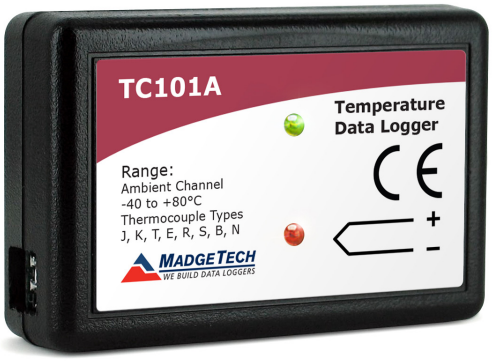
MADGETECH
WE BUILD DATA LOGGERS

TC101A

Thermocouple-Based Temperature Data Logger



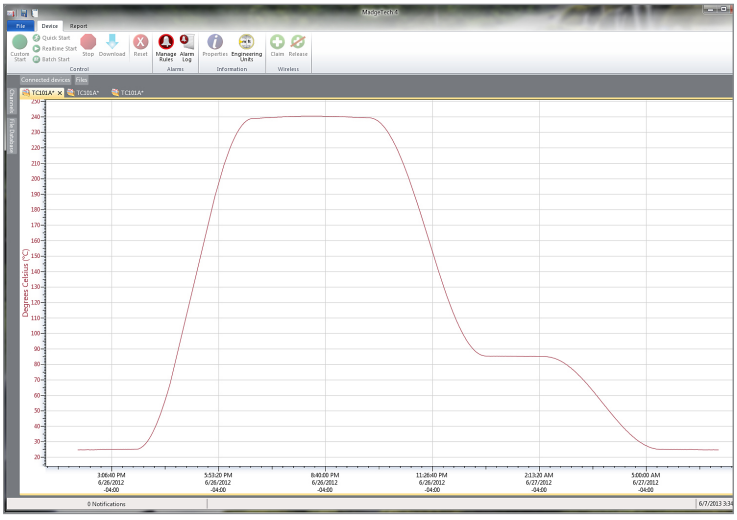
The TC101A temperature data logger, is a compact versatile device to be used with thermocouple probes for accurate temperature monitoring and profiling. This data logger is an ideal and affordable solution for applications such as HVAC studies, oven profiling, dry-ice shipments, process validation and 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 1,000,000 readings with optional memory wrap makes the TC101A ideal for extended deployments.

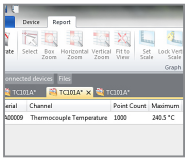
With the user friendly MadgeTech Data Logger Software, the TC101A is easily connected to a PC to download the collected data. The MadgeTech Software is capable of presenting the data in graphic, tabular, and summary formats for reporting. Data can also be exported easily to Excel for further analysis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

MadgeTech 4 Software Features

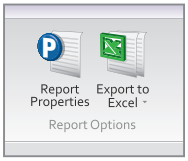


Graph View

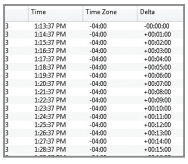
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



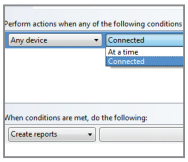
Statistics



Export to Excel



Tabular Data View



Automation

Features

- 10 Year Battery Life
- 1 Second Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 1,047,552 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

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call **01929 459 459** for details.

INTERNAL CHANNEL

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

REMOTE CHANNELS

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
Maximum Thermocouple Resistance	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.

GENERAL

Start Modes	Immediate start Delay start up to 18 months Multiple pushbutton start/stop
Stop Modes	Manual through software Timed (specific date and time)
Multiple Start/Stop Mode	Start and stop the device multiple times without having to download data or communicate with a PC
Real Time Recording	May be used with PC to monitor and record data in real time
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.
Memory	1,047,552 readings; software configurable memory wrap 523,776 readings in multiple start/stop mode or trigger settings mode
Wrap Around	Yes
Reading Rate	1 reading every second up to 1 reading every 24 hours
Alarm	Programmable high and low limits; alarm is activated when temperature reaches or exceeds set limits
LEDs	2 status LEDs
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	3.6V lithium battery included; user replaceable
Battery Life	10 years typical at a 15 minute reading rate
Data Format	Date and time stamped °C, °F, °R, K, mV, V
Time Accuracy	±1 minute/month at 25 °C (77 °F) (Stand alone mode)
Computer Interface	USB (interface cable required); 115,200 baud
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 2.05.06 or later Secure Software version 4.1.3.0 or later
Operating Environment	-40 °C to +80 °C (-40 °F to +176 °F) 0 %RH to 95 %RH non-condensing
Dimensions	1.4 in x 2.1 in x 0.6 in (35 mm x 54 mm x 15 mm)
Weight	0.9 oz (24 g)
Material	Polycarbonate
Approvals	CE

Ordering Information

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

For Quantity Discounts call 01929 459 459 or email **sales@wpls.co.uk**

DOC-1218009-00 REV 17 2020.06.23

MADGETECH
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