

# TCTEMP2000

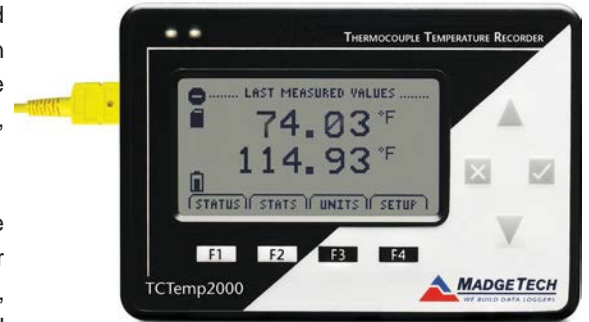
## THERMOCOUPLE TEMPERATURE RECORDER WITH LCD SCREEN

### Features

- Large, backlit LCD
- Internal temperature sensor and one external input which accepts thermocouple types J, K, T, E, R, S, B, N
- Front keypad with lock feature
- High speed download
- Real-time operation
- Min./max. and average statistics
- Programmable start/stop time
- NIST traceable calibration
- User replaceable battery and external power
- Wall mountable

The TCTemp2000 is a battery powered thermocouple temperature recorder with an LCD display. It has an internal temperature sensor and one external input for J, K, T, E, R, S, B and N type thermocouples.

The 8-button keypad and large LCD provide convenient access to current data and recorder setup. Additionally, memory and battery levels, external power status, and sampling and recording status are shown on the LCD.



### Benefits

- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

Available on-screen data includes: statistics (min, max, average); recording status (start, stop and recording rate); display options (units, text size); and calibration information (date calibrated, date for recalibration). Statistics can be cleared at any time during logging.

### Applications

- HVAC applications
- Oven profiling
- HACCP program implementation
- Process verification and validation
- Warehouse monitoring
- Museum and laboratory monitoring
- Medical/Pharmaceutical
- Environmental studies
- Food storage
- Live cargo transport
- Concrete Curing/Construction

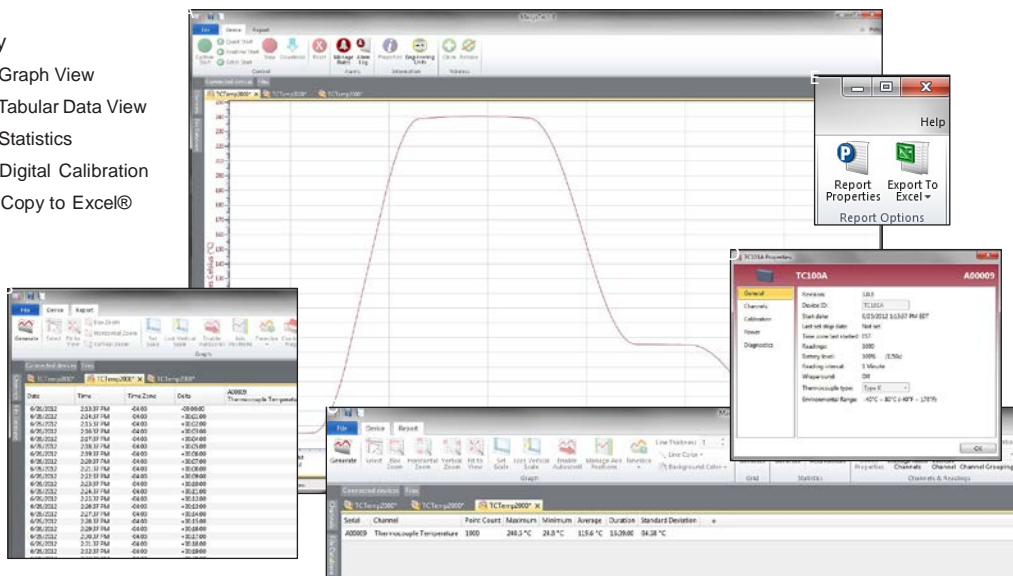
With 131,071 readings, the TCTemp2000 has one of the largest memory capacities of any similar data recorder on the market. The non-volatile memory will retain recorded data, even if AC and battery power are lost.

