

Vibration AND TEMPERATURE WIRELESS SENSOR

TECHNICAL DATA SHEET



ORDER CODE: AT-105
CATEGORY: Sensors

Smart Vibration Sensing - Safeguard Your Equipment.

PRODUCT OVERVIEW

General Description

The AT-105 Wireless Sensor is a compact, lightweight, battery-powered device designed for versatile environmental monitoring. Equipped with a robust 6-axis accelerometer, it accurately measures vibration, making it ideal for monitoring equipment health. Additionally, the sensor features integrated ambient light, temperature, and humidity sensors to provide comprehensive insights into environmental conditions. Simple mounting options make it easy to place on a wide range of equipment, enabling real-time data collection from virtually any location. Powered by a reliable CR2450 coin cell, the AT-105 ensures long-lasting performance and seamless connectivity via Bluetooth 5.0



PRODUCT BENEFITS

01 Versatile Monitoring

Combines vibration, ambient light, temperature, and humidity sensors to deliver comprehensive environmental insights, suitable for diverse industrial applications.

02 Compact and Lightweight

Designed for easy integration, it mounts seamlessly on various equipment, enabling monitoring in tight or mobile setups without adding significant weight.

03 Low Maintenance

The energy-efficient design reduces battery replacements and maintenance intervals, keeping operational costs low.

04 Vibration Measurement

Features a high-precision 6-axis accelerometer to detect even subtle vibrations, providing crucial data for proactive equipment maintenance and health monitoring.

05 Equipment Longevity

By detecting early signs of vibration-related issues, the sensor helps prevent costly machinery breakdowns and prolongs equipment life.

06 Streamlined Scheduling

Accumulates performance data to support predictive maintenance, reducing unnecessary routine checks and minimizing operational disruptions.

MEASURED PARAMETERS



FEATURES

✓ 24/7 Alarm Notifications

Continuously monitors conditions and sends instant alerts when heat thresholds are exceeded

✓ Automatic Data Logging

Securely records all measurements and events for traceability, audits, and long-term trend analysis

✓ Simple Installation

Compact design mounts easily utilizing screws, magnets, or adhesive, simplifying installation and reducing setup time

✓ Extended Battery Operation

Ultra-low-power design, delivering over 1 year of continuous use at a 5-minute reporting interval

✓ Customizable Alarm Limits

Allows users to set specific thresholds for alerts

✓ Fast, Scalable Deployment

Compact and easy to mount—ready for rapid rollout across enterprise-wide operations

✓ 6-Axis Accelerometer

Tracks motion and orientation, providing detailed insights into the assets movement and behaviour

✓ Wireless Data Transmission

Tracks motion and orientation, providing detailed insights into the asset's movement and behaviour

✓ Accessible Data

Sends data through a secure gateway to a central dashboard for real-time viewing and trend analysis

Real-Time Alarm Level Display and Historical Data

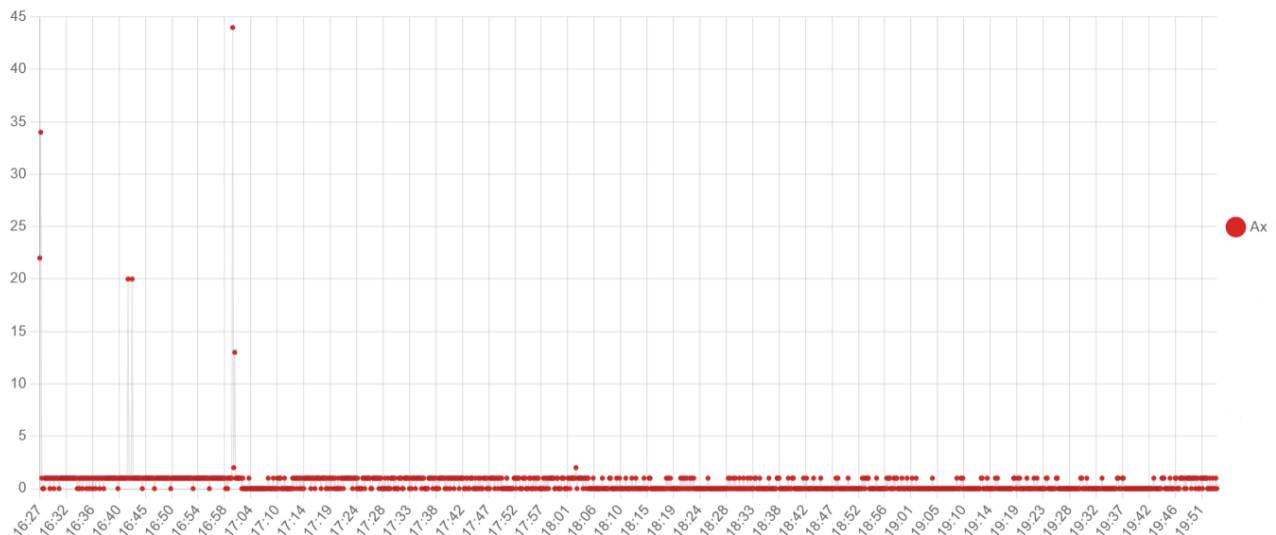
E4A's IoT Manager software provides a fully customizable interface, allowing users to focus on the specific data points that matter most to them. Whether it's vibration, ambient light, temperature, or humidity, the software enables easy monitoring and visualization of key metrics. Users can tailor the dashboard to display real-time data in the most intuitive way and set up alerts and alarms to notify them if any sensor readings fall outside of pre-defined specifications, ensuring prompt action can be taken. With seamless customization and proactive monitoring, this software is designed to keep your assets secure and within optimal conditions at all times.

