

# Monnit Industrial Wireless Activity Sensors

## Technical Overview

### General Description

Monnit's industrial wireless activity sensors can be used in a host of applications where detecting vibration (sudden movement) or counting the number of vibrations is required.

### Features

- Detects vibration or sudden movement.
- Counts vibrations.
- Free iMonnit basic online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email.

### Principle of Operation

**Profile 1: Activity Detection** - sensor detects sudden movement or non-movement of a given device or surface, and alerts you of the change.

**Profile 2: Activity Counter** - sensor accumulates vibration activity, giving the user an idea of how much activity has occurred. Instead of just indicating that vibration is present, it quantifies the vibration by counting the number of vibrations detected in a user specified time period ("Aware State" time interval). When no vibrations are present, the sensor reports in on its basic heartbeat with a value of 0.

### Solar Power Option

Monnit Industrial Sensors are powered by a replaceable 3.6 V battery (included).

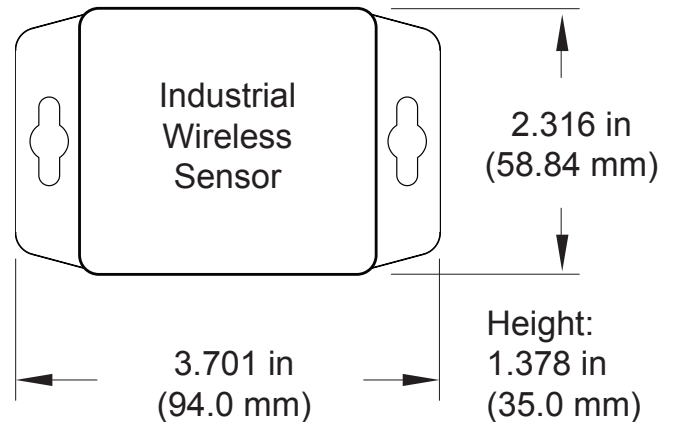
An optional solar powered version is also available. The solar powered sensor uses a Lithium Iron Phosphate rechargeable battery in conjunction with a solar power cell, extending the life of the battery.



### Monnit Industrial Sensor Electronics Specifications

- Power: replaceable 3.6V battery (included)
- Communication: RF 900, 920, 868 and 433 MHz
- Dimensions: 3.7" x 2.23" x 1.38"
- Antenna: 3dBi RP SMA antenna
- Operating Temperature: -40° to 85°C (-40° to 185°F)
- Transmission Range: 300 - 350 ft. non-line-of-sight\*
- Battery Life: at 1 hour heartbeat setting, battery will last ~ 4-5 years.\*\*


\* Actual range may vary depending on environment.  
\*\* Battery life is determined by sensor reporting frequency and other variables.



### Applications

- Machinery monitoring.
- Pump monitoring.
- Vibration counting.

**The Leader in Low Cost Wireless Sensors**

Technical Specifications	
Supply Voltage	2.0 - 3.6 VDC *
Current Consumption	0.7 $\mu$ A (sleep mode) 2 mA (radio idle/off mode) 2 mA (measurement mode) 25 mA (radio RX mode) 35 mA (radio TX mode)
Operating Temperature Range (Board Circuitry and Battery)	-40°C to +85°C ( -40°F to +185°F ) **
Optimal Battery Temperature Range (Battery)	+10°C to +60°C ( +50°F to +140°F )
Sensitivity	0.05 g
Enclosure Rating	NEMA 1, 2, 4, 4x, 12 and 13 rated, sealed and weather proof
Certifications	 900 MHz product; FCC ID: ZTL- RFSC1 and IC: 9794A-RFSC1. 920 MHz product; ARIB STD-T108 R210-103733. 868 and 433 MHz product tested and found to comply with: CISPR 22:2008-09 / EN 55022:2010 - Class B and ETSI EN 300 220-2 V2.4.1 (2012-05).

\* Hardware cannot withstand negative voltage. Please take care when connecting a power device.

\*\* At temperatures above 100°C, it is possible for the board circuitry to lose programmed memory.

### Type 1, 2, 4, 4X, 12 and 13 NEMA Rated Enclosure:

Monnit's Industrial sensors are enclosed in reliable, weatherproof NEMA rated enclosures. Our NEMA rated enclosures are constructed for both indoor or outdoor use and protect the sensor circuitry against the ingress of solid foreign objects like dust as well as the damaging effects of water (rain, sleet, snow, splashing water, and hose directed water).

- Safe from falling dirt.
- Protects against wind blown dust.
- Protects against rain, sleet, snow, splashing water, and hose directed water
- Increased level of corrosion resistance
- Will remain undamaged by ice formation on the enclosure



For more information about our products or to place an order, please contact our sales department at 801-561-5555.

Visit us on the web at [www.monnit.com](http://www.monnit.com).

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