Chilled Mirror Dew Point/Temperature Transmitter

- **Precision accuracy**
- **Two 4-20mA outputs (configurable)**
- **Durable and fast responding**
- **Automatic balance function for the mirror, optical circuitry**
- **RS232 communication**
- **Simple maintenance-mirror cleaning**
- **Applications: HVAC, Clean rooms, Environmental Chambers, Pharmaceutical, Industrial Processes, Glovebox, Semiconductor, Data storage, Hospitals, Museums, Battery systems**

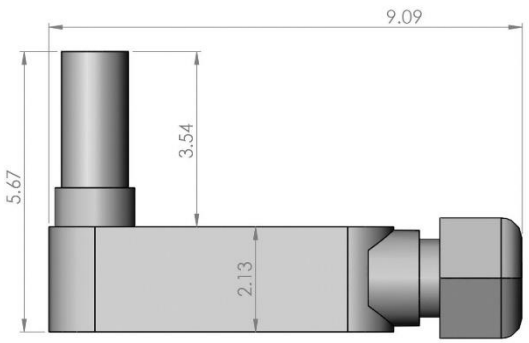
Overview

The CMDP-Series is a family of low-cost dew point chilled mirror transmitter that can be configured as a duct, wall, or pipe unit. The unit offers stable, accurate and repeatable measurements that are traceable to NIST. Available air temperature option is available on the Wall configuration. Settable service cycles for balancing and cleaning the mirror. The CMDP is a primary measurement using a fundamental principle to measure the dew point very accurately. Simple maintenance to cleaning the mirror requires using a wetted cotton swab to restore the transmitter to normal operation. Because of its construction, the customer can enjoy a long life of excellent performance.

Specifications

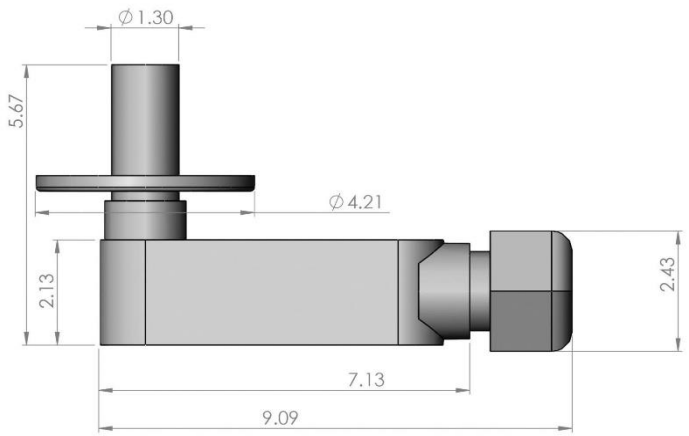
Operating Temperature	-40°C to +60°C
Accuracy	± 0.5C
Repeatability	± 0.05C
Calibration	NIST Traceable
Measurement Range	Dew Point -20°C (@ 25°C) to 60°C (non-condensing) Dew Point -40°C (@ 0°C) Temperature probe: (optional) -40°C to 120°C
Output	(2) 4 to 20mA output at 24Vdc (configurable). Default settings: -20°C to 60°C (unless specified on purchase order.
Supply Voltage	24Vdc +/-3V @1.0A
Pressure rating	2 ATM
Resolution	0.01 %
Analog Output scaled range Dew Point (4-20mA) User Selectable	2) 4-20mA -24 Vdc (configurable) Factory set-both outputs, -20C to 60C (unless specified on order)
Air Velocity	50 to 900m/min
Weight	< 5lbs.
Wetted Materials	Nickel, ultem and anodized aluminum

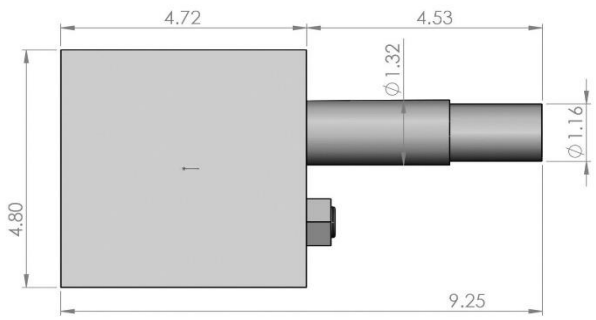
Dimensions



Pipe Mount

Duct Mount





Wall Mount

To Order	
Model No.	Description
CMDP-D	Duct Mounted Chilled Mirror Hygrometer (Dewpoint only)
CMDP-W	Wall Mounted Chilled Mirror Hygrometer (Dewpoint only)
CMDPT-W	Wall Mounted Chilled Mirror Hygrometer (Dewpoint/Temperature)
CMDP-P	Pipe Mounted Chilled Mirror Hygrometer (Dewpoint only)

Handheld Temperature/Humidity Meter

- **New compact hand held size**
- **Applying to duct measurements or harsh environment**
- **Quick response and high accuracy single input thermocouple and extend TRH probe**
- **Backlight function**
- **Hold function: Freeze current readings on LCD**
- **Max./Min./Avg.: Record since Powered on**
- **Auto power off**
- **Temperature unit switchable**
- **Off-line data logging 32,000 pts.**

Overview

The HH414 is a low cost, high performance handheld temperature and humidity meter with data logging capability. It offers a four variable display to show the temperature and humidity form a handheld probe and a separate K type thermocouple connected via a standard SMP type miniature connector to the T2 input along with a real time clock. High and Lo alarms can be set to T1, T2, and RH inputs. The temperature/humidity probe uses a semiconductor and polymer capacitive sensor. Windows® based software for Windows XP or above and USB interface cables allow real time or recorded data to be read by a PC.

Specifications

Input	Single K + Remote Temp. RH
Remote Temp. Range	-20-60℃ (-4-140°F)
Remote Temp. Accuracy	±0.6*℃ (1.2°F)*
Remote RH Range	0.0-99.9%
Remote RH Accuracy	±2.5%(@25*℃*, <70%), others ±5%
Resolution	0.1℃/°F, 0.1%
K Temp. Range	-200-1370℃ (-328-2498°F)
Function	Alarm setting, Max. Min. AVG. REL. Hold, T1 (Or Air T). Tripod mountable, APO
Backlight	Yes
Memory	Off-line 32,000 points
Temperature Coefficient	0.1 x accuracy spec. per °C from 0°C to 18°C and 28°C to 50°C (32°F to 64°F and 82°F to 122°F)
Operating Temperature	0–50°C (32 to 122°F) at < 80% RH
Power	9V Battery/AC/DC adaptor (Option)
Dimension	Meter: 180 x 68.5 x 50 mm Temp. RH sensor probe: 180 x 12 x 10 mm with 1M cable

Handheld Psycrometer with Enthalpy Measurement

HHAQ-106

1 YEAR WARRANTY

- **Integral 6" Long Sensor-Tipped Probe for Measuring Conditions Inside Ductwork**
- **Probe Swivels, Increasing Placement Options**
- **Choice of Imperial or Metric Units for All Measured Parameters Except Relative Humidity**
- **4-Digit LCD**
- **Low Battery Indicator and 2-Minute Auto Power Off**

OMEGA's HHAQ-106 handheld psychrometer with enthalpy can measure any environment's ambient temperature, relative humidity (RH), dew point and wet bulb temperatures, absolute humidity (mixing ratio) and enthalpy of vaporization. These measurements are typically made by three groups of users: Water damage restoration contractors, HVAC/R system installers and technicians and professionals charged with monitoring and maintaining the environment of facilities such as office buildings, greenhouses, food and equipment storage facilities, wineries, freezers, shipping containers, computer rooms, labs, libraries, museums and saunas.

The dew point is the temperature below which the water vapor in a volume of air at a given constant barometric pressure will condense into liquid water at the same rate at which it evaporates. Condensed water is called dew when it forms on a solid surface. Another way to think of dew point is as an air saturation temperature associated with relative humidity (RH). A high RH value indicates that the dew point is close to the current ambient air temperature. At 100% RH, the dew point temperature is equal to the ambient temperature because the air is completely saturated with water. The wet bulb temperature is the temperature that a volume of air would have if it were cooled to saturation (100% RH) by the evaporation of water into it, with the latent heat coming from the volume of air. It is the lowest temperature that can be reached under current ambient conditions by the evaporation of water only. The wet bulb temperature is the temperature you feel when your skin is wet and exposed to moving air as opposed to the actual air temperature—the dry bulb temperature. An environment's absolute humidity level (or mixing ratio) can be measured and expressed in units of grains per pound (GPP) or g/kg. GPP is a more useful moisture metric than RH to water damage remediators. Using RH alone, a remediator might unknowingly introduce moist air—with a low RH but a high GPP—during a job's drying phase.

The sixth environmental parameter that the HHAQ-106 can measure is enthalpy. Enthalpy is a measure of the amount of energy needed to change the state of a substance from a solid to a liquid or from a liquid to a gas. The most common application for the HHAQ-106 enthalpy-calculating algorithm is measuring the enthalpy of vaporization of air in an HVAC/R system duct.

HHAQ-106

SPECIFICATIONS

Ambient Temperature Measurement Range: -20 to 70°C (-4 to 158°F)
Ambient Temperature Measurement Accuracy: 0.5°C (±0.9°F) from -10 to 40°C (14 to 104°F); 1°C (±1.8°F) elsewhere in range
Temperature Measurement Resolution: 0.1°
RH Measurement Range: 0 to 100%
RH Measurement Accuracy: ±3% from 20 to 80% RH; ±3.5% elsewhere
RH Measurement Resolution: 0.1%
Probe Length: 150 mm (6")
Display Size: 38 mm (1.5") diagonal
Current Consumption: <10 mA
Battery Life: 1000 hours (typical)
Dimensions: 209 L x 47 W x 47 mm D (8.23 x 1.85 x 1.85")
Weight (Without Battery): 63 g (2.2 oz)
Power Source: Three "AAA" batteries (included)

To Order

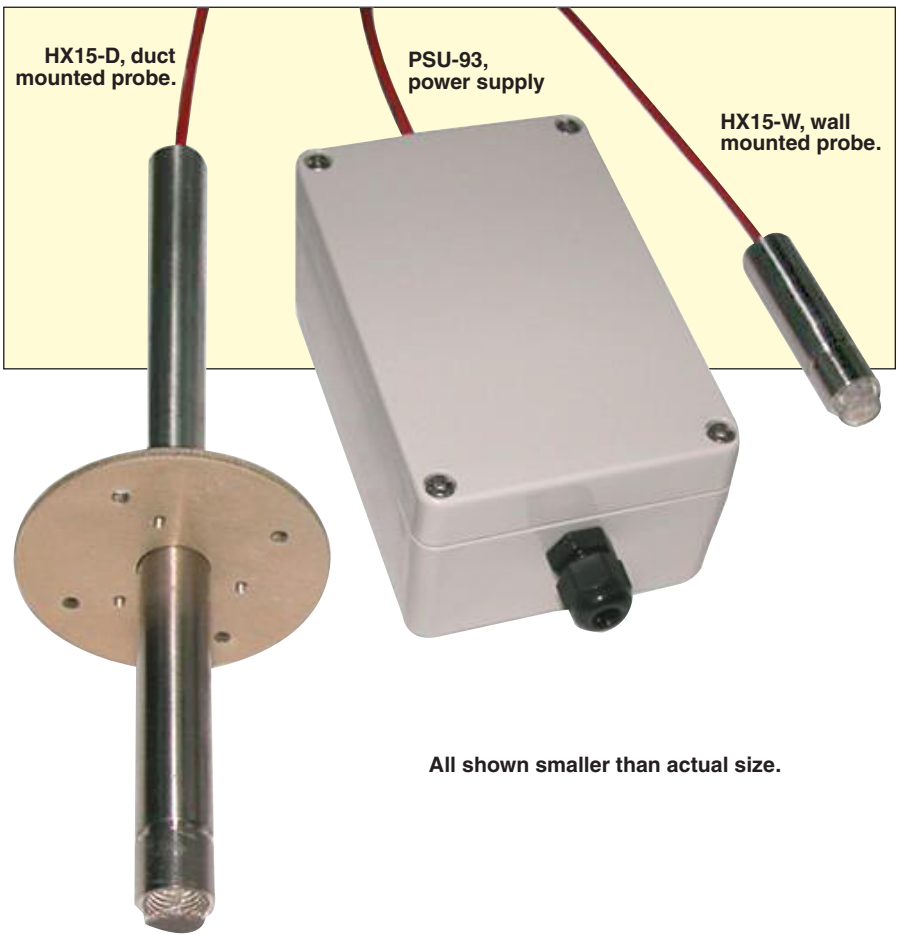
Model No.	Description
HHAQ-106	Handheld psychrometer with enthalpy calculation

Comes complete with rubber bushing for inserting the probe into ductwork, three "AAA" batteries and operator's manual.

Relative Humidity/Temperature Transmitters

HX15 Series

1 YEAR WARRANTY



All shown smaller than actual size.

- -40 to 180°C (-40 to 356°F) Operating Range
- Remote Stainless Steel Probe (Included)
- 79 mm (3") Long Wall-Mounted Probe
- 229 mm (9") Long Duct-Mounted Probe
- Accuracy: 2% RH, 0.5°C
- RoHS 2 Compliant

The HX15 Series 2-wire remote transmitters measure relative humidity and temperature over a large temperature range -40 to 180°C (-40 to 356°F). The HX15-W stainless steel probe is used for wall mounting. The HX15-D stainless steel duct probe has a removable flange. These probes are connected to housings with 1 m (40") PFA cables. Probes are not field replaceable.

Specifications

Accuracy:
Relative Humidity: ±2% RH, 3% to 95% @ 25°C (77°F); ±0.05% RH/°C for -40 to 150°C (-40 to 302°F)
Time Constant: 30 s, 90% response, 1 ms moving air
Temperature: ±0.5°C (1°F), -40 to 180°C (-40 to 356°F); time constant 4 s, 60% response, 1 ms; moving air

Sensors: RH, thin polymer capacitor; temperature, 1000 Ω Platinum RTD
Power: 7 to 30 Vdc
Outputs: 4 to 20 mA for 0 to 100% RH and 4 to 20 mA for -40 to 180°C (-40 to 356°F)
Operating Temperature Range:
Electronics: ABS enclosure NEMA 4X (IP66), -20 to 70°C (-4 to 158°F)
Probes: -40 to 180°C (-40 to 356°F)

Dimensions:
Electronics:
55 H x 80 W x 120 mm L (2.16 x 3.14 x 4.72"); wall mount
Wall Mount Probe: 79 x 16 mm D (3 x 0.625"), 1 m (40") PFA cable, metal wall mounting clip
Duct Probe: 229 x 16 mm D (9 x 0.625"), 1 m (40") PFA cable, removable and adjustable duct flange

To Order

Model No.	Description
HX15-W	Wall-mounted RH/temp transmitter [79 mm (3") probe]
HX15-D	Duct-mounted RH/temp transmitter [229 mm (9") probe]
PSU-93	Power supply, unregulated 16 to 23 Vdc, 300 mA max

Comes complete with operator's manual.
***Ordering Example: HX15-W,** wall-mount RH/temp transmitter wtih 4 to 20 mA outputs.*

Dew Point/Humidity Transmitters

HX200HD shown smaller than actual size.

HX200 Series

1 YEAR WARRANTY · NIST · RoHS

Standard

- **High Accuracy with Certificate of Calibration**
- **High Temperature Sensor to 200°C (392°F) (at 0% RH)**
- **High Pressure Sensor to 750 psi (51.7 bar)**
- **Switchable for Dew Point or Humidity**
- **Switchable °C or °F Temperature**

The HX200 is a high accuracy calibrated dew point or humidity transmitter. The remote sensor is designed to work at temperatures as high as 200°C (392°F). This high accuracy sensor is also built to withstand up to 750 psi. These transmitters are perfect for applications such as compressed air, dryers and environmental chambers.

Specifications

Dew Point: -60 to 40°C (-76 to 104°F)
Relative Humidity: 0 to 95% RH (non-condensing) unit displays dew point or humidity, as well as temperature
Maximum Sensor Pressure Rating: 750 psi (51.7 bar)
Sensor Body Material: 304 SS
Maximum Operating Temperature: 200°C (392°F) (at 0% RH)
Mesh Filter Top: Stainless Steel
Single Output: 4 to 20 mA loop powered (relative humidity or dew point)
Dew Point Accuracy: ±1.0°C from -20 to 40°C (-4 to 104°F); ±3.0°C below -20°C (-4°F)
Relative Humidity Accuracy: ±1% RH from 15 to 40°C (59 to 104°F), 0 to 90% RH (non-condensing); ±2% RH below 15°C (59°F) or above 40°C (104°F)
Display: 2 line LCD
Resolution: 0.1
Power: 4 to 20 mA loop powered, 2-wire 24 Vdc (typical) 12 to 28 Vdc
Dimensions (Enclosure): 88.9 L x 63.5 W mm (3.5 x 2.5")
Mounting Center: 78.7 mm (3.1")
Dimensions of Probe:
Length: 10.16 cm (4")
OD: 1.27 cm (0.5") ½ NPT Fitting
Weight: 1.8 kg (4 lb)

OMEGACARE℠ Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.

To Order

Model No.	Description
HX200HD	Dew point transmitter, 4 to 20 mA loop powered output
HX200HR	Relative humidity transmitter, 4 to 20 mA loop powered output

Comes complete with probe, transmittter, user's manual and NIST calibration certificate [calibration done at -60°C (-76°F)].
***Ordering Example: HX200HD** dew point transmitter and **OCW-1** OMEGACARE℠ extends standard 1-year warranty to a total of 2 years.*

Transmitters

HX300A Series

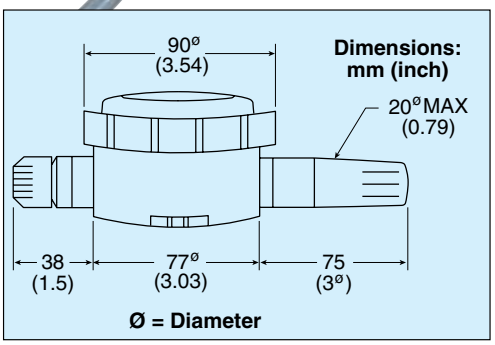
1 YEAR WARRANTY NIST CE

Optional

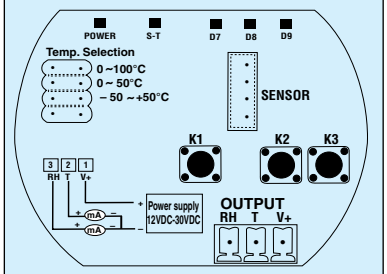
- **Fast, Stable, and Accurate**
- **Watertight Enclosure**
- **Compact, Easy to Use**
- **Excellent Long-Term Stability**
- **Wide Input Voltage Range (12 to 40 Vdc)**
- **Available with Either Current or Voltage Output**
- **On-Site, 2-Point Calibration (Zero and Span)**

The HX300A Series transmitter is designed for industrial environments requiring fast, stable, and accurate measurements. It employs a highly stable thin-film polymer capacitor to sense relative humidity, and a high-accuracy, thin-film RTD to accurately sense temperature.

HX303AC shown smaller than actual size.



On Site Calibration and Wiring



K1: Mode
K2: Increase value
K3: Decrease value
D7~ D9: LED indicator

Specifications

Measurement Range (Humidity): 0 to 100% RH @ 0 to 50°C (32 to 122°F)

Measurement Range (Temperature): 0 to 100°C (32 to 212°F)

Accuracy (25°C): ±2.5% RH, ±0.3°C

Long-Term Stability: Better than 1% RH per year (typical)

Temperature Compensation: 0.008% RH/°C (effect @ 05 RH)

Response: <15 seconds (90% @ 25°C in moving air at 0.5 m/sec)

Sensors:
Humidity: Thin-film capacitor
Temperature: RTD PT100 Ω, IEC 751, DIN 43760

Output:
Current: 4 to 20 mA, 2-wire ±15% scalable zero and span adjustment
Voltage: 0 to 1V

Supply Voltage: 12 to 40 Vdc (24 Vdc recommended)

Sensor Protection: Sintered filter

Housing: ABS plastic watertight enclosure to NEMA 4 (IP65)

Connections: Liquid-tight nylon, cable bushing fits 5 to 10 mm dia. (0.2 to 0.4") cables

Operating Temperature: 0 to 50°C (32 to 122°F)

Weight: Approx 150 g (5.3 oz)

To Order *Visit omega.com/hx300gb for Pricing and Details*

Model No.	Description
HX303AC	Wall mount RH/temperature transmitter, 4 to 20 mA current outputs
HX303AV	Wall mount RH/temperature transmitter, 0 to 1 voltage outputs
HX302AC	Wall mount RH transmitter, 4 to 20 mA current output
HX302AV	Wall mount RH transmitter, 0 to 1 voltage output
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
PSU-93	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
CAL-3-HU	NIST-traceable calibration

Comes complete with operator's manual.

***Ordering Examples: HX303AC,** wall mount RH/temperature transmitter with current outputs.*
***HX303AV,** wall mount RH/temperature transmitter with voltage outputs and **PSR-24L,** power supply*

Humidity/Temperature Transmitter

HX400 Series

1 YEAR WARRANTY NIST CE

Optional

- 4 to 20 mA for Both RH and Temperature
- Two Points Field Calibration
- Models with Built-In Display Indicate Humidity and Temperature
- Field Configurable Parameters
- Two Isolated SSR Output

The HX400 Series transmitters provide remote and on-site monitoring of relative humidity and temperature. Each parameter is transmitted as a 4 to 20 mA signal to remote receivers.

The HX400 is a programmable 2-wire field-mounted humidity/ temperature transmitter for use in environmental air monitoring and system. Its state-of the art design combines digital capacitor humidity/temperature chip and microprocessor-based linearization with temperature drift compensation technology offering proportional, linear, and highly accurate dual 4 to 20 mA output current in a variety of applications.

The HX400 integrates functions of transmitter, indicator and alarm outputs in one unit. All directly measured and computed parameters are configured via front 3 pushbutton without personal computer involved. Dual 3-digit 7-segments LED display module indicates the values of the measured parameters in measuring mode or prompting the programming instructions during setup mode and calibration mode. The current output models enable placing of the transmitter at a remote location virtually any distance away from the measuring device. The HX400 models feature built-in dual displays that indicate both humidity and temperature simultaneously.

HX402W shown smaller than actual size.

HX402D shown smaller than actual size.

Specifications

Loop Power: 12 to 32 Vdc; dual 4 to 20 mA loop current; reverse polarity protected (Vloop = 24 Vdc, Tamb = 23 ±2°C, Rload = 250 Ω)

Dual Isolated Solid State Relay Output: For output #1 and output #2; 15 mA maximum, 40 Vdc maximum

Accuracy and Range of Output Current: ±0.02 mA; 4 to 20 mA (both channels)

Accuracy @ 23°C and Scaleable Measurement Range: Without field calibration

Relative Humidity (RH): ±2%; 0 to 100%

Temperature: ±0.5°C (0.9°F)

Dew Point: ±2°C (3.6°F)

Wet Bulb Temperature: ±2°C (3.6°F),

Repeatability of Relative Humidity and Temperature: ±1% RH, ±0.1°C

Display Resolution: 0.1% RH, 0.1°C (temperature < 100°C)

Response: 10 seconds (relative humidity); 30 seconds maximum (temperature)

Filtering Ability of Sensor Cap: Stainless steel wire mesh; 0.05 mm

Type of Fluid: Air and neutral gases

Configuration Operation: Front 3 pushbutton with dual high bright 3-digit LED module

Working Temperature:
- **Electronics Device:** -20 to 70°C (-4 to 158°F)
- **Sensing Probe:** -40 to 100°C (-40 to 212°F)

Dual Miniature Loop-Powered Indicators: Dual 3-digits LED (green for humidity; red for temperature)

Reading Rate: 1 update per second

Display Accuracy
Temperature: ±0.5°C (1°F)

Display Resolution:
- **Relative Humidity:** 0.1% RH
- **Temperature:** 0.1°C (0.2°F)

Housing Material: POM (sensing probe); polycarbonate (electronics device)

Protection: NEMA 4 (IP65) (electronic device); IP40 (sensing probe)

Dimensions: 110 W x 80 L x 56 mm D (4.3 x 3.2 x 2.2")

Weight: 250 g (8.8 oz)

Probe Dimensions:
- **Wall Mount Unit:** L = 73 mm (2.87"), D = 15.5 mm (0.61")
- **Remote Mount Unit:** L = 100 mm (3.94"), D = 15.5 mm (0.61"), 100 cm (39.4") cable, 5.3 (0.21") diameter cable
- **Duct Mount Unit:** L = 200 mm (7.87"), D = 15.5 mm (0.61")

To Order *Visit omega.com/hx400 for Pricing and Details*

Model No.	Description
HX401W	Wall mount relative humidity transmitter
HX401R	Remote probe relative humidity transmitter
HX401D	Duct mount relative humidity transmitter
HX402W	Wall mount RH and temperature transmitter
HX402R	Remote probe RH and temperature transmitter
HX402D	Duct mount RH and temperature transmitter

Accessories

Model No.	Description
CAL-3-HU	NIST-traceable calibration
RHCN-7001	RH controller, 0 to 1 Vdc input, 110 Vac
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
PSU-93	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
TX4-100	4-conductor shielded transmitter cable 30 m (100')

Comes complete with operator's manual.
***Ordering Example: HX402W,** wall mount relative humidity and temperature transmitter.*

Relative Humidity On/Off Controller

RHCN-7000 Series

1 YEAR WARRANTY

- **Bright Green 3-Digit LED Display**
- **0 to 1 or 0 to 3 Vdc, 4 to 20 mA Inputs**
- **8 Amp Relay Output**
- **Simple On/Off Control**
- **Compatible with RH Transmitters**
- **Optional RH Probe**

RHCN-7001

Air Transmitters

RH and Temperature with Dew Point or Pressure Outputs

HX80A Series

1 YEAR WARRANTY · NIST · CE

Standard

HX85A shown smaller than actual size.

- **316 SS Housing**
- **±1% RH Accuracy**
- **±0.5°C (1.0°F) Temperature Accuracy**
- **High Temperature [120°C (248°F)]**
- **Removable Stainless Steel Sensor Cap**
- **RS232 Standard**
- **Adjustable ¾ NPT Fitting**

HX86A

The HX80A Series is a family of humidity probes that offer a variety of measurement parameters with precision accuracy: relative humidity and temperature, with dew point or pressure. The probe is easily adaptable for most applications via a ¾ NPT fitting that can be adjusted to any desired position, including high temperature and high pressure conditions. This remote type transmitter comes standard with a 1.8 m (6') cable and is ideally suited for many different applications such as environmental chambers, compressed air, and industrial applications.

Models offer a stainless steel probe with a removable sinter stainless steel filter and RS232 (which allows for reading of data, scaling output, and for HX86A type units, changing the digital display and setting the alarms).

All models have 3 outputs, with output 1 scaled for 0 to 100% RH, output 2 scaled for -20 to 120°C (-4 to 248°F), and output 3 determined by the model number. Output 3 for HX85A and HX86A is -60 to 40°C (-76 to 104°F) dew point, for HX85BA and HX86BA is 750 to 1100 mb, and for HX85PA and HX86PA is 0 to 200 psia. RH measurement range is 5 to 95% with an accuracy of ±1%. temperature accuracy is ±0.5°C (33°F).

HX85A (probe only) models (HX85A, HX85BA, HX85PA) offer 0 to 10V signals on the outputs via a 1.8 m (6') cable. The HX86A models (HX86A, HX86BA, HX86PA) include a display box attached to the end of the cable from the probe, and offers a 2 line digital display, 2 alarms, three 4 to 20 mA output signals, and an RS232 serial output.

SPECIFICATIONS

RH Accuracy: ±1% RH

RH Measurement Range: 5 to 95%

Time Constant: <15 sec, air flow dependent (for 66.6% response)

Temp Accuracy: ±0.5°C (1.0°F)

Temp Measurement Range: -20 to 120°C (-4 to 248°F)

Pressure Rating: 317 kg (700 lb) (47.6 bar) max

Serial Output: RS232C (bi-directional) to DTE device, 19.2 kilo baud, 8 bits data, 1 stop bit, no parity

Power Requirements: 18 to 30 Vdc unregulated, 50 mA max

Sensor Dimensions:
Probe: 19 Dia. x 203 mm (¾ x 8")
Cable Length: 1.8 m (6')
Filter: Sinter stainless steel (removable and cleanable)
Probe Material: Stainless steel
Fitting: Adjustable ¾ NPT
Weight: 0.9 kg (2 lb)

Display Box (HX86A, HX86BA,
(5.1 x 3.7 x 2.2")
Mounting Centers: 115 x 79 mm (4.52 x 3.11")
Digital Display: LCD, 2-line

Electrical Analog Outputs (HX85A, HX85BA, HX85PA Only):
0 to 10 Vdc (x3) @ 10 mA max

Electrical Outputs (HX86A, HX86BA, HX86PA Only):
Analog Outputs: 4 to 20 mA (x3) into 500 Ω max

Alarm Relay (x2): Form A
(SPST, NO) rated at 3 A/250 Vac

(HX85BA, HX86BA Only):
Range*: 750 to 1100 mb
Accuracy: ±5 mb
** Although the unit is scaled 750 to 1100 mb, the unit actual measurement range is 10 to 1100 mb and can be reprogrammed in the field if the range needs to be expanded.*

High Pressure (HX85PA, HX86PA Only):
Range: 0 to 200 psia
Accuracy: ±0.75 psi

Standard Scaling of Analog Outputs			
Model	**Output 1 (RH)**	**Output 2 (Air Temp)**	**Output 3 (Dew Point or Pressure)**
HX85A	0 to 100%	-20 to 120°C (-4 to 248°F)	-60 to 40°C (-76 to 104°F) DP
HX85BA	0 to 100%	-20 to 120°C (-4 to 248°F)	750 to 1100 mb
HX85PA	0 to 100%	-20 to 120°C (-4 to 248°F)	0 to 200 psia
HX86A	0 to 100%	-20 to 120°C (-4 to 248°F)	-60 to 40°C (-76 to 104°F) DP
HX86BA	0 to 100%	-20 to 120°C (-4 to 248°F)	750 to 1100 mb
HX86PA	0 to 100%	-20 to 120°C (-4 to 248°F)	0 to 200 psia

To Order	
Model No.	**Description**
HX85A	Remote Mount RH/Temp/Dew Point Transmitter, 0 to 10 Vdc x 3, plus RS232. Sensor only
HX86A	Remote Mount RH/Temp/Dew Point Transmitter, LCD Display, 4-20 mA x 3, 2 Alarms, plus RS232
HX85BA	Remote Mount RH/Temp/Barometric Pressure Transmitter, 0 to 10 Vdc x 3, plus RS232. Sensor only
HX85PA	Remote Mount RH/Temp/Pressure Transmitter, 0 to 10 Vdc x 3, plus RS232. Sensor only
HX86BA	Remote Mount RH/Temp/Barometric Pressure Transmitter, LCD Display, 4-20 mA x 3, 2 Alarms, plus RS232
HX86PA	Remote Mount RH/Temp/Pressure Transmitter, LCD Display, 4-20 mA x 3, 2 Alarms, plus RS232
HX86A-W	Wall Mount RH/Temp/Dew Point Transmitter, LCD Display, 4-20 mA x 3, 2 Alarms, plus RS232
HX86BA-W	Wall Mount RH/Temp/Barometric Pressure Transmitter, LCD Display, 4-20 mA x 3, 2 Alarms, plus RS232
HX86A-D	Duct Mount RH/Temp/Dew Point Transmitter, LCD Display, 4-20 mA x 3, 2 Alarms, plus RS232
HX86BA-D	Duct Mount Temp/Barometric Pressure/RH or Dew Point Transmitter, LCD Display, 4-20 mA x 3, 2 Alarms, plus RS232

Accessories

Model No.	Description
PSU-93	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
HX86A-DIS	Remote electronics module with two-line LCD digital display, three 4 to 20 mA analog outputs, RS232C, and 2 programmable alarm relays; this display module can be added to existing probes (HX86A series) in the field
HX80-SENSOR	Field-replaceable sensor module for RH/temperature
HXP80-SENSOR	Field-replaceable sensor module for RH/temperature/pressure
HXB80-SENSOR	Field-replaceable sensor module for RH/temperature/barometric pressure
HX80-CHAMBER	Sample chamber with inlet and outlet fittings

Come complete with operator's manual (on CD) and NIST certificate.

Relative Humidity Transmitters

Wall, Duct Mount, and Remote Probe Models

NEW

HX92B Series

1 YEAR WARRANTY

CE UKCA NIST

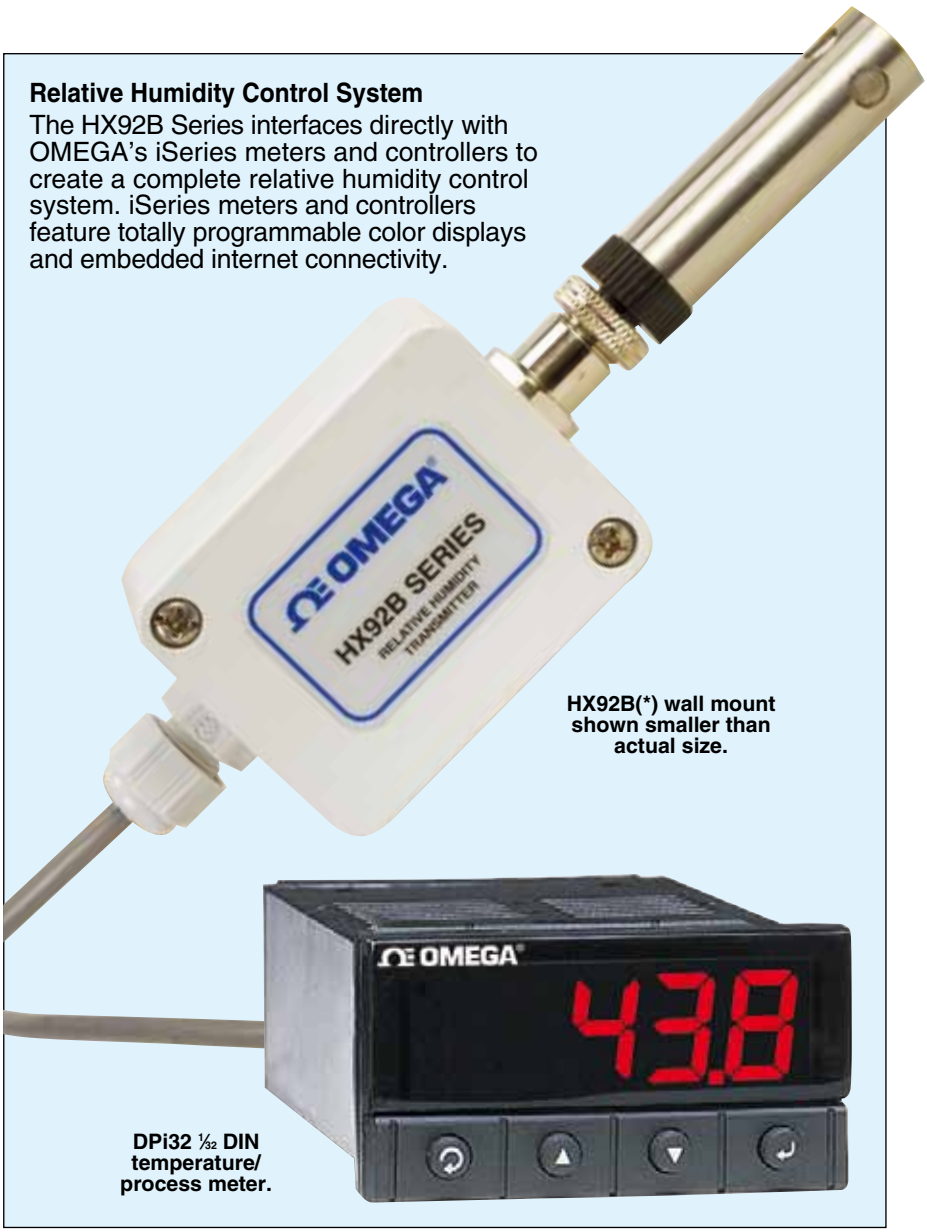
Optional

- **4 to 20 mA, 0 to 1 Vdc, 0 to 5 Vdc or 0 to 10 Vdc Outputs**
- **Accurate to ±2.5% (20 to 80% Relative Humidity)**
- **Rugged Industrial Splashproof Enclosure NEMA 13 (IP54)**
- **Duct Mount Kit Included with Duct Mount and Remote Probe Models**
- **Field Replaceable Sensor Probe (Except for Duct Mount Model)**

The HX92B Series transmitters provide remote and on-site monitoring of relative humidity. It is available with either voltage or 2-wire current output. The transmitter output is linearized and temperature compensated. Current output models enable placing of the transmitter at a remote location virtually any distance away from the measuring device. All models use an accurate digital sensor. A stainless steel mesh type filter, easily removable for cleaning, protects the sensor. Mounting screws are easily accessible inside the rugged, polycarbonate enclosure which protects the electronics to NEMA 13 (IP54) specifications.

Relative Humidity Control System

The HX92B Series interfaces directly with OMEGA's iSeries meters and controllers to create a complete relative humidity control system. iSeries meters and controllers feature totally programmable color displays and embedded internet connectivity.



HX92B(*) wall mount shown smaller than actual size.

DPi32 ⅛ DIN temperature/ process meter.

Specifications

Input Power:
- **4 to 20 mA:** 9 to 30 Vdc @ 50 mA
- **0 to 1V:** 9 to 30 Vdc @ 50 mA
- **0 to 5V:** 9 to 30 Vdc @ 50 mA
- **0 to 10V:** 12 to 30 Vdc @ 50 mA

Measuring Range: 0 to 100% RH

Accuracy: ±2.5% from 20 to 80% RH; ±3.5% from 5 to 20% and 80 to 95% RH; ±4% from 0 to 5% and 95 to 100% RH

Output:
- **HX92BC:** 4 to 20 mA for 0 to 100% RH
- **HX92BV0:** 0 to 1 Vdc for 0 to 100% RH
- **HX92BV1:** 0 to 5 Vdc for 0 to 100% RH
- **HX92BV2:** 0 to 10 Vdc for 0 to 100% RH

Relative Humidity Temperature Compensation: -30 to 75°C (-22 to 167°F)

Relative Humidity Response Time: 8 second typical

Repeatability: ±0.1% RH

Sample Rate: 1 sample every 4 seconds

Housing: Gray polycarbonate, NEMA 13 (IP54)

Connections: Liquid-tight nylon with neoprene gland, for 2.29 to 6.73 mm (0.09 to 0.265") diameter cable; internal 5 position terminal block accepts 14 to 22 gauge wire

Dimensions:
- **HX92B(*) (without Probe):** 65 L x 50 W x 34.8 D mm (2.56 x 1.97 x 1.37")
- **TP-SP (Short Probe):** 16 dia. x 71.88 L mm (0.63 x 2.83")

Weight:
- **HX92B(*):** 124 g (4.4 oz)
- **HX92B(*)-D:** 132 g (4.7 oz)
- **HX92B(*)-RP1:** 230 g (8.1 oz)

TH-SP short probe with M12 connector.

HX92B wall mount shown larger than actual size.

TH-RP remote probe with 3 m (10') cable and M12 connector.

Field Replaceable Parts

The HX92B Series has an M12 probe connection, that allows for easy probe replacement. The user can even switch the TH-SP short probe for a TH-RP remote probe with a 3 m (10') cable (not available with duct mount models).

HX92B(*)-D duct mount transmitter shown smaller than actual size.

To Order

Model No.	Description
HX92B(*)	Wall mount relative humidity transmitter
HX92B(*)-D	Duct mount relative humidity transmitter
HX92B(*)-RP1	Remote probe relative humidity transmitter

Accessories

Model No.	Description
TH-RP	Field replaceable remote probe with 3 m (10') cable and M12 connector
TH-SP	Field replaceable 71.88 L mm (2.83") short probe with M12 connector
IND-KIT	Duct mounting kit for HX92B(*)-D or HX92B(*)-RP1 only

Comes complete with quick start manual.

