



RFRTDTEMP101A

PRECISION TEMPERATURE DATA LOGGER & WIRELESS TRANSMITTER

Features

- Multiple transmitter configurations
- Memory wrap around
- Software configurable
- Real-time operation
- Programmable start time
- Miniature size
- User-friendly
- N.I.S.T. traceable

Applications

- Calibration chamber monitoring
- Precision temperature recording
- Warehouse monitoring
- HVAC
- Medical and Pharmaceutical
- Museum monitoring
- Environmental studies
- Replace costly strip chart recorders



The RFRTDTEMP101A is a battery powered precision temperature recorder and wireless transmitter. This is an all-in-one compact, portable, easy to use device that will measure and record up to 5,461 measurements. The RFRTDTEMP101A combines the features from the standard product line and adds the convenience of a wireless transmitter. When enabled, the wireless transmitter will transmit readings back to the host computer where the data can be analyzed in real time. These readings are also logged to the device's memory for added data security. The convenient slide switch allows the transmitter to be turned on or off without affecting the operation of the device.

The device can be started, stopped and configured directly from your computer. Its small size allows it to fit almost anywhere. In addition to the wireless communications, the RFRTDTEMP101A makes data retrieval quick and easy. Simply plug the device into an empty COM port and our user-friendly software will handle the rest.



DATA LOGGER SOFTWARE

displays temperature data in an easy to use graph.

The Windows®-based software package allows the user to effortlessly collect, display and analyze data. A variety of powerful tools allow you to examine, export, and print professional looking data with just a click of the mouse.

RFRTDTEMP101A SPECIFICATIONS*

Temperature**

Measurement Range: -200 to +850°C

Resolution: 0.01°C

Calibrated Accuracy: ±0.1°C ***

Specified Accuracy Range: -200 to +850°C

Resistance

Nominal Range: 0 to 500Ω

Resolution: 0.001Ω

Calibrated Accuracy: ±0.015Ω***

Specified Accuracy Range: 0 to 500Ω @ 25°C

Input Connection: Removable screw terminal; 2,3 or 4 wire interface****

Temperature Effect on Span: <25ppm/°C; <10ppm/°C typical

Temperature Effect on Offset: <10ppm cumulative over -30 to +70 °C

Memory: 5,461 readings; software configurable memory wrap

**Temperature specifications based on ideal 100 Ω Pt RTD compliant with IEC 751 (1983) and ITS-90, 5000 Ω FSR(accuracy based on 36" lead wire RTD with 4 wire configuration)

***Calibrated accuracies based on standard MadgeTech calibrations for 0 to 200Ω range.

****100 Ohm, 2 or 4 wire RTD probes are recommended for the most accurate performance. Most 100 Ohm, 3 wire RTD probes will work, but MadgeTech cannot guarantee the accuracy. To determine whether or not the 3-wire RTD probe will work, the resistance between the two same colored wires should be less than 1 Ohm. (Note: Please contact the manufacturer of the RTD probe for questions on the resistance)

Reading Rate: 1 reading every 30 seconds to 1 every 12 hours

Calibration: Digital calibration through software

Data Format: Date and time stamped °C, °F, K, °R, Ω

Computer Interface: PC serial or RS232C COM (interface cable required); 57,600 baud

Time Accuracy: ±1 minute/month (at 20 to 30°C)

RF Carrier Frequency: 418 ± 0.075MHz

RF Baud Rate: 4,800 baud

Maximum Output Power: <0dBm typical (<1mW)

Receiver Sensitivity (RFC101A): -90dBm typical

Range: Line-of-sight: up to 120 ft., Urban: up to 40 ft.

Approvals: US (FCC), CA (IC)

Battery Type: 3.6V lithium battery included; **user replaceable**

Battery Life: 1 year typical (1 min reading rate @ 25 °C)

Software: XP SP3/Vista/Windows 7

Operating Environment: -30 to +70°C, 0 to 95%RH non-condensing

Dimensions: 1.7" x 2.7" x 0.8" + 2.0" antenna (42mm x 69mm x 21mm + 51mm antenna)

Weight: 2 oz (60 g)

Enclosure: ABS plastic

BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 212°F, INCINERATE OR EXPOSE CONTENTS TO WATER.

SOFTWARE FEATURES

Multiple Graphs: Simultaneously analyze data from several units or deployments; easily switch to a single data series

Graphical Cursor: One click displays readings by time, value, parameter or sample number

Data Table: Instantly access tabular view for detailed dates, times, values, and annotations

Scaling Options: Autoscale function fits data to the screen, or allows user to manually enter their own values

Formatting Options: Change colors, line styles, plotting options, show or hide channels quickly

Statistics: Calculate averages, min, max, standard deviation, and mean kinetic temperature with the touch of a button

Export Data: Export data in a variety of common formats, or switch to Excel® with a single click

Calibration: Automatically calculate and store calibration parameters

Logger Configuration: Easy set up and launch of data loggers with immediate or delayed start, preferred sample rate, and device ID

Communications: Automatically sets up communications port, or lets user select configuration

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY AND REMEDY LIMITATIONS APPLY.

ORDERING INFORMATION

Model	Description
RFRTDTEMP101A	Precision Temperature Recorder and Wireless Transmitter
RFC101A	Software, manual, wireless receiver, power supply and RS232 interface cable
RFC200A	Software, manual, wireless receiver, power supply and USB interface cable
NIST	N.I.S.T. Calibration Certificate

ASK ABOUT OUR OTHER DATA RECORDERS

Temperature	Pulse/Event/State
Humidity	Low Level Current
Pressure	Low Level Voltage
pH	RF Transmitters
Level	Intrinsically Safe
Shock	Spectral Vibration
LCD Display	