The TCTemp2000 runs on a 9V battery with a typical battery life of 1 year at a 1 min reading rate with the display off. With continuous LCD and no backlight usage, the average battery life is 30 days. For power savings, both the LCD and backlight have configurable auto-off options. Those wanting to keep the LCD and backlight continuously active need only to connect the unit to an AC power supply, keeping the 9V battery connected as a backup.

## MADGETECH DATA LOGGER SOFTWARE

### Key

- Graph View
- Tabular Data View
- Statistics
- Digital Calibration
- Copy to Excel®



### Software Features:

- 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
- Data table view
- Automatic report generation
- Summary view
- Multilingual

# TCTEMP2000 SPECIFICATIONS\*

<u>Internal Channel</u>			
Temperature Range:	-20 °C to +60 °C		
Temperature Resolution:	0.1 °C		
Calibrated Accuracy:	±0.5 °C (0 °C to +50 °C)		
<u>Thermocouple Channel</u>			
Thermocouple Types:	J, K, T, E, R, S, B, N		
Thermocouple Connection:	Female subminiature (SMP), fixed screw terminal, or pluggable screw terminal		
Cold Junction Compensation:	Automatic, based on internal channel		
Maximum Thermocouple Resistance:	1000 Ω, <100 Ω recommended		
<u>Thermocouple</u>	<u>Range (°C)</u>	<u>Resolution</u>	<u>Accuracy</u>
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
<u>DOT-MATRIX LCD</u>			
Dimensions:	2.5 in x 1.375 in (63 mm x 35 mm)		
Text:	Configurable channel text size		
Indicators:	Power, status, memory		
Backlight:	Configurable w/auto shut-off and contrast adjustment		

Start/Stop Time:	Software programmable start time and date, up to six months in advance; programmable stop time
Memory:	131,071 readings per channel; 262,143 total readings; software configurable memory wrap
Reading Rate:	1 reading every 2 seconds up to 1 reading every 24 hours
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Battery Type:	9V lithium battery included, user replaceable; optional AC adapter
Battery Life:	1 year battery life at 1 min reading rate with display off. 30 days typical with continuous LCD and no backlight usage
Data Format:	Date and time stamped °C, °F, K, °R
Time Accuracy:	±1 minute/month (at 20 °C to 30 °C)
Computer Interface:	USB (interface cable required); 115,200 baud
Software:	XP SP3/Vista/Windows 7/Windows 8
Operating Environment:	-20 °C to +60 °C, 0 %RH to 95 %RH non-condensing
Dimensions:	4.8 in x 3.3 in x 1.25 in (122 mm x 84 mm x 32 mm)
Weight:	16 oz (440 g)
Enclosure:	Black anodized aluminum
Approvals:	CE

**BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, CRUSH, PENETRATE, OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 80 °C (176 °F).**

\*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY.

## ORDERING INFORMATION

MODEL	DESCRIPTION
TCTemp2000	Thermocouple temperature recorder w/ LCD
IFC200	Software, manual and USB interface cable
U9VL-J	Replacement battery for TCTemp2000
SVP –Secure	Protocols for validating the 21 CFR Part 11 ready, secure data logging system
SVP-Secure License	License for MadgeTech SVP-Secure Software (unlimited users, license per computer)
*NIST	NIST Calibration Certificate

**ASK ABOUT OUR OTHER DATA LOGGERS**

- Temperature
- Humidity
- Pressure
- pH
- Level
- Shock
- LCD Display
- Pulse/Event/State
- Current
- Voltage Wireless
- Intrinsically Safe
- Spectral Vibration
- Motion

\*To order the product with the NIST certificate add -CERT to the end of the part number.