** For 4 to 20 mA output specify **"C"**, for 0 to 1 Vdc output specify **"V0"**, for 0 to 5 Vdc output specify **"V1"**, and for 0 to 10 Vdc output specify **"V2".***

Humidity Transmitters

Wall, Duct Mount, and Remote Probe Models With Optional Built-In Digital Display

HX93B Series

1 YEAR WARRANTY

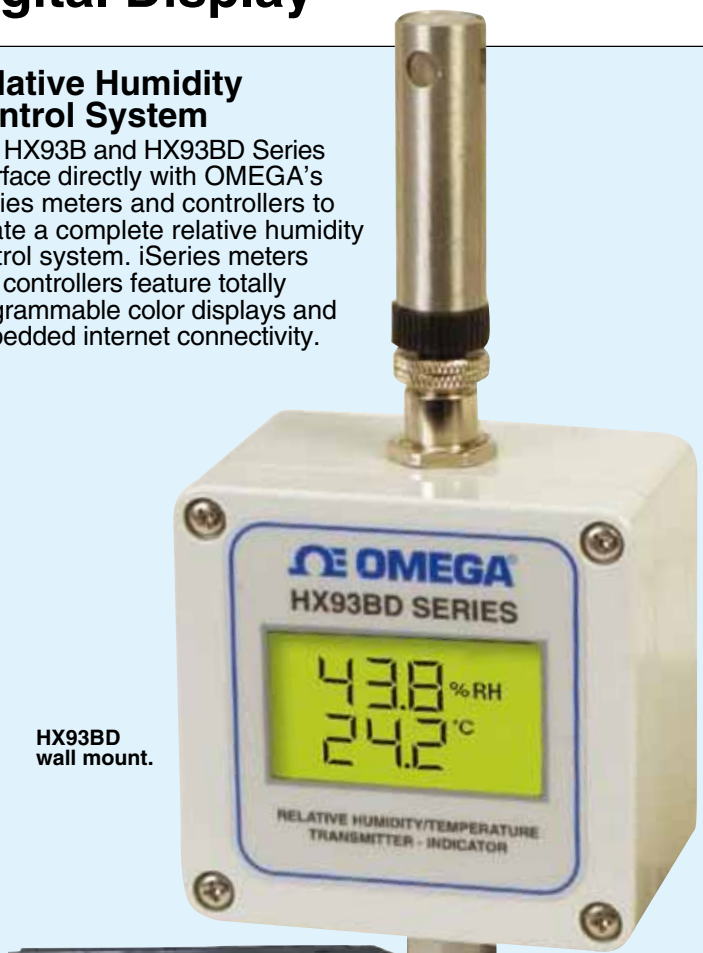
NIST Optional

- **4 to 20 mA, 0 to 1 Vdc, 0 to 5 Vdc or 0 to 10 Vdc Outputs for Both Temperature and Relative Humidity**
- **Rugged Industrial Splashproof Enclosure NEMA 13 (IP54)**
- **Accurate to ±0.6°C (0 to 50°C) and ±2.5% (20 to 80% Relative Humidity)**
- **New Models with Built-In Digital Display to Indicate Temperature and Relative Humidity**
- **Duct Mount Kit Included with Duct Mount and Remote Probe Models**
- **Field Replaceable Temperature/Relative Humidity Probe (Except for Duct Mount Model)**

The HX93B and HX93BD Series transmitters provide remote and on-site monitoring of temperature and relative humidity. Both series output a linearized current or voltage signal proportional to the temperature and relative humidity. Relative humidity output is temperature compensated. Current output models enable placing of the transmitter at a remote location virtually any distance away from the measuring device. The HX93BD models feature a built-in digital display that indicates both temperature and relative humidity simultaneously. All models use an accurate digital sensor. A stainless steel mesh type filter, easily removable for cleaning, protects the sensor. Mounting screws are easily accessible inside the rugged, polycarbonate enclosure which protects the electronics to NEMA 13 (IP54) specifications.

Relative Humidity Control System

The HX93B and HX93BD Series interface directly with OMEGA's iSeries meters and controllers to create a complete relative humidity control system. iSeries meters and controllers feature totally programmable color displays and embedded internet connectivity.



HX93BD wall mount.

DPi32 ½ DIN temperature/ process meter, shown actual size.

Specifications

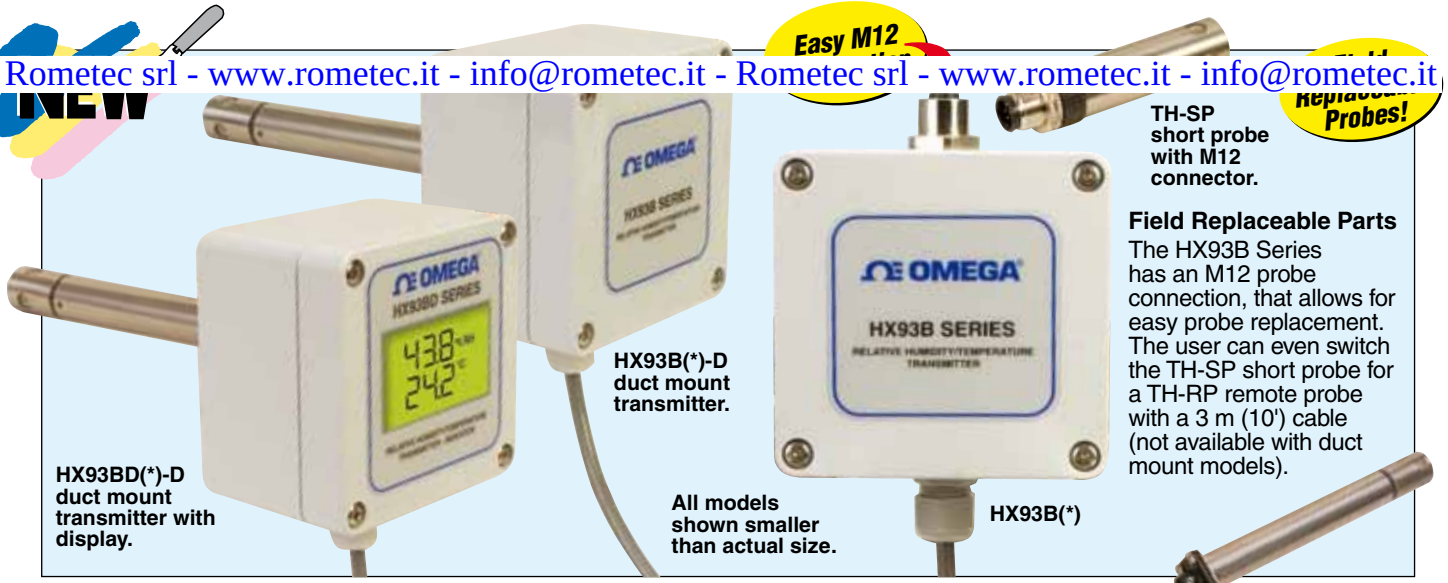
Input Voltage Range:
30 Vdc maximum
HX93B Series: 9 to 30 Vdc
HX93BV2 Series: 12 to 30 Vdc

Measuring Range
Not for condensing humidity conditions.

Temperature:
Standard: -30 to 75°C (-22 to 167°F)
Special: -20 to 75°C (-4 to 167°F)

Relative Humidity: 0 to 100%

Accuracy
Temperature: ±0.6°C from 0 to 50°C (32 to 122°F); ±1.25°C from -30 to 0°C (-22 to 32°F) and 50 to 75°C (122 to 167°F)
Relative Humidity: ±2.5% from 20 to 80% RH; ±3.5% from 5 to 20% and 80 to 95% RH; ±4% from 0 to 5% and 95 to 100% RH



Field Replaceable Parts
The HX93B Series has an M12 probe connection, that allows for easy probe replacement. The user can even switch the TH-SP short probe for a TH-RP remote probe with a 3 m (10') cable (not available with duct mount models).

Output

HX93BC or HX93BDC:
4 to 20 mA for 0 to 100% RH and -30 to 75°C (-22 to 167°F)

HX93BV0: 0 to 1 Vdc for 0 to 100% RH and -30 to 75°C (-22 to 167°F)

HX93BV1: 0 to 5 Vdc for 0 to 100% RH and -30 to 75°C (-22 to 167°F)

HX93BV2: 0 to 10 Vdc for 0 to 100% RH and -30 to 75°C (-22 to 167°F)

Relative Humidity Temperature Compensation: -30 to 75°C (-22 to 167°F)

Temperature Response Time: 5 seconds minimum, 30 seconds maximum

Relative Humidity Response Time: 8 second typical

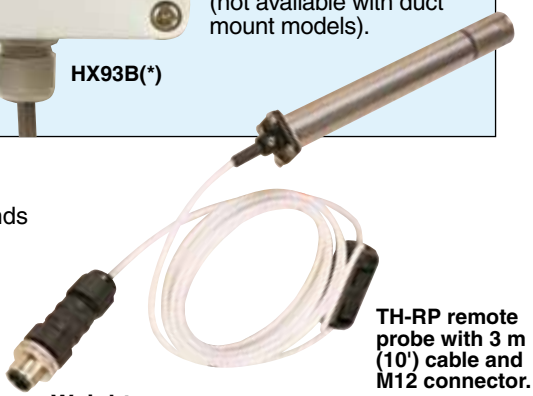
Repeatability: ±0.1% RH, ±0.2°C (0.4°F)

Sample Rate: 1 sample every 4 seconds

Housing: Gray polycarbonate, NEMA rated up to 13 (IP54)

Connections: Liquid-tight nylon with neoprene gland, for 2.50 to 8.00 mm (0.09 to 0.315") diameter cable; internal 6 position terminal block accepts 14 to 22 gauge wire

Dimensions:
HX93B(*) (without Probe): 80.01 L x 82.30 W x 55.63 D mm (3.15 x 3.24 x 2.19")
HX93B(*)-D (with Probe): 80.01 L x 82.30 W x 183.13 D mm (3.15 x 3.24 x 7.21")
TP-SP (Short Probe): ø16 x 71.88 L mm (ø0.63 x 2.83")



TH-RP remote probe with 3 m (10') cable and M12 connector.

Weight:
HX93B(*): 251 g (8.9 oz)
HX93B(*)-D: 256 g (9.0 oz)
HX93B(*)-RP1: 352 g (12.4 oz)

Display (HX93BD Series Only)

Indicators: Two 4 digit backlit LCD

Display Rate: 1 reading per second

Display Resolution:
Relative Humidity: 0.1% RH
Temperature: 0.1°C (0.1°F)

To Order

Model No.	Description
HX93B(*)	Wall mount temperature and relative humidity transmitter
HX93B(*)-D	Duct mount temperature and relative humidity transmitter
HX93B(*)-RP1	Remote probe temperature and relative humidity transmitter
HX93BD(*)	Wall mount, digital display temperature and relative humidity transmitter/indicator
HX93BD(*)-D	Duct mount, digital display temperature and relative humidity transmitter/indicator
HX93BD(*)-RP1	Remote probe, digital display temperature and relative humidity transmitter/indicator

Accessories

Model No.	Description
TH-RP	Field replaceable remote probe with 3 m (10') cable and M12 connector
TH-SP	Field replaceable 71.88 L mm (2.83") short probe with M12 connector
HX92-CAL	Calibration kit, 11 and 75% relative humidity standards
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
TX4-100	4-conductor shielded transmitter cable 30 m (100')
CAL-3-HU	NIST traceable calibration
IND-KIT	Spare duct mount kit for HX93B(*)-D, HX93B(*)-RP1, HX93BD(*)-D, HX93BD(*)-RP1

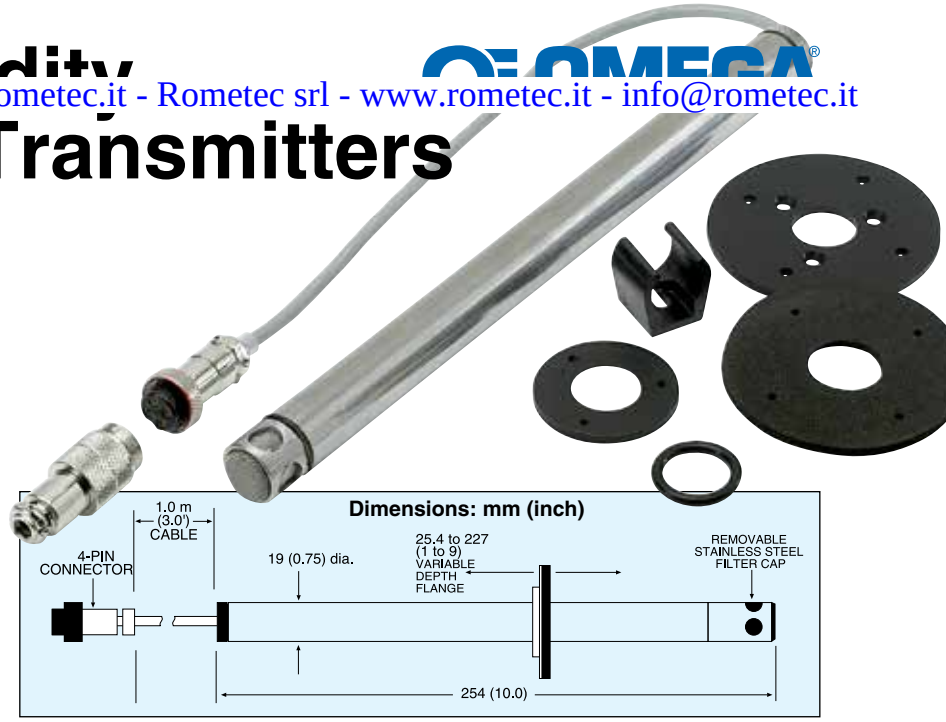
Comes complete with quickstart manual.

Temperature Transmitters

HX94 Series

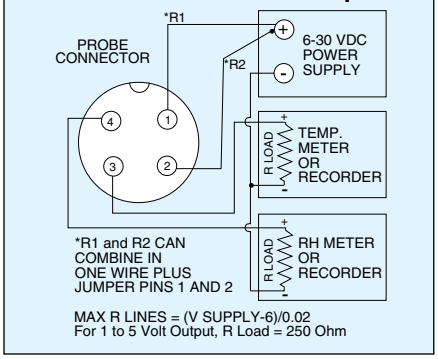
1 YEAR WARRANTY

- Stainless Steel NEMA 4 Housing
- 3 Different Output Connection Styles Available for Mounting Versatility
- 4 to 20 mA/0 to 1 Vdc Outputs
- Removable Stainless Steel Sensor Filter for Cleaning Ease
- RoHS 2 Compliant

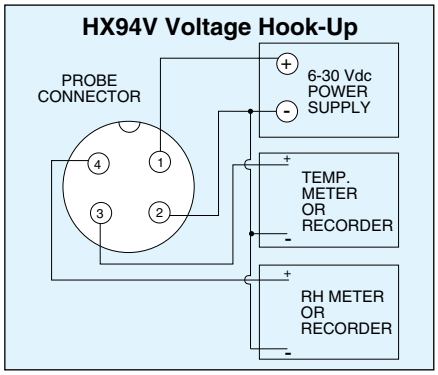


The HX94 relative humidity/ temperature transmitter provides a reliable and low cost method for duct mount monitoring applications. Solid state sensors provide excellent sensitivity, fast response, and stability. Simple hookup and linearized output permit interfacing with most display and control devices.

HX94C Current Hook-Up



HX94V Voltage Hook-Up



Specifications

RELATIVE HUMIDITY
Thin-Film Polymer Capacitor
Input Voltage Range:
6 to 30 Vdc, (polarity protected)
Range/Accuracy/Repeatability:
3 to 95% RH/±2% RH/±1% RH
Temperature Compensation:
-20 to 85°C (4 to 185°F)
Current Output:
HX94C: 4 to 20 mA for 0 to 100°C
Voltage Output:
HX94V: 0 to 1.0 V (0 to 100% RH)
Time Constant: (for 90% response at 25°C; in moving air, 1m/sec.)
Less than 20 seconds, 10 to 90% RH
Less than 30 seconds, 90 to 10% RH
TEMPERATURE
Thin-Film 100 Ω Platinum RTD (DIN 43760)
Input Voltage Range:
6 to 30 Vdc, (polarity protected)
Range: 0 to 100°C (32 to 212°F)
Accuracy: ±0.6°C (±1°F)
Repeatability: ±0.3°C (±0.5°F)
Current Output:
HX94C: 4 to 20 mA for 0 to 100°C
Voltage Output:
HX94V: 0 to 1.0V for 0 to 100°C
Time Constant: (for 60% response)
Less than 2 sec in moving air (1m/sec) less than 10 sec in still air

MECHANICAL
Housing: Stainless steel NEMA 4 enclosure
Probe: 254 x 19 mm (10 x 0.75") dia., 305 mm (12") cable
Duct Flange: Removable, variable 25.4 to 227 mm (1 to 9") depth; 70 mm (2.75") dia., duct hole 21 mm (0.812") dia. 4 mtg holes. 4 mm (0.156") dia. (for #6 sheet metal screws) on 51 mm (2.00") dia. circle; wall mounting bracket included
Connections:
HX94C/94V: 4 pin mating connector accepts 26 to 18 AWG wires
HX94CW/94VW: 1 m (3') braided and shielded cable, PVC sheathing
HX94CNPT/94VNPT: ½" male NPT conductor with 1 m (3') braided/ shielded cable
Weight: 198 g (7 oz) with duct flange

To Order

Model No.	Description
HX94C	RH/temp transmitter with 4 to 20 mA outputs with 4 pin connector
HX94V	RH/temp transmitter with 0 to 1 Vdc outputs with 4 pin connector
HX94CW	RH/temp transmitter with 4 to 20 mA outputs with 1 m (3') lead wires
HX94VW	RH/temp transmitter with 0 to 1 Vdc outputs with 1 m (3') lead wires
HX94CNPT	RH/temp transmitter with 4 to 20 mA outputs with ½" male NPT fitting and 1 m (3') leads
HX94VNPT	RH/temp transmitter with 0 to 1 Vdc outputs with ½" male NPT fitting and 1 m (3') leads
HX94-MC	Spare 4 pin mating connector
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads
PSU-93	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
TX4-100	4 conductor shielded transmitter cable, 30 m (100')
CAL-3-HU	NIST-traceable calibration

Comes with mating connector, removable protective sensor filter, removable duct flange, wall mounting bracket, and operator's manual.

Relative Humidity/Ambient Temperature Transmitters

For Duct or Wall Mounting

HX94B Series

1 YEAR WARRANTY NIST CE

Optional

- **Accurate to ±2.5% Relative Humidity and ±0.6°C (±1°F) Temperature**
- **Two Separate Analog Outputs, Humidity and Temperature**
- **Four Analog Outputs available, 4 to 20 mA, 0 to 1V, 0 to 5V, 0 to 10V**
- **Stainless Steel NEMA 4 (IP66) Enclosure**
- **Three Different Output Connection Styles Available**
- **Includes Hardware for Wall and Duct Mounting**
- **Removable Stainless Steel Sensor Cap**

HX94BC shown smaller than actual size.

All models include mounting kit, shown here.

Connector pair included with models HX94BC and HX94BV only.

The OMEGA® HX94B Series temperature/relative humidity transmitter provides a linearized and temperature compensated output signal of 4 to 20 mA, 0 to 1 Vdc, 0 to 5 Vdc or 0 to 10 Vdc depending upon the model selected for both temperature/relative humidity measurement. The output signals have been calibrated and scaled to 0 to 100°C for temperature and 0 to 100% for relative humidity. The digital temperature and relative humidity sensor is protected by a stainless steel cap that is easily removed for cleaning. The NEMA 4 stainless steel enclosure and cable entry connection provides weather tight protection. The stainless steel enclosure terminates to a 6 feet shielded cable. The cable end is either stripped leads or terminates to a 4-pin connector.

Specifications

TEMPERATURE

Measuring Range: 0 to 100°C (32 °F to 212°F)

Accuracy: ±0.6°C from 0 to 50°C (32 to 122°F), ±1.25°C from 50 to 100°C (122 to 212°F)

Repeatability: ±0.2°C (0.4°F)

Response Time: 5 seconds minimum, 30 seconds maximum

Sample Rate: 1 sample every 4 seconds

RELATIVE HUMIDITY

Measuring Range: 0 to 100% RH

Accuracy: ±2.5 % from 20 to 80% RH, ±3.5% from 5 to 20% and 80 to 95% RH, ±4% from 0 to 5% and 95 to 100% RH

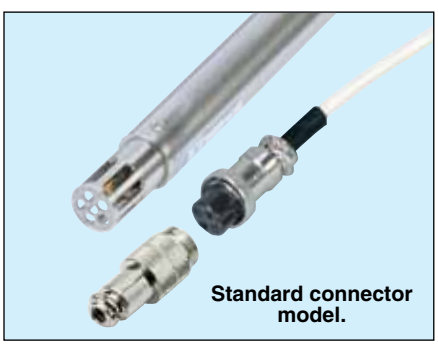
Hysteresis: ±1%RH

Repeatability: ±0.1%RH

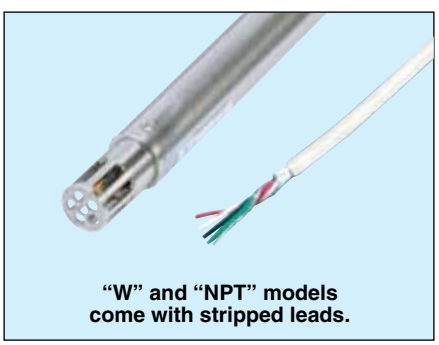
Response Time: 8 seconds typical

Sample Rate: 1 sample every 4 seconds

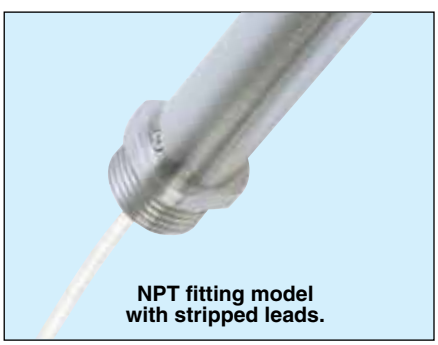
MODELS AVAILABLE WITH THREE DIFFERENT CONNECTION STYLES SHOWN BELOW!



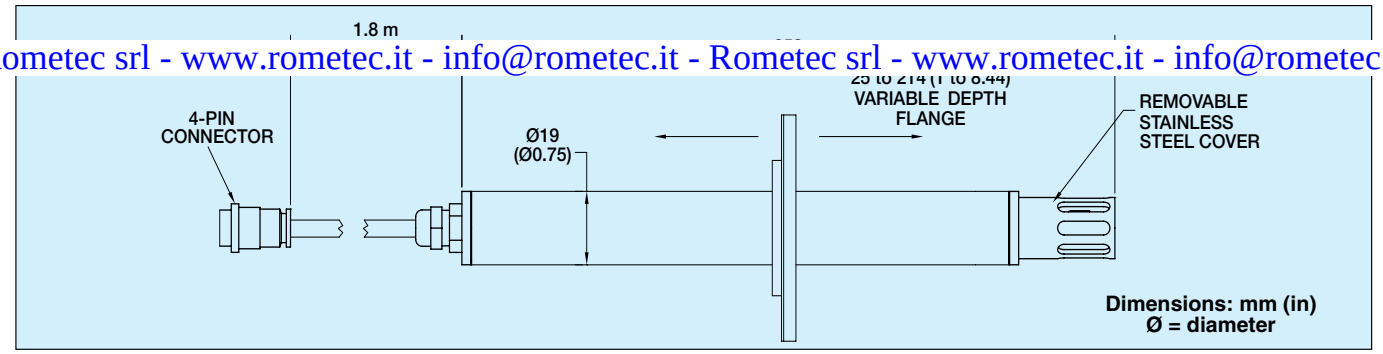
Standard connector model.



"W" and "NPT" models come with stripped leads.



NPT fitting model with stripped leads.



Operating Temperature Range: 0 to 100ºC (32 to 212°F)

Analog Outputs for Temperature and Humidity: 4 to 20 mA, 0 to 1V, 0 to 5V, 0 to 10V

Input Power Supply: 9 to 30 Vdc @ 100 mA: 4 to 20 mA, 0 to 1V, 0 to 5V output, 12 to 30 Vdc @ 100 mA: 0 to 10V output

Max Current Loop Resistance: Ω = [(V supply - 4V)/0.02A)] -50; 200Ω @ 9V supply or 1250Ω @ 30V supply

Max Load Resistance: 1.25K (for all voltage outputs)

Sensor Type: Digital sensor

Enclosure Housing: 316 stainless steel, NEMA 4; non-NPT version includes IP68-rated cable gland

Electrical Connections:

HX94BW, HX94B**NPT:** 1.8 m (6') 4 conductor PTFE shielded cable with stripped leads termination

HX94B:** 1.8 m (6') 4 conductor PTFE shielded cable with a 4-pin connector termination; a 4-pin mating connector is included that accepts 18 to 26 AWG wire

Dimensions: 258 L x ø19 mm OD (10.15 x 0.75")

Weight: 200 g (7 oz) with mounting kit

To Order

Model No.	Description
HX94BC	Relative humidity/temperature transmitter (4 to 20 mA output) with 4-pin connector
HX94BV0	Relative humidity/temperature transmitter (0 to 1 Vdc output) with 4-pin connector
HX94BV1	Relative humidity/temperature transmitter (0 to 5 Vdc output) with 4-pin connector
HX94BV2	Relative humidity/temperature transmitter (0 to 10 Vdc output) with 4-pin connector
HX94BCW	Relative humidity/temperature transmitter (4 to 20 mA output) with 1.8 m (6') lead wires
HX94BV0W	Relative humidity/temperature transmitter (0 to 1 Vdc output) with 1.8 m (6') lead wires
HX94BV1W	Relative humidity/temperature transmitter (0 to 5 Vdc output) with 1.8 m (6') lead wires
HX94BV2W	Relative humidity/temperature transmitter (0 to 10 Vdc output) with 1.8 m (6') lead wires
HX94BCNPT	Relative humidity/temperature transmitter (4 to 20 mA output) with ½" male NPT fitting and 1.8 m (6') lead wires
HX94BV0NPT	Relative humidity/temperature transmitter (0 to 1 Vdc output) with ½" male NPT fitting and 1.8 m (6') lead wires
HX94BV1NPT	Relative humidity/temperature transmitter (0 to 5 Vdc output) with ½" male NPT fitting and 1.8 m (6') lead wires
HX94BV2NPT	Relative humidity/temperature transmitter (0 to 10 Vdc output) with ½" male NPT fitting and 1.8 m (6') lead wires

Comes complete with mating connector (models HX94BC, HX94BV0, HX94BV1, HX94BV2 only), removable stainless steel cap, removable duct flange, wall mounting kit, and quick start manual.

Accessories

Model No.	Description
HX94-MC	Spare 4-pin mating connector
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output @ 400 mA, screw terminal, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output @ 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output @ 400 mA, stripped leads, CE
CAL-3-HU	NIST traceable calibration option
TX4-100	4-conductor metal foil shielded cable, 30 m (100')
TX4W-50	4-conductor metal braid shielded cable, 15 m (50')

Barometric Pressure, Temperature, Humidity Virtual Recorder

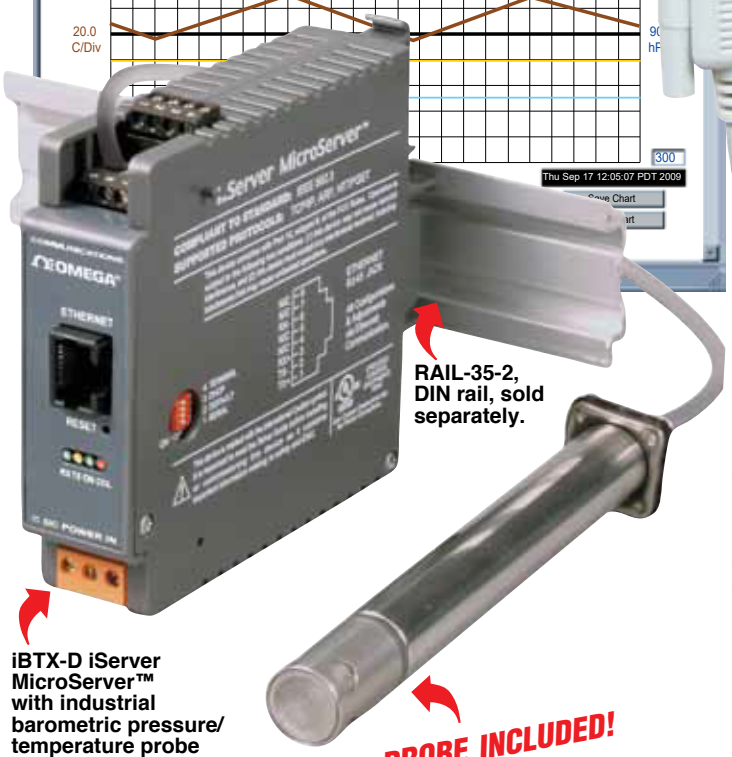
iBTHX

iBTX Series

1 YEAR WARRANTY

CE FCC-B

- Virtual Chart Recorder
- Web Server
- Alarms by Email or Text Message
- No Special Software Required
- iBTX-SD: Records Years of Data on Popular SD Cards



RAIL-35-2, DIN rail, sold separately.

iBTX-D iServer MicroServer™ with industrial barometric pressure/ temperature probe (included), shown smaller than actual size.

PROBE INCLUDED!

iBTX-SD shown smaller than actual size.

iBTHX-W shown smaller than actual size.

See Page Hu-12 to Order!

View Barometric Pressure, Temperature, and Humidity with a Web Browser

The OMEGA® iBTHX transmitter let's you monitor and record Barometric Pressure, Temperature, Relative Humidity and Dew Point over an Ethernet network or the Internet with no special software except a Web Browser.

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

The virtual chart viewed on the web page is a JAVA™ Applet that records a chart over the LAN or Internet in real time. With the iBTHX, there is no need to invest time and money learning a proprietary software program to log or chart the data.

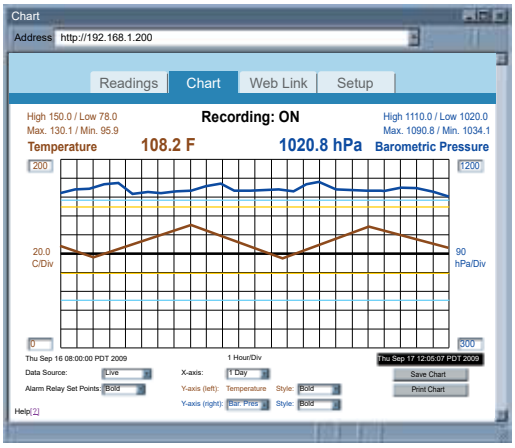
iBTHX

Adjustable Charts

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year.

Temperature and humidity can be charted across the full span (-40 to 85°C, and 0 to 100% RH) or within any narrow range such as (20 to 30°C).

Barometric Pressure can be displayed in hectopascals (hPa), millimeters of Mercury (mmHg), or inches of Mercury (inHg).



Adjustable-chart Web page.

Display and Chart Measurements

The iBTHX transmitters come complete with a barometric pressure, temperature and humidity probe for measurement of a single location. OMEGA offers a choice of industrial probes in 5" lengths and a wand style for ambient indoor applications.

Award-winning Technology

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

The iBHTX connects to an Ethernet Network with a standard RJ45 connector and sends data in standard TCP/IP packets.

It is easily configured with a simple menu using a Web Browser and can be password protected.

From within an Ethernet LAN or over the Internet, the user simply types its IP address or an easy to remember name such as "Cleanroom5" or "ServerRoom" in any Web Browser, and the iBTHX serves a Web Page with the current readings.

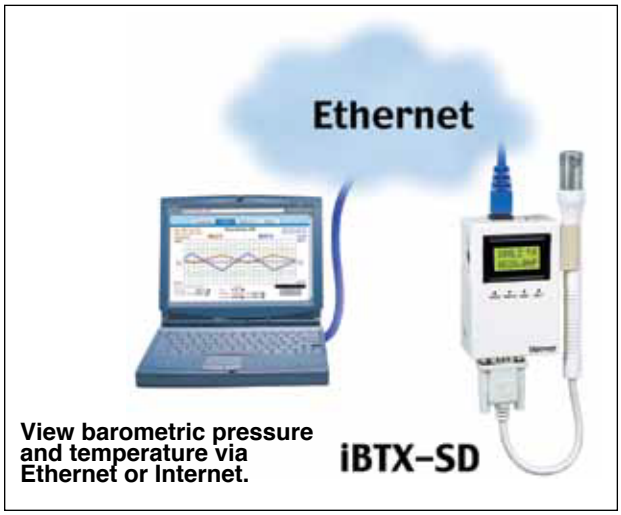
Email Alarms

All OMEGA iBTX models that are on a LAN that is connected to the Internet can trigger an alarm that can be sent by email to a user or a distribution list anywhere in the world, including text messages to cell phones and PDA's.

NIST-traceable calibration certificate available.
In compliance with ISO9001:2008, ISO10012-1.1992(E), ANSI/NCSL Z540-1.1994 and MIL-STD-45662A.

Typical Applications

The iBTHX is great for monitoring barometric pressure, 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, green-houses, farm animal shelters, and many more.



View barometric pressure and temperature via Ethernet or Internet.

NEW iBTX-SD with SD Flash Memory Card and LCD Display

The OMEGA model iBTX-SD with LCD display, adds several valuable features in addition to the backlit local display of barometric pressure and temperature.

SD Flash Memory Card

The iBTX-SD 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 spread sheets and other programs. It can be read on a PC or MAC with a USB card reader. You can also download the data remotely over an Ethernet network or the Internet.

Alarm Relays

The iBTX-SD features two 1.5 Amp relays. With the easy Web-based setup page, the two relays can be programmed for any combination of temperature or pressure, and high or low set points. The relays can also be programmed to remain latched and require a manual reset if a limit is exceeded.

Battery Backup

The iBTX-SD comes with a universal 100 to 240 Vac power adapter.

A standard 9 Volt Alkaline battery (also included) allows the device to log data for up to 2 days without external ac power. A failure on the Ethernet network will not interrupt data recording.

iBTHX

Sensor Specifications

Barometric Pressure (iBTX, iBTHX)

Accuracy/Range at 25°C:±3.5 mbar/ From 10 to 1100 mbar (1 to 110 kPa)
Resolution: 0.1 mbar

Relative Humidity (iBTHX)

Accuracy/Range at 25°C - Non-Condensing:
10 to 90%: ±2.75%
5 to 10% and 90 to 95%: ±3%
0 to 5% and 95 to 100%: ±4%
Non-linearity: ±3%
Hysteresis: ±1%RH
Response Time: 8 seconds, tau 63%
Repeatability: ±0.1%
Resolution: 0.1%, 12 bit

Temperature (iBTHX)

Accuracy/Range*:
Wand Probe: ±0.5°C for 5 to 45°C (±1°F for 41 to 113°F); up to ±1°C for 0 to 5°C and 45 to 70°C (up to 2°F for 32 to 41°F and 113 to 158°F)
Industrial Probe: (see chart in manual) ±0.5°C for 5 to 45°C (±1°F for 41 to 113°F); up to ±1.5°C for -40 to 5°C and 45 to 85°C (up ±2.7°F for -40 to 41°F and 113 to 185°F)

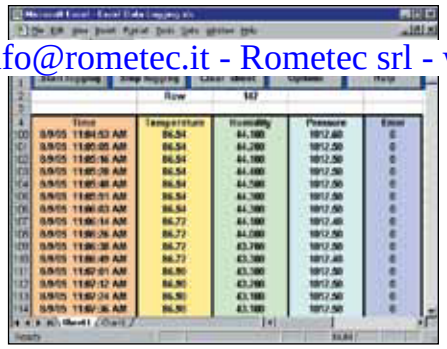
***Note:** Extended temperature range is for industrial probe only; the iServer's operating temperature is 0 to 70°C.*

Response Time: 5 to 30 seconds, tau 63%
Repeatability: ±0.1°C
Resolution: 0.1°C, 14-bit

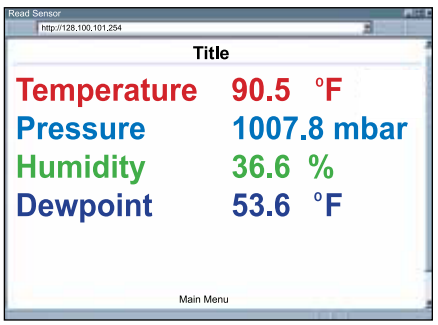
Temperature (iBTX)

Accuracy/Range*:
Wand Probe: ±0.8°C @ 20°C (±1.5°F @ 68°F); ±2°C for 0 to 70°C (±3.6°F for 32 to 158°F)
Industrial Probe: ±0.8°C @ 20°C (±1.5°F @ 68°F); ±2°C for -40 to 85°C (±3.6°F for -4 to 185°F)

***Note:** Extended temperature range is for industrial probe only; the iServer's operating temperature is 0 to 70°C.*



Data logging spreadsheet.



Sensor reading Web page.

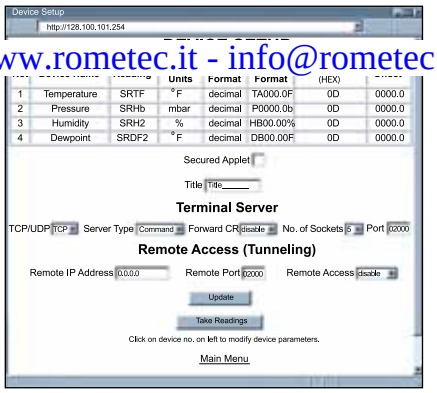
Probe Physical Dimensions

Wand Probe: 19 Dia x 159 mm L (0.75 Dia x 6.25" L)
Cable with DB9 Connector:
Length: 152 mm (6")
Operating Temp: 0 to 80°C (32 to 176°F)
Industrial Probe: 16 Dia x 137 mm L (0.63 Dia x 5" L)
Cable with DB9 or Stripped Leads:
Length: 3 m (10')
Operating Temp: -55 to 105°C (-67 to 221°F)

iServer Specifications

Interfaces

Ethernet (RJ45):
Fixed or auto-negotiating 10/100BASE-T, Auto MDI/MDIX: iBTX-SD; 10BASE-T: iBT(H)X-W, -D
Protocols
TCP, UDP, SNMP, SMTP, NTP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet: iBTX-SD;
TCP, UDP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet: iBT(H)X-W, -D



iBTHX-W and iBTHX-D device configuration Web page.

Sensor:
Digital 4-wire (DB9): iBT(H)X-W, iBTX-SD;
removable 8 position screw terminals: iBT(H)X-D
LCD Display (iBTX-SD)
16 Digits, 6 mm (0.23")
SD Flash Memory Card (iBTX-SD)
2GB card: 8 months of data storage at 1 second recording intervals or 7 years at 10 second intervals
Relay Outputs (iBTX-SD)
Two Relays 1.5A @ 30 Vdc
Embedded WEB Server
Serves WEB pages containing real-time data and live updated charts within definable time intervals
Software
OPC Server; macro for datalogging in Excel program; compatible with Windows operating systems

Power

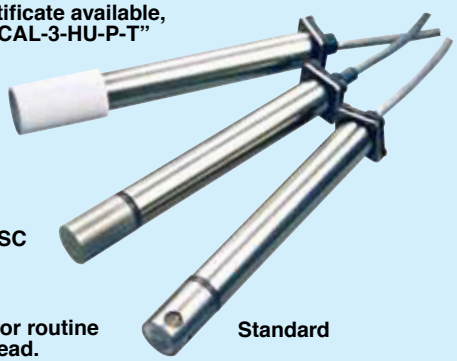
Input:
iBT(H)X-W, iBTX-SD: 9 to 12 Vdc
iBT(H)X-D: 10 to 32 Vdc
Safety-Qualified AC Power Adaptor
Nominal Output: 9 Vdc @ 0.5 A
Input (iBT(H)X-W, iBTX-SD):
100 to 240 Vac, 50/60 Hz (included)
Switching Power Supply (iBT(H)X-D):
Sold separately (iDRN-PS-1000)
Back-up Battery (iBTX-SD): 9V alkaline (included)
Environmental
Operating Temperature:
0 to 70°C (32 to 158°F) iBTX-W, -2
0 to 60°C (32 to 140°F) iBTX-SD
Battery: -18 to 55°C (0 to 131°F)
ac Adaptor: 0 to 40°C (32 to 104°F)
Storage Temperature:
-40 to 85°C (-40 to 185°F)
Packaging
Material:
iBTX/iBTHX-W: Valox® 364 PBT case with wall mount bracket
iBTX-SD: Steel metal case with wall bracket mount
iBTX/iBTHX-D: Polycarbonate case with DIN rail mount
Dimensions: See next page

Replacement probes with calibration certificate available, just add: "-CAL-3-HU" or "-CAL-3-P" or "-CAL-3-HU-P-T"

iP-PCI

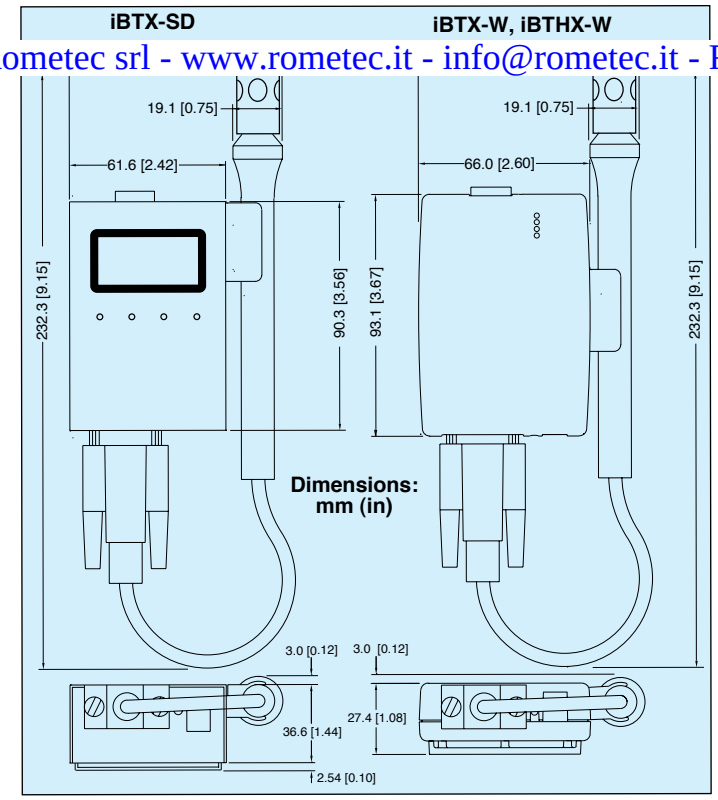
Optional probe caps shown, fits industrial wand probe.

