



# DataChart<sup>®</sup> TC4000

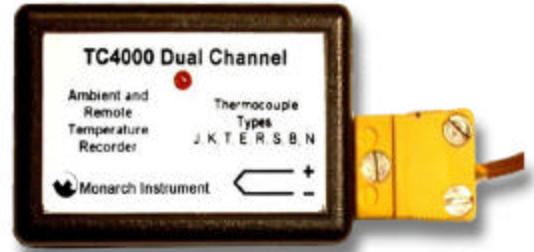
Thermocouple Based Temperature Data Logger

### Features

- Dual Channel-Ambient and External T/C
- Automatic Cold Junction Compensation
- Thermocouple Types J, K, T, E, R, B, S, N
- Memory: 16,383 internal ambient and external T/C
- Programmable Start Time
- Automatic Thermocouple Linearization
- Reusable
- Miniature Size
- N.I.S.T. Traceable
- User Calibration through Software
- No Programming Experience Necessary
- Real Time Operation
- Low Cost
- Quick Setup
- Record Keeping Simplified

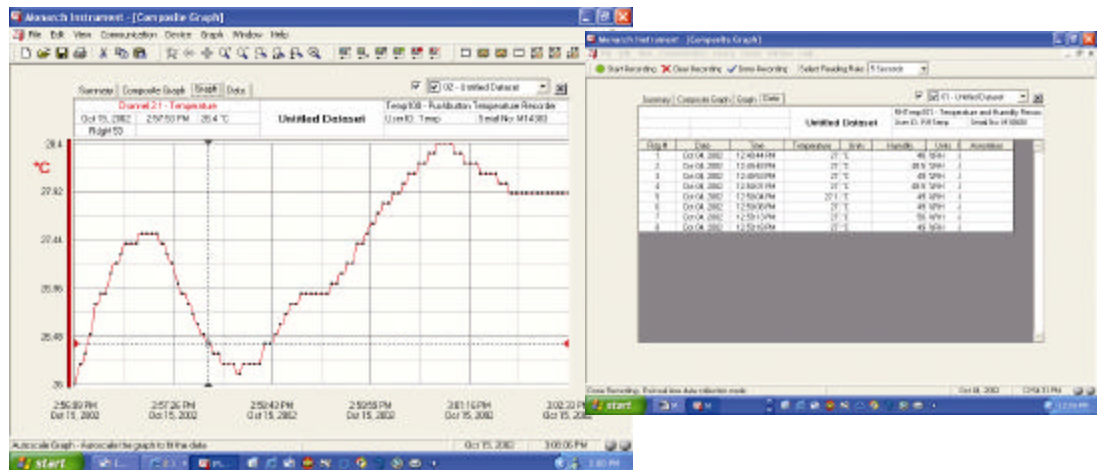
### Applications

- Record Temperature of Perishable Goods during Transit.
- Implementing HACCP Programs
- Medical/Pharmaceutical
- Extreme Temperature Monitoring
- Oven Profiling
- Environmental Studies
- Replace Costly Strip Chart Recorders
- HVAC



### Description

The TC4000 is a miniature, battery powered, stand-alone, thermocouple based temperature data logger. This all-in-one compact, portable, easy to use device will measure and record up to 16,383 temperature measurements. The TC4000 is a major leap forward in both size and performance. Its real time clock ensures that all data is time and date stamped. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. Its small size allows it to fit almost anywhere. Data retrieval is simple. Plug it into an empty com port and our easy to use software does the rest.



## Specifications

### Internal Channel:

**Temperature Range:** -40°C to 80°C

**Calibrated Temperature Accuracy:** 0.5°C

**Temperature Resolution:** 0.1°C

### External Channel:

**Thermocouple:** Thermocouple mini-plug or screw terminal.

**Cold Junction Compensation:** Automatic

| T/C | Range             | Resolution | Accuracy |
|-----|-------------------|------------|----------|
| J   | -200°C to +1190°C | 0.1°C      | 0.5°C    |
| K   | -260°C to +1370°C | 0.1°C      | 0.5°C    |
| T   | -260°C to +390°C  | 0.1°C      | 0.5°C    |
| E   | -260°C to +990°C  | 0.1°C      | 0.5°C    |
| R   | -40°C to +1760°C  | 0.1°C      | 0.5°C    |
| S   | -40°C to +1760°C  | 0.1°C      | 0.5°C    |
| B   | +50°C to +1810°C  | 0.1°C      | 0.5°C    |
| N   | -260°C to +1290°C | 0.1°C      | 0.5°C    |

\* Accuracy does not include errors due to thermocouple

**Temperature Calibration:** Digital calibration is available through software.

**N.I.S.T. Traceable:** N.I.S.T. certificates available

**Calibration Date:** Automatically recorded within device to alert user when calibration is required.

**Recording Interval:** 30/minute to 2/day selectable in software.

**Start Time:** Start time and date are programmable through software.

**Operations Indicator:** Red LED flashes at selected reading rate.

**Memory:** 16,383 ambient and 16,383 remote temperature readings max.

**User-Replaceable Battery:** 1 years typical.

**Time Accuracy:** ±1 min/month at 20°C

**Data Format:** Date and Time stamped, % RH, mg. of water vapor concentration, °C, °F, °K, °R.

**Shock resistance:** Drop proof to 5'.

**Weight:** 1 oz. (30g)

**Dimensions:** 0.6" x 1.4" x 2.2" (16mm x 35mm x 55mm)

**Material:** ABS Plastic

**Computer Interface:** RS232C Serial Port

**Software:** Windows®95/98/NT/2000/XP based software for complete control and operation.

**Operating Environment:** -40°C to + 80°C, (-40°F to +176°F) 5% to 95% RH (non-condensing).

### Software Features

*The software used to operate the TC4000 requires no programming skills. It enables users to effortlessly select reading rate, user ID and initiate the start of data collection within moments after user connects hardware. After retrieving the data, it may be viewed instantly in graphical or tabular form.*

**Zoom In/Out:** Use mouse to click and drag to select area for zooming in or out.

**Statistics:** min, max, mean, mean kinetic temperature, standard deviation

**Cursor:** Use mouse to click on graph to obtain specific data point information.

**Programmable Start Time:** Program start time and date through software.

**Real Time Operation:** Convert PC into strip chart recorder for real time data collection.

**Annotating Data:** All data points may be easily annotated.

**Printing:** Automatic printing of data in graphical or tabular form

**User ID:** Programmable through software and stored within device.

**AutoScale:** Autoscale function may be enabled or disabled by user.

**Calibration:** Automatic calibration in software and calibration parameters stored within device

**Exporting Data:** All data can be directly exported to Microsoft Excel® or to text format.

**Graph Grid Size:** Many options for grid size available.

### ORDERING INFORMATION

| Item No.  | Model          | Description                                      |
|-----------|----------------|--|
| 5399-0104 | TC4000         | Thermocouple Based Temperature Data Logger       |
| 5399-9901 | IFC101         | 9 Pin Computer Interface Cable Software & Manual |
| 5399-9999 | N.I.S.T. Cert. | N.I.S.T. Calibration Certificate                 |

### Ask About Our Other Data Loggers

|                 |                    |
|-----------------|--------------------|
| Temperature     | 4.0 to 20.0 mA     |
| Humidity        | Pulse/Counter      |
| Pressure        | Submersible        |
| pH              | Level              |
| Shock/Vibration | Multi-Parameter    |
| Voltage         | Intrinsically Safe |
| RF Transmitters |                    |

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