

# Monnit Industrial

## Wireless AC Voltage Detection Sensor

### Technical Overview



### General Description

Monnit's industrial wireless AC voltage detection sensor can interface with other devices to detect voltage from 24 VAC to 500 VAC. The sensor notifies of the presence or absence of voltage. It is intended for use on power sources or power supplies up to 500 VAC. Not intended for voltages higher than 600 VAC and also not intended for use with DC sources without permission. Perfect for monitoring electrical appliances.

### Features

- Wireless interface for detecting voltage.
- Detects voltage from 24 to 500 VAC.
- Free iMonnit basic online sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email.

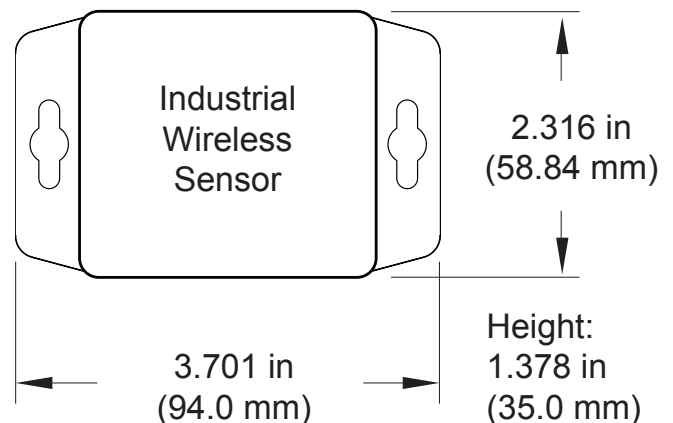
### Principle of Operation:

The Monnit industrial wireless AC voltage detection sensor can be connected to the positive and ground terminals of an electrical device or power supply line, triggering on the state change from voltage presence to absence and vice versa. The information is sent to the iMonnit Online Sensor Monitoring and Notification System where the data is displayed as either "No Voltage" or "Voltage Detected". The data is stored in the online system and can be reviewed and exported as a spread sheet or graph. Notifications can also be set up through the online system to alert the user when certain criteria have been met.

### 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.



### Example Interfacing

- Sprinkler Systems
- HVAC Systems
- Electrical Appliances
- Electrical Sources
- Power Couplings
- Line Power
- Power Supplies
- Sump Pumps
- And many more...

**The Leader in Low Cost Wireless Sensors**

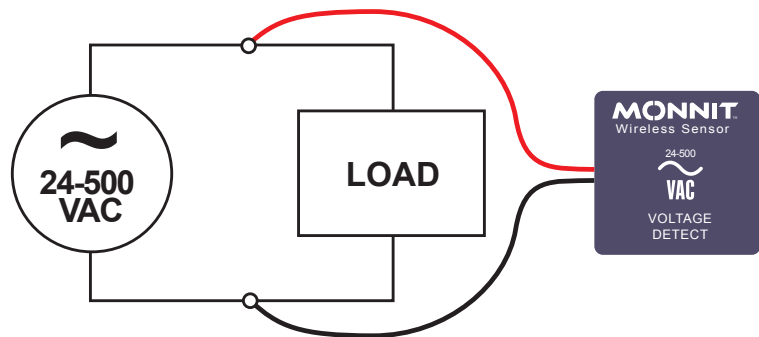
Technical Specifications	
Supply Voltage	2.0 - 3.6 VDC *
Current Consumption	0.7 $\mu$ A (sleep mode) 2 mA (radio idle/off mode) 2 mA (measurement mode) 25 mA (radio RX mode) 35 mA (radio TX mode)
Operating Temperature Range (Board Circuitry and Battery)	-40°C to +85°C ( -40°F to +185°F ) **
Optimal Battery Temperature Range (Battery)	+10°C to +60°C ( +50°F to +140°F )
Sensor Resolution	11 bit (single ended)
Conversion Time	228 $\mu$ s
Full Scale Voltage	24 - 500 VAC
Maximum Input Voltage	600 VAC
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.

### Proper Installation:

If the sensor is not connected to the power source properly, it will appear that the sensor is broken. Please follow this wiring diagram to ensure proper performance and detection.



### 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

**MONNIT**<sup>®</sup>

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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