

# EM-3 MANUAL

## ENVIRONMENTAL MONITOR



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SF-SLS-555 (A)

## **Introduction**

The Model EM-3 Environmental Monitor uses a PIC microcontroller and a USB driver to read and interface OHMIC resistive and hybrid capacitive relative humidity sensors via the USB port of a computer. The EM-3 is powered through the USB port. Sensors are connected by a terminal strip or an optional remote connector. Temperature is acquired from a 10K thermistor. Included with the EM-3 is a USB cable, HC-610 %RH sensors, 10K thermistor, and custom software program, Ohmic's Environmental Monitor Program. Ohmic's custom programming allows the user to display %RH, Dry Bulb Temperature, and Dewpoint Temperature and a Real Time Strip Chart Recorder. The Strip Chart Recorder has three selectable channels with an adjustable time frame. The user may configure the logging features to log in \*.TXT or \*.CSV file formats. The recorded files can be viewed on screen, printed, or imported to MS Excel. Contained in the program is a Humidity-Dewpoint calculator. The logging setup and start are accessed by the "Logging" heading. The program contains a fully functional HELP section and contains PDF data files for OHMIC relative humidity sensors.

## **Installation of the EM-3 program**

The EM-3 comes with the EM-3 program. Insert the disk into your computer. The program requires Microsoft Windows 2000, XP, Vista, or later. The program will auto run; if not click START, RUN and select HSEsetup.exe on this CD, click OK to run.

The Sensor Evaluator Setup Wizard will appear.

Click "Next". Please read information carefully before continuing. Click "Next". If Destination Folder is correct Click "Next". If Menu Folder is correct Click "Next". In Additional Options check "Install NET Framework 2.0". Also check Install Acrobat Reader 8.0 if needed (you must have an Acrobat reader to view documentation in program). Click "Install". Installation box appears, wait. When complete click "Finish".

Next the MS NET Framework 2.0 Setup will appear. Check the box for "I accept the terms of the License Agreement". Click "Install" (you may print the EULA). NET framework 2.0 will be installed, or if it is already on your computer it may give you the option of "Repairing" or "Uninstalling"; it is best to cancel the operation. There is no need to repair or uninstall.

The ME-3 program should now be installed and an icon placed on your computer desktop.

The program may be opened with the ME-3 connected or disconnected. Click on the Environmental Monitor icon. If you are not connected the computer shows an error box. To open unconnected click "Cancel" then Click "OK" in the warning box. You can navigate the program and access the Sensor Documentation files and EM-3 Help.

To use the EM-3 connect using the USB A to B cable. Click on the Environmental Monitor icon and the program will run. The EM-3 Help section contains all information needed to use the EM-3. The table of contents for the EM-3 Help section is on the following page.

**Connecting Sensors** Install HC-610 and thermistor as shown:

Fig A shows connector with HC-610 and thermistor correctly installed.



Fig A

Fig B shows up close view of the HC-610. Note the small rectangle. No writing seen.



Fig B

**Installing connector and USB cable**

Install connector with sensors in EM-3 as shown in Fig C. Then connect to computer with USB cable provided as shown in Fig D.



Fig C



Fig D

**Starting the program**

Start EM-3 program by double left clicking on the OHMIC icon "Environmental Monitor" on your desktop. See HELP section for additional instructions.

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2. On receipt of shipping instructions, forward the instrument, transportation prepaid. Repairs will be made and the instrument returned, transportation prepaid.

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