

# 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.



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:

¼-18 NPTF: For ≤700 psi

⅜-27 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

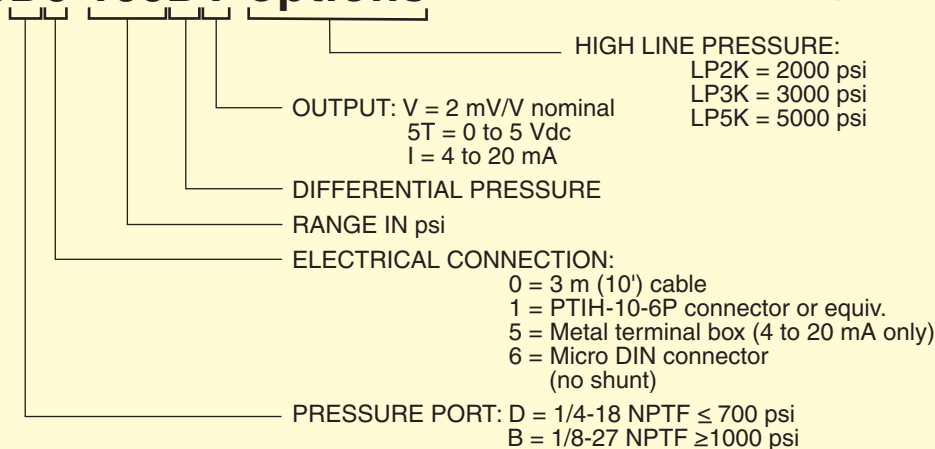
PX80D5-050DI, \$1045, shown smaller than actual size.



## 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)

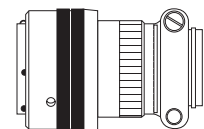
Output: 2 mV/V nominal

Bridge Resistance: 350 Ω

Zero Balance: ±1% FSO

### CONNECTIONS mV/V

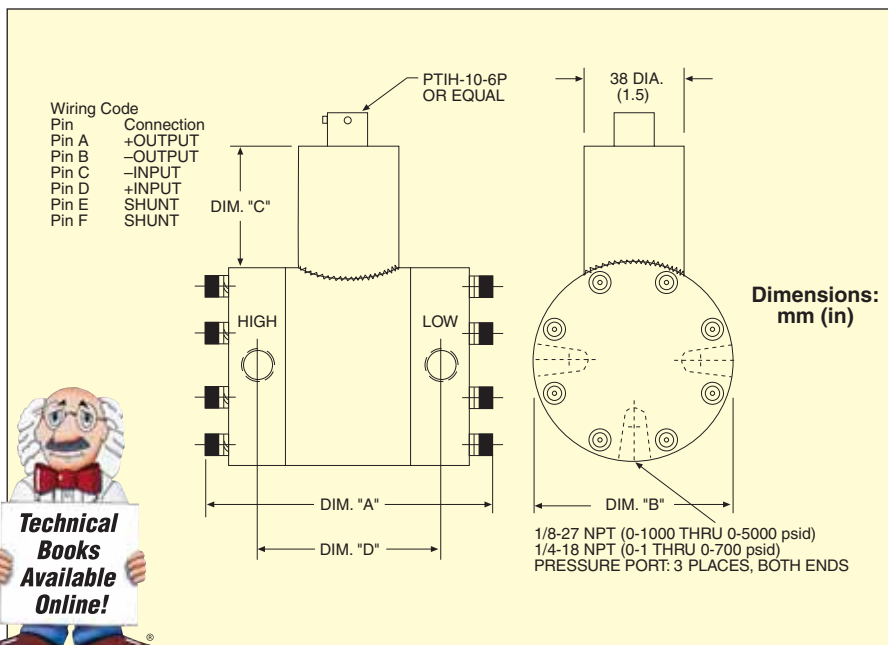
	PIN	Cable	DIN
+Output	A	Green	2
-Output	B	White	3
-Input	C	Black	GRND
+Input	D	Red	1
Shunt	E	Blue	
Shunt	F	Orange	



