

# Dry Media Differential Pressure Transducers

## PX Series



### Selectable Ranges, LCD Display, & Automatic Zero For Easy Operation

#### FEATURES

- Excellent tolerance to overpressure & vibration reduces field failures
- High accuracy digital sensor maintains calibration and reduces callbacks
- High reliability sensor technology for long-term maintenance-free operation
- Selectable ranges and scales reduce setup time & number of models to stock
- Microprocessor-based design allows for digitally profiled sensor increasing product accuracy and reliability
- Circuit protection reduces damage due to incorrect input wiring
- Monitors positive and negative pressure for application versatility
- Flexibility: standard and fast response modes
- LCD is ideal for setting up, troubleshooting, and measuring
- Ceramic capacitive sensing element...highly stable linear output, reducing offset errors

#### DESCRIPTION

The digital **PX Series** differential pressure transducers utilize highly accurate, microprocessor profiled sensors and an advanced ceramic capacitive sensing element. Designed to monitor duct and room pressure in commercial buildings, the PX Series offers exceptional job-site flexibility. PXP and PXD models feature four field-selectable ranges. The PXU features seven field-selectable ranges, allowing just one model to cover applications for 0-0.1" to 0-10" W.C. The directional mode jumper is used to configure the transducer in uni-directional or bi-directional mode for room and building static pressure applications. All models feature a pushbutton and digital input terminal to zero the output. The microprocessor is programmed to reduce accidental zero adjustment during normal operation.

#### SPECIFICATIONS

5 Year  
Warranty

<b>Media Compatibility</b>	Dry air or inert gas
<b>Input Power</b>	12-30VDC, or 24VAC nominal; 2-wire: 20mA max.; 3-wire: 30mA max.
<b>Output</b>	Field-selectable: 2-wire, loop-powered 4-20mA (DC only, clipped & capped), or 3-wire 0-5V/0-10V *
<b>PRESSURE RANGES</b>	
<b>PX: 01</b> <i>Uni-directional</i> <i>Bi-directional</i>	0.1/0.25/0.5/1.0" W.C. F.S., switch selectable ±0.1/±0.25/±0.5/±1.0" W.C. F.S., switch selectable 25 Pa/50 Pa/100 Pa/250 Pa, F.S., switch selectable ±25 Pa/±50 Pa/±100 Pa/±250 Pa, F.S., switch selectable
<b>PX: 02</b> <i>Uni-directional</i> <i>Bi-directional</i>	1.0/2.5/5.0/10" W.C. F.S., switch selectable ±1.0/±2.5/±5.0/±10" W.C. F.S., switch selectable 0.25 kPa/0.5 kPa/1.0 kPa/2.5 kPa, F.S., switch selectable ±0.25 kPa/±0.5kPa/±1.0 kPa/±2.5 kPa, F.S., switch selectable
<b>PXU: 05</b> <i>Uni-directional</i> <i>Bi-directional</i>	0.1/0.25/0.5/1.0/2.5/5/10" W.C. 25 Pa/50 Pa/100 Pa/250 Pa/0.5 kPa/1 kPa/2.5 kPa F.S. switch selectable ±0.1/0.25/0.5/1.0/2.5/5/10" W.C. 25 Pa/50 Pa/100 Pa/250 Pa/0.5 kPa/1 kPa/2.5 kPa F.S. switch selectable
<b>Response Time</b>	Standard: T95 in 20 sec, Fast: T95 in 2 sec, switch selectable
<b>Mode</b>	Unidirectional or bidirectional, switch selectable
<b>Display (option)</b>	Signed 3-1/2 digit LCD, indicates pressure, overrange indicator
<b>Proof Pressure</b>	3 psid (20.6 kPa)
<b>Burst Pressure</b>	5 psid (34.5 kPa)
<b>Accuracy</b>	±1%F.S. of selected range (combined linearity & hysteresis)
<b>Temperature Effect</b>	1" (250 Pa) models: 0.05%/°C; 10" (2.5 kPa) models: 0.01%/°C; (Relative to 25°C) 0° to 50°C (32° to 122°F)
<b>Zero Drift (1-year)</b>	1" (250 Pa) models: 2.0% max.; 10" (2.5 kPa) models: 0.5% max.
<b>Zero Adjust</b>	Pushbutton auto-zero & digital input (2-pos terminal block)
<b>Operating Environment</b>	0°- 60°C (32° to 140°F); 0 to 90% RH noncondensing
<b>Fittings</b>	Brass barb; 0.24" (6.1 mm) o.d.
<b>Physical</b>	UL 94 V-0 Fire Retardant ABS

