HEAVY-DUTY USB OUTPUT PRESSURE TRANSDUCER
STANDARD AND METRIC MODELS

High Speed 1000 Updates/per Second

USB Output
750 to 30,000 psi–Standard Models
60 to 400 bar–Metric Models

1 bar = 14.5 psi
1 kg/cm^2 = 14.22 psi
1 atmosphere = 14.7 psi
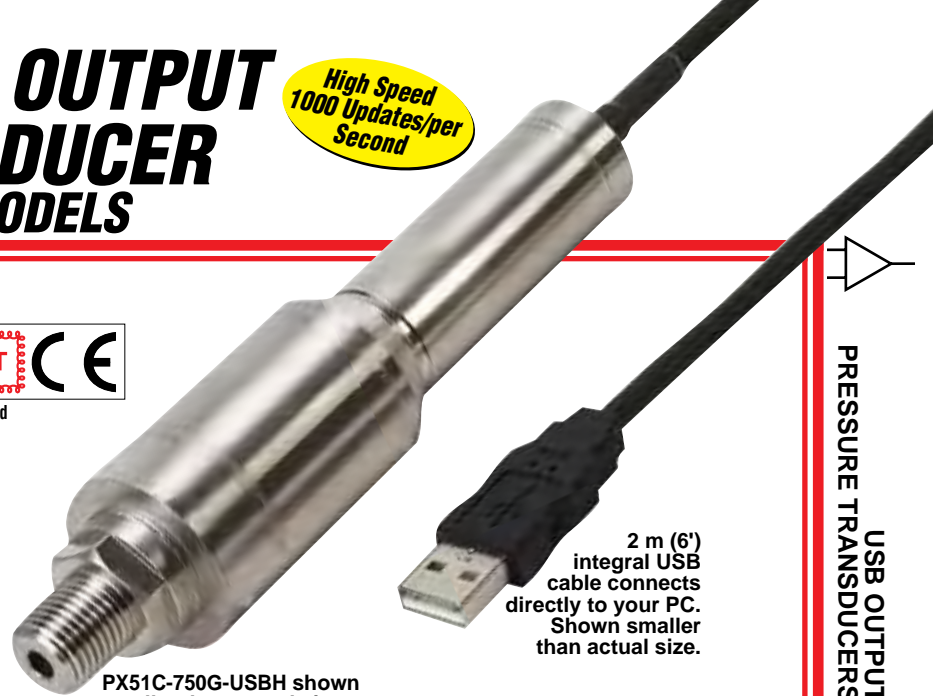*= 29.93 inHg = 760.2 mmHg = 1.014 bar*

NIST **CE**
Standard

PX51/PXM51-USBH Series

✔ **High Speed! 1000 Readings/Second**
✔ **Free Software Included**
✔ **All Stainless Steel Body**
✔ **Heavy-Duty Construction for Harsh Environments**
✔ **Available in Gage, Sealed Gage, and Absolute Pressure Models**

The PX51 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 high accuracy, rugged, low-cost transducer has an all stainless steel construction, making it suitable for the harshest environments. A 2 m (6') USB cable is standard.

PX51C-750G-USBH shown smaller than actual size.

2 m (6') integral USB cable connects directly to your PC. Shown smaller than actual size.

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.

SPECIFICATIONS

Accuracy: 0.25% full scale linearity and hysteresis combined
Resolution: Up to 5.5 significant figures
Bandwidth: DC to 1000 updates per second typical (±3%)
A to D Conversion: 24-bit
Output: Digital (USB)

Minimum Isolation: 1 GΩ @ 50 Vdc case to sensor 2MΩ @ 50 Vdc case to output terminations
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
Power Consumption: 0.35 W typical
CE Compliant: Meets industrial emissions and immunity EN61326
Environmental Protection: IP65
Weight: 400 g (14.1 oz)
Operational Temp Range: -40 to 85°C (-40 to 185°F)
Compensated Temp Range: 16 to 71°C (60 to 160°F)

