DATASHEET

RTDTemp101A

MadgeTech

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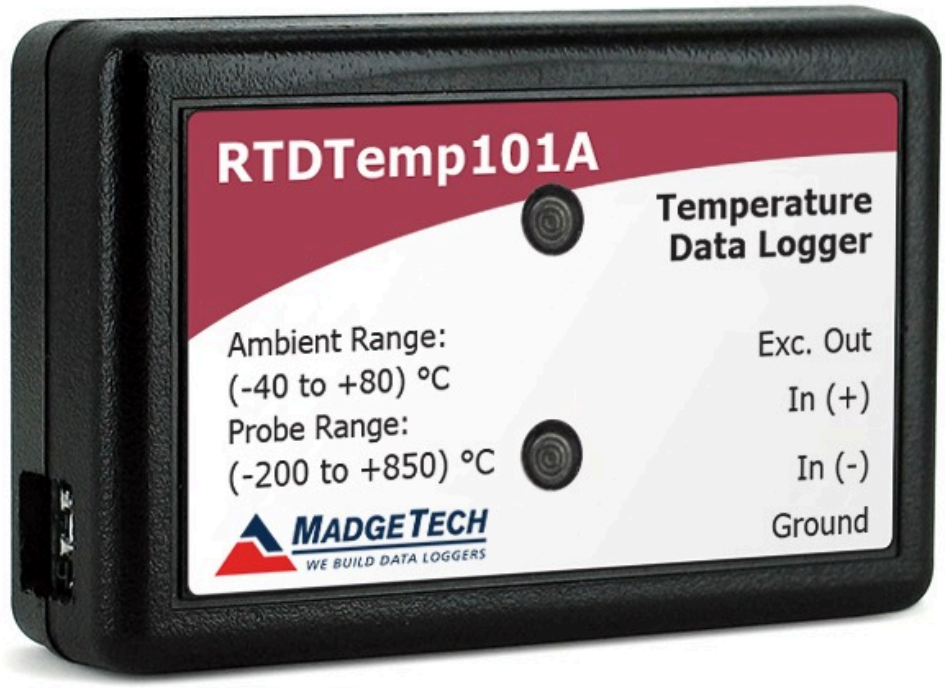
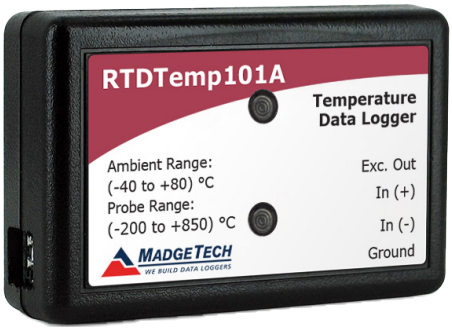


MADGETECH
WE BUILD DATA LOGGERS

RTDTemp101A

RTD-Based Temperature Data Logger



Don't be fooled by the small size, the RTDTemp101A temperature data logger offers a wealth of features with a compact form factor about the size of a matchbox. When used with an external RTD probe, this data logger measures temperatures from -200 °C to 850 °C (-328 °F to +1562 °F).

The low power design of this data logger provides a battery life of up to 10 years but still delivers ultra-fast download speeds. The RTDTemp101A can store over a million readings and offers a software configurable memory wrap option. In addition to having a pushbutton start stop, the device also can be programmed to a delay start up to 18 months in advance.

Using the MadgeTech Data Logger Software, data from the RTDTemp101A is easily down-loaded, displayed and formatted for reports or the data can be exported to Excel for further presentation customization.

This versatile device can be used for a wide variety of applications such as calibration chamber monitoring, HVAC applications, environmental studies or precision temperature recording for medical and pharmaceutical applications.

