Copyright 2004, Sensatronics, LLC
All rights reserved.

The information contained in this manual is subject to change without notice. Sensatronics reserves the right to make changes to equipment design or program components, as progress in engineering, manufacturing methods, or other circumstances may warrant. No responsibility is assumed for the use of software or equipment that is not supplied by Sensatronics.

IPSentry is a trademark of RGE, Inc.
Nagios is a registered trademark of Ethan Galstad.
Big Brother is a trademark of Quest Software, Inc.
Microsoft and Windows are registered trademarks of Microsoft Corporation.
Ethernet is a trademark of Xerox Corporation.
TempElert is a trademark of ITWORKS.
All other third-party trademarks and registered trademarks are the property of their respective owners.

How to Contact Sensatronics, LLC

Address: 20A Dunklee Road, Bow, NH 03304
Phone: (800) 633-1033, (603) 224-0167
FAX: (603) 224-2401
Email (sales): sales@sensatronics.com
Email (support): support@sensatronics.com
Web site: www.sensatronics.com
AOL Instant Messenger (Screen name: SensatronicsGuy)

Printed in U.S.A.
V1.0

Regulatory Information

U.S.A. Requirements

FCC Radio Frequency Class A Notice for Environmental Monitor

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense. Do not attempt to repair or modify this equipment. All repairs must be performed by Sensatronics, or an authorized Sensatronics representative.

UL Listing - U.S. and Canada

This equipment uses a power supply that has been listed by Underwriter Laboratories, Inc. for use in the U.S. and meets requirements of the Canadian Standards Association CAN/CSA.

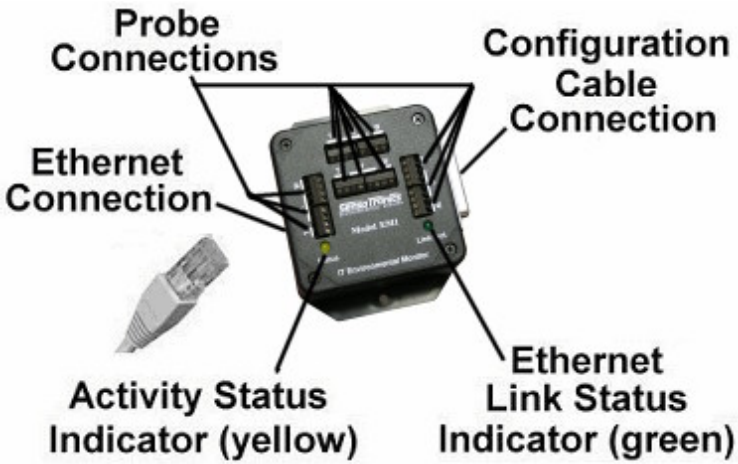
Contents

Regulatory Information 2
1 – Description 4
Mounting 5
Probe and Cables 5
Indicators 8
2 – Connecting the Device 9
Connecting the Configuration Cable 9
Connecting the Probes 10
Connecting the Power Supply 11
Connecting the Ethernet Cable 12
3 – Configuring the Device 13
4 – Software 19
EMS Software 20
SNMP 21
CRON logfile tool 22
TempElert Software 23
IPSentry Configuration 25
Write Your Own Software 26
Network Management Software Plug-Ins 30
Plug-In FAQs 31
Appendix A – Troubleshooting 33
Warranty 39
Index 42

1 – Description

The Environmental Monitor is an Ethernet device capable of providing temperature, humidity, and wetness sensor information to network management software for environmental monitoring. Its list of features includes:

- Measures temperatures from -40°F (-40°C) to 212°F (100°C)
- Measures humidity with accuracy of 2.5%
- Measures wetness
- SNMP MIB
- Monitors up to 4 temperature, 4 humidity, and 4 wetness locations
- Supported by many NMS (Network Management Software) applications
- Mounting flanges
- °F, °C, K and R units
- Low cost, small, lightweight



Mounting

Flanges for wall or rack mounting are provided.

Probe and Cables

The temperature/humidity probe measures temperatures from -40°F to 140°F (-40°C to 60°C) and relative humidity from 5% to 95%, non-condensing.

The probe is supplied with either a 10-foot (3.05m) cable or a 75-foot (22.86m) cable.

Custom lengths up to 2500 feet (762m) are available.

In addition to the temperature humidity probe, you can use the **standard** or **heavy-duty** temperature probes used with the Model E monitor.

The **standard** temperature probe has a 50-foot gray 24-gauge AWG cable, with the sensor housed in a white nylon cap on one end. It is well suited for most indoor applications, where environmental conditions don't require a rugged probe. The standard probe should be fine for most applications.

The **heavy-duty** temperature probe has a 75-foot PVC-jacketed and shielded cable, with the sensor housed in a stainless steel cylinder. It is well suited to withstand the elements of outdoor environments.

Note: The standard and temperature/humidity probes can be used to 60°C. The heavy-duty temperature probe can be used to 80°C.

The wetness probe is a rope that detects the presence of conductive liquids in a location where wetness is undesirable. The probe is scaled from 1 to approximately 100 to indicate the degree of wetness. Standards lengths are 10 feet and 75 feet. Custom lengths are available. The probe is typically applied to floor locations or any selected location where the presence of conductive liquids will cause safety issues, damage, or some other form of hazard.

