Vibration Meters

Wireless Accelerometers & Vibration Meters

Drop-in for deeper machine insight

If It Moves or Vibrates, Know When and How Much.

Alegna's motion and vibration sensors capture data from machines, processes, and critical infrastructure. When excessive vibration, jarring harmonics, or abnormal motion detected, an alert is issued via text, email, or call.

These sensors are offered in compact, AA-battery powered, and industrial-grade devices to support diverse applications and facilities.

Alegna's Vibration Meters use an accelerometer to measure g-force on 3 axes and then determines speed and frequency from this measurement. The sensor measures vibration once every Measurement Interval, which can be set as low as 1 minute and as high the Heartbeat Interval. The Vibration Meter will also report the duty cycle, or how long the sensor was measuring vibrations throughout the heartbeat.

Smart Sensors Monitoring Capabilities and Reasons to Use Them:

- Bearing heat and vibration—excesses foreshadow failure.
- Perimeter fences—extreme force might mean unauthorized access.
- Security gates/arms movement—erratic motion indicates a breach or impending failure.

Applications

- Vibration Monitoring
- Bearing Monitoring
- Motor Monitoring
- Inclination And Vibration Testing
- Loading Gates
- Bridge Monitoring

- Assembly Line Monitoring
- Single Axis Pitch Measurement

Smart Sensor Features & Benefits

Features

- 1200+ ft. Range
- Up to 12 Years of Battery Life
- Automated Data Logging

Benefits

- Unbeatable Range Eases Networking
- Dependable, Worry-free Operation
- Streamlined Compliance & Data Analysis

NOTE: SEE MORE SMART SENSORS BELOW.

Wireless Activity Detection Sensors

Alegna™ will Immediately Alert You!

When a smart sensor detects any vibration outside of your pre-set perimeters you and/or an authorized personnel will receive a text, email and/or call, in real-time.
Find out instantly if machinery, equipment, supplies, or other key assets vibrate or abruptly move too much. Alegna's Wireless Activity Detection Sensor monitors and measures the number of vibrations, frequency, and sudden movement or lack of movement of surfaces and objects.

Know if an asset moved or not. Track the activity and stability of motors, machines, pumps, and other vital assets, so processes run smoothly. Predict maintenance and schedule service when convenient and before it's too late.

Alegna offer commercial and industrial versions of the Wireless Activity Detection Sensor to help you decide which one is right for your required solution

Vibration Applications

- Smart Machinery Monitoring
- Window Glass Breakage
- Pump Monitoring
- Access Monitoring
- Smart Structures
- Smart Materials
- Bridge and Building Seismic Activity Monitoring
- Assembly Line Monitoring
- Single Axis Pitch Measurement
- Vibration Monitoring
- Bearing Monitoring
- Motor Monitoring
- Inclination And Vibration Testing
- Loading Gates

Choose the Smart Sensor Right for You!

Enterprise AA-battery powered: Our most popular type is ideal for typical commercial & enterprise environments, such as server rooms. A 1,200+ ft. range readily covers most facilities.

CC-battery powered: Compact sensor is great for space-restricted areas such as control cabinets or cold storage.

Industrial: Sensor's weatherproof, NEMA-rated enclosure withstands demanding indoor/outdoor use, e.g., warehouses & production facilities.

PoE•X: Power over Ethernet sensors integrate with a building's PoE network; it can also be used with a standard Ethernet infrastructure & powered via an optional AC adapter.

MoWi: This discreet sensor uses your own Wi-Fi for networking and data transmission—popular for smaller businesses and facilities.

Smart Vibration Sensor Features & Benefeits

Features

- 1200+ ft. Range
- Up to 12 Years of Battery Life
- Automated Data Logging

Benefits

- Unbeatable Range Eases Networking
- Dependable, Worry-free Operation
- Streamlined Compliance & Data Analysis

NOTE: SEE MORE SMART SENSORS BELOW.

Advanced Vibration Meter

IoT Excellence Recognized by Engineers.

Predict the maintenance of machinery and structures to improve performance by continuously measuring fluctuating vibration. Alegna's **Advanced Vibration Meter** uses an accelerometer to wirelessly monitor oscillation on three axes to capture vibration frequency, crest factor, velocity, displacement, or acceleration. The meter also reports duty cycle and temperature, helping protect vital assets and perform end-of-life analysis.

Setting the Benchmark

Alegna's Advanced Vibration Meter is an engineering innovation that increases industrial safety and efficiency.

Install the data-logging meter in 15 minutes and configure the frequency measurement range within 0.4 Hz–4,200 Hz (24 RPM–252,000 RPM) to track a subtly swaying bridge or high-RPM machinery. If a monitored variable exceeds thresholds, the Advanced Vibration Meter issues an alert via text, email, or voice call.

