RFRTDTEMP2000A
WIRELESS PRECISION RTD BASED TEMPERATURE DATA LOGGER

MADGETECH
WE BUILD DATA LOGGERS

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
- +/-0.05 °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

The RFRTDTemp2000A is an RTD-based, wireless temperature data logger with display. This data logger is ideal for applications that require high accuracy temperature monitoring such as within laboratories, pharmaceutical and biotech industries. The RFRTDTemp2000A accepts 2, 3 or 4 wire 100 Ω platinum RTD's and features a device accuracy of +/-0.05 °C. Starting, stopping and downloading 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.
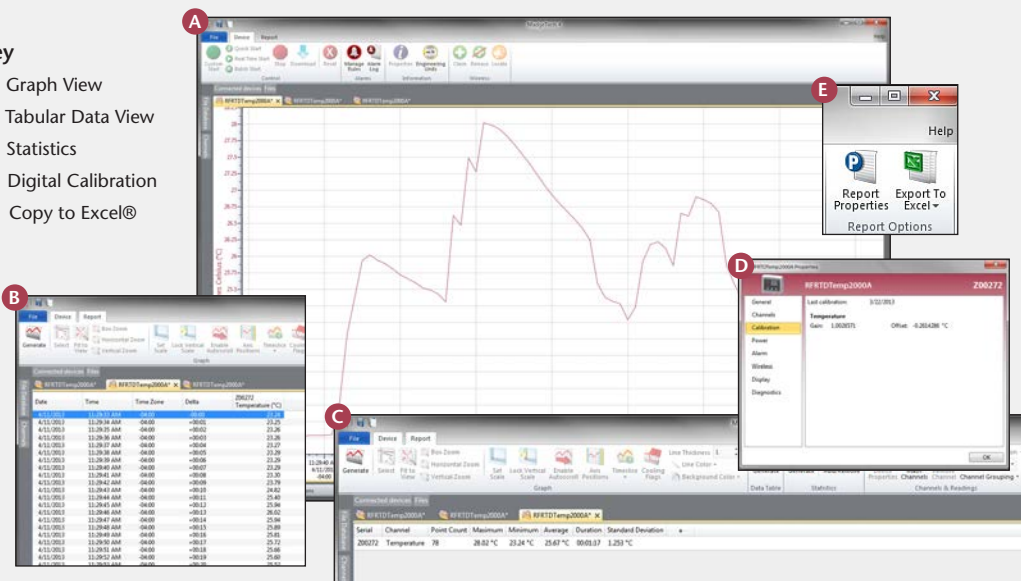
The convenient digital display provides the current reading as well as minimum, maximum and average statistics for a convenient snap shot of the logged data. For instant, out of range notification, an audible buzzer as well as LED alarm indicator notifies users when the temperature is above or below the user specified alarm setting. Through the software, email and text message alarms can also be sent.

The RFRTDTemp2000A can be used as a single, wireless data logging system, yet can be expanded to a large scale system, which can include hundreds of data loggers measuring a number of areas (additional MadgeTech wireless loggers and transceivers may be required). The RFRTDTemp2000A utilizes the new MadgeTech 4 Software. Data can be viewed in graphical or tabular formats and summary and statistics views are available for further analysis. The software features export to Excel®, data annotation, digital calibration and more.

MADGETECH DATA LOGGER SOFTWARE

Key
- **A** Graph View
- **B** Tabular Data View
- **C** Statistics
- **D** Digital Calibration
- **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
- Multilingual

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RFRTDTEMP2000A SPECIFICATIONS*

Temperature

External Channel Temperature Range:	-200 °C to +850 °C (-392 °F to +1562 °F)
Temperature Resolution:	0.001 °C (0.0018 °F)
Calibrated Accuracy:	±0.01 Ω (±0.05 °C)
Response Time:	Depending on type of RTD sensor.

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 Start & Delayed Start
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Battery Type:	Ultralife 9V Lithium included; **user replaceable**
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

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.

Time Accuracy:	± 1 minute/month
Computer Interface:	USB to mini USB, 250,000 baud for standalone operation or RFC1000/RFC1000-CE/RFC1000-IP69K required for wireless operation
Software:	XP SP3/Vista/Windows 7/Windows 8 (MadgeTech 4 only)
Operating Environment:	-20 °C to +60 °C (-4 °F to +140 °F) 0 %RH to 95 %RH non-condensing
Dimensions:	3.5 in x 3.25 in x 0.95 in (88.9 mm x 82.6 mm x 24.1 mm) - *Data logger only*
Weight:	4.1 oz (0.2563 lbs)
Enclosure Material:	ABS Plastic
Alarm:	Programmable high and low limits; alarm is activated when temperature reaches or exceeds set limits.
	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
Approvals:	US (FCC), CA (IC), CE, South Korea (KCC), China (CMIIT), Japan (LCIE)

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
Maximum Output Power:	+0dBm typical
Transceiver Sensitivity (RFC1000):	-95dBm 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

ORDERING INFORMATION

MODEL	DESCRIPTION
RFRTDTEMP2000A	Wireless Precision RTD Based 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
Calibration Certificate	Calibration Certificate available for data logger
U9VL-J	Replacement battery for RFRTDTemp2000A

Countries approved for use, purchase and distribution of the RFRTDTemp2000A:

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, 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