

# TC101A

## Thermocouple-Based Temperature Data Logger

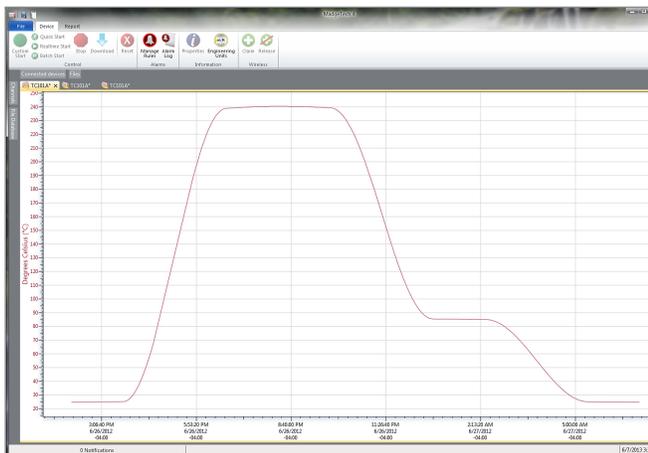
The TC101A temperature data logger, is a compact versatile device to be used with thermocouple probes for accurate temperature monitoring and profiling. This data logger is an ideal and affordable solution for applications such as HVAC studies, oven profiling, dry-ice shipments, process validation and many general purpose temperature monitoring applications.

Compatible with eight different types of thermocouple probes, the TC101A can measure temperatures as low as -270 °C (-454 °F), and up to as high as 1820 °C (3308 °F) (probe dependent), with an environmental operating temperature range of -40 °C to +80 °C (-40 °F to +176 °F) for the data logger body.

The 10 year battery life and the memory storage capacity of over 800,000 readings with optional memory wrap makes the TC101A ideal for extended deployments.

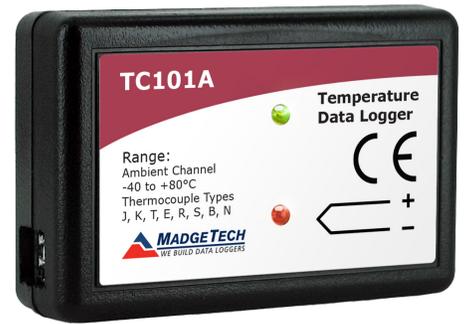
With the user friendly MadgeTech Data Logger Software, the TC101A is easily connected to a PC to download the collected data. The MadgeTech Software is capable of presenting the data in graphic, tabular, and summary formats for reporting. Data can also be exported easily to Excel for further analysis and calculations.

### MadgeTech 4 Software Features



Graph View

- 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
- Summary view



### FEATURES

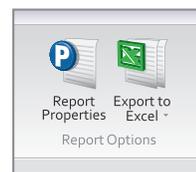
- 10 Year Battery Life
- 1 Second Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 838,041 Reading Storage Capacity
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- Field Upgradeable

### BENEFITS

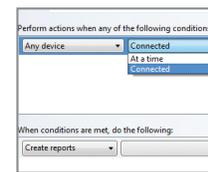
- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

### APPLICATIONS

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



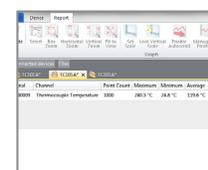
Export to Excel



Automation

Time	Time Zone	Delta
3	1:13:37 PM	-04:00
3	1:14:37 PM	-04:00
3	1:15:37 PM	-04:00
3	1:16:37 PM	-04:00
3	1:17:37 PM	-04:00
3	1:18:37 PM	-04:00
3	1:19:37 PM	-04:00
3	1:20:37 PM	-04:00
3	1:21:37 PM	-04:00
3	1:22:37 PM	-04:00
3	1:23:37 PM	-04:00
3	1:24:37 PM	-04:00
3	1:25:37 PM	-04:00
3	1:26:37 PM	-04:00
3	1:27:37 PM	-04:00
3	1:28:37 PM	-04:00

Tabular Data View



Statistics

# Specifications

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to [madgetech.com](http://madgetech.com) for details.

