

iServer MicroServer™



Barometric Pressure, Temperature + Relative Humidity

- ✓ Web Server
- ✓ Alarms by Email or Text Message
- ✓ No Special Software Required
- ✓ iBTX-SD: Record Years of Data on Popular SD Cards



The **NEWPORT® iBTX** 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 iBTX 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 iBTX, there is no need to invest time and money learning a proprietary software program to log or chart the data.

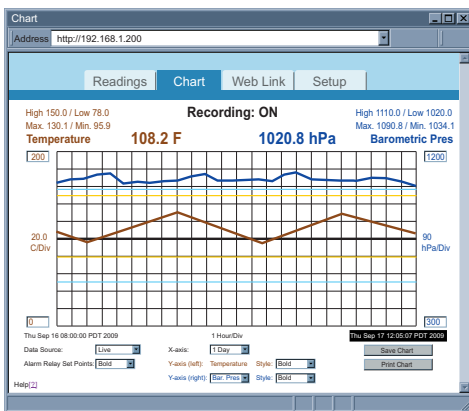
iServer MicroServer™

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).

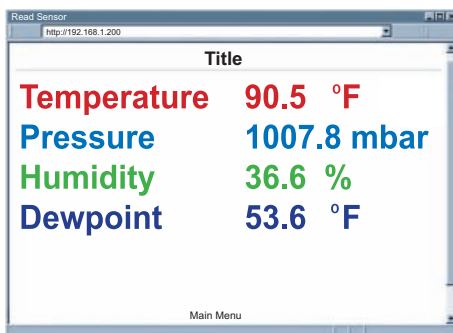


iBTHX-SD Adjustable Chart

Display and Chart Measurements

The iBTHX transmitters come complete with a barometric pressure, temperature and humidity probe for measurement of a single location.

NEWPORT offers a choice of industrial probes in 5" lengths and a wand style for ambient indoor applications.



Reading Sensor Web Page

Award-winning Technology

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

The iBTHX 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 NEWPORT iBTHX 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.

Typical Applications

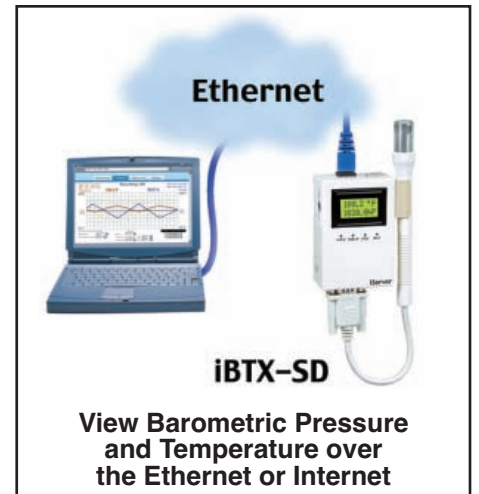
The iBTHX is great for monitoring barometric pressure, temperature + humidity in applications such as: clean rooms, computer rooms, HVAC systems, pharmaceutical and food processing and storage, hospitals, laboratories, semiconductor fabs, electronic assembly, warehousing, museums, manufacturing, green-houses,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

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

The NEWPORT model iBTHX-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 iBTHX-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 iBTHX-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 iBTHX-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.

Barometric Pressure, Temperature + Relative Humidity

SENSOR SPECIFICATIONS

BAROMETRIC PRESSURE (IBTX, IBTHX)

Accuracy/Range:

±2.0 mbar for 10 to 1100 mbar
(1 to 110 KPa)

Resolution: 0.1 mbar

RELATIVE HUMIDITY (IBTHX)

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%

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:

±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 to ±2.7°F for -40 to 41°F and 113 to 185°F)

*Note: extended temperature range is for Ind. 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)

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 -20 to 85°C
(±3.6°F for -4 to 185°F)

*Note: extended temperature range is for Ind. probe only, the iServer's operating temperature is 0 to 70°C

PROBE PHYSICAL DIMENSIONS

Wand Probe:

Ø 19 x 159 mm lg (Ø 0.75 x 6.25" lg)
Cable length 152 mm (6"), with DB9 Connector

Cable operating temperature:

0 to 80°C (32 to 176°F)

Industrial Probe:

Ø 16 x 137 mm lg (Ø 0.63 x 5" lg)

Housing material: SS 316

Cable length 3m (10'), stripped leads

Cable operating temperature:

-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

Sensor: Digital 4-wire (DB9): iBT(H)X-W, iBTX-SD; removable 8 position screw terminals: iBT(H)X-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

LCD DISPLAY (IBTX-SD)

16 Digits 6mm (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

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 Adapter: 0 to 40°C (32 to 104°F)

Storage Temperature:

-40 to 85°C (-40 to 185°F)

POWER

Input:

9 to 12 Vdc: iBT(H)X-W, iBTX-SD;

10 to 32 Vdc: iBT(H)X-D

Safety Qualified ac power adapter:

Nominal Output: 9 Vdc @ 0.5A

Input: 100 to 240 Vac, 50/60Hz included: iBT(H)X-W, iBTX-SD

Switching Power Supply sold separately: iBT(H)X-D

Back-up Battery:

