

# REED

## Model R6030

### Temperature/Humidity Data Logger



## Instruction Manual

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## Safety

After use in low temperature or high humidity environments, it is important to stand the instrument upright to allow the beads of water to dry without damaging the instrument.

When storing the instrument for a long period, remove the batteries to avoid battery fluid leaking and damaging the instrument.

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## Features

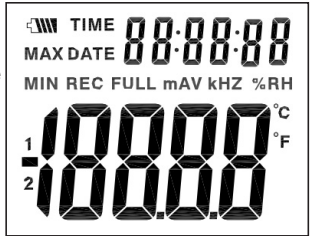
- Records up to 32,700 ambient temperature and relative humidity readings
- User selectable recording intervals from 1s to 24h
- Minimum/Maximum function with alarm
- Real-time clock stores data and time
- LCD readout displays current temperature (°F or °C) or humidity reading, min/max reading with date and time
- Download data directly to a PC via USB cable supplied
- Includes data logger, mounting bracket with screws, USB cable, software diskette, security lock and battery

## Specifications

Temperature Range:	40 to 70°C/-40 to 158°F
Resolution:	0.1°C/0.1°F
Accuracy:	-40 to -10°C/-40 to 14°F & 40 to 70°C/ 104 to 158°F: $\pm 2^{\circ}\text{C}/\pm 3.6^{\circ}\text{F}$ ; -10 to 40°C/ 14 to 104°F: $\pm 1^{\circ}\text{C}/\pm 1.8^{\circ}\text{F}$
Humidity Range:	0 to 100% RH
Resolution:	0.1% RH
Accuracy:	0 to 20% & 80 to 100%: $\pm 5.0\%$ RH; 20 to 40% & 60 to 80%: $\pm 3.5\%$ RH; 40 to 60%: $\pm 3.0\%$ RH
Sampling Rate:	User selectable rate, 1s to 24h
Power Supply:	1 x 3.6V lithium battery
Dimensions:	94 x 48 x 33mm
Weight:	115g

# Instrument Description

-  Battery Symbol  
When the battery power diminishes, the symbol will go from 3 slots to 2, 1 and then when it's empty,  it's time to replace the battery.
- DATE / TIME - Indicates the current date/time. The instrument will automatically rotate between the date and time every 10 seconds
- MAX / MIN - Indicates the maximum and minimum measuring values
- REC - Indicates that the data logger is recording data
- FULL - Indicates that the instruments memory capacity is full. The data logger will stop recording data
- %RH - Indicates that the data logger is measuring humidity
- °C - Indicates that the current unit of temperature measurement is Celsius
- °F - Indicates that the current unit of temperature measurement is Fahrenheit



## Notes:

When pressing the MAX / MIN button, the MAX, MIN, DATE & TIME values will be held. If you don't press any buttons for 40 seconds, the meter will automatically exit from the MAX / MIN mode and return to the default data hold and measurement mode.

When the measured value exceeds the upper and lower limits the alarm LED will flash once every minute. When the LED flashes Red, this indicates that the temperature value exceeds the limit, when the LED flashes Yellow this indicates that the humidity value exceeds the limit.

If the temperature/humidity sensor is not connected properly the -LO- symbol will display. When this happens, open the back cover and re-install the sensor. Repeat until the correct measurement value is displayed.

# Operation Instructions

## Software Installation

- 1) Install the software CD (included in packaging) into the CD-ROM of your computer. An installation window will appear. Follow the indications to install the software onto your computer.
- 2) After having installed the software, keep the CD in the CD-ROM of your computer. Connect the data logger to your computer using the USB cable (included). A USB Driver installation window will appear. Follow the indications to install the driver onto your computer.

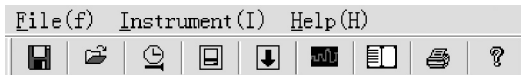
**Note:** The data logger USB software is a program to collect data from the data logger when it is connected to a computer. The data can be displayed graphically, in Excel or similar programs. The major functions are all listed in the main window.










**System requirements:** Windows 2000, Windows XP, or Windows Vista

**Minimum hardware required:** PC with Pentium 90MHz or higher, 32 MB of RAM, at least 7 MB of hard disk space to install the data logger USB software.


