

# TCTEMP1000

## RUGGED THERMOCOUPLE-BASED DATA LOGGER



### Features

- Rugged
- Submersible
- Real time Operation
- Low Cost
- Programmable Start Time
- Reusable
- User-friendly
- Memory Wrap

### Benefits

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

### Applications

- Extreme Temperature Monitoring
- Warehouse Monitoring
- HVAC
- Medical and Pharmaceutical
- Well Monitoring
- Hostile Environment Monitoring
- Environmental Studies
- Implement HACCP Programs



The TCTemp1000 is a rugged, submersible, battery powered, thermocouple based temperature recorder. This is a stand-alone, compact portable, easy to use device to measure and record up to 16,383 measurements per channel. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. Its real time clock ensures all data is time and date stamped. The TCTemp1000 makes data retrieval quick and easy even in harsh environment. Simply plug it into an empty COM or USB port and our user-friendly software does the rest.

## MADGETECH DATA LOGGER SOFTWARE

**Key**

- A** Graph View
- B** Tabular Data View
- C** Statistics
- D** Digital Calibration
- E** Copy to Excel®

Date	Time	Time Zone	Thermocouple Temperature
6/26/2012	10:26:33 PM	0400	-08:27:00
6/26/2012	10:31:37 PM	0400	-08:28:00
6/26/2012	10:36:37 PM	0400	-08:29:00
6/26/2012	10:41:37 PM	0400	-08:30:00
6/26/2012	10:46:37 PM	0400	-08:31:00
6/26/2012	10:51:37 PM	0400	-08:32:00
6/26/2012	10:56:37 PM	0400	-08:33:00
6/26/2012	11:01:37 PM	0400	-08:34:00
6/26/2012	11:06:37 PM	0400	-08:35:00
6/26/2012	11:11:37 PM	0400	-08:36:00
6/26/2012	11:16:37 PM	0400	-08:37:00
6/26/2012	11:21:37 PM	0400	-08:38:00
6/26/2012	11:26:37 PM	0400	-08:39:00
6/26/2012	11:31:37 PM	0400	-08:40:00
6/26/2012	11:36:37 PM	0400	-08:41:00
6/26/2012	11:41:37 PM	0400	-08:42:00
6/26/2012	11:46:37 PM	0400	-08:43:00
6/26/2012	11:51:37 PM	0400	-08:44:00
6/26/2012	11:56:37 PM	0400	-08:45:00
6/26/2012	12:01:37 PM	0400	-08:46:00
6/26/2012	12:06:37 PM	0400	-08:47:00
6/26/2012	12:11:37 PM	0400	-08:48:00
6/26/2012	12:16:37 PM	0400	-08:49:00
6/26/2012	12:21:37 PM	0400	-08:50:00
6/26/2012	12:26:37 PM	0400	-08:51:00
6/26/2012	12:31:37 PM	0400	-08:52:00
6/26/2012	12:36:37 PM	0400	-08:53:00
6/26/2012	12:41:37 PM	0400	-08:54:00
6/26/2012	12:46:37 PM	0400	-08:55:00
6/26/2012	12:51:37 PM	0400	-08:56:00
6/26/2012	12:56:37 PM	0400	-08:57:00
6/26/2012	1:01:37 PM	0400	-08:58:00
6/26/2012	1:06:37 PM	0400	-08:59:00
6/26/2012	1:11:37 PM	0400	-09:00:00

- 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

# TCTEMP1000 SPECIFICATIONS\*

## Internal Channel

Temperature Range:	-40 °C to +80 °C (-40 °F to +176 °F)
Temperature Resolution:	0.1 °C (0.18 °F)
Calibrated Accuracy:	±0.5 °C (0 °C 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		
<b>**Thermocouple</b>	<b>Range (°C)</b>	<b>Resolution</b>	<b>Accuracy</b>
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

\*\*Thermocouple accuracy is specified with a 24 AWG, 3 meter thermocouple  
 Note: Rapidly changing temperatures or temperature gradients across the device may adversely affect the cold junction compensation

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

Start Modes:	Software programmable immediate start or delay start 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; 32,766 total readings; software configurable memory wrap
Reading Rate:	1 reading every 2 seconds up to 1 reading every 12 hours
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Battery Type:	3.6V lithium battery included, user replaceable
Battery Life:	1 year typical (1 minute reading rate at +25 °C (77 °F))
Data Format:	Date and time stamped °C, °F, K, °R
Time Accuracy:	±1 minute/month (at +20 °C (+68 °F), RS232 port not in use)
Computer Interface:	PC serial or USB (interface cable required); 2,400 baud
Software:	XP SP3/Vista/Windows 7/Windows 8
Operating Environment:	-40 °C to +80 °C, 0 %RH to 100 %RH; Submersible to 150 feet
Dimensions:	7.4 in x 1.2 in dia. (188 mm x 31 mm dia.)
Materials:	303 Stainless Steel
Weight:	13 oz (0.8125 lbs)

**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).**

## ORDERING INFORMATION

MODEL	DESCRIPTION
TCTEMP1000	Rugged, Thermocouple-Based Recorder
IFC200	Software, manual and USB interface cable
Calibration Certificate	Calibration Certificate available for data logger
TLH-5902	Replacement battery for TCTemp1000

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