The meter seamlessly provides data for many commercial and industrial applications, including:

- **Manufacturing**—Monitoring machines, assembly lines, and equipment to help predict wear and failure, maximizing uptime through scheduled maintenance.
- **Energy field services**—Low-frequency monitoring of motor mounts on crude pumps. Remote monitoring replaces in-field checks, trimming operational expenses while preventing bearing blowouts.
- **Field maintenance**—Detecting abnormal vibrations (or temperature changes) within a duty cycle that may point to failing components. Plus, remotely monitoring high-RPM brushless motors and smart materials or structures within production facilities.
- **Civil engineering**—Tracking seismic activity on high-rise structures or oscillation-related stress on critical infrastructure, such as bridges. After-hours monitoring of tower cranes, generators, and other equipment on construction sites. Understanding the loads (and subsequent movement) placed on retaining walls along interstates and other vital infrastructure.
- **Freight management**—Collecting movement and stress placed on loading docks after being struck by cargo ships or semis. The data helps engineers buttress older installations and shapes new designs.

The meter is available as an enterprise-ready or an industrial-grade model with a 10’ lead.

Applications

- Vibration Monitoring
- Bearing Monitoring
- Motor Monitoring
- Bridge Monitoring
- Assembly Line Monitoring
- Vibration Metering

Choose the Right Smart Sensor for You!

Commercial AA-Battery Powered: Our most popular type is ideal for typical commercial and enterprise environments, such as server rooms. A 2,000+ ft. through 18+ walls wireless range when connected to an Alegna Gateway readily covers most facilities.
Industrial: Sensor's weatherproof, NEMA-rated enclosure withstands demanding indoor/outdoor use, e.g., warehouses and production facilities.

Smart Sensor Features & Benefits

Features

- 2000+ ft. Range through 18+ Walls
- Up to 12 Years of Battery Life
- Automated Data Logging

Benefits

- Unbeatable Range Eases Networking
- Dependable, Worry-free Operation
- Streamlined Compliance & Data Analysis

NOTE: SEE MORE SMART SENSORS BELOW.

Wireless Tilt Detection Sensor

Always-On Monitoring for Security & Safety

Alegna's Wireless Tilt Detection Sensor tracks the position (pitch) of access barriers, heavy equipment arms, and crucial machinery.

With a measurement range of 0–180° and accuracy of 0.5°, this sensor instantly reports (in degrees) when movement exceeds preset limits. If an arm is breached, the tilt detect sensor sends an alert via text, email, or call.

The sensor can also identify if an arm is raising/lowering slowly, indicating seizing hydraulics or motors. This capability helps prevent loss or injury in commercial real estate, agriculture, oil exploration, and other sectors.

Simplicity for Safety's Sake

The "always watching" sensor installs in 15 minutes—without wiring into a power system—and offers 4+ worry-free years of battery life.

Alegna's Tilt Detection Sensor can enhance the safety and security of any business. Find your enterprise and industrial tilt detect sensor below.

Applications

- Inclination monitoring
- Bay Door Orientation
- Bridge Monitoring
- Loading Gates
- Overhead Door Positioning
- Single Axis Pitch Measurement

Choose the Right Smart Sensor for You!

Commercial AA-battery powered: Our most popular type is ideal for typical commercial & enterprise environments, such as server rooms. A 1,200+ ft. range readily covers most facilities.

CC-battery powered: Compact sensor is great for space-restricted areas such as control cabinets or cold storage.

Industrial: Sensor's weatherproof, NEMA-rated enclosure withstands demanding indoor/outdoor use, e.g., warehouses & production facilities.

Choose the Right Smart Sensor for You!

- **Commercial AA-battery powered:** Our most popular type is ideal for typical commercial & enterprise environments, such as server rooms. A 1,200+ ft. range readily covers most facilities.
- **CC-Battery Powered:** Compact sensor is great for space-restricted areas such as control cabinets or cold storage.
  Industrial: Sensor's weatherproof, NEMA-rated enclosure withstands demanding indoor/outdoor use, e.g., warehouses & production

Smart Sensor Features & Benefits

Features

- 1200+ ft. Range
- Up to 12 Years of Battery Life
- Automated Data Logging

Benefits

- Unbeatable Range Eases Networking
- Dependable, Worry-free Operation
- Streamlined Compliance & Data Analysis

NOTE: SEE MORE SMART SENSORS BELOW.

Wireless Vibration Meters

Stay Up on Machine Health

A must for legacy machinery and it-can't-fail systems, Alegna's Wireless Smart Sensors use an accelerometer to continually measure vibration, speed, duration, and frequency for all three axes. Excessive vibration often indicates failing machine health, overdue maintenance, or structural damage.

Alegna's vibration sensor alerts you (via text, email, or call) if an asset moves more than it should. The sensor is highly configurable—measurement intervals can be set as low as one minute.

Business and Industry-ready Sensors

Installed within 15 minutes, these vibration sensors come in business-ready enterprise or industrial-grade models, and each offers options to suit common needs. Enterprise options include an on/off switch or line power with a battery backup (and on/off switch). Industrial options include solar power with a rechargeable battery and a high-gain leaded puck.

Deploy one of the vibration meters below to track vital machinery or structures within your facility.

