

HVAC STYLE LOW DIFFERENTIAL PRESSURE TRANSMITTERS ZERO OFFSET

PX291 Series
0-0.1 inH₂O to 0-30 psid
0-25 Pa to 0-2 bar

Starts at
\$196



- ✓ Voltage or Current Outputs
- ✓ Low Power Consumption
- ✓ No Moving Parts to Wear
- ✓ Position Insensitive
- ✓ Reliable Long-Term Stability
- ✓ Rugged Flame-Retardant Case

Applications

- ✓ Drop Across Filters
- ✓ Static Fan Pressures
- ✓ Clean Room Pressures
- ✓ Variable Volume Air Systems
- ✓ Velocity Pressures

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 inH₂O and a



PX291-001WDI, \$227, shown actual size.

piezoresistive chip for ranges above 5 inH₂O. 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 (1.4 x 3.0 x 5.15"); see next page

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

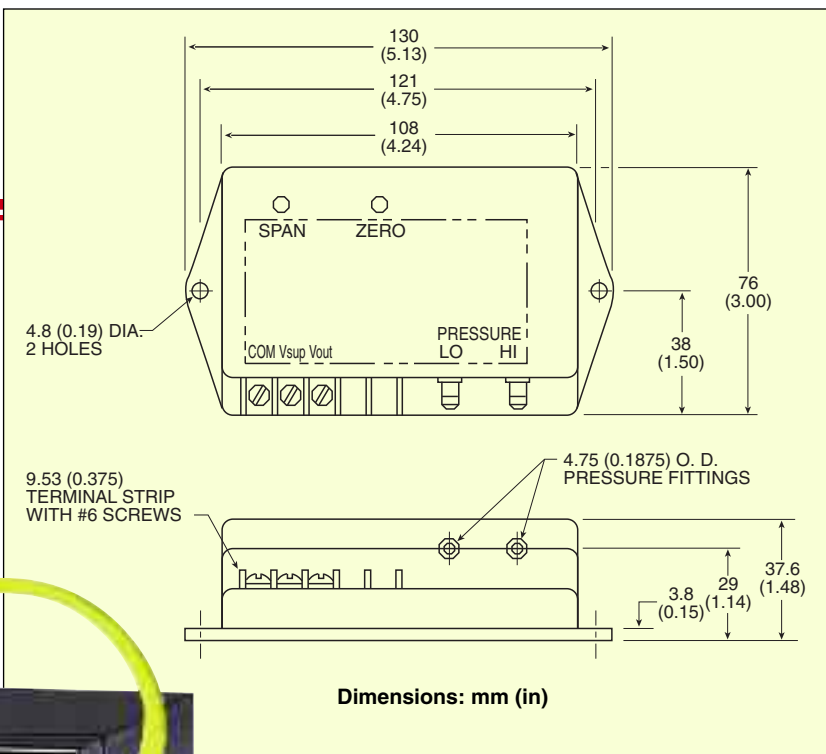
"B" $\frac{1}{2}$ Span Offset

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

HVAC STYLE LOW DIFFERENTIAL PRESSURE TRANSMITTERS



DPi8 with ethernet, \$240, shown smaller than actual size. iSeries meters and controllers accept both 0 to 5V and 4 to 20 mA transducer signals, see page D-13 for details.

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 ₂ O	0 to 25.0 Pa	PX291-0.1WD5V	\$252	PX291-0.1WDI	\$242	5 inH ₂ O 1.25 kPa	DP41-E, DP25B-E, DP24-E
0 to 0.2 inH ₂ O	0 to 50.0 Pa	PX291-0.2WD5V	227	PX291-0.2WDI	227	5 inH ₂ O 1.25 kPa	DP41-E, DP25B-E, DP24-E
0 to 0.3 inH ₂ O	0 to 75.0 Pa	PX291-0.3WD5V	227	PX291-0.3WDI	227	5 inH ₂ O 1.25 kPa	DP41-E, DP25B-E, DP24-E
0 to 0.5 inH ₂ O	0 to 125.0 Pa	PX291-0.5WD5V	227	PX291-0.5WDI	227	5 inH ₂ O 1.25 kPa	DP41-E, DP25B-E, DP24-E
0 to 1.0 inH ₂ O	0 to 249.0 Pa	PX291-001WD5V	227	PX291-001WDI	227	20 inH ₂ O 4.98 kPa	DP41-E, DP25B-E, DP24-E
0 to 2.0 inH ₂ O	0 to 498.0 Pa	PX291-002WD5V	196	PX291-002WDI	196	20 inH ₂ O 4.98 kPa	DP41-E, DP25B-E, DP24-E
0 to 3.0 inH ₂ O	0 to 748.0 Pa	PX291-003WD5V	196	PX291-003WDI	196	20 inH ₂ O 4.98 kPa	DP41-E, DP25B-E, DP24-E
0 to 5.0 inH ₂ O	0 to 1.25 kPa	PX291-005WD5V	196	PX291-005WDI	196	5 psid 0.34 bar	DP41-E, DP25B-E, DP24-E
0 to 10.0 inH ₂ O	0 to 2.49 kPa	PX291-010WD5V	196	PX291-010WDI	196	5 psid 0.34 bar	DP41-E, DP25B-E, DP24-E
0 to 20.0 inH ₂ O	0 to 4.98 kPa	PX291-020WD5V	196	PX291-020WDI	196	5 psid 0.34 bar	DP41-E, DP25B-E, DP24-E
0 to 30.0 inH ₂ O	0 to 7.47 kPa	PX291-030WD5V	196	PX291-030WDI	196	5 psid 0.34 bar	DP41-E, DP25B-E, DP24-E
0 to 50.0 inH ₂ O	0 to 12.5 kPa	PX291-050WD5V	196	PX291-050WDI	196	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 100.0 inH ₂ O	0 to 24.9 kPa	PX291-100WD5V	196	PX291-100WDI	196	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 1.0 psid	0 to 0.07 bar	PX291-001D5V	196	PX291-001DI	196	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 2.0 psid	0 to 0.14 bar	PX291-002D5V	196	PX291-002DI	196	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 5.0 psid	0 to 0.34 bar	PX291-005D5V	196	PX291-005DI	196	15 psid 1.0 bar	DP41-E, DP25B-E, DP24-E
0 to 15.0 psid	0 to 1.0 bar	PX291-015D5V	196	PX291-015DI	196	30 psid 2.1 bar	DP41-E, DP25B-E, DP24-E
0 to 30.0 psid	0 to 2.1 bar	PX291-030D5V	196	PX291-030DI	196	60 psid 4.1 bar	DP41-E, DP25B-E, DP24-E

Comes complete with NIST traceable calibration certificate and 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 inH₂O at 5 Vdc and 0 differential pressure at 0 Vdc, \$227.

PX291-001WD5V-A, range of 1.00 inH₂O at 5 Vdc and -0.33 inH₂O at 0 Vdc, \$196 + 20 = \$216.

PX291-001WDI, range of 1.00 inH₂O at 20 mA and 0 differential pressure at 4 mA, \$227.

PX291-001WDI-A, range of 1.00 inH₂O at 20 mA and -0.33 inH₂O at 4 mA, \$227 + 20 = \$247.



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