Product Spotlight

SoundExpert® LxT NMS (Noise Monitoring System)

NMS-SE-RI

The SoundExpert NMS is a great solution for unattended noise monitoring for up to two week using only eight D-cell batteries. When you need to make a site surveys or quick noise level check, the SoundExpert LxT is easily removed and used as a handheld sound level meter. Using the included SLM Utility G3 software, SoundExpert can be fully configured and data downloaded for analysis and reporting.

- Class 1 sound level meter compliant with IEC 61672-1 and ANSI S1.4
- Logging and community noise standard
- Lightweight, compact and affordable
- 2 weeks runtime using eight D-cell batteries
- 1/1 and 1/3 Octave filters standard
- SLM Utility G3 software included
- Designed for unattended, outdoor use in harsh environments
- Made to easily deploy, retrieve and download data
- Traceable calibration so you can trust your data

Wireless Telemetry for Mining Applications - Rotor measurements of driveshaft torque & motor temperature

AT-4500 EasyApp

Model AT-4500

- Ideal for torque monitoring for mining truck and other large vehicle driveshafts (mill driveshaft and coupling)
- Continuously monitors stress levels in drivetrain components by wireless reporting of strain gage measurements--useful for maximizing production output while providing predictive maintenance information.
- Measurement feedback can be used to pinpoint causes of damage by understanding mean and transient torsional stresses.
- The use of aramid strap mounting allows easy application to varied shaft diameters.
- The transmitter's front cover allows use in tough environments.
- The use of induction power allows long term monitoring, regardless of whether the shaft or coupling is at standstill or high RPM.
- Contact us for continuous monitoring of large motor rotor temperatures (via single or multi-channel wireless telemetry) for thermocouple or RTD measurement. Maximize your production throughput, while providing valuable predictive maintenance for your machinery.

An RF power supply in the receiver provides power to the primary coil of an RF air gap transformer (the stationary pickup). The transmitter receives this power by secondary coils embedded inside the transmitter housing, and provides DC power to the strain gage sensor on the shaft and to the transmitter electronics. The strain gage converts shaft strain to mV output, which is amplified, anti-alias filtered, and digitized before transmitting the data to the receiver. The receiver outputs a +/- 10 V analog signal, thereby providing a direct measurement of the shaft strain (which is used to indicate the torque).

Accessories

Built to hold up to the most extreme conditions within the mining industry

Cable Assemblies & Connectors

Model 052BR

Model 052AC

Model 052BQ

Model 055AE

Model 048EC

Model 055BP

2-conductor Twisted Pair, Shielded Cables

- Protects against EMI and noise
- Rugged and flexible

Polyurethane Jacket Option

- Used in general purpose applications
- Temperature range up to 250 °F (121 °C)

PTFE Jacket Option

- Used in high temperature and or corrosive applications
- Temperature range up to 392 °F (200 °C)

Industrial Connector Options

- Molded straight or right angle
- Environmental push-on boot (optional steel locking ring available)
- Traditional aluminum straight and right angle
- BNC or blunt cut termination
- Available options for use in general purpose, high temperature and corrosive applications

Model 050LQXXXHX
For CSI-2130 & CSI-2140 Analyzers

Model 050FVXXXCV
For CSI-2120 Analyzers

Model 050ACXXXHX
For CSI-2130 & CSI-2140 Analyzers

Model 050LQXXXDP
For Rockwell Datapak/Enpac Analyzers

Route Based PdM Data Collection Cable Assemblies

- Major analyzer cable assembly options available
- Durable and reliable and stay coiled despite heavy usage
- Temperature range up to 250 °F (121 °C)

Safety Equipment - Used in Route Based PdM Data Collection Applications

LU Connector LV Connector

Breakaway Safety Connectors

- Prevent reliability technicians from being pulled into rotating machinery
- Can be added to route based PdM data collection cable assemblies

Data Collection Extension Pole

- Keeps reliability technicians on the ground and away from hazardous environments
- Reduces the need for safety harness or other equipment
- Spring loaded head tilts 180° for proper sensor placement (Patent #27076138)
- Available in various lengths: 080A225: 4ft – 7ft & 080A226: 6ft – 11ft

Switch Boxes & Termination Enclosures

- Access vibration data from remote accelerometers at a safe location
- Provides central collection point, saving time for the reliability technician
- Rotary switch or BNC jack options available
- Consolidate up to 48 channels of outputs into one enclosure
- Options from 1 channel to 48 channels

Industry Exclusive!

