

# INDUSTRIAL WET/WET DIFFERENTIAL PRESSURE TRANSDUCER WITH HIGH OVERPRESSURE CAPACITY

**PX80 Series**  
**0-30 to 0-5000 psi**  
**(0-2 to 0-350 bar)**  
**Differential Pressure**  
**mV/V Output**  
**0 to 5 Vdc Output**  
**4 to 20 mA Output**

1 bar = 14.5 psi  
 1 kg/cm<sup>2</sup> = 14.22 psi  
 1 atmosphere = 14.7 psi = 29.93 inHg = 760.2 mmHg = 1.014 bar

Starts at  
**\$895**



- ✓ Low Differential Pressure at High Line Pressure—1500 psi Standard, Optional Up to 5000 psi
- ✓ FM Intrinsically Safe
- ✓ All Stainless Steel Construction
- ✓ Sealed for Harsh Environments
- ✓ Rugged Lightning-Protected Housing Available, Style 5

OMEGA's PX80 is a heavy-duty, wet/wet, differential pressure transducer that comes in ranges of 0-30 to 0-5000 psi (0-2 to 0-350 bar). Models are available in any of 3 outputs: mV/V, amplified 0 to 5 Vdc, or 4 to 20 mA. All are suitable for interface with most PLCs and computer-based control systems. An extremely high overpressure capacity of 1500 psi or 150% of capacity (whichever is greater) makes the PX80 an extremely durable transducer. An FM Approved Intrinsically Safe rating is standard. The all stainless steel construction, high overpressure protection, and FM approval offer high reliability in harsh industrial environments.



PX80D1-030DV,  
 \$950, shown  
 smaller than  
 actual size.

PX80B1-1.5KDV,  
 \$895, shown smaller  
 than actual size.

PX80B0-2KDI,  
 \$1045, shown  
 smaller than  
 actual size.

DIFFERENTIAL PRESSURE TRANSDUCERS **B**

# DIFFERENTIAL PRESSURE TRANSDUCERS

Style 5 sealed metal terminal box, \$1045 most ranges.

## SPECIFICATIONS

### mV/V Output

#### Electrical:

Excitation: 10 Vdc (15 V max)

Output: 2 mV/V nominal

Bridge Resistance: 350 Ω

Zero Balance: ±1% FSO

### 5 Vdc Output

#### Electrical:

Excitation: 24 to 32 Vdc

Output: 0 to 5 Vdc ±10% adj

Zero Balance: 0 V ±10% adj

### 4 to 20 mA Output

#### Electrical:

Excitation: 10 to 40 Vdc

Output: 4 to 20 mA ±0.8 mA adj

Max Loop Resistance:

(Input voltage - 12) x 50

Zero Balance: 4 mA ± 0.4 mA adj

## COMMON SPECIFICATIONS

### Performance:

Linearity: ±0.25% FSO

Hysteresis: ±0.10% FSO

Repeatability: ±0.1% FSO

### Environmental:

Agency Approvals:

FM Intrinsically Safe

IS/I.II.III/1/CDEFG standard

### Operating Temp Range:

mV/V: -73 to 163°C (-100 to 325°F)

Amplified: -46 to 107°C  
(-50 to 225°F)

### Compensated Temp Range:

mV/V: 17 to 71°C (60 to 160°F)

### Thermal Effects:

Zero: 0.009% FSO/°C (mV and 5 V)

Zero: 0.013% FSO/°C (4 to 20 mA)

Span: 0.009% rdg/°C

### Pressure:

Line Pressure: 1500 psi (100 bar)  
or 150% of rated pressure, whichever  
is greater

Burst Pressure: 6000 psi  
(414 bar) minimum

Wetted Parts: 17-4 PH stainless steel  
and Buna-N O-ring

### Pressure Port:

1/4-18 NPTF: For ≤700 psi

1/8-27 NPTF: For ≥1000 psi

### Electrical Termination:

Style 0 = 3 m (10') cable

Style 1 = PTIH-10-6P (or equiv)