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	PX80D[*]-030DV	\$950	DP41-S, DP25B-S
0 to 50 psid	PX80D[*]-050DV	950	DP41-S, DP25B-S
0 to 100 psid	PX80D[*]-100DV	895	DP41-S, DP25B-S
0 to 200 psid	PX80D[*]-200DV	895	DP41-S, DP25B-S
0 to 300 psid	PX80D[*]-300DV	895	DP41-S, DP25B-S
0 to 500 psid	PX80D[*]-500DV	895	DP41-S, DP25B-S
0 to 700 psid	PX80D[*]-700DV	895	DP41-S, DP25B-S
0 to 1000 psid	PX80B[*]-1KDV	895	DP41-S, DP25B-S
0 to 1500 psid	PX80B[*]-1.5KDV	895	DP41-S, DP25B-S
0 to 2000 psid	PX80B[*]-2KDV	895	DP41-S, DP25B-S
0 to 2500 psid	PX80B[*]-2.5KDV	895	DP41-S, DP25B-S
0 to 3000 psid	PX80B[*]-3KDV	895	DP41-S, DP25B-S
0 to 5000 psid	PX80B[*]-5KDV	895	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.

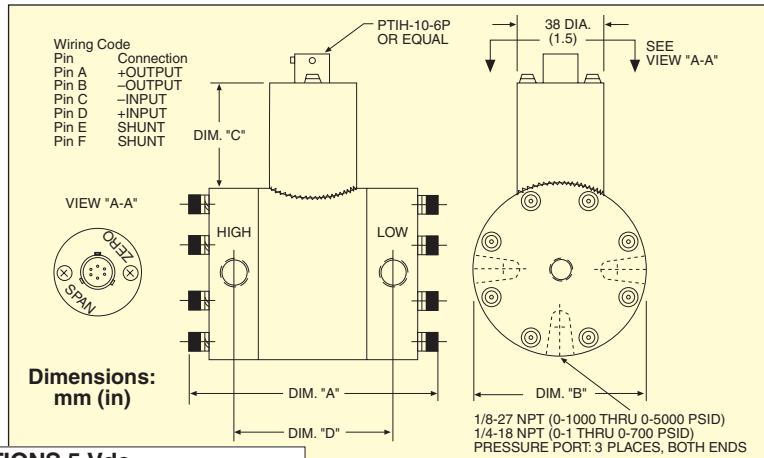
Ordering Examples: PX80D1-030DV, ±30 psid range differential transducer with 1/4-18 NPT pressure fittings, Bendix style electrical connector and mV/V output, \$950.

PX80B1-1KDV, ±1000 psid range differential transducer with 1/2-27 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**



- ✓ 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.



### 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

# 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

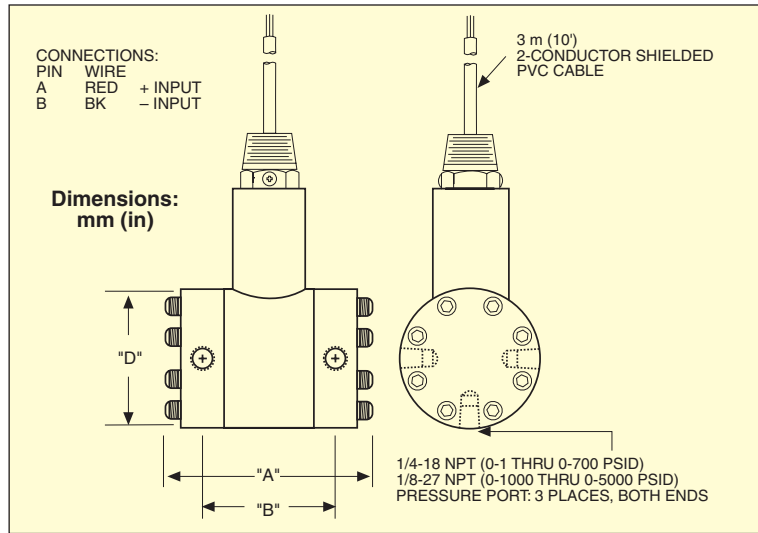
Output (FS): 4 to 20 mA ± 0.8 mA adj

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



PX80DI-100DI,  
\$1045, shown  
smaller than  
actual size.

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