GENERAL	
<b>Start Modes</b>	Immediate start Delay start up to 18 months Multiple pushbutton start/stop
<b>Stop Modes</b>	Manual through software Timed (specific date and time)
<b>Multiple Start/Stop Mode</b>	Start and stop the device multiple times without having to download data or communicate with a PC
<b>Real Time Recording</b>	May be used with PC to monitor and record data in real time
<b>Password Protection</b>	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password
<b>Memory</b>	838,051 readings; software configurable memory wrap 322,323 readings in multiple start/stop mode or trigger settings mode
<b>Wrap Around</b>	Yes
<b>Reading Rate</b>	1 reading every second up to 1 reading every 24 hours
<b>Alarm</b>	Programmable high and low limits; alarm is activated when temperature reaches or exceeds set limits
<b>LEDs</b>	2 status LEDs
<b>Calibration</b>	Digital calibration through software
<b>Calibration Date</b>	Automatically recorded within device
<b>Battery Type</b>	3.6 V lithium battery included; user replaceable
<b>Battery Life</b>	10 years typical at a 15 minute reading rate
<b>Data Format</b>	Date and time stamped °C, °F, °R, K, mV, V
<b>Time Accuracy</b>	±1 minute/month at 25 °C (77 °F) (Stand alone mode)
<b>Computer Interface</b>	USB (interface cable required); 115,200 baud
<b>Operating System Compatibility</b>	Windows XP SP3 or later
<b>Software Compatibility</b>	Standard Software version 2.05.06 or later Secure Software version 4.1.3.0 or later
<b>Operating Environment</b>	-40 °C to +80 °C (-40 °F to +176 °F) 0 %RH to 95 %RH non-condensing
<b>Dimensions</b>	1.4 in x 2.1 in x 0.6 in (35 mm x 54 mm x 15 mm)
<b>Weight</b>	0.9 oz (24 g)
<b>Material</b>	Polycarbonate
<b>Approvals</b>	CE

INTERNAL CHANNEL	
<b>Temperature Range</b>	-40 °C to +80 °C (-40 °F to +176 °F)
<b>Temperature Resolution</b>	0.01 °C (0.02 °F)
<b>Calibrated Accuracy</b>	±0.5 °C (±0.9 °F)
<b>Calibrated Accuracy Range</b>	0 °C to 50 °C (32 °F to 122 °F)

REMOTE CHANNELS			
<b>Remote Channel Thermocouple Types</b>	J, K, T, E, R, S, B, N		
<b>Thermocouple Connection</b>	Female subminiature (SMP) (MP model) Pluggable screw terminal (TB model) Fixed screw terminal (ST model)		
<b>Cold Junction Compensation</b>	Automatic, based on internal channel		
<b>Maximum Thermocouple Resistance</b>	100 Ω		
Thermocouple	Range (°C)	Resolution	Accuracy*
J	-210 to +760	0.1 °C	±0.5 °C
K	-270 to +1370	0.1 °C	±0.5 °C
T	-270 to +400	0.1 °C	±0.5 °C
E	-270 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	+50 to +1820	0.5 °C	±2.0 °C
N	-270 to +1300	0.1 °C	±0.5 °C

\*Thermocouple accuracy specified with 24 AWG diameter thermocouple wires.

**BATTERY WARNING:** Fire, explosion and severe burn hazard. Do not recharge, disassemble, heat above 100 °C (212 °F), incinerate, crush, or expose contents to water.





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Telephone +44(0)1929 459 459

Email [sales@WPLS.co.uk](mailto:sales@WPLS.co.uk)

## Ordering Information

<b>TC101A-MP</b>	PN 901590-00	Thermocouple Data Logger, standard mini plugs
<b>TC101A-ST</b>	PN 901600-00	Thermocouple Data Logger, fixed screw terminals
<b>TC101A-TB</b>	PN 901602-00	Thermocouple Data Logger, pluggable screw terminals
<b>IFC200</b>	PN 900298-00	USB interface cable
<b>LTC-7PN</b>	PN 900352-00	Replacement battery for the TC101A

For Quantity Discounts call (603) 456-2011 or email [sales@madgetech.com](mailto:sales@madgetech.com).