Indicators

The Environmental Monitor has two indicators, green for Ethernet Link Status, and yellow for Activity Status.

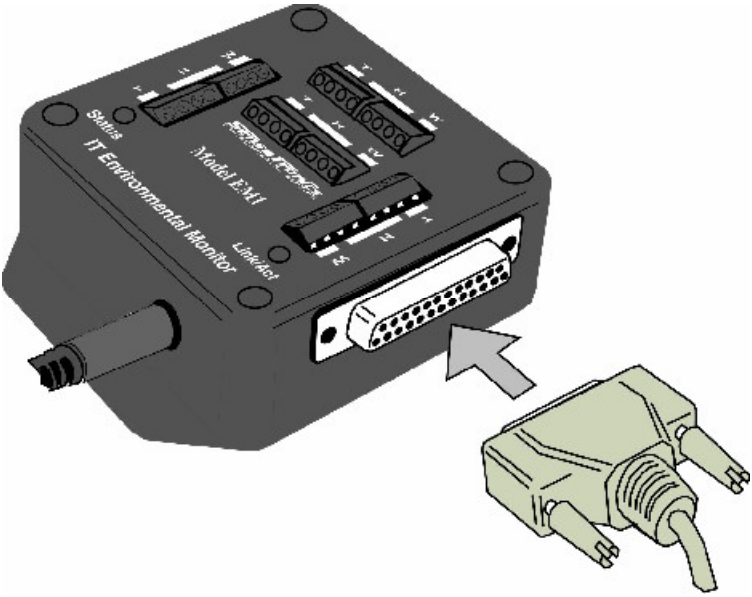
The green indicator will light to indicate that an Ethernet link is available. The indicator will also flash whenever a web page is accessed.

The yellow indicator will flash eight times whenever the unit scans the probe ports.

2 – Connecting the Device

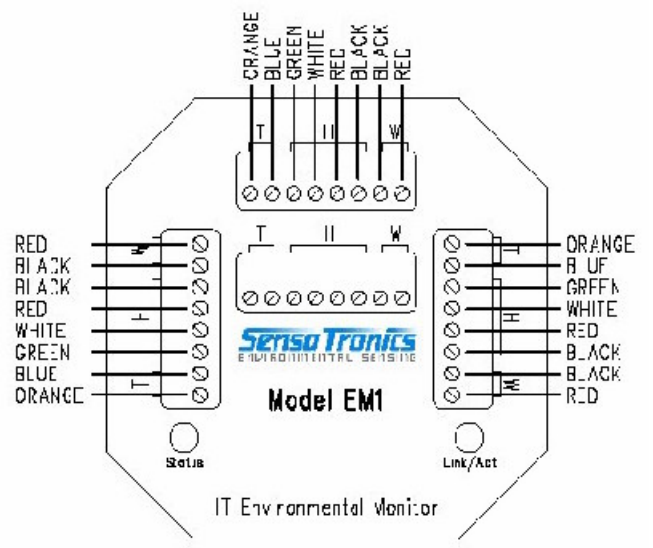
Connecting the Configuration Cable

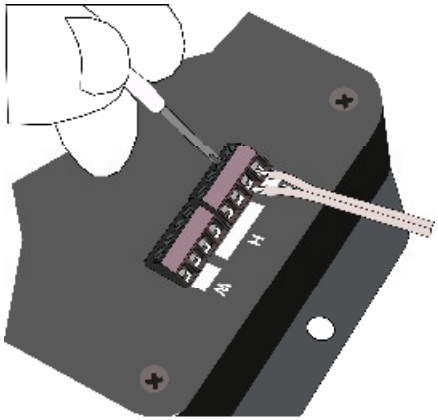
The configuration cable supplied with the Environmental Monitor plugs into the RS232 serial port on the right side of the unit. This is a simple, straight-through DB25 male to DB9 female. This cable is only connected for the configuration process, and should not be connected during normal unit operation. The other end of the cable is connected to the serial port of a PC.



Connecting the Probes

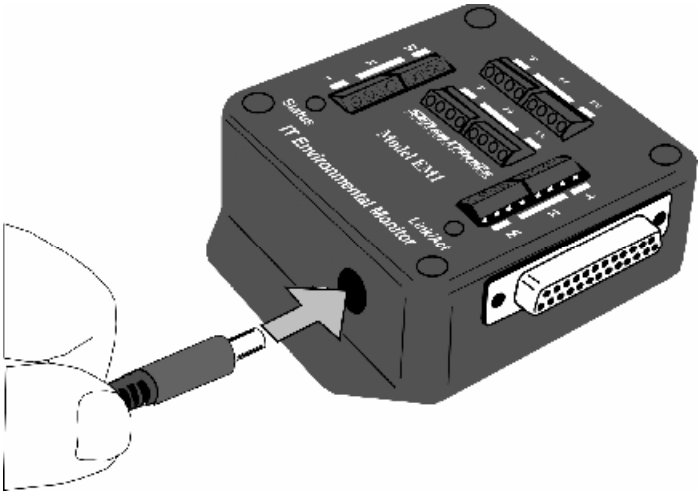
The Monitor can support up to 4 sets of temperature, humidity, and wetness probes. Connect the temperature probe wires to the retainers marked “T”, the humidity pair to “H”, and wetness probe wires to the retainers marked “W”. The following diagram shows the numbering of the connector sets.





