Senseit™

The Internet of Things

0-50 VDC

0-50 VOLT METER

Wireless 0-50 VDC Voltage Meter

General Description

The Senseit Wireless Voltage Meter measures the voltage between two electrical points. It can be connected to the power and ground of any voltage source and measure within stated accuracy up to 50 VDC. Perfect for measuring battery voltage at specified intervals where sensor data will be wirelessly sent to iSenseit, the online sensor monitoring system.

- Wireless interface for measuring voltage.
- Available in multiple voltage ranges. Measures voltage up to 50 VDC

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

By connecting the leads on the Senseit Wireless Voltage Meter to the positive and ground terminals of a battery, users can measure battery voltage through the iSenseit Online Sensor Monitoring and Notification System. Notifications can be set up through the online system to alert the user when battery levels reach a certain point. The data is also stored in the online system and can be reviewed and exported as a data sheet or graph.

Example Applications

- Car Battery Monitoring
- Boat and Marine Battery Monitoring
- RV Battery Monitoring
- ATV / Motorcycle Battery Monitoring
- Lawn Mowers and Utility Vehicle Battery Monitoring

And many more...

Senseit Sensor Core Specifications

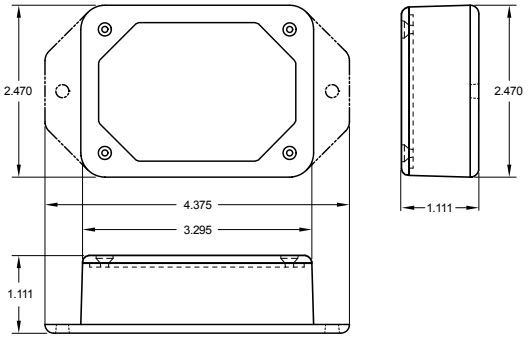
- Wireless Range: 250 - 300 ft. (non line-of-sight / indoors / through walls, ceilings & floors) *
- Communication: RF 900 MHz
- Power: Replaceable batteries (optimized for long battery life) - Line-power (AA version) options available
- Battery Life (at 1 hour heartbeat setting) **

  AA battery > 4-8 years

* Actual range may vary depending on environment.

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

Wireless 0-50 VDC Voltage Meter (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 (radio idle/off mode) 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)
Full Scale Voltage	0 - 50 VDC ***
Absolute Maximum Voltage	75 VDC ***
Sensor Resolution	0.025 VDC
Conversion Time	228 µs
Accuracy	+/- 3% FS****
User Calibrated Accuracy	+/- 1% FS *****
Weight	4.0 oz.
Wireless Range	250 - 300 ft. (Indoors / Through walls, ceilings & floors) 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.

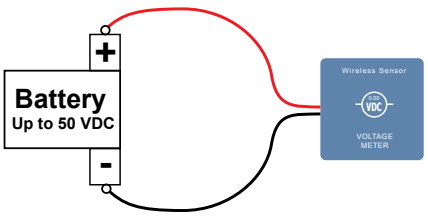
*** The sensor is capable of measuring above 50 volts but may not meet the specified accuracy above this value.

**** Due to diode reverse voltage protection the sensor typically has a -.3 volt offset between 0 and 5 volts.

***** For best results calibrate at a voltage between 50% and 90 % of the voltage range. If the max application voltage is below 50% of the voltage range (25V) calibrate to the max application voltage instead. It is not recommended to calibrate the sensor below 6 volts.

Proper Installation

IIf 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.