

# RFRHTemp2000A

## Wireless Temperature and Humidity Data Logger

The RFRHTemp2000A is a wireless temperature and humidity data logger with digital display. Designed with external humidity and RTD based temperature sensors, the device provides a fast response time for both parameters.

The convenient digital display provides the current reading for both the humidity and temperature channels with minimum, maximum and average statistics accessible for a quick snapshot of the logged data.

The RFRHTemp2000A features user programmable alarm settings for both temperature and humidity parameters. An audible buzzer and LED alarm indicator notifies users when the temperature or humidity is above or below the threshold set in the alarm. Email and text alarms can also be configured and sent from within the software, allowing users to be notified almost anywhere.

The RFRHTemp2000A 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 RFRHTemp2000A is compatible with the latest MadgeTech 4 Software.



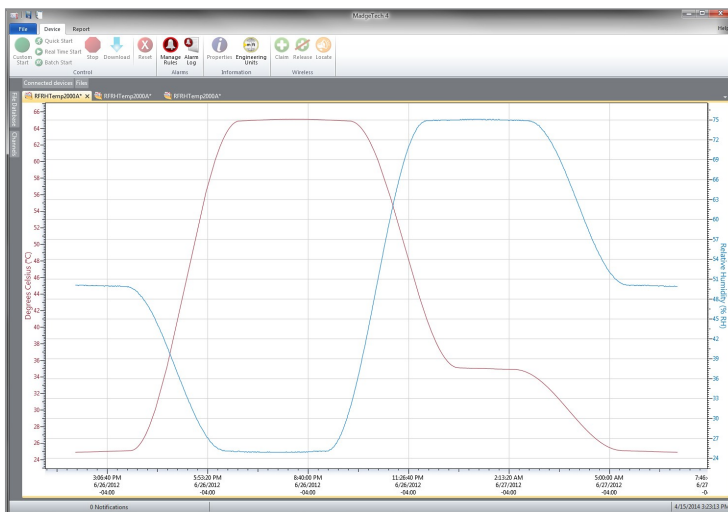
### Features

- Wireless Two-Way Communication
- View Data in Real Time
- 3 Year Battery Life
- Battery Life Indicator
- Field Upgradeable
- Audible and LED Alarm Indicators
- Cumulative Alarm Delay

### Benefits

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

## MadgeTech 4 Software Features

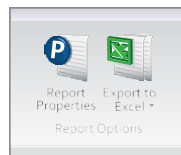


Graph View

- 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 Zone | Data     |
|------------|-----------|----------|
| 1:13:37 PM | -04:00    | -00.0000 |
| 1:14:37 PM | -04:00    | -00.0100 |
| 1:15:37 PM | -04:00    | -00.0200 |
| 1:16:37 PM | -04:00    | -00.0300 |
| 1:17:37 PM | -04:00    | -00.0400 |
| 1:18:37 PM | -04:00    | -00.0500 |
| 1:19:37 PM | -04:00    | -00.0600 |
| 1:20:37 PM | -04:00    | -00.0700 |
| 1:21:37 PM | -04:00    | -00.0800 |
| 1:22:37 PM | -04:00    | -00.0900 |
| 1:23:37 PM | -04:00    | -00.1000 |
| 1:24:37 PM | -04:00    | -00.1100 |
| 1:25:37 PM | -04:00    | -00.1200 |

Tabular Data View

Perform actions when any of the following conditions:

Any device ☐ Connected ☒ At a time ☐ Connected ☒

When conditions are met, do the following:

Create reports ☐

Automation

### Applications

- Clean Rooms
- Laboratories and Hospitals
- Medical and Pharmaceutical
- Warehouse mapping
- Storage of Perishable Goods
- Chemical Storage
- Incubator Monitoring
- Greenhouse Monitoring
- HVAC
- Bakery/Cereal Production

## SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call 1300 662 720 for details.

| TEMPERATURE                        |  |
|------------------------------------|--|
| Internal Channel Temperature Range | -20 °C to +60 °C (-4 °F to +140 °F)                                      |
| Resolution                         | 0.01 °C (0.018 °F)   |
| Calibrated Accuracy                | ±0.5 °C at 0 °C to +55 °C (± 0.9 °F at 32 °F to 131 °F)                  |
| Response Time                      | t63 - 302 seconds to 63% of change<br>t90 - 710 seconds to 90% of change |

| HUMIDITY                 |   |
|--------------------------|---|
| Humidity Range           | 0 %RH to 95 %RH   |
| Resolution               | 0.1 %RH   |
| Calibrated Accuracy      | ±3.0 %RH  |
| Specified Accuracy Range | 25 %RH to 75 %RH; +20 °C to +40 °C<br>Hysteresis Error 1 % typical, 3 % Maximum |
| Response Time            | 2 minutes to 90% of change  |

| 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<br>2,000 ft max. outdoors - line of sight unobstructed<br>500 ft max. indoors - typical urban environment  |
| Transmission Distance (to other RFC1000's) | RFC1000<br>4,000 ft max. outdoors - line of sight unobstructed<br>1,000 ft max. indoors - typical urban environment<br>RFC1000-CE<br>2,500 ft max. outdoors - line of sight unobstructed<br>700 ft max. indoors - typical urban environment<br>RFC1000-IP69K<br>4,000 ft max. outdoors - line of sight unobstructed<br>1,000 ft max. indoors - typical urban environment |

**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.

## Ordering Information

|                        |              |   |
|------------------------|--------------|---|
| RFRHTEMP2000A          | PN 901423-00 | Wireless Temperature and Humidity data logger with LCD  |
| 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   |
| Power Adapter          | PN 901839-00 | Replacement USB universal power adapter   |
| U9VL-J                 | PN 901804-00 | Replacement battery for RFRHTemp2000A   |

Countries approved for use, purchase and distribution of the RFRHTemp2000A: 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

| GENERAL                        |   |
|--------------------------------|---|
| Reading Rate                   | 1 reading every second up to 1 reading every 24 hours   |
| Memory                         | 16,128 per channel  |
| LED Functionality              | Green LED blinks every 5 seconds to indicate unit is logging<br>Blue LED blinks every 15 seconds to indicate unit is in wireless mode<br>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                   | 3 years typical at 1 minute reading rate  |
| Data Format                    | For Display: °C or °F, %RH<br>For Software: Date and time stamped °C, K, °F, or °R, %RH, mg/mL, Dew Point - °C/K/°F/°R  |
| 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<br>Secure Software version 4.1.3.0 or later  |
| Operating Environment          | -20 °C to +60 °C (-4 °F to +140 °F),<br>0 %RH to 95 %RH non-condensing  |
| Dimensions                     | 3.0 in x 3.5 in x 0.95 in<br>(76.2 mm x 88.9 mm x 24.1 mm) Data logger only   |
| Material                       | ABS Plastic   |
| 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.<br>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   |