



## Wireless RTD Low Temperature Sensor

### Technical Overview

#### General Description

The RF Wireless Low Temperature Sensor uses a glass coated platinum RTD sensor to accurately measure temperatures from -200° C to +162° C (-328°F to +325°F).

#### Features

- Accurate to +/- 0.15°C.
- Temperature range: -200°C to +162°C (-328°F to +325°F)

#### Principle of Operation

The OEM Wireless Low Temperature Sensor outputs the ambient temperature in degrees Celsius or Fahrenheit. It is programmed to sleep for a user-given time interval (heartbeat) and then wakeup, power up the RTD sensor and wait for it to stabilize then mathematically compute the temperature and transmit the data to the gateway.

#### OEM Sensor Core Specifications

- Power: 3.0 V coin cell battery
- Communication: RF 900, 868 and 433 MHz
- Antenna: 4" wire antenna
- Operating Temperature: -40° to 85°C (-40° to 185°F)
- Device Range: 250 - 300 ft. non-line-of-sight\*
- Only 1 inch by 1 inch

\* Actual range may vary depending on environment.

#### Applications

- Freezers & Coolers
- Environmental Monitoring
- Smart Machines & Smart Structures
- HVAC Operation & Testing
- And Many More...

#### Electronics Specifications

Supply Voltage	2.0 - 3.6 VDC *
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	-40°C to +85°C (-40°F to +185°F) **
Performance	0.7% BFSL Accuracy
Available Frequencies	900 MHz (25 Ch.), 868 MHz (5 Ch.) and 433 MHz (15 Ch.)
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 can not withstand negative voltage. Please take care when connecting a power device.

\*\* At temperatures above 100°C, it is possible to lose programmed memory.

#### RTD Technical Specifications

RTD Temperature Range (RTD and Cable Only)	-200°C to +162°C (-328°F to +325°F)
Accuracy @ 25°C	+/- 0.6% (0.15°C)
Dissipation Constant	2mW/°C
Thermal Time Constant	15 sec max.

For more product information, to get a quote, or to place an order, please contact our sales department at 801-561-5555. Visit us on the web at [www.oemsensors.com](http://www.oemsensors.com).

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