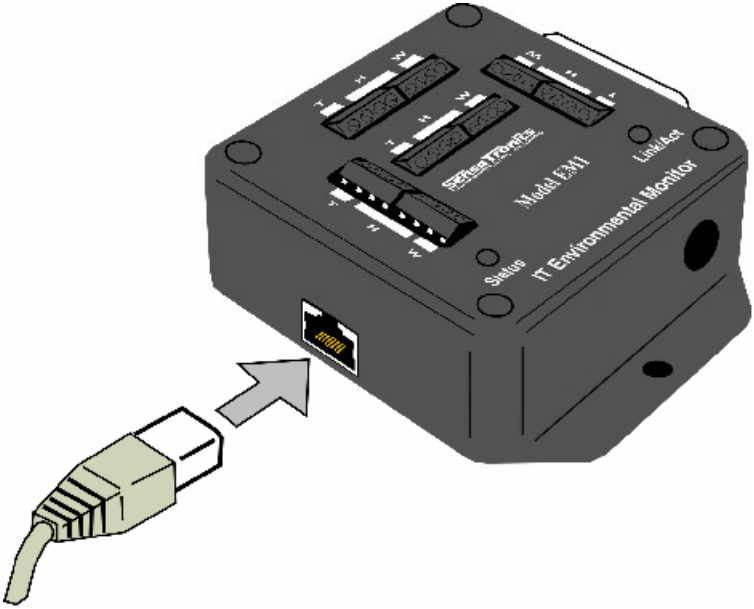
Connecting the Power Supply

The power supply cord should be the last connection made. Plug the cord from the wall transformer into a powered outlet and the jack on the side of the module. The yellow Status indicator will blink when the connection is made. As long as the module has power, the yellow Status indicator will blink eight times, pause briefly, and then repeat.



Connecting the Ethernet Cable

Connect the Ethernet cable to the connector on the side of the module. After a brief delay, the green Link/Act indicator will light to indicate a good connection.



3 – Configuring the Device

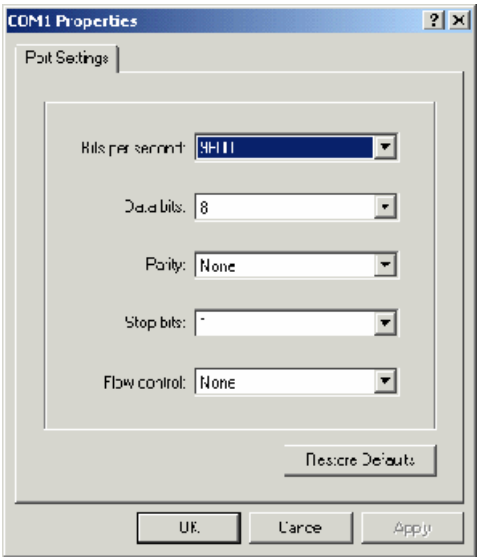
Before you can use the Environmental Monitor unit, you must configure its IP address and netmask, or determine the automatically obtained IP address.

NOTE: ***If communicating outside your LAN, the gateway will also need to be configured. See your network administrator***.

To configure the unit:

1. Determine a static IP and netmask that is available on your network.
2. Connect the unit to a PC's serial port, using the supplied RS-232 cable.
3. Start a terminal emulator program. (One emulator program, HyperTerminal, is included with Microsoft Windows.)
4. Set the RS-232 port settings to 9600,8,N,1 (no flow control).

IMPORTANT: ***Make sure that the settings include "No Flow Control". If this setting is incorrect, the unit will be unable to communicate with your terminal emulator.***



1. Connect the power cord to the unit. Make sure the wall transformer is plugged into a powered outlet.
2. Press Return to reach the main window.

```
DHCP IP: 0.0.0.0

  A. Set IP Address
  B. Set Unit Name & Port Identifiers
  C. SNMP, Temp Mode, and Web Settings

  R. Reset Unit
  X. Restore Default Configuration

                    Enter choice:
```

3. Select the menu items for configuring the unit, and for setting the IP address and netmask. If DHCP is selected for your network mode, the menu will appear as below:

```
Environmental Monitor IP Configuration Menu

Current settings
IP:
Net Mask:
Gateway:
HTTP Server Port:  80
Network mode:  DHCP

A. Set IP Address
B. Set Netmask
C. Set Default Gateway
D. Set HTTP Server Port
M. Toggle Network Mode

R. Return to Previous Menu
```

If static IP is selected as your network mode, the menu will appear as below:

