

RFTCTemp2000A

Wireless Thermocouple Temperature Data Logger



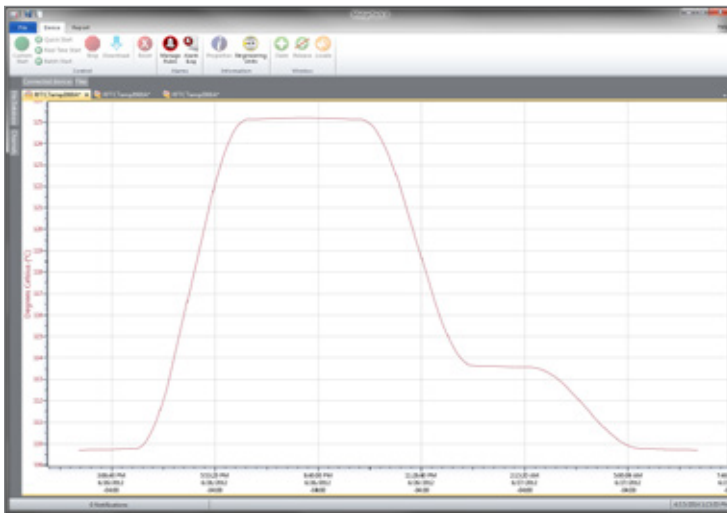
Probe Sold Separately

The RFTCTemp2000A is a wireless thermocouple based data logger with digital display. The device measures ambient temperatures, as well as remote temperature via a thermocouple (sold separately), making it ideal for monitoring perishable goods, vaccine storage, chemicals and more. Starting, stopping and downloading from the device are all performed wirelessly using the RFC1000 wireless transceiver, allowing customer 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 period 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.

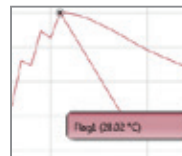
The RFTCTemp2000A can be used as a single, wireless data logging system, or it can be expanded to a large scale system, which can include hundreds of data loggers measuring a number of areas (additional MadgeTech wireless data loggers and transceivers may be required). The RFTCTemp2000A is compatible with the latest MadgeTech 4 Software.

MadgeTech 4 Software Features

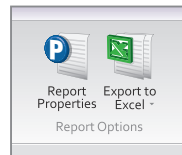


Graph View

- 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



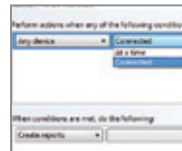
Cooling Flags



Export to Excel

| Time | Time Zone | Data |
|------------|-----------|---------|
| 1:00:00 PM | -04:00 | 40.0000 |
| 1:05:00 PM | -04:00 | 40.0000 |
| 1:10:00 PM | -04:00 | 40.0000 |
| 1:15:00 PM | -04:00 | 40.0000 |
| 1:20:00 PM | -04:00 | 40.0000 |
| 1:25:00 PM | -04:00 | 40.0000 |
| 1:30:00 PM | -04:00 | 40.0000 |
| 1:35:00 PM | -04:00 | 40.0000 |
| 1:40:00 PM | -04:00 | 40.0000 |
| 1:45:00 PM | -04:00 | 40.0000 |
| 1:50:00 PM | -04:00 | 40.0000 |
| 1:55:00 PM | -04:00 | 40.0000 |
| 2:00:00 PM | -04:00 | 40.0000 |
| 2:05:00 PM | -04:00 | 40.0000 |
| 2:10:00 PM | -04:00 | 40.0000 |
| 2:15:00 PM | -04:00 | 40.0000 |
| 2:20:00 PM | -04:00 | 40.0000 |
| 2:25:00 PM | -04:00 | 40.0000 |
| 2:30:00 PM | -04:00 | 40.0000 |
| 2:35:00 PM | -04:00 | 40.0000 |
| 2:40:00 PM | -04:00 | 40.0000 |
| 2:45:00 PM | -04:00 | 40.0000 |
| 2:50:00 PM | -04:00 | 40.0000 |
| 2:55:00 PM | -04:00 | 40.0000 |
| 3:00:00 PM | -04:00 | 40.0000 |

Tabular Data View



Automation

Features

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

Benefits

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

Applications

- Clean Rooms
- Oven Temperature Monitoring
- Laboratories and Hospitals
- Medical and Pharmaceutical
- Warehouse Mapping
- Storage of Perishable Goods
- Chemical Storage
- Incubator Monitoring
- Refrigerators and Freezers

SPECIFICATIONS

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

| TEMPERATURE | |
|------------------------------------|-------------------------------------|
| Internal Channel Temperature Range | -20 °C to +60 °C (-4 °F to +140 °F) |
| Resolution | 0.1 °C (0.18 °F) |
| Calibrated Accuracy | ±0.5 °C (± 0.9 °F) |
| Response Time | 10 minutes free air |

| 16 REMOTE CHANNELS | | | |
|------------------------------|---|------------|-----------|
| Thermocouple Connection | Female subminiature (SMP) (MP model) Pluggable screw terminal (TB model) | | |
| Cold Junction Compensation | Automatic, based on internal channel | | |
| Max. Thermocouple Resistance | 100 Ω | | |
| Thermocouple | Range (°C) | Resolution | Accuracy* |
| J | -210 to +760 | 0.1 °C | ±0.5 °C |
| K | -270 to +1370 | 0.1 °C | ±0.5 °C |
| T | -270 to +400 | 0.1 °C | ±0.5 °C |
| E | -270 to +980 | 0.1 °C | ±0.5 °C |
| R | -50 to +1760 | 0.5 °C | ±2.0 °C |
| S | -50 to +1760 | 0.5 °C | ±2.0 °C |
| B | +50 to +1820 | 0.5 °C | ±2.0 °C |
| N | -270 to +1300 | 0.1 °C | ±0.5 °C |
| Response Time | τ = 2 minutes to 63% of change | | |

| 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 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 | 3 years typical at 1 minute reading rate |

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

| | | |
|------------------------|--------------|---|
| RFTCTEMP2000A-MP | PN 901434-00 | Wireless thermocouple based data logger with LCD, standard mini plugs |
| RFTCTEMP2000A-TB | PN 901440-00 | Wireless thermocouple based data logger with LCD, pluggable screw terminals |
| 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 RFTCTemp2000A |

Countries approved for use, purchase and distribution of the RFTCTemp2000A: 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



| | |
|--------------------------------|---|
| Data Format | For Display: °C or °F For Software: Date and time stamped °C, K, °F, or °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 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 | 4.1 oz (0.2563 lbs) |
| 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 |

| 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 |

*Thermocouple accuracy is specified with a 24 AWG.