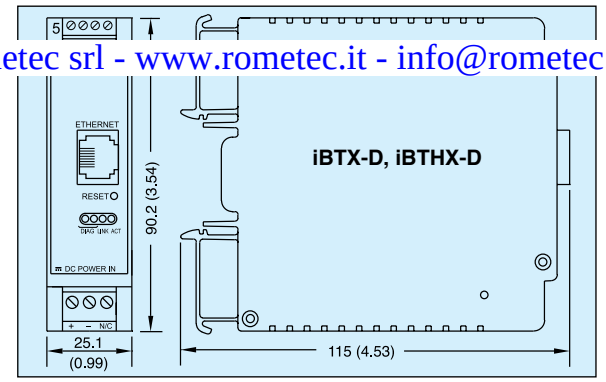
iP-SC



No need to take your unit out of service for routine calibration. Order a calibrated probe instead.

Standard





Replacement Probes with Calibration Certificate available, just add: **"- CAL-3-HU"** or **"- CAL-3-P"** or **"- CAL-3-HU-P-T"**

No need to take your unit out of service for routine calibration.
Order a calibrated probe instead.

iDRN-PS-1000

- 24 Vdc supply
- Switching power supply powers up to 7 units

To Order *Visit omega.com/ibtx_ibthx for Pricing and Details*

Model No.		Description
iBTX-SD		iServer MicroServer™ for barometric pressure and temperature, LCD, 2 GB SD flash memory card, 2-relay alarm and battery backup, with universal AC power adaptor
iBTX-W		iServer MicroServer™ for barometric pressure and temperature, with AC power adaptor
iBTHX-W		iServer MicroServer™ for barometric pressure, temperature, humidity and dew point, with AC power adaptor
	*	Standard wand probe, cable 152 mm (6") with DB9 connector (no entry required)
	-5	Industrial 5" probe, cable 3 m (10') with DB9 connector (substitution for wand probe)
Accessories		
iBTP-W-6		Wand probe, cable 152 mm (6") with DB9 connector (barometric pressure/temperature)
iBTHP-W-6		Wand probe, cable 152 mm (6") with DB9 connector (barometric pressure/temperature/humidity)
iBTP-5-DB9		Industrial 137 mm (5") probe, cable 3 m (10') with DB9 connector (barometric pressure/temperature)
iBTHP-5-DB9		Industrial 137 mm (5") probe, cable 3 m (10') with DB9 connector (barometric pressure/temp/humidity)
DB9-CA-3-2		Extension cable, 0.9 m (3') with DB9 connector

Model No.	Description
iBTX-D	iServer industrial MicroServer™ for barometric pressure and temp; industrial probe 137 mm (5"), cable 3 m (10'), stripped wire leads; DIN rail mount
iBTHX-D	iServer industrial MicroServer™ for barometric pressure, temp, humidity and dew point; industrial probe 137 mm (5"), cable 3 m (10'), stripped wire leads; DIN rail mount
Accessories	
iBTP-5	Industrial probe 137 mm (5"), cable 3 m (10') with stripped wire leads; barometric pressure/temp
iBTHP-5	Industrial probe 137 mm (5"), cable 3 m (10') with stripped wire leads; bar, pressure/temp/humidity
iDRN-PS-1000	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA (powers up to 7 units)
Common Accessories	
CAL-3-HU	NIST-traceable calibration certificate, 3 humidity points: 25%, 50%, 75%, temp 25°C (for new units)
CAL-3-HU-P-T	NIST-traceable calibration certificate, 3 humidity, barometric pressure and temp points (for new units)
CAL-3-P	NIST-traceable calibration certificate, 3 barometric pressure points, temp 25°C (for new units)
*** -CAL-3-HU**	Calibrated replacement probe, and NIST traceable calibration certificate (for * insert probe type)
*** -CAL-3-HU-P-T**	Calibrated replacement probe, and NIST traceable calibration certificate (for * insert probe type)
*** -CAL-3-P**	Calibrated replacement probe, and NIST traceable calibration certificate (for * insert probe type)
CT485B-CAL-KIT	Calibration kit, 33% and 75% RH standards
iP-PCI-10P	Porous polyethylene industrial probe cap for wet environments, 10 caps per pack
iP-SC	Porous stainless steel probe cap, 5 µm porosity, for dusty and pressurized (<35 psi) environments

***Ordering Examples: iBTHX-D**, DIN rail mount industrial MicroServer™ for barometric pressure, temperature, humidity and dew point, with **iDRN-PS-1000**, power supply.*

***iBTX-W**, bracket mounted iServer Microserver™ for barometric pressure and temperature, with **DB9-CA-3-2**, extension cable.*

*For calibrated replacement probe with certificate, **iBTHP-W-6-CAL-3-HU***

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

iSD–TH

- Virtual Chart Recorder
- Web Server
- Alarms by Email or Text Message
- No Special Software Required
- Record Years of Data on Popular SD Cards

iSD Series

1 YEAR WARRANTY · CE · FCC-B

iSD-TH, shown smaller than actual size.

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.

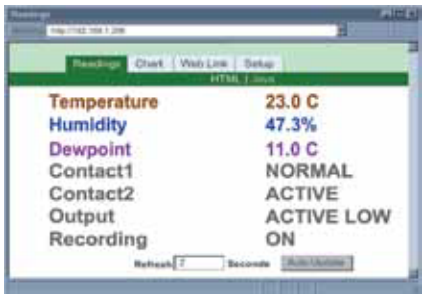
Local Alarms

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.

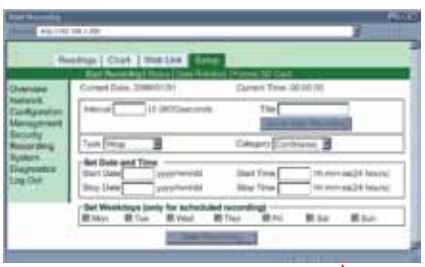
View Charts and Graphs on the Web

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.



The virtual chart viewed on the web page is a JAVA™ Applet that records a chart over the LAN or Internet in real time. With the OMEGA iSD, there is no need to invest time and money learning a proprietary software program to log or chart the data Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year.

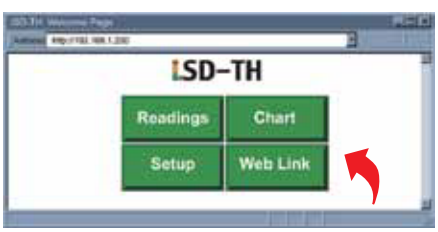
Temperature and humidity can be charted across the full span (-40 to 124°C, and 0 to 100% RH) or within any narrow range such as (20 to 30°C).



Recording Setup

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.



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

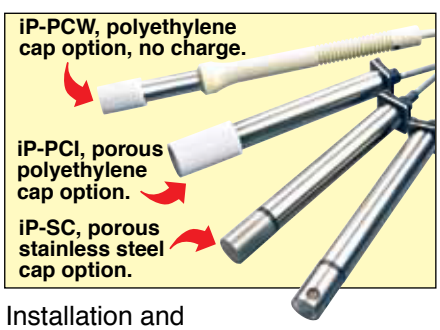
The data is recorded on widely available SD (Secure Digital) flash cards. The format is a simple ".txt" text file that is easily imported to spread sheets and other programs. It can be read directly on a PC or MAC with a USB card reader. You can also download the data remotely over an Ethernet network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

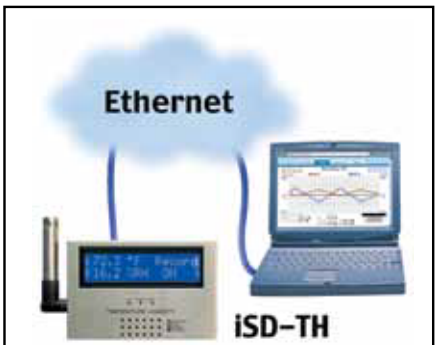
OMEGA offers replacement sensors with optional 3-point NIST traceable calibration certificates.



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.

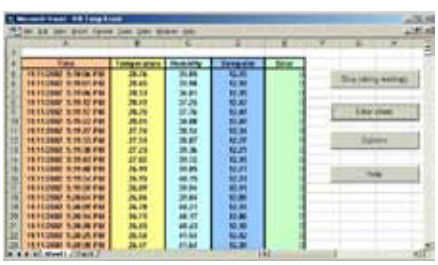


View temperature and humidity over Ethernet or the Internet.

The iSD connects to an Ethernet Network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu using a Web Browser and can be password protected. From within an Ethernet LAN or over the Internet, the user simply types its IP address or an easy to remember name such as "Cleanroom 5" or "Midwest Server Room" in any Web Browser, and the iSD serves a Web Page with the current readings.

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 at 25°C
Non Condensing: ±2.75% for 10 to 90%; ±3% for 5 to 10% and 90 to 95%; ±4% for 0 to 5% 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); up to ±1°C (up to ±2°F) 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); up to ±1.5°C (up to ±2.7°F) for -40 to 5°C and 45 to 124°C (-40 to 41°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)

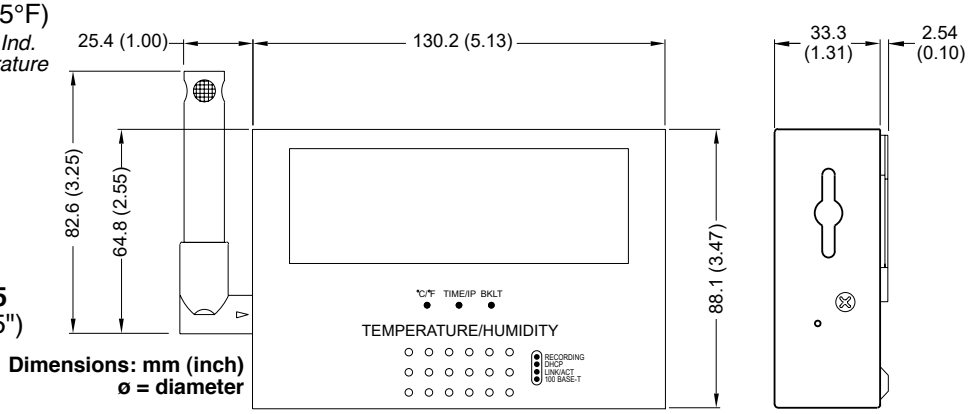
INTERFACES
Ethernet (RJ45): Fixed or auto-negotiating 10/100BASE-T, Auto MDI/MDIX
Protocols: TCP, UDP, SNMP, SMTP, NTP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet
LCD Display: 32 digits 4.8 x 9.7 mm (0.19 x 0.38")

SD FLASH MEMORY CARD
2 GB Card: 8 months of data storage at 1 second recording intervals or 7 years at 10 secintervals
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

Replacement probes with calibration certificate available, just add: **"-CAL-3-HU"**
No need to take your unit out of service to get re-calibrated, order a calibrated probe instead.



Dimensions: mm (inch)
ø = diameter

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

Comes complete with LCD display, 2 GB SD flash memory card, 2 relay alarms, battery back-up, universal 100 to 240 Vac power adaptor and operator's manual.

***Ordering Examples: iSD-TH,** monitor for temperature plus humidity with a right angle probe and 1.8 m (6') extension cable.*
***iSD-TH-5,** monitor for temperature plus humidity with industrial 137 mm (5") probe and 3 m (10') cable*

a DwyerOmega brand

Virtual Chart Recorder and Webserver

- Intuitive built-in web server with live charting
- Internal data storage up to 11 GB
- Modular compatibility with up to two Omega Link Smart Probes (PN#: M12-MT-079-2F required)
- Front panel color display (only on qualifying models)
- USB interface for easy local configuration and data extraction
- Compatible with the Omega Link Ecosystem

Introduction

The iServer 2 virtual chart recorder offers an intuitive way to collect and display live sensor readings through a web-based user interface or by integrating the device into an existing Omega Link Ecosystem.

The iServer 2 is packaged in a rugged, compact, stainless-steel housing designed for industrial applications and comes in variants that support different Omega Link Smart Probe types:

- iS2-THB-B
- iS2-THB-ST
- iS2-THB-DP

Web UI and Live Charting

The iServer 2 web UI offers a myriad or configurable features to ensure the device operates at the preferred user preferences. Configurable features include selective data extraction, measurement and device traceability, local alarms, and adaptive transmission rates. Live charting provides real-time readings of probes attached to the iServer 2 unit.

Edge Control and Built in I/O

The iServer 2 features 2 configurable digital I/O and relay ports (Standard and Deluxe models only). These can be used for a myriad of applications including driving relays or physical alarms. The iServer 2 can also be utilized as an edge controller, with autonomous independent decision-making capabilities to generate local alarms or provide control outputs based on sensor inputs.

Alarm and Notifications

A fully configurable alarm system is available in the web UI to create events and thresholds that will trigger a notification should those scenarios be met. A modern notification system allows users to be notified via email or text.

Easy Setup

The iServer 2 is simple to install and use, and features Omega's iServer technology that requires no special software except a web browser. The iServer 2 connects to an Ethernet Network with a standard RJ45 connector and uses TCP/IP or Modbus TCP protocols to communicate. It is easily configured with a simple menu using a web browser and is password protected. From within an Ethernet LAN, the user simply types the hostname or IP address in any web browser, and the iServer 2 provides a webpage with the current readings.

Typical Applications

The iServer 2 is great for monitoring temperature in applications such as clean rooms, computer rooms, HVAC systems, hospitals, laboratories, semiconductor fabs, electronic assembly, warehousing, museums, manufacturing, farm animal shelters, greenhouses, pharmaceutical, food processing and storage, and many more.

Power Over Ethernet

The iS2-THB-DP variant of the iServer 2 both offer a Power over Ethernet (PoE) feature that provides the device with sufficient power to operate when connected to a PC or router that supports Power over Ethernet.

Omega Link Integration

Omega Link compatible devices, such as the iServer 2, can be added to an existing Omega Link Ecosystem to provide data anytime, anywhere, through the Omega Link Cloud.

Dual Probe Functionality

Dual probe functionality can be enabled on the iServer 2 when two Omega Link Smart Probes are connected to the iServer 2 using an Omega **M12-MT-079-2F** Y-splitter cable, sold separately. An iServer 2 firmware upgrade to the latest version is required to enable dual probe functionality. Refer to the full list of compatible Omega Link Smart Probes on the last page of this data sheet.

Power Failure

The iServer 2 will continue to collect data for 96-hours when powered by a standard 9 Volt alkaline backup battery (included). A failure on the Ethernet network will not interrupt data recording.

Note: A fully charged 9 V battery will allow the iServer 2 to continue logging up to 10 000 data points for a period of 96 hours. When the 10 000 logged data points have been exceeded while running on the backup battery, the oldest logged data point on the Smart Probe will be overwritten starting from the oldest data point saved on the Smart Probe. A logging interval of at least 35 seconds or longer will prevent the overwriting of data during the 96-hour period the battery is in use.

Interfaces

Available input ports vary depending on the iServer 2 model

Ethernet (RJ45): 1x port (Power over Ethernet available on qualifying models)

Supported Protocols: TCP, UDP, SNMP, SNTP, ARP, ICMP, DNS, and HTTP

Omega Link Smart Probe: 1x M12 8-Pin port (PN#: M12-MT-079-2F cable is required for dual Smart Probe functionality, sold separately)

Digital I/O and Relays (Standard and Deluxe Models Only): Two contact inputs TTL 0.5 mA; one open collector output 150 mA @ 30 VDC

LED Indicators: 100 BASE-T, Network Link and Activity, Internet

Sample Rate: 1 sample per second max

Management: Device and probe configuration and monitoring through embedded WEB server

Embedded WEB Server: Embedded web pages containing real-time data and live updated gauge views and charts within definable time intervals.

Mechanical

Dimensions of Base Device: 101.6 mm L x 155.6 mm W x 330 mm H (4 in. L x 6.13 in. W x 12.99 in. H) not including bracket and M12 connector

Material: Stainless Steel

Display: LCD 32 mm L x 93.5 mm W

Weight: 655 g (1.44 lbs.), including battery

Power

Power Input: 9 to 12 VDC

Consumption: 4 W

AC Power Adapter (Included) Nominal Output: 12 VDC @ 1.5 A

Power over Ethernet: IEEE 802.3AF, 44 V - 49 V, Power Consumption under 10 W

Input: 100 to 240 VAC, 50/60 Hz

Back-Up Battery: 9 VDC, alkaline. 96 hours at 5 seconds recording intervals and 1 second reading with two connected probes

Environmental

Operating Temperatures - iServer 2

iServer 2 Unit: 0 to 60 °C (32 to 140 °F)

Battery: -18 to 55 °C (-0.4 to 131 °F)

AC Power Adapter: 0 to 40 °C (32 to 104 °F)

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

Storage Temperature: -40 to 85 °C (-40 to 185 °F)

General

Configuration: Internal Web UI

Software: Access web server using any modern web browser such as Chrome, Edge, or Firefox on the same local network; Firmware upgrade from Internet; Export probe data log to .CSV files

Agency Approvals: CE, UKCA, Canada ICES-3(B)/NMB-3(B), FCC (Part 15, Subpart B, Class B of the FCC rules)

Memory Capacity & Sample Rate

The table below lists the lifespan of the internal storage [illegible] come with more than one active sensor. These sensors can be individually enabled and disabled using Omega's SYNC configuration software.

Sample Rate	2 Active Sensors	4 Active Sensors
1 second (max)	4 years	2 years
5 seconds	24 years	12 years
10 seconds	40 years	20 years

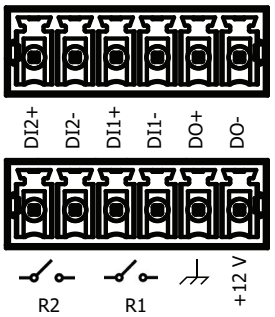
Digital I/O and Relays

The iS2-THB-ST and iS2-THB-DP feature a digital I/O and relay terminal block.

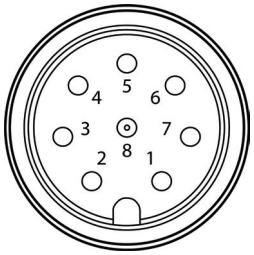
The DI connections (DI2+, DI2-, DI1+, DI1-) accept a 5V (TTL) input.

The DO connections (DO+, DO-) require an external voltage and can support up to 0.5 amp at 60 VDC.

The relays (R2, R1) can support a load of up to 1 amp at 30 VDC.



M12 8-Pin Smart Probe Wiring



Pin No.	Description
Pin 1	I2C-2_SCL
Pin 2	Interrupt Signal
Pin 3	I2C-1_SCL
Pin 4	I2C-1_SDA
Pin 5	Shield Ground
Pin 6	I2C-2_SDA
Pin 7	Power Ground
Pin 8	Power Supply

The iS2-THB-B, iS2-THB-ST, and iS2-THB-DP feature an M12 8-Pin Smart Probe Port.

SP-003-1 Probe Accuracy Specifications

(Included with iServer 2 M12 Smart Probe variants)

Temperature

Range: -40 to 85 °C (-40 to 185 °F)

Accuracy at 25 °C: ± 0.3 °C (±0.6 °F)

Response Time: Less than 1 second

Temperature Coefficient: Less than 0.01 C/C

Repeatability: ±0.15 °C

Relative Humidity

Accuracy at 25 °C: ±2.5 % (0 to 80 %) non-condensing

Hysteresis: ±0.8 %

Response Time: 8 seconds

Barometric Pressure

Accuracy Over Full Range: ±6 mbar from 300 to 1100 mbar

Accuracy @ 25 °C: ±4 mbar from 700 to 1100 mbar

iServer 2 Ordering Guide

Model No.	Model Name	Sensor	Screen	I/O	Power	Description
iS2-THB-B	iServer 2 - Basic	M12 Smart Probe	No Display	No Relay, No DIO	AC to 12 V DC Adaptor	iServer 2 - Basic virtual chart recorder and webserver, no display
iS2-THB-ST	iServer 2 - Standard	M12 Smart Probe	4.3" LCD	Relay, DIO	AC to 12 V DC Adaptor	iServer 2 - Standard virtual chart recorder and webserver with display
iS2-THB-DP	iServer 2 - Deluxe Probe	M12 Smart Probe	4.3" LCD	Relay DIO	AC to 12 V DC Adaptor; PoE	iServer 2 - Deluxe Probe virtual chart recorder and webserver with display and Power over Ethernet

This product is for sale only in the US, Canada, the UK and EU member countries. At this time, the Product does not meet regulatory compliance requirements outside of the aforementioned regions.

Omega Link Smart Probes

Compatible Omega Link Smart Probes are integrated with an advanced suite of IIoT Smart Core features. These features enable plug and play connectivity, alarms and notifications, data assurance, data logging, and storage. A full list of compatible Omega Link Smart Probes can be found on the Omega website.

Model Number	Description
SP-003 Series	Temperature, Humidity, Barometric Pressure, Dewpoint, Humidex, and Heat Index Smart Probe - Tube Housing
SP-004 Series	Temperature, Humidity, Dewpoint, Humidex, and Heat Index - Tube housing or Bulkhead housing, 5" variant also available
SP-005 Series	Temperature and RTD Smart Probe
SP-006 Series	Pressure Monitoring Smart Probe
SP-010 Series	Load Cell Smart Probe
SP-014 Series	Process Monitoring Smart Probe
SP-016 Series	Heat Flux Smart Probe

Important Note: The use of additional Omega Link Smart Probe will require a firmware update of the Smart Probe. The iServer 2 web interface is capable of downloading and updating the firmware of any Smart Probe that is compatible with the iServer 2.

CAL-3 SKU's

CAL-3 is available for iServer 2 M12 Models for temperature and humidity only by ordering the SKU's below. For Barometric Pressure or additional calibration requirements, please contact Omega.

- iS2-THB-B-CAL-3
- iS2-THB-ST-CAL-3
- iS2-THB-DP-CAL-3

Accessories Ordering Guide

Model Number	Description
M12-MT-079-2F	M12-8 connector Y-splitter cable for iServer 2 dual smart probe functionality
DM12CAB-8-1-RA	1 m (3.3') cable dual M12-8 connector, right angle terminator
DM12CAB-8-3-RA	3 m (9.8') cable dual M12-8 connector, right angle terminator
DM12CAB-8-5-RA	5 m (16.4') cable dual M12-8 connector, right angle terminator
DM12CAB-8-1	1 m (3.3') cable dual M12-8 straight connector
DM12CAB-8-3	3 m (9.8') cable dual M12-8 straight connector
DM12CAB-8-5	5 m (16.4') cable dual M12-8 straight connector

Controllers iSeries

DPiTH Series
CNiTH Series

- Output 1: Humidity, Output 2: Temperature
- High Accuracy ±0.5°C and ±3% RH
- 4 Popular DIN Sizes
- Ethernet and Serial Communications (Optional)
- User-Friendly, Simple to Configure
- Full Autotune PID Control
- Choice of Relays, SSR, DC Pulse, Analog Voltage and Current
- Programmable Ramp and Soak for Humidity and/or Temperature
- RH/Temperature Probe Included
- RoHS 2 Compliant

SENSOR INCLUDED!

All models shown smaller than actual size.

The OMEGA® iTH Series instruments monitor and control both temperature and relative humidity. All meters and controllers in the series are high quality, highly accurate instruments featuring OMEGA's award-winning iSeries technology, uncompromising accuracy, backed by an extended 5-year warranty.

The instruments are simple to configure and use, while providing tremendous versatility and a wealth of powerful features.

The OMEGA iTH Series instruments are available either as monitors or controllers. The monitors are extremely accurate programmable digital panel meters displaying humidity, temperature, or dew point. The controllers also provide single output control for humidity and temperature and are easily programmed for any control or alarming requirement from simple on-off to full autotune PID control.

The iTH family of meters and controllers are available in four true DIN sizes: the ultra compact 1/32 DIN; the popular midsize 1/16 DIN square bezel with dual display; the 1/8 DIN vertical, and the 1/8 DIN horizontal with the big bright 21 mm (0.87") digits.

The OMEGA iTH Series LED displays can be programmed to change color between **GREEN**, **AMBER**, and **RED** at any setpoint or alarm point.

The iTH controller models offer a choice of 2 control or alarm outputs in almost any combination: solid state relays (SSR); form "C" SPDT (single pole double throw) relays; pulsed 10 Vdc output for use with an external SSR; or analog output selectable for control or retransmission of the process value.

The networking and communications options (highly recommended) include direct Ethernet LAN connectivity with an embedded Web server, and serial communications. The C24 serial communications option includes both RS232 and RS485. Protocols include a straight forward ASCII protocol. The C4EIT option includes Ethernet and RS485 ASCII on one device.

The iTH Series meters and controllers are designed for easy integration with popular industrial automation, data acquisition and control programs as well as Microsoft Visual Basic® and Excel®. OMEGA provides free configuration software which makes it fast and easy to get up and running. Available for download at OMEGA.

Specifications

Control

Action: Reverse (heat) or direct (cool)

Modes: Time and amplitude proportional control modes; selectable manual or auto PID, proportional, proportional with integral, proportional with derivative with anti-reset windup and ON/OFF

Rate: 0 to 399.9 seconds

Reset: 0 to 3999 seconds

Cycle Time: 1 to 199 seconds; set to 0 for ON/OFF operation

Gain: 0.5 to 100% of span; setpoints 1 or 2

Damping: 0000 to 0008

Soak: 00.00 to 99.59 (HH:MM), or OFF

Ramp to Setpoint: 00.00 to 99.59 (HH:MM), or OFF

Autotune: Operator initiated from front panel for 1 input at a time only

Outputs

Two Physical Outputs: Output 1 = RH, output 2 = temperature; functions are set up as outputs (PID or ON/OFF), or alarms

Ordering Outputs Choices:

Relay: 250 Vac @ 3 A or 30 Vdc @ 3 A (resistive load); Form C SPDT

SSR: 20 to 265 Vac @ 0.05 to 0.5 A (resistive load); continuous

DC Pulse: Non-isolated; 10 Vdc @ 20 mA (used with external SSR)

Analog Output (Output 1 Only): Non-isolated, control or retransmission 0 to 10 Vdc or 0 to 20 mA, 500Ω maximum, ±1% of full scale accuracy

Control Output 1 and 2

Operation:

Action: Reverse (heat) or direct (cool)

Modes: Time and amplitude proportional control modes; selectable manual or auto PID, proportional, proportional with integral, proportional with derivative with anti-reset windup and ON/OFF

Alarm 1 and 2 (Programmable):

1) Alarms are used for color changing sequence of alarm status

functions, if output 1 and 2 are (menu) disabled
3) If alarms are disabled, output menus (PID or ON/OFF) are active; color change is still active

Operation: High/low, above/below, band, latch/unlatch, normally open/normally closed and process/deviation; front panel configurations

-AL Limit Alarm Version: Output 1 and 2 submenus used for PID are eliminated from menu; color sequence based on alarm setpoints is still available

Input

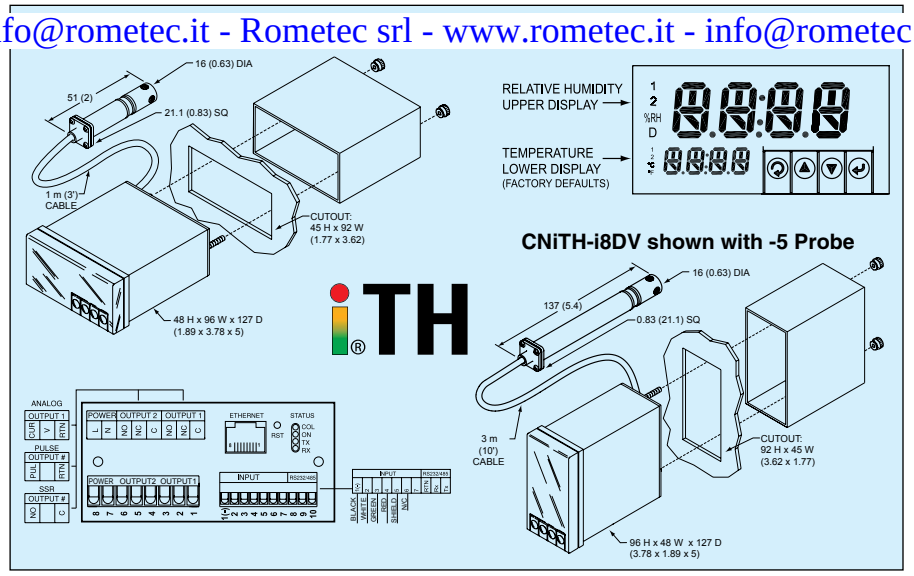
Accuracy/Range @ 25C - Non-condensing:
±3% for 10 to 90%;
±3.5% for 5 to 10% and 90 to 95%
±4% for 0 to 5% and 95 to 100%
Hysteresis: ±1% RH
Non-linearity: ±3%
Temperature Accuracy/Range*
±0.5°C for 5° to 45°C (±1°F for 41 to 113°F); up to ±1.5°C for -40° to 5°C and 45° to 124°C (up to ±2.7°F for -40° to 41°F and 113° to 255°F)
Resolution: 0.1%, 12bit for RH; 0.1°C, 14 bit for temperature
Response Time: 8 seconds, tau 63% for RH; 5 to 30 seconds, tau 63% for temperature
***Note:** Extended temperature range is for industrial probe only, the controller's operating temperature is 0 to 50°C.*

Network and Serial Communications (For Options -C24, -C4EIT, -EIT)

Ethernet: Standards compliance IEEE 802.3 10Base-T
Supported Protocols: TCP/IP, ARP, HTTPGET
RS232/RS422/RS485: Selectable from menu; both ASCII and MODBUS protocol selectable from menu; programmable 300 to 19.2 K baud; complete programmable setup capability; program to transmit current display, alarm status, min/max, actual measured input value and status
RS485: Addressable from 0 to 199
Connection: Screw terminals

General

A/D Conversion: 12-bit RH and 14-bit temp
Reading Rate: 2 samples per sec max
Digital Filter: Programmable
Decimal Selection: None, 0.1 for temperature and humidity
Display: 4-digit, 9-segment LED
i32, i16D, i8DV: 10.2 mm (0.40")
i8: 21 mm (0.83")
i8DH: 10.2 mm (0.40") and 21 mm (0.83")
RED, **GREEN** and **AMBER** programmable colors for process variable, setpoint and temp units
Operating Temperature: 0 to 50°C (32 to 122°F), 90% RH non-condensing
Protection:
i32, i16D: NEMA 4X (IP65) front bezel
i8DH, i8DV: NEMA 1 (IP23) front bezel
Power: Refer to ordering guide



To Order

Model No.			Description
DPiTH-	**(****)**		Monitor version, no control outputs
CNiTH-	**(****)**	**(* *)**	Controller version, select 2 control outputs
	i8DH		Temperature and RH Input ⅛ DIN dual display horizontal
	i8DV		Temperature and RH Input ⅛ DIN dual display vertical
	i16D		Temperature and RH Input 1/16 DIN dual display
	i32		Temperature and RH Input 1/32 DIN single display*2
Control Outputs			
		2 2	2 solid state relays (SSR's): 0.5 A @ 120/240 Vac continuous
		2 3	SSR and relay: Form "C" SPDT 3A @ 120Vac, 3A @ 240Vac
		2 4	SSR and pulsed 10 Vdc @ 20 mA (for use with external SSR)
		3 3	2 Relays: Form "C" SPDT 3 A @ 120 Vac, 3 A @ 240 Vac
		4 2	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and SSR
		4 3	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and relay
		4 4	2 pulsed 10 Vdc @ 20 mA (for use with external SSR)
		5 2	Analog output selectable as either control or retransmission of process value; 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max & SSR
		5 3	Analog output 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max & relay
		5 4	Analog out 0 to 10 Vdc or 0 to 20 mA @ 500 Ω max & pulse 10 V
			-AL limit alarm version (simplified menu; no PID control)*1
RH/Temperature Probe (Must Select One)			
-2			51 mm (2") probe for iTH with 1 m (3') cable
-5			127 mm (5") probe for iTH with 3 m (10') cable
Power Supply			
*			Standard power input: 90 to 240 Vac ±10%, 50 to 400 Hz, 110 to 300 Vdc, equivalent voltage (*no entry required)
-DC			Low voltage power option: 20 to 36 Vdc, 24 Vac ±10%; 12 to 36 Vdc, 24 Vac ±10% for iTH-32
Network Options			
-EIT			Ethernet with Embedded Web Server*2
-C24			Isolated RS232 and RS485/422. 300 to 19.2k Baud
-C4EIT			Ethernet with Embedded Web Server + Isolated RS485/422 hub for up to 31 devices*2

Accessories

Software	
OPC-SERVER LICENSE	OPC server/driver software license (requires network option)
iTHP-2	51 mm (2") replacement probe for iTH with 1 m (3') cable
iTHP-5	127 mm (5") replacement probe for iTH with 3 m (10') cable

1 Analog output (Option 5) is not available with **"-AL" units.*
**2 -C4EIT or -EIT option is not available on the 1/32 DIN. Refer to the iServer section for other Ethernet devices that can connect to a CNiTH-i32xx-x-C24.*
Units can be powered safely with 24 Vac power, but no certification for UL are claimed.
***Ordering Examples: CNiTH-i8DH43-5-C4EIT,** horizontal ⅛ DIN dual display with pulse and relay outputs, a 127 mm (5") probe and Ethernet with embedded Web server.*
***DPiTH-i16D-2-EIT,** 1/16 DIN dual display with a 51 mm (2") probe and Ethernet with embedded Web server.*

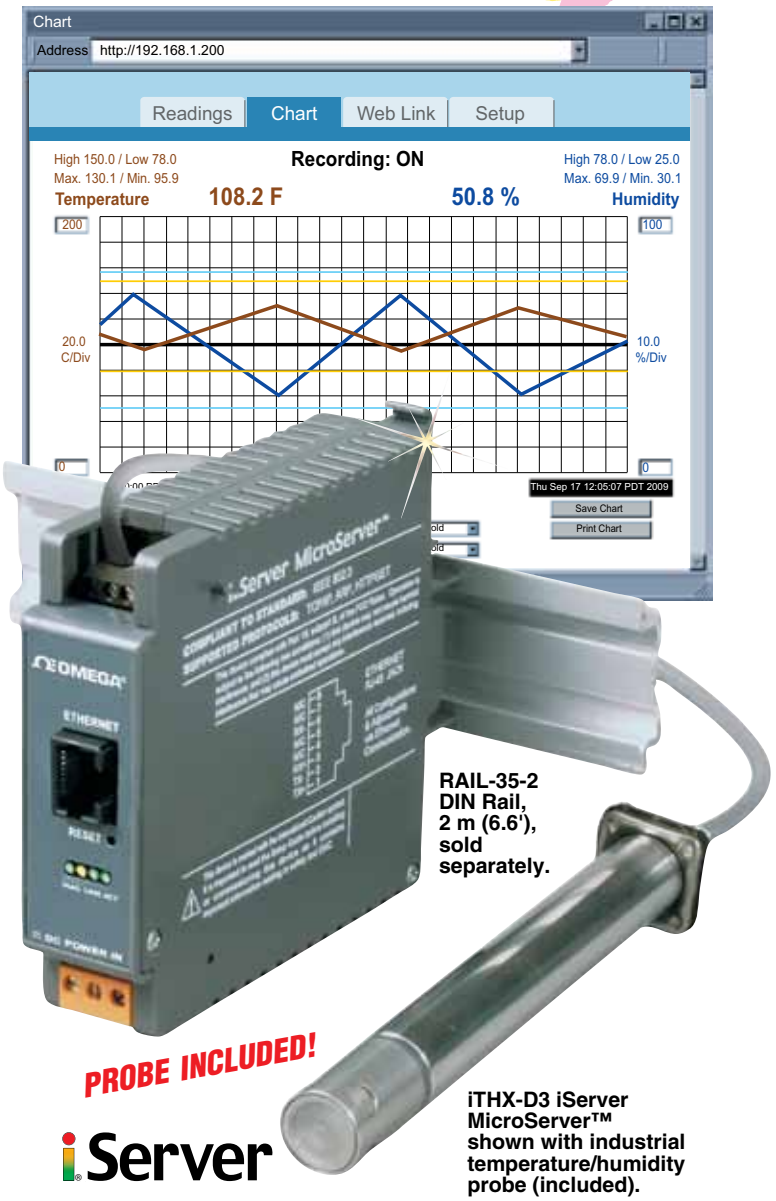
Temperature and Humidity Virtual Chart Recorder

iTHX-D3 Series

CE FCC-B NIST

Optional

- Web Server
- Alarms by Email or Text Message
- Accurate Readings
- Data Logging
- No Special Software Required



iTHX-D3 iServer MicroServer™ shown with industrial temperature/humidity probe (included).

View Temperature and Humidity with a Web Browser

The OMEGA® iTHX transmitter lets you monitor and record temperature, relative humidity, and dew point over an Ethernet network or the Internet with no special software except a web browser.

The iTHX serves active web pages to display real-time readings, 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.

The virtual chart viewed on the web page is a JAVA™ Applet that records a chart over the LAN or Internet in real time. With the iTHX, there is no need to invest time and money learning a proprietary software program to log or chart the data.

Adjustable Charts

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year. Temperature and humidity can be charted across the full span [-40 to 124°C (-40 to 254°F)], and 0 to 100% RH or within any narrow range such as 20 to 30°C (68 to 86°F).

Award-Winning Technology

The OMEGA iTHX is simple to install and use, and features OMEGA's award-winning iServer technology that requires no special software except a web browser.

The iTHX connects to an Ethernet network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu using a web browser and can be password protected.

From within an Ethernet LAN or over the Internet, the user simply types the IP address or an easy-to-remember name such as "Cleanroom5" or "Server Room" in any web browser, and the iTHX serves a web page with the current readings.

Email Alarms

All OMEGA iTHX models that are on a LAN that is connected to the Internet can trigger an alarm that can be sent by email to a user or a distribution list anywhere in the world, including text messages to cell phones and PDA's.

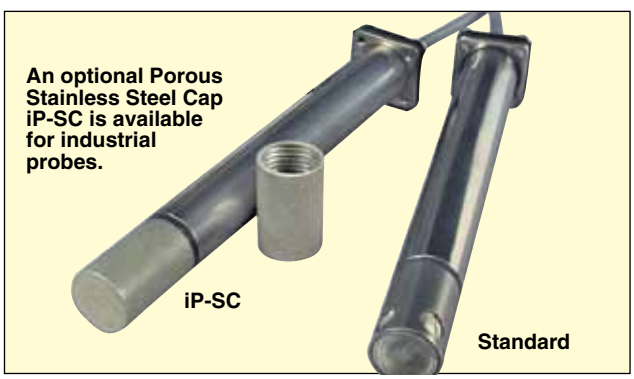
Link to Web CAM or IP Camera

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.

Sensor and Calibration

The iTHX transmitters come complete with a temperature and humidity probe for measurement of a single location.

OMEGA offers a choice of industrial probes in 2" (with a 3' cable) or 5" length (with a 10' cable)



instead of the commercial wand style probe which is designed for ambient indoor applications.

It is not necessary to take the iTHX 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 probes with optional 3-point NIST traceable calibration certificates.

Typical Applications

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

Sensor Specifications

RELATIVE HUMIDITY (RH)

Accuracy/Range at 25°C:
Non-Condensing:
10 to 90%: 2.75% RH
5 to 10% and 90 to 95%: ±3%
0 to 5% and 95 to 100%: ±4%

Non-Linearity: ±3%

Hysteresis: ±1% RH

Response Time: 8 seconds, tau 63%

Repeatability: ±0.1%

Resolution: 0.1%, 12 bit

TEMPERATURE

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

*** Note:** *Extended temperature range is for industrial probe only, the iServer's operating temp is -40 to 85°C (-40 to 185°F).*

Response Time: 5 to 30 seconds, tau 63%

Repeatability: ±0.1°C

Resolution: 0.1°C, 14 bit

Probe Specifications

iTHP-5, iTHP-2: 137 or 51 L x 16 mm Dia (5 or 2 x 0.63")

Housing Material: 316 SS
Cable: 3 or 0.9 m L (10 or 3')
Cable Operating Temperature: -40 to 125°C (-40 to 257°F)

NIST-Traceable Calibration Certificate available.
In compliance with ISO9001:2008, ISO10012-1.1992(E), ANSI/NCSL Z540-1.1994 and MIL-STD-45662A.

iServer Specifications

INTERFACES

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

Sensor: Removable 4 pos screw terminal

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

Embedded Web Server: Serves web pages containing real-time data and live updated charts within definable time intervals

Software: OPC Server; macro for data logging in Excel program; compatible with Windows® operating systems

Power Input: 10 to 32 Vdc switching power supply (sold separately)

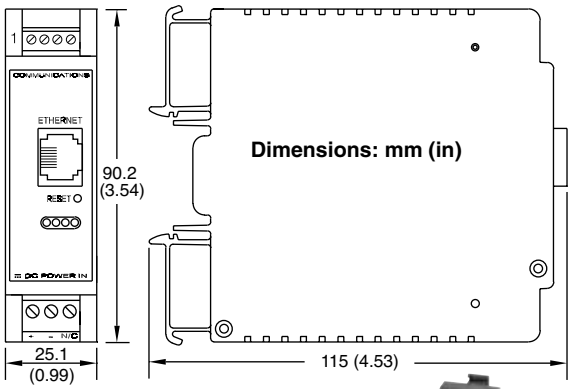
ENVIRONMENTAL

Operating Temperature: -40 to 85°C (-40 to 185°F)

Storage Temp: -40 to 125°C (-40 to 257°F)

Packaging Material: Polycarbonate case with DIN rail mount

Mechanical Specifications

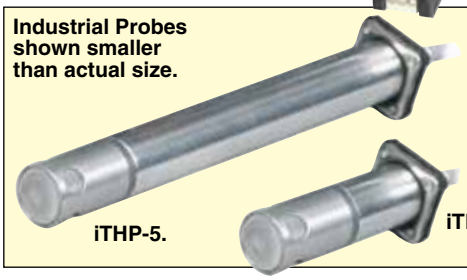


iTHX-D3: 113 g (0.25 lb)

iTHX

iDRN-PS-1000
- **24 Vdc Supply**
- **Switching Power Supply Powers Up to 7 Units**

Industrial Probes shown smaller than actual size.