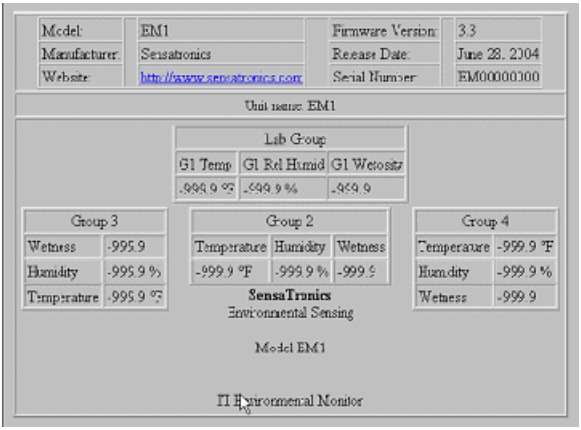
```
Environmental Monitor IP Configuration Menu

Current settings
IP:
Net Mask:
Gateway:
HTTP Server Port:  80
Network mode:  STATIC IP

  A. Set IP Address
  B. Set Netmask
  C. Set Default Gateway
  D. Set HTTP Server Port
  M. Toggle Network Mode

  R. Return to Previous Menu
```

4. If desired, return to the Main Menu and name the unit and probes for convenience.

```
Environmental Monitor Identity Configuration
Menu

  A. Set Unit Name
  B. Set Group Names

  R. Return to Previous Menu

  Enter choice:b

  Please enter the group number to rename:1
  Current group name is "Group 1"
  Please enter a new name for group 1 (up to 15
  characters):Lab Group
  Name for group 1 set to "Lab Group"
```

Default group names are, “Group1”, “Group2”, and so on. Set probe names, as desired.

```
  Current T probe name is "Temperature"
  New name for group 1 temperature probe (up to
  15 characters):G1 Temp
  Name for group 1 temperature probe set to "G1
  Temp"

  Current H probe name is "Humidity"
  New name for group 1 humidity probe (up to 19
  characters):G1 Rel Humid
  Name for group 1 humidity probe set to "G1
  Rel Humid"

  Current W probe name is "Wetness"
  New name for group 1 wetness probe (up to 15
  characters):G1 Wetosity
  Name for group 1 wetness probe set to "G1
  Wetosity
```



/config URL returns:

```
EM00000000|EM1|Model EM1|12|3.3|1|Drew Group|T|G1
Temp|H|G1 Rel Humid|W|G1 Wetosity|2|Group
2|T|Temperature|H|Humidity|W|Wetness|3|Group
3|T|Temperature|H|Humidity|W|Wetness|4|Group
4|T|Temperature|H|Humidity|W|Wetness
```

/data URL returns:

```
F|-999.9|-999.9|-999.9|-999.9|-999.9|-999.9|-999.9|-
999.9|-999.9|-999.9|-999.9|-999.9
```

5. From the Main Menu, you can set SNMP parameters:

```
SNMP and Temp Mode Settings Menu

C. Set SNMP Read Community   (Current: public)
D. Set SNMP Write Community  (Current: private)
E. Set SNMP Trap Password    (Current: trap)
S. Enable/Disable SNMP       (Current: Enabled)
I. Set index.html Refresh (10-65500) (Current: 60s)
U. Toggle Temperature Units  (Units now: Fahrenheit)

R. Return to previous menu
```

6. Return to the main menu for the settings to take effect.

IMPORTANT: ***There will be a short pause before the Main Menu reappears. This is normal.***

7. Disconnect the RS-232 cable.
8. Connect the supplied Ethernet cable to the unit; ensuring the other end of the cable is connected to your network through a hub or switch.

You should now be able to ping the Environmental Monitor, using the IP address you assigned. You should also be able to get temperature data with your web browser. Use the IP address you assigned. For example, if the unit IP is 192.168.2.201, enter http://192.168.2.201 in your web browser's address bar.

Temperature data is provided in the temperature scale the unit is set to. Check (and change) by performing an SNMP Get (or Set) on:

```
.1.3.6.1.4.1.16174.1.1.3.2.3.1.0
```

F = Fahrenheit, C = Celsius, R = Rankine, K = Kelvin

This variable can be written to change the temperature mode. (The Monitor will reinitialize when any writable variable is changed.)

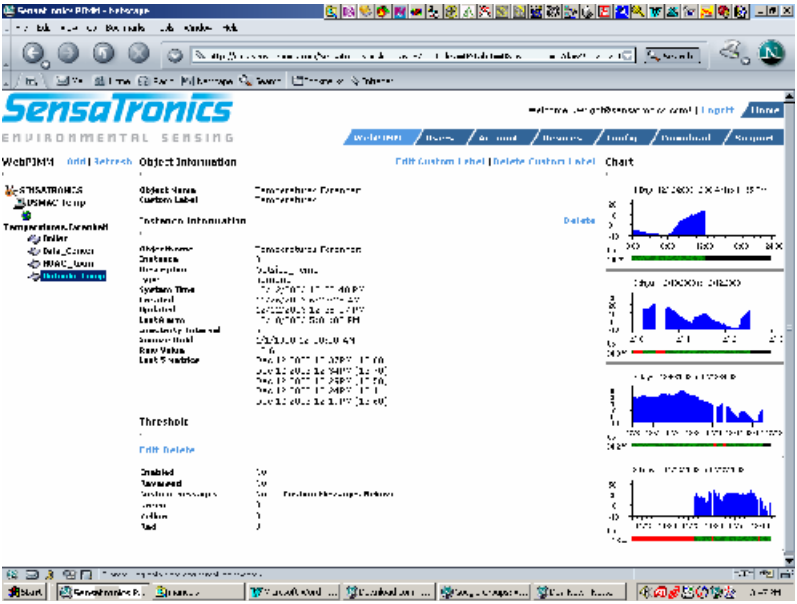
4 – Software

You can communicate with the Environmental Monitor using any of the following methods:

