Barometric Pressure, Temperature, Humidity Virtual Recorder

iBTHX

iBTX Series

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

See Page Hu-12 to Order!

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

The OMEGA® iBTHX transmitter lets 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.
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).

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.

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.

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 spreadsheets 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.

NIST-traceable calibration certificate available.
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 for 185°F)
* Note: Extended temperature range is for
industrial probe only; the iServer’s operating
temperature is 0 to 70°C.

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

To view sensor specifications, select
the iServer configuration Web page.

Optional probe caps shown, fits industrial
wand probe.

No need to take your unit out of service for routine
calibration. Order a calibrated probe instead.
To Order Visit omega.com/ibtx_ibthx for Pricing and Details

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>iBTX-SD</td>
<td>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</td>
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<tr>
<td>iBTX-W</td>
<td>iServer MicroServer™ for barometric pressure and temperature, with AC power adaptor</td>
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<tr>
<td>iBTHX-W</td>
<td>iServer MicroServer™ for barometric pressure, temperature, humidity and dew point, with AC power adaptor</td>
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<td>* Standard wand probe, cable 152 mm (6”) with DB9 connector (no entry required)</td>
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<td></td>
<td>-5 Industrial 5” probe, cable 3 m (10’) with DB9 connector (substitution for wand probe)</td>
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**Accessories**

<table>
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<tbody>
<tr>
<td>iBTTP-W-6</td>
<td>Wand probe, cable 152 mm (6”) with DB9 connector (barometric pressure/temperature)</td>
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<td>iBTTP-W-6</td>
<td>Wand probe, cable 152 mm (6”) with DB9 connector (barometric pressure/temperature/humidity)</td>
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<tr>
<td>iBTTP-5DB9</td>
<td>Industrial 137 mm (5”) probe, cable 3 m (10’) with DB9 connector (barometric pressure/temperature)</td>
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<tr>
<td>iBTTP-5DB9</td>
<td>Industrial 137 mm (5”) probe, cable 3 m (10’) with DB9 connector (barometric pressure/temperature/humidity)</td>
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<tr>
<td>DB9-CA-3-2</td>
<td>Extension cable, 0.9 m (3’) with DB9 connector</td>
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<tr>
<td>iBTX-D</td>
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<td>iBTHX-D</td>
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<tr>
<td>iBTTP-5</td>
<td>Industrial probe 137 mm (5”), cable 3 m (10’) with stripped wire leads; barometric pressure/temperature</td>
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<tr>
<td>iBTTP-5</td>
<td>Industrial probe 137 mm (5”), cable 3 m (10’) with stripped wire leads; bar, pressure/temperature/humidity</td>
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<tr>
<td>iDRN-PS-1000</td>
<td>Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA (powers up to 7 units)</td>
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**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:**

* iBTX-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: iBTTP-5-DB9-3-HU.