To Order *Visit omega.com/ithx-d3 for Pricing and Details*

Model No.	Description
iTHX-D3	DIN rail case iServer MicroServer™ for temperature + humidity and dew point, with industrial 137 mm (5") probe on 3 m (10') cable with stripped wire leads
iTHX-D3-2	DIN rail case iServer MicroServer™ for temperature + humidity and dew point, with industrial 51 mm (2") probe on 0.9 m (3') cable with stripped wire leads
Accessories	
iTHP-2	Replacement industrial probe 51 mm (2"), 0.9 m (3') cable
iTHP-5	Replacement industrial probe 137 mm (5"), 3 m (10') cable
iP-PCI-10P	Porous polyethylene probe cap, for wet environments, 10 caps per pack
iP-SC	Porous stainless steel probe cap, 5 µm porosity, for dusty, pressurized (<35 psi) environments
iDRN-PS-1000	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA (powers up to 7 units
CAL-3-HU	NIST-traceable calibration certificate. 3 points of 25%, 50%, 75% RH, temperature 25°C (77°F), for new units
CT485B-CAL-KIT	Calibration kit, 33 and 75% RH standards
*** -CAL-3-HU**	Calibrated replacement probe and NIST calibration certificate
RAIL-35-2	DIN rail, 2 m (6.6')

Volume discounts available.

Ordering Examples: iTHX-D3, *iServer MicroServer™ with temp and humidity and dew point, 127 mm (5") industrial probe.*

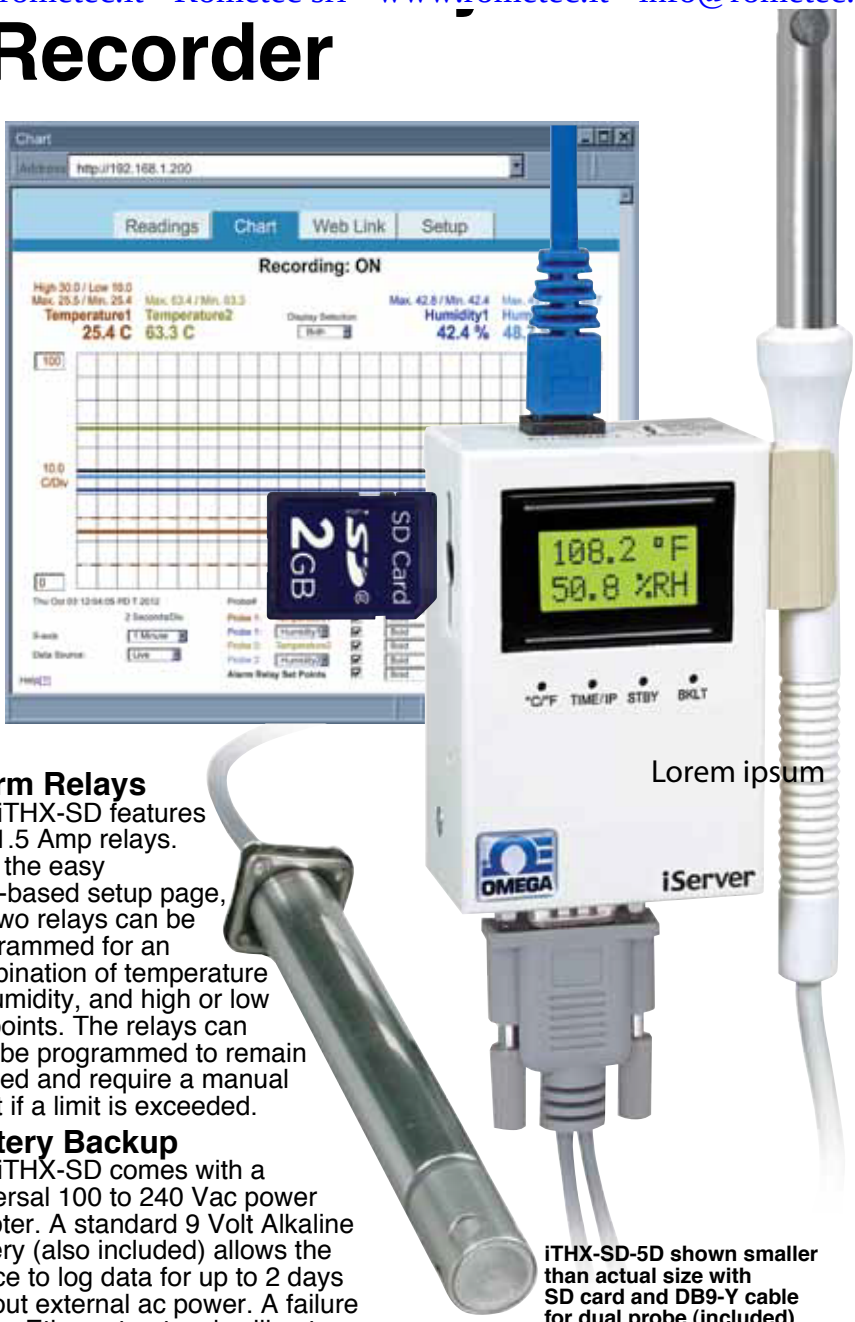
iTHP-5-CAL-3-HU*. *calibrated replacement probe, with NIST certificate.*

Virtual Chart Recorder

iTHX Series

1 YEAR WARRANTY CE FCC-B

- Web Server
- Alarms by Email or Text Message
- No Special Software Required
- Records Years of Data on Popular SD Cards
- Dual Probe Option



iTHX-SD-5D shown smaller than actual size with SD card and DB9-Y cable for dual probe (included).

iServer

View Temperature + Humidty with a Web Browser

The OMEGA® iTHX-SD transmitter let's you monitor and record Temperature, Relative Humidity and Dew Point over an Ethernet network or the Internet with no special software except a Web Browser.

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

The virtual chart viewed on the web page is a JAVA™ Applet that records a chart over the LAN or Internet in real time. With the iTHX-SD, there is no need to invest time and money learning a proprietary software program to log or chart the data.

SD Flash Memory Card

The iTHX-SD 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 text file that is easily imported to spread sheets and other programs. It can be read on a PC or MAC with a USB card reader. You can also download the data remotely over an Ethernet network or the Internet.

Alarm Relays

The iTHX-SD features two 1.5 Amp relays. With the easy Web-based setup page, the two relays can be programmed for an combination of temperature or humidity, and high or low set points. The relays can also be programmed to remain latched and require a manual reset if a limit is exceeded.

Battery Backup

The iTHX-SD comes with a universal 100 to 240 Vac power adapter. A standard 9 Volt Alkaline battery (also included) allows the device to log data for up to 2 days without external ac power. A failure on the Ethernet network will not interrupt data recording.

Adjustable Charts

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year. Temperature and humidity can be charted across the full span (-40 to 124°C, and 0 to 100% RH) or within any narrow range such as (20 to 30°C). When a second sensor is added, users can select a chart that records channel 1, channel 2 or the difference of the two channels.

Award-Winning Technology

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

The iTHX-SD connects to an Ethernet Network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu using a Web Browser and can be password protected.

From within an Ethernet LAN or over the Internet, the user simply types its IP address or an easy to remember name such as "Cleanroom5" or "ServerRoom" in any Web Browser, and the iTHX-SD serves a Web Page with the current readings.

View temperature and humidity over Ethernet or the Internet.

Email Alarms

All OMEGA iTHX-SD models that are on a LAN that is connected to the Internet can trigger an alarm that can be sent by email to a user or a distribution list anywhere in the world, including text messages to cell phones and PDA's.

Link to Web CAM or 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.

Display and Chart Two Channels

The iTHX-SD transmitters come complete with a temperature and humidity probe for measurement of a single location. With the addition of a second probe, the iTHX-SD transmitter can measure and display temperature, humidity and dew point in a second location up to ten feet away.

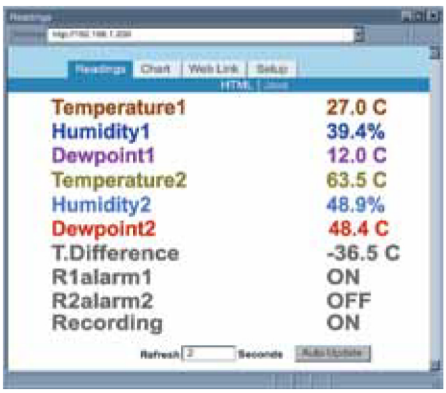
The transmitter can display and chart absolute measurements in both locations, or a differential measurement between the two locations. The second probe requires no change to the basic iTHX-SD transmitter hardware, it can be added at the time of purchase or in the future. OMEGA offers a choice of industrial probes in 2 and 5" lengths, and a wand style for ambient indoor applications. A simple DB-9 "Y" connector is available for adding a second probe.

Sensor and Calibration

It is not necessary to take the iTHX-SD 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.

Typical Applications

The iTHX-SD 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, green-houses, farm animal shelters, and many more.



Readings through embedded Web server

Sensor Specifications

RELATIVE HUMIDITY (RH)

Accuracy/Range at 25°C - Non-Condensing:
- **10 to 90%:** ±2.75%
- **5 to 10% and 90 to 95%:** ±3%
- **0 to 5% and 95 to 100%:** ±4%

Non-linearity: ±3%
Hysteresis: ±1%RH
Response Time: 8 seconds, tau 63%
Repeatability: ±0.1%
Resolution: 0.1%, 12 bit

TEMPERATURE (T)

Accuracy/Range*
Wand Probe: ±0.5°C (±1°F) for 5 to 45°C (41 to 113°F); up to ±1°C (up to ±2°F) 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); up to ±1.5°C (up to ±2.7°F) for -40 to 5°C and 45 to 124°C (-40 to 41°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 seconds, tau 63%
Repeatability: ±0.1°C
Resolution: 0.1°C, 14-bit

Probe Specifications

Wand Probe:
198 L x 19 mm Dia (7.8 L x 0.75" Dia)
- **Cable with DB9 Connector:** 152 mm L (6" L)
- **Cable Operating Temperature:** 0 to 80°C (32 to 176°F)

Industrial Probe iTHP-5, iTHP-2:
137 L *or* 51 L x 16 mm Dia (5 L *or* 2 L x 0.63" Dia)
- **Housing Material:** 316 SS
- **Cable with DB9 Connector:** 3 *or* 0.9 m L (10 *or* 3')
- **Cable Operating Temperature:** -40 to 125°C (-40 to 257°F)

iServer Specifications

INTERFACES

Ethernet: (RJ45)
Fixed or auto-negotiating 10/100BASE-T, Auto MDI/MDIX
Supported Protocols:
TCP, UDP, SNMP, SMTP, NTP, ARP, ICMP, DHCP, DNS, HTTP and Telnet
Sensor: Digital 4-wire, DB9
LCD Display: 16 digits, 6 mm (0.23")
SD Flash Memory Card:
2GB card: 8 months of data storage at 1 second recording intervals or 7 years at 10 second intervals
Relay Outputs:
Two relays 1.5 A @ 30 Vdc
Embedded Web Server:
Serves Web pages containing real-time data and live updated charts within definable time intervals
Software: OPC Server; macro for datalogging in Excel program; compatible with Windows operating systems

Power

Input: 9 to 12 Vdc
Safety qualified AC power adapter:
- **Nominal Output:** 9 Vdc @ 0.5 A
- **Input:** 100 to 240 Vac, 50/60Hz (included)

Back-up Battery:
9 Vdc, alkaline (included)

ENVIRONMENTAL

Operating Temperature:
- **iServer unit:** 0 to 60°C (32 to 140°F)
- **Battery:** -18 to 55°C (0 to 131°F)
- **ac Adapter:** 0 to 40°C (32 to 104°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

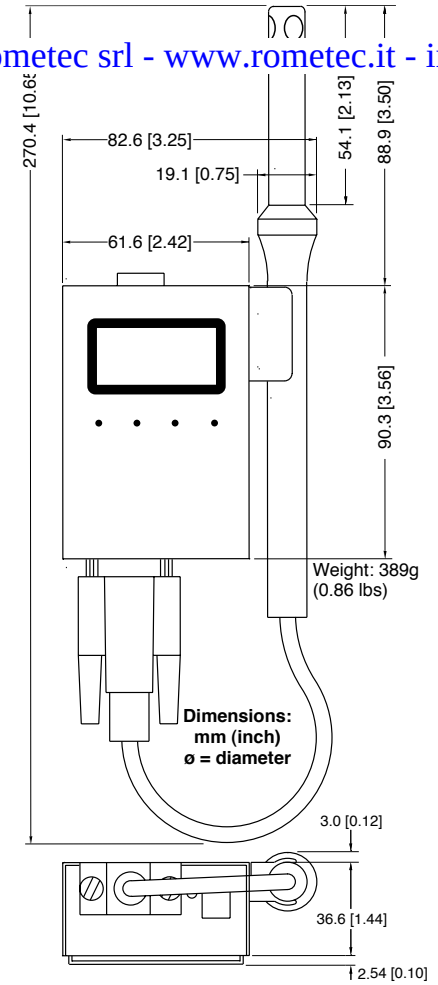
Packaging

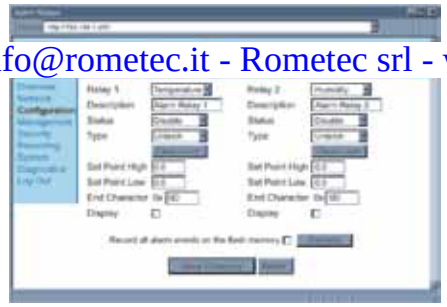
Material: Steel metal case with wall mount bracket

NIST-Traceable Calibration Certificate available.
In compliance with ISO9001:2008, ISO10012-1.1992(E), ANSI/NCSL Z540-1.1994 and MIL-STD-45662A.

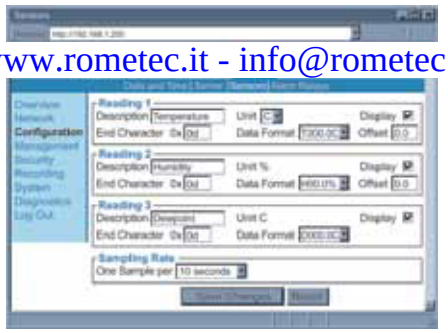
R

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it

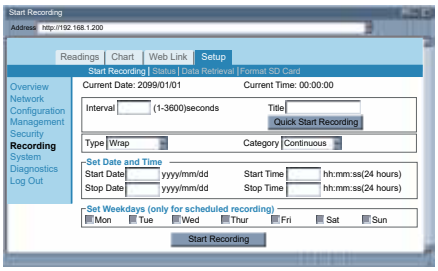




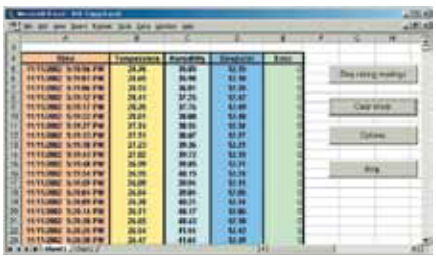
Alarm relay configuration through embedded Web server



Sensor configuration



Recording Setup

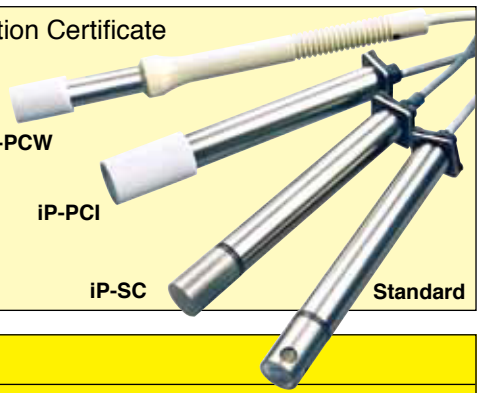


Data logging spreadsheet

Replacement Probes with Calibration Certificate available, just add: **"-CAL-3-HU"**

Optional Probe Caps shown

No need to take your unit out of service for routine calibration. Order a calibrated probe instead.



To Order

Model No.	Description
iTHX-SD	iServer MicroServer™ for Temp, Humidity, and Dew Point. Includes standard 203 mm (8") wand probe, cable 152 mm (6") with DB9 connector
iTHX-SD-2	iServer MicroServer™ includes industrial 51 mm (2") probe, cable 0.9 m (3') with DB9 connector
iTHX-SD-5	iServer MicroServer™ includes industrial 137 mm (5") probe, cable 3 m (10') with DB9 connector
iTHX-SD-WD	iServer MicroServer™ includes two wand probes and "Y" cable
iTHX-SD-2D	iServer MicroServer™ includes two probes, wand and 51 mm (2") industrial probe with 0.9 m (3') cable and "Y" cable
iTHX-SD-5D	iServer MicroServer™ includes two probes, wand and 137 mm (5") industrial probe with 3 m (10') cable and "Y" cable
Accessories	
iTHP-W-6	Wand probe 203 mm (8"), cable 152 mm (6")
iTHP-2-DB9	Industrial probe 51 mm (2"), cable 0.9 m (3')†
iTHP-5-DB9	Industrial probe 137 mm (5"), cable 3 m (10')†
DB9-CA-3	Extension cable, 0.9 m (3') with DB9 connectors
DB9-Y	DB9 "Y" connector adaptor for 2 probes with DB9 connector
iP-PCI-10P	Porous polyethylene industrial probe cap, for wet environments, 10 caps per pack
iP-PCW-10P	Porous polyethylene wand probe cap, for wet environments, 10 caps per pack
iP-SC	Porous stainless steel probe cap, 5 um porosity, for dusty, pressurized (<35 psi) environments
CAL-3-HU	NIST traceable calibration certificate. 3 points of 25%, 50%, 75% RH, temperature 25°C (77°F), for new units
CT485B-CAL-KIT	Calibration kit, 33% and 75% RH standards
*** -CAL-3-HU**	Calibrated replacement probe and NIST traceable calibration certificate (for * insert probe type)

† Other lengths of cable (up to 40') are available, please contact our Sales Department. Note: Volume discounts are available.

Ordering Examples: iTHX-SD with LCD display, SD card, 2 relay alarm, battery back-up and wand probe.

Temperature and Humidity Virtual Chart Recorder

iTHX-W3 Series

CE NIST FCC-B

Optional†

- Web Server
- Alarms by Email or Text Message
- Accurate Readings
- Data Logging
- No Special Software Required

View Temperature and Humidity with a Web Browser

The OMEGA® iTHX transmitter lets you monitor and record temperature, relative humidity, and dew point over an Ethernet network or the Internet with no special software except a web browser.

The iTHX serves active web pages to display real-time readings, 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.

The virtual chart viewed on the web page is a JAVA™ Applet that records a chart over the LAN or Internet in real time. With the iTHX, there is no need to invest time and money learning a proprietary software program to log or chart the data.

Adjustable Charts

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year. Temperature and humidity can be charted across the full span [-40 to 124°C (-40 to 254°F)], and 0 to 100% RH or within any narrow range such as 20 to 30°C (68 to 86°F).

Award-Winning Technology

The OMEGA iTHX is simple to install and use, and features OMEGA's award-winning iServer technology that requires no special software except a web browser.

The iTHX connects to an Ethernet network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu using a web browser and can be password protected.

From within an Ethernet LAN or over the Internet, the user simply types the IP address or an easy-to-remember name such as "Cleanroom5" or "Server Room" in any web browser, and the iTHX serves a web page with the current readings.

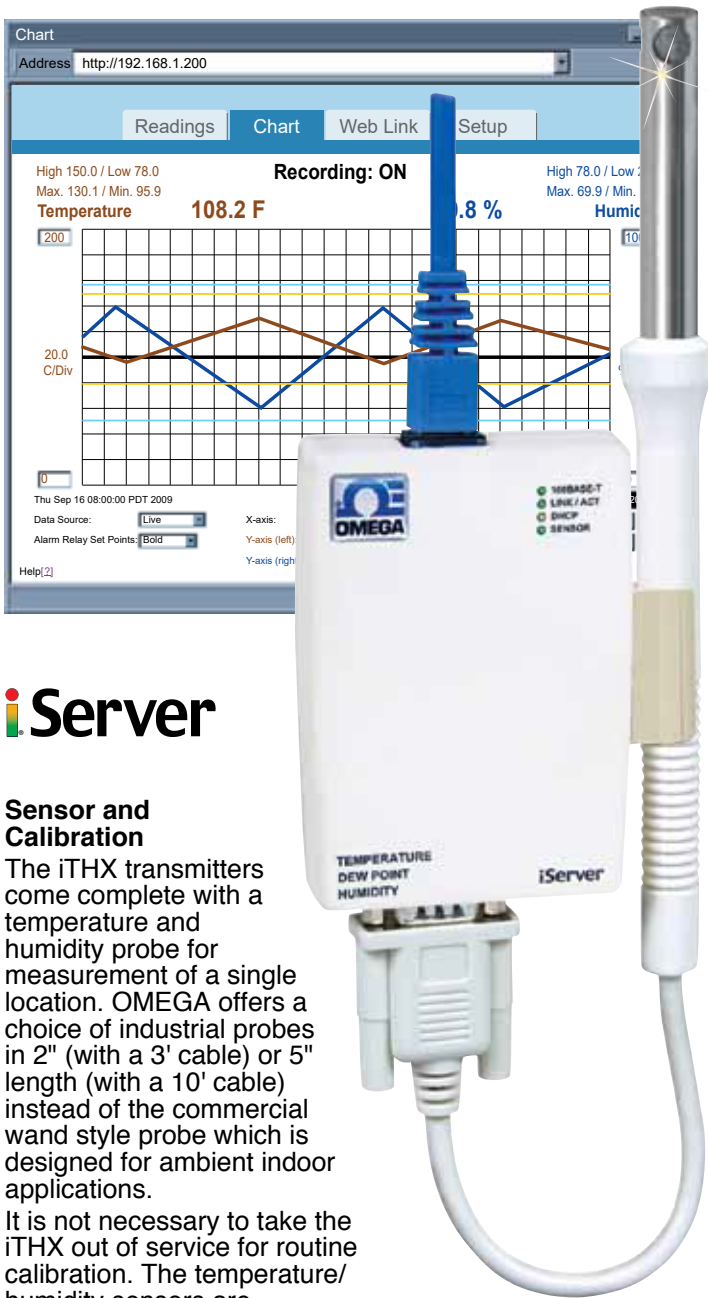
Email Alarms

All OMEGA iTHX models that are on a LAN that is connected to the Internet can trigger an alarm that can be sent by email to a user or a distribution list anywhere in the world, including text messages to cell phones and PDA's.

Link to Web CAM or 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.

† Refer to next page for NIST calibration ordering information.



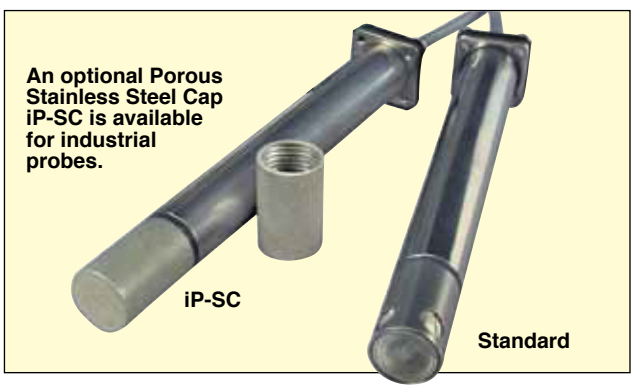
iServer

Sensor and Calibration

The iTHX transmitters come complete with a temperature and humidity probe for measurement of a single location. OMEGA offers a choice of industrial probes in 2" (with a 3' cable) or 5" length (with a 10' cable) instead of the commercial wand style probe which is designed for ambient indoor applications.

It is not necessary to take the iTHX 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.

iTHX-W3 iServer MicroServer™.



OMEGA offers replacement probes with optional 3-point NIST traceable calibration certificates.

Typical Applications

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

Sensor Specifications

RELATIVE HUMIDITY (RH)

Accuracy/Range at 25°C - Non-Condensing:
- **10 to 90%:** ±2.75%
- **5 to 10% and 90 to 95%:** ±3%
- **0 to 5% and 95 to 100%:** ±4%

Non-Linearity: ±3%
Hysteresis: ±1% RH
Response Time: 8 seconds, tau 63%
Repeatability: ±0.1%
Resolution: 0.1%, 12 bit

TEMPERATURE

Accuracy/Range**:
- **Wand Probe:** ±0.5°C (±1°F) for 5 to 45°C (41 to 113°F); up to ±1°C (up to ±2°F) for 0 to 5°C and 45 to 70°C (32 to 41°F and 113 to 158°F)
- **Industrial Probe**: (see chart in manual) ±0.5°C (±1°F) for 5 to 45°C (41 to 113°F); up to ±1.5°C (up to ±2.7°F) for -40 to 5°C and 45 to 124°C (-40 to 41°F and 113 to 255°F)

**** Note:** Extended temperature range is for industrial probe only, refer to the iServer's operating temperature spec.*

Response Time: 5 to 30 seconds, tau 63%
Repeatability: ±0.1°C
Resolution: 0.1°C, 14 bit

Probe Specifications

iTHP-W:198 x 19 mm Dia (7.8 x 0.75")
- **Cable**: 152 mm L (6") with DB9 conn.
- **Cable Operating Temperature:** 0 to 80°C (32 to 176°F)

iTHP-5, iTHP-2: 137 or 51 L x 16 mm Dia (5 or 2 x 0.63")
- **Housing Material:** 316 SS
- **Cable**: 3 or 0.9 m L (10 or 3')
- **Cable Operating Temperature:** -40 to 125°C (-40 to 257°F)

NIST-Traceable Calibration Certificate available.
In compliance with ISO9001:2008, ISO10012-1.1992(E), ANSI/NCSL Z540-1.1994 and MIL-STD-45662A.

iServer Specifications

INTERFACES

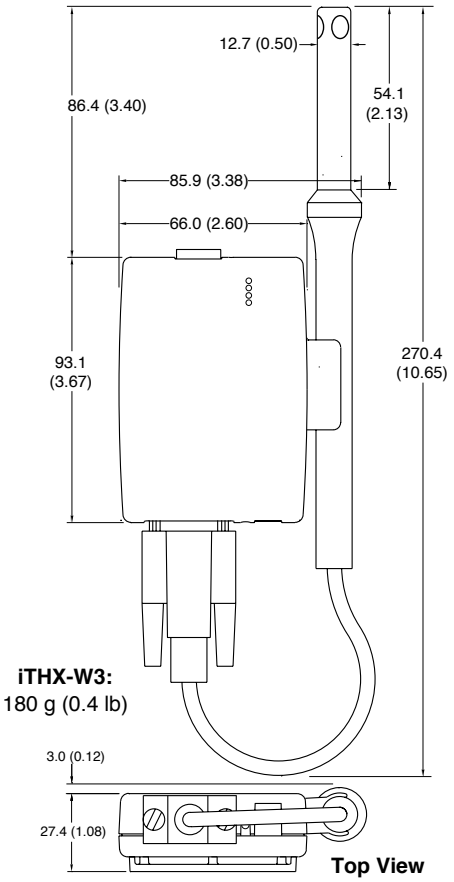
Ethernet (RJ45): Fixed or auto-negotiating 10/100BASE-T, auto MDI/MDIX
Sensor: Digital 4-wire (DB9 connector)
Supported Protocols: TCP, UDP, SNMP, SMTP, NTP, ARP, ICMP, DHCP, DNS, HTTP, and Telnet
Management: Device configuration and monitoring through embedded web server
Software: OPC Server; macro for data logging in Excel program; compatible with Windows® operating systems
Embedded Web Server: Serves web pages containing real-time data and live updated charts within definable time intervals
Power Input: 5 Vdc @ 200 mA

ENVIRONMENTAL

Operating Temperature: 0 to 70°C (32 to 158°F) for iTHX-W3; -40 to 85°C (-40 to 185°F) for iTHX-W3-2 or iTHX-W3-5
AC Adaptor: 0 to 40°C (32 to 104°F)
Safety Qualified AC Power Adaptor (Included):
- **Nominal Output:** 5 Vdc @ 0.6A
- **Input:** 100 to 240 Vac, 50/60 Hz

Storage Temp: -40 to 125°C (-40 to 257°F)
Packaging Material: Valox® 364 PBT case with wall mount bracket

Mechanical Specifications



Dimensions: mm (in), ø = diameter

To Order *Visit omega.com/ithx-w3 for Pricing and Details*

Model No.	Description
iTHX-W3	iServer MicroServer™ for temperature + humidity and dew point, commercial wand probe on 152 mm (6") cable with DB9 connector
iTHX-W3-2	iServer MicroServer™ with industrial 51 mm (2") probe on 0.9 m (3') cable with DB9 connector
iTHX-W3-5	iServer MicroServer™ with industrial 137 mm (5") probe on 3 m (10') cable with DB9 connector
Accessories	
iTHP-W-6	Replacement wand probe, 203 mm (8"), 152 mm (6") cable
iTHP-2-DB9	Replacement industrial probe 51 mm (2"), 0.9 m (3') cable with DB9
iTHP-5-DB9	Replacement industrial probe 137 mm (5"), 3 m (10') cable with DB9
DB9-CA-3	Extension cable, 0.9 m (3') with DB9 connectors
iP-PCW-10P	Porous Polyethylene commercial wand probe cap, for wet environments, 10 caps per pack
iP-PCI-10P	Porous Polyethylene industrial probe cap, for wet environments, 10 caps per pack
iP-SC	Porous stainless steel probe cap, 5 µm porosity, for dusty, pressurized (<35 psi) environments
CAL-3-HU†	NIST-traceable calibration certificate. 3 points of 25%, 50%, 75% RH, temperature 25°C (77°F), for new units
CT485B-CAL-KIT	Calibration kit, 33% and 75% RH standards
*** -CAL-3-HU**	Calibrated replacement probe and calibration certificate

Volume discounts available.

***Ordering Examples: iTHX-W3,** iServer MicroServer™ with temp and humidity and dew point, 203 mm (8") wand probe.*

***iTHP-W-6-CAL-3-HU*,** calibrated replacement probe with certificate.*

Portable Temperature/Humidity Data Loggers with USB Interface

OM-140 Series

1 YEAR WARRANTY

- One Button Starts/Stops Data Logging Without a PC
- Plug-and-Play USB 2.0 Interface; No Need for Cables, Cradles or Docks
- Large Storage Capacity: 16,000 Pairs of Temperature and Humidity Readings
- 3½-Digit LCD Displays Real-Time Temperature and RH Readings, Device Working Status and "Memory Full" (OM-143 and OM-144 Only)
- Built-In Infrared Thermometer for Checking Temperature of Vents and Surfaces (OM-144 Only)
- Sampling Time and Hi/Lo Temperature and RH Alarm Setpoints are Selectable Using Included Software
- Software Also Calculates Dew Point and Wet Bulb Temperatures, and Mixing Ratio as GPP (Grains per Pound) or GPK (Grams per Kilogram)
- One-Click Exporting of Logged Data to Excel® or Word
- Long Battery Life (Up to One Year)

All models shown smaller than actual size.

OM-144

Protective USB cap for OM-144 included.

OM-143

OM-141

Protective USB cap and magnetic mounting base included with OM-143 and OM-141.

The OM-140 Series are low-cost, compact, battery-powered temperature/humidity data loggers capable of unattended logging (recording) of the ambient temperature and relative humidity (RH) of an environment for days, weeks or months. The OM-144 data logger can also measure and optionally log surface temperatures spot-checked by a technician using the unit's integral infrared (IR) thermometer. In addition, these units can also calculate and display absolute humidity levels in units of grains per pound (GPP) or g/kg. Also called mixing ratio, GPP is a more useful moisture metric than RH to water damage restorers. Using RH alone, a restorer might unknowingly introduce moist air—with a low RH but a high GPP—during a job's drying phase.

Data logging can be started or stopped by pushing a button on the unit, eliminating the need to bring a laptop to the job site. After a data log has been captured and stored, it can be uploaded as a .txt file to any PC running the Windows® XP/7 or 8 operating system after plugging the data logger into one of the computer's USB ports. The data logger's internal flash memory is large enough to store 16,300 pairs of temperature and RH readings or for the model OM-144 nearly 10,000 sets of RH, ambient temperature and surface temperature readings. Included with the product is a mini-disc with the drivers needed to interface the unit to the computer, as well as software that can display a data log file as a table or graph and/or export it to Microsoft Excel. Exporting to Excel is recommended for sophisticated trending and analysis of humidity and temperature data and easy detection of unexpected excursions.

SPECIFICATIONS

Model No.	OM-141	OM-143	OM-144
Ambient Temperature Measurement Range	-20 to 70°C (-4 to 158°F)		
Ambient Temperature Measurement Accuracy	±1.0°C (±1.8°F) from -10 to 40°C (14 to 104°F); ±2.0°C (±3.6°F) elsewhere in range		
Ambient Temperature Measurement Resolution	±0.1°C (±0.2°F)		
Ambient Temperature Response Time	5 to 30 seconds		
RH Measurement Range	0 to 100% RH		
RH Measurement Accuracy	±3% RH from 20 to 80% RH; ±3.5% RH elsewhere		
RH Measurement Resolution	0.1% RH		
RH Response Time	8 seconds		
GPP Measurement Range	0 to 1500 GPP (0 to 285 g/kg)		
Internal Storage Capacity	16,000 pairs of RH and temperature readings		16,000 pairs of RH and temperature readings or 10,000 RH and temperature sets + IR readings
Sampling Rate	Adjustable from 10 seconds to 12 hours		
Infrared Thermometer Surface Temperature Measurement Range	NA		-20 to 250°C (-4 to 482°F)
Infrared Thermometer Surface Temperature Measurement Accuracy	NA		±3.0°C (±4.0°F)
Infrared Thermometer Surface Temperature Measurement Resolution	NA		±0.1°C (±0.2°F)
Infrared Thermometer Operating Ambient Temperature Range	NA		0 to 40°C (32 to 104°F) @ 10 to 90% RH
Infrared Thermometer Distance-to-Spot Ratio	NA		2:1
Infrared Thermometer Emissivity	NA		0.95 (fixed)
Infrared Thermometer Response Time	NA		0.5 seconds
Laser Power	NA		1 mW (Class 2)
Dimensions (OM-141 and OM-143 Include Mounting Base)	31 W x 95 L x 28 mm D (1.22 x 3.74 x 1.10")	32 W x 132 L x 28 mm D (1.26 x 5.19 x 1.11")	43 W x 125 L x 23 mm D (1.69 x 4.92 x 0.91")
Weight	200 g (7 oz)		
Power	3.6 V non-rechargeable lithium ion battery		
Battery Life	1 year typical		

OMEGA CARE℠ Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.

To Order

Model No.	Description
OM-141	Temperature/humidity data logger
OM-143	Temperature/humidity data logger with LCD display
OM-144	Temperature/humidity data logger with LCD display and built-in infrared thermometer
OM-EL-BATT	Replacement 3.6V lithium battery

Comes complete with Windows software on CD, protective cap, USB extension cable, 3.6V lithium battery and user's manual. Models OM-141 and OM-143 also include a magnetic mounting base.

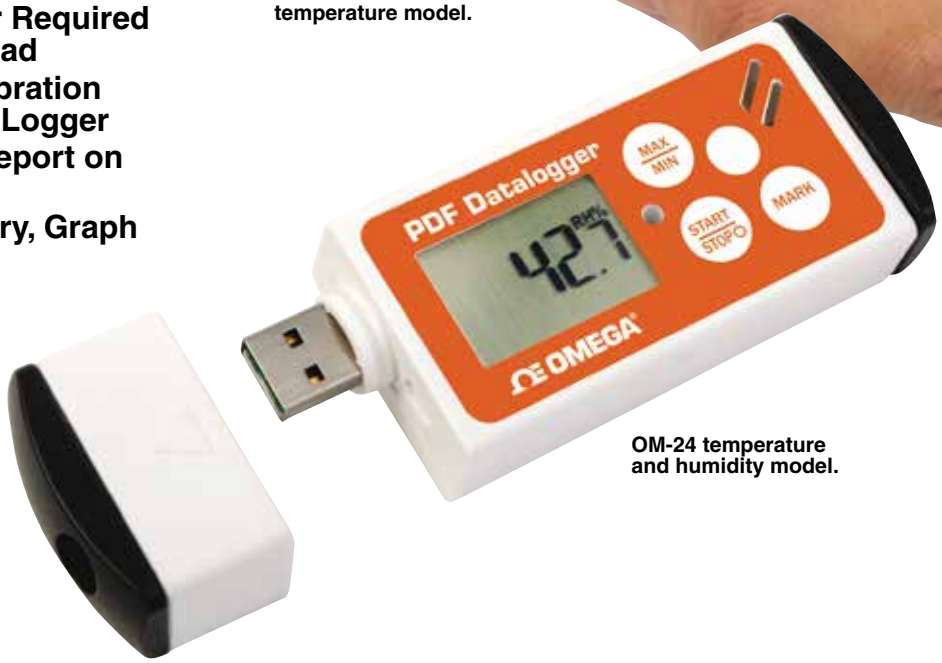
Ordering Example: OM-144 *temperature/humidity data logger with LCD display and built-in infrared thermometer and* ***OCW-1,*** *OMEGACARE℠ extends standard 1 year warranty to a total of 3 years*

Multi-Use PDF Temperature and Humidity Data Loggers

OM-22, OM-23, OM-24

1 YEAR WARRANTY

OM-22 ambient temperature model.



OM-24 temperature and humidity model.

- **Plug-and-Play Multi-Use Temperature Data Logger with USB 2.0 Interface**
- **Accurate Thermistor Temperature Sensor**
- **No Special Software or Driver Required for Programming and Download**
- **Configuration Utility and Calibration Certificate Stored in the Data Logger**
- **Generate a PDF and Excel® Report on Completion of Data Logging**
- **PDF Report Contains Summary, Graph and Detailed Data List**
- **LCD Display**
- **Dual Color Status LED**
- **Start/Stop Logging via Single Button Press**
- **MIN/MAX Function**
- **EN 12830 Compliance**

The OM-22, OM-23 and OM-24 are multiple use temperature and humidity data loggers that are ideal for a wide range of test and measurement, quality control, and environmental monitoring applications. They conveniently generate a PDF and Excel report on completion of data logging. The OM-22 measures ambient temperature using an internal thermistor temperature sensor. The OM-23 measures ambient temperature and also accepts an external thermistor temperature probe as input. Model OM-24 measures ambient temperature and relative humidity. These data loggers are completely user-programmable including language selection, sampling interval, start delay, alarm delay, temperature units, alarm range, alarm type, password and user name. No special software or driver is required for setup or download of data. The data logger appears as a mass storage device when connected to the PC. The user manual, a calibration certificate and data logger configuration utility are all stored in the data logger.

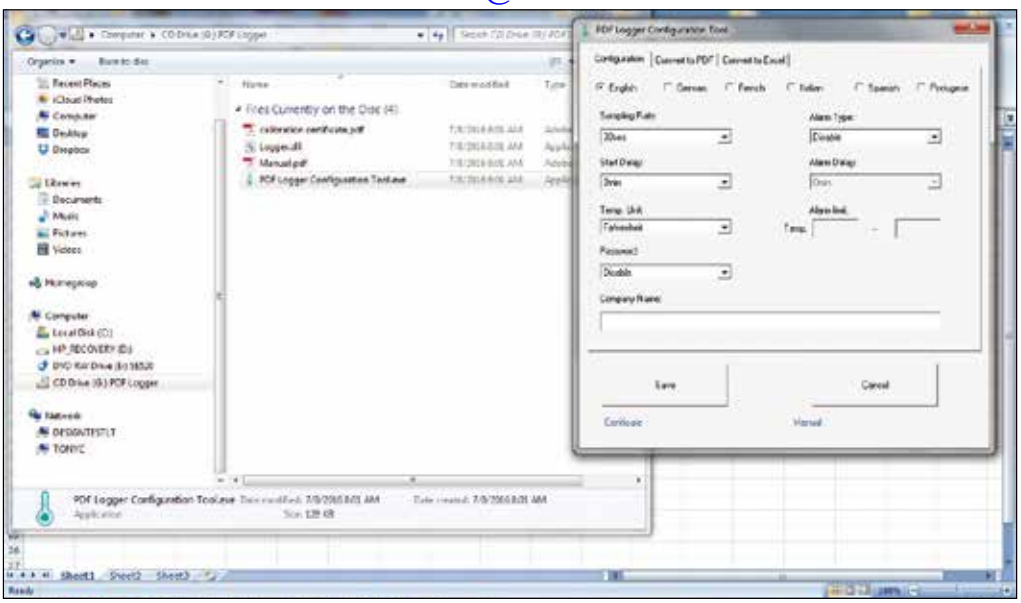
To setup the data logger simply plug it into a USB port on your computer and run the on-board configuration utility. Once configuration is complete the data logger can be removed from the PC's USB port. On completion of data logging re-connect the data logger to the computer and open the configuration utility. Choose the function convert to PDF or convert to Excel and select the desired location on your computer to store the reports. The PDF report contains the data summary, graph and tabular results. The Excel report contains all of the information in the PDF report except for the graph.

OM-23 dual temperature model (laptop not included).

