

# RFRTDTemp2000A

## Wireless Precision RTD-Based Temperature Data Logger

The RFRTDTemp2000A is an RTD-based, wireless temperature data logger with display. This data logger accepts 2, 3 or 4-wire 100 Ω platinum RTD's and features a device accuracy of  $\pm 0.04$  °C. Starting, stopping and down-loading from the device are all performed wirelessly using the RFC1000 wireless transceiver, allowing the user to spend less time maintaining the data logger. Data can be provided in real time back to a central PC, or the device may be downloaded at periodic intervals.

The convenient digital display provides the current reading for both channels. Minimum, maximum and average statistics are also provided for a convenient snap shot of the logged data. Out of range notification, an audible buzzer as well as LED alarm indicator notifies users when the temperature is above or below the user specified alarm. Through the software, email and text message alarms can also be sent.

The RFRTDTemp2000A can be used as a single, wireless data logging system, or it can be expanded to a large scale system, which can include hundreds of data loggers measuring a number of areas (additional MadgeTech wireless data loggers and transceivers may be required). The RFRTDTemp2000A is compatible with the latest MadgeTech 4 Software.



Probe Sold Separately

### Features

- Wireless Two-Way Communication
- View Data in Real Time
- Battery Life Indicator
- 5 year battery life at 15 Minute Reading Rate
- Audible alarm and LED Alarm Indicator
- Wall or Table Mount Included
- Field Upgradeable
- $\pm 0.04$  °C Device Accuracy
- Direct USB Interface

### Benefits

- Fast Installation
- Minimal Long-Term Maintenance
- Full Communication From One PC
- Time and Money Saving with Battery Management

### Applications

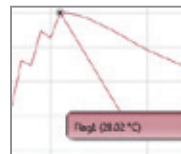
- Clean Rooms
- Laboratories and Hospitals
- Medical and Pharmaceutical

## MadgeTech 4 Software Features

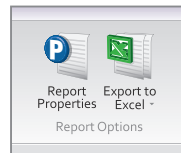


Graph View

- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



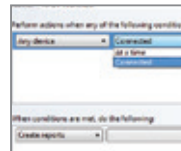
Cooling Flags



Export to Excel

Time	Time Date	Info
1	1:00:00 PM	45.0000
2	1:00:05 PM	45.0000
3	1:00:10 PM	45.0000
4	1:00:15 PM	45.0000
5	1:00:20 PM	45.0000
6	1:00:25 PM	45.0000
7	1:00:30 PM	45.0000
8	1:00:35 PM	45.0000
9	1:00:40 PM	45.0000
10	1:00:45 PM	45.0000
11	1:00:50 PM	45.0000
12	1:00:55 PM	45.0000
13	1:01:00 PM	45.0000
14	1:01:05 PM	45.0000
15	1:01:10 PM	45.0000
16	1:01:15 PM	45.0000
17	1:01:20 PM	45.0000
18	1:01:25 PM	45.0000
19	1:01:30 PM	45.0000
20	1:01:35 PM	45.0000
21	1:01:40 PM	45.0000
22	1:01:45 PM	45.0000
23	1:01:50 PM	45.0000
24	1:01:55 PM	45.0000
25	1:02:00 PM	45.0000

Tabular Data View



Automation

## SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to [madgetech.com](http://madgetech.com) for details.

TEMPERATURE*	
Temperature Measurement Range	18 Ω to 400 Ω -200 °C to +850 °C (-328 °F to +1562 °F) (Probe Dependent)
Resolution	0.005 Ω 0.01 °C (0.018 °F) (Probe Dependent)
Calibrated Accuracy	±0.015 Ω ±0.04 °C (±0.072 °F) (Probe Dependent)
Response Time	Depending on type of RTD sensor
Calibration Accuracy Range	18.5 Ω to 175.9 Ω -200 °C to +200 °C (-328 °F to 392 °F)

