

HIGH ACCURACY TRANSDUCERS

MICRO-MACHINED SILICON

FOR BAROMETRIC PRESSURE MEASUREMENT

Barometric Pressure Absolute Pressure
Outputs: mV/V, 0 to 5V, 0 to 10V
or 4 to 20 mA
0 to 32, 16 to 32 or 26 to 32 inHg
0 to 1100, 550 to 1100, 880 to 1100 hPa

PX409 Series



Standard

- ✓ High Accuracy
±0.08% BSL Includes Linearity, Hysteresis, and Repeatability
- ✓ Broad Temperature Compensated Range
-18 to 85°C (0 to 185°F)
- ✓ Premium Temperature Performance
Span: ±0.5% Over Compensated Range
- ✓ 5-Point NIST Traceable Calibration Included
- ✓ All Stainless Steel Wetted Parts
- ✓ Fast Response Time
- ✓ Solid State Reliability and Stability
- ✓ 400% Proof Pressure

OMEGA's PX409 series electronic barometers are high-accuracy barometers available in three ranges: 16 to 32 inHg, 26 to 32 inHg, or 0 to 32 inHg (absolute pressure) for laboratory or industrial test applications. Models with integral cables (PX409) are IP67 while connector styles (PX419 and PX429) are IP65 rated. They feature all stainless steel construction, which makes them ideal for harsh industrial environments. Their high operating

temperature, broad compensated range, and excellent temperature compensation allow stable readings in applications with fluctuating temperatures commonly found where barometric pressure must be monitored. Models are available with millivolt, voltage or current outputs.

Metric threads available

Cable style

M12 Connector also Available See To Order Chart

IP67 rated
PX409-32BV

Twist-lock style

IP65 rated
PX429-26BI

mini DIN style

IP65 rated
PX419-16B5V

All shown actual size.

SPECIFICATIONS

Output:

Millivolt: 10 mV/V (100 mV @ 10 Vdc)

Amplified Voltage: 0 to 5 Vdc or 0 to 10 Vdc

Current Loop: 4 to 20 mA

Power Requirements:

Millivolt: 5 to 10 Vdc (5 mA @ 10 Vdc)

Amplified Voltage:

0 to 5 Vdc Supply Voltage: 10 to 30 Vdc @ 10 mA

0 to 10 Vdc Supply Voltage: 15 to 30 Vdc @ 10 mA

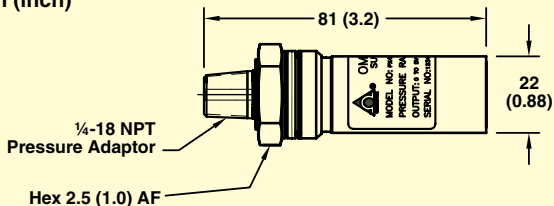
Current Loop: 9 to 30 Vdc
 [max loop res = (Vs-9) x 50];
 [9 to 20 Vdc above 105°C (229°F)]

Accuracy (Combined Linearity, Hysteresis and Repeatability):
 ±0.08% BSL

Zero Balance: ±0.5% FS typical, 1% max

Span Setting: ±0.5% FS typical, 1% max; calibrated in vertical direction with fitting down

Dimensions: mm (inch)



HIGH ACCURACY, MICRO-MACHINED SILICON TRANSDUCERS

All models shown smaller than actual size.



IP67 rated
PX409-32BV



IP65 rated
PX419-16B5V



IP65 rated
PX429-26BI

PX409 and PX409C CABLE CONNECTION			
COLOR	mV	5/10V	mA
Black	- EXC	Common	- Supply
White	+ SIG	+ Output	NC
Green	- SIG	NC	NC
Red	+ EXC	+ EXC	+ Supply

PX419 and PX459 PIN OUT			
PIN	mV	5/10V	mA
1	+ EXC	+ EXC	+ Supply
2	- EXC	Common	- Supply
3	+ SIG	+ Output	NC
4	- SIG	NC	NC

PX429 TWIST LOCK PINOUT			
PIN	mV	5/10V	mA
A	+ EXC	+ EXC	+ Supply
B	- EXC	Common	- Supply
C	+ SIG	+ Output	NC
D	- SIG	NC	NC
E	NC	NC	NC
F	NC	NC	NC