Applications

- Vibration Monitoring
- Vibration Metering

Choose the Right Smart Sensor for You!

Commercial AA-battery powered: Our most popular type is ideal for typical commercial & enterprise environments, such as server rooms. A 1,200+ ft. range readily covers most facilities.

CC-battery powered: Compact sensor is great for space-restricted areas such as control cabinets or cold storage.

Industrial: Sensor's weatherproof, NEMA-rated enclosure withstands demanding indoor/outdoor use, e.g., warehouses & production facilities.

Smart Sensor Features & Benefits

Features

- 1200+ ft. Range
- Up to 12 Years of Battery Life
- Automated Data Logging

Benefits

- Unbeatable Range Eases Networking
- Dependable, Worry-free Operation
- Streamlined Compliance & Data Analysis

NOTE: SEE MORE SMART SENSORS BELOW.

G-Force Max-Avg Accelerometer

Get Real-Time Alerts to Protect Assets.

Alegna's G-Force Max-Avg Accelerometer delivers detailed, real-time G-force alerts. This broad-spectrum vibration meter can determine if a fence is swaying in the wind or vibrating as it's scaled. It can also detect irregularities in assembly lines, motors, and wind turbines.

The turnkey, battery-powered sensor uses an accelerometer to determine which axis the force is on and the maximum and average movement of the force. If variables exceed preset limits, the sensor alerts you via text, email, or call.

Advanced Sensor Features:

- 2G resolution
- Four data rates: 6Hz, 12Hz, 50Hz, 100Hz
- A high-pass filter to remove gravity in all resolution modes and data rates
- Provides the following for X, Y, and Z axes:
- Raw, full-spectrum G-force maximum and average
- Magnitude maximum and average
- Sensor orientation
- Gain a whole new level of operational and security insight with one of the enterprise-ready or industrial-grade accelerometers below.

Applications

- Inclination And Vibration Testing
- Assembly Line Monitoring
- Orientation Sensing
- Impact Load Sensing

Choose the Right Smart Sensor for You!

Commercial AA-battery powered: Our most popular type is ideal for typical commercial & enterprise environments, such as server rooms. A 2,000+ ft. range when connecting a sensor to an Alegna Gateway readily covers most facilities.
Industrial: Sensor's weatherproof, NEMA-rated enclosure withstands demanding indoor/outdoor use, e.g., warehouses and production facilities.

Smart Sensor Features & Benefits

Features

- 2,000+ ft. Range with Alegna™ X1L Gateway
- Up to 12 Years of Battery Life
- Automated Data Logging

Benefits

- Unbeatable Range Eases Networking
- Dependable, Worry-free Operation
- Streamlined Compliance & Data Analysis

Alegna's Wireless G-Force Max-Avg Accelerometer measures the maximum and average G-force values along X, Y, and Z axes. A Heartbeat can be set to determine how long the sensor will accumulate data before reporting. Custom Delta values allow you to set thresholds which, when exceeded, will trigger the sensor to report immediately. Configurable data rates give you more samples to collect for every measurement with higher data rates resulting in faster reaction time.

These accelerometers do not stream continuous data.

NOTE: SEE MORE SMART SENSORS BELOW.

Wireless Tilt Smart Sensors

Tilting the Balance Back to You

Better understand your operations, machine health, or structure status by collecting inclination data or tracking pitch and roll with Alegna's Wireless Tilt Sensors. If a tilt sensor detects a deviation from your preset limits during measurement, an alert is issued via text, email, or call.

A user configures a tilt sensor to activate at a set time interval; this wireless accelerometer then captures and converts measurements to pitch and roll (0–180° or 180–0°). Data is displayed in AlegnaSense™ Sensor Configuration and Management Software Platform in degrees with 0.1° of resolution.

Tilt Smart Sensor Variety

Alegna™ offers a tilt sensor for nearly any facility or business. Battery-powered sensors range from a compact CC, enterprise-ready AA, and 3.6V industrial-grade sensor.

Applications

- Inclination Monitoring
- Measure Pitch & Roll

Choose the Right Smart Sensor for You!

Commercial AA-battery powered: Our most popular type is ideal for typical commercial & enterprise environments, such as server rooms. A 1,200+ ft. range readily covers most facilities.
CC-battery powered: Compact sensor is great for space-restricted areas such as control cabinets or cold storage.
Industrial: Sensor's weatherproof, NEMA-rated enclosure withstands demanding indoor/outdoor use, e.g., warehouses & production facilities.

Smart Sensor Features & Benefits

Features

- 1200+ ft. Range
- Up to 12 Years of Battery Life
- Automated Data Logging

Benefits

- Unbeatable Range Eases Networking
- Dependable, Worry-free Operation
- Streamlined Compliance & Data Analysis

The wireless accelerometer - tilt sensor activates at a set time interval (defined by user) and converts accelerometer measurements to pitch and roll (0 to 180° -> -180° to 0°). The data is displayed in degrees with 0.1° of resolution.

Call us today at (770) 855-3328 for more information. Alegna's Team Is At Your Service!