WIRELESS	
RF Frequency	2.45 GHz IEEE 802.15.4 ultra-low power wireless transceiver with fully bi-directional communication
Band	ISM band 2.405-2.475 GHz
Maximum Output Power	+0 dBm typical
Receiver Sensitivity (RFC1000)	-95 dBm typical
Transmission Distance (to data loggers)	RFC1000, RFC1000-CE & RFC1000-IP69K 2,000 ft max. outdoors - line of sight unobstructed 500 ft max. indoors - typical urban environment
Transmission Distance (to other RFC1000's)	RFC1000 4,000 ft max. outdoors - line of sight unobstructed 1,000 ft max. indoors - typical urban environment RFC1000-CE 2,500 ft max. outdoors - line of sight unobstructed 700 ft max. indoors - typical urban environment RFC1000-IP69K 4,000 ft max. outdoors - line of sight unobstructed 1,000 ft max. indoors - typical urban environment

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

**BATTERY WARNING:** BATTERY MAY LEAK, FLAME OR EXPLODE IF DISASSEMBLED, SHORTED, CHARGED, CONNECTED TOGETHER, MIXED WITH USED OR OTHER BATTERIES, EXPOSED TO FIRE OR HIGH TEMPERATURE. DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN.

GENERAL	
Reading Rate	1 reading every second up to 1 reading every 24 hours
Memory	21,504 readings
LED Functionality	Green LED blinks every 5 seconds to indicate unit is logging Blue LED blinks every 15 seconds to indicate unit is in wireless mode Red LED blinks every 1 second to indicate alarm condition
Wrap Around	Yes
Start Modes	Immediate and delay start
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	9 V lithium or alkaline battery included; user replaceable with any 9 V battery
Battery Life	4 years typical at 1 minute reading rate
Data Format	For Display: °C, °F or Ω For Software: Date and time stamped °C, K, °F, °R or Ω
Time Accuracy	± 1 minute/month
Computer Interface	USB to mini USB, 250,000 baud for standalone operation or RFC1000 required for wireless operation
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 4.1.0.0 or later Secure Software version 4.1.3.0 or later
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH non-condensing
Dimensions	3.0 in x 3.5 in x 0.95 in (76.2 mm x 88.9 mm x 24.1 mm) Data logger only
Material	ABS Plastic
Weight	4.9 oz (140 g)
Approvals	US (FCC), CA (IC), CE, South Korea (KCC), China (CMIIT), Japan (LCIE)
Alarm	User configurable high and low audible, on-screen, email and text (SMS) alarms. Alarm Delay: A cumulative alarm delay may be set in which the device will activate the alarm (via LED) only when the device has recorded a user specified time duration of data.
Audible Alarm Functionality	1 Beep per second for reading alarm above/below threshold

## Ordering Information

RFRTDTEMP2000A	PN 901431-00	Wireless Precision RTD Based Temperature data logger
RFC1000	PN 901383-00	Wireless RF receiver/repeater. USB to mini USB adapter & power supply included
RFC1000-CE	PN 901338-00	Wireless RF transceiver/repeater, CE approved for Europe. USB to mini USB adapter & power supply included
RFC1000-IP69K	PN 901389-00	Wireless RF transceiver/repeater, splash proof with an IP69K rating. USB to mini USB adapter included
RFC1000 Cloud Relay	PN 901900-00	MadgeTech Cloud Services Data Logging Hub
RFC1000-CE Cloud Relay	PN 901901-00	MadgeTech Cloud Services Data Logging Hub, CE approved for Europe
U9VL-J	PN 901804-00	Replacement battery for RFRTDTemp2000A

For Quantity Discounts call (603) 456-2011 or email [sales@madgetech.com](mailto:sales@madgetech.com)

**Countries approved for use, purchase and distribution of the RFRTDTemp2000A:** Australia, Austria, Belgium, Bulgaria, Canada, Chile, China, Colombia, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Honduras, Hungary, Iceland, Ireland, Israel, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malaysia, Malta, Mexico, New Zealand, Norway, Peru, Poland, Portugal, Romania, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, The Netherlands, Turkey, United Kingdom, United States, Venezuela, Vietnam