

# RFCO<sub>2</sub>RHTEMP2000A

## WIRELESS CO<sub>2</sub>, HUMIDITY & TEMPERATURE DATA LOGGER



### Features

- Battery Life Indicator
- Digital Display
- Direct USB Interface
- AC Power connection via USB
- Configurable Alarms
- Ability to manually reset statistics
- 16 month battery life at 10 Minute Reading Rate
- NIST Traceable Calibration

### Benefits

- Digital Display Provides Instant Access to Current Readings and Statistics
- Minimal Long-Term Maintenance
- Readings Displayed in User Selected Measurement Unit
- Time and Money Saving with Battery Life Management
- Continuous Monitoring
- E-mail, Text Message and Audible Alerts Provide Assurance and Quality Control

### Applications

- Incubator Monitoring
- Building Studies (hospitals, schools, offices)
- HVAC System Testing
- Agricultural Studies
- Indoor Air Quality (IAQ) Studies

The RFCO<sub>2</sub>RHTemp2000A is a wireless data logger that measures and records carbon dioxide, humidity, and temperature levels in a variety of applications. This data logger is ideal for use in air quality studies including HVAC applications and much more.

The RFCO<sub>2</sub>RHTemp2000A data logger comes with a 72 inch cable connected to the CO<sub>2</sub> sensor, making it ideal for placement within enclosed environments such as an incubator to ensure optimum levels. The logger features an LCD screen which provides instant access to current readings, as well as minimum, maximum, and average statistics. The device also features configurable alarms, battery life indicator, and the ability to reset statistics without impacting the data collection. The logger features a convenient wall mount, while the CO<sub>2</sub> sensor is equipped with dual lock for easy and secure placement and effortless mobility.

Temperature recorded on the RFCO<sub>2</sub>RHTemp2000A can be expressed in °C, °F, °R, or °K while humidity can be shown in %RH, mg/ml, and Dew Point. Carbon dioxide can be expressed as either ppm or as a percentage. All units can be viewed on both the LCD screen as well as in the software.

The device can be used to determine ventilation efficiency in a variety of environments including buildings, offices, hospitals, schools, and laboratories. By determining the levels of carbon dioxide, improvements can be made to the ventilation systems and energy saving opportunities become more easily identified.

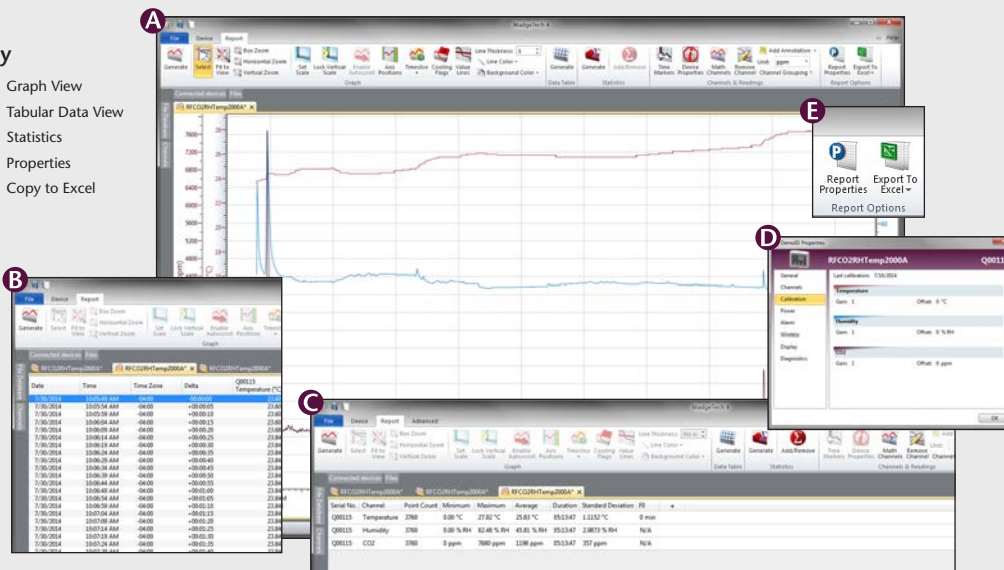
The RFCO<sub>2</sub>RHTemp2000A can be used as a standalone data logger, or may used wirelessly to transmit collected data back to a central PC for real time monitoring. The RFCO<sub>2</sub>RHTemp2000A can be used as a single wireless data logging system, or can be expanded to a large scale system including hundreds of data loggers. The RFCO<sub>2</sub>RHTemp2000A utilizes the latest version of the MadgeTech 4 Data Logger Software to analyze data or generate reports in graphs or tabular formats. Summary and statistic views are also available for further analysis, as well as the capability to export to Excel®.



