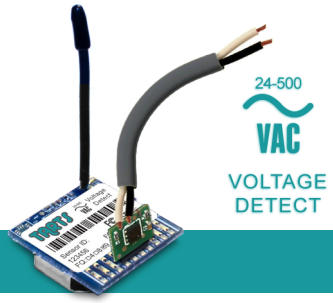
TARTS™
Sensors for Makers™



Tarts Wireless 24-500 VAC Voltage Detection Sensor

General Description

Tarts 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.

Features

- Wireless interface for detecting voltage.
- Detects voltage from 24 - 500 VAC.
- Calibration feature for higher accuracy.

Principle of Operation

The Tarts 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 wirelessly to the gateway (Arduino shield, Raspberry Pi plate or BeagleBone Black cape).

Calibration

This sensor can be calibrated for higher accuracy. For highest accuracy, you will need to have an accurate voltage meter.

Technical Specifications

Datum Definition	Type: 64 Name: DETECT RawValue: 0 (Not Present), 1 (Present) FormattedValue: NOT PRESENT (0), PRESENT (1)
Calibration Parameter	void calibrate(float value); Value is the voltage.
Supply Voltage	2.0 - 3.6 VDC * (ships with CR2032 - 3.0 V coin cell battery and battery clip)
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)
Electronics Operating Temperature Range	-40°C to +85°C (-40°F to +185°F) **
Available Operating Frequencies	900 MHz (25 Channels), 868 MHz (5 Channels) and 433 MHz (15 Channels)
Sensor Resolution	11 bit (single ended)
Conversion Time	228 µs
Full Scale Voltage	24 - 500 VAC ***
Maximum Voltage	600 VAC ***
Antenna	4” wire antenna
Device Range	250 - 300 ft. non-line-of-sight (actual range may vary depending on environment.)
Dimensions	1 inch (W) x 1 inch (L)
Certifications	FC CE Industry Canada 900 MHz product; FCC ID: ZTL- RFSC1 and IC: 9794A-RFSC1. 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 to lose programmed memory.
*** If application exceeds 600 VAC the sensor can be damaged.

For more product information or to place an order visit us on the web at www.tartssensors.com.
Tarts Sensors | email: info@tartssensors.com | web: www.tartssensors.com