Style 5 = Metal terminal box

Style 6 = Micro DIN

### Mating Connector:

Style 1: PT06F-10-6S

(not included)

Style 6: Mating connector

(included)

Weight: 5 lb

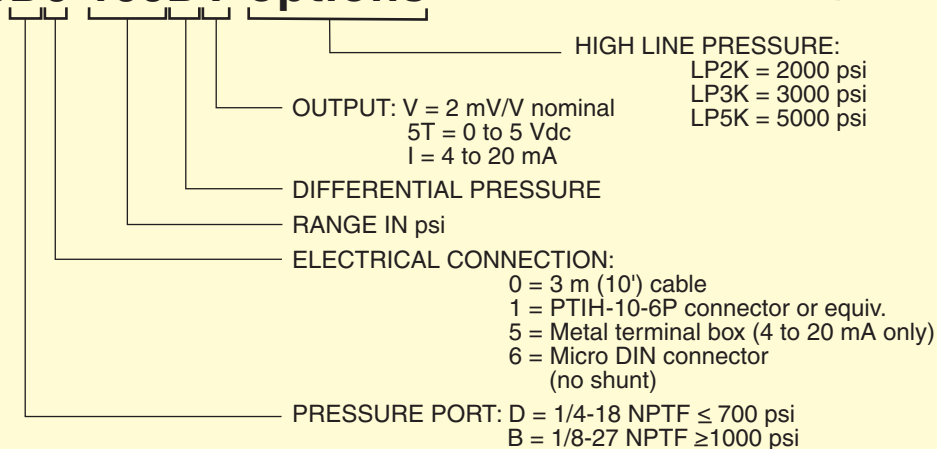
PX80D5-050DI, \$1045,  
shown smaller than  
actual size.



## Custom Configurations

MODEL NUMBER SPECIFICATION:

### PX80D0-100DV-options



To order extra cable on cable style models, add suffix “-(Length in feet)FT” and \$2/ft beyond the standard 3 m (10') length.

Ordering Examples: **PX80B5-1KDI**, 1000 psid range model with 4 to 20 mA output and a lightning-protected amplifier housing, \$1045. **PX80D5-030DI-25FT**, 30 psid range model, 4 to 20 mA output and 7.6m (25') cable, 1100 + 30 = \$1130.

**PX80D1-200DV**, 200 psid range model with mV/V output and integral connector, \$895. **PT06F-10-6S**, mating connector (not included), \$26.50.

# HOW TO ORDER PX80 SERIES WET/WET DIFFERENTIAL PRESSURE TRANSDUCERS WITH mV/V OUTPUT

**PX80 Series**  
mV/V Output  
0-30 to 0-5000 psi  
(0-2 to 0-350 bar)  
Differential Pressure

Starts at  
**\$895**

- ✓ Low Differential Pressure at High Line Pressure—1500 psi Standard, Optional Up to 5000 psi
- ✓ FM Intrinsically Safe
- ✓ All Stainless Steel Construction
- ✓ Sealed for Harsh Environments
- ✓ High Overpressure

## SPECIFICATIONS

mV/V Output

Electrical:

Excitation: 10 Vdc (15 V max)

