

Description	RHTemp101A
Temperature Sensor	Precision RTD Element
Temperature Range	-40 °C to +80 °C (-40 °F to +176 °F)
Temperature Resolution	0.01 °C (0.018 °F)
Calibrated Accuracy/Range	±0.5 °C (±0.9 °F) Between 0 °C to +55 °C
Humidity Sensor	Internal semiconductor
Humidity Range	0 %RH to 95 %RH
Humidity Resolution	0.1 %RH
Calibrated Accuracy	±3.0 %RH
Specified Accuracy Range	25 %RH to 75 %RH +20 °C to +40 °C Hysteresis Error 1 % typical, 3 % Maximum
Memory	1,032,192 readings per channel 500,000 readings in multiple start/stop mode
Wrap Around	Yes
Reading Rate	1 reading every second up to 1 reading every 24 hours
RH Units	%RH, dew pt., water vapor concentration (mg/ml)
Alarm	Yes, Humidity
Required Interface Package	IFC200
Baud Rate	115,200
Typical Battery Life	10 years at a 15 minute reading rate
MadgeTech 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
Material	ABS Plastic
Dimensions	1.4 in x 2.2 in x 0.6 in (35.1 mm x 54.1 mm x 14.8 mm)
Weight	0.9 oz (24 g)
Approvals	CE

Battery Warning

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

Specifications subject to change. See MadgeTech's terms and conditions at madgetech.com.

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Product User Guide

RHTemp101A



RHTemp101A

Humidity and Temperature Data Logger
with a 10 Year Battery Life

Product Notes

For many applications that require the monitoring of both ambient temperature and humidity, the RHTemp101A is the ideal solution. Used for warehouse and museum monitoring as well as HVAC studies, the RHTemp101A can measure ambient temperature from -40 °C to +80 °C and humidity from 0 %RH to 95 %RH.

LEDs

- Green LED blinks: 10 seconds to indicate logging and 15 seconds to indicate delay start mode
- Red LED blinks: 10 seconds to indicate low battery and/or memory and 1 second 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.

Multiple Start/Stop Mode Activation

- To start 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 during this time. The device has stopped logging.

Alarm

Programmable high and low limits; alarm is activated when humidity reaches or exceeds set limits.

Installation Guide

Installing the Interface cable

- IFC200:
Insert the device into a USB port. The drivers will install automatically.

Installing the software

Software can also be downloaded from the MadgeTech website at the following link: www.madgetech.com/software-download. Double click the zipped download file and follow the steps to finish downloading

Device Operation

Connecting and Starting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- Connect the USB end of the interface cable into an open USB port on the computer.
- The device will appear in the Connected Devices list, highlight the desired data logger.
- For most applications, select **“Custom Start”** from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging

application and click **“Start”**. (**“Quick Start”** applies the most recent custom start options, **“Batch Start”** is used for managing multiple loggers at once, **“Real Time Start”** stores the dataset as it records while connected to the logger.)

- The status of the device will change to **“Running”**, **“Waiting to Start”** or **“Waiting to Manual Start”**, depending upon your start method.
- Disconnect the data logger from the interface cable and place it in the environment to measure.

Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.

Downloading data from a data logger

- Highlight the data logger in the Connected Devices list. Click **“Stop”** on the menu bar.
- Once the data logger is stopped, with the logger highlighted, click **“Download”**. You will be prompted to name your report.
- Downloading will offload and save all the recorded data to the PC.

Device Maintenance

Battery Replacement

Materials:

[Small Phillips Head Screwdriver](#)

[LTC-7PN Battery](#)

- Puncture the center of the back label with the screw driver and unscrew the enclosure.
- Remove the battery by pulling it perpendicular to the board.
- Insert the new battery into the terminals and verify it is secure.
- Screw the enclosure back together securely.

Recalibration

The RHTemp101A standard calibration is one point at 25 °C and two points at 25 %RH and 75 %RH.

Additional Services:

Custom calibration and verification point options available, please call for pricing.

Call for custom calibration options to accommodate specific application needs.

Prices and specifications subject to change. See MadgeTech's terms and conditions at madgetech.com

To send devices to MadgeTech for calibration, service or repair, please use the MadgeTech RMA Process at madgetech.com.