Thermal Effects:
  Span: 0.003% of FSO/°F
  Zero: 0.005% of FSO/°F
Proof Pressure: 150% of rated pressure
Burst Pressure: 300% of rated pressure
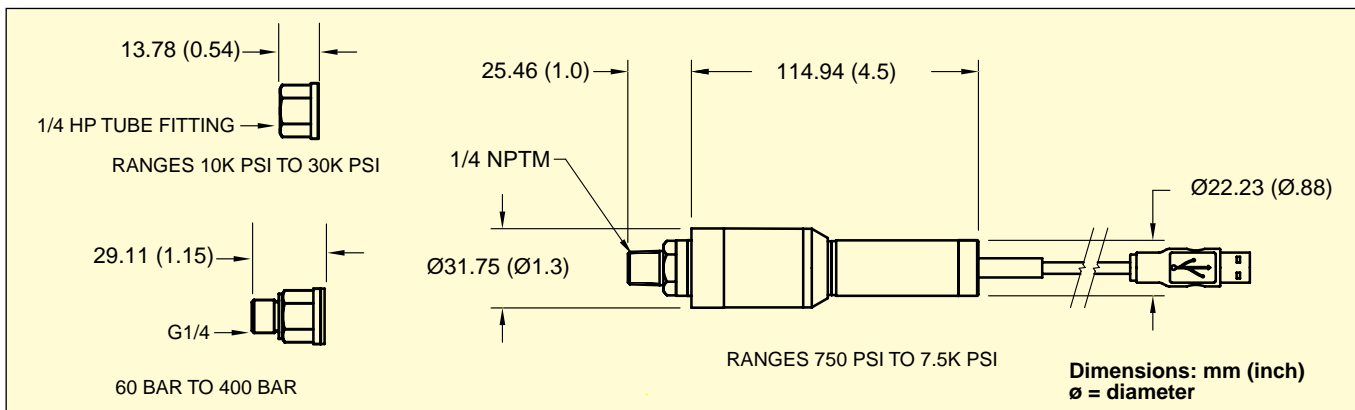**Wetted Parts:** 17-4 PH stainless steel
Pressure Port:
  <10,000 psi: See dimensional drawings
  ≥10,000 psi: ⁹⁄₁₆-18, ¼" HP tube
Excitation: Derived from USB Power
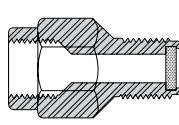**Electrical Connection:** 2 m (6') USB type A cable

13.78 (0.54)
1/4 HP TUBE FITTING
RANGES 10K PSI TO 30K PSI

25.46 (1.0)
114.94 (4.5)
1/4 NPTM
Ø22.23 (Ø.88)

29.11 (1.15)
Ø31.75 (Ø1.3)
G1/4
60 BAR TO 400 BAR

RANGES 750 PSI TO 7.5K PSI

Dimensions: mm (inch)
ø = diameter

HEAVY-DUTY INDUSTRIAL TRANSDUCER

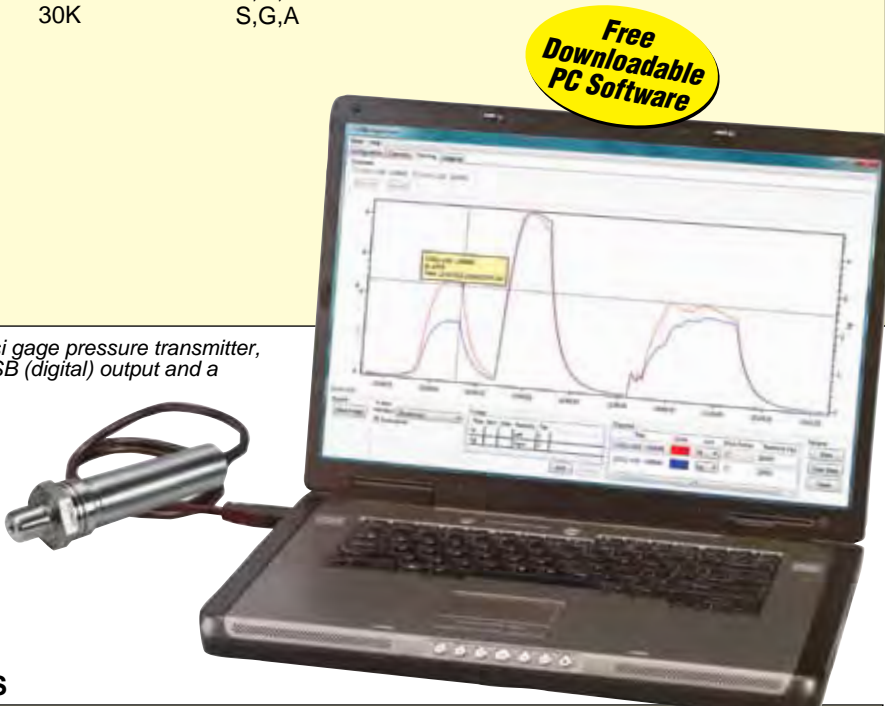## STANDARD CUSTOM CONFIGURATIONS

PX51 USBH SERIES	PRESSURE PORT [1]	RANGE (psi) [2]	UNITS [3]	ELECTRICAL CONNECTION USBH	OPTIONS [4]
	C = ¼-18 NPT-M (<10,000 psi ranges) **S** = ¼ HP tube fitting (≥10,000 psi ranges)	750 1K 1.5K 2K 2.5K 3K 3.5K 5K 7.5K 10K 15K 20K 30K	S,G,A S,G,A S,G,A S,G,A S,G,A S,G,A S,G,A S,G,A S,G,A S,G,A S,G,A S,G,A S,G,A	2 m (6') USB Type A Cable	Visit us online or consult Omega Pressure for options available on this series.

