

TEMPERATURE / HUMIDITY DATA LOGGER



F.A.Q.(Frequently Ask Question)

FAQ: If I can't load and the display won't active, what should I do?
Ans: Make sure you have selected correct baud rate , see page select 4800 baud rate for model 8818 , or select 9600 baud rate for the rest models. This is to ensure you could download quicker by selecting correct baud rate value .

FAQ: If the logger is not flashing , how should I do ?
Ans: If you were set up Magnet start function , when a magnet passes over the middle of rear side , the logger is not flashing , change with a new and stronger magnetism and try it again. Make sure the flashing interval is the same as programmed sampling time . If you were set 5 minutes as sample rate , the LED will just flash every 5 minutes .

WARRANTY

The meter is warranted to be free from defects in material and workmanship for a period of one years from the date of purchase.

This warranty covers normal operation and does not cover batteries, misuse, abuse, alteration, tampering, neglect, improper maintenance, or damage resulting from leaking batteries. Proof of purchase is required for warranty repairs.

RETURN AUTHORIZATION

Authorization must be obtained from the supplier before returning items for any reason.

When requiring a RA (Return Authorization), please include data regarding the defective reason, the meters are to be returned along with good packing to prevent any damage in shipment and insured against possible damage or loss.

INTRODUCTION

Thank you for purchasing this Temperature Data Logger! This unit has been developed to meet your maximum satisfaction with its user-friendly design. Review the entire manual for a complete overview of the operation of this new data logger. You may also review the manual from Autoplay Menu, double click "Run software, Manual (PDF)" and peruse every procedure and function step by step. The logger is very easy-to-use.

The software is used to readout the stored data and see as a graph, showing the history with real-time clock, the tabular data can be viewed or exported to a spreadsheet for various analysis.

One interface can be used with multiple loggers, designed as a saving cost unit. There are 3 color of interfaces for choice: White, Dark Blue, Burgundy.

IDEAL FOR APPLICATION:

- Monitoring Ambient condition in Greenhouses, Warehouses, Food transport, Aircraft cabins, refrigerator truck, containers, railway, Art galleries and Museum, incubation process, Hatcheries, HVAC fields (Heat, Ventilation, Air Conditioning), collecting data for QC.



FRONT VIEW

REC - Stands for RECORD

For model without LCD : 8818 or 88128
 "REC" is flashing while logging the temperature records
 "REC" LED will stop flashing after complete recorded or battery is out of power .
 REC green light will flash every second (8818) .
 REC green light will flash every 5 seconds when sample interval is set over 5 seconds (88128).

For model with LCD : 8828 or 8829
 Both "REC" green light and "REC" indicator will active and display on the screen per every set sample interval . For example , if you set sample interval less than 5 seconds , the REC light will flash per set second , otherwise , will flash every 5 seconds .

ALM - Stands for ALARM

"ALM" is flashing while recorded value is higher than set HI or less than LO setting , the logger alarm designed is not audible , but for reminding or warning the user to do necessary action .
For model without LCD : 8818 or 88128
 "ALM" "ALM" LED will stop flashing after downloading to a PC or battery is out of power .
 ALM red light will flash every second (8818) .
 ALM red light will flash every 5 seconds when sample interval is set over 5 seconds (88128).

For model with LCD : 8828 or 8829
 Both "ALM" red light and "ALM" indicator will active and display on the screen per every set sample interval . For example , if you set sample interval less than 5 seconds , the ALM light will flash per set second , otherwise , will flash every 5 seconds .

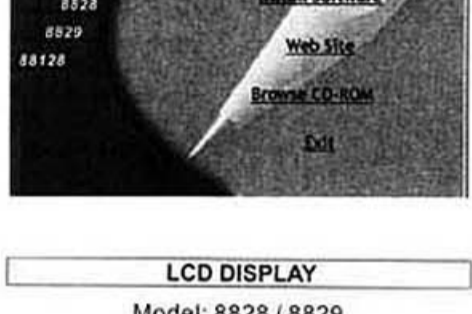
SOFTWARE INSTALLATION

Microsoft Office is a registered trademark of Microsoft Corporation.

Installation procedure :

- Slide the logger unit onto the RS232 interface.
- Connect the socket of RS232 to the COM1 or COM2
- Insert CD-ROM to the computer for starting software set up
- See the diagram as an example of 8818 Temp. logger :

- Run Software** : To run software from CD-Rom. (Or read manual)
- Install Software** : Run the set-up installation program.
- Browse CD-ROM** : Browse the CD-Rom using Windows.
- Web Site** : Visit our web site in your browser.
- Exit** : Close this menu system.