Specifications

	OM-22	OM-23	OM-24
Internal Temperature			
Temperature Sensor	NTC Thermistor		
Temperature Range	-30 to 70°C (-22 to 158°F)		
Temperature Accuracy	±0.5°C		
Temperature Resolution	0.1°C, 0.1°F		
External Temperature (OM-23 Only)			
Temperature Sensor	—	NTC Thermistor	—
Temperature Range	—	-30 to 70°C (-22 to 158°F)	—
Temperature Accuracy	—	±0.5°C	—
Temperature Resolution	—	0.1°C, 0.1°F	—
Relative Humidity (OM-24 Only)			
Humidity Sensor	—	—	Capacitive
Humidity Range	—	—	0.1 to 99.9% RH
Humidity Accuracy	—	—	±3% RH from 10 to 90% RH @ 25°C, ±5% RH elsewhere
Humidity Resolution	—	—	0.1% RH
Logging Type	Multiple Use		
Memory	48,000 points (internal temperature)	24,000 points (internal temperature) + 24,000 points (external temperature)	24,000 points (internal temperature) + 24,000 points (relative humidity)
Sampling Interval	30 seconds, 5, 10, 30, 60, 90, 120 minutes		
Start Delay	0, 5, 30, 45, 60, 90, 120 minutes and 24 hours		
Password	Can be ON or OFF (default is OFF); password can be up to 16 alpha-numeric characters		
Compatibility	Windows XP/Vista/7/8		
Languages	English (default), German, French, Italian, Spanish, Portuguese		
Temperature Alarm Range	-30 to 70°C (-22 to 158°F)		
Humidity Alarm Range (OM-24 Only)	—	—	1 to 99% RH
Alarm Delay	0, 5, 30, 45, 60, 90, 120 minutes		
Alarm Type	Single Event, Cumulative, Disable*		
Display	LCD		
LED Indicator	REC, High/Low Alarm		
Operation Buttons	Start/Stop, Mark (provides up to 8 bookmarks during the data logging period), Min/Max		
Operating Temperature	-30 to 70°C (-22 to 158°F)		
Operating Humidity	<90% RH		
Storage Temperature	-40 to 85°C (-40 to 185°F)		
Storage Humidity	<90% RH		
Power	Two 3V CR2032 lithium coin cell batteries		
Battery Life	Approximately 3 months		
Protection Class	NEMA 6 (IP67)	NEMA 4 (IP65)	NEMA 4 (IP65) not including sensor area
Dimensions	110 L x 45 H x 17 mm D (4.3 x 1.8 x 0.7")		
Weight	90 g (3.2 oz)		

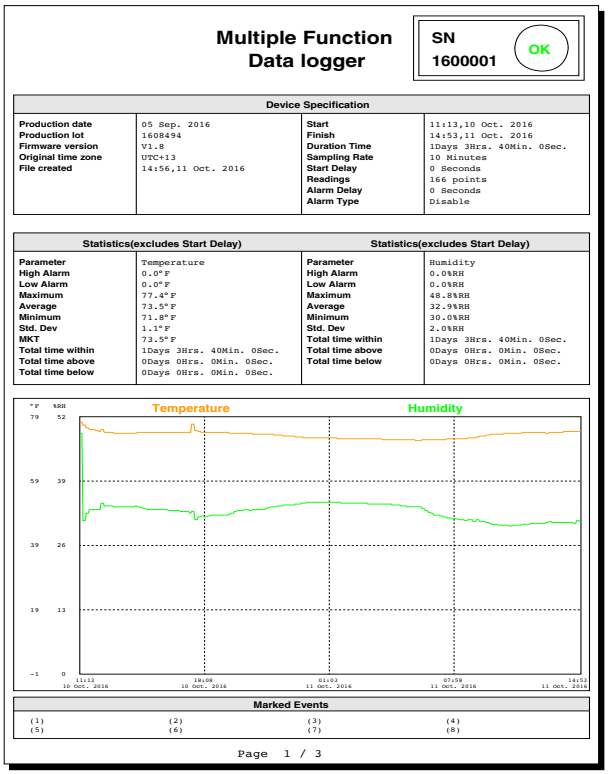
**Single: an LED alarm is triggered immediately when the measured value exceeds the alarm threshold; Cumulative: an LED alarm is not triggered when the measured value exceeds the alarm threshold, but only once the overall average value during alarm delay duration exceeds the alarm threshold; Disable: no LED alarm function during the logging process.*



On-board configuration utility (included).

All models feature a flip-up hook for wall mounting.

OM-23 can be connected to an external temperature probe (sold separately).



Multiple Function Data logger

SN 1600001 OK

Device Specification

Production date	05 Sep. 2016	Start	11:13,10 Oct. 2016
Production lot	1608494	Finish	14:53,11 Oct. 2016
Firmware version	V1.8	Duration Time	1Days 3Hrs. 40Min. 0Sec.
Original time zone	UTC+13	Sampling Rate	10 Minutes
File created	14:56,11 Oct. 2016	Start Delay	0 Seconds
		Readings	166 points
		Alarm Delay	0 Seconds
		Alarm Type	Disable

Statistics(excludes Start Delay)		Statistics(excludes Start Delay)	
Parameter	Temperature	Parameter	Humidity
High Alarm	0.0°F	High Alarm	0.0%RH
Low Alarm	0.0°F	Low Alarm	0.0%RH
Maximum	77.4°F	Maximum	48.8%RH
Average	73.5°F	Average	32.9%RH
Minimum	71.8°F	Minimum	30.0%RH
Std. Dev	1.1°F	Std. Dev	2.0%RH
MKT	73.5°F	Total time within	1Days 3Hrs. 40Min. 0Sec.
Total time within	1Days 3Hrs. 40Min. 0Sec.	Total time above	0Days 0Hrs. 0Min. 0Sec.
Total time above	0Days 0Hrs. 0Min. 0Sec.	Total time below	0Days 0Hrs. 0Min. 0Sec.
Total time below	0Days 0Hrs. 0Min. 0Sec.		

Marked Events

(1) (5)	(2) (6)	(3) (7)	(4) (8)

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The OM-22, OM-23 and OM-24 can output reports in PDF or Excel format.

To Order

Model No.	Description
OM-22	Multi-use PDF temperature data logger, ambient temperature
OM-23	Multi-use PDF temperature data logger, ambient temperature plus input for external temperature probe (external probe sold separately)
OM-24	Multi-use PDF temperature and humidity data logger
OM-23-TP1	External temperature probe (with handle) for OM-23
OM-23-TP2	External temperature probe (without handle) for OM-23

Comes complete with two CR2032 3V lithium coin cell batteries and user's manual.

***Ordering Example: OM-24** multi-use PDF temperature and humidity data logger.*

Portable Low-Cost Temperature Relative Humidity Data Logger Part of the NOMAD® Family

OM-62

1 YEAR WARRANTY

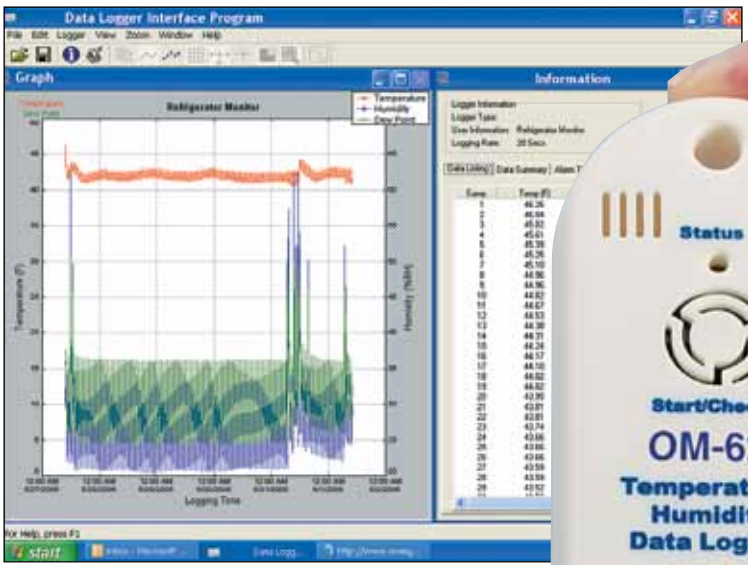
- **Measure Temperature, Relative Humidity and Dew Point Simultaneously**
- **Temperature and Humidity Alarm with Visual Indication on Demand**
- **User Selectable Stop on Memory Full or Memory Rollover for Continuous Recording**
- **PC or Push Button Recording Control**
- **USB Interface**
- **Compact, Light Weight, Easy-to-Use**

The OM-62 temperature/relative humidity data logger is an easy-to-use, versatile device which can be used for a wide range of logging applications. The OM-62 is capable of sampling as fast as once per second or as slow as every 18 hours.

A total of 43,344 temperature measurements can be stored in the data logger memory if only temperature is measured, or 21,672 measurements for temperature and humidity.

In addition to measuring temperature and relative humidly, the easy-to-use Windows software included with the OM-62 data logger calculates and displays the dew point temperature. The software is a full-featured program that allows you to set up all data logger functions including sampling rate, logging duration, start mode, logging mode, and high and low temperature and relative humidity alarm values.

Once data has been logged, the program then allows you to download data from the logger, plot the data and export the data to an ASCII text or Excel file format for further analysis.



Windows software displays data in graphical or tabular format.

OM-62.

Specifications

Temperature Measurement Range: -40 to 70°C (-40 to 158°F)

Temperature Sensor: Internal digital sensor

Relative Humidity Range: 0 to 99% RH, non-condensing

Relative Humidity Sensor: Polymer capacitive

Temperature Accuracy: ±0.5°C (±1°F)

Temperature Resolution: ±0.1°C (±0.1°F)

Relative Humidity Accuracy: ±2% RH from 10 to 90% RH

Relative Humidity Resolution: 0.01% RH

Temperature and Relative Humidity Alarms: Programmable high and low alarm thresholds, for both temperature and humidity

Sampling Rate: User selectable, 1 second to 18 hours, in 1 second increments

Data Storage: 43,344 for temperature only; 21,672 for temperature and humidity

Recording Mode: User selectable; stop on memory full or continuous recording with memory rollover

Recording Start: Push button, computer controlled, or up to 6 week delayed start

PC Interface: USB

Calibration: Single point offset calibration available through software for both temperature and humidity

Time Accuracy: ±100 ppm @ 75°F

Power: 3V lithium battery (included)

Battery Life: 6 years typical

Storage Temperature: -40 to 70°C (-40 to 158°F)

Dimensions: 76 H x 40 W x 15 mm D (3.0 x 1.6 x 0.6")

Compatibility: Windows® XP/VISTA/7 and 8 (32- and 64-bit)

Weight: 28 g (1 oz)

To Order *Visit omega.com/om-62 for Pricing and Details*

Model No.	Description
OM-62	Temperature relative humidity data logger

Comes complete with Windows software on CD ROM, 3V lithium battery and USB interface cable.

***Ordering Example: OM-62,** temperature relative humidity data logger.*

Portable Temperature and Humidity Data Loggers

Part of the NOMAD™ Family

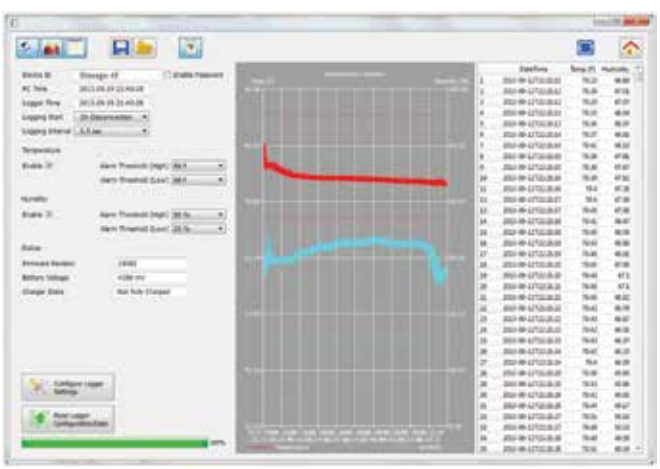
OM-90 Series

- Models for Temperature (OM-91) and Temperature/Humidity (OM-92)
- Immediate, Delayed (Specific Date/Time) or Pushbutton Start
- Real-Time Mode
- User-Configurable High and Low Alarms
- LED Status Indicators
- USB Interface for Fast Data Transfer
- Compact, Light Weight, Easy-to-Use
- Long Battery Life
- Free Software Download

The OM-90 Series are portable, battery operated, temperature (OM-91) and temperature/humidity (OM-92) data loggers. The OM-90 Series data loggers offer accurate and repeatable logging for temperature and relative humidity. Temperature is measured to an accuracy of ±0.3°C over the range of 5 to 60°C (41 to 140°F) and ±2.0°C over the full range of -30 to 80°C (-22 to 176°F). Relative humidity is measured to an accuracy of ±3.0% RH over the 20 to 80% RH range and ±5.0% RH over the 0 to 100% RH range. Both temperature and relative humidity are logged at a user configurable logging rate which is software selectable.

These data loggers are ideal for transportation applications where it is necessary to document that the material in-transit has stayed within particular environmental limits. High/low alarm limits can be set above or below which LED indicators will be activated so that the user can become aware that the desired transportation conditions have been exceeded.

Each data logger can be assigned a 16 character name. This can be helpful in applications where multiple data loggers are used and there is a need to distinguish between them (for example based on location).



Windows® software used for data logger configuration and data display in graphical or tabular format.

OM-91 temperature data logger.

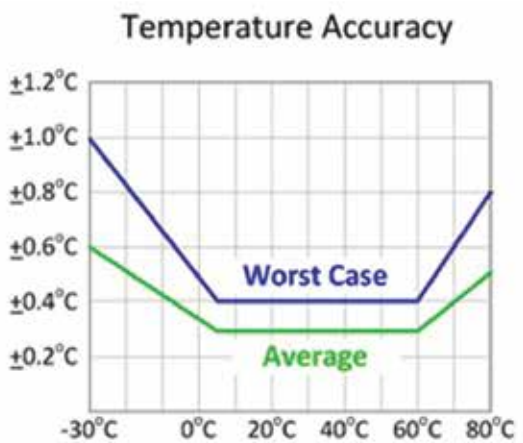
OM-92 temperature/ humidity data logger.

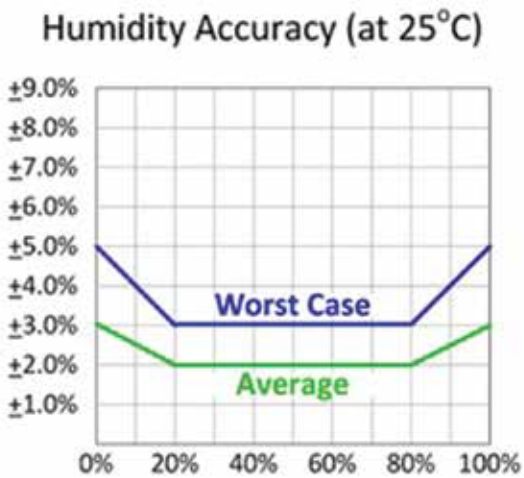
The data logger includes a very easy to use software application. The application is used for configuration of the logger, extraction of logger data, graphically viewing data, spread sheet analysis of data and saving data to file (typically in comma separated value CSV file format) for third party applications such as Microsoft Excel. The graphical user interface is completely intuitive in terms of configuring new devices and extracting data from a field device. When the user has multiple devices requiring the same setup then a logger setup from a saved configuration file can be preloaded into the application to help expedite the process and ensure all loggers get setup identically. The application does not require any driver installations to connect to the data logger. Just install the software, run it and then connect the data logger.

SPECIFICATIONS

Temperature

Range: -30 to 80°C (-22 to 176°F)
Resolution: 0.01°C
Accuracy: ±0.3°C from 5 to 60°C (41 to 140°F)
Calibration Accuracy @ 25°C ±20°C: ±0.1°C





Humidity (OM-92 Only)

Range: 0 to 100% RH
Resolution: 0.01% RH
Accuracy: ±3% over 20 to 80% RH range; ±5% RH below 20% RH or above 80% RH
Calibration Accuracy @ 25% RH: ±1.8% RH @ 25% RH

Memory

OM-91: 65,520 temperature measurements
OM-92: 65,520 temperature and 65,520 humidity measurements

Start Modes: Immediate start on disconnect from PC, delayed start (scheduled date/time) or pushbutton start

Recording Mode: Stop on memory full; when data logger operation is start/stopped by user intervention via button press, last memory location is retained

Recording Interval: 1 sec, 10 sec, 30 sec, 1 min, 10 min, 30 min, 1 hr (software selectable)

Software Compatibility: Windows XP/Vista/7, 8 & 10 (32-bit and 64-bit)

Real Time Logging: Displays real-time data when connected to a PC

Real Time Clock: Time automatically synced to PC

Battery Backup: Continues to keep time when off

Accuracy: 0.50 sec/day (~3 min/year)

Alarms: High and Low alarms for temperature and humidity; dedicated alarm LED indicator

LED Indicators: Alarm and status LEDs

Device ID: Each data logger can have a 16 character name assigned

Connections: 0.9 m (3') USB Micro-B to PC cable (included)

Power: 3V lithium CR2450 battery included (user replaceable)

Battery Life: Over 4 year battery life while logging

Bypass Mode: Unit is powered from USB when connected to conserve the battery

Dimensions: 53 H x 33 W x 15 mm D (1.38 x 2.36 x 0.6")

Weight: 25 g (0.9 oz)

To Order

Model No.	Description
OM-91	Temperature data logger
OM-91-NIST	Temperature data logger with single point (25°C) NIST calibration certificate
OM-92	Temperature/humidity data logger
OM-92-NIST	Temperature/humidity data logger with single point (25°C) NIST calibration certificate (temperature calibration only)

Comes complete with 0.9 m (3.0') USB interface cable, software CD (free download available on the OM-90 web page), and 3V lithium battery.
***Ordering Example: OM-92-NIST,** temperature/humidity data logger with single point NIST calibration certificate.*

Pressure, Humidity and Temperature Data Logger
Part of the NOMAD® Family

OM-CP-PRHTEMP101A

5 YEAR WARRANTY · CE · NIST
Optional

- 10 Year Battery Life
- 1 Second Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- Field Upgradable

OM-CP-PRHTEMP101A shown larger than actual size.

The OM-CP-PRHTEMP101A is a low cost, state-of-the-art pressure, relative humidity and temperature data logger, specifically designed to be compact and portable for use in a variety of applications such as museum and archive preservation, shipping and transportation, warehouse monitoring, HVAC, clean rooms, clinical laboratories and altitude validation and studies.

The OM-CP-PRHTEMP101A offers a 10-year battery life, 1 second reading rate, multiple start/stop functions, ultra-high speed download capability, optional memory wrap, battery life indicator, optional password protection, programmable high-low alarms and more.

Using the software, starting, stopping and downloading from the OM-CP-PRHTEMP101A is simple and easy. Graphical, tabular and summary data is provided for analysis and data can be viewed in °C, °F, °R, K, for the temperature channel, %RH, mg/mL and dew point for the humidity channel, and mbar, PSI, inHg, mmHg, atm, Torr, Pa, m, kPa, MPa for the pressure channel.

The OM-CP-PRHTEMP101A is a major leap forward in both size and performance, Its real-time clock ensures that all data is time and date stamped. The storage medium is non-volatile memory, providing maximum data security even if the battery becomes discharged.

Data retrieval is simple. Simply connect the data logger to an available USB port and the easy to use Windows software does the rest. The software converts your PC into a real-time strip chart recorder. Data can be printed in tabular format and can also be exported to a text or Microsoft Excel file for further calculations.

The OM-CP-PRHTEMP101A was designed with our customers in mind. There are free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments. Units do not need to be returned to the factory for upgrades, this can be done automatically from any PC.

SPECIFICATIONS

Pressure
Sensor: Piezoresistive
Range: 250 to 1300 mbar
Resolution: 0.02 mbar
Calibrated Accuracy: 10 mbar

Humidity
Sensor: Capacitive Polymer
Range: 0 to 95% RH
Resolution: 0.1 %RH
Calibrated Accuracy: 3% RH

Temperature
Sensor: Precision RTD element
Range: -40 to 80°C (-40 to 176°F)
Resolution: 0.01°C (0.018°F)
Calibrated Accuracy: ±0.5 °C (0.9°F)

Reading Rate: 1 reading every second up to 1 reading every 24 hours.

Memory
Readings Per Channel: 688,128
Readings (Manual or Trigger Mode): 412,876
Memory Wrap Around: Yes (software selectable)
Start Modes:
- Immediate start
- Delay start up to 18 months
- Multiple pushbutton start/stop

Stop Modes:
- Manual through software
- Timed (specific date and time)

Real Time Recording: The device may be used with a PC to monitor and record data in real time.

Alarm: Programmable high and low limits; alarm is activated when recording environment reaches or exceeds set limits (pressure channel only).

OM-CP-IFC200 software package (sold separately).

OM-CP-PRHTEMP101A shown larger than actual size.

LED Functionality

Green LED blinks:

- 10 second rate to indicate logging
- 15 second rate to indicate delay start mode/Standby (Waiting to start)

Red LED blinks:

- 10 second rate to indicate low battery and/or full memory
- 1 second to indicate alarm condition met

Password Protection: An optional password may be programmed into the device to restrict access to configuration options. Data may be read without the password.

Engineering Units: Native measurement units can be changed to display measurement units of another type.

Calibration: Digital calibration through software

Calibration Date: Automatically recorded within device

Battery Type: 3.6V lithium battery included; user replaceable

Battery Life: 10 years typical at a 15 minute reading rate

Data Format: Date and time stamped °C, °F, °R, K, %RH, mg/mL, Dew Point, mbar, PSI, inHg, mmHg, atm, Torr, Pa, kPa, m, MPa units specified through software.

Time Accuracy: ±1 minute/month @ 25 °C

Computer Interface: USB (interface cable required); 115,200 baud

Software: Windows XP SP3/Vista/7 and 8 (32-bit and 64-bit)

Operating Environment: -40 to 80°C (-40 to 176°F), 0 to 95 %RH non-condensing, 0.002 to 100 psia

Dimensions: 36 L x 56 W x 16 mm D (1.4 x 2.2 x 0.6")

Weight: 24 g (0.8 oz)

Materials: ABS Plastic

To Order

Model No.	Description
OM-CP-PRHTEMP101A	Pressure, humidity and temperature data logger
OM-CP-PRHTEMP101A-CERT	Pressure, humidity and temperature data logger and NIST calibration certificate
OM-CP-IFC200	Windows software and 1.8 m (6') USB interface cable
OM-CP-SVP-SYSTEM	FDA 21 CFR part 11 compliant IQ/OQ/PQ secure software validation workbook and software package (unlimited users, license per computer)
OM-CP-BAT105	Replacement 3.6V lithium battery

Comes complete with 3.6V lithium battery. Operator's manual and USB cable are included with the OM-CP-IFC200 Windows software (required to operate the data logger and sold separately).

***Ordering Example: OM-CP-PRHTEMP101A-CERT,** pressure, humidity and temperature data logger with NIST calibration certificate and **OM-CP-IFC200** Windows software.*

OM-CP-RHTEMP1000IS-A2
Intrinsically Safe Temperature & Humidity Data Logger

800898

- **Certified Intrinsically Safe: Class 1 Division 1 Group ABCD, Class 1 Division 2 Group ABCD, Temperature Class: T4A, CAN/CSA-C22.2 No. 60079-0:15, CAN/CSA-C22.2 No. 60079-11:14, FM3600 and FM3610**
- **Software Battery Life Indicator**
- **316 Stainless Steel Enclosure**
- **Small, Sleek Design**
- **Fast Response Time**
- **CE Compliant**
- **NIST Traceable Certificate Included**

The OM-CP-RHTEMP1000IS is an Intrinsically Safe humidity and temperature data logger. It carries hazardous location, intrinsically safe certification in accordance with the latest issue of FM3600, FM3610. This certification makes the device ideal for EtO Sterilization, environmental studies, and numerous other hostile environment applications.

The device can be started and stopped directly from your computer and its small, sleek size allows it to fit almost anywhere. The OM-CP-RHTEMP1000IS-A2 makes data retrieval quick and easy. Simply insert the device into the OM-CP-IFC400 or the OM-CP-IFC406 USB docking station (sold separately) and our user-friendly software does the rest. The small size of the OM-CP-RHTEMP1000IS-A2, allows it to be placed in remote or hard to reach locations. The device now features a battery life indicator allowing users to easily identify low voltage and change batteries when required. This feature maximizes the use of your battery life and is a cost saving efficiency.

The OM-CP Data Logger Software is a powerful, analytic tool. Data can be viewed in graphical or tabular formats and summary and statistics views are available for further analysis.

Specifications

TEMPERATURE	
Temperature Sensor	Resistance Temperature Detector (RTD)
Temperature Range	-40 °C to +80 °C (-40 °F to +176 °F)
Temperature Resolution	0.01 °C (0.018 °F)
Calibrated Accuracy	±0.5 °C (0 °C to ±50 °C) ±0.9 °F (32 °F to 122 °F)

HUMIDITY	
Humidity Sensor	Capacitive Polymer
Humidity Range	0 %RH to 100 %RH (non-condensing)
Humidity Resolution	0.1 %RH
Calibrated Accuracy	±3.0 %RH maximum
Specified Accuracy Range	25 %RH to 75 %RH +20 °C to +40 °C (68 °F to 104 °F) Hysteresis Error 1 % typical, 3 % Maximum

Specifications

GENERAL	
Memory	32,768 Readings
Start Modes	Software programmable immediate start or delay start, up to 24 months in advance
Real Time Recording	May be used with PC to monitor and record data in real time
Reading Rate	1 reading every second up to 1 reading every 24 hours
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	Tadiran TL-2150 3.6V lithium battery included, user replaceable in a non-hazardous location
Battery Life	2 years typical at 15 minute reading rate
Data Format	Date and time stamped °C, °F, K, °R; %RH, mg/mL, Dew Point
Time Accuracy	16 seconds / month -40 °C to 80 °C
Computer Interface	OM-CP-IFC400 or OM-CP-IFC406

Operating System Compatibility	Windows XP SP3/7/8/10
Software Compatibility	Standard Software version 4.2.19.1 or later Secure Software version 4.2.18.0 or later
Operating Environment	-40 °C to +80 °C (-40 °F to +176 °F), 0 %RH to 100 %RH (case properly sealed)
Dimensions	1.67 in x 0.97 in dia. (42.3 mm x 24.6 mm dia.)
Weight	2.4 oz (68 g)
Enclosure	316 Stainless Steel/Radel
Approvals	CE FM Class 3600, Rev. Jan 2018 FM Class 3610, Rev. Jan 2018 CAN/CSA-C22.2 No. 60079-0:15 CAN/CSA-C22.2 No. 60079-11:14

BATTERY WARNING: BATTERY MAY LEAK, FLAME OR EXPLODE IF DISASSEMBLED, SHORTED, CHARGED, CONNECTED TOGETHER, MIXED WITH USED OR OTHER BATTERIES, EXPOSED TO FIRE OR HIGH TEMPERATURE. DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN.

To Order	
P/N	**Description**
OM-CP-RHTEMP1000IS-A2	Intrinsically Safe Temperature and Humidity Data Logger
OM-CP-IFC400	Docking station with USB cable
OM-CP-IFC406	6 Port, Multiplexer docking station with USB cable
OM-CP-BAT113	Replacement 3.6 V lithium battery

Humidity and Temperature Data Logger Part of the NOMAD® Family

OM-CP-RHTEMP101A

5 YEAR WARRANTY NIST CE

Optional

- **10 Year Battery Life**
- **1 Second Reading Rate**
- **Multiple Start/Stop Function**
- **Ultra High Speed Download**
- **Memory: 1,000,000 Readings per Channel**
- **Battery Life Indicator**
- **Optional Password Protection**
- **Programmable High and Low Alarms**

The OM-CP-RHTEMP101A is part of a new series of low cost, state-of-the-art data logging devices.

The OM-CP-RHTEMP101A offers a 10 year battery life, a 1 second reading rate, a multiple start/stop function, ultra-high speed download capability, 1,000,000 readings per channel storage capacity, optional memory wrap, precision RTD sensing element, battery life indicator, optional password protection, programmable high-low alarms and more.

Using the software, starting, stopping and downloading from the OM-CP-RHTEMP101A is simple and easy. Graphical, tabular and summary data is provided for analysis and data can be viewed in °C, °F, K,°R, %RH, mg/ml water vapor concentration and dew point. The data can also be automatically exported to Excel® for further calculations.

The OM-CP-RHTEMP101A is a major leap forward in both size and performance. Its real time clock ensures that all data is time and date stamped.

The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. Its small size allows it to fit almost anywhere.

Data retrieval is simple. Plug it into an available USB port and the easy to use Windows software does the rest. The software converts your PC into a real time strip chart recorder. Data can be printed in tabular format and can also be exported to a text or Microsoft Excel file.

OM-CP-RHTEMP101A shown actual size.

The OM-CP-RHTEMP101A designed with our customers in mind. There are free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments. Units do not need to be returned to the factory for upgrades. The user can do this automatically from any PC.

Specifications

Temperature Sensor: Precision RTD Element

Temperature Range: -40 to 80°C (-40 to 176°F)

Temperature Resolution: 0.01°C (0.018°F)

Calibrated Accuracy: ±0.5°C (0.9°F)

Humidity Sensor: Internal semi-conductor

Humidity Range: 0 to 95% RH

Humidity Resolution: 0.1% RH

Calibrated Accuracy: ±3.0% RH, ±2% RH typical @ 25°C (77°F)

Specified Accuracy Range: 10 to 40ºC (50 to 104ºF); 10 to 80% RH

Reading Rate: 1 reading every second to 1 every 24 hours

Memory: 1,000,000 readings per channel; software configurable memory wrap; 500,000 readings in multiple start/stop mode

Memory Wrap Around: Yes (software selectable)

Start Modes:

- Immediate start
- Delay start up to 18 months
- Multiple pushbutton start/stop

StopModes:

- Manual through software
- Timed (specific date and time)

Multiple Start/Stop Mode: Start and stop the device multiple times without having to download data or communicate with a PC

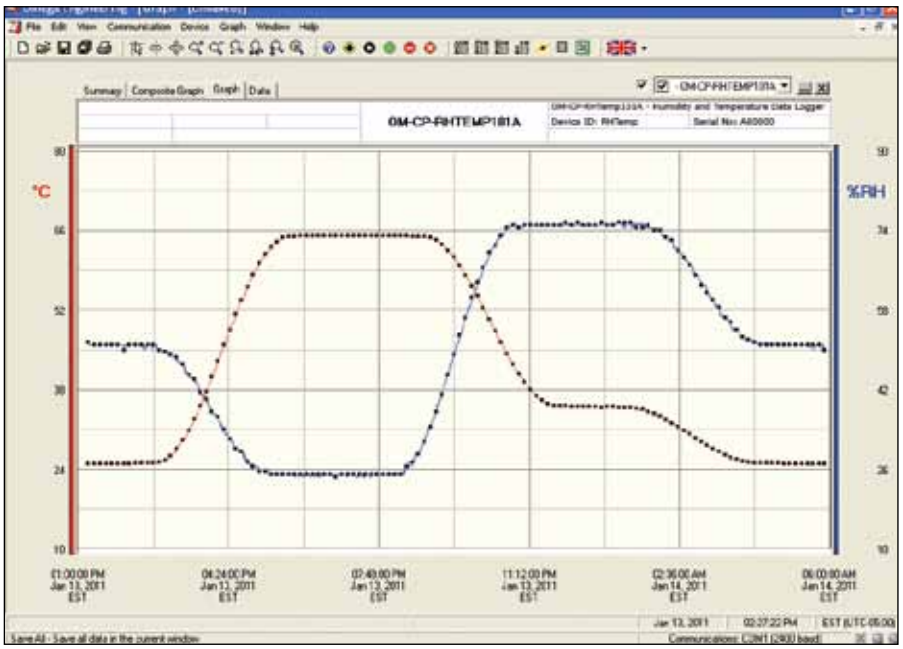
Multiple Start/Stop Mode Activation:

To Start the Device: Press and hold the pushbutton for 5 seconds, the green light will flash during this time. The device has started logging.

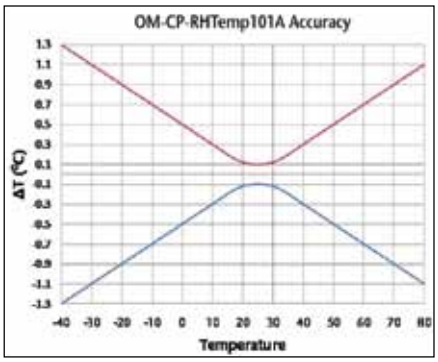
To Stop the Device: Press and hold the pushbutton for 5 seconds, the red light will flash during this time. The device has stopped logging.

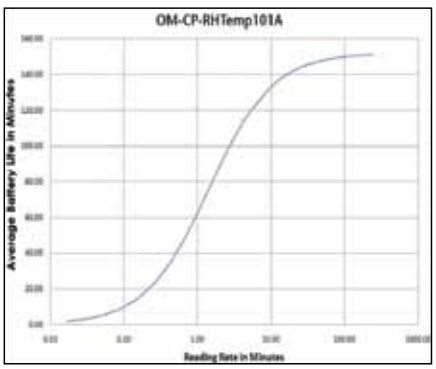
Real Time Recording: The device may be used with PC to monitor and record data in real-time

Alarm: Programmable high and low limits; alarm is activated when humidity reaches or exceeds set limits



OM-CP-IFC200, Windows software displays data in graphical or tabular format.





Average Battery Life vs. Reading Rate of the OM-CP-RHTEMP101A recording in a 25°C environment.

LED Functionality:

Green LED Blinks: 10 second rate to indicate logging; 15 second rate to indicate delay start mode

Red LED Blinks: 10 second rate to indicate low battery and/or full memory; 1 second rate to indicate an alarm condition

Password Protection: An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password

Calibration: Digital calibration through software

Calibration Date: Automatically recorded within device

Battery Type: 3.6V lithium battery (included); user replaceable

Battery Life: 10 years typical at a 15 minute reading rate

Data Format: Date and time stamped ºC, ºF, K, ºR; %RH, mg/ml water vapor concentration, dew point

Time Accuracy: ±1 minute/month at 20ºC (68ºF), stand alone data logging

Computer Interface: USB (interface cable required); 115,200 baud

Software: Windows® XP SP3/Vista and 7/8 (32- and 64-bit)

Operating Environment: -40 to 80ºC (-40 to 176ºF), 0 to 95% RH non-condensing

Dimensions: 36 L x 56 W x 16 mm D (1.4 x 2.2 x 0.6")

Weight: 24 g (0.9 oz)

Material: ABS plastic

To Order

Model No.	Description
OM-CP-RHTEMP101A	Humidity and temperature data logger
OM-CP-RHTEMP101A-CERT	Humidity and temperature data logger and NIST calibration certificate
OM-CP-IFC200	Windows software and 1.8 m (6') USB interface cable
OM-CP-SVP-SYSTEM	FDA 21 CFR part 11 compliant IQ/OQ/PQ secure software validation workbook and software package (unlimited users, license per computer)
OM-CP-BAT105	Replacement 3.6V lithium battery

Comes complete with 3.6V lithium battery. Operator's manual and USB cable are included with the OM-CP-IFC200 Windows software (required to operate the data logger and sold separately).

***Ordering Example: OM-CP-RHTEMP101A-CERT,** humidity and temperature data logger with NIST calibration certificate and **OM-CP-IFC200** Windows software.*

Portable Temperature/Humidity Data Loggers With Graphic Display

All models shown smaller than actual size.

OM-EL-GFX SERIES

1 YEAR WARRANTY

OM-EL-GFX-1, temperature data logger with graphic display.

OM-EL-GFX-TC single channel thermocouple data logger with graphic display.

OM-EL-GFX-DTP, dual channel thermistor data logger with graphic display.

OM-EL-GFX-2 and OM-EL-GFX-2-PLUS temperature/humidity data logger with graphic display.

OM-EL-GFX-DTC, dual channel thermocouple data logger with graphic display.

- **Graphic LCD Shows Real-Time Readings, Graph and Current Status**
- **Memory: 252,928 Readings**
- **On Screen Menu and Graphing to Start, Stop, Review and Restart the Logger in the Field**
- **Micro USB Interface for PC Based Set-Up and Data Download**
- **Immediate, Delayed, Pushbutton or Temperature Triggered Start Mode**
- **User Programmable Alarm Thresholds**
- **User Enabled Audible Alarm**
- **Highly Visible Confidence/Alarm LEDs**
- **Rugged and Robust IP67 Construction**

The OM-EL-GFX Series portable temperature/humidity data loggers measure and store up to 252,928 readings. Using the included Windows® control software users can quickly set up the data logger and view downloaded data by connecting the device to the computer's USB port.

The data logger features a high contrast graphic LCD display and three input buttons. This allows users to start, stop and restart the data logger using on-screen menus. The menu also provides real-time analysis of data either as a data summary (showing highest and lowest readings and alarm conditions) or as a graph that updates as new data is added. The maximum and minimum readings and also the time and date these are valid from can be displayed on the LCD display by using the info button. If desired, the user can then reset the maximum/minimum readings shown. Each time the maximum/minimum readings are reset while logging, an "event marker" is created in the data. When the data has been downloaded to the computer these events can be viewed on the graph (event markers), and they also appear in the data file associated with the corresponding log when the reset took place. This can be useful as an audit/validation tool for certain applications where procedures mandate that a regular physical check of the logger/statistics have taken place. Multiple data logging sessions can be stored on the device ready for upload to the computer at a later time.

The data logger's robust design provides IP67 waterproof protection (OM-EL-GFX-1, OM-EL-GFX-2 and OM-EL-GFX-2-PLUS only).

CONTROL SOFTWARE

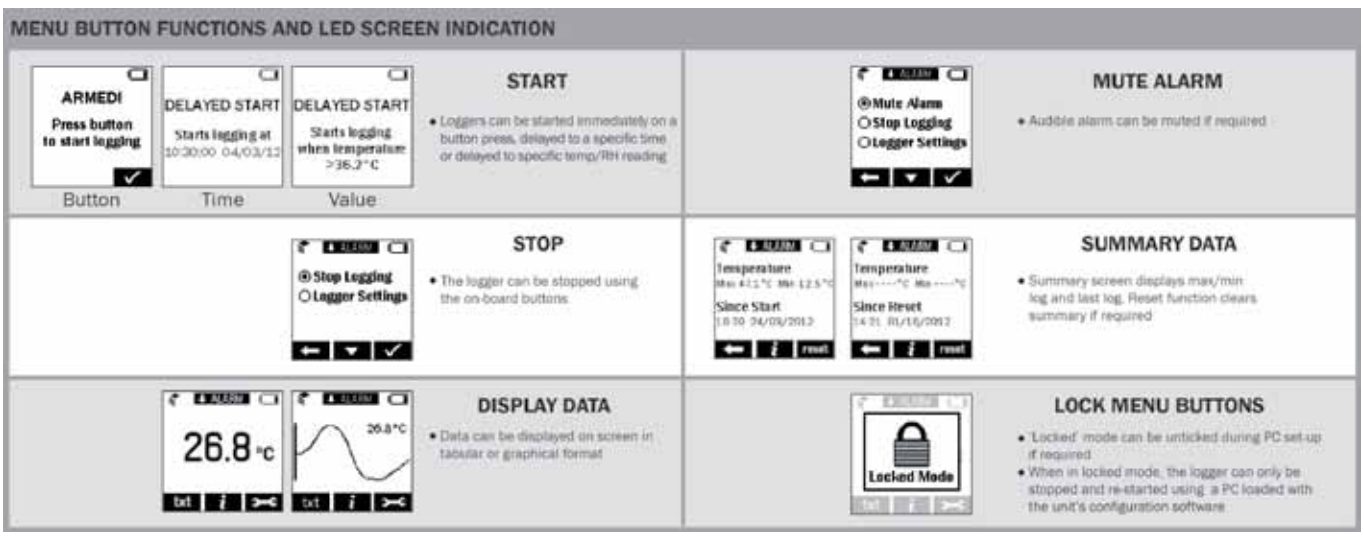
The Easylog USB control software is easy to install and use, and runs under Windows XP, Vista, 7 and 8. The software is used to set-up the data logger as well as download, graph and export data to Excel. Each stored logging session is saved as a separate file.

The software allows the following parameters to be configured:

- Logger name
- Measurement parameter (ºC or ºF)
- Logging Rate (user-selectable between 10 seconds and 1 hour for OM-EL-GFX-1, OM-EL-GFX-2 and OM-EL-GFX-2-PLUS and between 2 seconds and 1 hour for OM-EL-GFX-DTC, OM-EL-GFX-TC and OM-EL-GFX-DTP)
- High and low temperature alarms
- Immediate, delayed, push-button or temperature triggered start mode
- Disable or enable LEDs and audible alarm with delayed activation
- Display and backlight behavior after button press

These data loggers do not lose stored readings when the batteries are discharged or when the batteries are replaced; however, the data logging process will be stopped. If the batteries are changed within a 2 minute window the data loggers will retain its settings (internal clock and logging mode). This will allow logging to be restarted without additional connection to a PC via USB.

Windows software shows data in graphical format.



