

USB-501-TC-LCD

Specifications



**MEASUREMENT
COMPUTING™**

Revision 1.1, March, 2010

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Specifications

All specifications are subject to change without notice.

Typical for 25 °C unless otherwise specified.

Specifications in *italic text* are guaranteed by design.

Temperature

Table 1. Temperature specifications

Parameter	Specification
Measurement range	<ul style="list-style-type: none">▪ K-type thermocouple: –200 to +1350 °C (–328 to +2462 °F)▪ J-type thermocouple: –200 to +1190 °C (–328 to +2174 °F)▪ T-type thermocouple: –200 to +390 °C (–328 to +734 °F)
Resolution	0.5 °C (1 °F) typical
Accuracy (logger error)	±1 °C (±2 °F) typical

Note 1: The USB-501-TC-LCD ships with a K-type thermocouple probe rated from 0 to 400 °C (32 to 752 °F).

Note 2: The USB-501-TC-LCD can log temperatures as detailed above using thermocouple sensors. However, the data logger should not be subjected to temperatures outside the operating temperature range of –10 to +40 °C (+14 to +104 °F).

Data sampling

Table 2. Sampling specifications

Parameter	Specification
Sampling intervals	1 s, 2,s, 5 s, 10 s, 30 s, 1 min, 5 min, 15 min, 30 min, 1 hr, 2 hr, 6 hr, 12 hr
Temperature samples	32,510 maximum
Units	°C or °F
Data rollover	Software configurable: allows unlimited logging periods by overwriting the oldest data when the memory is full.

Alarms

Table 3. Alarm conditions

Parameter	Specification
High temperature alarm range	–200 °C (–328 °F) minimum, 1349.5 °C (2461 °F) maximum
Low temperature alarm range	–200 °C (–328 °F) minimum, 1349.5 °C (2461 °F) maximum
Alarm temperature resolution	0.5 °C (1 °F) typical

USB specifications

Table 4. USB specifications

USB-device type	USB 2.0 (full-speed)
Device compatibility	USB 1.1, USB 2.0

Power

Table 5. Power specifications

½AA 3.6 V lithium battery life	At 25 °C and 1 minute logging rate	6 months, typical
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Environmental

Table 6. Environmental specifications

Parameter	Condition	Specification
Operating temperature range		-10 °C (+14 °F) minimum to +40 °C (+104 °F) maximum

LED status indicators

Two LEDs indicate the logging, battery, and alarm status.

Table 7. LED specifications

Parameter	Condition	Specification
Green LED	Single flash every 10 seconds	Currently logging, no alarm.
	Single flash every 20 seconds	Low battery, logging continues, no alarm.
	Single flash every 30 seconds	Logging to start at set date and time.
	Double flash every 20 seconds	Memory is full, no alarms, no more readings stored.
Red LED	Single flash every 10 seconds	Currently logging, low alarm condition (note 3)
	Double flash every 10 seconds	Currently logging, high alarm condition (note 3)
	Single flash every 20 seconds	Low battery, logging continues, low alarm.
	Double flash every 20 seconds	Low battery, logging continues, high alarm.
Both LEDs flash alternately	Both LEDs flash once every 20 seconds	Memory is full, low or high alarm condition, no more readings stored. Both alarms have Hold selected.
No LEDs flash		Logger stopped or battery depleted (voltage is less than 2.8 V)

Note 3: If both alarms have Hold selected, the alarm condition may have been triggered at any point during the current logging session.

LCD status indicators

The high-contrast LCD shows temperature data and information regarding the logger status.

Table 8. LCD specifications

Parameter	Specification
Temperature (°C/°F)	Current temperature, stored maximum, and stored minimum values
LCD mode	Software configurable: <ul style="list-style-type: none"> ▪ Always on ▪ On for 30 seconds after the LCD button is pressed ▪ Always off
Logger status indicators	dS Delayed start. Displayed for 3 seconds after the LCD button is pressed when the device is configured to start at a set date and time.
	PS Push to start. Flashes repeatedly when the logger is configured for "push to start" logging and the LCD button has not yet been pressed.
	log Logging. Displays for 3 seconds when the LCD mode is set to "Always off" and the LCD button is pressed.
	--- Stopped. Displays for 3 seconds after the LCD button is pressed when the device is <i>not</i> configured to log data.

Mechanical

Table 9. Mechanical specifications

Dimensions	134.5 mm long x 23.9 mm wide x 21.2 mm high (5.29 in. long x 0.94 in wide x 0.83 in. high)
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