# HIGH SPEED USB OUTPUT PRESSURE TRANSDUCER
## CONNECT DIRECTLY TO YOUR COMPUTER

*High Speed 1000 Updates/per Second*

**Gage and Absolute Pressures
25 mb to 345 bar
Vacuum and Compound Ranges
25 mb to 1 bar
Barometric and Differential Pressure Ranges**

## PXM409-USBH Series

*Fast Delivery!*

**PXM409-001BGUSBH
shown actual size.**

**2 m (6') integral USB cable connects directly to your PC.**

NIST Standard   CE

- ✔ **1000 Readings/Second**
- ✔ **Micro-Machined Silicon Sensor**
- ✔ **316L SS Wetted Parts**
- ✔ **High ±0.08% BSL Accuracy**
- ✔ **Excellent Long Term Stability**
- ✔ **USB 2.0 and Below Compatible**
- ✔ **Standard USB Connector Termination**
- ✔ **Shock and Vibration Rated**
- ✔ **Ruggedized with Secondary Containment**

The PXM409 High Speed USBH Series connects directly to your computer. Free PC software enables you to chart, log, display, and output data for analysis. Also included are **.**NET APIs, and a command set for command-line access. The micro-machined silicon design is ideal for pressure or level applications in laboratory, test platforms, or bio/pharmaceutical applications as well as industrial applications that require a rugged, high accuracy transducer. The micro-machined silicon sensor provides a very stable transducer with exceptional high accuracy of ±0.08% and a broad compensated range of -29 to 85°C (-20 to 185°F). The modular construction allows for fast delivery of most configurations and fittings. Delivery is typically stock to 1 week!

## SPECIFICATIONS

**Accuracy:** 0.08% BSL (linearity, hysteresis and repeatability combined)

**Resolution:** Up to 5.5 significant figures

**Temperature Compensation (Over Compensated Range):**
  **Span: Range > 350 mb:** ±0.5%
      **Range ≤ 350 mb:** ±1.0%
  **Zero: Range > 350 mb** ±0.5%
      **Range ≤ 350 mb** ±1.0%

**Minimum Isolation:**
  100 MΩ @ 50 Vdc case to sensor
  2 MΩ @ 50 Vdc case to output terminations

**Pressure Cycles:** 1 million, minimum

**Long Term Stability (1-Year):** ±0.1% full scale typical

**A to D Conversion:** 24-bit

**Shock:** 50 g, 11 mS half sine, vertical and horizontal axis

**Vibration:** 5-2000-5 Hz, 30 minute cycle, Curve L, Mil-Spec 810 figure 514-2-2, vertical and horizontal axis

**Bandwidth:** DC to 1000 updates per second typical (±3%)

**Power Consumption:** 0.35 W typical

### FREE OMEGA® USBH Downloadable Software!

OMEGA is excited to announce the release of a major software update for USB Transducers! The fresh look and added features add even more value and flexibility to your transducer's performance.

Free OMEGA PC software takes the data from the transducer directly to the digital domain, turning your laptop or Windows® tablet (with USB connection) into a virtual meter, chart recorder, or data logger.

Also included are **.**NET APIs and a set for command-line access. Visit **ftp://ftp.omega.com/public/DASGroup/products/USBH/** to download your free copy.*

*Includes software to run TRH Central compatible devices.

**CE Compliant:** Meets industrial emissions and immunity EN61326

**Environmental Protection:** IP65

**Secondary Containment**

**Gage/Vacuum/Compound Pressure:**
  **25 to 350 mb:** to 70 bar
  **1 to 70 bar:** to 200 bar
  **100 to 350 bar:** to 700 bar

**Absolute/Barometric Pressure:**
  **350 mb to 70 bar:** to 400 bar
  **100 to 350 bar:** to 700 bar

**Zero Balance:**
  **Ranges > 170 mB:** ±0.5% typ. (1% max)
  **Ranges ≤ 170 mB:** ±1% typ. (2% max)

**Span Setting:**
  **Ranges > 170 mB:** ±0.5% typ. (1% max)
  **Ranges ≤ 170 mB:** ±1% typ. (2% max)

**Overpressure**

**Gage/Vacuum/Compound Pressure:**
  **25 mb:** 10 times span
  **70 mb:** 6 times span
  **170 mb to 100 bar:** 4 times span
  **175 to 350 bar:** 500 bar maximum

**Absolute/Barometric Pressure:**
  **350 mb to 100 bar absolute:** 4 times span
  **175 to 350 bar absolute:** 500 bar maximum

