

FEATURES

- ❖ N.I.S.T. traceable
- ❖ Real-time operation
- ❖ Low cost
- ❖ Programmable start time
- ❖ Reusable
- ❖ Miniature size
- ❖ User-friendly
- ❖ CE compliant

APPLICATIONS

- ❖ Extreme temperature monitoring
- ❖ Warehouse monitoring
- ❖ HVAC
- ❖ Medical/Pharmaceutical
- ❖ Oven profiling
- ❖ Museum monitoring
- ❖ Environmental studies
- ❖ Replace costly strip chart recorders
- ❖ Implement HACCP programs

Thermocouples are one of the most popular measuring devices available today. Because thermocouples measure wide temperature ranges, are relatively rugged and inexpensive to produce, they have become widely used throughout many different industries.

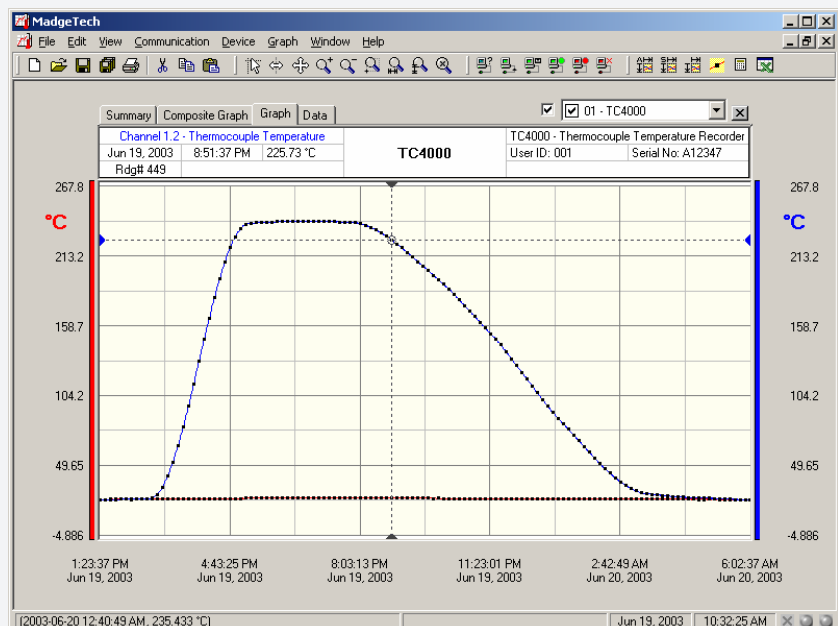
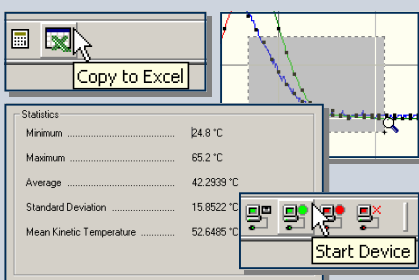


MadgeTech offers the TC4000 to fit almost any temperature measurement application. It is designed to accept eight different thermocouple types including types J, K, T, E, R, S, B and N and offers up to 16 bits of resolution. In addition to the thermocouple input, it also offers an internal temperature sensor that can be used to monitor and record ambient temperatures. The TC4000 comes standard with an SMP-style (miniature) connector for quick and easy setup. A removable screw terminal input connector is also available upon request.

With the user-friendly MadgeTech software, data is simply downloaded to a computer where the readings are displayed in the users' choice of degrees Celsius, Fahrenheit, Kelvin or Rankine. The software allows the user to view all data points and even a summary of the data being viewed for calculations such as Mean Kinetic Temperature. If additional analysis of the data needs to be performed, the data can easily be exported to MS Excel® by simply clicking a button.

SOFTWARE

MadgeTech's Data Recorder Software is an easy to use Windows-based software package that allows the user to effortlessly collect, display and analyze data. A variety of powerful tools allow you to examine, export, and print professional looking data with just a click of the mouse.



TC4000 SPECIFICATIONS

Internal Channel
Temperature Range: -40 to +80 °C
Temperature Resolution: 0.1 °C
Calibrated Accuracy: ±0.5 °C (0 to +50 °C)

Remote Channel
Thermocouple Types: J,K,T,E,R,S,B,N

Thermocouple connection: Female subminiature (SMP)

Cold Junction Compensation: Automatic, based on internal channel

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

Start Time: Software programmable start time and date, up to six months in advance
Real Time Recording: May be used with PC to monitor and record data in real time

Memory: 16,383 readings per channel
Reading Interval: 1 reading every 2 seconds to 1 every 12 hours

Calibration: Digital calibration through software

Calibration Date: Automatically recorded within device

Power: 3.6V lithium battery included

User Replaceable Battery: 1 year typical (1 minute reading rate at 25 °C)

Data Format: Date and time stamped °C, °F, °K, °R; µV, mV, V

Time Accuracy: ±1 minute/month (at 20 °C, RS232 port not in use)

Computer Interface: PC serial or RS232C COM (interface cable required); 2,400 baud

Software: Windows 95/98/ME/NT/2000/XP based software

Operating Environment: -40 to +80 °C, 0 to 95 %RH non-condensing

Dimensions: 1.4" x 2.2" x 0.6" (36mm x 56mm x 16mm)

Weight: 0.9 oz (25 g)

Approvals: CE compliant

BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 212°F, INCINERATE OR EXPOSE CONTENTS TO WATER.

SOFTWARE FEATURES

Multiple Graphs: Simultaneously analyze data from several units or deployments; easily switch to a single data series

Real-Time Recording: Collect and display data in real-time while continuing to log

Graphical Cursor: One click displays readings by time, value, parameter or sample number

Data Table: Instantly access tabular view for detailed dates, times, values, and annotations

Scaling Options: Autoscale function fits data to the screen, or allows user to manually enter their own values

Formatting Options: Change colors, line styles, plotting options, show or hide channels in an instant

Statistics: Calculate averages, min, max, standard deviation, and mean kinetic temperature with the touch of a button

Export Data: Export data in a variety of common formats, or switch to Excel with a single click

Calibration: Fully digital calibration function automatically stores parameters in device

Logger Configuration: Easy set up and launch of data loggers with immediate or delayed start, preferred sample rate, and device ID

Communications: Automatically sets up communications port, or lets user set configuration

Printing: Automatically print graphical or tabular data

*Specifications are subject to change without notice. Specific warranty and remedy limitations apply. Call 1-603-456-2011 or go to www.madgetech.com for details.

ORDERING INFORMATION

Model	Description
TC4000	Thermocouple-Based Temperature Recorder
IFC110	Software, manual and 9-pin computer interface cable
NIST	N.I.S.T. Calibration Certificate

ASK ABOUT OUR OTHER DATA RECORDERS

Temperature	pH
Humidity	Level
Pressure	Shock/Vibration
Bridge/Strain	Submersible
Current	Intrinsically Safe
Pulse/Event	RF Transmitters
Voltage	Multi-parameter