

# MICRO-MACHINED SILICON TRANSDUCERS

## WET/WET 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**

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

**High 0.08% Accuracy**

### PX409 Series



- ✓ Precision Micro-Machined Silicon Core
- ✓ 5-Point NIST Traceable Calibration
- ✓ High Stability, Low Drift
- ✓ Welded Stainless Steel Construction
- ✓ 316L SS Wetted Parts
- ✓ 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

Get all the great performance characteristics of the Micro-Machined Silicon Transducers in these wet/wet differential pressure models. These rugged stainless steel transducers are ideal for tough industrial automotive, or aerospace applications requiring a wet/wet transducer. They can be used in test benches, filter monitoring, hydraulic, flow, or water/wastewater applications, as well as factory or pneumatic air, pitot tubes, air speed and other industrial or aerospace applications. The solid state silicon core and all stainless steel wetted parts 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**  
 % 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%



Cable style.

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

Metric threads available, visit us online



PX459, M12 connector.

### Five Electrical Termination Styles



PX409, 2 m (6') cable.



PX419, mini DIN.



PX409C, conduit cable.



PX429, twist-lock.

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

**Pressure Cycles:** 1 million minimum

**Long Term Stability (1-Year):**

±0.1% FS typical

**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

**Wetted Parts:** 316L stainless steel

**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)

PX459: M12 connector

**PX429 Mating Connector:**

PT06F10-6S

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