S = Sealed Gage
G = Gage
A = Absolute

¼ NPT Pressure Snubbers:
PS-4G = Gas
PS-4E = Lt Oil
PS-4D = Dense Lq
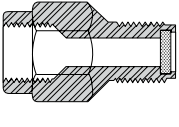
Free Downloadable PC Software

Ordering Example: PX51C-750G-USBH, *750 psi gage pressure transmitter, ¼-NPT male pressure connection, high speed USB (digital) output and a 2 m (6') cable.*

To order a custom configuration:
1. Select a pressure port
2. Select a pressure range
3. Select pressure units
4. Select options

METRIC CUSTOM CONFIGURATIONS

PXM51 USBH SERIES	PRESSURE PORT [1]	RANGE (bar) [2]	UNITS [3]	ELECTRICAL CONNECTION USBH	OPTIONS [4]
	MC = G¼B Male	060 100 160 250 400	S,G,A S,G,A S,G,A S,G,A S,G,A	2 m (6') USB Type A Cable	Visit us online or consult Omega Pressure for options available on this series.

G¼ Pressure Snubbers:
PS-4G-MG = Gas
PS-4E-MG = Lt Oil
PS-4D-MG = Dense Liquid

S = Sealed Gage
G = Gage
A = Absolute

Ordering Example: PXM51MC-160A-USBH, *160 bar absolute pressure transmitter, ¼B male pressure connection, high speed USB (digital) output and a 2 m (6') cable.*

To Order

MODELS WITH 1/4-NPT MALE PRESSURE CONNECTION

RANGE		GAGE PRESSURE MODEL NO	ABSOLUTE PRESSURE MODEL NO	SEALED GAGE MODEL NO
PSI	BAR			
0 to 750 psi	0 to 51 bar	PX51C-750G-USBH	PX51C-750A-USBH	PX51C-750SG-USBH
0 to 1K psi	0 to 68.9 bar	PX51C-1KG-USBH	PX51C-1KA-USBH	PX51C-1KSG-USBH
0 to 1.5K psi	0 to 103 bar	PX51C-1.5KG-USBH	PX51C-1.5KA-USBH	PX51C-1.5KSG-USBH
0 to 2K psi	0 to 138 bar	PX51C-2KG-USBH	PX51C-2KA-USBH	PX51C-2KSG-USBH
0 to 2.5K psi	0 to 172 bar	PX51C-2.5KG-USBH	PX51C-2.5KA-USBH	PX51C-2.5KSG-USBH
0 to 3K psi	0 to 206 bar	PX51C-3KG-USBH	PX51C-3KA-USBH	PX51C-3KSG-USBH
0 to 3.5K psi	0 to 241 bar	PX51C-3.5KG-USBH	PX51C-3.5KA-USBH	PX51C-3.5KSG-USBH
0 to 5K psi	0 to 345 bar	PX51C-5KG-USBH	PX51C-5KA-USBH	PX51C-5KSG-USBH
0 to 7.5K psi	0 to 517 bar	PX51C-7.5KG-USBH	PX51C-7.5KA-USBH	PX51C-7.5KSG-USBH

MODELS WITH G1/4B MALE PRESSURE CONNECTION

RANGE		GAGE PRESSURE MODEL NO	ABSOLUTE PRESSURE MODEL NO	SEALED GAGE MODEL NO
BAR	PSI			
60	870	PXM51MC-060G-USBH	PXM51MC-060A-USBH	PXM51MC-060SG-USBH
100	1450	PXM51MC-100G-USBH	PXM51MC-100A-USBH	PXM51MC-100SG-USBH
160	2320	PXM51MC-160G-USBH	PXM51MC-160A-USBH	PXM51MC-160SG-USBH
250	3625	PXM51MC-250G-USBH	PXM51MC-250A-USBH	PXM51MC-250SG-USBH
400	5801	PXM51MC-400G-USBH	PXM51MC-400A-USBH	PXM51MC-400SG-USBH

