

RHTemp1000

Description	RHTemp1000
Temperature Sensor	Resistance Temperature Detector (RTD)
Temperature Range	-40 °C to +80 °C (-40 °F to +176 °F)
Temperature Resolution	0.01 °C
Calibrated Accuracy	±0.5 °C (0 °C to 55 °C)
Humidity Sensor	Capacitive Polymer
Humidity Range	0 %RH to 100 %RH (non-condensing)
Humidity Resolution	0.1 %RH
Calibrated Accuracy	±3.0 %RH maximum
Specified Accuracy Range	25 %RH to 75 %RH +20 °C to +40 °C Hysteresis Error 1 % Typical, 3% Maximum
Data Format	Date and time stamped °C, °F, K, °R; %RH, mg/mL, Dew Point
Memory	16,384 readings per channel
Memory Wrap	Yes
Reading Rate	1 reading every second up to 1 reading every 24 hours
Time Accuracy	±16 seconds/month @ 25 °C
Required Interface Package	IFC400 or IFC406
Baud Rate	125,000 baud
Typical Battery Life	2 years typical at 25 °C (15 minute reading rate)
Operating System Compatibility	Windows XP SP3 or later
MadgeTech Software Compatibility	Standard Software version 4.1.0.2 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 100 %RH (non-condensing)
Material	316 Stainless Steel/Radel
Dimensions	1.7 in x 0.97 in x 0.97 in (42 mm x 24.6 mm x 24.6 mm)
Weight	2.3 oz (65 g)
Approvals	CE

Battery Warning

WARNING: FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 100 °C (212 °F), INCINERATE, CRUSH, OR EXPOSE CONTENTS TO WATER.

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



RHTemp1000
Humidity and Temperature Data Logger

Product Notes

The RHTemp1000 humidity and temperature data logger is a rugged, battery powered, stand alone device which can be used to automatically record humidity and temperature. This all in one compact, portable, easy to use device is able to measure and record data for up to 21,845 humidity and temperature measurements.

The RHTemp1000 is ideal for use in harsh environments. Its real time clock ensures that all the data is time and date stamped. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. The device can be started and stopped directly from your computer and its small size allows it to fit almost anywhere.

IP Rating

The RHTemp1000 is rated IP30 and is non-submersible.

O-Rings

O-Ring maintenance is a key factor when properly caring for the RHTemp1000. The O-Rings ensure a tight seal and prevent liquid from entering the inside of the device. Please refer to the application note “O-Rings 101: Protecting Your Data,” found on the MadgeTech website for information on how to prevent O-Ring failure.

Note: This product is rated for use up to 80 °C. Please read the battery warning. The product could explode if exposed to temperatures above what is specified.

Communication

To ensure desired operation of the RHTemp1000, please keep the surface clear of any foreign objects or substances. The RHTemp1000s data is downloaded through external contact with the IFC400 or IFC406 docking station. Covering the surface with foreign objects (i.e. Calibration Labels) can prevent the communication and/or downloading process.

Installation Guide

Installing the Interface cable

- IFC400 or IFC406:
Refer to the “Quick Start Guide” included in the package.

Installing the software

Software can also be downloaded from the MadgeTech website at madgetech.com. 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 docking station.
- Connect the USB end of the interface cable into an open USB port on the computer.
- Place the data logger into the docking station.
- The data logger will automatically appear under **Connected Devices** within the software.
- 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 docking station 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, unless user selectable memory wrap is enabled. At this point the device cannot be restarted until it has been re-armed by the computer.*

Downloading data from a data logger

- Place the data logger in the IFC400 or IFC406 docking station.
- 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:

TL-2150/S Battery (user replaceable)

- Unscrew the bottom of the logger and remove the battery.
- Place the new battery into the logger. Note the polarity of the battery.
- Screw the cover back onto the logger.

Recalibration

The RHTemp1000 standard calibration is one temperature point at 25 °C and two humidity points at 25 %RH and 75 %RH.

Additional Services:

Custom Calibration

Call for Pricing

Prices and specifications subject to change. See MadgeTech's terms and conditions at madgetech.com. To send the devices back, visit madgetech.com to initiate the RMA Process.