- EMS (Environmental Management Software)
- SNMP (Version 1 support, no MIB-II/System information)
- CRON logfile Tool (Perl/Netcat required)
- PHP interface (Netcat required)
- Network Management Software plug-ins (currently for users of IPSentry, Nagios, and Big Brother and the Intellipool Network Monitor)
- TempElert software
- Write your own software

EMS Software

Sensatronics' EMS (Environmental Management Software) is an ASP software offering used to monitor all your temperature needs. Used in conjunction with the Environmental Monitor, EMS provides a graphical view of your entire organization and will alert you via your email, cell-phone or pager if preset threshold conditions are crossed.



EMS Features:

- Graphical user interface via the internet
- Multiple levels of user notification
- Monitor unlimited number of Environmental Monitors
- Monitor other IT needs
- Data accessible anytime, anywhere via the Internet

- Receive pager/email/cell-phone alerts
- Minimal software installation
- Historical data available in Excel format
- Visual indications of warnings and alerts
- 30-day free trial (visit http://ems.sensatronics.com)
- Low-cost yearly subscription fee

For more information on the EMS software, visit the Sensatronics website at www.sensatronics.com .

SNMP

Only SNMP Version 1.0 is supported in the Environmental Monitor. MIB-II information is NOT supported. A graphical representation of the MIB is shown below. Items in gray are read/write. Items in black are read only.

To set the SNMP community strings use the serial port configuration menus (***see chapter 3, Configuring the Device).*** The latest MIB files are always available via our website at:

http://sensatronics.com/downloads/snmp/ .

IMPORTANT: When configuring the SNMP community strings (read, read/write, and trap), be sure you don't leave any of them blank. They default to "public", "private", and "trap".

CRON logfile tool

Perl scripts are available for simple logging of unit data by Unix/Linux/Solaris/etc. systems. Download them from our website at:

http://sensatronics.com/downloads/plugins/cron/

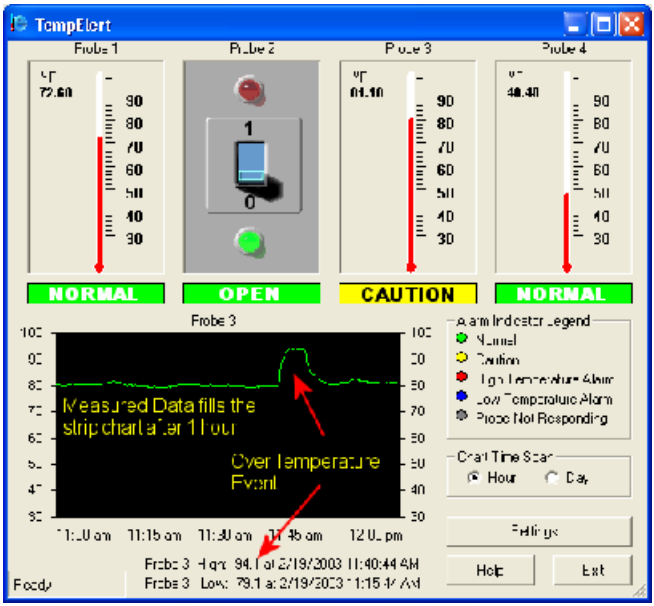
This script produces a CSV log file with date and temperatures suitable for importing into most spreadsheets. The script requires netcat (unsupported script), that can be found at:

http://netcat.sourceforge.net/download.php

NOTE: The script is designed to be executed no more than once per minute. We no not recommend polling at intervals more frequent than this.

TempElert Software

Sensatronics has partnered with ItWorks to offer the TempElert Alerting and Monitoring Program for the Environmental Monitor. The TempElert Program notifies you through e-mail or a page whenever temperatures reach values that you set.



TempElert features:

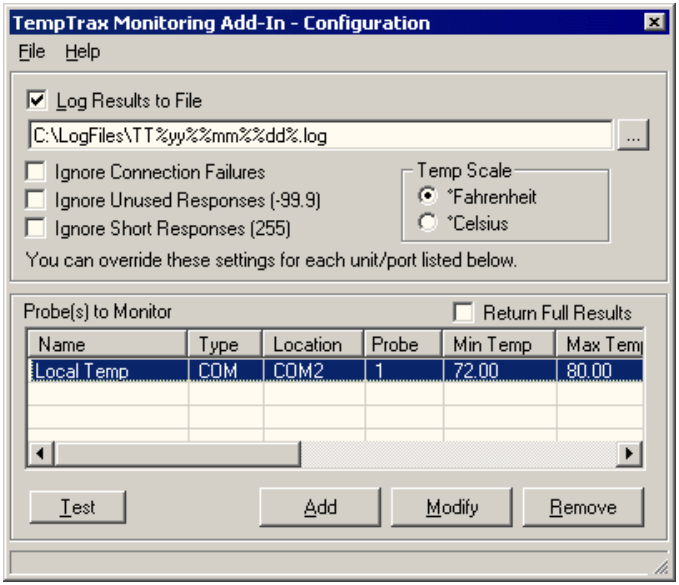
- Data is displayed as visual thermometer indicators.
- Probes can be either thermometers or switches, enabling simultaneous monitoring of temperature and door/window switches, limit switches or burglar alarm relays.
- Probes and switches can be named to match locations.
- Both Normally Open (N.O.) switches and Normally Closed (N.C.) switches are supported.

