Senseit™

The Internet of Things

24-500 VAC VOLTAGE DETECT

Wireless AC Voltage Detection Sensor

General Description

The wireless AC voltage detection sensor can interface with other devices to detect voltage from 24 VAC to 500 VAC.
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.

- Wireless interface for detecting voltage
- Detects voltage from 24 to 500 VAC

Free iSenseit 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 Senseit wireless AC voltage detection sensor can be connected to the positive and ground terminals of an electrical device or power supply line - triggering the state change from voltage presence to absence and vice versa. The information is sent to the iSenseit 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 specified criteria have been met.

Example Applications

- Sprinkler Systems
- HVAC Systems
- Appliances
- Electrical Sources
- Power Couplings
- Line Power
- Power Supplies
- Sump Pump

And many more...

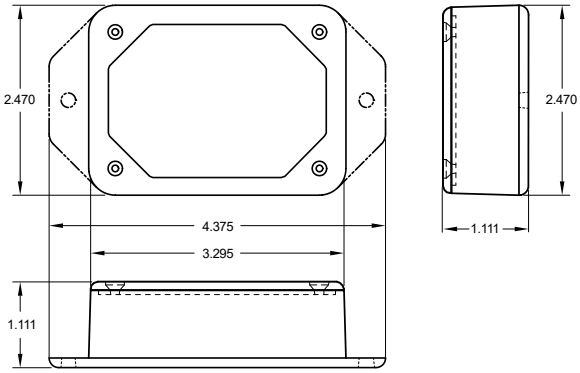
Senseit Sensor Core Specifications

- Wireless Range: 250 - 300 ft. (non-line-of-sight / indoors / through walls, ceilings & floors) *
- RF Communication: 900 MHz
- Power: Replaceable batteries (optimized for long battery life) Line-power options available
- Battery Life (at 1 hour heartbeat setting): **

  AA battery > 4-8 years

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

Wireless AC Voltage Detection Sensor (AA)



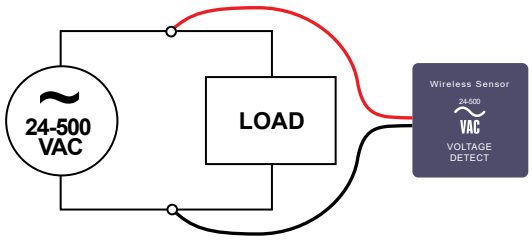
Technical Specifications	
Supply Voltage	2.0 - 3.6 VDC (3.0 - 3.6 VDC Using Power Supply) *
Current Consumption	0.7 µA (sleep mode) 2 mA 2 mA (measurement mode) 25 mA (radio RX mode) 35 mA (radio TX mode)
Operating Temperature Range (Board Circuitry and Batteries)	-18°C to 55°C (0°F to 130°F) using alkalin -40°C to 85°C (-40°F to 185°F) using lithium **
Optimal Battery Temperature Range (AA)	+10°C to +50°C (+50°F to +122°F)
Sensor Resolution	11 bit (single ended)
Conversion Time	228 µs
Full Scale Voltage	24 - 500 VAC
Maximum Input Voltage	600 VAC
Weight	4.0 oz.
Wireless Range	250 - 300 ft. (Indoors / Range may vary according to environmental variables.
Certifications	900 MHz product; FCC ID: ZTL- RFSC1 and IC: 9794A-RFSC1.

* 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.



Power Options

Two replaceable 1.5V AA sized batteries are included with the standard model. A line-power version with battery backup is also available - allowing it to be powered by a standard 3.0 - 3.6V power supply and use the internal batteries if there is a power interruption.

Power options must be selected at time of purchase as the internal hardware of the sensor must be changed to support the selected power requirements.

Notes

Commercial Grade Sensors

Senseit commercial grade sensors are designed for applications in ordinary environments (normal room temperature, humidity and atmospheric pressure). Do not use these sensors 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 these products within the specified temperature range. Higher temperature may cause deterioration of the characteristics or the material quality.