

# MICRO-MACHINED SILICON TRANSDUCERS

## WET/DRY DIFFERENTIAL PRESSURE MODELS

**mV/V, 0 to 5 or 0 to 10 Vdc, or 4 to 20 mA Outputs**  
**Uni-Directional Ranges**  
**0-10 inH<sub>2</sub>O to 0-1000 psid**



### PX409 Series

- 5-Point NIST Traceable Calibration
- Precision Micro-Machined Silicon Core
- High Stability, Low Drift
- Welded Stainless Steel Construction
- 316L SS Wetted Parts on Wet Side—Clean Dry Gases in Dry Side
- Digital Dynamic Thermal Compensation Across Temperature and Pressure Range
- Premium Temperature Performance
- Broad Compensated Temperature Range
- Durable, 1 Million Cycle Life
- Ruggedized with Secondary Containment
- Customized Specifications Available

These rugged stainless steel transducers are ideal for industrial, automotive, or aerospace applications where only one side of the transducer is exposed to wet media. These wet/dry transducers deliver the great performance characteristics of the Micro-Machined Silicon Series Transducers at a lower price than the wet/wet models. They can be used in test benches, filter monitoring, air flow, factory or pneumatic air, pitot tubes, air speed and other industrial or aerospace applications requiring a very rugged wet/dry transducer. The solid state silicon core will provide long, reliable service life with excellent long term stability. To obtain their high accuracy and stability, the PX409 Series use state of the art digital mapping of the temperature, pressure and output performance of the silicon sensor in conjunction with a custom ASIC to provide dynamic thermal compensation across the temperature and pressure parameters.

### COMMON SPECIFICATIONS

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

**Minimum Resistance Between Transducer Body and Any Wire:** 100 MΩ

**Operating Temperature:**

**mV/V and 5 to 10 Vdc Output:** -45 to 121°C (-49 to 250°F)  
**mA Output:** -45 to 115°C (-49 to 239°F)

**Compensated Temperature Range:**

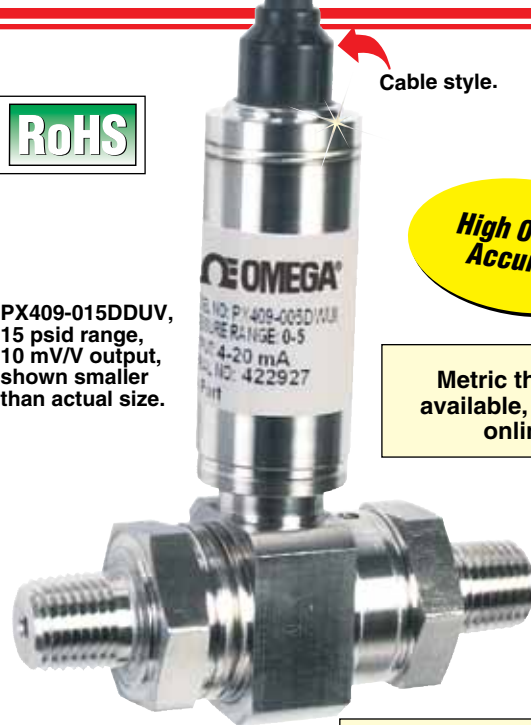
**10 inH<sub>2</sub>O to 5 psi:** -17 to 85°C (1 to 185°F)  
**15 to 1000 psi:** -29 to 85°C (-20 to 185°F)

**Thermal Accuracy:** **Zero** **Span**  
 % Span Shift over compensated temperature range

**10 inH<sub>2</sub>O to 5 psi:** ±1.00% ±1.00%  
**15 to 1000 psi:** ±0.50% ±0.50%

**Pressure Cycles:** 1 million minimum

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



Cable style.

**High 0.08% Accuracy**

Metric threads available, visit us online

PX409-015DDUV,  
 15 psid range,  
 10 mV/V output,  
 shown smaller than actual size.

**Fast Delivery!**  
**Stock to 2 Weeks**  
**On Most Models**



PX459: M12 connector IP65 environmental rating.

PX459, M12 connector

### Five Electrical Termination Styles



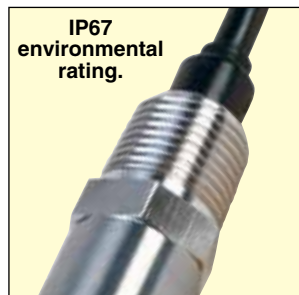
IP67 environmental rating.

PX409, 2 m (6') cable.



IP65 environmental rating.

PX419, mini DIN.



IP67 environmental rating.

PX409C, conduit cable.



IP65 environmental rating.

PX429, twist-lock.

# MICRO-MACHINED SILICON TRANSDUCERS WET/DRY DIFFERENTIAL PRESSURE MODELS

**Bandwidth:** DC to 1 kHz typical

**Response Time:** <1 ms

**CE Compliant:** Meets EN61326-1: 2006 for industrial locations

**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

**Media Compatibility:**

**High Side:** All fluids and gases compatible with 316L SS

**Low Side:** Clean, dry, non-ionic gases

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

**Proof Pressure (Differential):**

10 inH<sub>2</sub>O range = 10 times range

1 psi range = 6 times range

2.5 to 750 psi ranges = 4 times range

1000 psi range = 3 times range

**Hi Side Containment Pressure (Differential):**

**Ranges 10 inH<sub>2</sub>O to 5 psi:** to 1000 psi

**Ranges 15 to 1000 psi:** to 3000 psi

**Pressure Ports:** ¼ NPT male

**Electrical Terminations:**

**PX409:** 2 m (6') cable

**PX409C:** 2 m (6') cable with ½ NPT conduit thread

**PX419:** mini DIN (mating connector included)

**PX429:** Twist-lock (mating connector sold separately)

**PX429 Mating Connector:**

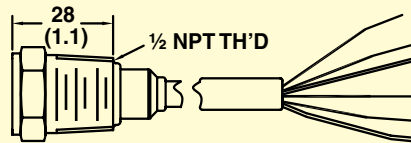
PT06F10-6S

**PX459:** M12 connector

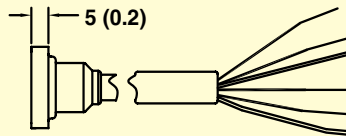
**Weight:** 200 g (7 oz) maximum

Dimensions: mm (inch)

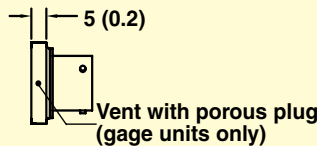
**Conduit backend PX409C**



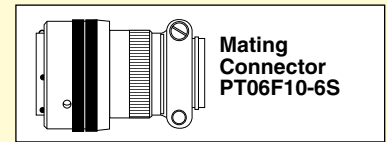
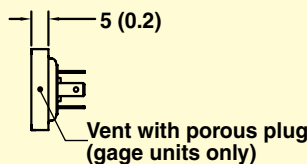
**Integral cable backend PX409**



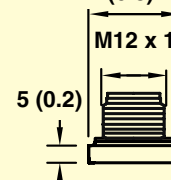
**Twist-lock backend PX429**



**mini DIN backend PX419**



**M12 connector backend PX459**  
Ø 20.2 (0.8)



Dimensions: mm (inch)  
ø = diameter

