

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

High Speed  
1000 Updates/per  
Second

**Gage and Absolute Pressures**  
10 inH<sub>2</sub>O to 5000 psi (25 mb to 345 bar)  
**Vacuum and Compound Ranges**  
10 inH<sub>2</sub>O to 15 psi  
**Barometric and Differential Pressure Ranges**

Fast  
Delivery!

PX409-015GUSBH  
shown actual size.

## PX409-USBH Series



Standard

- ✓ 1000 Readings/Second
- ✓ Micro-Machined Silicon Sensor
- ✓ 316L SS Wetted Parts
- ✓ High  $\pm 0.08\%$  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 PX409 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  $\pm 0.08\%$  and a broad compensated range of  $-29$  to  $85^\circ\text{C}$  ( $-20$  to  $185^\circ\text{F}$ ). 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  $> 5$  psi:  $\pm 0.5\%$   
Range  $\leq 5$  psi:  $\pm 1.0\%$

Zero: Range  $> 5$  psi:  $\pm 0.5\%$   
Range  $\leq 5$  psi:  $\pm 1.0\%$

**Minimum Isolation:**

100 M $\Omega$  @ 50 Vdc case to sensor  
2 M $\Omega$  @ 50 Vdc case to output terminations

**Pressure Cycles:** 1 million, minimum

**Long Term Stability (1-Year):**  $\pm 0.1\%$  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 ( $\pm 3\%$ )



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

### 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.

**Power Consumption:** 0.35 W typical

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

**Environmental Protection:** IP65

**Secondary Containment**

**Gage/Vacuum/Compound Pressure:**

10 inH<sub>2</sub>O to 5 psi: to 1000 psi  
15 to 1000 psi: to 3000 psi  
1500 to 5000 psi: to 10,000 psi

**Absolute/Barometric Pressure:**

5 to 1000 psia: to 6000 psia  
1500 to 5000 psia: to 10,000 psia

**Overpressure**

**Gage/Vacuum/Compound Pressure:**

10 inH<sub>2</sub>O: 10 times span  
1 psi: 6 times span  
2.5 psi to 1000 psi: 4 times span  
1500 psi to 5000 psi: 7250 psi maximum

**Absolute/Barometric Pressure:**

5 psia: 6 times span  
15 psia to 1000 psia: 4 times span  
1500 to 5000 psia: 7250 psia maximum

