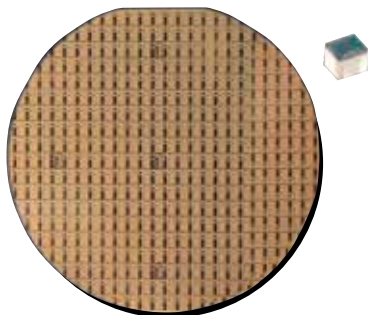


HIGH ACCURACY PRESSURE TRANSDUCERS

PIEZORESISTIVE DESIGN WITH HIGH TEMPERATURE PERFORMANCE

**EXCEPTIONAL PERFORMANCE
0.08% STATIC ACCURACY**

Micro-Machined Silicon



**5-Point NIST Traceable
Calibration Certificate**



Common Specifications Gage and Absolute Pressure

Approvals: RoHS compliant

**Minimum Isolation Between Case
and Output Terminations:**

100M Ω @ 50 Vdc

Pressure Cycles: 1 million, minimum

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

Bandwidth: DC to 1 kHz typical

Response Time: <1 ms

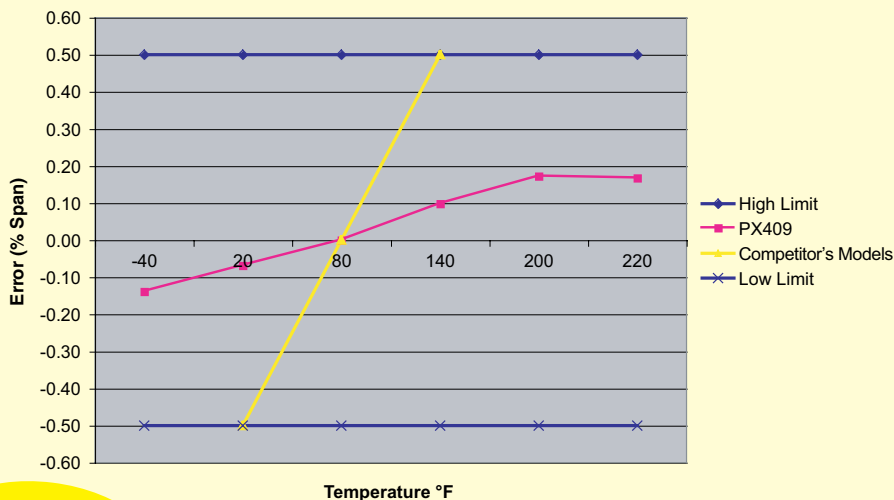
CE Compliant:

Emissions: IEC550022 Class B

Electrostatic Discharge Immunity:
IEC61000-4-2

Thermal Effects -29 to 85°C (-20 to 185°F)

Span Error: 100 psig



**RUGGEDIZED DESIGN
For Aerospace,
Automotive, Test and
Industrial Applications**

CUSTOM CONFIGURATIONS AVAILABLE!



Designed to be quickly customized to meet your exacting specifications, often with fast delivery. Custom variables are available including custom fittings, accuracies, ranges, calibrations, pressure units, thermal specifications, vibration, operating temperature and compensated range. Contact OMEGA Pressure Engineering for more details.

EM Field Immunity: IEC61000-4-3

EFT Immunity: IEC61000-4-4

Surge Immunity: IEC61000-4-5

Conducted RF: IEC61000-4-6

**Rate Power Frequency Magnetic
Field:** IEC61000-4-8

Electrical Termination:

PX409: Integral 2 m (6') cable

PX409C: Integral 2 m (6') cable
with 1/2 NPT conduit fitting

PX419: mini-DIN

PX429: Twist lock

Environmental Protection:

PX409: IP67

PX409C: IP67

PX419: IP65

PX429: IP65

Overpressure Gage Pressure:

10 inH₂O: 10 times span

1 psi: 6 times span

2.5 to 1000 psi: 4 times span

1500 to 5000 psi: 7250 psi maximum

Overpressure Absolute Pressure:

5 psia: 6 times span

2.5 psia to 1000 psia: 4 times span

1500 to 5000 psia: 10,000 psi
maximum

Secondary Containment

Gage/Diff/Vac/Compound:

10 inH₂O to 5 psi: To 1000 psi

15 to 1000 psi: To 3000 psi

1500 to 5000 psi: To 10,000 psi

Absolute/Barometric:

5 to 1000 psi: To 6000 psia

1500 to 5000 psi: To 10,000 psia

Wetted Parts: 316 SS

Pressure Port: 1/8-18 NPT male

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

mV/V OUTPUT

HIGH PERFORMANCE PRESSURE TRANSDUCERS

PIEZORESISTIVE DESIGN WITH HIGH TEMPERATURE PERFORMANCE

100 mV Output
0-10 inH₂O to 0-5000 psi
25 mb to 345 bar

PX409-100GV,
 shown actual size.