9Vdc, Alkaline for iBTX-SD

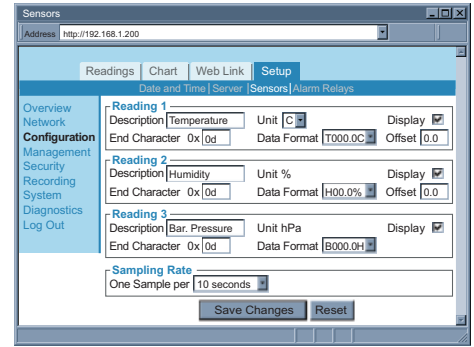
PACKAGING

Material:

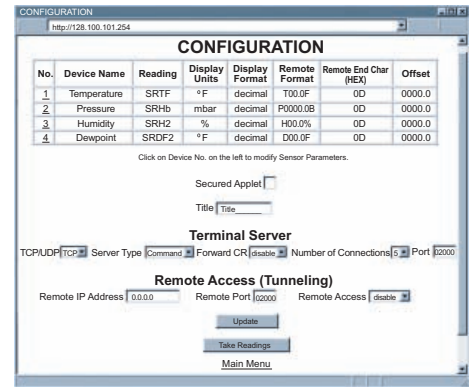
Steel metal case with wall mount bracket: iBTX-SD;

Valox 364 PBT case with wall mount bracket: iBT(H)X-W;

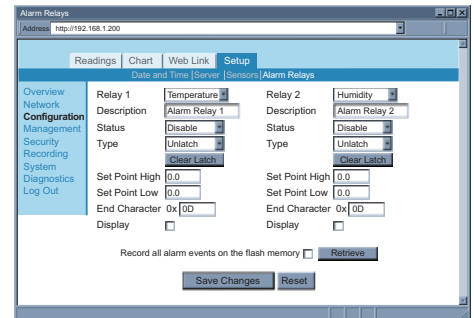
Polycarbonate case with DIN Rail mount: iBT(H)X-D



iBTX-SD Sensor Configuration



iBTHX-W and iBTHX-D Configuration

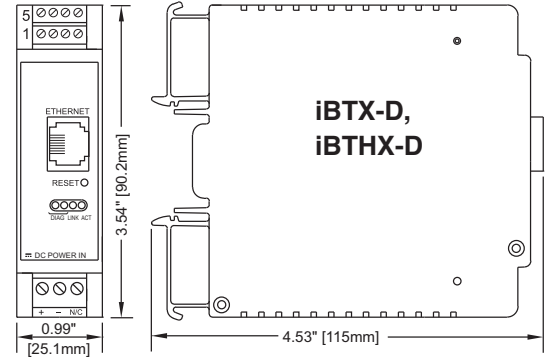
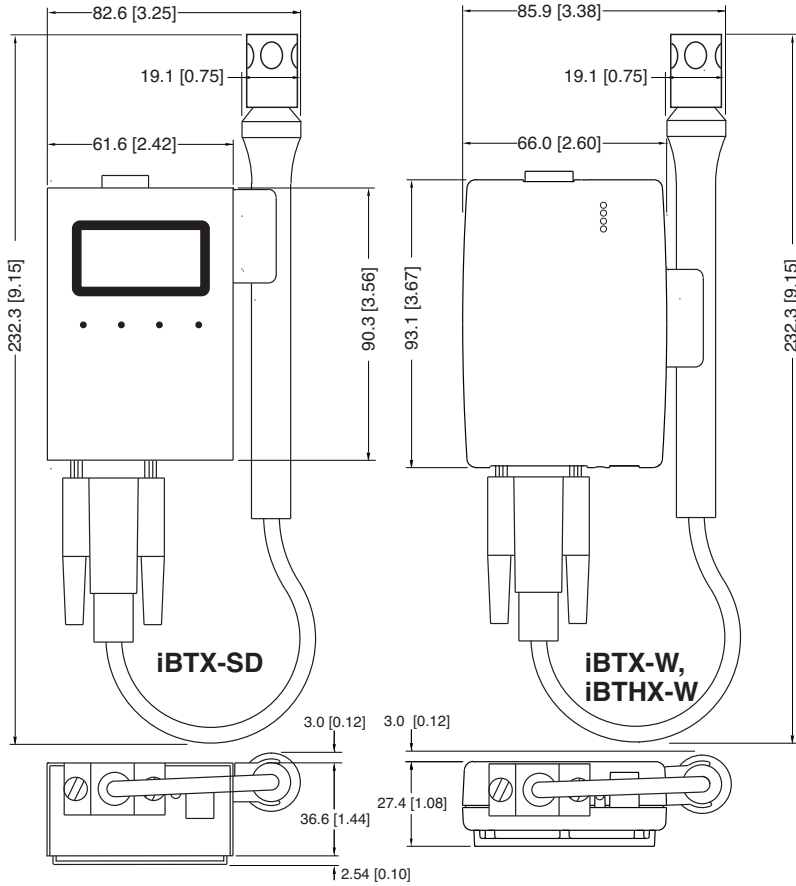


