

RTDTEMP101A

TEMPERATURE DATA LOGGER



Features

- 10 Year Battery Life
- $\pm 0.05^{\circ}\text{C}$ ($\pm 0.09^{\circ}\text{F}$) Accuracy
- Multiple Start/Stop Function
- Ultra High Speed Download
- 670,000 Reading Storage Capacity
- Memory Wrap
- Precision RTD Sensing Element
- 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

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



The RTDTEMP101A is one of MadgeTech's newest data loggers. It is part of a new series of low cost, state-of-the-art data logging devices. MadgeTech has taken the lead in offering the most advanced, low cost, battery powered data loggers in the world today.

The RTDTEMP101A offers a 10 year battery life, a multiple start/stop function, ultra-high speed download capability, 670,000 reading storage capacity, optional memory wrap, precision RTD sensing element, battery life indicator, optional password protection, programmable high-low alarms and more. The RTDTEMP101A is priced at \$179 each and can be delivered from stock now. Our research has shown that the RTDTEMP101A is second to no other data logger when it comes to price and performance.

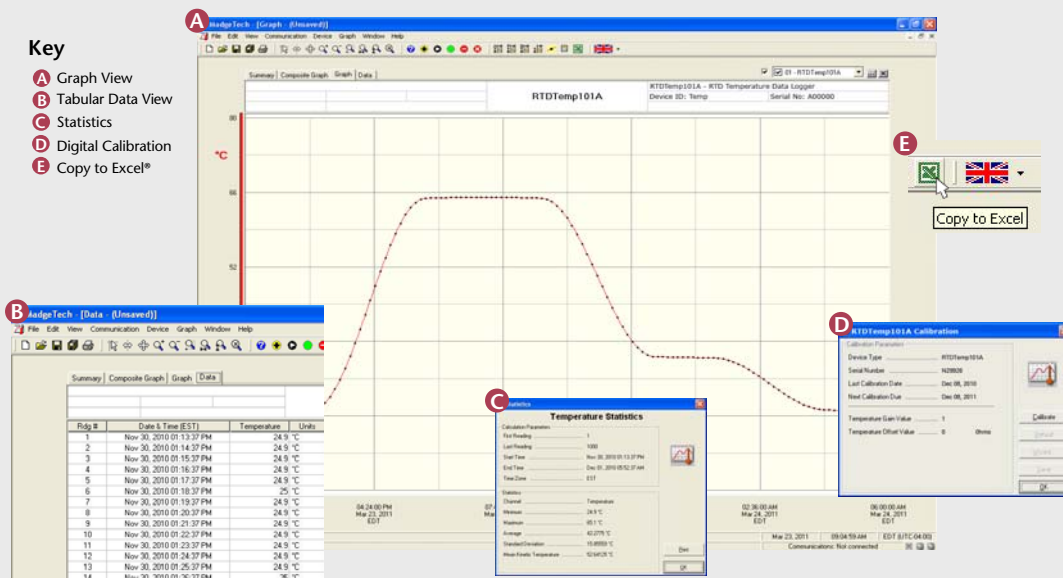
Using the MadgeTech Software, starting, stopping and downloading from the RTDTEMP101A is simple and easy. Graphical, tabular and summary data is provided for analysis and data can be viewed in $^{\circ}\text{C}$, $^{\circ}\text{F}$, K or $^{\circ}\text{R}$. The data can also be automatically exported to Excel[®] for further calculations.

As the leader in low power data logger technology, MadgeTech continuously improves its products and develops solutions to meet ever-changing challenges. The RTDTEMP101A was designed with our customers in mind. MadgeTech offers free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments. Units do not need to be returned to the factory for upgrades. The user can do this automatically from any PC.

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 (F_0 , 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 100Ω RTD

Measurement -200°C to +850°C (-392°F to +1562°F)

Temperature Range:

Temperature Resolution: 0.001°C (0.0018°F)

Calibrated Accuracy: ±0.05°C (±0.09°F)

Nominal Range: 18 to 400Ω

Resolution: 0.0001Ω

Calibrated Accuracy: ±0.015Ω (0 to 200Ω)
±0.015Ω + 0.015% of readings
(200 to 400°C)***

Input Connection: Removable screw terminal; 2,3 or 4 wire interface****

Temperature Effect on Span: < 2ppm/°C

Temperature Effect on Offset: <10ppm cumulative over entire range

Reading Rate: 1 reading every second to 1 reading every 24 hours

Memory: 670,000 readings; software configurable memory wrap
333,000 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 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 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 1-803-456-2011 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" lead wire RTD with 4 wire configuration)

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

****100 Ohm, 2 or 4 wire RTD probes are recommended for the most accurate performance. Most 100 Ohm, 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 Ohm. (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

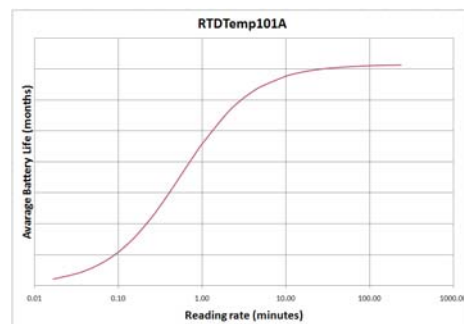
Password Protection: An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.

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

Operating -40°C to +80°C (-40°F to +176°F),
Environment: 0%RH to 95%RH non-condensing

Dimensions: 1.4" x 2.2" x 0.6" (36mm x 56mm x 16mm)

Weight: 0.8 oz (24 g)

Materials: ABS Plastic

Approvals: CE

BATTERY WARNING: 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
N.I.S.T.	N.I.S.T. 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 N.I.S.T. 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