PX409 Series



PX419-015GV,
 shown actual size.

Stock Delivery for most Ranges!



PX429-015GV,
 shown actual size.

mV/V Specifications

Output: mV/V, 100 mV @ 10 Vdc

(Ratiometric 5 to 10 Vdc)

Supply Voltage: 10 Vdc

(5 mA @ 10 Vdc)

Input/Output Resistance: 5000 Ω

±20% typical

Accuracy (Combined Linearity,

Hysteresis and Repeatability):

±0.08% BSL maximum

Zero Balance: ±0.5% FS typical

1% max (1% typical, 2% maximum

for 2.5 psi and below)

Span Setting: ±0.5% FS typical 1%

maximum (1% typical, 2% maximum for

2.5 psi and below) Calibrated in vertical

direction with fitting down

Operating Temperature Range:

-45 to 121°C (-49 to 250°F)

Compensated Temperature:

Ranges >5 psi: -29 to 85°C

(-20 to 185°F)

Ranges ≤ 5 psi: -17 to 85°C

(0 to 185°F)

Thermal Effects Zero

(Over Compensated Range):

Ranges >5 psi: ±0.5% span

Ranges ≤5 psi: ±1.0% span

Thermal Effects Span

(Over Compensated Range):

Ranges >5 psi: ±0.5% span

Ranges ≤5 psi: ±1.0% span

To Order

| RANGE | | 2 m (6') CABLE TERMINATION | MINI-DIN TERMINATION | TWIST-LOCK TERMINATION |
|--|--------|-------------------------------|-------------------------|---------------------------|
| psi | bar | | | |
| mV/V OUTPUT, GAGE PRESSURE RANGES | | | | |
| 10 in-H ₂ O | 25 mb | PX409-10WGV | PX419-10WGV | PX429-10WGV |
| 1 | 69 mb | PX409-001GV | PX419-001GV | PX429-001GV |
| 2.5 | 172 mb | PX409-2.5GV | PX419-2.5GV | PX429-2.5GV |
| 5 | 345 mb | PX409-005GV | PX419-005GV | PX429-005GV |
| 15 | 1.0 | PX409-015GV | PX419-015GV | PX429-015GV |
| 30 | 2.1 | PX409-030GV | PX419-030GV | PX429-030GV |
| 50 | 3.4 | PX409-050GV | PX419-050GV | PX429-050GV |
| 100 | 6.9 | PX409-100GV | PX419-100GV | PX429-100GV |
| 150 | 10.3 | PX409-150GV | PX419-150GV | PX429-150GV |
| 250 | 17.2 | PX409-250GV | PX419-250GV | PX429-250GV |
| 500 | 34.5 | PX409-500GV | PX419-500GV | PX429-500GV |
| 750 | 51.7 | PX409-750GV | PX419-750GV | PX429-750GV |
| 1000 | 69 | PX409-1.0KGV | PX419-1.0KGV | PX429-1.0KGV |
| 1500 | 103 | PX409-1.5KGV | PX419-1.5KGV | PX429-1.5KGV |
| 2500 | 172 | PX409-2.5KGV | PX419-2.5KGV | PX429-2.5KGV |
| 3500 | 241 | PX409-3.5KGV | PX419-3.5KGV | PX429-3.5KGV |
| 5000 | 345 | PX409-5.0KGV | PX419-5.0KGV | PX429-5.0KGV |
| mV OUTPUT, ABSOLUTE PRESSURE RANGES | | | | |
| 5 | 345 mb | PX409-005AV | PX419-005AV | PX429-005AV |
| 15 | 1.0 | PX409-015AV | PX419-015AV | PX429-015AV |
| 30 | 2.1 | PX409-030AV | PX419-030AV | PX429-030AV |
| 50 | 3.4 | PX409-050AV | PX419-050AV | PX429-050AV |
| 100 | 6.9 | PX409-100AV | PX419-100AV | PX429-100AV |
| 150 | 10.3 | PX409-150AV | PX419-150AV | PX429-150AV |
| 250 | 17.2 | PX409-250AV | PX419-250AV | PX429-250AV |
| 500 | 34.5 | PX409-500AV | PX419-500AV | PX429-500AV |
| 750 | 51.7 | PX409-750AV | PX419-750AV | PX429-750AV |
| 1000 | 69 | PX409-1.0KAV | PX419-1.0KAV | PX429-1.0KAV |

Ordering Examples: PX409-1.0KGV, mV output, 1000 psi gage pressure range, 2 m (6') cable termination. PX429-015AV, mV output, 15 psi absolute pressure, twist lock termination, PT06F10-6S, mating twist lock connector (sold separately), and DP25B-S, 4-digit meter, system with meter.
 (See page B-25h for information on meters).