**Wetted Parts:** 316L stainless steel

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

**Operating Temperature Range:**  $-40$  to  $85^\circ\text{C}$  ( $-40$  to  $185^\circ\text{F}$ )

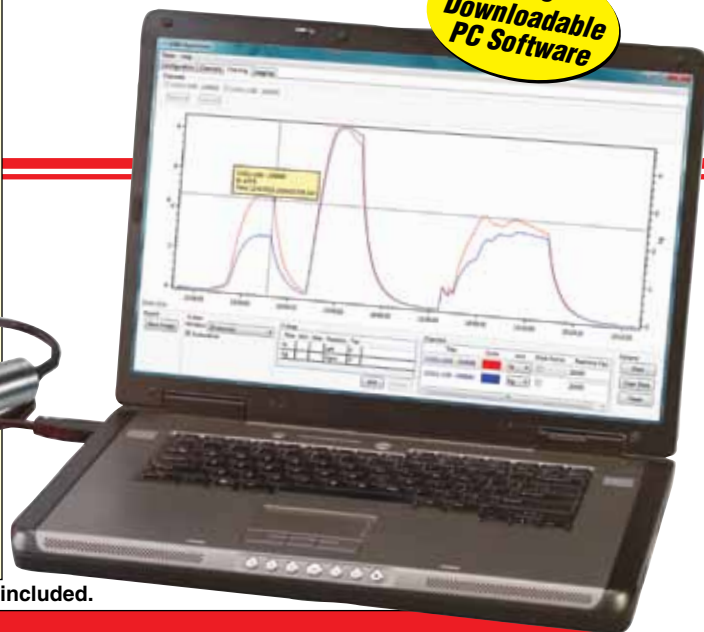
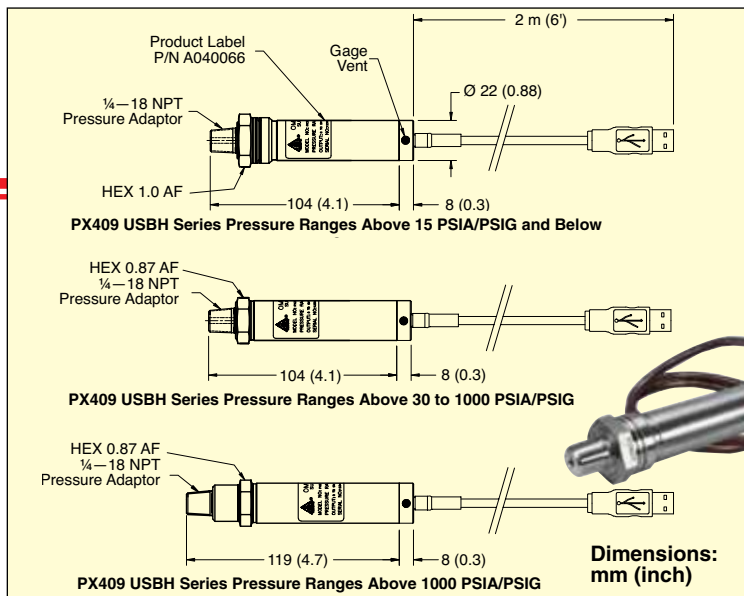
**Compensated Temperature:**

Ranges  $> 5$  psi:  $-29$  to  $85^\circ\text{C}$  ( $-20$  to  $185^\circ\text{F}$ )  
Ranges  $\leq 5$  psi:  $-17$  to  $85^\circ\text{C}$  ( $0$  to  $185^\circ\text{F}$ )

Metric threads and  
ranges available.

USB OUTPUT  
PRESSURE TRANSDUCERS  
B

**Free  
Downloadable  
PC Software**



Laptop not included.

## To Order

RANGE		GAGE PRESSURE MODEL NO.	ABSOLUTE PRESSURE MODEL NO.
psi	bar		
<b>GAGE AND ABSOLUTE PRESSURE</b>			
0 to 10 inH <sub>2</sub> O	0 to 25 mb	PX409-10WGUSBH	—
0 to 1	0 to 69 mb	PX409-001GUSBH	—
0 to 2.5	0 to 172 mb	PX409-2.5GUSBH	—
0 to 5	0 to 345 mb	PX409-005GUSBH	PX409-005AUSBH
0 to 15	0 to 1	PX409-015GUSBH	PX409-015AUSBH
0 to 30	0 to 2.1	PX409-030GUSBH	PX409-030AUSBH
0 to 50	0 to 3.4	PX409-050GUSBH	PX409-050AUSBH
0 to 100	0 to 6.9	PX409-100GUSBH	PX409-100AUSBH
0 to 150	0 to 10.3	PX409-150GUSBH	PX409-150AUSBH
0 to 250	0 to 17.2	PX409-250GUSBH	PX409-250AUSBH
0 to 500	0 to 34.5	PX409-500GUSBH	PX409-500AUSBH
0 to 750	0 to 51.7	PX409-750GUSBH	PX409-750AUSBH
0 to 1000	0 to 69	PX409-1.0KGUSBH	PX409-1.0KAUSBH
0 to 1500	0 to 103	PX409-1.5KGUSBH	PX409-1.5KAUSBH
0 to 2500	0 to 172	PX409-2.5KGUSBH	PX409-2.5KAUSBH
0 to 3500	0 to 241	PX409-3.5KGUSBH	PX409-3.5KAUSBH
0 to 5000	0 to 345	PX409-5.0KGUSBH	PX409-5.0KAUSBH
<b>VACUUM RANGES (NEGATIVE GAGE PRESSURE)</b>			
0 to -10 inH <sub>2</sub> O	0 to -25 mb	PX409-10WVUSBH	—
0 to -1 psi	0 to -69 mb	PX409-001VUSBH	—
0 to -2.5 psi	0 to -172 mb	PX409-2.5VUSBH	—
0 to -5 psi	0 to -345 mb	PX409-005VUSBH	—
0 to -15 psi	0 to -1	PX409-015VUSBH	—
<b>COMPOUND GAGE RANGES</b>			
± 10 inH <sub>2</sub> O	± 25 mb	PX409-10WCGUSBH	—
± 1 psi	± 69 mb	PX409-001CGUSBH	—
± 2.5 psi	± 172 mb	PX409-2.5CGUSBH	—
± 5 psi	± 345 mb	PX409-005CGUSBH	—
± 15 psi	± 1	PX409-015CGUSBH	—
<b>BAROMETRIC RANGES (ABSOLUTE PRESSURE)</b>			
0 to 32 inHg	0 to 1100 mb	—	PX409-32BUSBH
16 to 32 inHg	550 to 1100 mb	—	PX409-16BUSBH
26 to 32 inHg	880 to 1100 mb	—	PX409-26BUSBH

