

# INDUSTRIAL WET/WET DIFFERENTIAL PRESSURE—HIGH OVERPRESSURE CAPACITY

## STANDARD AND METRIC MODELS

0-30 to 0-5000 psi-Standard Models

0-2 to 0-350 bar-Metric Models

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

### PX80/PXM80 Series



- ✓ Low Differential Pressure at High Line Pressure—1500 psi (100 bar) Standard
- ✓ All Stainless Steel Construction
- ✓ Sealed for Harsh Environments
- ✓ Rugged Lightning-Protected Housing Available, Style 5

OMEGA's PX80/PXM80 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/PXM80 an extremely durable transducer. The all stainless steel construction and high overpressure protection offer high reliability in harsh industrial environments.



DIFFERENTIAL PRESSURE TRANSDUCERS **B**

# DIFFERENTIAL PRESSURE TRANSDUCERS

Style 5 sealed metal terminal box most ranges, visit [omega.com](http://omega.com) for details.

## SPECIFICATIONS

### mV/V Output

#### Electrical:

Excitation: 10 Vdc (15 V maximum)

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

### 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 5V)

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: See dimensional drawings on following pages

### Electrical Termination:

Style 0 = 3 m (10') cable

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

Style 5 = Metal terminal box (4 to 20 mA output models only)

Style 6 = mini DIN

### Mating Connector:

Style 1: PT06F10-6S

(sold separately)

Style 6: Mating connector

(included)

Weight: 5 lb



STANDARD  
PX80D5-050DI  
shown smaller than  
actual size.

## STANDARD AND METRIC CUSTOM CONFIGURATIONS

### MODEL NUMBER SPECIFICATION:

# PXM80D0-100DV

psi RANGES

METRIC bar RANGES

OUTPUT: V = 2 mV/V nominal  
5T = 0 to 5 Vdc  
I = 4 to 20 mA

DIFFERENTIAL PRESSURE

RANGE IN psi FOR PX80; IN bar FOR PXM80

ELECTRICAL CONNECTION:

0 = 3 m (10') cable  
1 = PTIH-10-6P connector or equiv.  
5 = Metal terminal box (4 to 20 mA only)  
6 = mini DIN connector  
(no shunt)

PRESSURE PORT: D = PX80: 1/4-18 FNPT ≤ 700 psi

PXM80: G1/4 <70 bar

B = PX80: 1/8-27 FNPT ≥ 1000 psi

PXM80: G1/8 ≥ 70 bar

To order extra cable on cable style models, add suffix “-(length in feet)FT” and add cost/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  
PX80D0-030DI-25FT, 30 psid range model, 4 to 20 mA output and 7.6m (25') cable.

PX80D1-200DV, 200 psid range model with mV/V output and twist-lock connector. PT06F10-6S, mating connector (sold separately).

# 4 to 20 mA OUTPUT STANDARD RANGES

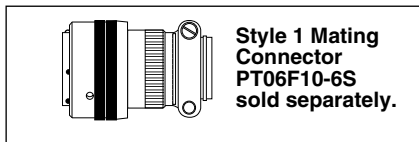
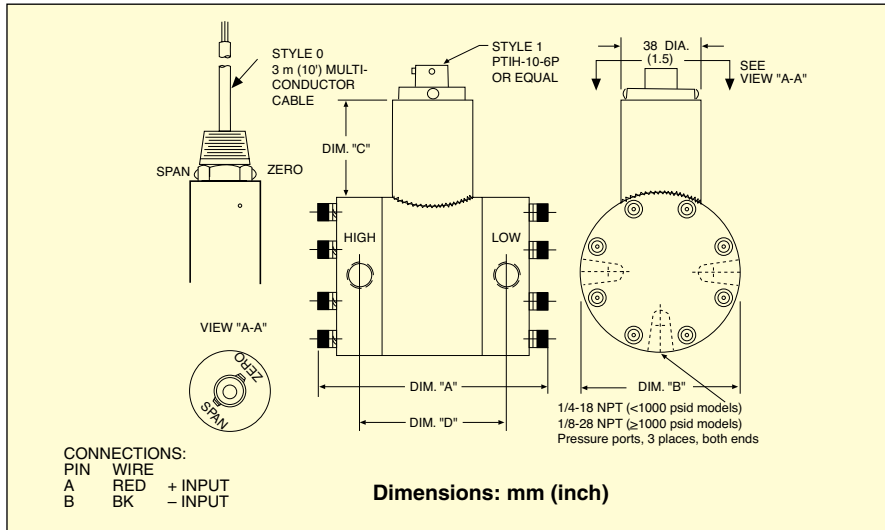
**4 to 20 mA Output**  
**0-30 to 0-5000 psi**  
**(0-2 bar to 0-350 bar)**  
**Differential Pressure**