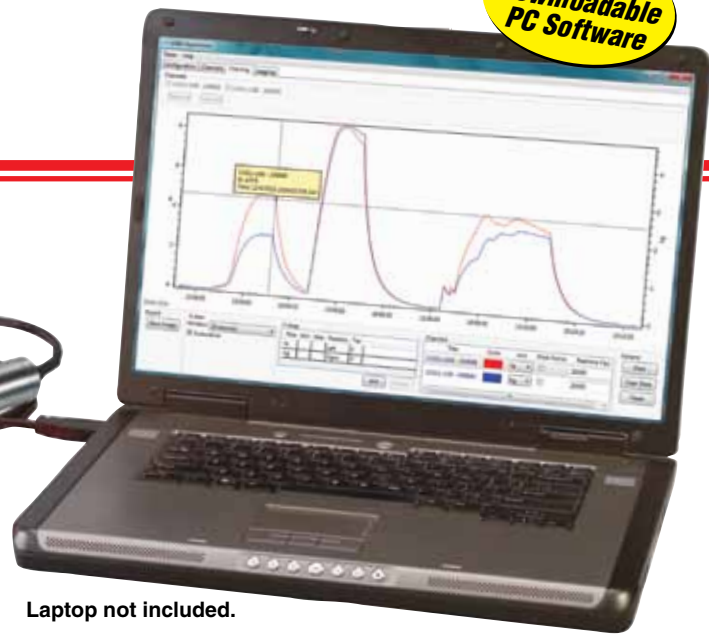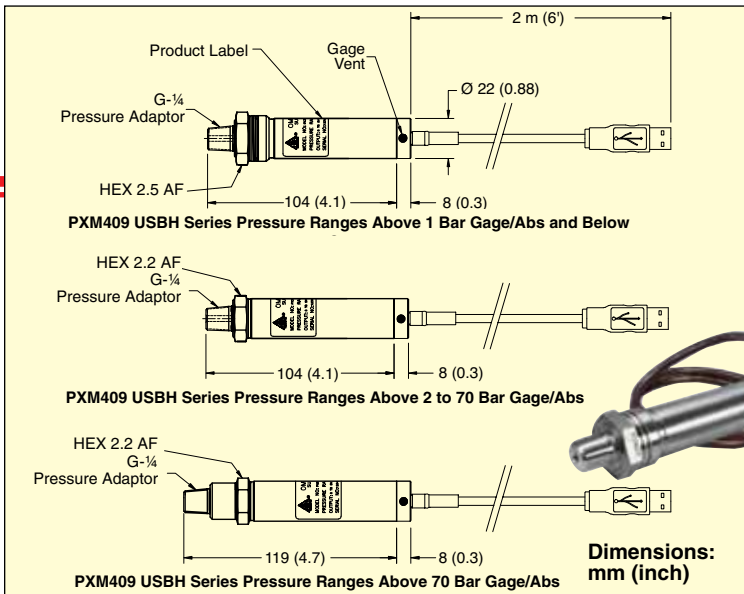**Wetted Parts:** 316L stainless steel

**Weight:** 200 g (7 oz)

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

**Compensated Temperature:**
  **Ranges > 350 mb:** -29 to 85°C (-20 to 185°F)
  **Ranges ≤ 350 mb:** -17 to 85°C (0 to 185°F)

**PXM409 USBH Series Pressure Ranges Above 1 Bar Gage/Abs and Below**

**PXM409 USBH Series Pressure Ranges Above 2 to 70 Bar Gage/Abs**

**PXM409 USBH Series Pressure Ranges Above 70 Bar Gage/Abs**

Dimensions: mm (inch)

