

## Wireless Thermocouple Temperature Data Logger with Display

### OM-CP-RFTCTEMP2000A



- ✓ Wireless 2-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

The OM-CP-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 OM-CP-RFC1000-EXT wireless transceiver, allowing the 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. 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. Through the software, email and text message alarms can also be sent.

The OM-CP-RFTCTEMP2000A also features programmable trigger settings for applications in which temperature logging is critical only above or below a certain temperature. This information may be programmed into the device, and the data logger will only begin to log data to memory, once the temperature limit has been exceeded.

The OM-CP-RFTCTEMP2000A 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 wireless loggers and transceivers may be required).

Data retrieval is simple. Plug the device into an available USB port and our easy-to-use software does the rest. The software converts a PC into a real-time strip chart recorder.



OM-CP-RFTCTEMP2000A with mounting bracket and 5SC Series thermocouple (sold separately—visit [omega.com](http://omega.com) for details), shown actual size.

The data logger software is a powerful, analytic tool. 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.

### Specifications

#### TEMPERATURE Internal Channel

#### Temperature Range:

-20 to 60°C (-4 to 140°F)

#### Temperature Resolution:

0.1°C (0.18°F)

#### Calibrated Accuracy:

±0.10°C (±0.18°F)

0 to 55°C (32 to 131°F)

**Response Time:** 10 minutes free air

## REMOTE CHANNEL

**Thermocouple Connection:** Female subminiature (SMP) connector

**Cold Junction Compensation:** Automatic based on internal channel

**Maximum Thermocouple Resistance:** 100 Ω

**Response Time:** 2 minutes to 63% of change

## WIRELESS

**RF Frequency:** 2.45GHz IEEE 802.15.4 ultra-low power wireless transceiver with fully bi-directional communication

**Band:** ISM band 2.405-2.48 GHz

**Output Power:** +0dBm typical

**Receiver Sensitivity (OM-CP-RFC1000-EXT):** -95dBm typical

**Range:** 610 m (2000') maximum outdoors (line of sight unobstructed); 152 m (500') maximum indoors (typical urban)

## GENERAL

**Reading Rate:** One reading every second up to one 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

**Memory Wrap Around:** Yes

**Start Modes:** Immediate start

**Calibration:** Digital calibration through software

**Calibration Date:** Automatically recorded within device

**Battery Type:** 9V lithium battery (included); user replaceable

**Battery Life:** 3 years typical at 1 minute reading rate

## 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 OM-CP-RFC1000-EXT required for wireless operation

**Software:** XP SP3/Vista/7/8 (32 and 64-bit)

**Operating Environment:** -20 to 60°C (-4 to 140°F), 0 to 95% RH non-condensing

**Dimensions:** 76.2 H x 88.9 W x 24.1 mm D (3.0 x 3.5 x 0.95") data logger only

**Weight:** 116 g (4.1 oz)

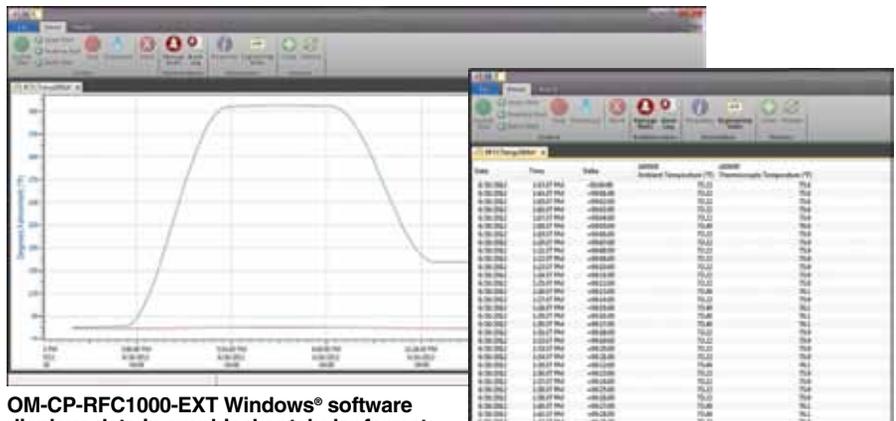
**Enclosure Material:** ABS plastic  
**Alarm:** Programmable high and low limits for temperature and humidity. Alarm is activated when temperature or humidity reaches or exceeds set limits.

**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

Thermocouple Type	Range	Resolution	Accuracy*
J	-210 to 760°C (-346 to 1400°F)	0.1°C	±0.5°C
K	-270 to 1370°C (-454 to 2498°F)	0.1°C	±0.5°C
T	-270 to 400°C (-454 to 752°F)	0.1°C	±0.5°C
E	-270 to 980°C (-454 to 1796°F)	0.1°C	±0.5°C
R	-50 to 1760°C (-58 to 3200°F)	0.5°C	±2.0°C
S	-50 to 1760°C (-58 to 3200°F)	0.5°C	±2.0°C
B	50 to 1820°C (122 to 3308°F)	0.5°C	±2.0°C
N	-270 to 1300°C (-454 to 2372°F)	0.1°C	±0.5°C

\*Accuracy is specified with a 24 AWG thermocouple.



OM-CP-RFC1000-EXT Windows® software displays data in graphical or tabular format, sold separately.

## To Order

Model No.	Description
OM-CP-RFTCTEMP2000A	Wireless thermocouple data logger with LCD display
OM-CP-RFTCTEMP2000A-CERT	Wireless thermocouple data logger with LCD display and NIST calibration certificate
OM-CP-RFC1000-EXT	Wireless transceiver package includes RF transceiver, USB cable, Windows software and operator's manual (not CE approved)
OM-CP-RFC1000-EXT-EUR	Wireless transceiver package includes RF transceiver, USB cable, Windows software and operator's manual (CE approved)
OM-CP-RFC1000-IP69K	Splash proof (IP69K) wireless transceiver package includes RF transceiver, USB cable, Windows software and operator's manual (not CE approved)
OM-CP-BAT103	Replacement 9V lithium battery

Comes complete with 9V lithium battery and mounting bracket. Operator's manual, Windows software and USB interface cable are included with the OM-CP-RFC1000-EXT wireless transceiver package (required to operate the data logger, sold separately).

**Note:** Because of transmission frequency regulations, OM-CP-RFTCTEMP2000A wireless data loggers are only approved for use in the following countries: 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.

**2 Ordering Example:** OM-CP-RFTCTEMP2000A wireless thermocouple data logger with LCD display and OM-CP-RFC1000-EXT wireless transceiver package.