

Description	TCTemp2000
Temperature Sensor	Semiconductor
Temperature Range	-20 °C to +60 °C (-4 °F to +140 °F)
Temperature Resolution	0.1 °C (0.18 °F)
Remote Channel Temperature Sensor Range, Resolution & Accuracy	*See Table for Details
Cold Jct. Compensation	Automatic
Memory	131,071/channel
Reading Rate	1 reading every 2 seconds up to 1 reading every 24 hours
Channels	1 Internal & 1 Remote
Required Interface Package	IFC200
Baud Rate	115,200
Typical Battery Life	1 year with display off, 30 days with continuous LCD and no backlight
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH
Material	Black Anodized Aluminum
Dimensions	4.8 in x 3.3 in x 1.25 in (122 mm x 84 mm x 32 mm)
Approval	CE

\* Remote Channel Range, Resolution & Accuracy

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

### Battery Warning

**WARNING: DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN. DO NOT DISPOSE OF IN FIRE, RECHARGE, PUT IN BACKWARDS, DISASSEMBLE, OR MIX WITH OTHER BATTERY TYPES. MAY EXPLODE, FLAME, OR LEAK AND CAUSE PERSONAL INJURY.**

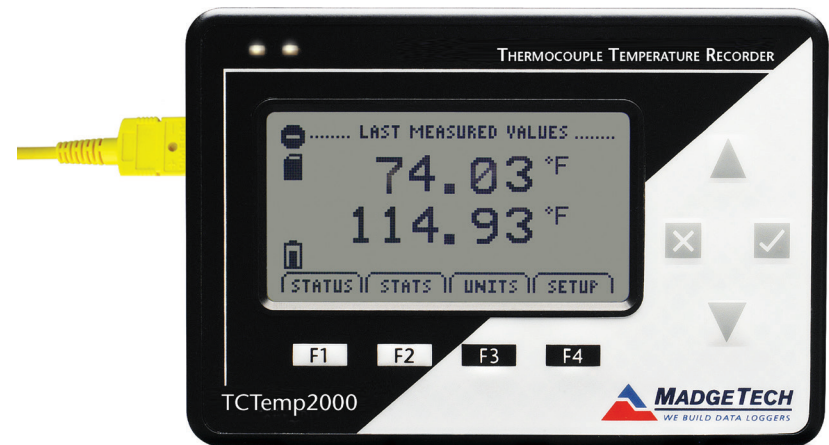
*Specifications subject to change.*

See MadgeTech's terms and conditions at [www.madgetech.com](http://www.madgetech.com)

**MadgeTech, Inc.**  
6 Warner Road • Warner, NH 03278  
Phone 603.456.2011 • Fax 603.456.2012  
[www.madgetech.com](http://www.madgetech.com) • [info@madgetech.com](mailto:info@madgetech.com)

DOC-1149035-00 REV 11 2014.11.26

## TCTemp2000



### TCTemp2000

Thermocouple Temperature Recorder with LCD

## Product Notes

The TCTemp2000 is a thermocouple based temperature data logger with LCD display. The convenient LCD provides access to the current temperature reading, as well as minimum, maximum and average statistics. For additional information refer to your TCTemp2000 manual and "Data Logger & Software Operating Manual".

### Backlight

The backlight uses a significant amount of battery life. Refer to the manual to configure the auto shut-off when not in use.

### Programming Thermocouple Type

To change the thermocouple type:

- In the **Connected Devices** panel, click the device desired.
- On the **Device Tab**, in the **Information Group**, click **Properties**. Or, right-click the device and select Properties in the context menu.
- On the **General Tab**, change the **Thermocouple type** in the drop down menu.
- Apply these changes, there will be a prompt to reset the device, select **yes**.

### Set Password

To password protect the device so that others cannot start, stop or reset the device;

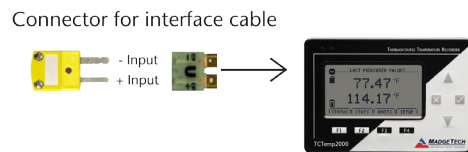
- In the **Connected Devices** panel, click the device desired.
- On the **Device Tab**, in the **Information Group**, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
- On the **General Tab**, click **Set Password**.
- Enter and confirm the password in the box that appears, then select **OK**.

## Wiring the Data Logger

### Wiring Diagrams

This diagram (right) shows how to connect the thermocouple.

**Warning:** Note the polarity instructions. Do not attach wires to the wrong terminals.



## Installation Guide

### Installing the Interface cable

- IFC200
- Insert the device into a USB port. The drivers will install automatically.

### Installing the software

Insert the Software USB Stick in an open USB port. If the autorun does not appear, locate the drive on the computer and double click on **Autorun.exe**. Follow the instructions provided in the Wizard.

## Device Operation

### Connecting and Starting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- Connect the USB end of the interface cable into an open USB port on the computer.
- The device will appear in the Connected Devices list, highlight the desired data logger.
- For most applications, select "**Custom Start**" from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging application and click "**Start**". ("**Quick Start**" applies the most recent custom start options, "**Batch Start**" is used for managing multiple loggers at once, "**Real Time Start**" stores the dataset as it records while connected to the logger.)
- The status of the device will change to "**Running**", "**Waiting to Start**" or "**Waiting to Manual Start**", depending upon your start method.
- Disconnect the data logger from the interface cable and place it in the environment to measure.

*Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.*

### Downloading data from a data logger

- Highlight the data logger in the Connected Devices list. Click "**Stop**" on the menu bar.
- Once the data logger is stopped, with the logger highlighted, click "**Download**". You will be prompted to name your report.
- Downloading will offload and save all the recorded data to the PC.

## Device Maintenance

### Battery Replacement

Materials: 3/32" HEX Driver (Allen Key) and a Replacement Battery (U9VL-I)

- Remove the back cover from the device by unscrewing the four screws.
- Remove the battery from its compartment and unsnap it from the connector.
- Snap the new battery into the terminals and verify it is secure.
- Replace the cover taking care not to pinch the wires. Screw the enclosure back together securely.

*Note: Be sure not to over tighten the screws or strip the threads.*

### Recalibration

The TCTemp2000 standard calibration is one point at 25 °C for the internal channel and 0 mV for the thermocouple channel.

#### Pricing:

Recalibration traceable to NIST	\$70.00
Recalibration	\$40.00

#### Additional Services:

Custom calibration and verification point options available, please call for pricing.

*Call for custom calibration options to accommodate specific application needs.*

*Prices and specifications subject to change. See MadgeTech's terms and conditions at [www.madgetech.com](http://www.madgetech.com)*

*To send devices to MadgeTech for calibration, service or repair, please use the MadgeTech RMA Process by visiting [www.madgetech.com](http://www.madgetech.com), then under the services tab, select RMA Process.*