## MADGETECH DATA LOGGER SOFTWARE

### Key

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Properties
- E** Copy to Excel



### Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view

# RFCO<sub>2</sub>RHTEMP2000A SPECIFICATIONS\*

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

## Carbon Dioxide (CO<sub>2</sub>)

Measurement Range:	0 ppm to 200,000 ppm
Measurement Resolution:	10 ppm
Calibrated Accuracy:	±70 ppm

## Temperature

Measurement Range:	0 °C to +55 °C (+32 °F to 131 °F)
Measurement Resolution:	0.08 °C
Calibrated Accuracy:	±1 °C

## Humidity

Measurement Range:	0 %RH to 95 %RH
Measurement Resolution:	0.08 %RH
Calibrated Accuracy:	±3 %RH from 25 %RH to 75 %RH @ 25 °C, 7 %RH otherwise

## General

Reading Rate:	1 reading every second up to 1 reading every 24 hours
Memory:	10,752 readings per channel
LED Functionality:	<ul style="list-style-type: none"> <li>Green LED blinks every 5 seconds to indicate unit is logging</li> <li>Blue LED blinks every 15 seconds to indicate unit is in wireless mode</li> <li>Red LED blinks every 1 second to indicate alarm condition</li> </ul>
Memory Wrap Around:	Yes
Start Modes:	Immediate Start & Delayed Start
Battery Type:	Ultralife 9V Lithium included; user replaceable
Battery Life:	Approximately 16 months typical at a 10 minute reading rate
Approvals:	US (FCC), CA (IC), CE, South Korea (KCC), China (CMIIT), Japan (LCIE)
Time Accuracy:	±1 minute/month @ 25 °C

**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.

Computer Interface:	USB to mini USB, 250,000 baud for standalone operation or RFC1000/ RFC1000-CE/RFC1000-IP69K required for wireless operation
Operating System Compatibility:	XP SP3/Vista/Windows 7/Windows 8
MadgeTech Software Compatibility:	The RFCO <sub>2</sub> RHTemp2000A is compatible with MadgeTech Standard Software version 4.2.1.1 & MadgeTech Secure Software version 4.2.0.1 or later
Operating Environment:	0 °C to +55 °C (-4 °F to +131 °F) 0 %RH to 95 %RH non-condensing 0.002 PSIA to 100 PSIA
Dimensions:	Data logger: 3.0 in x 3.5 in x 0.95 in (76.2 mm x 88.9 mm x 24.1 mm) Sensor: 1.98 in x 1.98 in x 1.15 in (50.3 mm x 50.3 mm x 29.2 mm)
Weight:	140 g (4.9 oz)
Enclosure Material:	ABS Plastic
Alarm:	User configurable 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

## 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 Operation (channels 11 through 25) @ 250 kbps data rate
Transceiver Sensitivity (RFC1000):	-95 dBm typical
Transmission Distance (to data loggers)	<ul style="list-style-type: none"> <li>RFC1000, RFC1000-CE &amp; RFC1000-IP69K</li> <li>2,000 ft max. outdoors - line of sight unobstructed</li> <li>500 ft max. indoors - typical urban environment</li> </ul>
Transmission Distance (to other RFC1000's)	<ul style="list-style-type: none"> <li>RFC1000</li> <li>4,000 ft max. outdoors - line of sight unobstructed</li> <li>1,000 ft max. indoors - typical urban environment</li> <li>RFC1000-CE</li> <li>2,500 ft max. outdoors - line of sight unobstructed</li> <li>700 ft max. indoors - typical urban environment</li> <li>RFC1000-IP69K</li> <li>4,000 ft max. outdoors - line of sight unobstructed</li> <li>1,000 ft max. indoors - typical urban environment</li> </ul>

## ORDERING INFORMATION

MODEL	DESCRIPTION
RFCO <sub>2</sub> RHTEMP2000A	Wireless CO <sub>2</sub> , Humidity & Temperature Data Logger.
RFC1000	Wireless RF transceiver/repeater. USB to mini USB adapter & power supply included.
RFC1000-CE	Wireless RF transceiver/repeater, CE approved for Europe. USB to mini USB adapter & power supply included.
RFC1000-IP69K	Wireless RF transceiver/repeater, splash proof with an IP69K rating. USB to mini USB adapter included.
U9VL-J	Replacement battery for RFCO <sub>2</sub> RHTemp2000A.

### Countries approved for use, purchase and distribution of the RFCO<sub>2</sub>RHTemp2000A:

Australia, Austria, Belgium, Bulgaria, Canada, Chile, China, Columbia, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Honduras, Hungary, Iceland, Ireland, Israel, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, New Zealand, Norway, Peru, Poland, Portugal, Romania, Saudi Arabia, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, The Netherlands, Turkey, United Kingdom, United States, Venezuela, Vietnam



Contact:  
Industrial Process Measurement, Inc.  
3910 Park Avenue, Unit 7  
Edison, NJ 08820  
732-632-6400  
support@instrumentation2000.com  
http://www.instrumentation2000.com