

USB-501-TC Thermocouple Data Logger

The USB-501-TC thermocouple data logger measures and stores over 32,000 temperature readings from either a K, J or T type thermocouple. A thermocouple is attached via the thermocouple socket at the base of the unit. The user can easily set up the thermocouple type, logging rate, start-time, logging mode, and download the stored data by plugging the module straight into a PC's USB port and running the purpose designed software under Windows 2000, XP or Vista (32-bit only). Data can then be graphed, printed and exported to Excel. The data logger is supplied complete with a basic K-type thermocouple (for 0 to 400 °C measurement) and a long-life lithium battery, which will last for approximately six months.



Control Software

The easy-to-install and use USB-500 Series Data Logger Application software runs in Windows 2000/XP/Vista (Home and Professional Editions). It allows the user to configure the USB-501-TC logger and download and display the data graphically in a powerful strip chart. The software also provides an easy export to Excel™.

The latest version of the application software may be downloaded from www.mccdaq.com

Features

- K type TC supplied: 0 to 400 °C (32 to 752 °F)
- USB interface for set-up and data download
- Two user-programmable alarm thresholds
- Bright red and green LED indication
- Replaceable long-life lithium battery

Setup Options

- Logger name
- °C or °F
- Logging rate intervals (1-second to 12-hour)
- High and low alarm thresholds
- Start date and start time

Ordering Information

Part Number	Description	Price
USB-501-TC	Thermocouple Data Logger (Logger unit, software CD, battery)	\$82

USB-501-TC Specifications

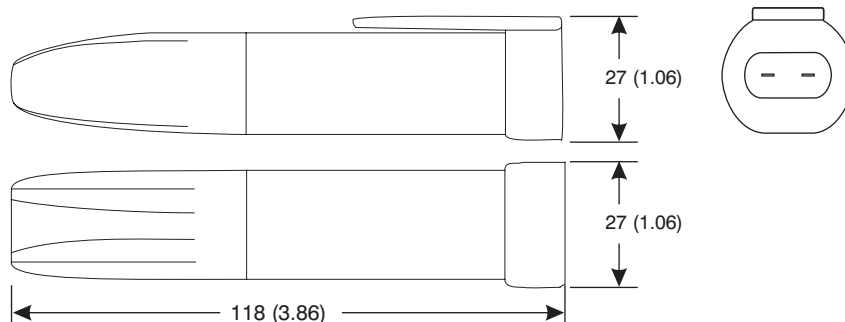
Specification	Min.	Typ.	Max.	Unit
Probe Measurement ranges				
K-type	-200 (-328)		+1350 (+2462)	°C (°F)
J-type	-200 (-328)		+1190 (+2174)	°C (°F)
T-type	-200 (-328)		+390 (+734)	°C (°F)
Internal resolution		0.5 (1)		°C (°F)
Accuracy (overall error)		±1 (±2)**		°C (°F)
Operating temperature range*	-10 (+14)		+40 (+104)	°C (°F)
1/2AA 3.6V lithium battery life***	6			month

* Using thermocouple sensors, the USB-501-TC can log temperatures as detailed above, but the data logger should not be subjected to temperatures outside the operating temperature range.

** USB-501-TC is designed to be used while disconnected from USB port.

*** @ 25°C and 1m logging rate

Dimensions All dimensions in mm (inches)



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LED Flashing Modes



USB-501-TC LED functions

The USB-501-TC has two LEDs—one that flashes green and the other that flashes red. The red LED flashes to indicate an alarm reading.

- Green LED flashes once every 10 seconds**
—the USB-501-TC is logging with no alarms. No action is needed.
- Green LED flashes once every 20 seconds**
—the USB-501-TC's battery charge is low. The device continues logging, but alarm conditions are ignored. You need to replace the battery.
- Green LED flashes twice every 20 seconds**
—the USB-501-TC's memory is full, and no alarm condition. You need to download data from the device.
- Green LED flashes once every 30 seconds**
—the USB-501-TC starts logging at the date and time you set
- Red LED flashes once every 10 seconds**
—the USB-501-TC is logging with a low alarm. The action you take depends on your application.
- Red LED flashes twice every 10 seconds**
—the USB-501-TC is logging with a high alarm. The action you take depends on your application.
- Red LED flashes once every 20 seconds**
—the USB-501-TC's battery charge is low and it has a low alarm, but it continues logging. Replace the battery and download data.
- Red LED flashes twice every 20 seconds**
—the USB-501-TC's battery charge is low and it has a high alarm, but it continues logging. Replace the battery and download data.
- Red and Green LEDs both flash once every 20 seconds**
—the USB-501-TC's memory is full, and a high or low alarm condition exists. You need to download data from the device. If both alarms have Hold selected, the LED only applies to the first alarm condition detected.
- No LEDs are flashing**
—plug the USB-501-TC into the PC and run the USB-500 software to find out which condition applies and then take the corresponding action. If logging is not set up, then set up logging. If the battery is depleted or not installed, then install a new battery.

Battery Replacement

Measurement Computing recommends that the battery be replaced every six months, or prior to logging critical data.

The USB-501-TC does not lose its stored readings when the battery is depleted or when it is replaced; the data logging process will however be stopped and cannot be restarted until the battery has been replaced and the logged data has been downloaded to PC.

Use only 3.6V 1/2AA lithium batteries. Check with the supplier that the battery is 'press fit' and is not fitted with solder tags. Before replacing the battery, remove the USB-501-TC from the PC.

Note: Leaving the USB-501-TC plugged into the USB port for longer than necessary will cause some of the battery capacity to be lost.

WARNING: Handle lithium batteries carefully, observing warnings on battery casing. Dispose of in accordance with local regulations.