- An at-a-glance visual annunciator shows alarm status on-screen.
- Alarms and Cautions upper and lower limits can be set.
- Built-in error checking and recovery, and daily data logging to disk (plain text) are included.
- Audible alarms can be turned on or off, and different alarm sounds are selectable.
- A customizable Alarm or Switch Status Box allows you to use your own image and wording in the alarm indicator box.
- Temperatures can be displayed in either Fahrenheit or Celsius degrees.
- A single unit can be monitored from multiple locations. Multiple iterations of the program can poll the Environmental Monitor simultaneously.
- External windows programs (such as a PC power shutdown routine) can be run when alarms occur. Programs and batch file operations are supported.
- Remote and local operation, and dial-up Internet connections are supported.
- TempElert contains fully configurable SMTP mail server settings, including authentication, if needed. It can monitor the 16-probe Ethernet/Internet-ready Environmental Monitor.

For more information or for technical support on the TempElert software, visit the TempElert website at www.tempelert.com .

IPSentry Configuration

Before using the Environmental Monitor with IPSentry, use the IPSentry Add-in Manager to install the Monitor add-in via the configuration tool:



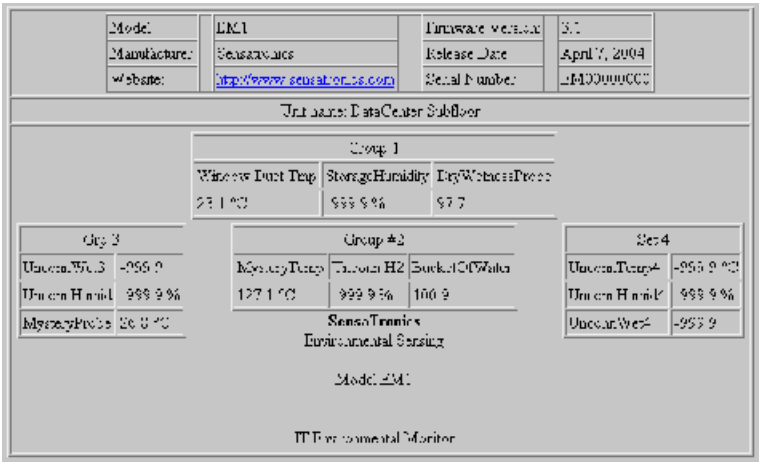
For details on configuring the IPSentry add-in for the Environmental Monitor plug-in, visit their website at www.ipsentry.com.

Write Your Own Software

The Environmental Monitor is running an internal web server, listening for TCP/IP HTTP /GET requests on Port 80. The Monitor responds to three different URL requests:

/index.html: This is the main index page that returns an HTML-formatted web page that contains the temperatures of all connected probes. This index page also details information about the Monitor, such as manufacturer, serial number, unit, and probe names.

Note: As the index.html page may change without warning, do not use it in custom software.



/data: This request will return an HTML-free web page, consisting of a simple ASCII string of pipe-delimited data. The data will be in the following format:

```
C|21.8|-999.9|94.8|117.9|-999.9|100.9|24.2|-999.9|-999.9|
-999.9|-999.9|-999.9
```

This URL is typically used by OEM's who are packaging the Environmental Monitor for use with their software and need an easy and efficient way to get to the probe data. This URL is also handy for those wishing to write their own software interface to simply and quickly obtain the temperatures and incorporate them into their existing Network Management Software.

/config: This request will return an HTML-free web page, consisting of a simple ASCII string of pipe-delimited data. The information contained in this string of data will include configuration information about the Environmental Monitor, such as serial number, unit & probe names, and model number. Here's an example:

```
EM00000000|data Center Subfloor|Model EM1|12|3.1|1|Group
1|T|Window Duct Tmp|H|Storage Humidity|W|DryWetnessProbe|2|Group
#2|T|MysteryTemp|H|Unconn H2|W|BucketOfWater|3|Grp
3|T|MysteryProbe|H|UnconnHumid|W|UnconnWet3|4|Set
4|T|UnconnTemp4|H|UnconnHumid4|W|UnconnWet4
```

To query the Environmental Monitor from within your own software, you will need an understanding of TCP/IP Sockets and the HTTP protocol. Consult the documentation of the specific programming language for details. After successfully initializing and opening up a TCP/IP socket to the Monitor, you will be able to communicate with it using the HTTP Protocol. To request the /temp URL simply send the following string

```
"GET /data <CR><LF><CR><LF>"
```

Using the **Telnet** command is a convenient way of retrieving data from the Monitor. To do this, open a telnet session to the Monitor unit's IP Address on Port 80. For example, if the Monitor was configured on IP 192.168.2.101, you would send the following command:

```
telnet 192.168.2.101 80
```

If successful, you will be able to send command directly to the Monitor. Recall that one such command is **/data:**

```
GET /data HTTP/1.0
```

…followed by the ENTER key twice.