FEATURES

- 10 Year Battery Life
- ±0.04 °C Accuracy
- Multiple Start/Stop Function
- Ultra High Speed Download
- 1,396,736 Reading Storage Capacity
- Memory Wrap
- Precision RTD Sensing Element
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- Field Upgradeable

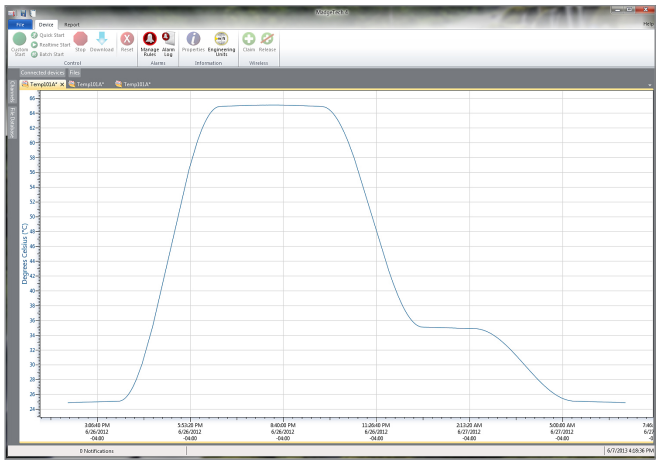
BENEFITS

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

APPLICATIONS

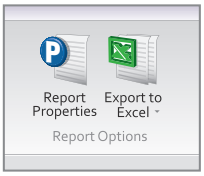
- Implement HACCP Programs
- HVAC
- Warehouse Monitoring
- Museum Monitoring
- Medical/Pharmaceutical
- General Purpose Humidity Recording

MadgeTech 4 Software Features

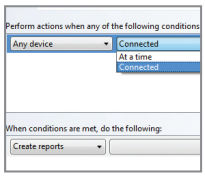


Graph View

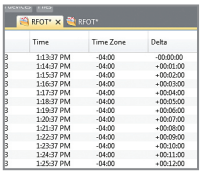
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



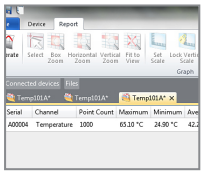
Export to Excel



Automation



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** for details.

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	1,396,736 readings; software configurable memory wrap 380,928 readings in multiple start/stop 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	3.6 V lithium battery included; user replaceable
Battery Life	10 years typical at a 15 minute reading rate
Data Format	Date and time stamped °C, °F, K or °R
Time Accuracy	±1 minute/month at 26 °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 2.03.06 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	0.8 oz (24 g)
Material	Polycarbonate
Approvals	CE

TEMPERATURE

Temperature Sensor*	External 100 Ω RTD (Sold Separately)
Temperature Range	18 Ω to 400 Ω -200 °C to +850 °C (-328 °F to +1562 °F) (Probe Dependent)
Temperature Resolution	0.0005 Ω 0.01 °C (0.018 °F) (Probe Dependent)
Calibrated Accuracy **	±0.015 Ω ±0.04 °C (±0.072 °F) (Probe Dependent)
Input Connection***	Removable screw terminal; 2, 3 or 4 wire interface
Temperature Effect on Span	< 2 ppm / °C
Temperature Effect on Offset	< 10 ppm cumulative over entire range

*Temperature specifications based on ideal 100 Ω Pt RTD compliant with IEC 751 (1983) and ITS-90, 5000 Ω FSR (accuracy based on 36 in lead wire RTD with 4 wire configuration)

**Calibrated accuracies based on standard MadgeTech calibrations for 0 to 200 Ω range.

***100 Ω, 2 or 4 wire RTD probes are recommended for the most accurate performance. Most 100 Ω, 3 wire RTD probes will work, but MadgeTech cannot guarantee the accuracy. To determine whether or not the 3-wire RTD probe will work, the resistance between the two same colored wires should be less than 1 Ω. (Note: Please contact the manufacturer of the RTD probe for questions on the resistance.)

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.

Ordering Information

RTDTemp101A	PN 901520-00	RTD-Based Temperature Data Logger
IFC200	PN 900298-00	USB interface cable
LTC-7PN	PN 900352-00	Replacement battery for the RTDTemp101A

For Quantity Discounts call **(603) 456-2011** or email **sales@madgetech.com.**

AKRIBIS www.akribis.info contacto@akribis.info