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Description	RHTemp1000IS
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 %RH maximum
Memory	16,350 readings per channel
Memory Wrap	Yes
Reading Rate	1 reading every second up to 1 reading every 24 hours
Time Accuracy	±1 minute/month at 25 °C
Data Format	Date and time stamped °C, °F, K, °R; %RH, mg/mL, Dew Point
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/Vista/Windows 7/Windows 8
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/PEEK
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; Intrinsically Safe for Class I, Div 1, groups ABCD; Non-incendive for Class I, Division 2, groups ABCD Hazardous *(Classified)* Locations

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. FAILURE TO USE A TADIRAN TL-2150 BATTERY WILL VOID THE INTRINSICALLY SAFE/NON-INCENDIVE RATINGS.

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

RHTemp1000IS

RHTemp1000IS
Intrinsically Safe Rugged Humidity and Temperature Data Logger

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To view the full MadgeTech product line,
visit our website at www.madgetech.com.

Product Notes

Intrinsic Safety Approval

The RHTemp1000IS has been certified by FM Approvals as Intrinsically Safe (IS) for use in Class I, Division 1, groups A, B, C, D, and Non-incendive (NI) for use in Class I, Division 2, groups A, B, C, D Hazardous (Classified) Locations. The rating listed in the FM Approvals guide is as follows:

RHTemp1000IS. Temperature and Humidity Recorder.
IS / I / 1 / ABCD T4A Ta=80 °C; NI / I / 2 / ABCD / T4A Ta=80 °C

These are the only safety ratings relevant to the use of this product. Use of this product in hazardous environments not specifically covered by this rating, is prohibited, unless the user takes the appropriate steps to ensure the safety of the product and assumes full responsibility for its safe use.

O-Rings

O-Ring maintenace is a key factor when properly caring for the RHTemp1000IS. 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.

Communication

To ensure desired operation of the RHTemp1000IS, **please keep the surface clear of any foreign objects or substances**. The RHTemp1000IS's 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 be downloaded from the MadgeTech website at the following link: www.madgetech.com/software-download. Follow the instructions provided in the Installation Wizard to install the MadgeTech Software.

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

- Connect the data logger via 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 RHTemp1000IS standard calibration is one temperature point at 25 °C and two humidity points at 25 %RH and 75 %RH.