## PX80 Series

4 to 20 mA Models



- ✓ Low Differential Pressure at High Line Pressure—1500 psi Standard
- ✓ All Stainless Steel Construction
- ✓ Sealed for Harsh Environments
- ✓ High Overpressure



CONNECTIONS 4 to 20 mA			
	PIN	Cable	DIN
+ Input	A	Red	1
- Input	B	Black	2

Dimensions: mm (inch)

CAPACITY	A	B	C	D
<1000 psi	111 (4.38)	75 (2.94)	62 (2.44)	76 (3.0)
≥1000 psi	76 (3.0) + fitting	51 (2.0)	76 (3.0)	N/A

### STANDARD MODELS

To Order			
Models with 4 to 20 mA Output			
RANGE psid	RANGE bar	MODEL NO.	COMPATIBLE METERS*
0 to 30	0 to 2	PX80D[*]-030DI	DP41-E, DP25B-E, DP24-E
0 to 50	0 to 3.4	PX80D[*]-050DI	DP41-E, DP25B-E, DP24-E
0 to 100	0 to 6.9	PX80D[*]-100DI	DP41-E, DP25B-E, DP24-E
0 to 200	0 to 13.8	PX80D[*]-200DI	DP41-E, DP25B-E, DP24-E
0 to 300	0 to 20.7	PX80D[*]-300DI	DP41-E, DP25B-E, DP24-E
0 to 500	0 to 34.5	PX80D[*]-500DI	DP41-E, DP25B-E, DP24-E
0 to 700	0 to 48.3	PX80D[*]-700DI	DP41-E, DP25B-E, DP24-E
0 to 1000	0 to 68.9	PX80B[*]-1KDI	DP41-E, DP25B-E, DP24-E
0 to 1500	0 to 103	PX80B[*]-1.5KDI	DP41-E, DP25B-E, DP24-E
0 to 2000	0 to 138	PX80B[*]-2KDI	DP41-E, DP25B-E, DP24-E
0 to 2500	0 to 172	PX80B[*]-2.5KDI	DP41-E, DP25B-E, DP24-E
0 to 3000	0 to 207	PX80B[*]-3KDI	DP41-E, DP25B-E, DP24-E
0 to 5000	0 to 345	PX80B[*]-5KDI	DP41-E, DP25B-E, DP24-E

Comes complete with 5-point NIST traceable calibration.

\* Visit us online for compatible meters.

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

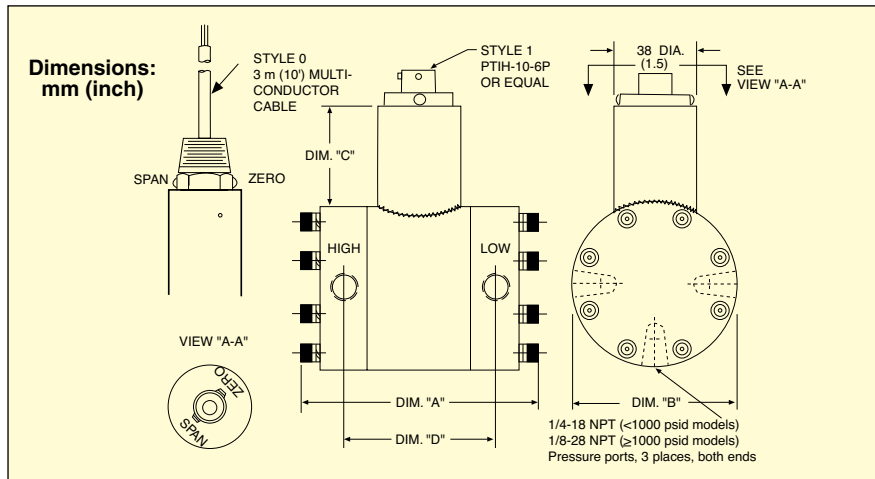
To order extra cable length, add suffix "(Length in feet)FT" to model number and add cost/ft beyond standard 3 m (10') length.