Attribute: Vibration_X-mm/s

RESET ZOOM

EXPORT TO CSV

ASSIGN LABELS



E4A IOT MANAGER

Unlock the full potential of your sensor network with E4A's IoT Manager — a powerful, web-based platform designed for real-time monitoring, control, and analysis of your IoT devices.

- 01 Real-Time Sensor Dashboard
- 02 Advanced Data Analytics
- 03 Customizable Alarm Thresholds
- 04 Remote Setpoint Configuration
- 05 Historical Data Review
- 06 Plus Much More!

SIGN UP HERE!



Just scan the QR code and follow the prompts. Once you contact us, we'll handle the setup and get you connected — quick and hassle-free.

TECHNICAL SPECIFICATIONS

Power Supply

Main Power	Internal Battery (CR2450 coin cell battery)
Nominal Voltage	3VDC
Typical Capacity	600mAh
Average Current	24uA

Operating Specifications

Operating Temperature	-20°C to +60°C
Storage Temperature	-20°C to +70°C (battery installed) -20°C to +70°C (battery not installed)
Permissible Humidity	20-85% (operating and storage)
Ingress Protection Rating	IP30
Pollution Degree	2
Altitude	2000m

Measurement Characteristics

Accelerometer	6-axis, $\pm 16g$ FSR
Light Exposure	0-100% relative light (up to 220 lux)
Temperature	-40°C to +120°C ($\pm 0.5^\circ\text{C}$, 15°C to 40°C)
Humidity	0-100% relative humidity (± 3.5 RH accuracy)

Physical Characteristics

Housing Material	ABS plastic
Physical Dimensions	Height: 15mm / 4.7 inches Width: 75mm / 1.9 inches Depth: 50mm / 3.2 inches
Weight	35g
Mounting	Magnetic mount Screw mount Double sided adhesive

Communications

Wireless Module	2.4GHz Bluetooth 5.0 transceiver
Communication Range	125m line of sight
Communication Interval	User programmable in 10 second increments
Security	AES 128-bit crypto accelerator ECC and RSA public key accelerator (PKA) SHA2 accelerator (full suite up to SHA-512) True Random Number Generator (TRNG)

Interface

Indicators	Pairing and broadcast (red, green LED)
User Interface	1 push button (device reset and pairing)
Alarm Range	User programmable

SPARE PARTS AND ACCESORIES

Part Description	E4A Part Number
Magnetic Mounting Feet	E4A-FAS-00048-00
Quad-Band Gateway	E4A-BFA-00005-01
Dual-Band Gateway	E4A-BFA-00004-01
Double Sided Adhesive	E4A-ADH-00011-00
Coin Cell Battery	E4A-BAT-00001-00

CERTIFICATIONS

FCC	2AXVKWAT01
Industry Canada	26661-WAT01
Safety	CSA C22.2 No. 61010-1-12 UPD1: Jul 2015 UPD2: APR 2016 UPD3: Jun 2023 and AMD 1:2018 UL61010-1 3rd Edition: 2023

CONTACT US!

Headquarters

250 Herzberg Road
Ottawa, Ontario, Canada
K2K 2A1

Lab Testing Facility

1292 Rosedale Road North
Smith Falls, Ontario, Canada
K7A 4S6

Phone: (+1) 613-595-0303

E-mail: sales@electronics4all.ca

Website: www.electronics4all.ca



DISTRIBUTORS

