

Tarts Wireless 0-50 VDC Voltage Meter

General Description

The Tarts wireless 0-50 VDC voltage meter can be attached to the positive and ground terminals of another device, battery or sensor to measure the voltage.

Features

- Wireless interface for measuring voltage.
- Measures voltage up to 50 VDC.
- Calibration feature for higher accuracy.


Principle of Operation

The Tarts wireless 0-50 VDC voltage meter is a DC analog voltage measuring device that can be connected to the positive and ground terminals of a battery or power source to report the measured voltage at user specified intervals. Voltage data is transmitted 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: 59 Name: VOLTAGE RawValue: 40233 FormattedValue: 40.233
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 μ A (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)
Conversion Time	228 μ s
Sensor Resolution	0.025 VDC
Full Scale Voltage	0 - 50 VDC ***
Absolute Maximum Voltage	75 VDC ***
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	 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 50 VDC the sensor will return a maximum reading of 50 V. Voltage over 75 VDC can damage sensor.

For more product information or to place an order visit us on the web at www.tartssensors.com.

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