

Monnit Industrial

Wireless DC Voltage Detection Sensor

Technical Overview



General Description

Monnit's industrial wireless DC voltage detection sensor detects the presence or absence of electricity. It is intended for use on battery or other DC sources, up to 50 Volts. Not intended for use with AC Voltages. It is perfect for batteries, adapters, solar equipment, vehicles or machinery, and any other electrical appliance monitoring. The sensor triggers on voltage presence to voltage Absence and vice versa. The data is displayed as "Voltage Detected" or "No Voltage".

Features

- Detects presence or absence of voltage.
- Voltage presence detected above ~.47 volts.
- Voltage absence detected below ~.47 volts.
- Detects voltages up to 50 volts.
- Reverse voltage protection, up to 50 Volts.
- 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:

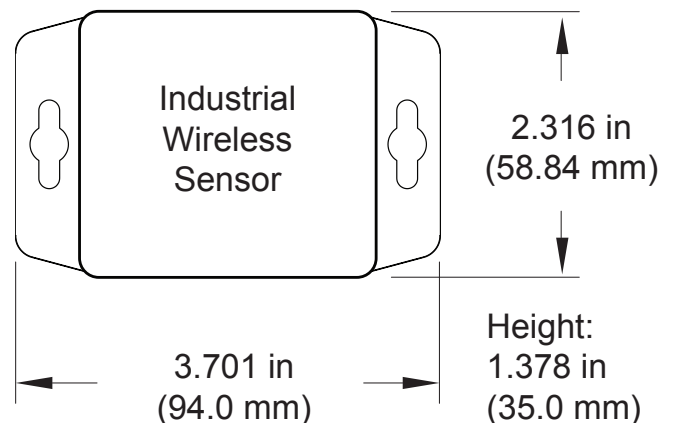
The Monnit industrial wireless DC voltage detection sensor detects the presence or absence of voltage. The sensor triggers on voltage presence to voltage absence and vice versa. The data is displayed as "Voltage Detected" or "No Voltage". If no change is observed within the heartbeat interval, the state is continuously reported on the heartbeat interval. Transitions and heartbeat data is logged into a cloud service. The user can set the system to send an alert on either state, or on the transition of states.

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

- Battery Power
- Relays/Switches
- Appliances
- Adapters
- Solar
- Power Supplies
- Sump Pumps
- And many more...

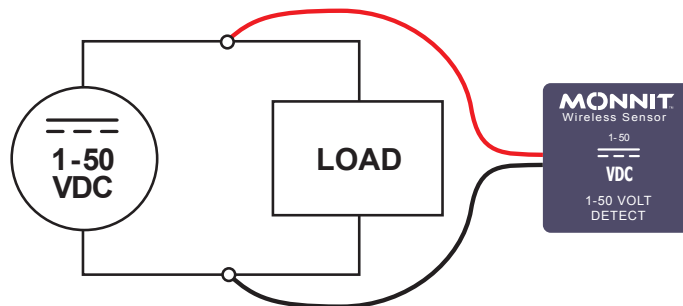
The Leader in Low Cost Wireless Sensors

Technical Specifications	
Supply Voltage	2.0 - 3.6 VDC
Current Consumption	0.7 μ 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)
Maximum Rated Input Voltage	50.0 Volts
Minimum Rated Input Voltage	-50.0 Volts
Voltage Detection Threshold	Present above ~.47 Volt, Absent below ~.47 Volt
Trigger	Transmits data upon state change
Open Circuit Reading	Voltage Absent
Leaded Wire Specification	2 Wires, 1 ft. (12 in.), Red (+), Black (-), 18 AWG (Custom lengths available upon request)
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).

* 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®

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.

Monnit Corporation
4403 South 500 West
Murray, UT 84123
801-561-5555
www.monnit.com