

# HVAC STYLE LOW DIFFERENTIAL PRESSURE TRANSMITTERS

**PX291 Series**  
 0-0.1 inH<sub>2</sub>O to 0-30 psid  
 0-25 Pa to 0-2 bar

Starts at  
**\$180**



PX291-001WDI, \$210, shown smaller than actual size.

## Applications:

- ✓ Drop Across Filters
- ✓ Static Fan Pressures
- ✓ Clean Room Pressures
- ✓ Variable Volume Air Systems
- ✓ Velocity Pressures
- ✓ Voltage or Current Outputs
- ✓ Low Power Consumption
- ✓ No Moving Parts to Wear
- ✓ Position Insensitive
- ✓ Reliable Long-Term Stability
- ✓ Rugged Flame-Retardant Case

**MOST POPULAR MODELS HIGHLIGHTED!**

To Order (Specify Model Number)							
RANGE		5 Vdc OUTPUT	PRICE	4 TO 20 mA OUTPUT	PRICE	MAX* OVERPRESSURE	COMPATIBLE METERS**
0 to 0.1 inH <sub>2</sub> O	0 to 25.0 Pa	PX291-0.1WD5V	\$220	PX291-0.1WDI	\$220	5 inH <sub>2</sub> O 1.25 kPa	DP41-E, DP25B-E, DP24-E
0 to 0.2 inH <sub>2</sub> O	0 to 50.0 Pa	PX291-0.2WD5V	210	PX291-0.2WDI	210	5 inH <sub>2</sub> O 1.25 kPa	DP41-E, DP25B-E, DP24-E
0 to 0.3 inH <sub>2</sub> O	0 to 75.0 Pa	PX291-0.3WD5V	210	PX291-0.3WDI	210	5 inH <sub>2</sub> O 1.25 kPa	DP41-E, DP25B-E, DP24-E
0 to 0.5 inH <sub>2</sub> O	0 to 125.0 Pa	PX291-0.5WD5V	210	PX291-0.5WDI	210	5 inH <sub>2</sub> O 1.25 kPa	DP41-E, DP25B-E, DP24-E
0 to 1.0 inH <sub>2</sub> O	0 to 249.0 Pa	PX291-001WD5V	210	PX291-001WDI	210	20 inH <sub>2</sub> O 4.98 kPa	DP41-E, DP25B-E, DP24-E
0 to 2.0 inH <sub>2</sub> O	0 to 498.0 Pa	PX291-002WD5V	180	PX291-002WDI	180	20 inH <sub>2</sub> O 4.98 kPa	DP41-E, DP25B-E, DP24-E
0 to 3.0 inH <sub>2</sub> O	0 to 748.0 Pa	PX291-003WD5V	180	PX291-003WDI	180	20 inH <sub>2</sub> O 4.98 kPa	DP41-E, DP25B-E, DP24-E
0 to 5.0 inH <sub>2</sub> O	0 to 1.25 kPa	PX291-005WD5V	180	PX291-005WDI	180	5 psid 0.34 bar	DP41-E, DP25B-E, DP24-E
0 to 10.0 inH <sub>2</sub> O	0 to 2.49 kPa	PX291-010WD5V	180	PX291-010WDI	180	5 psid 0.34 bar	DP41-E, DP25B-E, DP24-E
0 to 20.0 inH <sub>2</sub> O	0 to 4.98 kPa	PX291-020WD5V	180	PX291-020WDI	180	5 psid 0.34 bar	DP41-E, DP25B-E, DP24-E
0 to 30.0 inH <sub>2</sub> O	0 to 7.47 kPa	PX291-030WD5V	180	PX291-030WDI	180	5 psid 0.34 bar	DP41-E, DP25B-E, DP24-E
0 to 50.0 inH <sub>2</sub> O	0 to 12.5 kPa	PX291-050WD5V	180	PX291-050WDI	180	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 100.0 inH <sub>2</sub> O	0 to 24.9 kPa	PX291-100WD5V	180	PX291-100WDI	180	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 1.0 psid	0 to 0.07 bar	PX291-001D5V	180	PX291-001DI	180	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 2.0 psid	0 to 0.14 bar	PX291-002D5V	180	PX291-002DI	180	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 5.0 psid	0 to 0.34 bar	PX291-005D5V	180	PX291-005DI	180	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 15.0 psid	0 to 1.0 bar	PX291-015D5V	180	PX291-015DI	180	30 psid 2.1 bar	DP41-E, DP25B-E, DP24-E
0 to 30.0 psid	0 to 2.1 bar	PX291-030D5V	180	PX291-030DI	180	60 psid 4.1 bar	DP41-E, DP25B-E, DP24-E

Comes with complete operator's manual.

\* Maximum momentary overpressure.

\*\* See section D for compatible meters.

Note: See specifications for description of the elevated zero option, \$20 additional.

Ordering Examples: PX291-001WD5V, range of 1.00 inH<sub>2</sub>O at 5 Vdc and 0 differential pressure at 0 Vdc, \$210. PX291-001WD5V-A, range of 1.00 inH<sub>2</sub>O at 5 Vdc and -0.33 inH<sub>2</sub>O at 0 Vdc, \$210 + \$20 = \$230. PX291-001WDI, range of 1.00 inH<sub>2</sub>O at 20 mA and 0 differential pressure at 4 mA, \$210. PX291-001WDI-A, range of 1.00 inH<sub>2</sub>O at 20 mA and -0.33 inH<sub>2</sub>O at 4 mA, \$210 + \$20 = \$230.