Before starting the logger setting , please read throughly the whole operation manual , there are some FAQ listed in some pages for troubleshooting reference.

MATERIAL SUPPLIED

Check for damaged or missing parts in your data logger before starting.

The Data Logger Set should contain:

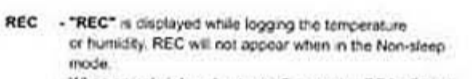
- Either one of the following :
Model: 8818, 88128 or 8828 or 8829 The Data Logger (supplied with one CR2 or ER3, 3.0V Lithium battery)
Model: 8818P(White), 8828P(Dark blue), 8829P(Burgundy) The Interface cable & software.
Model: 8818S, 88128S or 8828S or 8829S The complete set including data logger with lithium battery , interface cable and software.

2. Operation manual



LCD DISPLAY

Model: 8828 / 8829



REC - "REC" is displayed while logging the temperature or humidity. REC will not appear when in the Non-sleep mode. When sample interval set over 5 seconds , REC LED will every 5 seconds , set less than 5 seconds , REC green LED will flash per sample interval , such as 1,2,3, or 4

HI - "HI" is displayed and alarm LED is flashing if a temperature/humidity is higher than set High value in the logger unit.

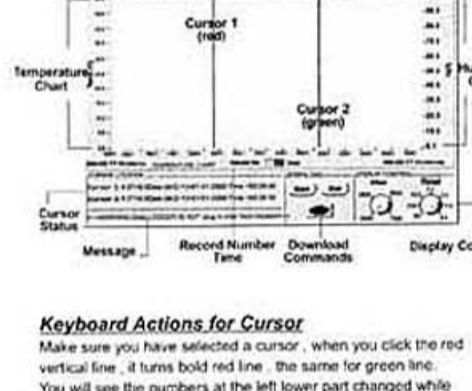
LOW - "LOW" is displayed while logged temperature is lower than set Low value in the logger unit.

RH% - Display Relative Humidity % (Though you might have seen RH% when replacing with a new battery , which is not available for the model 8828 but model 8829 Temperature/ Humidity datalogger .)

C - Temperature displays reading in Celsius
F - Temperature displays reading in Fahrenheit
COMM - When communicating with computer. "COMM" is shown at the top of the screen.

MAIN SCREEN

The data logger program is easy to operate from its main screen.



Keyboard Actions for Cursor
 Make sure you have selected a cursor , when you click the red vertical line , it turns bold red line , the same for green line. You will see the numbers at the left corner part changed while pressing arrow left or down arrow key for last record or pressing right or up arrow key for next record

Left arrow key : To the previous point on the current plot.
 Right arrow key : To the next point on the current plot.
 <Shift>-left arrow key : Back 10 points on the current plot.
 <Shift>-right arrow key : Forward 10 points on the current plot.
 <Home> : To the first Visible point on the current plot.
 <End> : To the last visible point on the current plot.

FAQ: Why can't I see the movement by pressing above keys ?
Ans : Make sure the bottom right corner "Display Control - Offset" figures are not in black , if it is yellow button , please click other area to restore to the original black .

Drag a cursor to move it.
 The cursor tracks the mouse until you release the mouse button, and then the cursor snaps to the nearest data point.

Actions by Offset Knob
 You can operate on graph from the "Offset Knob" after pressed "Offset Knob" in the following ways :

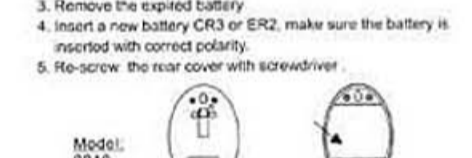
Press the up ▲ or down ▼ arrow key to increase or decrease one record number (or corresponding to date) in the graph .

Zooming and Panning on Graphs
 To start zooming in on a point, press the <Ctrl> key and click on the left mouse button over the point; you can release the <Ctrl> key after you press the mouse button. The resolution in the viewport is increases dynamically until you release the mouse

To zoom out, click on the right mouse button, and then press the <Ctrl> key as you do to zoom in.

BATTERY REPLACEMENT

The dataloggers are designed with a waterproof housing, and allow the user to replace battery when it has expired. You will see "Lo" appeared on the display when battery is weak for model 8828 and 8829.



- Follow the steps to remove and replace battery.
- Unscrew the datalogger from the rear side.
- Do not remove o-ring but make sure the o-ring is in its place (groove).
- Remove the expired battery
- Insert a new battery CR3 or ER2, make sure the battery is inserted with correct polarity.
- Re-screw the rear cover with screwdriver .