**Recommended display resolution:** 1024 x 768 with 16 bit Color.

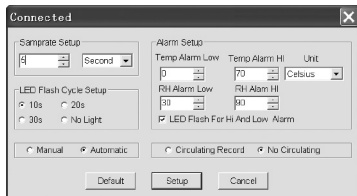
## Main Menu



-  Save - Save recorded data to the disk
-  Open - Open a saved file
-  Change Date/Time
-  Data logger Setup
-  Data Download from Data logger
-  Show Data in Graph format
-  Show Data in List format
-  Print - Print the Graph or List
-  Help

## Data logger Setup

- Press the  Data logger Setup icon on the main menu bar. The setup window will appear.
- The Sample Rate Setup field instructs the data logger to log readings at a specific rate. You can input specific measurement increment in the box to the left and select the time unit of measure in the box to the right.
- You can set the LED Flash Cycle Setup field. By selecting No Light, the LED will not flash and this will conserve the battery power.
- The Manual and Automatic options allow you to start data logging immediately when the Setup window is closed (Automatic) or at a later time (Manual).
- The Alarm Setup allows you to set HIGH and LOW temperature and relative humidity limits and disable the flashing of the data logger's LED's to conserve the battery power.
- The Circulating Record and No Circulating options allow you to choose what you want the data logger to do when the storage memory is full. Either continue logging data and replace the earlier data (Circulating Record) or to stop logging (No Circulating).



Press the Setup button to save your changes. Press the Default button to reset to the default settings. Press the Cancel button to exit the Setup window.


### Notes:

All stored data will be permanently erased when the Setup is finished. To save this data before it is lost, click Cancel and download and save the data. Then you can return to the Setup.

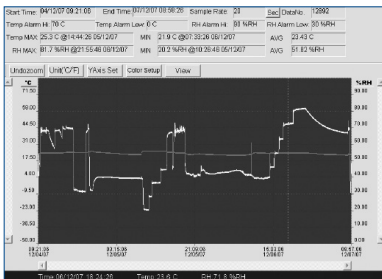
It is possible that the battery will not last for entire duration of your use, Always ensure that you have enough battery power and if in doubt, replace with a new battery before logging critical data.

## Data logger Download

Transfer the readings store in the logger to the computer:

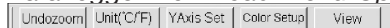
- 1) Connect the data logger to the computer using USB cable (included)
- 2) Open the HT Data logger software program
- 3) Press the  Data logger Download icon
- 4) A window offering Download or Cancel options will appear, press Download

If the readings were successfully transferred, the data graph window will appear:



The top fields show detailed information on the readings (time, sampling rate, data numbers, alarm hi, alarm low, max data, min data and average data).

## Data Logger Download Menu Options

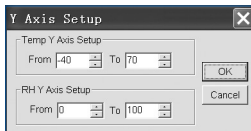


### Zoom In

- 1) Press the left mouse button and drag a rectangle around the area you want to zoom into
- 2) Release the mouse button
- 3) Use the horizontal scrollbar to scroll through all the data. Use the left vertical scrollbar to scroll through the temperature data. Use the right vertical scrollbar to scroll through the relative humidity data

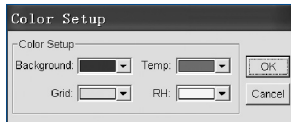
### Zoom Out

- 1) Select the Undozoom option.
- 2) Select the Y Axis Set option to Setup the Temperature (Temp) and Humidity (RH)



### Color Setup

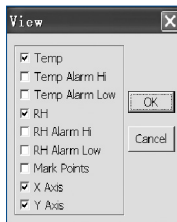
Setup the background color, grid color, temperature and relative humidity color.



### View

Customize the graph window. You can select the data to be viewed as: a trace, add or remove grid lines from the x and y axes, apply mark points (places dots on the traces for the actual data points, breaking up the continuous nature of a trace).


Click on the List  icon to get the list window.




No.	Time	(%RH) Humidity	(C) Temperature	(F) Temperature
1	15/10/07 15:25:13	53.5	25.5 C	77.9 F
2	15/10/07 15:25:14	53.3	25.5 C	77.9 F
3	15/10/07 15:25:15	52.9	25.5 C	77.9 F
4	15/10/07 15:25:16	52.6	25.5 C	77.9 F
5	15/10/07 15:25:17	52.4	25.5 C	77.9 F
6	15/10/07 15:25:18	52.2	25.5 C	77.9 F
7	15/10/07 15:25:19	52.1	25.5 C	77.9 F
8	15/10/07 15:25:20	52.0	25.5 C	77.9 F
9	15/10/07 15:25:21	51.9	25.5 C	77.9 F
10	15/10/07 15:25:22	51.8	25.5 C	77.9 F







## *File Save and Open*

- 1) Select the Save  icon to open the file save dialog box.
- 2) Name the file and save it with the default file extension (the file will be saved with the .record extension). This file can be reopened in the HT Data logger software program or as a .xls file to be opened in a spreadsheet program.

### **Notes:**

To open an existing file for viewing on the data graph window, select the Open  icon. When prompted, select the .record file you saved.

## *Printing Graphs and Lists*

- 1) Select the Graph  icon to show the data as a graph, then select the Print  icon to print the graph
- 2) Select the List  icon to show the data as a graph, then select the Print  icon to print the list

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## Notes

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