EMC Conformance: Low voltage directive 2006/95/EC; EMC directive 2004/108/EC.  
EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1:2007 specification requirements).

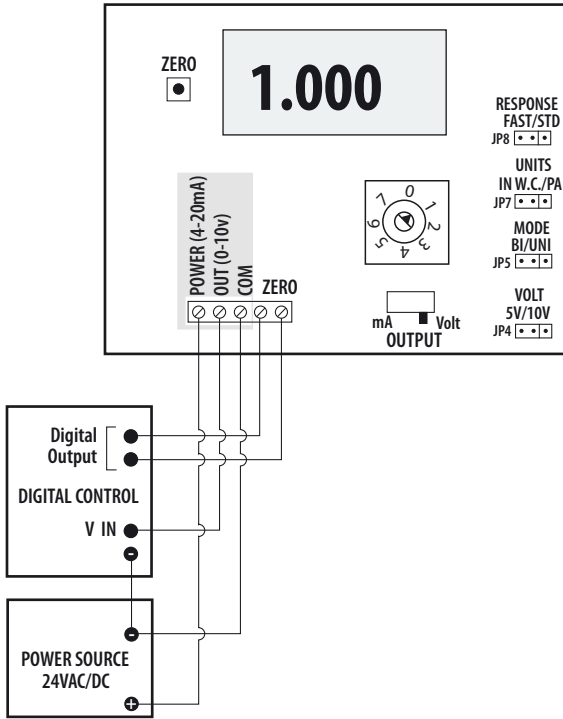
\* Minimum input voltage for 4-20mA operation: 250 Ω loop = 13VDC; 500Ω loop = 19VDC

#### APPLICATIONS

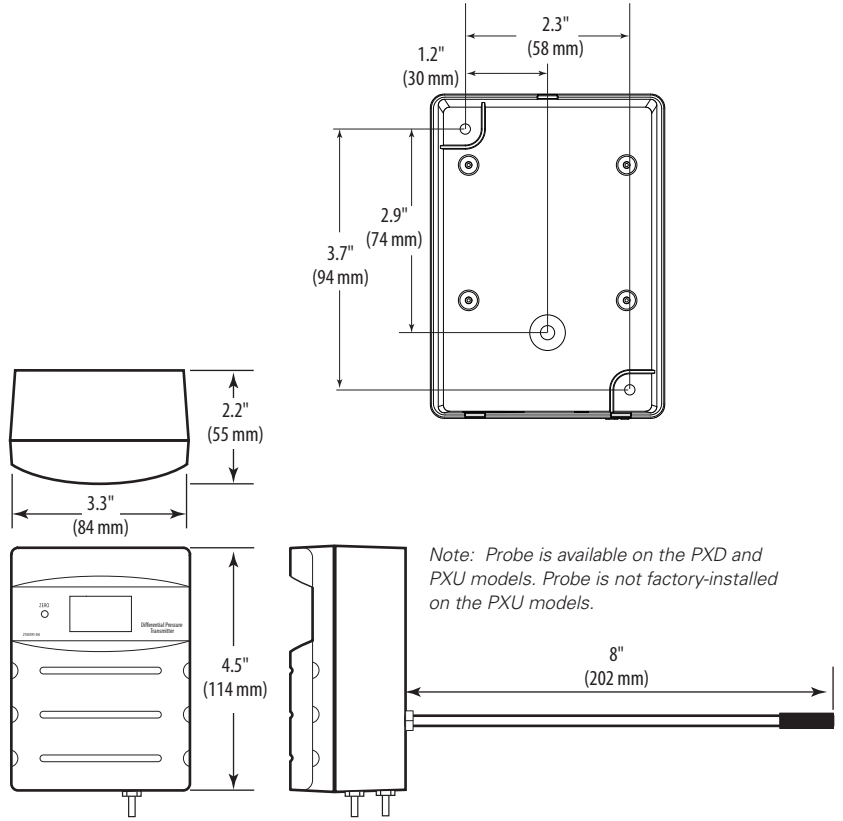
- Static pressure in duct or room applications
- Variable air volume system control
- Filter status monitoring
- Clean rooms, hospitals, fume hoods, computer rooms, and other very low differential pressure applications

