Environmental Monitoring and Recording Over the Internet
Temperature + Humidity and Dew Point

The OMEGA® iSD environmental monitor provides Web-based remote surveillance of environmental conditions in critical HVAC applications such as computer server rooms, clean rooms, laboratories, museums, warehouses, or any remote facility. View and record Temperature, Relative Humidity and Dew Point over an Ethernet network or the Internet with no special software—just a Web browser.

Email Alarms
The device can trigger an alarm if temperature or humidity goes above or below a set point that you determine. Your alarm can be sent by email to a single user or to a group distribution list, including text messages to cell phones and PDA’s.

Physical Threats
The OMEGA iSD includes screw terminals for two contact closures that work with common alarm sensors. You can instruct the iSD monitor to send an alarm if a door is opened, a window is broken, or a fire sprinkler goes off.

Power Failure
The iSD monitor can trigger an alarm if the AC power fails. The iSD monitor will continue to collect data for two days powered by a standard 9 Volt alkaline battery (included). A failure on the Ethernet network will not interrupt data recording.

Local Alarms
The OMEGA iSD monitor includes two 1.5 Amp output relays that are controlled by the alarm conditions you select. The relays can trigger flashing lights and a siren for example to alert personnel near the scene. With the easy Web-based setup page, the two relays can be programmed for any combination of temperature or humidity, and high or low set points, as well as alarm conditions triggered by contact closures. The relays can also be programmed to turn off when conditions return to normal, or programmed to remain latched and require a manual reset.
**View Charts and Graphs on the Web**

The OMEGA iSD serves Active Web Pages to display real time readings, display charts of temperature and humidity, or log data in standard data formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic.

**SD Flash Memory Card**

The iSD comes complete with a removable 2 GB SD Flash Memory card that can store up to seven years of readings taken at ten second intervals.

**Records on SD Flash Cards**

The data is recorded on widely available SD (Secure Digital) flash cards. The format is a simple “.txt” text file that is easily imported to spreadsheet sheets and other programs. It can be read directly on a PC or MAC with a USB card reader. You can also download the data remotely over an Ethernet network or the Internet.

**Sensor and Calibration**

The iSD monitors come complete with a plug-in temperature and humidity probe that mounts on the instrument or separately with the six foot extension cable (included). It is not necessary to take the iSD monitor out of service for routine calibration. The temperature/humidity sensors are interchangeable and can be replaced for about the same cost as a typical calibration. OMEGA offers replacement sensors with optional 3-point NIST traceable calibration certificates.

**IP Camera**

The Web page includes a link to a “Web Cam” or “IP camera” (not included). If you get a message about an alarm condition, you can quickly click on the link to view the actual scene over the Internet.

**Installation and operation of the OMEGA iSD monitor**

requires no special training, tools, or software. The device connects to any Ethernet network with standard cable and plugs and is powered by any AC outlet supplying 110 to 240 Vac.

**Award-Winning Technology**

The OMEGA iSD is simple to install and use, and features OMEGA’s award-winning iServer technology that requires no special software except a Web Browser.

**Typical Applications**

The OMEGA iSD is great for monitoring temperature + humidity in applications such as: clean rooms, computer rooms, HVAC systems, pharmaceutical and food processing and storage, hospitals, laboratories, semiconductor fabs, electronic assembly, warehousing, museums, manufacturing, greenhouses, farm animal shelters, and many more.

**Data logging spreadsheet**
Specifications

RELATIVE HUMIDITY SENSOR

Accuracy/Range: ±2.5% RH at 90% RH; ±3% for 5 to 10% RH and 90 to 95%; ±4% for 0 to 5% RH and 95 to 100%

Non-linearity: ±3%

Hysteresis: ±1% RH

Response Time: 8 seconds, tau 63%

Repeatability: ±0.1%

Resolution: 0.1%, 12 bit

TEMPERATURE SENSOR

Accuracy/Range*

Wand Probe: ±0.5°C (±1°F) for 5 to 45°C (41 to 113°F); ±1°C (up to ±2°C) for 0 to 5°C and 45 to 60°C (32 to 41°F and 113 to 140°F)

Industrial Probe: (see chart in manual) ±0.5°C (±1°F) for 5 to 45°C (41 to 113°F); ±1.5°C (up to ±2.7°C) for -40 to 5°C and 45 to 124°C (-40 to 113°F and 113 to 255°F)

*Note: extended temperature range is for Ind. probe only, the iServer’s operating temperature is 0 to 60°C

Response Time: 5 to 30 secs, tau 63%

Repeatability: ±0.1°C

Resolution: 0.1°C, 14 bit

Standard Probe Dimensions:
Ø13 x 83.8 mm L (Ø 0.5 x 3.3” L)

INDUSTRIAL PROBE ISD-THP-5

Probe: Ø16 x 137 mm L (0.63 x 5”)

Housing Material: SS 316

Cable Length: 3 m (10’)

Cable Operating Temperature:
-40 to 125°C (-40 to 257°F)

ETHERNET DATA ACQUISITION

INTERFACES

Ethernet (RJ45): Fixed or auto-negotiating 10/100BASE-T, Auto MDI/MDIX

Protocols: TCP, UDP, SNMP, SMTP, NTP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet

LCD Display: 32 digits 4.8 x 9.7 mm (0.19 x 0.38”)

SD FLASH MEMORY CARD

2 GB Card: 8 months of data storage at 1 second recording intervals or 7 years at 10 second intervals

Relay Outputs: Two relays 1.5A @ 30 Vdc

Alarm I/Os: Two contact inputs, TTL 0.5 mA with 10K pull-up; one open collector output 150 mA @ 30 Vdc

Embedded WEB Server:

Serves WEB pages containing real-time data and live updated charts within definable time intervals

POWER

Input: 9 to 12 Vdc

AC Power Adaptor (Included):

Input: 100 to 240 Vac, 50/60Hz

Nominal Output: 9 Vdc @ 0.5 A

Back-Up Battery: 9 Vdc, Alkaline (included)

Operating Temperature:

iServer Unit: 0 to 60°C (32 to 140°F)

Battery: -18 to 55°C (0 to 131°F)

AC Adaptor: 0 to 40°C (32 to 104°F)

PACKAGING

Weight: 490 g (1.08 lb)

Material: SS 304 case with wall mount bracket

To Order Visit omega.com/isd-th for Pricing and Details

Model No. Description

iSD-TH iSD monitor for temperature + humidity, standard probe, 1.8 m (6’) extension cable

iSD-TH-5 iSD monitor for temperature + humidity, 137 mm (5”) industrial probe with 3 m (10’) cable

Accessories

iSDTHP Replacement standard right angle probe

iSDTHP-5 Replacement industrial 137 mm (5”) probe, cable 3 m (10’)

iP-PCW-10P Porous polyethylene right angle probe cap, for wet environments, 10 pack

iP-PCI-10P Porous polyethylene industrial probe cap, for wet environments, 10 pack

iP-SC Porous stainless steel probe cap, 5 µm porosity, for dusty and pressurized (<35 psi) environments

Calibration for New Units

CAL-3-HU NIST traceable calibration certificate. Three humidity points: 25%, 50%, 75%, one temperature 25°C, for new units.

CT485B-CAL-KIT Calibration kit, 33% and 75% RH standards

For Calibrated Replacement Probes, Including Calibration Certificate

iSDTHP-CAL-3-HU Standard right angle probe and NIST traceable calibration certificate

iSDTHP-5-CAL-3-HU Industrial probe and NIST traceable calibration certificate

To Order, Call 1-800-327-4889SM or Shop Online at omega.comSM