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

**Ordering Examples:** PX409-100GUSBH, 2 m (6') cable with USB termination, 100 psig range, USB output.

PX409-16BUSBH, 2 m (6') cable with USB termination, 16 to 32 inHg absolute barometric range, USB output.

# HIGH SPEED USB DIFFERENTIAL PRESSURE TRANSDUCERS

## SPECIFICATIONS DIFFERENTIAL MODELS

**Ranges:** Unidirectional 10 inH<sub>2</sub>O to 1000 psi

**Line/Static Pressure:** 500 psi maximum applied to both sides simultaneously

**High Side Containment Pressure (Differential)**

**Wet/Dry and Wet/Wet:**

10 inH<sub>2</sub>O to 5 psi: to 1000 psi  
15 to 1000 psi: to 3000 psi

**Overpressure (Differential)**

**Wet/Dry and Wet/Wet:**

10 inH<sub>2</sub>O: 3.6 psi  
1 psi: to 6 psi  
2.5 psi to 750 psi: 4 times span  
1000 psi: to 3000 psi

**Weight:** 227 g (8 oz)

**Line Pressure:** 500 psi maximum

**Fitting:** ¼-18 NPT male

To Order		
RANGE		MODEL NO.
psi	bar	
<b>WET/DRY DIFFERENTIAL PRESSURE MODELS</b>		
0 to 10 inH <sub>2</sub> O	0 to 25.00 mb	PX409-10WDDUUSBH
0 to 1	0 to 69.00 mb	PX409-001DDUUSBH
0 to 2.5	0 to 172.0 mb	PX409-2.5DDUUSBH
0 to 5	0 to 345.0 mb	PX409-005DDUUSBH
0 to 15	0 to 1.000	PX409-015DDUUSBH
0 to 30	0 to 2.100	PX409-030DDUUSBH
0 to 50	0 to 3.400	PX409-050DDUUSBH
0 to 100	0 to 6.900	PX409-100DDUUSBH
0 to 150	0 to 10.30	PX409-150DDUUSBH
0 to 250	0 to 17.20	PX409-250DDUUSBH
0 to 500	0 to 34.50	PX409-500DDUUSBH
0 to 750	0 to 51.70	PX409-750DDUUSBH
0 to 1000	0 to 69.00	PX409-1.0KDDUUSBH
<b>WET/WET DIFFERENTIAL PRESSURE MODELS</b>		
0 to 10 inH <sub>2</sub> O	0 to 25.00 mb	PX409-10WDWUUSBH
0 to 1	0 to 69.00 mb	PX409-001DWUUSBH
0 to 2.5	0 to 172.0 mb	PX409-2.5DWUUSBH
0 to 5	0 to 345.0 mb	PX409-005DWUUSBH
0 to 15	0 to 1.000	PX409-015DWUUSBH
0 to 30	0 to 2.100	PX409-030DWUUSBH
0 to 50	0 to 3.400	PX409-050DWUUSBH
0 to 100	0 to 6.900	PX409-100DWUUSBH
0 to 150	0 to 10.30	PX409-150DWUUSBH
0 to 250	0 to 17.20	PX409-250DWUUSBH
0 to 500	0 to 34.50	PX409-500DWUUSBH
0 to 750	0 to 51.70	PX409-750DWUUSBH
0 to 1000	0 to 69.00	PX409-1.0KDWUUSBH



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

**Ordering Examples:** PX409-100DDUUSBH, Wet/Dry 0 to 100 psi differential high speed USB output transducer.

PX409-2.5DWUUSBH, Wet/Wet 0 to 2.5 psi differential high speed USB output transducer.

