

RFCO₂RHTemp2000A

Wireless CO₂, Humidity and Temperature Data Logger

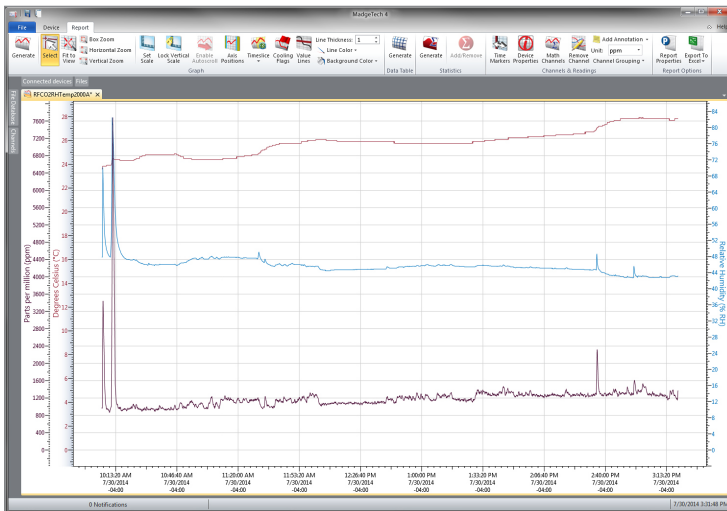
The RFCO₂RHTemp2000A is a wireless data logger that measures and records carbon dioxide, humidity, and temperature levels in a variety of applications. The RFCO₂RHTemp2000A data logger comes with a 16 ft cable connected to the CO₂ sensor, making it ideal for placement within enclosed environments such as an incubator to ensure optimum levels.

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 convenient digital display provides the current reading for all 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.

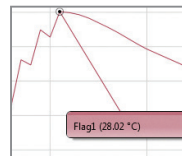
The RFCO₂RHTemp2000A can be used as a single, wireless data logging system, or it can be expanded to a large scale system, which can include hundreds of data loggers measuring a number of areas (additional MadgeTech wireless data loggers and transceivers may be required). The RFCO₂RHTemp2000A is compatible with the latest MadgeTech 4 Software.

MadgeTech 4 Software Features

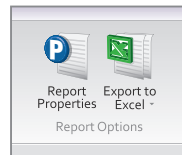


Graph View

- 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	Delta
1:13:37 PM	-0400	-00:00:00
1:14:37 PM	-0400	+00:00:00
1:15:37 PM	-0400	+00:00:00
1:16:37 PM	-0400	+00:00:00
1:17:37 PM	-0400	+00:00:00
1:18:37 PM	-0400	+00:00:00
1:19:37 PM	-0400	+00:00:00
1:20:37 PM	-0400	+00:00:00
1:21:37 PM	-0400	+00:00:00
1:22:37 PM	-0400	+00:00:00
1:23:37 PM	-0400	+00:00:00
1:24:37 PM	-0400	+00:00:00
1:25:37 PM	-0400	+00:00:00

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



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

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

RFCO₂RHTemp2000A

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply.

CARBON DIOXIDE (CO ₂)		Time Accuracy	± 1 minute/month @ 25 °C
Measurement Range	0 ppm to 200,000 ppm	Computer Interface	USB to mini USB, 250,000 baud for standalone operation or RFC1000 required for wireless operation
Resolution	10 ppm	Operating System Compatibility	Windows XP SP3 or later
Calibrated Accuracy	±70 ppm ± 5% of the reading	Software Compatibility	Standard Software version 4.2.1.0 or later Secure Software version 4.2.0.0 or later
Sensor Warm Up Time	30 seconds	Operating Environment	0 °C to +55 °C (+32 °F to +131 °F) 0 %RH to 95 %RH non-condensing; 13.77 PSIA to 100 PSIA
TEMPERATURE		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) Cable Length: 16 ft (192 in)
Measurement Range	0 °C to +55 °C (+32 °F to +131 °F)	Material	ABS Plastic
Resolution	0.08 °C (0.144 °F)	Weight	4.9 oz (140 g)
Calibrated Accuracy	±1.0 °C at +20 °C to +50 °C (±1.8 °F at 68 °F to 122 °F)	Approvals	US (FCC), CA (IC), CE, South Korea (KCC), China (CMIIT), Japan (LCIE)
HUMIDITY		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.
Measurement Range	0 %RH to 95 %RH	Audible Alarm Functionality	1 Beep per second for reading alarm above/below threshold
Resolution	0.08 %RH	WIRELESS	
Calibrated Accuracy	±3 %RH	RF Frequency	2.45 GHz IEEE 802.15.4 ultra-low power wireless transceiver with fully bi-directional communication
Specified Accuracy Range	25 %RH to 75 %RH +20 °C to +40 °C Hysteresis Error 1 % typical, 3 % Maximum	Band	ISM band 2.405-2.475 GHz
GENERAL		Maximum Output Power	+0 dBm typical
Reading Rate	1 reading every second up to 1 reading every 24 hours	Receiver Sensitivity (RFC1000)	-95 dBm typical
Memory	10,752 readings per channel	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
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	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
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	Approximately 16 months typical at a 10 minute reading rate		
Data Format	Temperature: °C, °F, °R, K Humidity: %RH, mg/mL, Dew Point CO ₂ : ppm, %		

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

RFCO ₂ RHTemp2000A	PN 901391-00	Wireless CO ₂ , Humidity & Temperature data logger
RFC1000	PN 901383-00	Wireless RF receiver/repeater. USB to mini USB adapter & power supply included
RFC1000-CE	PN 901388-00	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 RFCO ₂ RHTemp2000A

Countries approved for use, purchase and distribution of the RFCO₂RHTemp2000A: 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