**Laptop not included.**

Free Downloadable PC Software

## To Order

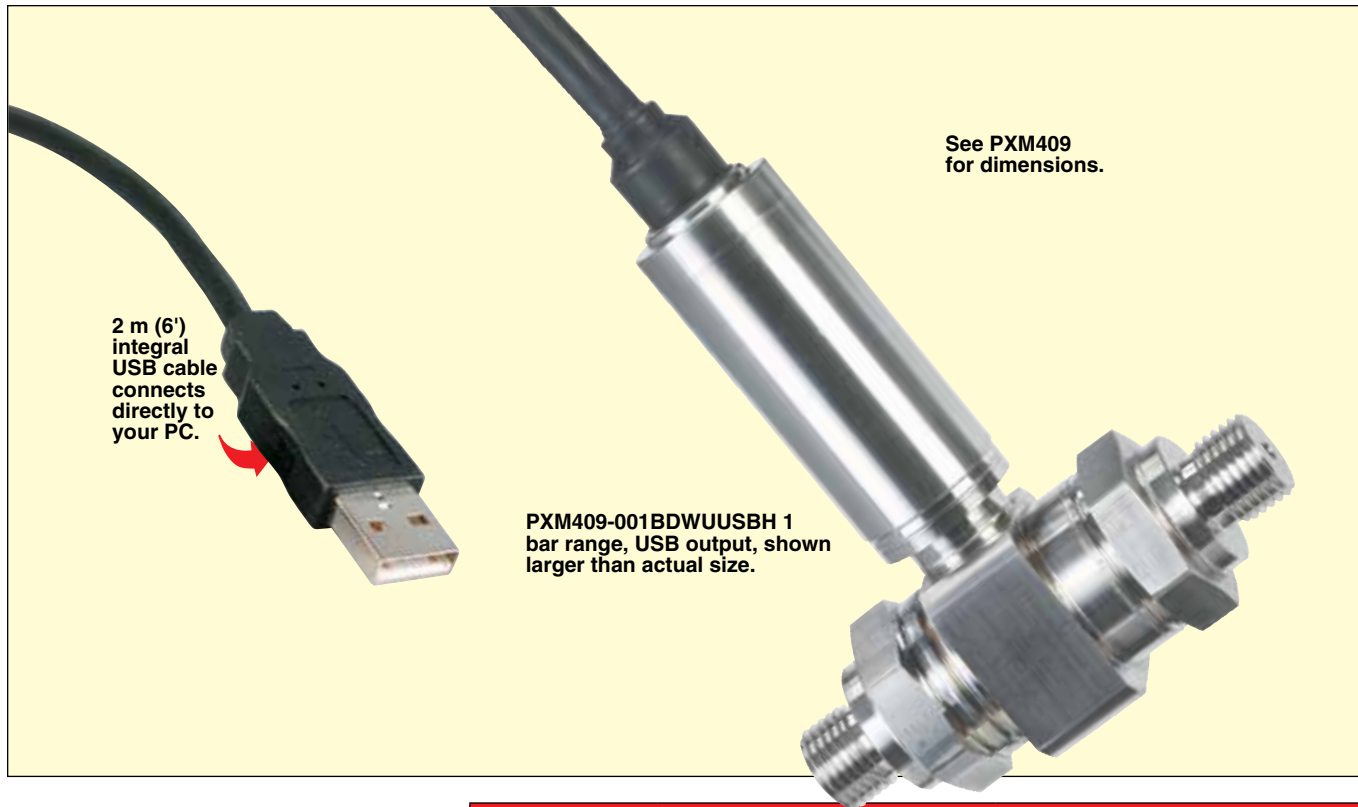| RANGE | GAGE PRESSURE MODEL NO. | ABSOLUTE PRESSURE MODEL NO. |
|---|---|---|
| **GAGE (Relative) AND ABSOLUTE PRESSURE** | | |
| 0 to 25 mbar | PXM409-025HGUSBH | — |
| 0 to 70 mbar | PXM409-070HGUSBH | — |
| 0 to 170 mbar | PXM409-170HGUSBH | — |
| 350 mbar | PXM409-350HGUSBH | PXM409-350HAUSBH |
| 1 bar | PXM409-001BGUSBH | PXM409-001BAUSBH |
| 2 bar | PXM409-002BGUSBH | PXM409-002BAUSBH |
| 3.5 bar | PXM409-3.5BGUSBH | PXM409-3.5BAUSBH |
| 7 bar | PXM409-007BGUSBH | PXM409-007BAUSBH |
| 10 bar | PXM409-010BGUSBH | PXM409-010BAUSBH |
| 17.5 bar | PXM409-17.5BGUSBH | PXM409-17.5BAUSBH |
| 35 bar | PXM409-035BGUSBH | PXM409-035BAUSBH |
| 50 bar | PXM409-050BGUSBH | PXM409-050BAUSBH |
| 70 bar | PXM409-070BGUSBH | PXM409-070BAUSBH |
| 100 bar | PXM409-100BGUSBH | PXM409-100BAUSBH |
| 175 bar | PXM409-175BGUSBH | PXM409-175BAUSBH |
| 245 bar | PXM409-245BGUSBH | PXM409-245BAUSBH |
| 350 bar | PXM409-350BGUSBH | PXM409-350BAUSBH |
| **VACUUM RANGES (Ambient pressure = 0, output increases with vacuum)** | | |
| 25 mbar | PXM409-025HVUSBH | — |
| 70 mbar | PXM409-070HVUSBH | — |
| 170 mbar | PXM409-170HVUSBH | — |
| 350 mbar | PXM409-350HVUSBH | — |
| 1 bar | PXM409-001BVUSBH | — |
| **COMPOUND GAGE RANGES (Output is bi-directional with pressure)** | | |
| ±25 mb | PXM409-025HCGUSBH | — |
| ±70 mb | PXM409-070HCGUSBH | — |
| ±170 mb | PXM409-170HCGUSBH | — |
| ±350 mb | PXM409-350HCGUSBH | — |
| ±1 bar | PXM409-001BCGUSBH | — |
| **BAROMETRIC RANGES** | | |
| 0 to 1100 hPa | — | PXM409-32HBUSBH |
| 550 to 1100 hPa | — | PXM409-16HBUSBH |
| 880 to 1100 hPa | — | PXM409-26HBUSBH |