Windows Software

Data Logger Setup

Alarm Setup

Alarm Setup

Specifications

OM-EL-GFX-1

Measurement Range: -30 to 80°C (-22 to 176°F)
Internal Resolution: 0.1°C (0.1°F)
Accuracy (Overall Error @ 25°C): ±0.1°C (±0.2°F) typical; ±0.75°C (±1.5°F) maximum
Logging Interval: 1 reading every 10 seconds to 1 every hour
Battery Life: 6 months typical at 25°C (77°F) and 10 minute logging rate
Weight: 99 g (3.5 oz)
Dimensions: 88 H x 48.5 W x 30.5 mm D (3.46 x 1.91 x 1.20")

OM-EL-GFX-2, OM-EL-GFX-2-PLUS

Temperature
- **Measurement Range:** -30 to 80°C (-22 to 176°F)
- **Repeatability:** ±0.1°C (±0.2°F) typical
- **Internal Resolution:** 0.1°C (0.1°F)
- **Accuracy (Overall Error):**
  - **OM-EL-GFX-2:** ±0.5°C (±1.0°F) typical, ±2.0°C (± 4.0°F) maximum
  - **OM-EL-GFX-2-PLUS:** ±0.2°C (±0.4°F) typical, ±0.8°C (±1.6°F) maximum

Humidity
- **Measurement Range:** 0 to 100% RH
- **Repeatability:** ±0.5% RH
- **Long Term Stability:** ±0.5% RH/year
- **Internal Resolution:** 0.1% RH
- **Accuracy (20 to 80% RH):**
  - **OM-EL-GFX-2:** ±3.0% RH typical, ±5.0% RH maximum
  - **OM-EL-GFX-2-PLUS:** ±1.8% RH typical, ±4.0% RH maximum

Dew Point
- **Accuracy (Overall Error in the Calculated Dew Point, for RH Measurement Between 40 to 100% RH @ 25°C):** ±1.1°C (±2.0°F)

Logging Interval: 1 reading every 10 seconds to 1 every hour
Battery Life: 4 months typical at 25°C (77°F) and 10 minute logging rate
Dimensions: 88 H x 48.5 W x 30.5 mm D (3.46 x 1.91 x 1.20")
Weight: 99 g (3.5 oz)

OM-EL-GFX-DTC (2 channels), OM-EL-GFX-TC (1 channel)

Temperature Measurement Range:
- **Type K:** -200 to 1350°C (-328 to 2462°F)
- **Type J:** -200 to 1190°C (-328 to 2174°F)
- **Type T:** -200 to 390°C (-328 to 734°F)

Internal Resolution: 0.1°C (0.1°F)
Accuracy (Overall Error @ 25°C): ±0.5°C (±0.9°F) typical
Operating Temperature Range: -10 to 40°C (-14 to 104°F)
Logging Interval: 1 reading every 2 seconds to 1 every hour
Battery Life:
- **OM-EL-GFX-DTC:** 4 months typical at 25°C (77°F) and 10 minute logging rate, no alarm LEDs or audible alarm and minimal LCD use
- **OM-EL-GFX-TC:** 1 year typical at 25°C (77°F) and 1 minute logging rate, LCD off

Weight: 105 g (3.7 oz)
Dimensions: 102 H x 48.5 W x 30.5 mm D (4.06 x 1.91 x 1.20")

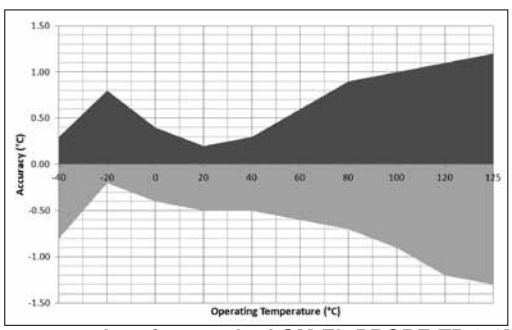
OM-EL-GFX-DTP

Temperature Measurement Range (with Included Thermistor Probe): -40 to 125°C (-40 to 257°F)
Internal Resolution: 0.1°C (0.2°F)
Accuracy (Data Logger Error @ 25°C): ±0.1°C (±0.2°F) typical (does not include thermistor probe error)
Operating Temperature Range: -10 to 40°C (-14 to 104°F)
Logging Interval: 1 reading every 2 seconds to 1 every hour
Battery Life: 4 months typical at 25°C (77°F) and 10 minute logging rate
Dimensions:
- **Data Logger:** 101 H x 48.5 W x 30.5 mm D (3.98 x 1.91 x 1.20")
- **Thermistor Probe:**
- **Cable:** 1 m (3')
- **Probe Tip:** Stainless steel, 25 L x 5 mm dia (1 x 3⁄16")

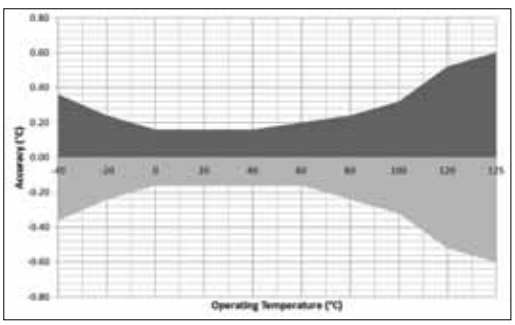
Weight: 105 g (3.7 oz)

COMMON SPECIFICATIONS

Memory: 252,928 readings
Software: Windows XP/VISTA/7 and 8 (32 and 64-bit)
Power: 2 ½ "AA" 3.6V lithium batteries (included)
Enclosure: IP67 with USB cover attached (excludes OM-EL-GFX-DTC, OM-EL-GFX-TC and OM-EL-GFX-DTP)
Display: High contrast graphic backlit LCD



Accuracy chart for standard OM-EL-PROBE-TP-2-1M thermistor probe (2 included with OM-EL-GFX-DTP).



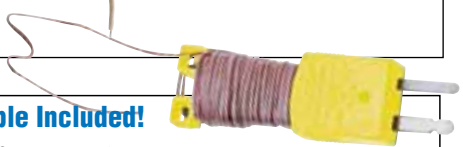
Accuracy chart for optional OM-EL-PROBE-TP-A-3M thermistor probe (used with OM-EL-GFX-DTP).

OM-EL-GFX-DTP shown smaller than actual size with 2 thermistor probes (included).

OM-EL-GFX-DTC shown smaller than actual size with 2 5SC Series thermocouples (included).

OMEGACARE℠ Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.



Free Thermocouple Included!

Model OM-EL-GFX-DTC includes 2 free 1 m (40") Type K insulated beaded wire thermocouple with subminiature connector and wire spool caddy (1 per channel). Model OM-EL-GFX-TC includes 1 free Type K insulated beaded wire thermocouple **Order a Spare! Model No. SC-GG-K-30-36**

To Order

Model No.	Description
OM-EL-GFX-1	Temperature data logger with graphic display
OM-EL-GFX-2	Temperature and relative humidity data logger with graphic display
OM-EL-GFX-2-PLUS	High accuracy temperature and relative humidity data logger with graphic display
OM-EL-GFX-DTC	Dual channel K, J, and T Type thermocouple data logger with graphic display
OM-EL-GFX-TC	Single channel K, J, and T Type thermocouple data logger with graphic display
OM-EL-GFX-DTP	Dual channel thermistor data logger with graphic display
OM-EL-PROBE-TP-2-1M	Spare standard thermistor probe for OM-EL-GFX-DTP (2 included with data logger), 1 m (3') cable
OM-EL-PROBE-TP-A-3M	Optional higher accuracy thermistor probe for OM-EL-GFX-DTP, 3 m (10') cable
OM-EL-PROBE-TP-A-GLY-3M	Optional higher accuracy thermistor probe (in sealed glycol filled chamber for temperature stabilization) for OM-EL-GFX-DTP, 3 m (10') cable
OM-EL-PROBE-EXT-CAB-1.5M	Thermistor probe extension cable, 1.5 m (5') for OM-EL-GFX-DTP
OM-EL-PROBE-EXT-CAB-5M	Thermistor probe extension cable, 5 m (16.5') for OM-EL-GFX-DTP
OM-EL-PROBE-EXT-CAB-10M	Thermistor probe extension cable, 10 m (33') for OM-EL-GFX-DTP
OM-EL-BATT	Replacement 3.6V lithium battery (2 required)

Comes complete with Windows software and operator's manual on CD-ROM, two replaceable 1/2 AA 3.6V lithium batteries, USB cover, mounting clip and 1 m (3.2') USB cable. OM-EL-GFX-DTC also includes 2 Type K insulated beaded wire thermocouples. OM-EL-GFX-TC includes 1 Type K insulated beaded wire thermocouple. OM-EL-GFX-DTP includes 2 OM-EL-PROBE-TP-2-1M standard thermistor probes.

***Ordering Example: OM-EL-GFX-DTC**, dual channel K, J and T Type thermocouple data logger with graphic display, **OCW-1** OMEGACARE℠ extended warranty adds 1 year to standard 1 year warranty, and two **OM-EL-BATT** replacement batteries.*

Audible and Visual Alarm for OM-EL-WIFI Series Temperature and Humidity Data Loggers

OM-EL-WIFI-ALERT

1 YEAR WARRANTY

OM-EL-WIFI-ALERT shown smaller than actual size.

- **Detects Alarms from any OM-EL-WIFI Series Temperature and Humidity Data Logger on the Same Wireless Network**
- **Audible Alarm with Built-in Speaker**
- **Visual Alarm from High Brightness LEDs**
- **Continues to Work When the PC is Turned Off**
- **Easy Set-Up Using the Free PC Software Application (Downloadable from OMEGA)**
- **Rechargeable Internal Lithium Polymer Battery for Short Term Backup During AC Power Failure**

The OM-EL-WIFI-ALERT is a stand-alone monitoring system for all OM-EL-WIFI Series data loggers. The OM-EL-WIFI-ALERT will receive alarm messages from any OM-EL-WIFI Series temperature and humidity data logger connected to the same wireless network. The OM-EL-WIFI-ALERT indicates an alarm activation using high brightness LEDs and a choice of nine alarm tones. The OM-EL-WIFI-ALERT continues to work when the PC is turned off.

The OM-EL-WIFI-ALERT has been designed to be continuously powered via the included AC power adaptor. However it does contain a rechargeable lithium polymer battery for device positioning and limited power during the event of a power failure.

The WiFi signal strength indicator is activated by pressing the OM-EL-WIFI-ALERT button three times. All LEDs and a fast beep indicate a strong signal. Limited LEDs and slow beep indicate a weak signal.

The audible alarm can be muted by pressing the OM-EL-WIFI-ALERT button once or remotely from the PC software. There is also a configurable auto-mute function.

Set-up is completed through software installed on the PC. This software is available to download for free from OMEGA online. Free firmware downloads are also available.

After initial set-up, audible and visual alerts can be re-configured wirelessly using the PC software.

The OM-EL-WIFI-ALERT can be attached to a wall or flat surface using the bracket provided, and has a protection rating of IP44 (with cable connected).

OMEGACARE℠ Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.

SPECIFICATIONS

Wireless Network: This device is IEEE 802.11b compliant, supports WEP, WPA/WPA2 and WPA-Enterprise (MS-CHAPv2, PEAP, EAP-FAST, EAP-TTLS)

Sound Output: 100 dBA @ 1m

Operating Temperature: 0 to 40°C (32 to 104°F)

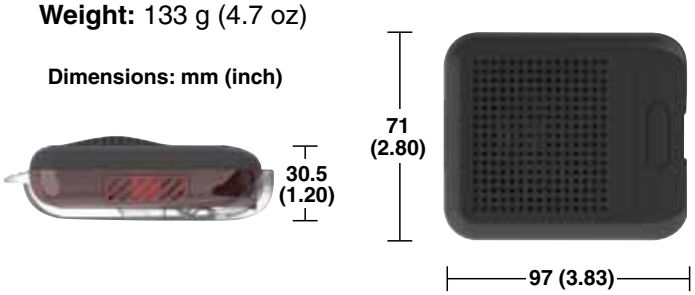
USB Supply Voltage: 4.5 V min, 5.0 V typical, 5.5 V max

Power: 100/240 Vac via included AC power adaptor (USA plug). Optional UK and EU power adaptors available. Internal rechargeable lithium polymer battery for device positioning and limited backup power during the event of a power failure.

Enclosure: IP44 (with cable connected)

Weight: 133 g (4.7 oz)

Dimensions: mm (inch)



To Order	
Model No.	**Description**
OM-EL-WIFI-ALERT	Audible and visual alarm for OM-EL-WIFI Series temperature and humidity data loggers
OM-EL-WIFI-BRACKET	Wall mount bracket
OM-EL-WIFI-ADAPTOR	Spare 100/240 Vac 50/60 Hz power adaptor (USA plug)
OM-EL-WIFI-ADAPTOR-UK	Optional 100/240 Vac 50/60 Hz power adaptor with UK plug
OM-EL-WIFI-ADAPTOR-EU	Optional 100/240 Vac 50/60 Hz power adaptor with EU plug

Comes complete with wall mount bracket, 1 m (3.3') USB cable, 100/240 Vac 50/60 Hz power adaptor (USA plug) and quick start guide.

***Ordering Example: OM-EL-WIFI-ALERT** audible and visual alarm for **OM-EL-WIFI** Series temperature and humidity data loggers and **OCW-1,** OMEGACARE extends standard 1-year warranty to a total of 2 years*

WiFi Wireless Temperature and Humidity Data Loggers

OM-EL-WIFI Series

1 YEAR WARRANTY

OM-EL-WIFI-TP wireless temperature data logger with removable thermistor probe (included).

OM-EL-WIFI-T wireless temperature data logger with internal temperature sensor.

OM-EL-WIFI-TH wireless temperature/ humidity data logger.

OM-EL-WIFI-TC wireless thermocouple input temperature data logger shown with 5SC Series thermocouple and mounting bracket (included).

OM-EL-WIFI-DTC dual channel wireless thermocouple input temperature data logger shown with 2 5SC Series thermocouples and mounting bracket (included).

All models shown smaller than actual size.

- Four High Accuracy (-PLUS) Models Available
- WiFi Capability and Integrated Display
- Wireless Connectivity to PC Via WiFi
- WiFi Connection Indicator
- Easy Set-Up Using Free PC Software Download Available From OMEGA
- View and Analyze Multiple Data Loggers Using the PC Application, Including Immediate Graphing of Historic Data (Included)
- 802.11b Compliant
- Large Memory–Stores All Data Even if WiFi is Temporarily Disconnected
- Rechargeable Internal Lithium Polymer Battery (Included)
- USB Port Used for Recharging
- Low Battery Indicator
- Configurable High and Low Alarms with Indicator
- Maximum and Minimum Readings

Rear view of OM-EL-WIFI-DTP-PLUS showing probe input and splitter/ adaptor (included).

OM-EL-WIFI-DTP-PLUS dual channel wireless temperature data logger with removable thermistor probes (included).

The OM-EL-WIFI-TH wireless temperature/humidity data logger measures the temperature and humidity of the environment in which it is situated via internal sensors. The OM-EL-WIFI-TP (single channel) and OM-EL-WIFI-DTP-PLUS (dual channel) wireless temperature data loggers measure temperature via the included removable thermistor temperature probes. The OM-EL-WIFI-T wireless temperature data logger measures temperature via an internal temperature sensor. The OM-EL-WIFI-TC (single channel) and OM-EL-WIFI-DTC (dual channel) wireless thermocouple input temperature data loggers accept J, K, T or N thermocouples. Data is transmitted wirelessly via a WiFi network to a PC and viewed using a free software package.

During configuration the data logger will search for an existing wireless network while physically connected to the PC. It can then be placed anywhere within range of the network. If the data logger temporarily loses connectivity with the network, it will log readings until it is able to communicate again with the PC application (max 60 days at 10 second sample interval for OM-EL-WIFI-TH); (maximum 120 days at 10 second sample interval for OM-EL-WIFI-TP, OM-EL-WIFI-T and OM-EL-WIFI-TC); (max 30 days at 10 second sample interval for OM-EL-WIFI-DTC and OM-EL-WIFI-DTP-PLUS). The range of the data logger can be increased by using WiFi extenders.

The probe on the OM-EL-WIFI-TP and OM-EL-WIFI-DTP-PLUS can be used in a wide range of temperature situations e.g. manufacturing processes, cold storage and hot storage.

OM-EL-WIFI-TP, detail of probe installation/removal.

The OM-EL-WIFI Series are low powered battery devices. When configured using typical sampling periods (e.g. once every 5 minutes) the data logger will operate for over one year. The battery can then be recharged via a PC or USB 5V wall adaptor using the USB lead provided.

The battery is safely charged when the unit is operating between 0 to 40°C (32 to 104°F). It is protected against charging outside this temperature range. Data logger readings may be inaccurate during battery charging.

Windows® software used for data logger set up, data transfer and display. (Software available free at OMEGA)

With the OM-EL-WIFI Series the software installed on the PC will allow set-up, data logging and data review. Set-up features will include data logger name, °C/°F, sample rate, and high/low alarms. Once configured, historic data can be viewed via the graphing tool or exported into Excel®. This software is available online for free from OMEGA.

The OM-EL-WIFI-TP (single channel) and OM-EL-WIFI-DTP-PLUS (dual channel) wireless temperature data loggers are supplied with removable thermistor temperature probes. The probe can be attached to a wall or other flat surface using the included mounting bracket (probe clips into the bracket).

Specifications

OM-EL-WIFI-TH

Temperature Measurement Range: -20 to 60ºC (-4 to 140ºF)

Temperature Resolution:

OM-EL-WIFI-TH: 0.5ºC (1.0ºF) display; 0.1°C (0.18°F) recorded

OM-EL-WIFI-TH-PLUS: 0.5ºC (1.0ºF) display; 0.01°C (0.01°F) recorded

Temperature Accuracy (Overall Error):

OM-EL-WIFI-TH:

5 to 60ºC: ±0.3ºC (±0.5ºF) typical

-20 to 60ºC: ±0.8ºC (±1.4ºF) maximum

OM-EL-WIFI-TH-PLUS

5 to 60ºC: ±0.2ºC (±0.4ºF) typical

-20 to 60ºC: ±0.8ºC (±1.4ºF) maximum

Humidity Measurement Range: 0 to 100% RH

Humidity Resolution:

OM-EL-WIFI-TH, OM-EL-WIFI-TH-PLUS: 1% RH (display and recorded)

Humidity Accuracy (Overall Error@ 25°C)

OM-EL-WIFI-TH: ±2.5% RH typical (20 to 80% RH); ±5.0% RH maximum (0 to 100% RH)

OM-EL-WIFI-TH-PLUS:
±2.5% RH typical (10 to 90% RH); ±4.0% RH maximum (0 to 100% RH)

Memory: 500,000 temperature and 500,000 humidity readings

OM-EL-WIFI-TP, OM-EL-WIFI-DTP-PLUS

Operating Temperature Range (Data Logger):
-20 to 60ºC (-4 to 140ºF)

Probe Temperature Measurement Range:
-40 to 125ºC (-40 to 257ºF)

Temperature Resolution:
OM-EL-WIFI-TP: 0.1°C (0.1°F) display and recorded
OM-EL-WIFI-TP-PLUS, OM-EL-WIFI-DTP-PLUS: 0.01°C (0.01°F) display and recorded
Temperature Accuracy:
OM-EL-WIFI-TP: ±0.6°C typical, ±1.0°C maximum
OM-EL-WIFI-TP-PLUS: ±0.1°C typical, ±0.3°C maximum
OM-EL-WIFI-DTP-PLUS: ±0.2°C typical, ±0.6°C maximum
Probe Clip Operating Temperature Range: -40 to 100°C (-40 to 212°F)
Memory: 1,000,000 temperature readings
Temperature Probe (Thermistor):
OM-EL-WIFI-TP, OM-EL-WIFI-TP-PLUS, OM-EL-WIFI-DTP-PLUS: High temperature flexible cable with 304 SS end cap
Probe Dimensions:
OM-EL-WIFI-TP: Cable length, 50 cm (19.7"); end cap, 25 x 4.8 mm dia (1 x 0.188")
OM-EL-WIFI-TP-PLUS, OM-EL-WIFI-DTP-PLUS: Cable length, 300 cm (118.1"); end cap, 75 x 4.95 mm dia (2.95 x 0.19")

OM-EL-WIFI-T
Temperature Measurement Range: -20 to 60°C (-4 to 140°F)
Temperature Resolution:
OM-EL-WIFI-T: 0.1°C (0.1°F) display and recorded
OM-EL-WIFI-T-PLUS: 0.01°C (0.01°F) display and recorded
Temperature Accuracy:
OM-EL-WIFI-T (-10 and 50°C): ±0.5°C typical
OM-EL-WIFI-T-PLUS (-10 and 60°C): ±0.1°C typical
Memory: 1,000,000 temperature readings

OM-EL-WIFI-TC, OM-EL-WIFI-DTC
Temperature Measurement Range:
Type K: -200 to 1350°C (-328 to 2462°F)
Type J: -200 to 1190°C (-328 to 2174°F)
Type T: -200 to 390°C (-328 to 734°F)
Type N: -270 to 1300°C (-454 to 2372°F)
Resolution (-99.9 to 999.9°C or °F): 0.1°C (0.1°F) display and recorded
Accuracy: ±1.5°C (±2.7°F)
Thermocouple Connection: Female subminiature connector
Memory: 1,000,000 temperature readings
Operating Temperature Range (Data Logger): -20 to 60°C (-4 to 140°F)

GENERAL
Power: Rechargeable internal lithium polymer battery (included)
Battery Life: 1 year typical (depends on transmission interval)
USB Supply Voltage: 4.5 Vdc minimum, 5.5 Vdc maximum
Logging Rate: 1 reading every 10 seconds to 1 every 12 hours
Software: Windows® XP/Vista/7/10 (32-bit or 64-bit), download
Enclosure Rating: IP55
Weight: 43 g (1.5 oz)
Dimensions (with Mounting Bracket Attached): 97.3 H x 71.3 W x 26.36 mm D (3.8 x 2.8 x 1.04")

Free Thermocouple Included!
OM-EL-WIFI-TC includes a free 1 m (40") Type K insulated beaded wire thermocouple with subminiature connector and wire spool caddy. OM-EL-WIFI-DTC includes two free thermocouples (1 per channel). **Order a Spare! Model No. SC-TT-K-30-36.**

To Order

Model No.	Description
OM-EL-WIFI-TH	WiFi temperature and humidity data logger
OM-EL-WIFI-TH-PLUS	High accuracy WiFi temperature and humidity data logger
OM-EL-WIFI-TP	WiFi temperature data logger with removable thermistor probe
OM-EL-WIFI-TP-PLUS	High accuracy WiFi temperature data logger with removable thermistor probe
OM-EL-WIFI-DTP-PLUS	High accuracy dual channel WiFi temperature data logger with removable thermistor probes
OM-EL-WIFI-T	WiFi temperature data logger with internal temperature sensor
OM-EL-WIFI-T-PLUS	High accuracy WiFi temperature data logger with internal temperature sensor
OM-EL-WIFI-TC	WiFi thermocouple input temperature data logger
OM-EL-WIFI-DTC	WiFi dual channel thermocouple input temperature data logger
OM-EL-WIFI-ADAPTOR	USB power adaptor for recharging any OM-EL-WIFI Series data logger (120 Vac input, 5 Vdc/1A output via standard size USB type A connector)
OM-EL-PROBE-EXT-CAB-1.5M	Thermistor probe extension cable, 1.5 m (5') for OM-EL-WIFI-TP and OM-EL-WIFI-TP-PLUS
OM-EL-PROBE-EXT-CAB-5M	Thermistor probe extension cable, 5 m (16.5') for OM-EL-WIFI-TP and OM-EL-WIFI-TP-PLUS
OM-EL-PROBE-EXT-CAB-10M	Thermistor probe extension cable, 10 m (33') for OM-EL-WIFI-TP and OM-EL-WIFI-TP-PLUS
OM-EL-WIFI-ALERT	Audible and visual alarm for OM-EL-WIFI Series data loggers

OM-EL-WIFI-TC includes one type K beaded wire thermocouple. OM-EL-WIFI-DTC includes two type K beaded wire thermocouples

Temperature Humidity Alarm
With Logging Capability

OM-THA2-U shown smaller than actual size.

OM-THA2-U

1 YEAR WARRANTY NIST

Optional

- **Audible and Visual Alarm**
- **Digital Display**
- **Log Up to 170 Days of Data**
- **Relay Contacts for Remote Alarm or Auto Dialer**
- **Remote Sensor**
- **USB Connection**
- **Windows Software Included Free**

Applications

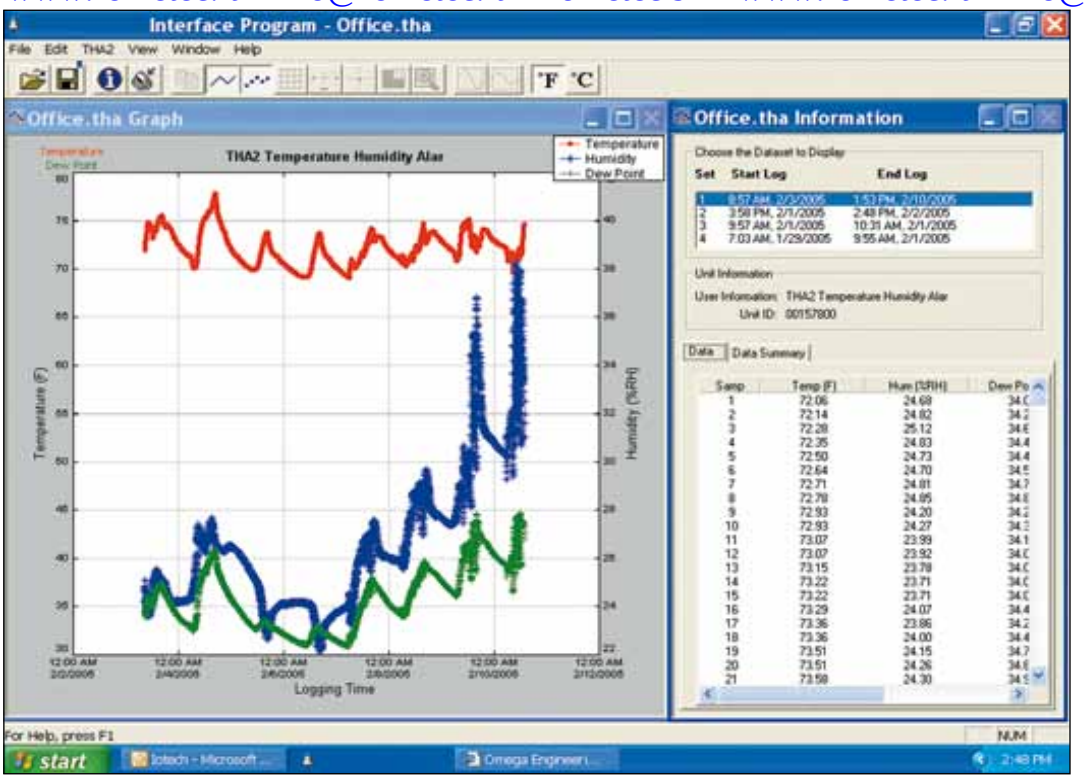
- **Supermarkets, Food Markets, Convenience Stores**
- **Restaurants, Florists, Greenhouses**
- **Laboratories, Pharmaceutical Storage Facilities**
- **Refrigerated Transport, Cold Chain Facilities**
- **Computer Rooms**

The OM-THA2-U is a multi-function unit that monitors temperature, relative humidity and dew point. The OM-THA2-U records data and generates an alarm for any out-of-range conditions. It consists of a base unit with an easy-to-read display and a 4.6 m (15') remote sensor probe.

The alarm function monitors temperature, relative humidity and dew point once every second. If any of the readings reach an alarm threshold, the unit generates an alarm by turning on a beeper and a dry relay contact. The relay can be connected to a telephone dialer, light or bell. The delayed alarm feature can reduce false alarms by ignoring short duration alarm conditions. The unit will also generate an alarm on probe failure.

The logger function records the data into an internal non-volatile memory at a user specified interval. The recording is performed continuously after the unit is turned on. No computer set-up is necessary to start logging, and all logging settings can be viewed or changed through the front panel functions. When the internal memory becomes full the recording rolls over, overwriting the oldest recorded data. Review logged data on a computer using the included Windows software while continuously recording new data.

All the operating settings of the OM-THA2-U can be changed from the front panel without the need for a computer. The two-line display provides an easy-to-read means of viewing or changing settings.



Windows software displays data in graphical or tabular format.

Specifications

SENSOR PROBE

Operating Temperature Range: -40 to 60°C (-40 to 140°F)
Operating Humidity Range: 0 to 90% RH non-condensing
Temperature Accuracy: ±1°C (±2°F)
Temperature Resolution: 0.1°C (0.1°F)
Humidity Accuracy: ±2% RH
Humidity Resolution: 0.1% RH
Calibration: User calibration for temperature and relative humidity
Dimensions: 9.65 L x 2.79 cm dia (3.8 x 1.1")
Weight: 25 g (0.9 oz)
Cable Length: 4.6 m (15')

BASE UNIT

Operating Temperature Range: 0 to 54°C (32 to 132°F)
Storage Temperature: -18 to 54°C (0 to 130°F)
Operating Humidity: 0 to 90% RH, non-condensing
Power: 12 to 24 Vac/Vdc, 0.78W alarm active
Battery Backup: 9V alkaline battery for 25 hrs operation during power outage
Relay: 5A/250V NO/NC dry contact, resistive load
Dimensions: 14 L x 11.4 W x 4.1 cm dia (5.5 x 4.5 x 1.6")
Weight: 245 g (8.6 oz)

ALARM

Temperature/Relative Humidity Alarm: High/low temperature and humidity alarms, condensation alarm
Alarm Delay: Up to 2 hrs, user-selectable
Alarm Indication: Audible/visual/relay

LOGGING

Sample Rate: 1 sec to 30 min, user-selectable
Data History Storage: 2 hrs to 170 days, depending on sample rate
Memory Capacity: 8150 samples for temperature, humidity and dew point
Software Compatibility: Windows XP/Vista/7/8/10 (32-bit and 64-bit)

OMEGA CARE℠ Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.

To Order

Model No.	Description
OM-THA2-U	Temperature/humidity alarm
OM-THA2-U-CAL-3-HU	Temperature/humidity alarm with NIST calibration certificate
OM-THA2P	Replacement remote sensor probe
OM-THA2-ADAP	Replacement 115 Vac power adaptor
OM-THA2-ADAP-220V	Replacement 220 Vac power adaptor

Comes complete with user guide, Windows software on CD, USB interface cable and 115 Vac power adaptor.
***Ordering Example: OM-THA2-U,** temperature/humidity alarm and **OCW-1** OMEGACARE℠ 1-year extended warranty for OM-THA2 (adds 1 year to standard 1-year warranty).*

Temperature/Humidity Data Logger with 2 External Inputs

OMYL-RH25

1 YEAR WARRANTY

OMYL-RH25 shown larger than actual size.

- **Integral Temperature/Humidity Sensors**
- **Plus 2 External Inputs for Temperature (Pt100/Pt1000 RTD/Thermistor) or Temperature/Humidity Probes**
- **Up to 4 Million Readings (Internal Memory Size)**
- **Up to 4 Hz Sampling Rate**
- **High Accuracy**
- **20 Bit A/D Converter**
- **Shock Proof, IP65 Housing (Dust and Water Jet Proof)**
- **Transfer Rate of 500 kbps**
- **Low Current Consumption**
- **Up to 4 Years Battery Life**

The OMYL-RH25 is a temperature/humidity data logger that also accepts two external temperature or temperature/humidity inputs. This data logger is available with standard memory of 100,000 readings (OMYL-RH25) or expanded memory of 4 million readings (OMYL-RH25-4M). The following inputs can be configured:

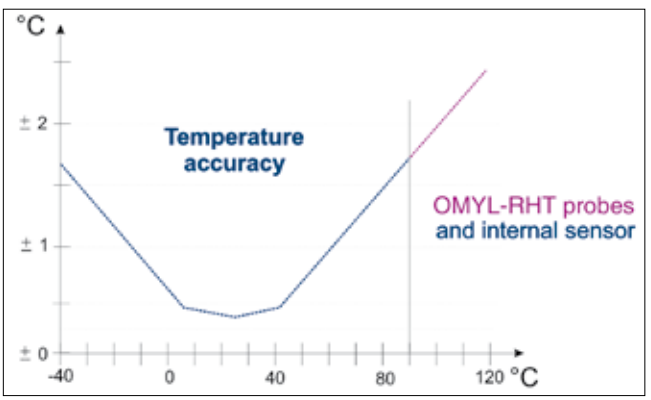
- Internal temperature and humidity sensors
- External temperature (Pt100/Pt1000 RTD, Type U thermistor)
- External temperature/humidity (for combined external temperature/humidity probes)

The storage medium is non-volatile flash memory so no data is lost if the battery becomes discharged. Data logger setup as well as data retrieval is accomplished using the included standard OMYL-SOFT software. Downloaded data is stored in the OMYL-SOFT software as a text file for viewing in third party software packages or Microsoft Excel®. The OMYL-SOFT standard software does not include any graphing functionality. Graphing and analyzing downloaded data files requires the OMYL-SOFT-PLUS version of the software (sold separately).

SPECIFICATIONS

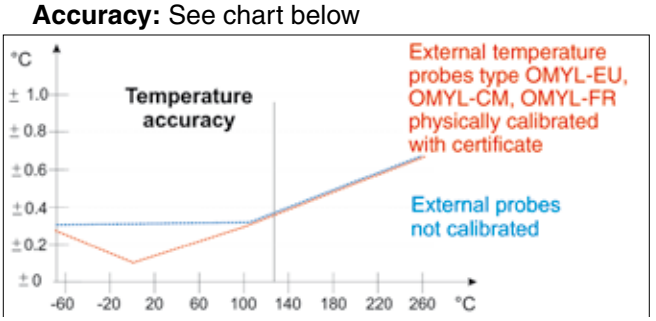
Internal Temperature

Temperature Range: -30 to 70°C (-22 to 158°F) with standard lithium battery; -40 to 90°C (-40 to 194°F) with optional high temperature lithium battery
Temperature Resolution: 0.01°C (0.02°F)
Accuracy: See chart below



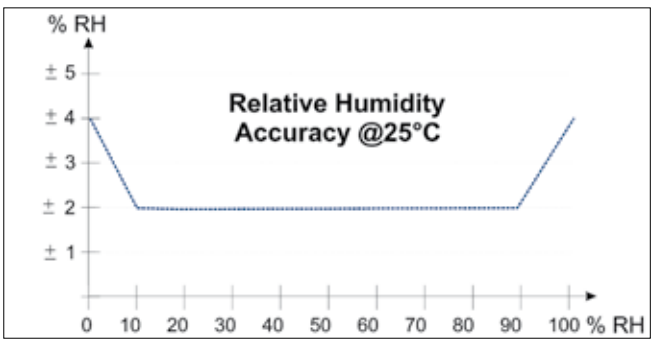
External Temperature Input

Sensor: Pt100 or Pt1000 RTD, U thermistor (2000Ω @ 25°C)
Range: -70 to 250°C (-94 to 482°F)
Resolution: 0.01°C (0.02°F)
Accuracy: See chart below



Internal/External Humidity
- **Humidity Range:** 0 to 100% RH
- **Humidity Resolution:** 0.01% RH
- **Accuracy:** See chart below

Reading Rate: 1 second to 24 hours; 2 Hz, 4 Hz in fast mode

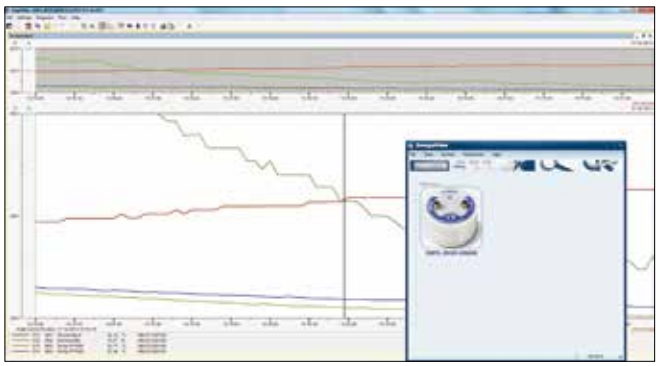


Start Modes: Immediate start, delayed start

Memory Capacity
- **OMYL-RH25:** 100,000 readings
- **OMYL-RH25-4M:** 4 million readings

Memory Wrap Around: Yes (software configurable)

Battery: 3V lithium battery [standard temperature range battery (included), optional high temperature range battery]; user replaceable



OMYL-SOFT-PLUS graphical display.

Battery Life (Standard Temperature Range Battery): 4 years at 1 minute reading rate, 230 days at 10 second reading rate, 25 days at 1 second reading rate

LED Functionality: Integrated status LED indicates data logging status, low battery or alarm condition

Alarms: Software programmable high/low thresholds

Computer Interface: USB (interface cable included)

Software: XP SP3/Vista/7 and 8 (32- and 64-bit)

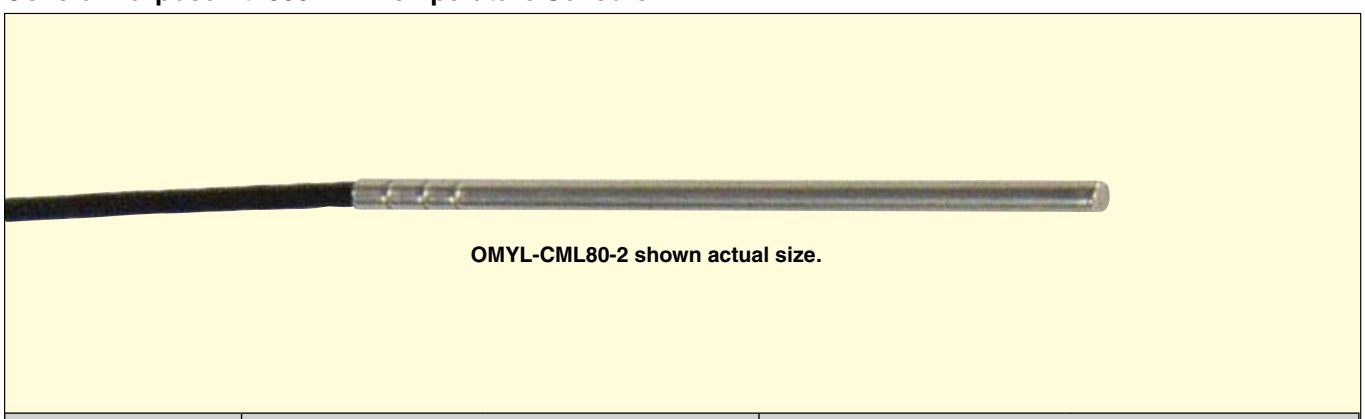
Operating Environment: -30 to 70°C (-22 to 158°F) with standard lithium battery; -40 to 90°C (-40 to 194°F) with optional high temperature lithium battery

Dimensions: 30 H x 50 mm dia (1.18 x 1.97")

Weight: 70 g (2.5 oz)

Enclosure: Robust, shock-proof POM, IP65

General Purpose Pt1000 RTD Temperature Sensors



OMYL-CML80-2 shown actual size.

Model No.	Stainless Steel Probe		Cable		
	Operating Temperature	Dimensions (mm)	Material	Length	Maximum Operating Temperature
OMYL-CML80-2	-70 to 250°C (-94 to 482°F)	100 L x 4 mm dia (4 x 0.16")	PVC	2 m (6.6')	80°C (176°F)
OMYL-CML80-5			PVC	5 m (16.4')	80°C (176°F)
OMYL-CML120-2			PTFE	2 m (6.6')	120°C (248°F)
OMYL-CML120-5			PTFE	5 m (16.4')	120°C (248°F)
OMYL-CMS80-2		50 L x 4 mm dia (2 x 0.16")	PVC	2 m (6.6')	80°C (176°F)
OMYL-CMS80-5			PVC	5 m (16.4')	80°C (176°F)
OMYL-CMS120-2			PTFE	2 m (6.6')	120°C (248°F)
OMYL-CMS120-5			PTFE	5 m (16.4')	120°C (248°F)

Pt1000 RTD Sensors for Surface Temperature Measurement

Model No.	Stainless Steel Base		Cable		
	Operating Temperature	Dimensions	Material	Length	Maximum Operating Temperature
OMYL-EU80-2	-70 to 250°C (-94 to 482°F)	20 L x 10 mm W (0.8 x 0.4")	PVC	2 m (6.6')	80°C (176°F)
OMYL-EU80-5			PVC	5 m (16.4')	80°C (176°F)
OMYL-EU120-2			PTFE	2 m (6.6')	120°C (248°F)
OMYL-EU120-5			PTFE	5 m (16.4')	120°C (248°F)

Magnetic Pt1000 RTD Sensors for Surface Temperature Measurement

Model No.	Steel Base with Built-In Magnet		Cable		
	Operating Temperature	Dimensions	Material	Length	Maximum Operating Temperature
OMYL-EUM80-2	-70 to 250 (-94 to 482°F)	25 L x 14 mm W (1 x 0.56")	PVC	2 m (6.6')	80°C (176°F)
OMYL-EUM80-5				5 m (16.4')	

Fast Response
Air Temperature Sensors

OMYL-FR80-2 shown actual size.

Model No.	Stainless Steel Probe		Cable		
	Operating Temperature	Dimensions	Material	Length	Maximum Operating Temperature
OMYL-FR80-2	-70 to 250°C (-94 to 482°F)	17 L x 4 mm dia (0.67 x 0.16")	PVC	2 m (6.6')	80°C (176°F)
OMYL-FR80-5			PVC	5 m (16.4')	
OMYL-FR120-2			PTFE	2 m (6.6')	120°C (248°F)
OMYL-FR120-5			PTFE	5 m (16.4')	

General Purpose Temperature/Humidity Sensors

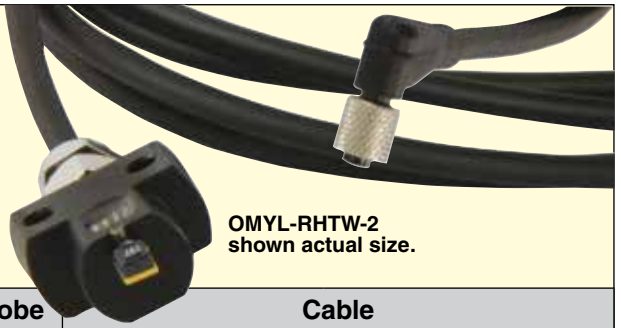
OMYL-RHT80-2
shown actual size.