This will return a non-HTML ASCII, pipe-delimited string…just as it would if you were to open your web browser and type

```
http://192.168.2.101/temp
```

in the URL box.
Here's an example of a return string:

```
C|21.8|-999.9|94.8|117.9|-999.9|100.9|24.2|-999.9|-999.9|
-999.9|-999.9|-999.9
```

If you are having difficulties or need further help, send an email to support@sensatronics.com. Be sure to include your phone number in case a technician needs to call you.

In addition, the SNMP interface an also be used for quick and easy script or plug-in work. More information on the units SNMP capabilities can be found in the readme and MIB files found at the Sensatronics website:

http://www.sensatronics.com/downloads/snmp.

IMPORTANT: When configuring the SNMP community strings (read, read/write, and trap), be sure you don't leave any of them blank. They default to "public", "private", and "trap".

Network Management Software Plug-Ins

The following plug-ins are currently available:

- ActiveXperts (www.activexperts.com)
- Big Brother (www.bb4.com) **
- Bizwatch (www.bizwatch.com)
- DotCom-Monitor (www.dotcom-monitor.com)
- Host Monitor (http://www.ks-soft.com)
- Intellipool Network Monitor (www.intellipool.com)
- IPSentry (www.ipsentry.com)
- MRTG (www.mrtg.org) **
- N-Able (www.n-able.com)
- Nagios (www.nagios.org) **
- Servers Alive (http://www.woodstone.nu)
- SNMPc (www.castlerock.com)

Be sure to visit www.sensatronics.com for the latest list of available plug-ins.

** Note: Visit our website to retrieve the latest plug-ins:

http://sensatronics.com/downloads/plugins/

Plug-In FAQs

- **What is a plug-in?**
  A plug-in is a software module that can be added to the network management software to extend its capability to include communication with the Environmental Monitor module.

- **How do I get the plug-in I need?**
  Our website (www.sensatronics.com) always contains information on how and where to obtain the latest software plug-ins. Please note that IPSentry uses the term "add-in components" for plug-ins. They are the same thing.

- **How do I install the plug-in?**
  Plug-ins are installed or copied into specific folders. For IPSentry, use the Add-in manager to install the plug-in. For Nagios and Big Brother, refer to the readme file that comes in the plug-in.

- **Where can I get more help?**

Contact Sensatronics for help with using plug-ins. Visit our website at www.sensatronics.com , send e-mail to support@sensatronics.com , or contact a support representative directly with AOL Instant Messenger (Screen name: SensatronicsGuy).

Appendix A – Troubleshooting

Question: I can't ping the unit nor can I bring up its internal web page. What's wrong?

Answer: Double-check the unit's IP Address and Netmask to be sure they are valid for your LAN/WAN. Also be sure to "Save Changes" from the main menu before powering down the unit.

The Ethernet chip is running at 10Mbps. Check to be sure your switch or hub is properly configured to work with this data rate.

Question: I get a reading of "-999.9". What's wrong?

Answer: This reading indicates that the temperature, humidity, or wetness probe for that position is not connected. One possible cause is if the line has been cut between the temperature probe and the unit. Check the line, and make sure you have a good connection to the unit.

Question: I get a reading of 9999.9. What's wrong?

Answer: This reading indicates that there is a short in the probe line; that the two probe leads are touching each other. Check the line for damage.

Question: The unit doesn't work. What's wrong?

Answer: Several problems could cause the unit to not work. Try these possible fixes:

A. Check to make sure the wall transformer is securely plugged into the outlet, and that the transformer cord is securely connected to the unit.
B. Check the outlet into which the transformer is plugged, to ensure it has power.
C. Check probe line connections.
D. If the unit was recently installed, ensure it was properly configured. Especially note the Flow Control setting, which must be "None". Try reconfiguring the device (Chapters 2 and 3).

Question: Where can I get the latest software plug-ins?

Answer: If you cannot find the latest plug-in at the software publisher's website, be sure to check our plug-in listing:

http://sensatronics.com/downloads/plugins/

Question: I get a humidity reading of greater than 100%.

Answer: The probe is not functioning correctly. Call Sensatronics for assistance

Question: I can bring up the Environmental Monitor's main /index page but I cannot get to its other URL's (such as /data or /config).

Answer: This may be due to a proxy server. Try bypassing the proxy if possible or configure the proxy to allow this traffic; the /data and /config URLs are plain text, not HTML.

Question: The wetness probe reads greater than 0 and less than 10. Is something wrong?

Answer: The probe is sensitive to humidity, and may read values less than 10 when no liquids are present. In the presence of liquid, the probe will read greater than 50. If the probe has previously been wet and then dried, it may need to be cleaned (see below) to avoid a false wetness reading.

Question: The wetness has gotten wet. Do I need to replace it?

Answer: No, however, it is probably necessary to clean the probe. To clean it, thoroughly rinse it in distilled water. An improperly-cleaned probe may give false wetness readings. A wet probe may take 48 hours or more to dry, depending on the humidity.