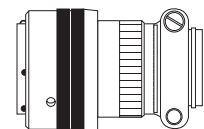
Output: 2 mV/V nominal

Bridge Resistance: 350 Ω

Zero Balance: ±1% FSO

### CONNECTIONS mV/V

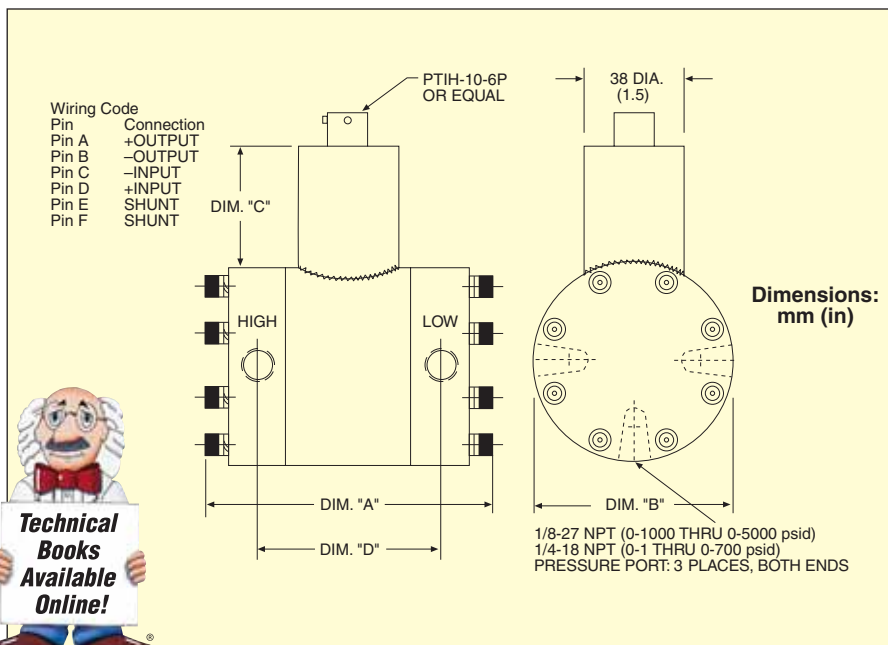
|         | PIN | Cable  | DIN  |
|---------|-----|--------|------|
| +Output | A   | Green  | 2    |
| -Output | B   | White  | 3    |
| -Input  | C   | Black  | GRND |
| +Input  | D   | Red    | 1    |
| Shunt   | E   | Blue   |      |
| Shunt   | F   | Orange |      |



**Style 1 Mating Connector**  
PT06F-10-6S  
\$26.50

### ACCESSORY

| MODEL NO. | PRICE | DESCRIPTION                    |
|-----------|-------|--------------------------------|
| GE-2530   | \$155 | Reference Book: Control Valves |



Dimensions: mm (in)

| Capacity  | A                  | B        | C         | D         |
|-----------|--------------------|----------|-----------|-----------|
| ≤700 psi  | 111 (4.38)         | 76 (3.0) | 49 (1.94) | 75 (2.94) |
| ≥1000 psi | 76 (3.0) + Fitting | 51 (2.0) | 54 (2.13) | N/A       |

**MOST POPULAR MODELS HIGHLIGHTED!**

## To Order (Specify Model Number)

Models with mV Output and Integral Connector

| RANGE          | MODEL NO.     | PRICE                  | COMPATIBLE METERS* |                 |
|----------------|---------------|------------------------|--------------------|-----------------|
| 0 to 30 psid   | 0 to 2.1 bar  | <b>PX80D[*]-030DV</b>  | <b>\$950</b>       | DP41-S, DP25B-S |
| 0 to 50 psid   | 0 to 3.4 bar  | <b>PX80D[*]-050DV</b>  | <b>950</b>         | DP41-S, DP25B-S |
| 0 to 100 psid  | 0 to 6.9 bar  | <b>PX80D[*]-100DV</b>  | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 200 psid  | 0 to 13.8 bar | <b>PX80D[*]-200DV</b>  | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 300 psid  | 0 to 20.7 bar | <b>PX80D[*]-300DV</b>  | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 500 psid  | 0 to 34.5 bar | <b>PX80D[*]-500DV</b>  | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 700 psid  | 0 to 48.3 bar | <b>PX80D[*]-700DV</b>  | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 1000 psid | 0 to 68.9 bar | <b>PX80B[*]-1KDV</b>   | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 1500 psid | 0 to 103 bar  | <b>PX80B[*]-1.5KDV</b> | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 2000 psid | 0 to 138 bar  | <b>PX80B[*]-2KDV</b>   | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 2500 psid | 0 to 172 bar  | <b>PX80B[*]-2.5KDV</b> | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 3000 psid | 0 to 207 bar  | <b>PX80B[*]-3KDV</b>   | <b>895</b>         | DP41-S, DP25B-S |
| 0 to 5000 psid | 0 to 345 bar  | <b>PX80B[*]-5KDV</b>   | <b>895</b>         | DP41-S, DP25B-S |

Comes with 5-point calibration.