OMYL-RHT-XS80-2
shown actual size.

Model No.	Stainless Steel Temperature/Humidity Probe		Cable		
	Humidity Range (%RH)	Dimensions	Material	Length	Maximum Operating Temperature
OMYL-RHT80-2	0 to 100	35 L x 8 mm dia (1.4 x 0.32")	PVC	2 m (6.6')	80°C (176°F)
OMYL-RHT80-5			PVC	5 m (16.4')	
OMYL-RHT120-2			PTFE	2 m (6.6')	120°C (248°F)
OMYL-RHT120-5			PTFE	5 m (16.4')	
OMYL-RHT-XS80-2		20 L x 4 mm dia (0.8 x 0.16")	PVC	2 m (6.6')	80°C (176°F)
OMYL-RHT-XS80-5			PVC	5 m (16.4')	
OMYL-RHT-XS120-2			PTFE	2 m (6.6')	120°C (248°F)
OMYL-RHT-XS120-5			PTFE	5 m (16.4')	

Special Temperature/Humidity Sensors

OMYL-RHTO-2
shown actual size.



OMYL-RHTW-2
shown actual size.

Model No.	Stainless Steel Temperature/Humidity Probe			Cable		
	Application	Humidity Range (%RH)	Dimensions	Material	Length	Maximum Operating Temperature
OMYL-RHTO-2	Wall saturation and boundary levels	0 to 100	10 H x 30 mm dia (0.4 x 1.2")	PVC	2 m (6.6')	80°C (176°F)
OMYL-RHTO-5					5 m (16.4')	
OMYL-RHTW-2	Walls or confined spaces		45 L x 20 mm W (1.8 x 0.8")		2 m (6.6')	
OMYL-RHTW-5					5 m (16.4')	

Moisture/Condensation Sensors

OMYL-SHS-A-2
shown actual size.

Model No.	Probe			Cable		
	Application	Operating Temperature	Dimensions	Material	Length	Maximum Operating Temperature
OMYL-SHS-A-2	Condensation (incipient moisture)	0 to 50°C (32 to 122°F)	60 L x 10 mm W (1.7 x 0.4")	PVC	2 m (6.6')	50°C (122°F)
OMYL-SHS-A-5					5 m (16.4')	

To Order

Model No.	Description
OMYL-RH25	Temperature/humidity data logger (internal temperature/humidity sensors) with 2 external inputs, 100,000 readings
OMYL-RH25-4M	Temperature/humidity data logger (internal temperature/humidity sensors) with 2 external inputs, 4 million readings

Comes complete with 3V lithium battery (standard temperature range), 1.8 m (6') USB interface cable, OMYL-SOFT software and operator's manual on USB stick.

***Ordering Example: OMYL-RH25** temperature/humidity data logger with two external RTD inputs, 100,000 readings, one **OMYL-CML80-2** general purpose PT1000 RTD temperature sensor, one **OMYL-RHT80-2** general purpose temperature/humidity sensor and **OCW-1,** OMEGACARE℠ extends standard 1-year warranty to a total of 2 years.*

Accessories

Model No.	Description
OMYL-SOFT-PLUS	Plus version of the software for graphing and analyzing data files
OMYL-WH20	Wall mount holder for data logger (includes tamper evident lead seal)
OMYL-WS50	Set of 50 tamper evident lead seals (50 wires and 50 seals)
OMYL-BATT	Replacement 3V lithium battery (standard temperature range)
OMYL-BATT-HT	Replacement 3V lithium battery (high temperature range)

Pocket Size Temperature/ Humidity Handheld Data Logger

RH32 Series

1 YEAR WARRANTY NIST CE

Optional

RH32B-C2 shown actual size.

- **±2% RH Accuracy**
- **Logs Up to 8000 Readings (Both Temperature and Humidity)**
- **3 Types of Sensors: Built-in, Probe Type and Miniature Separate Sensor**
- **Sensors Interchangeable**
- **Min/Max and Average**
- **High and Low Alarms**
- **Optional Software**
- **RS232C or RS485 Communication Standard**
- **Reads Humidity or Dewpoint Temperature**

The reliable and accurate RH32 Series Temperature/Relative Humidity Meters measure and display both temperature from -10 to 50°C (14 to 122°F) and humidity from 0 to 100% RH. It has the datalogging capability to store up to 8000 readings of both temperature and humidity into memory. The data can be stored either manually or automatically from once a minute to once an hour over a specified time period entered in calendar time (month/day/hour/minute).

Three types of sensors are available: a built-in sensor, a small separate sensor and a probe type sensors. The model comes with 1 type of sensor when purchased, but all sensors can plug into the units and are easily interchangeable without special calibration.

RS232C communication interface is available along with optional software for analysis of measured data. The software allows for easy transfer of data to a computer either in real time or of data stored in memory. A trend graph can be displayed on the computer screen. The data can also be exported to a spreadsheet.

The RS485 communication allows up to 30 units to be connected to a computer for real-time temperature/humidity measurement applications.

Specifications

Relative Humidity:
Sensor: Capacitance type
Measuring Range: 0 to 100% RH
Accuracy Rating: ±2% RH [0 to 90% RH and 25°C (76°F)], ±3% RH [90 to 95% RH and 25°C (76°F)]

Temperature Coefficient: ±0.1% RH/°C [5 to 80°C (41 to 176°F)]

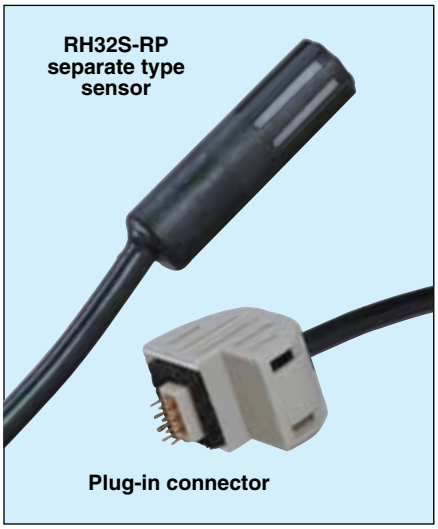
Response Time: Within 15 seconds (90% response, 25°C constant, under 0.1 m/s ventilation)

Temperature:
Sensor: Semiconductor type temperature sensor
Measuring Range:
RH32B: -10 to 50°C (14 to 122°F),
RH32S and RH32P: -40 to 80°C (-40 to 176°F)
Accuracy: ±0.5°C (±0.9°F) 0 to 50°C (32 to 120°F); ±1°C (±1.8°F) below 0°C (32°F) or above 50°C (120°F)

Sensor Interchangeability: Interchangeable by plug-in; for probe type and separate type, interchangeable including cable

Power Supply: 2 “AA” batteries (included) or 100 to 240 Vac with optional AC adaptor

Display:
Current Data: Month, day, hour, minute; temperature reading (°C or °F); relative humidity or dew-point temperature reading (°C or °F)
Logged Data: Parameters; logged data at each year, month, day, hour, or minute; maximum temperature/humidity, minimum temperature/humidity, average temperature/humidity, totalized temperature



Meter and optional accessories, shown smaller than actual size.

Programmable Set Up Parameters: Clock, temperature °C/°F, humidity or dewpoint, logging start/stop time, high/low alarm, auto power off, keylock

Logging Repetition: None, daily, or weekly

Measurement Interval: Continuous or 1 to 60 min

Number of Logged Data Points: Temperature/humidity: up to 8000 points each, total 16,000 points (EEPROM)

Communications Function: RS232C or RS485

Dimensions: 64 W x 113 H x 32 mm D (2.5 x 4.5 x 1.2")

Weight: 140 g (0.30 lb)

To Order

Model No.	Sensor Type	Communications
RH32B-C2	Built-in	RS232C
RH32B-C4	Built-in	RS485
RH32S-C2	Miniature separate type	RS232C
RH32S-C4	Miniature separate type	RS485
RH32P-C2	Probe type	RS232C
RH32P-C4	Probe type	RS485

Accessories

Model No.	Description
CAL-3-HU	NIST-traceable calibration
RH32B-RP	Plug in replacement built-in sensor
RH32S-RP	Plug in replacement miniature separate sensor
RH32P-RP	Plug in replacement probe type sensor
RH32-SW1	Software, RS232C, download and real-time
RH32-SW2	Software, RS485 multipoint, real-time only
RH32-AC110	AC power adaptor (recommended when using RS485)
RH32-S2-CABLE	2 m (7') RS232C cable
RH32-S4-CABLE	2 m (7') RS485 cable

Comes complete with sensor and two "AA" batteries.
Note: *Software, cable, and AC power adaptor sold separately.*
Ordering Examples: RH32B-C2, *with built-in RS232C,* ***RH32-SW1,*** *software and* ***RH32-S2-CABLE,*** *cable.* ***RH32P-C2,*** *probe type.*

Paperless Humidity/ Temperature Chart Recorder

RH520

1 YEAR WARRANTY

Optional

RH520 shown smaller than actual size.

- Simultaneous Numerical and Graphical Display of Humidity and Temperature Readings, Plus Time and Date
- Measures Humidity (10 to 95% RH) and Temperature (-20 to 140°F) Plus Included LabVIEW™ Based Software (up to Windows XP)—Calculates and Graphs Dew Point, Wet Bulb, and GPP (Grains per Pound)
- Large Dual Graphical LCD with Adjustable Vertical and Horizontal Settings
- Internal Memory Records up to 49,000 Data Points
- LCD Indicates Percentage of Memory Remaining
- Replaceable Probe Does Not Require Recalibration
- Detachable Probe Extends up to 1 m (3.3') for Measurements in Closed Environments
- Audible and Visual Alarm with Hi/Low Setpoints
- Output Socket Used with Optional External Alarm Module
- Scroll the Cursor to Display Selected Data Recorded
- Desk or Wall Mount

Applications

- Monitor and Record Laboratory or Clean Room Temperature and Humidity History
- Record Process Conditions
- Generate Warning When Conditions are Outside Required Limits
- Monitor Controlled Environment Areas Such as Freezers, Storage Areas and Other Critical Areas
- Store Humidity and Temperature Historical Data for Report Generation

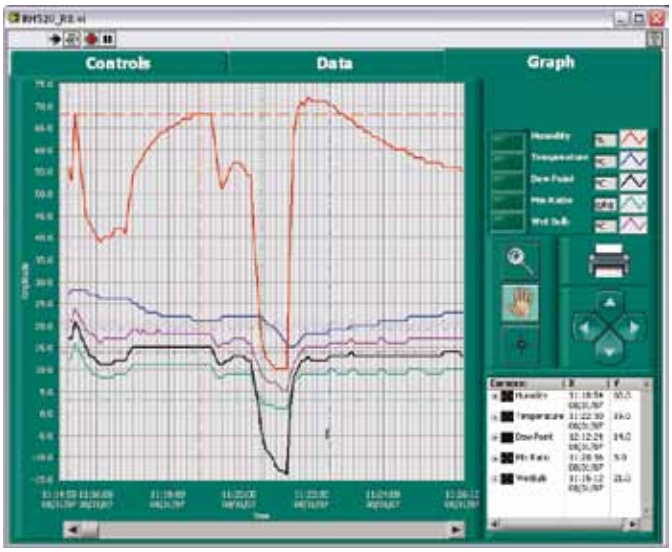
The environmental paperless monitor provides PC-based remote surveillance of environmental conditions in critical HVAC applications such as computer server rooms, clean rooms, laboratories, museums, warehouses, or any remote facility.

View and record temperature and relative humidity. Data points can be transferred to PC via RS232 serial port for further analysis.

The remote (detachable) probe senses the ambient conditions while the LCD graphs and provides numerical representation of the readings. Programmable audiovisual alarms alert the user when ambient conditions reach alarm presets. The optional alarm module permits automatic relay switching when alarm presets are reached.

The software is a full-featured program that allows you to set up all data logger functions including sampling rate, logging duration, start mode, logging mode, and high and low temperature alarm values.

Wall mounted for storage and easy viewing of temperature and humidity trends with date/time stamp.



LabVIEW-based PC software and proprietary cable for data download control.

Specifications

Relative Humidity Range: 10 to 95%
Temperature Range: -20 to 140°F (-28 to 60°C)
Accuracy: ±3% RH; ±1°C (±1.8°F)
Dimensions: 129 x 195 x 22 mm (5 x 7.7 x 0.9")
Weight: 357 g (12.6 oz)

OMEGA CARE℠ Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.

To Order

Model No.	Description
RH520	Humidity and temperature chart recorder with universal adaptor
RH520-NIST	Humidity and temperature chart recorder with universal adaptor with NIST certificate
RH520-220	Humidity and temperature chart recorder (220 Vac)
RH520-220-NIST	Humidity and temperature chart recorder (220 Vac) with NIST certificate
RH520-240	Humidity and temperature chart recorder (240 Vac)
RH520-240-NIST	Humidity and temperature chart recorder (240 Vac) with NIST certificate

Accessories

Model No.	Description
RH520RP	Replaceable humidity/temperature probe
RH520-SL123	AC alarm relay module 3 m (9.8') cable
RH520-SL124	DC alarm relay module 3 m (9.8') cable

Comes complete with operator's manual, built-in stand, detachable probe with 1 m (3.3') cable, RS232 cable, RS232 to USB adaptor, LabVIEW—based PC software (up to Windows XP), 100 to 240 Vac, 50/60 Hz adaptor, and 3 "AA" batteries.

***Ordering Example: RH520-NIST,** humidity and temperature chart recorder with universal adaptor with NIST Certificate.*

Thermo-Hygrometers

RH80/90 Series

1 YEAR WARRANTY

- Compact: Fits in Pocket
- Cover Protects Sensor and Serves as a Clip (RH81/RH83)
- Twist Close Cap on RH92
- RH81 Measures RH and Temperature
- RH83 and RH92 Measures RH, Temperature, Dewpoint and Wet Bulb
- RH92 Recalibratable (with Available Salt Solutions)
- Replaceable External Temperature Probe (RH92 only)
- °F/°C Switchable, Data Hold, Min/Max Data Storage, Auto Power Off

Applications

- Laboratories
- Printing/Paper Processing
- HVAC
- Computer Rooms
- Clean Rooms
- Nurseries/Greenhouses

RH80 and RH90 Series thermo-hygrometers are compact in size and easily fit into your shirt pocket. The cover protects the sensor and also acts as a handy pocket clip on the RH81 and RH83. Model RH81 is a digital thermo-hygrometer with min/max data storage, data hold and auto power-off features. Models RH83 and RH92 have all of the features of the RH81 and also measures dewpoint and wet bulb temperature. Optional external temperature probe (P8706) available for RH92 and test salts (CS338706 and CS758706).

Specifications

Humidity Sensor: Electronic capacitance polymer film sensor
Temperature Sensor: Thermistor
Display: LCD

Accuracy

Temperature:
RH81/RH83: ±1°C (±1.8°F)
RH92: ±0.6°C (±1.0°F)
Relative Humidity:
RH81: ±4% @ 25°C from 10 to 90%, ±5% other ranges
RH83: ±3% @ 25°C from 10 to 90%, ±4% other ranges
RH92: ± 3% 0-100% non-condensing
Resolution:
Temperature: 0.1°C (0.1°F)
Relative Humidity: 0.1% RH
Response Time: 60 sec (80 sec for RH81)
Power: 2 "AAA" alkaline batteries (included)
Battery Life: 500 hrs typical
Dimensions: 17 H x 4.9 W x 1.65 cm D (6.7 x 1.9 x 0.65")

To Order *Visit omega.com/rh80 for Pricing and Details*

Model Number	Dewpoint	Wet Bulb	RH Range	Temp Range
RH81	No	No	5 to 95%	-10 to 50°C (14 to 122°F)
RH83	Yes	Yes	0 to 100%	-20 to 50°C (-4 to 122°F)
RH92	Yes	Yes	0 to 100%	-20 to 50°C (-4 to 122°F)
P8706 (RH92)	—	—	—	-20 to 70°C (-4 to 158°F)
CS338706	—	—	33% 33%	—
CS758706	—	—	75% 75%	—

Comes complete with 2 "AAA" batteries and operator's manual.
Ordering Example: RH81, *thermo-hygrometer, 5 to 95% RH range, -10 to 50°C (14 to 122°F) temperature range.*

Handheld Meter

Available with USB and Wireless Interfaces

Models RH820U and RH820W Come with Windows® Compatible Software

RH820 Series

1 YEAR WARRANTY

- **USB Port Provides Excellent User Interface (RH820U)**
- **Wireless 2-Way Transmission (RH820W)**
- **2 Temperature Sensors (Internal NTC and External K-Type) and Humidity Sensor Together**
- **Wet/Dry Bulb, Dew Point and %RH**
- **MAX/MIN/AVG/REL/HOLD Function**

The RH820 Series are low cost, high performance handheld meters available with USB or wireless connectivity. They offer a double display to show the temperature and humidity from built in sensors and can alternately display data from a separate Type K thermocouple connected via SMP type miniature connector. Save function allows storage of up to 256 readings (no time-stamp) to internal non-volatile memory. Software for USB and wireless versions is included to allow internal, external temperature, and RH data to be recorded by a PC. Interface cable is included with the USB version; receiver with the wireless version.

Specifications

Display: 3.5" digit LCD with a maximum reading of 1999

Low Battery Indication: The " " is displayed when the battery voltage drops below the operating level

Operating Environment: 0 to 50°C (32 to 122°F) at <80% RH

Storage Environment: -20 to 60°C (-4 to 140°F), 0 to 70% RH with battery removed from meter

Accuracy: Stated accuracy at 23°C ±5°C. <75% RH

Battery: Four 1.5V "AAA" (included)

Dimensions: 160 H x 83 W x 38 mm D (6.3 x 3.3 x 1.5")

Weight: Approx 265 g (0.6 lb) including batteries

Temperature Range

Range: -50 to 1000°C (-58 to 1832°F)

Accuracy: ±(0.1% rdg +1°C) on -50 to 1000°C; ±(0.1% rdg +2°F) on -58 to 1832°F

Temperature

Sensor: Thermistor temperature sensor

Range: 0 to 60°C (32 to 140°F)

Resolution: 0.1°C/°F

Accuracy: ±2°C on 0 to 10°C, ±0.5°C on 10 to 45°C; ±2°C on 45 to 60°C; ±4°F on 32 to 50°F, ±1°F on 50 to 113°F; ±4°F on 113 to 140°F

Relative Humidity

Sensor: Capacitive humidity sensor

Range: 0 to 100% RH, non-condensing

Accuracy: ±2.5% at 25°C (77°F), 10 to 90% RH; ±5% at 25°C (77°F), 0 to 10% RH, 90 to 100% RH

Sensor Response Time for 90% of Total Range: 60 sec typical

Sensor Hysteresis (Excursion of 10% to 90% to 10% RH): ±1% RH typical

RH820W Frequency Range: 910~920 mHz, low current consumption less than 1 mA, the transmitting distance can reach 25M

RH820

To Order

Model No.	Description
RH820	Humidity/temperature handheld meter
RH820U	Humidity/temperature handheld meter with USB interface
RH820W	Humidity/temperature handheld meter wireless interface

Note: *All wireless units are USA, 900 mHz frequency band versions.*

Accessories

Model No.	Description
HH800-ADAPTOR	AC adaptor (USB model only)
SC-800	Soft case for HH800 series

Comes complete with 4 "AAA" batteries, Type K thermocouple, rubber boot, NIST calibration (no points) and operator's manual. RS820W also comes with software and receiver, RH820U comes with software and USB cable.

Ordering Example: RH820, *humidity/temperature meter.*

Handheld Hygrometer
Humidity and Temperature Meter

RH85

1 YEAR WARRANTY

- Dual Display Temperature and Humidity
- Portability and Simplicity One-Hand Operation
- MAX/MIN Record Function
- Wet Bulb/Dry Bulb/ Dew Point/Temperature Calculated
- Memory MAX/MIN/ MAX-MIN/AVG
- DATA HOLD Function
- Highly Accurate NTC Temperature Sensor
- Quick Response Capacitive Humidity Sensor
- Auto Power Off Function Can Be Disabled
- °C or °F Switchable
- Battery Life 200 Hrs. Typical Use
- Pocket Hook with Magnetic Hanger

Applications
- Greenhouses
- HVAC Installation and Maintenance
- Office Environment
- Art Galleries/Museums
- Environmental Studies
- Hospitals and Clinics
- Weather Monitoring
- Printing Industry
- Food Distribution
- Store Rooms
- Labs
- Department Stores

Specifications

Display: 3½ digit LCD

Low Battery Indication: The "⊟" is displayed when the battery voltage drops below the operating level

Battery Life: 200 hours, typical use

Power: 2 "AAA" alkaline batteries (included)

Operating Ambient: 0 to 50°C (32 to 122°F), @ <75% RH

Storage Ambient: -20 to 60°C (-4 to 140°F), 0 to 80% RH with battery removed from meter

Accuracy: Stated accuracy at 23°C ±5°C (73°F ±9°F), <75% RH

Dimensions: 167 H x 48 W x 24 mm D (6.57 x 1.89 x 0.95")

Weight: 87 g (3 oz) including batteries

Relative Humidity:
- **Sensor:** Capacitive humidity sensor
- **Range:** 0% to 100% RH
- **Resolution:** 0.1% RH
- **Accuracy:** ±2.5% @ 25°C (77°F), 10% to 90% RH, ±5% @ 25°C (77°F), 0% to 10% RH, 90% to 100% RH

Sensor Response Time for 90% of Total Range: 60 sec typical

Sensor Hysteresis (Excursion of 10% to 90% to 10% RH): ±1% RH typical

Temperature:
- **Sensor:** Thermistor
- **Range:** -20 to 60°C (-4 to 140°F)
- **Resolution:** 0.1°C (0.1°F)
- **Accuracy:** ±0.5°C, 0 to 45°C; ±1°C -20 to 0°C, 45 to 60°C; ±1°F, 32 to 113°F; ±2°F, -4 to 32°F, 113 to 140°F

RH85 shown actual size.

To Order *Visit omega.com/rh85 for Pricing and Details*

Model No.	Description
RH85	Handheld hygrometer
SC-50	Soft carrying case

Comes complete with operator's manual, magnet hanger, and 2 "AAA" batteries.
Ordering Example: RH85, *handheld hygrometer.*

Portable Dew Point Monitor

Highly Accurate, Rugged Enclosure!

RHB-1500 Series

2 YEAR WARRANTY | NIST | CE

Standard

- **Primary Field Measurement Technique**
- **Accuracy: ±0.2°C**
- **NIST-Traceable**
- **Rechargeable Batteries**
- **Easily Transportable in Hard Protective Case**
- **Wide Measurement Range: -60 to 75°C (-76 to 167°F)**
- **Microprocessor Controlled**
- **Self-Balancing**

RHB-1500-C1S2 shown smaller than actual size.

This portable dew point hygrometer integrates the accuracy and reliability of the OMEGA® chilled mirror with the battery life and ruggedness required for field use.

The RHB-1500-C portable chilled-mirror hygrometer has all the standard features, such as drift-free NIST-traceable accuracy, low maintenance, high durability, and ease of use—in a system that is ideally suited for the demands of field use. Whether you use the RHB-1500-C as a field transfer standard or to spot-check your process air dryness or dew point, you'll find this system provides trouble-free operation.

The RHB-1500-C is a self-contained system. Not only is field assembly not required, but also there is not a need to carry around a myriad of individual components such as control boxes, sensors, cables, pumps, and power cords. Simply attach the sample line, adjust the flow (with the integral flowmeter) and turn on the power. Within minutes you'll be collecting field dew point data with the same chilled-mirror accuracy of a lab-standard hygrometer. And with a nominal battery life of 12 hours, the RHB-1500-C lets you collect for the entire shift or spot-check your processes for several days.

Specifications

Measurement

Range (Dew/Frost Point):
2-Stage (S2):
-40 to 50°C (-40 to 122°F)
3-Stage (S3):
-60 to 50°C (-76 to 122°F)

Accuracy (Dew/Frost Point):
±0.25°C (0.45°F)

Functionality

Power/Charger: 115 to 230 Vac, 50 to 600 Hz

Operating Temperature:
0 to 50°C (32 to 122°F)

Sample Connection:
¼" compression fitting

Sample Flow Rate: 0.5 to 5 SCFH; integral flowmeter

Sample Pressure: 0 to 150 psig (higher pressures available; consult Engineering Department)*

Output:
Analog: 4 to 20 mA (0 to 5 Vdc), -50 to 50°C (-58 to 122°F) or -60 to 75°C (-76 to 167°F)
Compliance: 9.0 Vdc, 450 Ω

Display: Red LED, 0.5" tall; 8-digit alphanumeric

Alarm:
Visual: Flashing "ALARM" message
Relay: 1 form "C", non-latching; 10 A @ 240 Vac, 8 A @ 24 Vdc, ½HP @ 240 Vac

Physical

Dimensions: 37.5 H x 46 W x 18 cm D (14.75 x 18 x 7")

Weight: 11 kg (24 lb)

Enclosure: Plastic carrying case

** Unit requires a pump for non-pressurized systems.*

Standard Features

- **Programmable Automatic Balance Control (ABC)**
- **8-Digit Alphanumeric Display**
- **User-Programmable Alarm**
- **Visual Alarms**
- **4 to 20 mA (or 0 to 5 Vdc) Analog Output**
- **Microprocessor-Controlled**
- **115/230 Vac Battery Charger**

To Order

Model No.	Description
RHB-1500-C1S2	Battery powered, 2-stage chill mirror
RHB-1500-C1S2-RHB-ATP	Battery powered, 2-stage chill mirror and temperature probe with 3 m (10') cable
RHB-1500-C1DS2R	Battery powered, 2-stage remote chill mirror
RHB-1500-C1DS2R-RHB-ATP	Battery powered, 2-stage remote chill mirror and temperature probe with 3 m (10') cable
RHB-1500-C1S2L	Line powered, 2-stage chill mirror
RHB-1500-C1S2L-RHB-ATP	Line powered, 2-stage chill mirror and temperature probe with 3 m (10') cable
RHB-1500-C2-3	Line powered, 3-stage chill mirror
RHB-1500-C2-3-RHB-ATP	Line powered, 3-stage chill mirror and temperature probe with 3 m (10') cable
RHB-C2-DS2	Line powered, 2-stage remote chill mirror
RHB-C2-DS2-RHB-ATP	Line powered, 2-stage remote chill mirror and temperature probe with 3 m (10') cable

Comes complete with operator's manual, SCFH air flow controller and NIST certificate.
***Ordering Example: RHB-1500-C1S2,** battery-powered hygrometer with 2-stage chill mirror.*

Optical Chilled Mirror

Dew Point Transmitter

With Optional Humidity Measurement

RHCM-40 Series

1 YEAR WARRANTY · NIST · CE

Standard

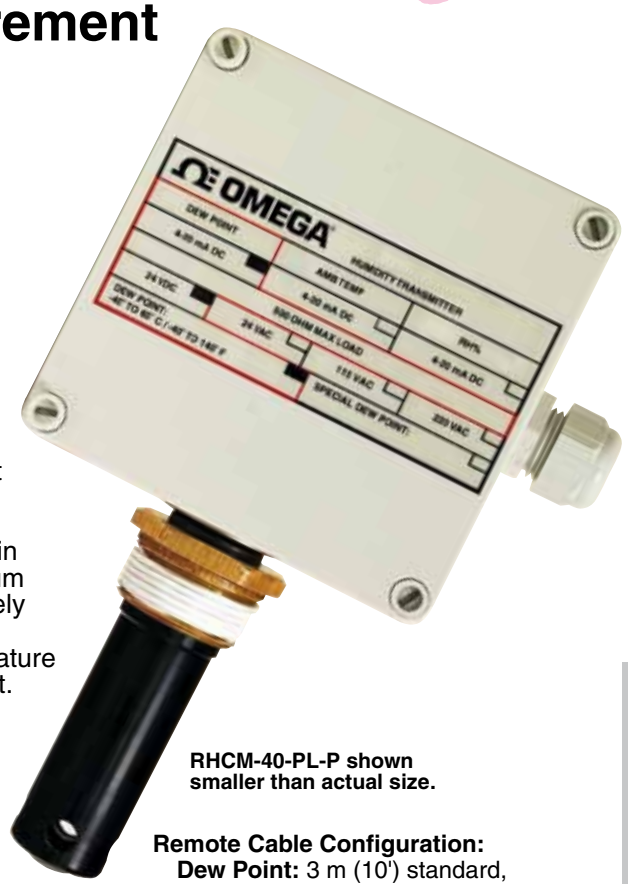
- Wall, Duct and Pipe Mount Models
- Remote Type Models
- 4-Wire RTD Measurement for Dew Point
- ±0.2°C Accuracy for Both Dew Point and Temperature
- Long-Term Stability and Repeatability
- RS232, Bi-Directional, Serial Output
- Electronics Housed in IP65 Enclosure (Wall Mount)
- Aluminum Housing for Other Configurations
- 2 Analog Outputs (4 to 20 mA/0 to 5 Vdc to 0 to 10 Vdc Selectable)

Optional Features

- Air Temperature and Humidity
- 2 Line LCD (Graphical Display with 3 Parameters Displayed at One Time)
- AC Universal Supply 85 to 230 Vac
- Flow-Through Sample Chamber
- High Pressure (20 bar)

The RHCM-40 Series dew point transmitter is an optical chilled mirror high performance hygrometer designed to continuously measure the moisture content in gases. The sensor provides accurate long term repeatability and high reliability performance for process control and energy management. The instrument is powered by 24 Vdc or optional AC universal supply 85 to 230 Vac.

The RHCM-40 series uses the chilled mirror dew point temperature condensation principle to determine the water vapor concentration in gas mixtures, and a platinum resistance RTD to accurately measure that temperature. Options include air temperature and humidity measurement. There are two selectable analog outputs which include 4 to 20 mA, 0 to 5 Vdc, or 0 to 10 Vdc and an RS232 serial port as well as electrically isolated relay contacts.



RHCM-40-PL-P shown smaller than actual size.

Specifications

Range:
- **Dew Point (Standard):** -40 to 60°C (-40 to 140°F)
- **Air Temperature (Optional):** -40 to 60°C (-40 to 140°F)
- **RH (Optional):** 1 to 95%

Accuracy: ± 0.2°C for both dew point and temperature

Hysteresis: Negligible

Repeatability: ±0.05°C

Response: 1°C/second not including settling time

Flow Rate: Static to 3000 linear feet/minute

Pressure: 100 psig maximum (higher pressure available on special order)

Analog Outputs: 2 analog ouputs (4 to 20 mA/0 to 5 Vdc to 0 to 10 Vdc selectable)

Load:
- **4 to 20 mA:** 0 to 250 Ω
- **0 to 5/10 Vdc:** 1 kΩ or higher

Relay Outputs: 2 programmable alarm relays
- **K1:** Clean mirror/Alarm 1
- **K2:** Servolock/Alarm 2
- **Contact Rating:** Normally open (NO) 3 A at 25 Vac, or 30 Vdc

Remote Cable Configuration:
- **Dew Point:** 3 m (10') standard, 15.2 m (50') maximum
- **Air Temperature (Optional):** 3 m (10') standard, 15.2 m (50') maximum

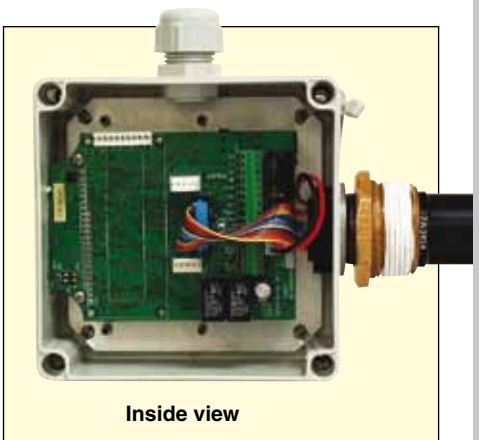
For Dew Point: 2 stages of cooling (TEC) with a depression of 60°C

Mirror:
- **Standard:** Chrome plated
- **Optional:** Gold or platinum

Power Supply: 24 Vdc ±20%, 1 A maximum

Weight: 1.4 kg (3 lb)

Electronics Module Outside Dimensions: 130 H x 130 W x 76 mm D (5.1 x 5.1 x 3")



Inside view

To Order *Visit omega.com/rhcm-40 for Pricing and Details*	
Model No.	**Description**
RHCM-40-PL-W	Wall mount, dew point transmitter with an IP65 plastic enclosure, a 2-staged chilled mirror sensor, 2 programmable analog outputs, RS232, alarm relays
RHCM-40-AL-W	Wall mount, dew point transmitter with an aluminum enclosure, a 2-staged chilled mirror sensor, 2 programmable analog outputs, RS232, alarm relays
RHCM-40-PL-D	Duct mount, dew point transmitter with an IP65 plastic enclosure, a 2-staged chilled mirror sensor, 2 programmable analog outputs, RS232, duct mount flange kit, alarm relays
RHCM-40-AL-D	Duct mount dew point transmitter with an aluminum enclosure, a 2-staged chilled mirror sensor, 2 programmable analog outputs, RS232, alarm relays
RHCM-40-PL-R	Remote mount dew point transmitter with an IP65 plastic enclosure, a 2-staged chilled mirror sensor, 2 programmable analog outputs, RS232, duct mount flange kit, 1.8 m (6') cable between sensor and electronics, alarm relays
RHCM-40-AL-R	Remote mount dew point transmitter with an aluminum enclosure, 3 m (10') cable between sensor and electronics
RHCM-40-PL-P	Pipe mount dew point transmitter with an IP65 enclosure, 1¼ NPT brass pipe fitting (100 psi maximum)
RHCM-40-AL-P	Pipe mount dew point transmitter with an aluminum enclosure, 1¼ NPT brass pipe fitting (100 psi maximum)

Options ***(Choosing one of the following three options will include relative humidity)***

Suffix	Description
-ATDT/R	Remote mount air temperature 100Ω Pt RTD probe [3 m (10' cable)]
-ATDT/W	Wall mount air temperature 100Ω Pt RTD probe (-W models only)
-ATDT/I	Integrated air temperature 100Ω Pt RTD sensor embedded in the dew point sensor (-W, -D, -R models only)

Two Analog Outputs Selectable for Dew Point, Temperature or Humidity

Suffix	Description
-ACDT	Universal power supply (85 to 230 Vac, 50/60 Hz)
-ECDT	Additional cable length [up to 15.2 m (50')] for both AT and/or dew point sensor
-RD	LCD (-PL models only)
-RTD	Resistive (100Ω Platinum RTD) dew point output
-AR	Aspirator kit
-SC	Cover, flow through, low pressure sample chamber with fittings
-SC1	Sample chamber flow through max pressure 100 psig
-SMU	Sample module universal 115/230 Vac operation

***Note:** When ordering the "**-RD**" LCD option, all 3 parameters will be displayed but only 2 of the parameters can be assigned to the two analog outputs.*

Accessory

Suffix	Description
-D2	Two stage chill mirror flow through sensor

Comes complete with two stage chill mirror sensor (insertion probe style, 60°C depression), 24 Vdc input power, 2 selectable analog outputs, RS232 (bi-directional), two programmable alarm relays, operator's manual and NIST certificate.

***Ordering Example: RHCM-40-PL-W-ATDT/W,** wall mount, dew point transmitter with an IP65 plastic enclosure, a 2-staged chilled mirror sensor, 2 programmable analog outputs, RS232, alarm relays and wall mount temperature probe with relative humidity.*

Relative Humidity On/Off Controller

RHCN-7000 Series

RHCN-7001

- **Bright Green 3-Digit LED Display**
- **0 to 1 or 0 to 3 Vdc, 4 to 20 mA Inputs**
- **8 Amp Relay Output**
- **Simple On/Off Control**
- **Compatible with RH Transmitters**
- **Optional RH Probe**

The microprocessor based RHCN-7000 Series on/off controller provides control for humidifying or de-humidifying. Relative humidity, output status, and error messaging can be viewed on the bright green LED display. The controller features user defined parameters including setpoint, hysteresis, control type, and probe adjustment. Access to programming parameters can be locked for security purposes using the password protection feature. Select RHCN-7000 models can be interfaced with most RH transmitters that provide a 0 to 1 Vdc or 4 to 20 mA output, or an optional RH probe, model RHCN-7000-RP can be ordered to work with 0 to 3 Vdc input models.

Specifications

(Instrument Only)

Relative Humidity Range: 0 to 100% RH

Input: 0 to 3 or 0 to 1 Vdc or 4 to 20 mA (depending on model)

Accuracy: ±1% RH

Display: 3-digit, green, 12.7 mm (0.5") digits

Resolution: 1-digit

Temperature Limits: 0 to 70°C (32 to 158°F)

Storage Temperature: -20 to 80°C (-4 to 176°F)

Output: 8 A SPDT relay @ 250 Vac resistive

Horsepower Rating (HP): ⅓ HP

Control Type: ON/OFF

Power Requirements: 110 or 230 Vac (depending on model)

Memory Backup: Nonvolatile memory

Weight: 65 g (2.3 oz)

Front Panel Rating: IP64

Optional Probe

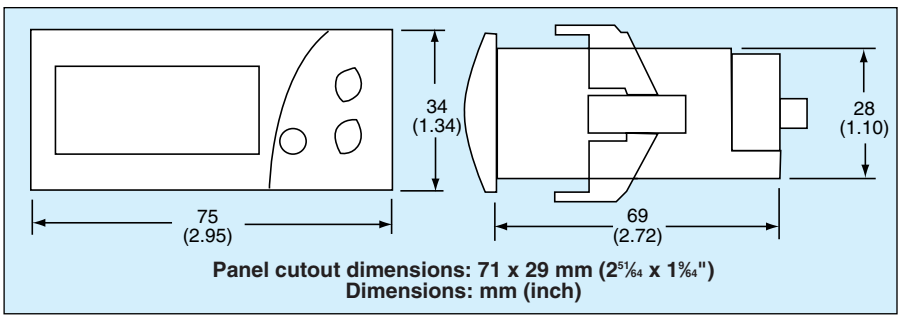
Output: 0 to 3 Vdc

Dimensions: 64 x 25 mm (2.5 x 0.98"), 1.22 m (4') cable

Relative Humidity Range: 25 to 90% RH (probe only)

Accuracy: ±5% RH @ 25°C (77°F)

System Accuracy (Instrument and Optional Probe): ±6% RH



Panel cutout dimensions: 71 x 29 mm (2⁵⁵⁄₆₄ x 1¹⁄₆₄")
Dimensions: mm (inch)

To Order *Visit omega.com/rhcn-7000_series for Pricing and Details*

Model No.	Description
RHCN-7001	RH controller, 0 to 1 Vdc input, 110 Vac
RHCN-7002	RH controller, 0 to 1 Vdc input, 230 Vac
RHCN-7003	RH controller, 4 to 20 mA input, 110 Vac
RHCN-7004	RH controller, 4 to 20 mA input, 230 Vac
RHCN-7005	RH controller, 0 to 3 Vdc input, 110 Vac
RHCN-7006	RH controller, 0 to 3 Vdc input, 230 Vac
RHCN-7000-RP	Humidity probe, 0 to 3 Vdc output (for models RHCN-7005 and RHCN-7006 only)

Comes complete with operator's manual.

***Ordering Examples: RHCN-7003** relative humidity controller, 4 to 20 mA input, 110 Vac power.*

***RHCN-7005** relative humidity controller, 0 to 3 Vdc input, 110 Vac power, and **RHCN-7000-RP** humidity probe.*

Accessory (Field Installable)

Model No.	Description
CNQUENCHARC	Noise suppression RC snubber (2 leads), 110 to 230 Vac

Transmitter Receivers

Monitor Up to 48 Temperature, pH, Process or Humidity Signals

UWTC-REC Series

1 YEAR WARRANTY

- **Receive Signals from UWTC, UWRTD, UWRH, UWPH and UWPC Transmitters**
- **Analog Output Available**
- **USB Interface for Fast Installation—Cable Included!**
- **Digital Display Available**
- **Weather Resistant NEMA Enclosure Available**
- **TC Central Software Included—Converts Your PC into a Chart Recorder or Data Logger**
- **Display and Log Data, Ambient, Signal Strength and Battery Status in Real Time**

UWTC-REC1 transmitter/ receivers are compatible with all connector/ transmitters, including:

- UWTC thermocouple connectors/transmitters
- UWRTD RTD connectors/ transmitters
- UWRH relative humidity transmitter
- UWPH pH transmitters
- UWPC process transmitters

UWTC-REC1

All models shown smaller than actual size.

UWTC-1 thermocouple transmitter. Visit OMEGA for the complete selection of compatible wireless transmitters.

UWTC-REC2-D with analog output and display.

The OMEGA® wireless connector/ transmitter receivers are compact devices that receive the transmitted signals from UWTC Series transmitters, and display/log/ graph the data on your PC. TC Central software, included with each unit, displays the measured and ambient temperatures, along with RF signal strength and battery condition. The TC central software can turn your PC into a recorder or data logger so readings can be saved and later printed or exported to a spreadsheet file.

The UWTC-REC1 is a 48-channel receiver with USB connection; the UWTC-REC2 adds an analog output that can be used to retransmit a 0 to 5 Vdc, 0 to 10 Vdc, type K thermocouple or 4 to 20 mA signal to a remote meter, controller, PLC or data acquisition instrument. Both are available with an optional NEMA rated enclosure; UWTC-REC2 units are also available with an optional digital display.

