

TC101A

THERMOCOUPLE-BASED TEMPERATURE DATA LOGGER



The TC101A is the newest temperature data logger. It is part of a new series of low cost, state-of-the-art data logging devices. PTC® Instruments is proud to offer the most advanced, low cost, battery powered data loggers in the world today.

The TC101A offers a 10 year battery life, 1 second reading rate, a multiple start/stop function, ultra-high speed download capability, 500,000 reading storage capacity, optional memory wrap, battery life indicator, optional password protection, programmable high-low alarms and more.

Using the new software, starting, stopping and downloading from the TC 101A is simple and easy. Graphical, tabular and summary data is provided for analysis and data can be viewed in °C, °F, K or °R. The data can also be automatically exported to Excel® for further calculations.

Features

- 10 Year 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
- Field Upgradeable

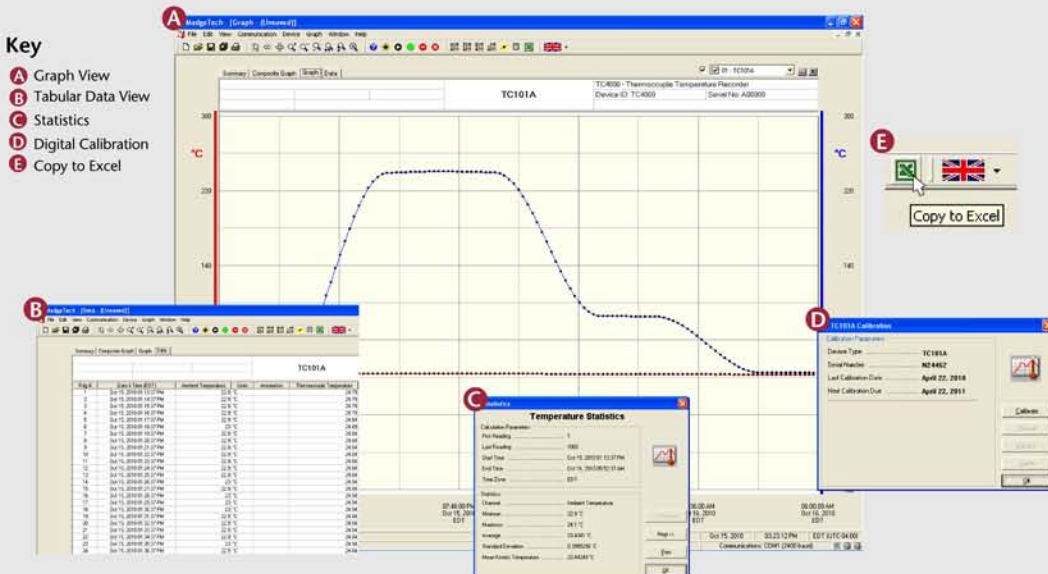
Benefits

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

Applications

- Process Validation
- Dry Ice Shipments and Storage
- Oven Profiling
- HVAC
- Implement HACCP Programs
- General Purpose Temperature Recording

DATA LOGGER SOFTWARE



- ### 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

TC101A 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)

Remote Channel

Thermocouple Types: J, K, T, E, R, S, B, N

Thermocouple Connection: Female subminiature(SMP) (MP model)
Pluggable screw terminal (TB model)
Fixed screw terminal (ST model)

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 To start the device:

Activation: 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

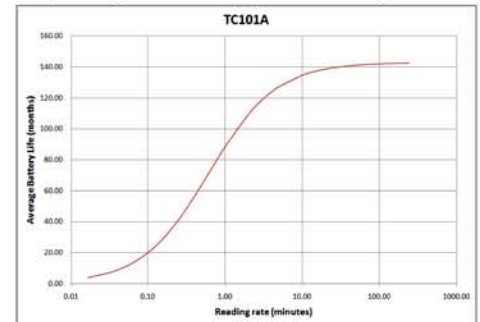
Red LED blinks:

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: 3.6V lithium battery included; user replaceable

Battery Life: 10 years typical at a 15 minute reading rate



Graph display of the device recording in a 25°C environment.

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

BATTERY WARNING: WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, DISASSEMBLE, CRUSH, PENETRATE OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 80°C (176°F).

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

ORDERING INFORMATION

MODEL	DESCRIPTION
TC101A-MP	Thermocouple Data Logger, standard mini plugs
IFC200	Software, Manual and USB interface cable
LTC-7PN	Replacement battery for TC101A

ASK ABOUT
OUR OTHER
DATA
LOGGERS

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion

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