



# RFRTDTEMP2000A SPECIFICATIONS\*

\*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY. CALL (603) 456-2011 OR GO TO [MADGETECH.COM](http://MADGETECH.COM) FOR DETAILS.

## Temperature\*\*

|                                       |  |
|---------------------------------------|--|
| <b>Measurement Temperature Range:</b> | 18 Ω to 400 Ω<br>-200 °C to +850 °C (-328 °F to +1562 °F)<br>(Probe Dependent) |
| <b>Temperature Resolution:</b>        | 0.005 Ω<br>0.01 °C (0.018 °F) (Probe Dependent)                                |
| <b>Calibrated Accuracy:</b>           | ±0.015 Ω<br>±0.04 °C (±0.072 °F) (Probe Dependent)                             |
| <b>Response Time:</b>                 | Depending on type of RTD sensor.   |
| <b>Calibration Accuracy Range:</b>    | 18.5 Ω to 175.9 Ω<br>-200 °C to +200 °C (-328 °F to 392 F)                     |

## General

|                           |  |
|---------------------------|--|
| <b>Reading Rate:</b>      | 1 reading every second up to 1 reading every 24 hours  |
| <b>Memory:</b>            | 21,504 readings  |
| <b>LED Functionality:</b> | <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> |
| <b>Wrap Around:</b>       | Yes  |
| <b>Start Modes:</b>       | Immediate Start & Delayed Start  |
| <b>Calibration:</b>       | Digital calibration through software   |
| <b>Calibration Date:</b>  | Automatically recorded within device   |
| <b>Battery Type:</b>      | Ultralife 9V Lithium included;<br>user replaceable   |
| <b>Battery Life:</b>      | 4 years typical at 1 minute reading rate   |
| <b>Data Format:</b>       | <ul style="list-style-type: none"> <li>For Display: °C, °F or Ω</li> <li>For Software: Date and time stamped °C, K, °F, °R or Ω</li> </ul>   |

\*\*Temperature specifications based on ideal 100 Ω Pt RTD compliant with IEC 751 (1983) and ITS-90, 5000 Ω FSR (accuracy based on 36 in lead wire RTD with 4 wire configuration)

**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.

|                                     |  |
|-------------------------------------|--|
| <b>Time Accuracy:</b>               | ± 1 minute/month   |
| <b>Computer Interface:</b>          | USB to mini USB, 250,000 baud for standalone operation or RFC1000/RFC1000-CE/RFC1000-IP69K required for wireless operation   |
| <b>Software:</b>                    | MadgeTech 4: Windows XP SP3 or later   |
| <b>Operating Environment:</b>       | -20 °C to +60 °C (-4 °F to +140 °F)<br>0 %RH to 95 %RH non-condensing  |
| <b>Dimensions:</b>                  | 3.5 in x 3.25 in x 0.95 in<br>(88.9 mm x 82.6 mm x 24.1 mm) - Data logger only   |
| <b>Weight:</b>                      | 4.9 oz (140 g)   |
| <b>Enclosure Material:</b>          | ABS Plastic  |
| <b>Alarm:</b>                       | Programmable high and low limits; alarm is activated when temperature reaches or exceeds set limits.<br><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. |
| <b>Audible Alarm Functionality:</b> | 1 Beep per second for reading alarm above/below threshold  |
| <b>Approvals:</b>                   | US (FCC), CA (IC), CE, South Korea (KCC), China (CMIIT), Japan (LCIE)  |

## Wireless

|   |   |
|---|---|
| <b>RF Frequency:</b>                              | 2.45 GHz IEEE 802.15.4 ultra-low power wireless transceiver with fully bi-directional communication   |
| <b>Band:</b>                                      | ISM band 2.405-2.475 GHz Operation (channels 11 through 25) @ 250 kbps  |
| <b>Maximum Output Power:</b>                      | +0dBm typical   |
| <b>Transceiver Sensitivity (RFC1000):</b>         | -95dBm typical  |
| <b>Transmission Distance (to data loggers)</b>    | <ul style="list-style-type: none"> <li><b>RFC1000, RFC1000-CE &amp; RFC1000-IP69K</b><br/>2,000 ft max. outdoors - line of sight unobstructed<br/>500 ft max. indoors - typical urban environment</li> </ul>  |
| <b>Transmission Distance (to other RFC1000's)</b> | <ul style="list-style-type: none"> <li><b>RFC1000</b><br/>4,000 ft max. outdoors - line of sight unobstructed<br/>1,000 ft max. indoors - typical urban environment</li> <li><b>RFC1000-CE</b><br/>2,500 ft max. outdoors - line of sight unobstructed<br/>700 ft max. indoors - typical urban environment</li> <li><b>RFC1000-IP69K</b><br/>4,000 ft max. outdoors - line of sight unobstructed<br/>1,000 ft max. indoors - typical urban environment</li> </ul> |

## ORDERING INFORMATION

| MODEL          | PART NUMBER | DESCRIPTION   |
|----------------|-------------|---|
| RFRTDTEMP2000A | 901431-00   | Wireless Precision RTD Based Temperature data logger  |
| RFC1000        | 901383-00   | Wireless RF transceiver/repeater. USB to mini USB adapter & power supply included                         |
| RFC1000-CE     | 901388-00   | Wireless RF transceiver/repeater, CE approved for Europe. USB to mini USB adapter & power supply included |
| RFC1000-IP69K  | 901389-00   | Wireless RF transceiver/repeater, splash proof with an IP69K rating. USB to mini USB adapter included     |
| U9VL-J         | 901804-00   | Replacement battery for RFRTDTemp2000A  |

For Quantity Discounts call (603) 456-2011 or email [sales@madgetech.com](mailto:sales@madgetech.com)

### 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