UWTC-REC3 32-channel receiver with ethernet.

UWTC-REC3 receiver/host with ethernet is compatible with UWTC, UWRTD, UWRH and UWIR series transmitters, and connects directly to your network or the Internet—no PC required!

UWTC-REC1-NEMA with NEMA-rated enclosure.

Combine One of These Wireless Receivers with Multiple Wireless Connectors or Wireless Probe Assemblies to Form a Complete Wireless Measurement System!

Data Logging and Recording Software Included

UWTC-REC2 models are available with 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc or Type K thermocouple output. Mating connector and cable included.

Laptop not included.

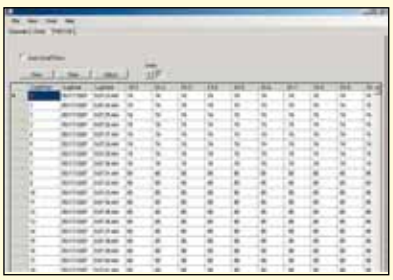
TC Central Software

- Display, Log and Chart Data from up to 48 Wireless Instruments
- Easy Setup and Operation
- High/Low Alarms
- Programmable Engineering Units
- Transmission, Signal Strength and Battery Power Indicators
- Data Export to CSV File, Chart Export to Clipboard
- Included with UW and MWTC Wireless Instruments

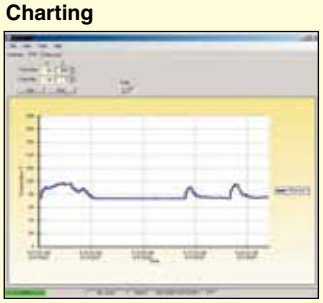
Compatible with 32-bit Windows (2000, XP, Vista or 7) OS

Latest software version available for free download at **ftp.omega.com**

Data Logging



Charting



SPECIFICATIONS

Power: USB-powered device; receives power from host; UWTC-REC2 units also require dc power supply for analog output (AC adaptor included)

Operating Environment: -10 to 70°C (14 to 158°F)

Radio Frequency (RF) Transceiver

Carrier: ISM 2.4 GHz, direct sequence spread spectrum

RF Data Packet Standard: IEEE 802.15.4, open communication architecture

Software (Included): Requires Windows® OS

CE Compliance: Standard

Note: *Because of transmission frequency regulations, the UWTC-REC1 may only be used in the United States, Canada, Europe, South Korea and Brazil. The UWTC-REC2 may only be used in the United States, Canada, Europe, China, South Korea, Singapore, Brazil and Mexico. For purchase of model UWTC-REC2 exclusively in Japan, please order model UWTC-REC2J.*

To Order

Model No.	Description
UWTC-REC1	USB powered 48-channel transmitter receiver
UWTC-REC1-NEMA	USB powered 48-channel transmitter receiver with NEMA enclosure
UWTC-REC2-(*)	48-channel transmitter receiver with analog output
UWTC-REC2-D-(*)	48-channel transmitter receiver with analog output and digital display
UWTC-REC2-(*)-NEMA	48-channel transmitter receiver with analog output, NEMA enclosure
UWTC-REC2-D-(*)-NEMA	48-channel transmitter receiver with analog output and digital display, NEMA enclosure (TC version is no longer available)
UWTC-CABLE	Additional USB programming/communication cable

Comes complete with measurement/data logging software, USB cable, and operator's manual. UWTC-REC2 units also include AC power adaptor.

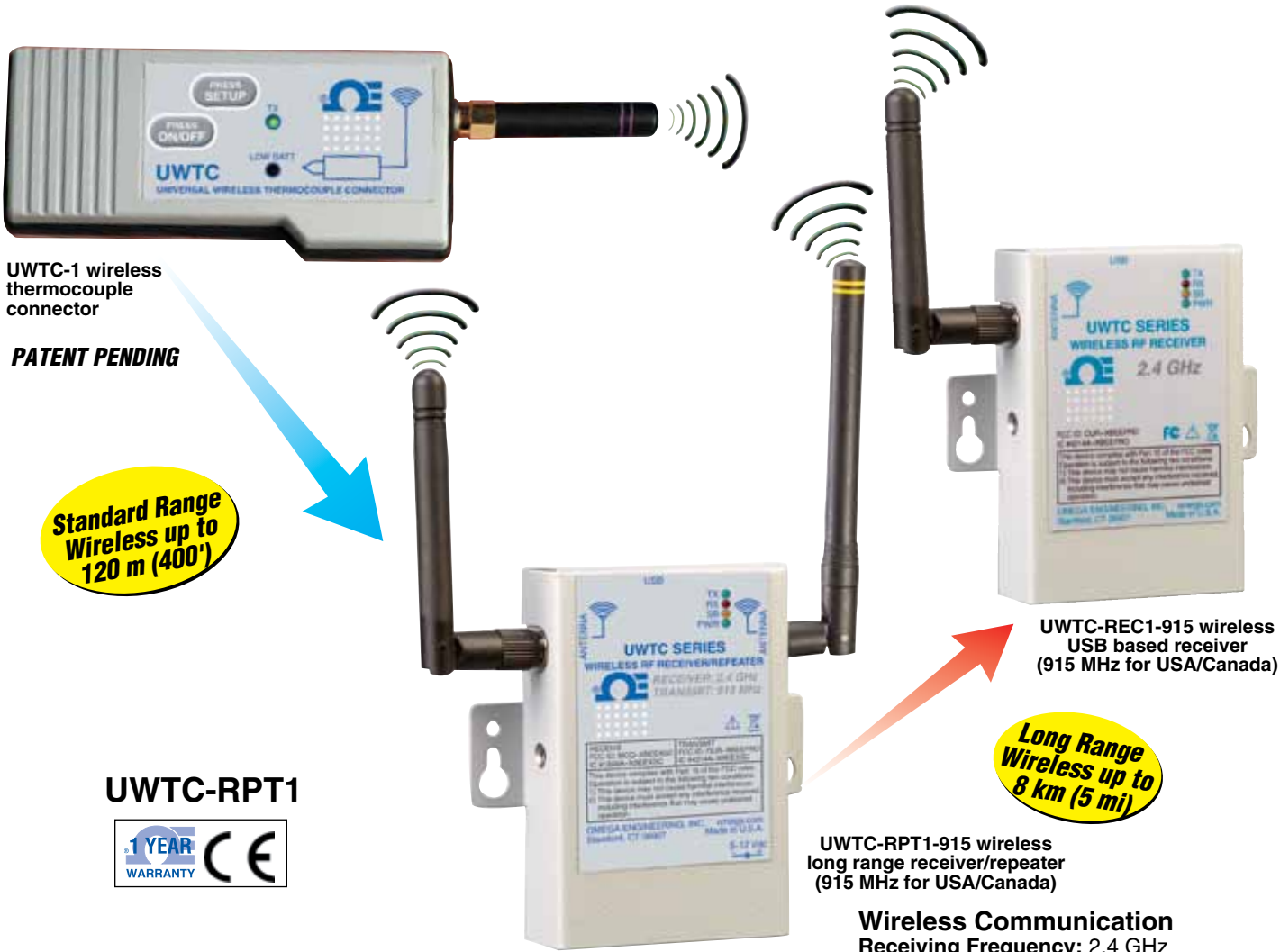
***** *Specify analog output signal: "**V1**" for 0 to 5 Vdc; "**V2**" for 0 to 10 Vdc, "**TC**" for Type K thermocouple, or "**MA**" for 4 to 20 mA.*

Ordering Examples: UWTC-REC1, *USB powered 48-channel transmitter receiver.*

UWTC-REC2-D-V1-NEMA, *48-channel transmitter receiver with analog output and digital display, NEMA enclosure.*

Long Range Wireless Repeater/ Receiver System

For UW Series Transmitters



UWTC-1 wireless thermocouple connector

PATENT PENDING

Standard Range Wireless up to 120 m (400')

UWTC-REC1-915 wireless USB based receiver (915 MHz for USA/Canada)

Long Range Wireless up to 8 km (5 mi)

UWTC-RPT1-915 wireless long range receiver/repeater (915 MHz for USA/Canada)

UWTC-RPT1

1 YEAR WARRANTY

- **Receive Data from Up to 48 Wireless Sensors and Re-transmits the Data to a USB Based Receiver Up to 5 Miles (8 km) Away**
- **Compatible with All OMEGA UW Series Wireless Connectors, Transmitters and Probe Assemblies**
- **Available in 915 MHz for USA/Canada or 868 MHz for Europe**
- **Field Programmable via USB Connection and Included Software Utility**
- **Available in Rugged, Splashproof, NEMA (IP65) Housing**

OMEGA's long range wireless repeater system extends the transmitting range of OMEGA's wireless connectors, probes and industrial transmitters up to 5 miles. The UWTC-RPT1 collects transmitted data from OMEGA UW series transmitters and instantaneously re-transmits the data to your USB base receiver. Distances of up to 5 miles line-of-sight are possible with proper installation of the repeater and high gain antennas. This system provides a low cost, ideal solution for when data from many process sensors need to be recorded far from the actual sensing location.

Specifications

Power: 5 to 12 Vdc @ 500 mA (AC wall adaptor included)
Ambient Operating Conditions: 0 to 55°C (32 to 131°F), 90% RH non-condensing

Wireless Communication

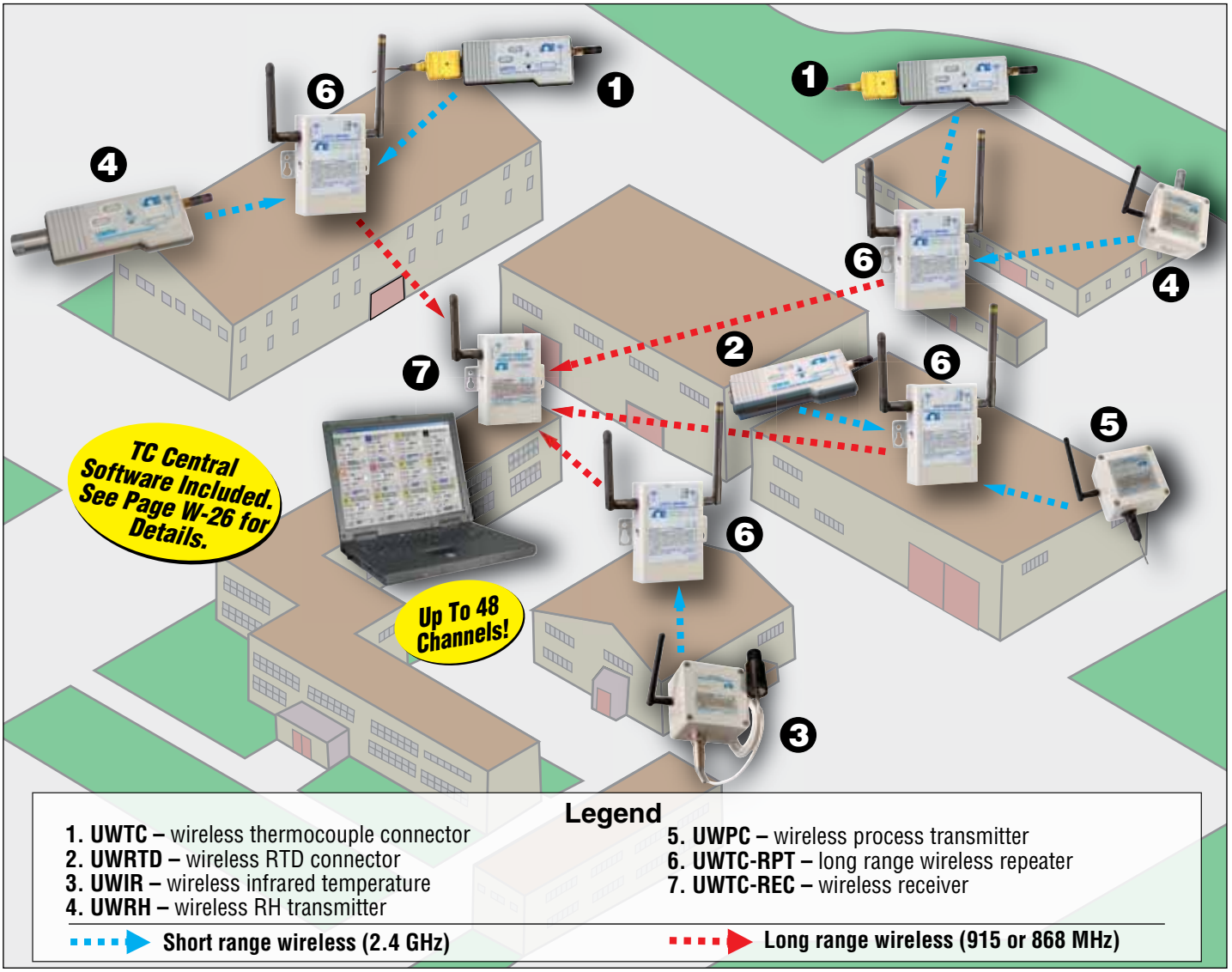
Receiving Frequency: 2.4 GHz
Transmitting Frequency: 915 MHz (USA/Canada) 868 MHz (Europe)
RF Transmit Power: 100 mW (+20 dBm)
Indoor/Urban Range: Up to 305 m (1000')
Outdoor/RF Line-of-Sight Range:
Standard: Up to 1.8 miles (3 km)
One High Gain Antenna: Up to 3 miles (4.8 km)
Two High Gain Antennas: Up to 5 miles (8 km)
Setup and Configuration: USB (cable included) for Windows®

Enclosure

Standard Model: Painted steel
NEMA Model: ABS base, polycarbonate lid

Dimensions
Standard Model: 92 H x 62 W x 22 mm D (3.6 x 2.43 x 0.85")
NEMA Model: 160 H x 90 W x 60 mm D (6.3 x 3.54 x 2.36")
Approvals: FCC, IC, CE

Consolidate All Your Wireless Signals Into a Single Convenient Location, Up to 5 Miles Away with the UWTC-RPT1 Wireless Repeater System



To Order	
Model No.	**Description**
UWTC-RPT1-(*)	48-device wireless receiver/repeater†
UWTC-RPT1-(*)-NEMA	48-device wireless receiver/repeater, NEMA enclosure†
UWTC-REC1-(*)	48-device wireless USB receiver
UWTC-REC1-(*)-NEMA	48-device wireless USB receiver, NEMA enclosure
UWTC-RPT-ANT-900	UWTC-RPT1 high gain antenna mounting kit (for longer range)
UWTC-RPT-CABLE-25	25' extension cable for high gain antenna mounting kit

Note: *The* ***UWTC-RPT-ANT-900*** *high gain antenna kit includes one high gain antenna, adapter, and 10' cable to be installed on the receiver. To extend the range further, you may purchase a second kit and install it on the repeater.*

** Specify RF "**915**" for 915 MHz (USA/Canada) or "**868**" for 868 MHz (Europe) † additional cost for "**868**" models*

Each receiver comes complete with a USB cable, PC based software and operator's manual.
Each repeater comes complete with a USB programming cable, AC wall adaptor and operator's manual.

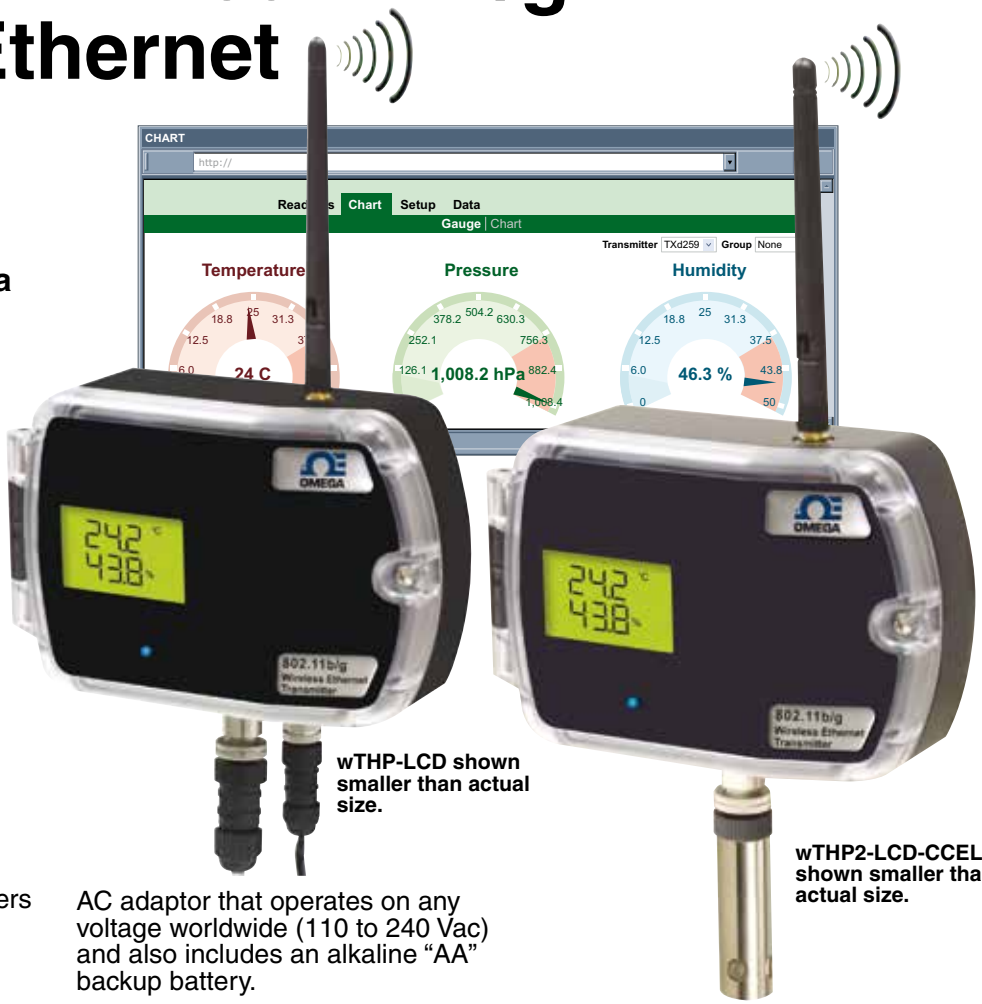
USA/Canada Ordering Example: UWTC-RPT1-915, *48-device wireless repeater (USA/Canada), and* ***UWTC-REC1-915,*** *48-device wireless receiver (USA/Canada).*

Europe Ordering Example: UWTC-RPT1-868, *48-device wireless repeater (Europe), and* ***UWTC-REC7-868,*** *48-device wireless receiver*

Sensor System 802.11b/g Wireless Ethernet

wSeries 1 YEAR WARRANTY

- Web Server
- Virtual Coordinator Data Logging Software
- Alarms by Email or Text Message
- Gadgets for Your Desktop
- Temperature
- Humidity
- Barometric Pressure
- Dual Thermocouple Input
- Analog Process Voltage and Current Inputs
- NEMA 4 (IP65) Enclosure
- RoHS 2 Compliant



wTHP-LCD shown smaller than actual size.

wTHP2-LCD-CCELL shown smaller than actual size.

The OMEGA™ wSeries transmitters communicate on a standard Wi-Fi network which is an ideal and economical solution for facilities with an existing Wi-Fi network as well as new installations.

OMEGA offers Wi-Fi transmitters for analog voltage and current, temperature from digital sensors and dual thermocouples, humidity, and barometric pressure.

Included with Wireless Sensor System is the Virtual Coordinator, a data logging software application running on a computer on the network. The "VC" collects and logs data from the transmitters and serves it to Web browsing clients.

You can view charts and graphs, monitor and record readings from virtually any type of transducer over an Ethernet network or the Internet from any computer, tablet, or smart phone with a Web browser.

The Wi-Fi transmitters are powered by your choice of batteries or AC. The battery version comes with two ordinary alkaline "C-cell" batteries that can last for 2 years depending on the frequency of readings. The AC version comes with a universal AC adaptor that operates on any voltage worldwide (110 to 240 Vac) and also includes an alkaline "AA" backup battery.

The wSeries Wi-Fi transmitters are designed for demanding industrial applications and harsh outdoor environments. The electronics are protected in a rugged weatherproof, polycarbonate NEMA 4 (IP65) rated housing.

Alarm and Email

The wSeries wireless sensor system can trigger an alarm if variables go above or below a set point that you determine. You can even set alarms to be notified by email. Alarms can be sent to a single user or to a group distribution list, including text messages to cell phones.

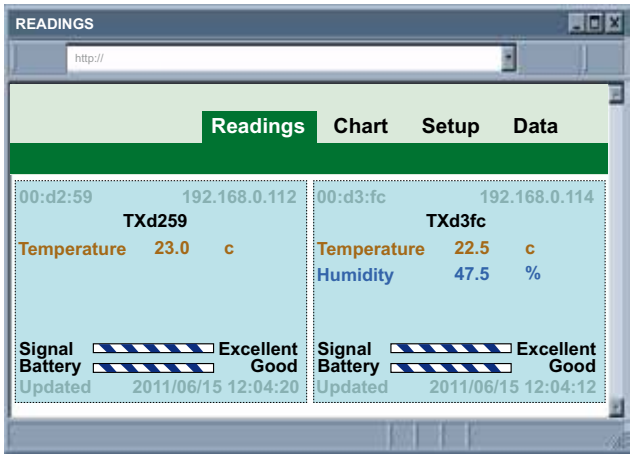
Charts and Graphs

The wSeries system serves active web pages to display real time readings and charts of analog voltage and current, temperature, humidity, and barometric pressure. You can also log data in standard data formats for use in a spreadsheet or data acquisition program such as Excel® or Visual Basic®.

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year. Temperature and humidity can be charted across the full span (-40 to 125°C, and 0 to 100% RH) or within any narrow range such as (20 to 30°C). OMEGA offers an OEG Server software that makes it easy to integrate the wSeries wireless sensor system with many popular data acquisition and automation programs offered by OMEGA, Wonderware, iConics, Intellution, Rockwell Automation, and National Instruments, among others.

Quality and Technology

The innovative wSeries system features an extended one year warranty at no extra charge.



Readings from web browser.

Gauge readings from web browser.

Specifications

RELATIVE HUMIDITY

wTHP, wTHP2, wBTHP Accuracy/Range: ±2% for 10 to 90%; ±3% for 5 to 10% and 90 to 95%; ±4% for 0 to 5% and 95 to 100%

Hysteresis: ±1% RH

Non-Linearity: ±3%

Repeatability: ±0.1%

Resolution: 0.1%

TEMPERATURE

Accuracy/Range*:

wTHP, wTHP2: ±0.5°C for 5 to 45°C (±0.9°F for 41 to 113°F); up to ±1.5°C for -40 to 5°C and 45 to 124°C (up to ±2.7°F for -40 to 41°F and 113 to 255°F)

wTP1, wTP2: ±0.5°C for 10 to 85°C (±0.9°F for 50 to 185°F); ±1°C for -40 to 10°C and 85 to 125°C (±1.8°F for -40 to 50°F and 185 to 257°F)

wBTHP: ±0.5°C for 5 to 45°C (±0.9°F for 41 to 113°F); up to ±1.5°C for -40 to 5°C and 45 to 85°C (up to ±2.7°F for -40 to 41°F and 113 to 185°F)

wBTP: ±0.8°C @ 25ºC (±1.5°F @ 77ºF) ±4°C for -40 to 85°C (±7.2°F for -40 to 185ºF)

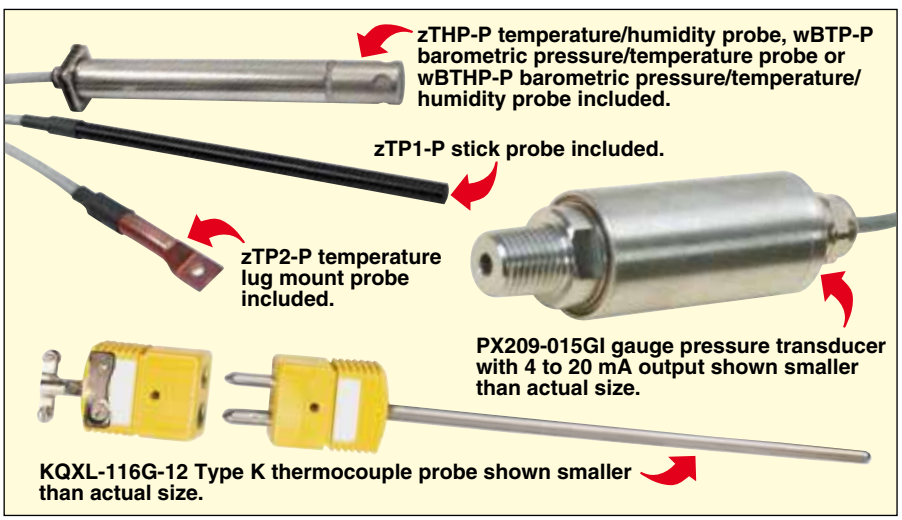
***Note:** Extended temperature range is for external probe only.*

Resolution: 0.1ºC

BAROMETRIC PRESSURE

wBTP, wBTHP Accuracy/Range: ±2 mbar for 300 to 1100 mbar @ 0 to 50°C; ±6 mbar for 300 to 1100 mbar @ -40 to 85°C

Resolution: 0.1 mbar



ANALOG VOLTAGE AND CURRENT INPUT (wVI)

Voltage Input: Differential; bipolar; ±100 mV, ±1V, ±10V

Input Impedance: 38 kΩ for voltage

Current Input: Differential; bipolar; ±20 mA (5 Ω load)

Accuracy: ±0.1% full range @ 25°C

Reading Rate: Periodic (1 sample/update) or continuous (3 samples/second)

A/D Conversion: Sigma-delta

Resolution: 16 bits

Temperature Coefficient: ±50 ppm/°C

Common Mode Rejection: 105 dB

Normal Mode Rejection: 98 dB

Warm-Up to Rated Accuracy: 30 minutes

THERMOCOUPLE INPUT (wTC)

Temperature Range: Refer to thermocouple chart on next page

Temperature Accuracy: Refer to thermocouple chart on next page

Temperature Stability: 0.08°C/°C

Temperature Coefficient: ±25 ppm/°C

Thermocouple Cold End Tracking: 0.1°C/°C

Thermocouple Lead Resistance: 100 Ω max

Thermocouple Type (ITS 90): J, K, T, E, R, S, B, C, N, L (DIN J)

Warm-Up to Rated Accuracy: 30 minutes

Reading Rate: Periodic (1 sample/update) or continuous (3 samples/second)

Meter Specifications

Supported Protocols Transmitter: TCP/IP, UDP, ARP, ICMP, DHCP, HTTP and FTP

Supported Protocols VC: TCP/IP, UDP, HTTP, FTP, SMTP and Telnet

WIRELESS COMMUNICATION

Standard: IEEE 802.11 b/g / Wi-Fi

Frequency: 2.4 GHz (2402 to 2480 MHz)

Range: 60 m (200') indoor line-of-site or more depending upon sensitivity, data rate, wireless access point, and environmental considerations

Radio Power Output Level (Class 1): 91.4 mW EIRP (19.6 dBm EIRP)

Modulation:
- **802.11b Compatibility:** DSSS (CCK-11, CCK-5.5, DQPSK-2, DBPSK-1)
- **802.11g:** OFDM (default)

Channels: 1 to 13; channel 14 for Japan use only and is not certified

Channel Spacing (Bandwidth)/ Transmission Rate (Over the Air): 20 MHz, refer to manual
- **802.11b:** 1 to 11 Mbps
- **802.11g:** 6 to 54 Mbps

Receiver Sensitivity: -85 dBm, typ

POWER (wSERIES AC POWER)

Power Input: 5 Vdc
Consumption: 0.7 W max

AC Power Adaptor (Safety Qualified):
- **Nominal Output:** 5 Vdc @ 0.6 A
- **Input:** 100 to 240 Vac, 50/60 Hz

Back-Up Alkaline Battery: One "AA" 1.5 Vdc (included)

POWER (wSERIES-CCELL)

Alkaline Battery: 2 "CCELL" 1.5 Vdc (included)

Lifetime: Estimate of 4.3 year with frequency of 1 reading per 2 minutes (see chart this page)

ENCLOSURE PACKAGING

Material: Polycarbonate

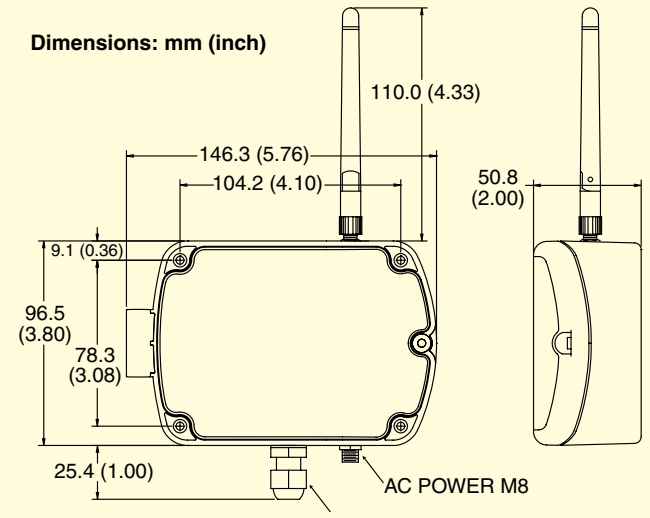
Protection: NEMA 4 (IP65) rated housing

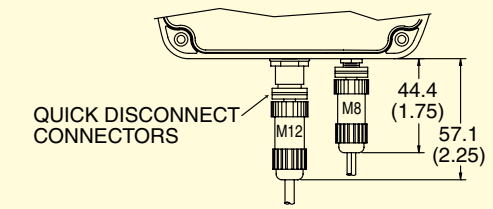
Dimensions: 96.5 H x 146.3 W x 50.8 mm D (3.8 x 5.76 x 2"), not including connectors or antenna

GENERAL

Approvals: FCC Part 15C; EMC; 2004/108/EC, LVD 2006/95/EC, R&TTE 1999/5/EC

Operating Temperature: -10 to 55°C (14 to 131°F), 90% RH non-condensing





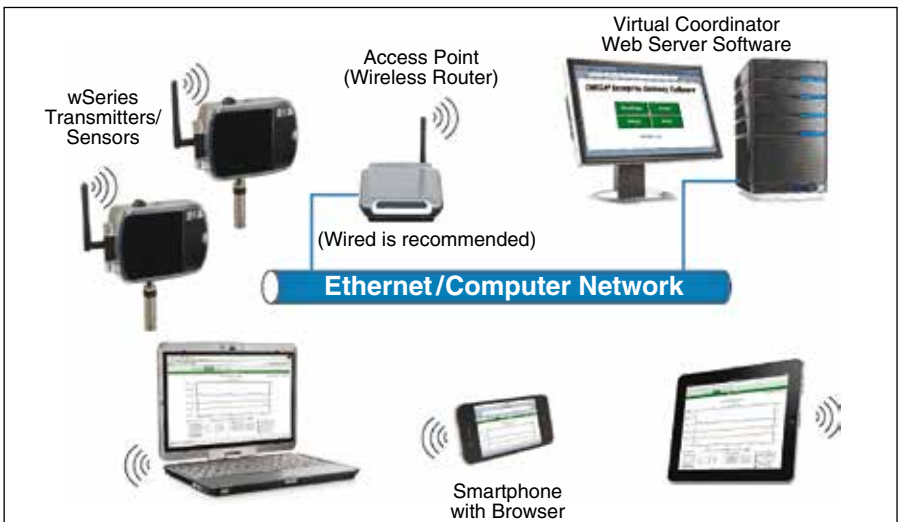
Safety qualified universal AC power adaptor included.

THERMOCOUPLE CHART	
Input Type	
J	Iron-Constantan
K	CHROMEGA™-ALOMEGA™
T	Copper-Constantan
E	CHROMEGA™-Constantan
R	Pt/13%Rh-Pt
S	Pt/10%Rh-Pt
B	30%Rh-Pt/6%Rh-Pt
C	5%Re-W/26%Re-W
N	Nicrosil-Nisil
L	J DIN

ESTIMATED ALKALINE BATTERY LIFETIME

Update Rate	C Cell Units	AA Back-Up/AC Units
Continuous* (wTC, wVI)	2 weeks	2 days
10 seconds* (default)	9.6 to 20.5 months	4 weeks
1 minute	2.4 to 7 years	3.6 to 9.6 months
2 minutes	4.3 to 7 years	6 months to 1.5 years

** Power save mode.*
Important: Battery life is dependent on environmental conditions and transmitter settings.



Gadgets

Another way to display your data is by using our gadget feature.

This is a convenient way to view your process without keeping a web browser open, and you can display multiple IP addresses.

The values are always visible while you are working on your other computer tasks. It will automatically start when you restart your computer.

Download the gadget from the software section on OMEGA's website.

To Order

Model No.	Description
wTP1-LCD	Temperature sensor with stick probe, AC powered, LCD display
wTP2-LCD	Temperature sensor with lug mount probe, AC powered, LCD display
wTHP-LCD	Temperature and humidity sensor with industrial probe, AC powered, LCD display
wTHP2-LCD	Temperature and humidity sensor with short probe, AC powered, LCD display
wBTHP-LCD	Barometric pressure, temp and humidity sensor with industrial probe, AC powered, LCD display
wBTP-LCD	Barometric pressure and temperature sensor with industrial probe, AC powered, LCD display
wTC-LCD	Dual thermocouple inputs, AC powered, LCD display
wVI-LCD	Analog input, AC powered, LCD display
wTP1-LCD-CCELL	Temperature sensor with stick probe, battery powered, LCD display
wTP2-LCD-CCELL	Temperature sensor with lug mount probe, battery powered, LCD display
wTHP-LCD-CCELL	Temperature and humidity sensor with industrial probe, battery powered, LCD display
wTHP2-LCD-CCELL	Temperature and humidity sensor with short probe, battery powered, LCD display
wBTHP-LCD-CCELL	Barometric pressure, temp and humidity sensor with industrial probe, battery powered, LCD display
wBTP-LCD-CCELL	Barometric pressure and temperature sensor with industrial probe, battery powered, LCD display
wTC-LCD-CCELL	Dual thermocouple inputs, battery powered, LCD display
wVI-LCD-CCELL	Analog input, battery powered, LCD display
Replacement Probes	
zTP1-P	External stick probe with temperature sensor, 3 m (10') cable
zTP2-P	External lug mount probe with temperature sensor, 3 m (10') cable
zTHP-P	External industrial probe with temperature and humidity sensor, 3 m (10') cable
zTHP2	External short industrial probe with temperature and humidity sensor
wBTP-P	External industrial probe with barometric pressure, temperature sensor, 3 m (10') cable
wBTHP-P	External industrial probe with barometric pressure, temp and humidity sensor, 3 m (10') cable
Calibration for New Units	
CAL-3-HU	NIST traceable calibration certificate, 3 humidity points: 25%, 50%, 75%, 1 temperature point 25°C (for new units)
CAL-3-HU-P-T	NIST traceable calibration certificate, 3 humidity, 3 barometric pressure, and 3 temperature points (for new units)
CAL-3-P	NIST traceable calibration certificate, 3 barometric pressure points and 1 temperature 25°C (for new units)
CAL-3-T	NIST traceable calibration certificate, 3 temperature points (for new units)
CT485B-CAL-KIT	Calibration kit, 33% and 75% RH standards

Comes complete with 2 "CCELL" batteries or AC power adaptor, and "AA" backup battery.

Ordering Example: *Two* ***wTP1-LCD,*** *wireless transmitters with LCD, AC power and external temperature sensor with 3 m (10') cable, and two* ***CAL-3-T,*** *NIST traceable calibration certificates;* ***zTP1-CAL-3-T,*** *a calibrated replacement probe including calibration certificate.*

Note: *Two Type K thermocouples with 1 m (3') of 24 AWG PFA insulated wire with stripped lead termination included with wTC models.*

Wireless Environmental Sensor

ZW-CM

- **Temperature, Humidity & Barometric Pressure**
- **Up to 5 Year Battery Life Using Low Cost Alkaline "AA" Batteries**
- **Time Stamping and Local Logging of All Measurements**
- **Flexible Power Management**
- **Compatible with ZW-REC Coordinators —No Special Software Required**
- **OEG Support Provides Email Alarming, Data Historian and OPC/UA, DA Support**

ZW-CM shown smaller than actual size.

The compact ZW-CM provides assured monitoring and transmission of temperature, relative humidity and barometric pressure for environmental monitoring applications. The fully self-contained unit operates using two low-cost Alkaline "AA" batteries, requiring no external sensors or power and may be easily wall mounted in virtually any residential, industrial or commercial site. The ZW-CM seamlessly integrates with the Omega™ ZW SERIES wireless sensor system (ZW-REC and ZW-ED.

The ZW-CM uses an IEEE 802.15.4 compliant transmitter operating at 2.4 GHz designed to transmit up to 1000 m* (3280') to a ZW-REC coordinator. The ZW-REC connects directly to an Ethernet network to serve active web pages and display the data. You can monitor and record temperature, relative humidity, and barometric pressure over an Ethernet network with no special software—just your web browser.

The Omega™ ZW-Series wireless sensor system provides Web-based monitoring of temperature, humidity, barometric pressure and a wide range of process related devices in diverse industrial, laboratory, commercial and agricultural applications.

Omega™ offers a growing selection of end devices suitable for a variety of applications. Each end device supports up to four internal or external sensors. The ZW-ED Universal Sensor interface allows users to connect a variety of digital probes, 4-20 mA external sensors and discrete digital signals to measure pulse rate, width, delay and counter applications. The ZW-ED-A extends support to thermocouples, RTD's and process voltage/current devices. The UWxx end devices provide a convenient handheld device with a range of sensor inputs.

The ZW-CM compact wireless "End Devices" mount discretely to the wall in clean rooms, laboratories, museums, computer server rooms, warehouses and any facility requiring environmental monitoring. The device is powered by two "AA" 1.5V alkaline batteries with expected lifetimes of up to 5 years (1 transmission/hour).

The ZW family end devices transmit sensor information to a ZW-REC coordinator (receiver) that can directly support up to one hundred and twenty-eight (128) end devices. The ZW-REC may be powered from an AC adapter to operate on any voltage worldwide from 100 to 240 Vac and 50/60 Hz and connects directly to an Ethernet Network or the Internet.

The ZW-REC is an independent node with an embedded web server and allows sending and receiving data in standard TCP/IP packets.

It is easily configured from a protected and offers encryption. From within an Ethernet LAN or over the Internet, the user just types the IP address (such as 192.168.1.200) or an easy to remember the name (such as “Warehouse 5” or “Chicago Lab”) and the ZW-REC serves a Web Page with the current readings.

The ZW-REC is supported by the Omega Enterprise Gateway (OEG) which provides a set of web-based data data historian and email services.

The optional OEG OPC-UA/DA and MQTT software allow data from the ZW-CM to be integrated into enterprise network and cloud-based applications. The OPC Server enables the ZW wireless sensor system to be easily combined with many popular Data Acquisition and Automation programs offered by Omega, DasyLab, Wonderware, iConics, Intellution, Rockwell Automation, others.

The ZW-CM is designed for residential, industrial or commercial indoor environments. Refer to the ZW-ED Universal sensor transmitter for demanding NEMA rated industrial applications.

** Without obstructions or interference.*

Specifications

Integrated Sensors: Temperature, Relative Humidity, Barometric Pressure
Warm-Up to Rated Accuracy: 30 minutes
Operating Environment: -18 to 55°C (-0.4 to 131°F), 90% RH non-condensing
PACKAGING
Enclosure Material: Polycarbonate
Enclosure Dimensions: 135.9 L x 82 W x 39 mm D (5.35 x 3.23 x 1.56")

TEMPERATURE
Accuracy/Range*: ±0.5°C for 10 to 55°C (±0.9°F for 50 to 131°F) ±1°C for -18 to 10°C (±1.8°F for -0.4 to 50°F)
Resolution: 0.1°C
Repeatability: ±0.1±C
Relative Humidity
Accuracy/Range: 3% (20% to 80%) 5% (5% to 95%)
Hysteresis: ±1% RH
Non-linearity: ±3%
Repeatability: ±0.1%
Resolution: 0.1%
BAROMETRIC PRESSURE
Accuracy/Range: ±4 mbar (300 - 1100 mbar)
Resolution: 0.1 mbar

WIRELESS COMMUNICATION
Standard: IEEE 802.15.4, DSSS
Frequency: 2.4 GHz (2400 to 2483.5 MHz), 16 channels
Network Topology: Star Topology
Range: Up to 300 m (1000') without obstructions or interference
POWER
Alkaline Battery: Two AA-cell 1.5 Vdc, supplied
Lifetime: Estimate 4 years with frequency of 1 reading per minutes
GENERAL
Approvals: CE, FCC: Part 15C. ECCN 5A992, EMC 2014/30/EU, LVD 2014/35/EU, RED 2014/53/EU
Software: OEG

Battery Life

Transmission Rate (Sec)	Battery Life (Days)	Months	Years	Frequency
1	25	1	0.1	Transmit every 1 second
10	247	8	1	Transmit every 10 seconds
60	1395	47	4	Transmit every 1 minute
120	2609	87	7	Transmit every 2 minutes
300	5455	182	15	Transmit every 5 minutes

To Order

Model No.	Description
ZW-CM-TH	Wireless temperature and humidity sensor
ZW-CM-BTH	Wireless temperature, humidity and barometric pressure sensor

Note: *A complete wireless system requires at least: one (1) End Device (ZW-CM) and one (1) Coordinator/Receiver (ZW-REC).*