

## THERMOCOUPLE TEMPERATURE RECORDER LOGS 500,000 READINGS

Telatemp's Micro Thermocouple ML-TCA Temperature Data Logger is designed with an internal channel to monitor temperatures from -40°F to +176°F (-40°C to +80°C) with 0.1°C resolution and an external channel that will accept mini-plug thermocouple types J, K, T, E, R, S, B, and N. This small, reusable logger will record up to 500,000 date and time stamped internal and external channel temperature readings at user-defined intervals from 1 per second to once every 24 hours. It utilizes a low power microprocessor to record data into a non-volatile memory and operates on a replaceable lithium battery (included).

Features include: a multiple start/stop function, ultra-high speed download capability, optional memory wrap, precision RTD sensing element, battery life indicator, optional password protection, programmable high-low alarms and more.

With the Telatemp Micro Series Software\*, starting, stopping and downloading from the Micro Thermocouple is simple and easy. Data can also be viewed in graphical, tabular, and summary form, displayed in °C, °F, K or °Rankine and saved to your PC as an electronic file. The data can also be exported to Excel® for further calculations.

The complete user manual can be viewed onscreen or printed out from the software.

\*MLSP-USB Software & USB Interface is required.

### FEATURES

- 1 year plus Battery Life
- 1 Second Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 500,000 Reading Storage Capacity
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- N.I.S.T. Traceable

### BENEFITS

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

### SOFTWARE APPLICATIONS

- Multiple graph overlay
- Statistics
- Zoom in / zoom out
- Lethality equations (PU, Fo)
- Mean Kinetic Temperature (MKT)
- Full time zone support
- Data annotation & data table view
- Min./ Max./ Average lines

### TO ORDER

- ML-TCA Micro Thermocouple Data Logger
- MLSP-USB Software & USB Interface



**WARRANTY:** The following is made in lieu of all warranties, expressed or implied, including the implied warranties of merchantability and fitness of purpose: Seller's and manufacturers' only obligation shall be to replace such quantity of the product proved by Telatemp Corporation to be defective.

**LIMITATION OF LIABILITY:** All physical properties, statements, and recommendations are either based on tests we believe to be reliable or our experience, but they are not guaranteed. Telatemp Corporation recommends each user determine the suitability of the products for the intended application. Telatemp Corporation shall not be liable for direct, indirect, special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability or any other legal theory.

MICRO THERMOCOUPLE ML-TCA 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: ±0.25°C (±0.45°F)

External Channel

Thermocouple Types: J, K, T, E, R, S, B, N  
Thermocouple Connection: Mini-plug  
Cold Junction Compensation: Automatic based on internal channel  
Max. Thermocouple Resistance: 100Ω

Thermocouple Type:	Range (°C)	Resolution	Accuracy
J	-210 to +760	0.1°C	±0.5°C
K	-260 to +1370	0.1°C	±0.5°C
T	-260 to +400	0.1°C	±0.5°C
E	-260 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	+60 to +1820	0.5°C	±2.0°C
N	-260 to +1300	0.1°C	±0.5°C

\* Thermocouple accuracy is specified with a 24 AWG

Reading Rate: 1 reading every second to 1 every 24 hours  
Memory: 500,000 readings; software configurable memory wrap  
250,000 readings in multiple start/stop mode  
Wrap Around: Yes  
Start Modes: • Immediate start

- Delay start up to 18 months
- Multiple pushbutton start/stop

Multiple Start/Stop Mode: Start and stop the device multiple times without having to download data or communicate with a PC

Multiple Start/Stop Mode Activation: To start the device:  
Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging.  
To stop the device:  
Press and hold the pushbutton for 5 seconds, the red LED will flash during this time. The device has stopped logging.

Real Time Recording: The device may be used with PC to monitor and record data in real-time

Alarm: Programmable high and low limits; alarm is activated when temperature reaches or exceeds set limits

LED Functionality: Green LED blinks:  
10 second rate to indicate logging  
15 second rate to indicate delay start mode  
Red LED blinks:  
10 second rate to indicate low battery and/or full memory  
1 second rate to indicate an alarm condition

Password Protection:	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.
Battery Type:	Replaceable lithium 3.6V
Battery Life:	1+ years typical at a 15 minute reading rate
Data Format:	Date and time stamped °C, °F, K, °R; µV, mV, V
Time Accuracy:	±1 minute/month (at 20°C, stand alone data logging)
Computer Interface:	USB (interface cable required); 115,200 baud
Software:	XP SP3 / Vista / Windows 7
Operating Environment:	-40°C to +80°C (-40°F to +176°F), 0 to 95% RH non-condensing
Dimensions:	1.4" x 2.2" x 0.6" (36mm x 56mm x 16mm)
Weight:	0.9 oz (24 g)
Approvals:	CE