*Comes complete with 5-point NIST traceable calibration certificate, cable with USB connector, and free downloadable PC software.*
**Ordering Examples: PXM409-17.5BAUSBH,** *17.5 bar absolute pressure range, high speed USB output.*
**PX409-16HBUSBH,** *550 to 1100 hPa barometric pressure range, high speed USB output.*

# HIGH SPEED USB DIFFERENTIAL PRESSURE TRANSDUCERS

See PXM409
for dimensions.

**2 m (6')
integral
USB cable
connects
directly to
your PC.**

**PXM409-001BDWUUSBH 1
bar range, USB output, shown
larger than actual size.**

## SPECIFICATIONS
## DIFFERENTIAL MODELS

**Ranges:** Unidirectional 25 mb to 70 bar
**Line/Static Pressure:** 35 bar maximum
applied to both sides simultaneously
**High Side Containment Pressure
(Differential)**
**Wet/Dry and Wet/Wet:**
   **25 to 350 mb:** to 70 bar
   **1 to 70 bar:** to 200 bar
**Overpressure (Differential):**
**Wet/Dry and Wet/Wet:**
   **25 mb:** 10 times span
   **70 mb:** 6 times span
   **170 mb to 50 bar:** 4 times span
   **70 bar:** to 200 bar
**Weight:** 227 g (8 oz)
**Line Pressure:** 35 bar maximum
**Fitting:** G-¼ male

## To Order

| RANGE | WET/DRY DIFFERENTIAL PRESSURE MODEL NO. | WET/WET DIFFERENTIAL PRESSURE MODEL NO. |
|---|---|---|
| **DIFFERENTIAL PRESSURE** | | |
| 0 to 25 mbar | **PXM409-025HDDUUSBH** | **PXM409-025HDWUUSBH** |
| 0 to 70 mbar | **PXM409-070HDDUUSBH** | **PXM409-070HDWUUSBH** |
| 0 to 170 mbar | **PXM409-170HDDUUSBH** | **PXM409-170HDWUUSBH** |
| 350 mbar | **PXM409-350HDDUUSBH** | **PXM409-350HDWUUSBH** |
| 1 bar | **PXM409-001BDDUUSBH** | **PXM409-001BDWUUSBH** |
| 2 bar | **PXM409-002BDDUUSBH** | **PXM409-002BDWUUSBH** |
| 3.5 bar | **PXM409-3.5BDDUUSBH** | **PXM409-3.5BDWUUSBH** |
| 7 bar | **PXM409-007BDDUUSBH** | **PXM409-007BDWUUSBH** |
| 10 bar | **PXM409-010BDDUUSBH** | **PXM409-010BDWUUSBH** |
| 17.5 bar | **PXM409-17.5BDDUUSBH** | **PXM409-17.5BDWUUSBH** |
| 35 bar | **PXM409-035BDDUUSBH** | **PXM409-035BDWUUSBH** |
| 50 bar | **PXM409-050BDDUUSBH** | **PXM409-050BDWUUSBH** |
| 70 bar | **PXM409-070BDDUUSBH** | **PXM409-070BDWUUSBH** |

*Comes complete with 5-point NIST traceable calibration certificate, cable with USB connector,
and free downloadable PC software.*

***Ordering Examples: PXM409-17.5BDDUUSBH,*** *17.5 bar differential pressure range,
unidirectional, Wet/Dry model, high speed USB output.*