Ordering Examples: PX80D0-050DI-25FT, 50 psid differential transmitter with 7.6 m (25') cable and 1/4-18 NPT fitting. PX80B0-1.5KDI, 1500 psid differential transmitter with 3 m (10') cable, and 1/2-27 NPT fitting.

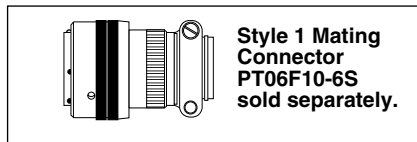
# 4 to 20 mA OUTPUT **METRIC** RANGES

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

**PXM80 Series**  
**4 to 20 mA Models**



- ✓ Low Differential Pressure at High Line Pressure—100 bar Standard
- ✓ All Stainless Steel Construction
- ✓ Sealed for Harsh Environments
- ✓ High Overpressure



CONNECTIONS 4 to 20 mA			
	PIN	Cable	DIN
+ Input	A	Red	1
- Input	B	Black	2

Dimensions: mm (inch)

CAPACITY	A	B	C	D
<70 bar	111 (4.38)	75 (2.94)	62 (2.44)	76 (3.0)
≥70 bar	76 (3.0) + fitting	51 (2.0)	76 (3.0)	N/A

## METRIC MODELS

To Order			
Models with 4 to 20 mA Output, Specify Electrical Termination			
RANGE	MODEL NO.	COMPATIBLE METERS*	
<b>DIFFERENTIAL PRESSURE</b>			
0 to 2 bar	0 to 29 psi	<b>PXM80MD[*]-002BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 3.50 bar	0 to 51 psi	<b>PXM80MD[*]-3.50BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 7 bar	0 to 102 psi	<b>PXM80MD[*]-007BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 14 bar	0 to 203 psi	<b>PXM80MD[*]-014BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 20 bar	0 to 290 psi	<b>PXM80MD[*]-020BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 35 bar	0 to 508 psi	<b>PXM80MD[*]-035BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 50 bar	0 to 725 psi	<b>PXM80MD[*]-050BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 70 bar	0 to 1015 psi	<b>PXM80MB[*]-070BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 100 bar	0 to 1450 psi	<b>PXM80MB[*]-100BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 140 bar	0 to 2031 psi	<b>PXM80MB[*]-140BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 175 bar	0 to 2538 psi	<b>PXM80MB[*]-175BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 200 bar	0 to 2901 psi	<b>PXM80MB[*]-200BARDI</b>	DP41-E, DP25B-E, DP24-E
0 to 350 bar	0 to 5076 psi	<b>PXM80MB[*]-350BARDI</b>	DP41-E, DP25B-E, DP24-E

Comes complete with 5-point NIST traceable calibration. \* Visit us online for compatible meters

[\*] Insert "0" for 3 m (10') cable, "1" for twist-lock connector, "5" for metal terminal box or "6" for mini DIN connector. To order extra cable on cable style models, add suffix "-(total length in meters)M" and add cost/m beyond the standard 3 m (10') length.

**Ordering Examples:** **PXM80MD0-002BARDI-10M**, 2 bar range differential transmitter with G 1/4 female pressure fittings, 10 m (32') cable and 4 to 20 mA output.  
**PXM80MB1-100BARDI**, 100 bar range differential transmitter with G 1/8 pressure fittings, twist-lock electrical connector and 4 to 20 mA output. **PT06F10-6S**, mating connector (sold separately).