RETRIEVE FILE

Click on icon to retrieve and to load a data file into this program. (See Diagram B.) This program is designed to log up to 8,000 / 16,000 sample readings (Model 88128/ 8828/ 8829 are available for 16,000 sample collecting)

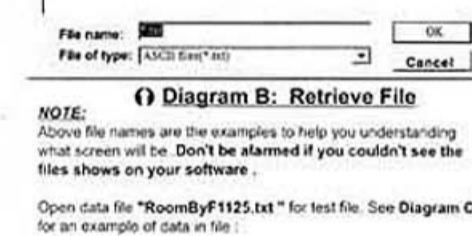


Diagram B: Retrieve File

NOTE: Above file names are the examples to help you understanding what screens will be. Don't be alarmed if you couldn't see the files shows on your software .

Open data file "RoomByF1125.txt" for test file. See Diagram C for an example of data in a file :

To aid in reading a graph , a grid can be drawn on the graph, and a dialogue box display at the left bottom corner shows the appearance of this grid.(CONTROL LOCATION-Cursor 1 and Cursor 2)

STATISTICS

Depress icon to view histograms of data based on "Whole Range" and on different "Cursor Range" basis. See (Diagram I)

Whole Range - Covers all sample readings which have been logged
Cursor Range - Covers all sample readings between two cursors.

- Click and drag the yellow indicator on the button display in the left part of Diagram I enables equally divide all sample readings into 4 divisions (up to 130). This can also be done by clicking on ▲▼ or by Keying in the figure directly.
Note: You might not be able to see this diagram, this is an example to show you the graph that select whole range to 40 and cursor range to 40.

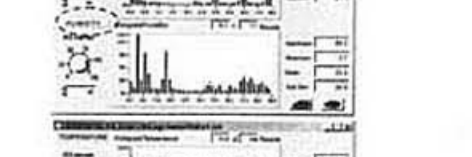
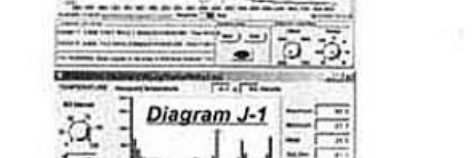
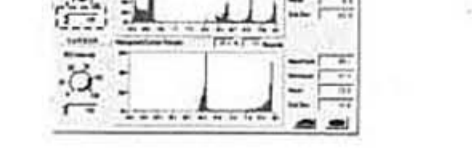
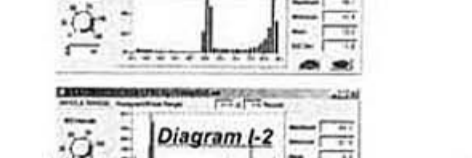
- As shown in the middle top of Diagram I-1, by changing the cursor position, you will find an example for the statistic source of temperature records.
 1021 samples located at the temperature of 44°C or 213 samples at the temperature of 62.7°C between two cursors' range as shown in the middle bottom).

- If you set all sample readings into 100 divisions, you will find the histogram of whole range changed as well.

- Diagram I-2 is another example of setting the cursor range, it has been set into 100 division as well.

- If you compare Diagram I, I-1, I-2, you will notice the differences of changing setting have also changed the related figures.

- For the model 8829 (Temperature & Humidity datalogger) , you will see Diagram J-1 as an example, the upper diagram shows the cursor 1 temperature , the lower diagram shows the Relative Humidity records. Diagram J-2 set division as 130.



- Diagram I is an Temperature example for the statistic source to the Diagram I-1 and Diagram I-2
 And Diagram J is another Temperature/Humidity example for the statistic source to the Diagram J-1 and Diagram J-2.

- The right part of Diagram I indicates Maximum, Minimum, Mean and Standard Deviation (Std.Dev) values from the temperature of whole range (Upper part) and between 2 cursors' range (Lower part)

Maximum	85.1
Minimum	41.4
Mean	72.0
Std.Dev	11.6

Maximum : The greatest value of whole logged records, or the greatest value between two selected cursors , or the greatest value of whole Humidity records.

Minimum : The least value from the logged records , or the least value between two selected cursors, or the least value whole logged Humidity records. (Model: 8829)

Mean : Average value from the logged records , or average value between two selected cursors , or average value from whole logged Humidity records (Model: 8829).

Std. Dev : This is a very useful feature to see more reliable deviation while recording . Calculate each deviation between each value and Mean value, then get an average figure from total mean deviation. (See Diagram I-1)