Appendix B - Hardware Specifications

Controller Operating Range:

-40°F to 122°F
-40°C to +50°C

Accuracy:

0.5°F from –20°F to 120°F
1.5°F from –40°F to 159°F
2.0°F from 160°F to 212°F
0.3°C from –3°C to 50°C
0.8°C from –40°C to 70°C
2.0°C from 71°C to 100°C*

* Not available on all units

Resolution: 0.1° F, C, K, R

Units: Fahrenheit, Celsius, Kelvin, and Rankine

Measurement Interval:

3 seconds

Power Supply: 9 VDC @ 250mA (wall transformer), 2.5mm plug, center positive

Note: The Environmental Monitor can be supplied by any 9-15 VDC power supply capable of supplying 250mA.

Dimensions: 4.25” x 3.25” x 0.75” (108mm x 83mm x 20mm)

Shipping Weight: 3 lb. (1.3 kg) with cables

Mounting: Flanges for wall or rack mounting

Temp/Humidity Probe: Heavy duty

Cable Length: 10 feet (3.05).
75’ and longer lengths are available on request.

Wetness Probe: 10’ and 75’ lengths

Computer Interface:
RS232C (25-pin female D connector)

Warranty

GENERAL WARRANTY POLICY

Sensatronics LLC. (hereinafter referred to as SENSATRONICS) warrants that the Product shall conform to and perform in accordance with published technical specifications and the accompanying written materials, and shall be free of defects in materials and workmanship, for the period of time herein indicated, such warranty period commencing upon receipt of the Product. This Limited Warranty applies only to hardware products manufactured by or for Sensatronics that can be identified by the Sensatronics trademark, trade name, or logo affixed to them. The Limited Warranty does not apply to any non-Sensatronics hardware products or any software, even if packaged or sold with Sensatronics hardware.

This warranty is limited to the repair and/or replacement, at SENSATRONICS discretion, of defective or non-conforming Product, and SENSATRONICS shall not be responsible for the failure of the Product to perform specified functions, or any other non- conformance caused by or attributable to: (a) any misapplication or misuse of the Product; (b) failure of Customer to adhere to any of SENSATRONICS specifications or instructions; (c) neglect of, abuse of, or accident to, the Product; or (d) any associated or complementary equipment or software not furnished by SENSATRONICS.

Limited warranty service may be obtained by delivering the Product to SENSATRONICS in the US or to the international distributor it was purchased through and providing proof of purchase or receipt date. Customer

agrees to insure the Product or assume the risk of loss or damage in transit, to prepay shipping charges to SENSATRONICS, and to use the original shipping container or equivalent.

LIMITATION OF LIABILITY

EXCEPT AS EXPRESSLY PROVIDED HEREIN, SENSATRONICS MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, WITH RESPECT TO ANY EQUIPMENT, PARTS OR SERVICES PROVIDED PURSUANT TO THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NEITHER SENSATRONICS NOR ITS DEALER SHALL BE LIABLE FOR ANY OTHER DAMAGES, INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, WHETHER IN AN ACTION IN CONTRACT OR TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY), SUCH AS, BUT NOT LIMITED TO, LOSS OF ANTICIPATED PROFITS OR BENEFITS RESULTING FROM, OR ARISING OUT OF, OR IN CONNECTION WITH THE USE OF FURNISHING OF EQUIPMENT, PARTS OR SERVICES HEREUNDER OR THE PERFORMANCE, USE OR INABILITY TO USE THE SAME, EVEN IF SENSATRONICS OR ITS DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL SENSATRONICS OR ITS DEALERS TOTAL LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT.

The Limited Warranty does not apply to any software, even if packaged or sold with Sensatronics hardware. Non-Sensatronics manufacturers, suppliers, or publishers

may provide their own warranties. Software distributed by Sensatronics under the Sensatronics brand name (including, but not limited to monitoring software) is not covered under this Limited Warranty. Refer to the individual Software License Agreements for more information.

Where dictated by Country or State Law, some of the above exclusions or limitations may not be applicable in some countries or states. This warranty provides specific legal rights; other rights that vary from country to country or state to state may also exist. This warranty shall not be applicable to the extent that any Federal, State or Municipal Law that cannot be preempted prohibits any provision of this warranty.

HARDWARE PRODUCT WARRANTY DETAILS

WARRANTY PERIOD: SENSATRONICS warranties hardware Product for a period of one (1) year.
WARRANTY PROCEDURE: Upon return of the hardware Product SENSATRONICS will, at its option, repair or replace Product at no additional charge, freight prepaid, except as set forth below. Repair parts and replacement Product will be furnished on an exchange basis and will be either reconditioned or new. All replaced Product and parts become the property of SENSATRONICS. If SENSATRONICS determines that the Product is not under warranty, it will, at the Customers option, repair the Product using current SENSATRONICS standard rates for parts and labor, and return the Product using Ground Transportation at no charge in or out of warranty.

Index

Accuracy, 37
Activity Status Indicator, 4, 8
Configuring, 9, 13, 18
Connecting, 9
Description, 4
Dimensions, 38
Ethernet cable, 12
Ethernet Link Status Indicator, 4, 8
Hardware, 37
HyperTerminal, 13
Mounting, 5, 38
Operating Systems, 38
Plug-ins, 30
Power, 11
Probes, 10, 17
Resolution, 37
Sensatronics, 1
Specifications, 37
TempElert, 20, 23
Warranty, 39
Weight, 38