

# Monnit

## Wireless Seat Occupancy Sensor

### Technical Overview

#### General Description

The Wireless Seat Occupancy Sensor monitors for force or weight applied to a sensor plate.

#### Features

- Detects force applied to the sensor plate.
- 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

The wireless seat occupancy sensor uses a stress plate with an integrated flexible, stress sensitive ribbon to accurately measure when (force) is applied to the plate. Perfect for monitoring seats for occupancy. The data is stored in the online system and can be reviewed and exported as a data sheet or graph. User customization allows you to set the frequency of readings and the ability to set thresholds for notifications or alerts from the iMonnit online sensor monitoring system.

#### Power Options

Sensors are powered by a replaceable 3.0 V coin cell battery. Optional AA battery powered sensors are available. The AA version of these sensors are larger in size (3" [L] x 2.1" [W] x 1.2" [H] ) and include two long-life AA batteries.

It is recommended that unless you are using the AA battery solution, you set heartbeat to no faster than one hour to preserve battery life.

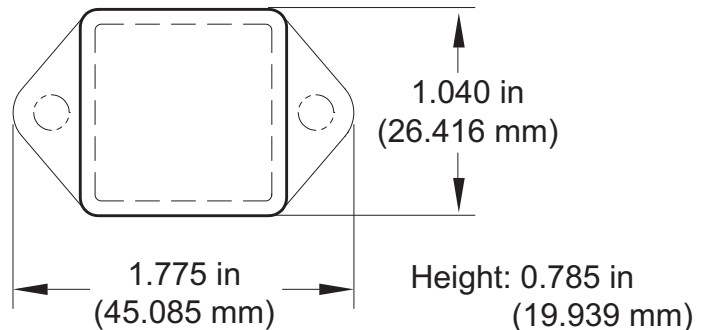


#### Monnit Sensors Core Specifications

- Power: Replaceable 3.0 V coin cell battery
- Communication: RF 900, 920, 868 and 433 MHz
- Dimensions: 1.775" x 1.040" x 0.785"
- Antenna: 4" wire antenna
- Operating Temperature: -7° to 60°C (20° to 140°F)
- Device Range: 250 - 300 ft. non-line-of-sight\*
- Battery Life: At 1 hour heartbeat setting, coin cell battery will last ~ 1-2 years.\*\*

\* Actual range may vary depending on environment.


\*\* Battery life is determined by sensor reporting frequency and other variables.



#### Example Applications

- Movie Theater Seat Monitoring
- Stadium Seat Monitoring
- Heavy Equipment Operator Seats
- General Seat Monitoring

**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 Coin Cell)	-7°C to +60°C ( 20°F to +140°F )**
Optimal Battery Temperature Range (Coin Cell)	+10°C to +50°C ( +50°F to +122°F )
Base Resistance	100 $\Omega$ - 500 K $\Omega$
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).
Seat Sensor Plate Specifications	
Life Cycle	More than 1,000,000 Cycles (Tested to 10,000,000+ Cycles)
Temperature Range	-35°C to +85°C ( -31°F to +185°F )
Hysteresis	7%

\* Hardware can not 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.

 **Warning: Do not kink or damage the flexible ribbon!**

### Caution/Notice:

This product is designed for application in an ordinary environment (normal room temperature, humidity and atmospheric pressure). Do not use this sensor under the following conditions as these factors can deteriorate the product characteristics and cause failures and burn-out.

- Corrosive gas or deoxidizing gas - chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas, nitric oxides gas, etc.).
- Volatile or flammable gas.
- Dusty conditions.
- Under low or high pressure.
- Wet or excessively humid locations.
- Places with salt water, oils chemical liquids or organic solvents.
- Where there are excessively strong vibrations.
- Other places where similar hazardous conditions exist.

Use this product within the specified temperature range. Higher temperature may cause deterioration of the characteristics or the material quality of this product.

**MONNIT**<sup>®</sup>