***PXM409-025HDWUUSBH,*** *25 mbar differential pressure range, unidirectional Wet/Wet model,
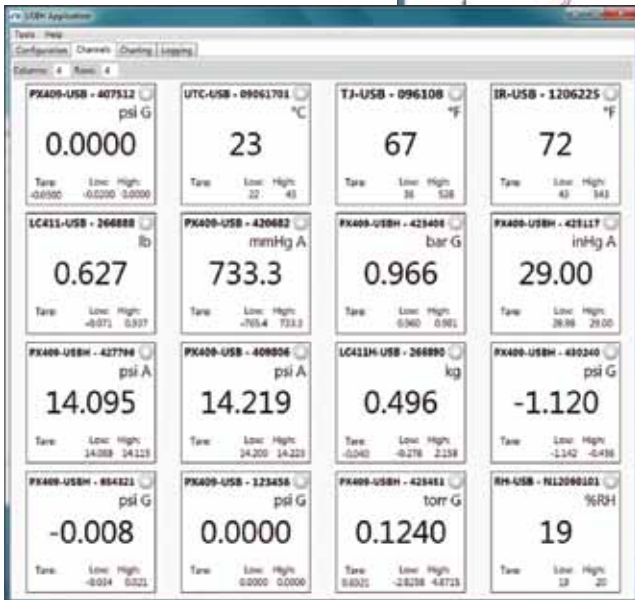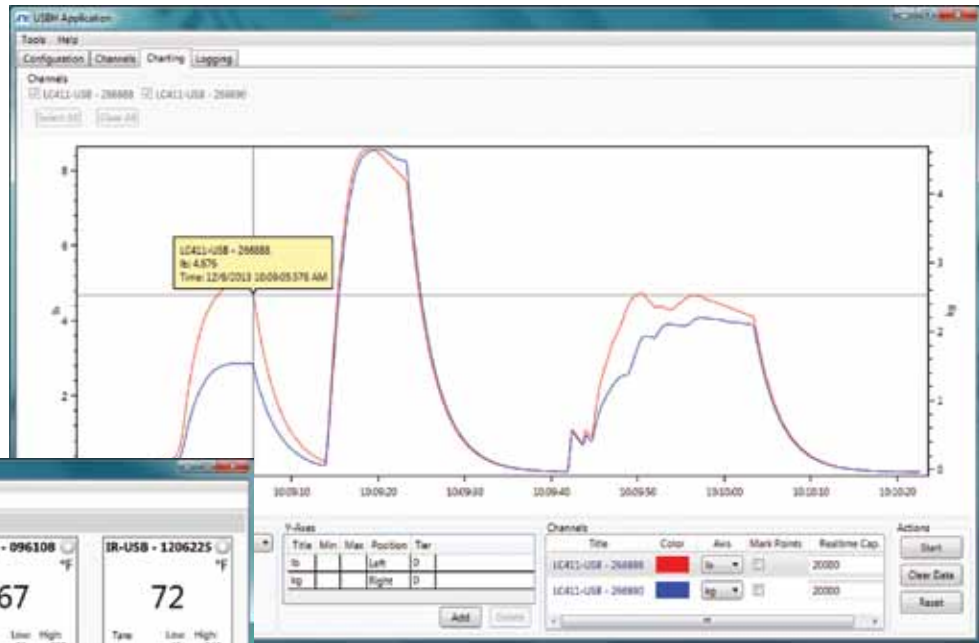high speed USB output.*

# OMEGA USBH MAJOR SOFTWARE UPDATE

OMEGA is excited to announce the release of a major software update for USB Transducers! The fresh look and added features add even more value and flexibility to your transducer's performance. Free OMEGA PC software takes the data from the transducer directly to the digital domain, turning your laptop or Windows® tablet (with USB connection) into a virtual meter, chart recorder, or data logger. Also included are **.**NET APIs and a set for command-line access.
Visit **ftp://ftp.omega.com/public/DASGroup/products/USBH/** to download your free copy.*
**\*** Includes software to run TRH Central compatible devices.

**Charting Window** – The addition of a charting window allows you to see your data graphed in real time. The Y axis is configurable to allow simultaneous graphing of multiple engineering units. You can output the image of your data to a png file.

**Channels Window** – Display data from all of your sensors simultaneously. Each channel has configurable user alarms, three data filters, tare, resettable low/high indication, and sample rates ranging from 30 minutes to 1000 Hz.

| PX409-USBH-425117 | |
|---|---|
| Units | psi |
| Count | 10 |
| Last | 14.2349 |
| Low | 14.2349 |
| High | 14.2353 |

**Logging Window** – A new xls filetype output option presents preformatted data for readability. In addition, Live Statistics are displayed, including the sensor information, the start/stop time, the number of samples taken, the current reading, and the High/Low readings. With the logging window, you can capture your data for later analysis.

**Support for Omega Pressure, Force, Temperature, and Humidity USB Transducers**
One software package supports:
PX409-*-USB, PX409-*-USBH, LC411-*-USBH, TJ-USB, IR-USB, RH-USB and UTC-USB transducers.