Metric ranges available – consult Engineering.

[\*] Insert "0" for 3 m (10') cable, "1" for Bendix connector, or "6" for DIN connector.

\* See section D for compatible meters.

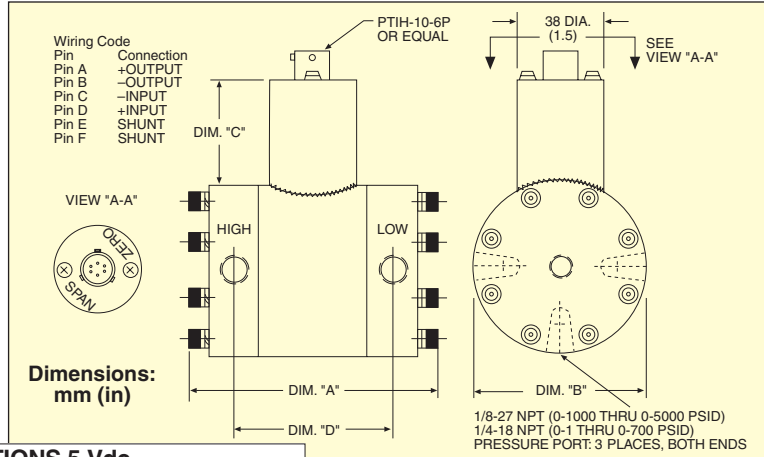
**Ordering Examples:** PX80D1-030DV, ±30 psid range differential transducer with 1/4-18 NPT pressure fittings, Bendix style electrical connector and mV/V output, \$950.

PX80B1-1KDV, ±1000 psid range differential transducer with 1/8-27 NPT pressure fittings, Bendix style electrical connector and mV/V output, \$895.

# HOW TO ORDER PX80 SERIES WET/WET DIFFERENTIAL PRESSURE TRANSMITTERS WITH 0 TO 5 Vdc OUTPUT

**PX80 Series**  
0 to 5 Vdc Output  
0-30 to 0-5000 psi  
(0-2 bar to 0-350 bar)  
Differential Pressure

Starts at  
**\$1045**



### CONNECTIONS 5 Vdc

|         | PIN | Cable  | DIN  |
|---------|-----|--------|------|
| +Output | A   | Green  | 2    |
| -Output | B   | White  | 3    |
| -Input  | C   | Black  | GRND |
| +Input  | D   | Red    | 1    |
| Shunt   | E   | Blue   |      |
| Shunt   | F   | Orange |      |



### Dimensions: mm (in)

| Capacity  | A                  | B        | C         | D         |
|-----------|--------------------|----------|-----------|-----------|
| ≤700 psi  | 111 (4.38)         | 76 (3.0) | 62 (2.44) | 75 (2.94) |
| ≥1000 psi | 76 (3.0) + Fitting | 51 (2.0) | 76 (3.0)  | N/A       |