MODELS WITH 1/4" HP TUBE FITTING

RANGE		GAGE PRESSURE MODEL NO	ABSOLUTE PRESSURE MODEL NO	SEALED GAGE MODEL NO
PSI	BAR			
0 to 10K psi	0 to 689 bar	PX51S-10KG-USBH	PX51S-10KA-USBH	PX51S-10KSG-USBH
0 to 15K psi	0 to 1379 bar	PX51S-15KG-USBH	PX51S-15KA-USBH	PX51S-15KSG-USBH
0 to 20K psi	0 to 1379 bar	PX51S-20KG-USBH	PX51S-20KA-USBH	PX51S-20KSG-USBH
0 to 30K psi	0 to 2068 bar	PX51S-30KG-USBH	PX51S-30KA-USBH	PX51S-30KSG-USBH

Comes complete with 5-point NIST traceable calibration certificate, cable with USB connector, and free downloadable PC software.
***Ordering Examples: PX51C-750G-USBH,** 750 psi gage pressure transmitter, ¼-NPT male pressure connection, high speed USB (digital) output and a 2 m (6') cable.*
***PXM51MC-160A-USBH,** 160 bar absolute pressure transmitter, ¼B male pressure connection, high speed USB (digital) output and a 2 m (6') cable.*
***PX51S-30KSG-USBH,** 30K psi sealed gage pressure transmitter, ¼" HP female tube fitting, high speed USB (digital) output and a 2 m (6') cable.*
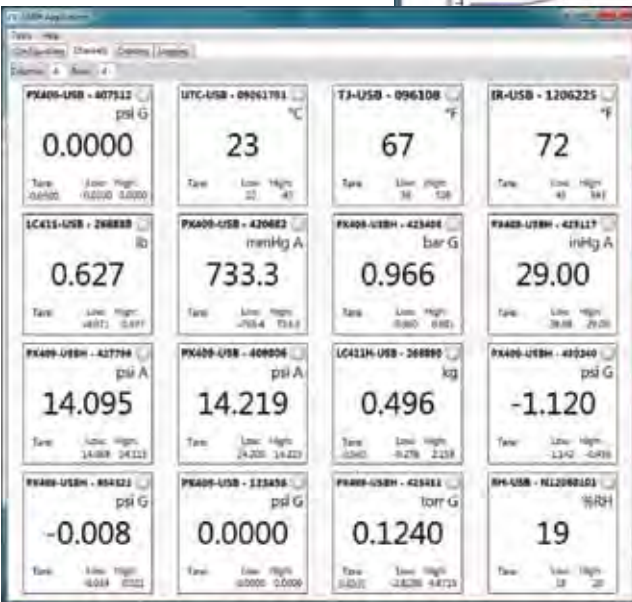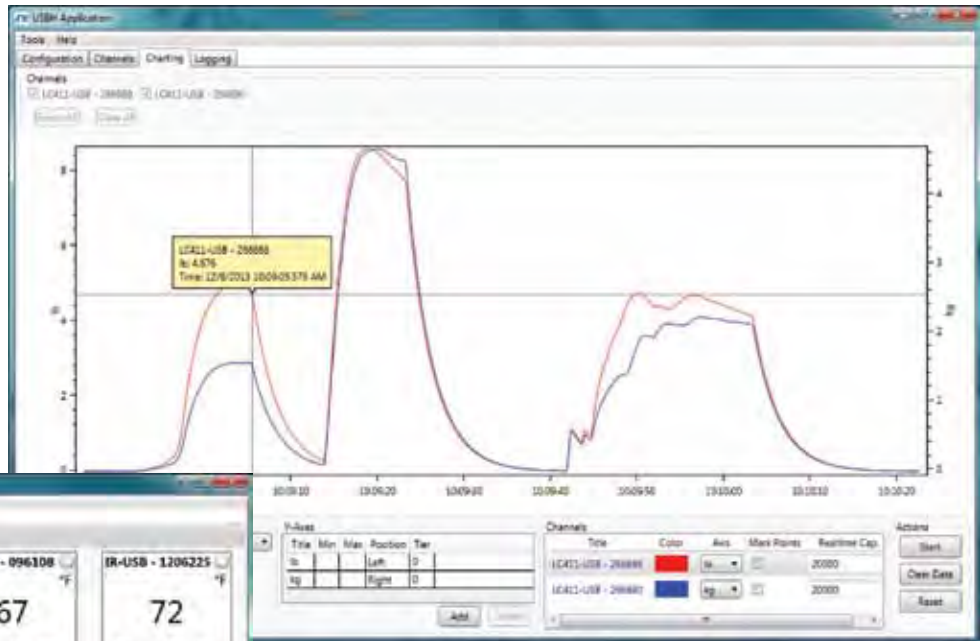
OMEGA USBH MAJOR SOFTWARE UPDATE

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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, PX51*USBH and IN-USBH*, TJ-USB, IR-USB, RH-USB and UTC-USB transducers.