VOLTAGE OUTPUT
PRESSURE TRANSDUCERS

B

Operating Temperature Range:
-45 to 121°C (-49 to 250°F) [-45 to 115°C (-49 to 240°F) for voltage or current outputs]

Compensated Temperature:
Ranges > 5 psi: -29 to 85°C (-20 to 185°F)
Ranges ≤ 5 psi: -18 to 85°C (0 to 185°F)

Thermal Effects Span (Over Compensated Range):
Ranges > 5 psi: ±0.5% span
Ranges ≤ 5 psi: ±1% span

Long Term Stability (1-Year):
±0.1% FS typical

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

Response Time: <1 ms

Bandwidth: DC to 1 kHz typical

Proof Pressure: 400% of span

Burst Pressure: 1000 psia

Electrical Termination:

PX409: Integral 2 m (6') cable

PX419: mini DIN

PX429: Twist-lock

Mating Connectors:

PX419: CX5302 (included)

PX429: PT06F10-6S

(sold separately)

Environmental Protection:

PX409: IP67

PX419: IP65

PX429: IP65

PX459: IP65

Wetted Parts: 316 SS

Pressure Port: ¼-18 NPT male

Weight: 115 to 200 g (4 to 7 oz) depending upon configuration

To Order				
CALIBRATED RANGE		mV/V OUTPUT	5 Vdc** OUTPUT	4 to 20 mA OUTPUT
inHg	hPa			
BAROMETRIC RANGES (Absolute Pressure)				
0 to 32 inHg	—	PX4[*]9-32BV	PX4[*]9-32B5V	PX4[*]9-32BI
16 to 32 inHg	—	PX4[*]9-16BV	PX4[*]9-16B5V	PX4[*]9-16BI
26 to 32 inHg	—	PX4[*]9-26BV	PX4[*]9-26B5V	PX4[*]9-26BI
—	0 to 1100 hPa	PX4[*]9-32HBV	PX4[*]9-32HB5V	PX4[*]9-32HBI
—	550 to 1100 hPa	PX4[*]9-16HBV	PX4[*]9-16HB5V	PX4[*]9-16HBI
—	880 to 1100 hPa	PX4[*]9-26HBV	PX4[*]9-26HB5V	PX4[*]9-26HBI

ACCESSORIES

MODEL NO.	DESCRIPTION
PT06F10-6S	Mating connector for PX429 series, sold separately
CX5302	Spare mating connector for PX419 series; one included with each unit
M12C-PVC-4-S-F-5	PVC cable, straight 4-pin M12 female connector one end, flying leads one end, 5 m (16.4') long, fits PX459
M12C-PVC-4-R-F-5	PVC cable, right angled 4-pin M12 female connector one end, flying leads one end, 5 m (16.4') long, fits PX459
-MB	Mounting bracket, factory installed

** For 0 to 10 Vdc output replace "5V" with "10V" in model number.

[*] Select Electrical Termination (no extra charge).

Insert "0" for 2 m (6') cable with flying leads.

For ½ NPT conduit connector order **PX409CS**.

Insert "1" for Mini DIN connector (mating connector included).

Insert "2" for Twist-lock connector (mating connector **PT06F10-6S** sold separately).

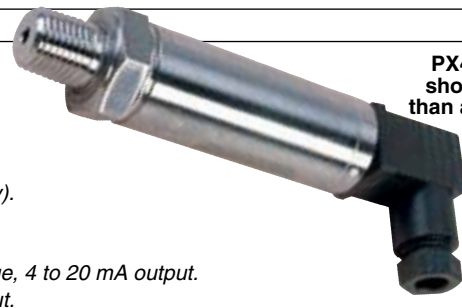
Insert "5" for M12 connector, M12 cables sold separately.

Custom configurations also available.

Ordering Examples: **PX409-32BI**, cable termination, 0 to 32 inHg barometric range, 4 to 20 mA output.

PX459-32HB5V, M12 connector, 0 to 1100 hPa barometric range, 0 to 5 Vdc output.

PX419-16HBV mini DIN termination, 550 to 1100 hPa barometric range, mV/V output.



PX419-26B5V, shown smaller than actual size.

mini DIN style