iBTX-SD Alarm Relays

Time	Temperature	Humidity	Pressure	Error
8:05 11:04:53 AM	86.54	44.100	1012.60	0
8:05 11:05:05 AM	86.54	44.200	1012.50	0
8:05 11:05:16 AM	86.54	44.100	1012.50	0
8:05 11:05:28 AM	86.54	44.400	1012.50	0
8:05 11:05:40 AM	86.54	44.500	1012.50	0
8:05 11:05:51 AM	86.54	44.300	1012.50	0
8:05 11:06:03 AM	86.54	44.300	1012.50	0
8:05 11:06:14 AM	86.72	44.100	1012.40	0
8:05 11:06:26 AM	86.72	44.000	1012.50	0
8:05 11:06:38 AM	86.72	43.700	1012.50	0
8:05 11:06:49 AM	86.72	43.300	1012.40	0
8:05 11:07:01 AM	86.90	43.300	1012.50	0
8:05 11:07:12 AM	86.90	43.200	1012.50	0
8:05 11:07:24 AM	86.90	43.100	1012.50	0
8:05 11:07:36 AM	86.90	43.100	1012.50	0

Data Logging Spreadsheet

MECHANICAL SPECIFICATIONS



iDRN-PS-1000

- ✓ 24Vdc Supply
- ✓ Mounts to 35mm DIN rails
- ✓ Switching Power Supply powers up to 7 units



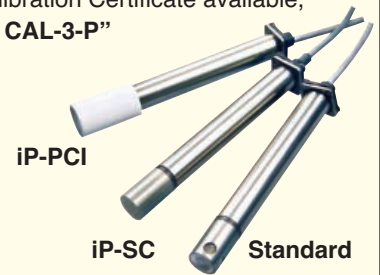
NIST Traceable Calibration Certificate available.
In compliance with ISO9001:2008,
ISO10012-1:1992(E),
ANSI/NCSL Z540-1:1994 and MIL-STD-45662A.

Model No.	Description
iBTX-SD	iServer MicroServer™ for barometric pressure + temperature LCD display, 2GB SD flash memory card, 2 relay alarm, battery back-up, with universal ac power adapter
iBTX-W	iServer MicroServer™ for barometric pressure + temperature
iBTHX-W	iServer MicroServer™ for barometric pressure + temperature
	* Standard 152 mm (6") wand probe, cable 152 mm (6") with DB9 connector. No entry required
-5	Industrial 137 mm (5") Probe, Cable 3 m (10 ft) with DB9 connector. Substitution for wand probe
Accessories	
iBTP-W-6	Replacement 152 mm (6") wand probe, cable 152mm (6") with DB9 connector, bar. pres. + temperature
iBTHP-W-6	Replacement 152 mm (6") wand probe, cable 152 mm (6") with DB9 connector, bar. pressure + temperature + humidity
iBTP-5-DB9	Replacement industrial 137 mm (5") probe, cable 3 m (10 ft) with DB9 connector, bar. pres. + temperature
iBTHP-5-DB9	Replacement Industrial 137 mm (5") probe, cable 3 m (10 ft) with DB9 connector, bar. pres. + temperature + humidity
DB9-CA-3	Extension cable, 0.9 m (3 ft) with DB9 connector

Common Accessories	
iP-PCI-10P	Porous polyethylene industrial probe cap, for wet environments, 10 caps per pack
iP-SC	Porous stainless steel probe cap, 5um porosity, for dusty and pressurized (< 35 psi) environments
CAL-3-HU	NIST traceable calibration certificate. 3 points of 25%, 50%, 75% RH, temp. 25°C, for new units
CAL-3-HU-P-T	NIST traceable calibration certificate. 3 humidity, barometric pressure & temp points, for new units
CAL-3-P	NIST traceable calibration certificate. 3 points of barometric pressure points, temp 25°C, for new units
CT485B-CAL-KIT	Calibration kit, 33% and 75% RH standards
* - CAL-3-HU	Calibrated replacement probe and certificate
* - CAL-3-HU-P-T	Calibrated replacement probe and certificate
* - CAL-3-P	Calibrated replacement probe and certificate

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

Optional Probe Caps shown, fits industrial or wand probe



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

Model No.	Description
iBTX-D	iServer MicroServer™ for barometric pressure and temperature, DIN rail mount. Industrial probe 137mm (5"), Cable 3 m (10 ft)
iBTHX-D	iServer MicroServer™ for bar. pressure, temperature + humidity, DIN rail mount. Industrial probe 137mm (5"), cable 3 m (10 ft)
Accessories	
iBTP-5	Industrial probe 137 mm (5"), cable 3 m (10 ft) for barometric pressure and temperature
iBTHP-5	Industrial probe 137 mm (5"), cable 3 m (10 ft) for barometric pressure and temp + humidity
iDRN-PS-1000	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA (powers up to 7 units)
RAIL-35-2	2 m (6.5 ft) section of 35mm DIN rail

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

For iBTX-W-5 with industrial probe: **iBTX-W-5**.

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

* Volume discounts are available.