16-Channel Switch Box

Model 691B47

- 16-channel rotary switch box
- Multiple output connector feature allows the option for the enclosure to be turned into an interface-box in the future to an online system

Intrinsic Safety Barriers and Enclosures

- Used in series with Class I, Division 2 sensors to prevent electrical spark within a hazardous area

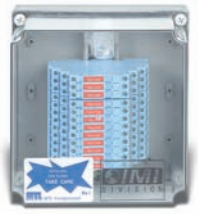
Barriers and Enclosures Below Are CE Certified. CE

Model 691B60

- For use with ICP® accelerometers

Model 691B70

- For use with 4-20 mA transmitters



Model 691A61

- Enclosure with max capacity up to 12 barriers

Model 691B62

- Enclosure with max capacity up to 24 barriers

Mounting Hardware

Curved and Flat Surface Magnets

- Used in PdM route based data collection
- Multiple sizes & magnet pull strength available
- Options from 3/4" to 2" in diameter

Mounting Pads

- Used to mount permanent mount sensors
- Multiple size diameters available
- Options from 3/4" to 1.375" in diameter

Spot Face Tools

- Used for machine surface preparation to mount permanent mount sensors
- Multiple size diameters available
- Options from 1" to 1.5" in diameter

Epoxy Kits

- Provide a secure means for mounting accelerometers and mounting pads to machine structures.
- Model 075A05 can mount approximately 10 points
  Model 075A06 can mount approximately 100 points

Portable Calibration / Reference Units

Both Units Below Are CE Certified. CE

Model 699A02

- Performs reference check on permanently installed accelerometers at the machine
- Verifies both portable data collector or online systems

Model 699A06

- Performs variable frequency & amplitude calibration
- Calibrate proximity probes with optional (600A23) adaptor kit
- Industrial portable case, plug in or battery power

Backed By Total Customer Satisfaction and Supported By Our Global Distribution Network.

PCB PIEZOTRONICS is your partner in

PROTECTING your two most valuable assets: EMPLOYEES & MACHINERY

The IMI® Mining Team has Application Engineers that are MSHA Certified for surface and underground metal mining. Members of the team can visit your site and provide assistance in determining which monitoring instrumentation may be right for you.

PCB PIEZOTRONICS INC.
Website www.pcb.com

IMI SENSORS A PCB PIEZOTRONICS DIV.
Website www.imi-sensors.com

LARSON DAVIS A PCB PIEZOTRONICS DIV.
Website www.larsondavis.com

Corporate Headquarters 3425 Walden Avenue Depew, NY 14043-2495 USA
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Fax 716-684-3823 ■ **Email** imi@pcb.com
AS9100 CERTIFIED ■ ISO 9001 CERTIFIED ■ A2LA ACCREDITED to ISO 17025

IMI-App-Mining-1115

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Platinum Stock Products
LIFETIME WARRANTY
Delivery Now!
Over 10,000 Sensors In-Stock Ready to Ship

IMI Sensors Platinum Stock Products represent some of our most popular models and can be used in a wide range of applications. As you browse this brochure, you will find Platinum Products indicated with the "Platinum Shield" icon (above).

Our Platinum Products are available with our Lifetime Warranty and fast delivery. If for any reason you are not 100% satisfied with your IMI Sensors Platinum Stock Product, we will repair, replace or exchange the product at no charge. For U.S. customers, all IMI Sensors Platinum Stock Products will ship within 24 hours. IF NOT, YOUR SHIPPING IS FREE!

Visit www.imi-sensors.com for complete details.