RTDTEMP101A
TEMPERATURE DATA LOGGER

MADGETECH
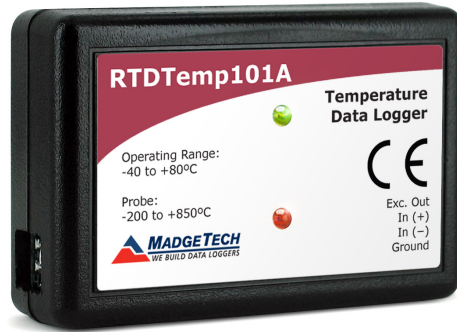WE BUILD DATA LOGGERS

Features
- 10 Year Battery Life
- ±0.05 °C (±0.09 °F) Accuracy
- Multiple Start/Stop Function
- Ultra High Speed Download
- 1,340,000 Reading Storage Capacity
- Memory Wrap
- Precision RTD Sensing Element
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- NIST Traceable
- Field Upgradeable

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

Applications
- Calibration Chamber Monitoring
- HVAC
- Medical/Pharmaceutical
- Environmental Studies
- Precision Temperature Recording

RTDTemp101A
Temperature Data Logger

Operating Range:
-40 to +80ºC

Probe:
-200 to +850ºC

CE

Exc. Out
In (+)
In (−)
Ground

MADGETECH
WE BUILD DATA LOGGERS

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.

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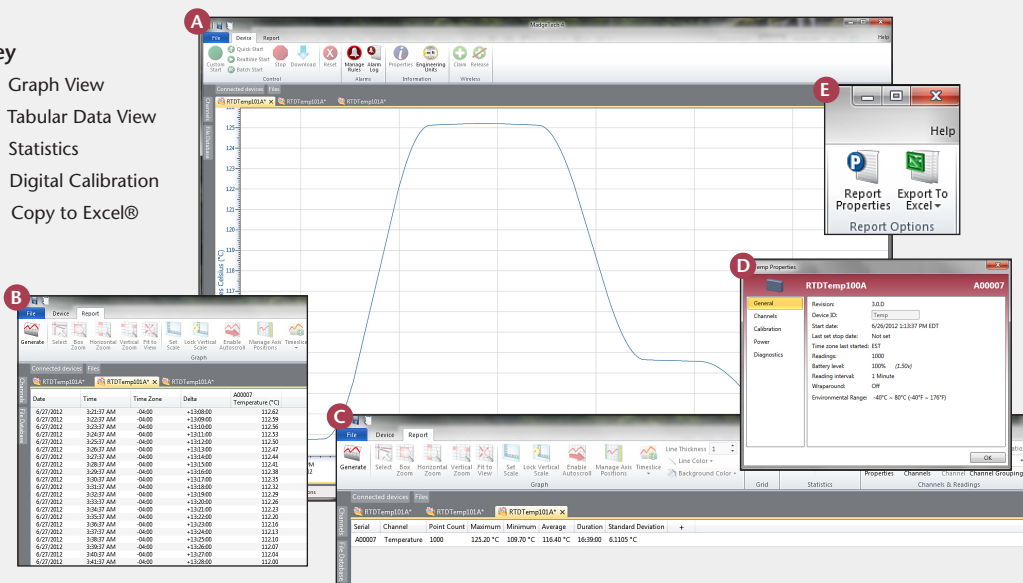
Using the MadgeTech Data Logger Software, data from the RTDTemp101A is easily down-loaded, displayed and formatted for reports or the data can be exported to Excel for further presentation customization.

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.

MADGETECH DATA LOGGER SOFTWARE

Key
- **A** Graph View
- **B** Tabular Data View
- **C** Statistics
- **D** Digital Calibration
- **E** Copy to Excel®

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
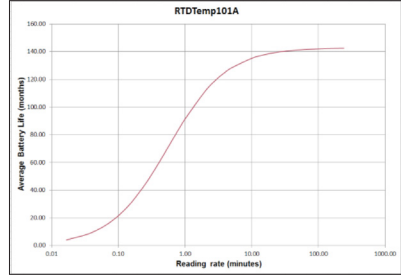- Summary view
- Multilingual

RTDTEMP101A SPECIFICATIONS*

Temperature Sensor:**	External 100 Ω RTD
Measurement Temperature Range:	-200 °C to +850 °C (-392 °F to +1562 °F)
Temperature Resolution:	0.001 °C (0.0018 °F)
Calibrated Accuracy:	±0.05 °C (±0.09 °F)
Nominal Range:	18 Ω to 400 Ω
Resolution:	0.0001 Ω
Calibrated Accuracy:	±0.015 Ω (0 Ω to 200 Ω) ±0.01% of readings (200 Ω to 400 Ω)***
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
Reading Rate:	1 reading every second up to 1 reading every 24 hours
Memory:	• 1,340,000 readings; software configurable memory wrap • 666,000 readings in multiple start/stop mode
Wrap Around:	Yes
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
Multiple Start/Stop Mode Activation:	To start the device: 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 for three seconds and then the green LED will flash for two seconds. The device has stopped logging.

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY. CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

**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)*

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.
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 Graph display of the device recording in a 25°C environment.
Data Format:	Date and time stamped °C, °F, K, °R
Time Accuracy:	±1 minute/month (at 20 °C/60 °F, stand alone data logging)
Computer Interface:	USB (interface cable required); 115,200 baud
Software:	XP SP3/Vista/Windows 7/Windows 8
Operating Environment:	-40 °C to +80 °C (-40 °F to +176 °F), 0 %RH to 95 %RH non-condensing
Dimensions:	1.4 in x 2.2 in x 0.6 in (36 mm x 56 mm x 16 mm)
Weight:	0.8 oz (24 g)
Materials:	ABS Plastic
Approvals:	CE

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

ORDERING INFORMATION

MODEL	DESCRIPTION	PRICE (U.S.)
RTDTEMP101A	RTD Temperature Data Logger	$179.00
IFC200	Software, manual and USB interface cable	$119.00
*NIST	NIST Calibration Certificate	$60.00
LTC-7PN	Replacement battery for RTDTemp101A	$10.00

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

*To order the product with the NIST certificate add -CERT to the end of the part number and add $60.00 to the price.

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