**WIRING DIAGRAM**

3-wire, 0-5V/0-10V



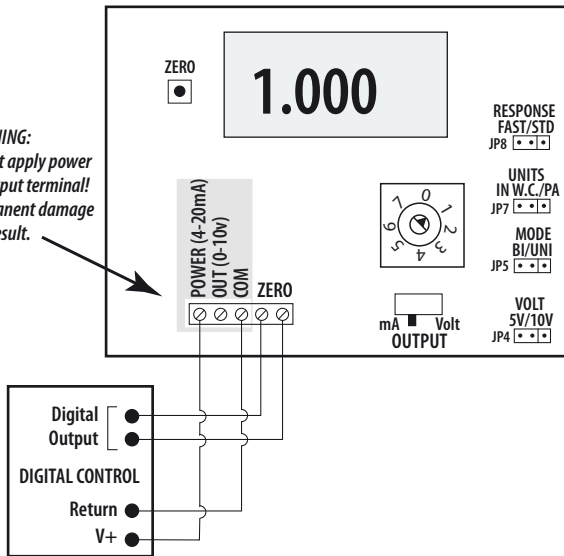
**DIMENSIONAL DRAWING**



Note: Probe is available on the PXD and PXU models. Probe is not factory-installed on the PXU models.

2-wire, 4-20mA

**WARNING:**  
Do not apply power to output terminal!  
Permanent damage will result.



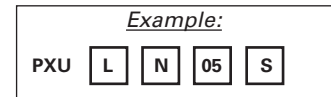
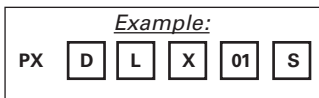
Rotary Switch Position	PX01		PX02		PX05	
	Inches W.C.	Pascal	Inches W.C.	Pascal	Inches W.C.	Pascal
0	0.1	25	1	250	0.1	25
1	0.25	50	1	250	0.25	50
2	0.5	100	1	250	0.5	100
3	1	250	1	250	1	250
4	1	250	2.5	0.5kPa	2.5	0.5kPa
5	1	250	5	1kPa	5	1kPa
6	1	250	10	2.5kPa	10	2.5kPa
7	1	250	10	2.5kPa	10	2.5kPa

**ORDERING INFORMATION**



Enclosure: PX  D = Duct,  P = Panel  
 Local Display:  L = LCD Display,  X = No Display  
 NIST:  N = NIST,  X = None  
 Range:  01 = 0-1"WC/0-250Pa,  02 = 0-10"WC/0-2.500kPa  
 Response:  S = Selectable

Local Display: PXU  L = LCD Display,  X = No Display  
 NIST:  N = NIST,  X = None  
 Range:  05 = 0-10"WC/0-2.500kPa  
 Response:  S = Selectable



**ACCESSORIES**

Room and duct static pickup tubes (AA05, AA06, AA07)  
 Pitot tube kits (AA18, AA19, AA20), wall plate remote pickup (AA56)  
 Replacement covers (AA62, AA63)