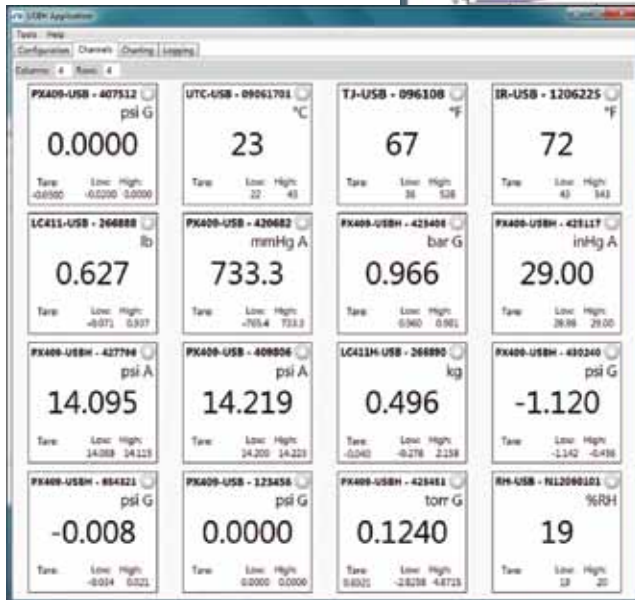
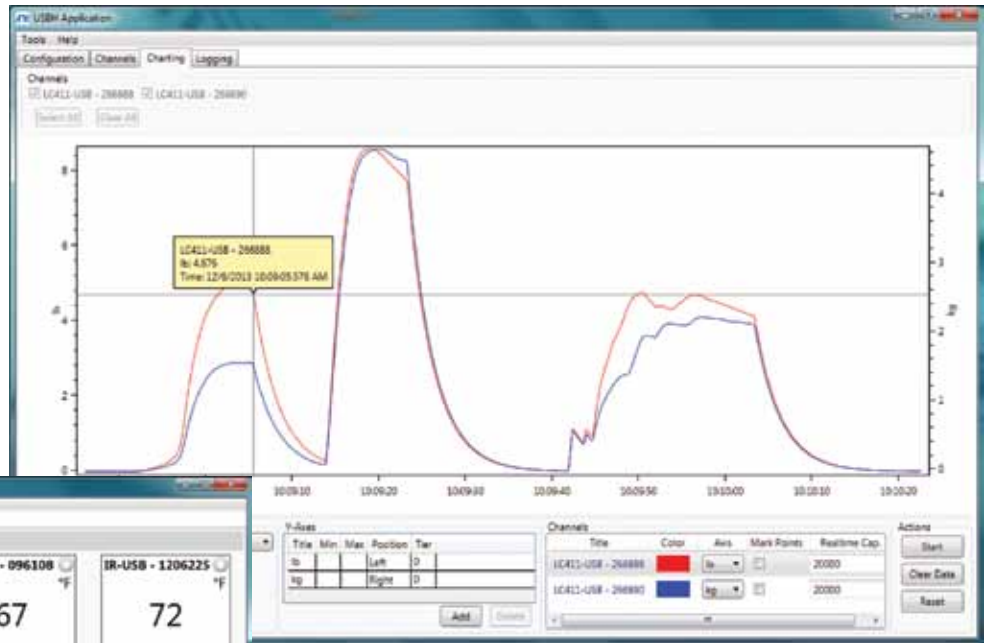
# OMEGA USBH MAJOR SOFTWARE UPDATE

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.

**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.

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

## 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.