**MOST POPULAR MODELS HIGHLIGHTED!**

### To Order (Specify Model Number)

#### Models with 0 to 5 V Output and Integral Connector

| RANGE                        | MODEL NO.        | PRICE  | COMPATIBLE METERS*      |
|------------------------------|------------------|--------|-------------------------|
| 0 to 30 psid 0 to 2 bar      | PX80D[*]-030D5T  | \$1100 | DP41-E, DP25B-E, DP24-E |
| 0 to 50 psid 0 to 3.4 bar    | PX80D[*]-050D5T  | 1100   | DP41-E, DP25B-E, DP24-E |
| 0 to 100 psid 0 to 6.9 bar   | PX80D[*]-100D5T  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 200 psid 0 to 13.8 bar  | PX80D[*]-200D5T  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 300 psid 0 to 20.7 bar  | PX80D[*]-300D5T  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 500 psid 0 to 34.5 bar  | PX80D[*]-500D5T  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 700 psid 0 to 48.3 bar  | PX80D[*]-700D5T  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 1000 psid 0 to 68.9 bar | PX80B[*]-1KD5T   | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 1500 psid 0 to 103 bar  | PX80B[*]-1.5KD5T | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 2000 psid 0 to 138 bar  | PX80B[*]-2KD5T   | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 2500 psid 0 to 172 bar  | PX80B[*]-2.5KD5T | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 3000 psid 0 to 207 bar  | PX80B[*]-3KD5T   | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 5000 psid 0 to 345 bar  | PX80B[*]-5KD5T   | 1045   | DP41-E, DP25B-E, DP24-E |

Comes with 5-point calibration.

Metric ranges available – consult Engineering.

[\*] Insert "0" for 3 m (10') cable, "1" for Bendix connector, or "6" for DIN connector.

\* See section D for compatible meters.

**Ordering Examples:** PX80D1-050D5T, 50 psid range differential transducer with 0 to 5 Vdc output, 1/4-18 NPT pressure fittings, and Bendix style electrical connector, \$1100. PT06F-10-6S, mating connector (not included), \$26.50. PX80B0-1KD5T, 1000 psid range differential transducer with 0 to 5 Vdc output, 1/8-27 NPT pressure fittings, and 3 m (10') PVC cable, \$1045.

### ACCESSORY

| MODEL NO. | PRICE | DESCRIPTION                                  |
|-----------|-------|--|
| ME-1805   | \$131 | Reference Book: Instrumentation Fundamentals |

- ✓ Low Differential Pressure at High Line Pressure—1500 psi Standard, Optional Up to 5000 psi
- ✓ FM Intrinsically Safe
- ✓ All Stainless Steel Construction
- ✓ Sealed for Harsh Environments
- ✓ High Overpressure

### 5 Vdc Output

#### Electrical:

Excitation: 24 to 32 Vdc

Output: 0 to 5 Vdc ±10% adj

Zero Balance: 0 V ±10% adj

PX80B1-2KD5T,  
\$1045, shown  
smaller than  
actual size.





# HOW TO ORDER PX80 SERIES WET/WET DIFFERENTIAL PRESSURE TRANSMITTERS 4 TO 20 mA OUTPUT

**PX80 Series**  
4 to 20 mA Output  
0-30 to 0-5000 psi  
(0-2 bar to 0-350 bar)  
Differential Pressure

Starts at  
**\$1045**



- ✓ Low Differential Pressure at High Line Pressure—1500 psi Standard, Optional Up to 5000 psi
- ✓ FM Intrinsically Safe
- ✓ All Stainless Steel Construction
- ✓ Sealed for Harsh Environments
- ✓ High Overpressure

4 to 20 mA Output

Electrical:

Excitation: 10 to 40 Vdc

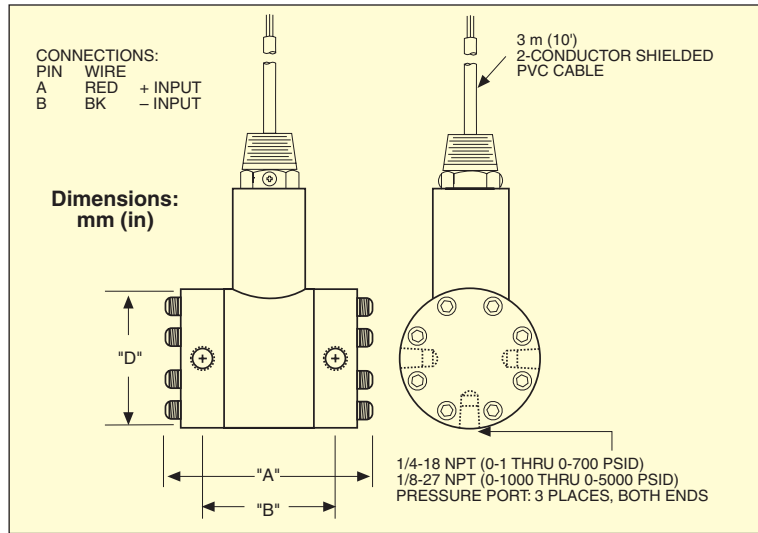
Output (FS): 4 to 20 mA ± 0.8 mA adj

Zero Balance: 4 mA ± 0.4 mA adj

Max Loop Resistance:

(Input voltage - 12) x 50

Zero Balance: 4 mA +10% -2%



### CONNECTIONS 4 to 20 mA

|         | PIN | Cable | DIN |
|---------|-----|-------|-----|
| + Input | A   | Red   | 1   |
| - Input | B   | Black | 2   |

Dimensions: mm (in)

| Capacity  | A                  | B         | D        |
|-----------|--------------------|-----------|----------|
| <700 psi  | 111 (4.38)         | 75 (2.94) | 76 (3.0) |
| ≥1000 psi | 76 (3.0) + Fitting | 51 (2.0)  | N/A      |

**MOST POPULAR MODELS HIGHLIGHTED!**

## To Order (Specify Model Number)

### Models with 4 to 20 mA Output

| RANGE psid | RANGE bar | MODEL NO.       | PRICE  | COMPATIBLE METERS*      |
|------------|-----------|-----------------|--------|-------------------------|
| 0 to 30    | 0 to 2    | PX80D[*]-030DI  | \$1100 | DP41-E, DP25B-E, DP24-E |
| 0 to 50    | 0 to 3.4  | PX80D[*]-050DI  | 1100   | DP41-E, DP25B-E, DP24-E |
| 0 to 100   | 0 to 6.9  | PX80D[*]-100DI  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 200   | 0 to 13.8 | PX80D[*]-200DI  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 300   | 0 to 20.7 | PX80D[*]-300DI  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 500   | 0 to 34.5 | PX80D[*]-500DI  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 700   | 0 to 48.3 | PX80D[*]-700DI  | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 1000  | 0 to 68.9 | PX80B[*]-1KDI   | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 1500  | 0 to 103  | PX80B[*]-1.5KDI | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 2000  | 0 to 138  | PX80B[*]-2KDI   | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 2500  | 0 to 172  | PX80B[*]-2.5KDI | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 3000  | 0 to 207  | PX80B[*]-3KDI   | 1045   | DP41-E, DP25B-E, DP24-E |
| 0 to 5000  | 0 to 345  | PX80B[*]-5KDI   | 1045   | DP41-E, DP25B-E, DP24-E |

Comes with 5-point calibration.

Metric ranges available - consult Engineering.

[\*] Insert "0" for 3 m (10') cable, "1" for Bendix connector, or "6" for DIN connector.

\* See section D for compatible meters.

To order extra cable length, add suffix "(Length in feet)FT" to model number and \$2/ft beyond standard 3 m (10') length.

Ordering Examples: PX80D0-050DI-25FT, 50 psid differential transmitter with 7.6 m (25') cable and 1/4-18 NPT fitting, \$1100 + (\$2 x 15) = \$1130. PX80B0-1.5KDI, 1500 psid differential transmitter with 3 m (10') cable, and 1/8-27 NPT fitting, \$1045.

### ACCESSORY

| MODEL NO. | PRICE | DESCRIPTION                             |
|-----------|-------|---|
| CM-4363   | \$85  | Reference Book: Plant Design for Safety |



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