## ACCESSORY

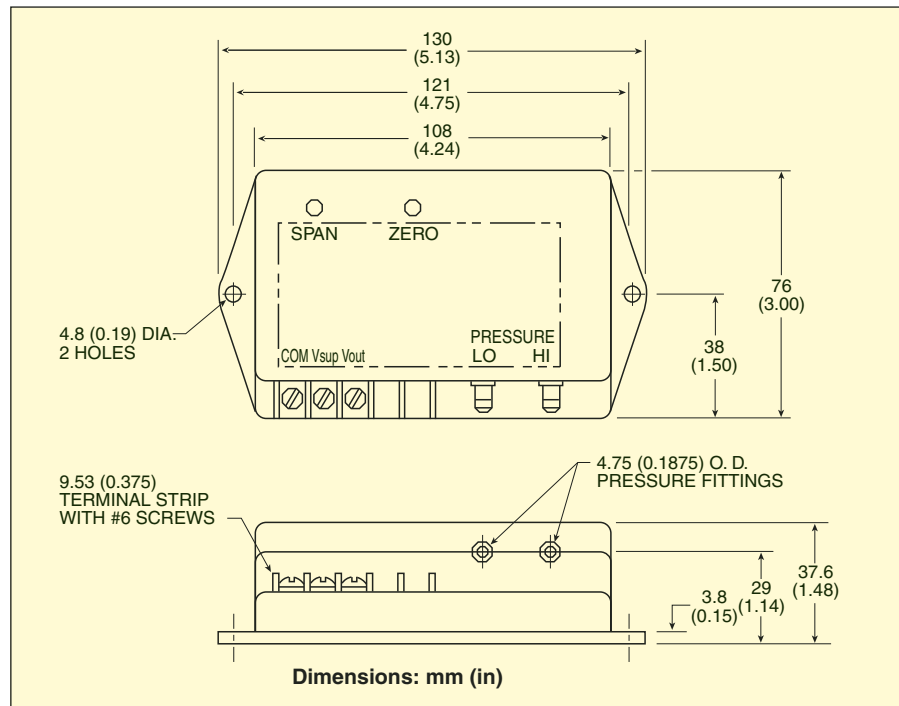
MODEL NO.	PRICE	DESCRIPTION
EE-2590	\$190	Reference Book: Measurement Instrumentation and Sensors Handbook



# 0 TO 5 Vdc OR 4 TO 20 mA OUTPUTS ZERO OFFSET

The PX291 Series of differential pressure transmitters is designed to measure low pressures while using little power. A selection of ranges is available to meet most industrial and laboratory applications.

The transmitters are housed in a flame-retardant, glass-reinforced polyphenylene oxide case. Electrical connections are made by means of a  $\frac{3}{8}$ " terminal with #6 screws. There are no moving parts and the transducers are virtually position insensitive. The span and zero settings are made via 20-turn potentiometers, for easy and precise adjustments. The pressure sensing element is a differential capacitive cell for the low pressure ranges from 0.1 to 5 inH<sub>2</sub>O and a piezoresistive chip for ranges above 5 inH<sub>2</sub>O. Both sensors ensure reliability and long-term stability.



## SPECIFICATIONS

**General:** Measures differential, gage pressure or vacuum

**Excitation:** 11 to 32 Vdc reverse polarity protected

**Voltage Output Models:**  
0 to 5 Vdc 3-wire, source or sink  
3.5 mA, short circuit protected,  
current draw = 10 mA

**Current Output Models:**  
4 to 20 mA, output limited to  
approximately 3.85 mA at low end and  
25 mA at high end

**Maximum Current Loop Resistance:**  
 $R_L = (V_S - 11) \times 50$

**Accuracy:**  $\pm 1\%$  includes linearity,  
hysteresis

**Calibration:** NIST-traceable

**Operating Temperature:**  
0 to 45°C (32 to 115°F)

**Temperature Effects:**  
Zero:  $\pm 0.05\%/^{\circ}\text{C}$   
Span:  $\pm 0.02\%/^{\circ}\text{C}$

**Operating Humidity Range:**  
10 to 90% non-condensing

**Shock Resistance:** 10 g (11 ms)

**Vibration Resistance:** 5 g to 50 Hz

**Overpressure:** See order chart for  
maximum safe momentary overpressure

**Media Compatibility:** Suitable for air or  
inert gas

**Pressure Connection:**  $\frac{3}{16}$ " Dia. tube  
connections with integral filters at both  
ports, suitable for  $\frac{1}{8}$ " ID Tygon® or  
polyurethane tubing (3 to 4 mm) or  
 $\frac{1}{4}$ " OD polyethylene tubing (6 mm)

**Electrical Connection:** External  $\frac{3}{8}$ "  
terminal strip with #6 screws

**Case Material:** Flame-retardant,  
glass-reinforced polyphenylene oxide

**Dimensions:** 36 H x 76 W x 131 mm L  
(1.4H x 3.0W x 5.15"L)

**Weight:** 190 g (6.72 oz)

## OFFSET OPTIONS

If the measured differential pressure is expected to go from positive to negative, a transducer with offset (elevated zero) should be ordered. The standard models in the order chart have no offset (i.e., at zero differential pressure, the output is 0 Vdc or 4 mA).

2 offset options are available:

### "A" $\frac{1}{4}$ Span Offset

At zero differential pressure, the output is 1.25 Vdc or 8 mA  
allowable pressure excursion:  
-33% to 100% of range

### "B" $\frac{1}{2}$ Span Offset

At zero differential pressure, the output is 2.5 Vdc or 12 mA  
allowable pressure excursion:  
-100% to 100% of range

**Examples: PX291-001WD5V-A**  
will have a range of 1" water at  
5 Vdc and -0.33" water at 0 Vdc

**PX291-001WDI-B** will have a  
range of +1" water at 20 mA  
and -1" water at 4 mA

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