

# LOW-RANGE WET/WET INDUSTRIAL DIFFERENTIAL TRANSDUCER

## STANDARD AND METRIC MODELS

0-50 to 0-800 inH<sub>2</sub>O

0-2 to 0-22 psi-Standard Models

0-130 to 0-1500 mbar-Metric Models

Differential Pressure

mV/V Output

0 to 5 Vdc Output

4 to 20 mA Output

1 psi = 27.68 inH<sub>2</sub>O

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

### PX82/PXM82 Series



- ✓ Inches of Water Differential at Line Pressure—Up to 1500 psi (100 bar)
- ✓ Stainless Steel/Inconel® Construction for Harsh Industrial Environments
- ✓ High Overpressure Capability and High Operating Temperature
- ✓ 5-Point Calibration Provided: 0%, 50%, 100%, 50%, 0%

OMEGA's PX82/PXM82 Series wet/wet, differential pressure transducers can measure inches of water differential at line pressure up to 1500 psi (100 bar). This high line pressure capacity, a high operating temperature, and excellent temperature compensation make the PX82/PXM82 Series extremely accurate and reliable. The rugged Inconel® diaphragms and stainless steel body give the PX82/PXM82 Series high performance in harsh industrial environments. The PX82/PXM82 Series is available with mV/V, 5 V, or 4 to 20 mA outputs. Mounting in any position via use of one of the 4 ports is available on the high and low side.



# LOW-RANGE WET/WET INDUSTRIAL DIFFERENTIAL TRANSDUCER

## SPECIFICATIONS

### mV/V Output

#### Electrical:

Excitation: 10 Vdc (15 V max)

Output: 1.5 mV/V nominal

Input Resistance: 5000  $\Omega$  minimum

Output Resistance: 5000  $\pm$ 25  $\Omega$

Zero Balance:  $\pm$ 2% FS

### 0.5 to 5.5 Vdc Output

#### Electrical:

Excitation: 10 to 35 Vdc

Output: 0.5 to 5.5 Vdc  $\pm$ 10%

Zero Balance: 0.5 V  $\pm$ 2% adj

### 4 to 20mA Output

#### Electrical:

Excitation: 10 to 40 Vdc

Output: 4 to 20 mA  $\pm$ 10% adj

Zero Balance: 4 mA +10% -2% adj

## COMMON SPECIFICATIONS

### Performance:

Accuracy: 0.25% linearity, hysteresis and repeatability combined

### Environmental:

Operating Temp Range:

-34 to 107°C (-30 to 225°F)

Compensated Temp Range:

-1 to 54°C (30 to 130°F)

### Pressure Effects:

Zero: <2%/1000 psi (70 bar)

line pressure

Span: -2.45%/1000 psi (70 bar)

line pressure

### Thermal Effects:

Zero:  $\pm$ 0.50% FSO maximum over compensated range

Span:  $\pm$ 0.50% rdg maximum over compensated range

### Pressure:

Line Operating Pressure:

1500 psi (100 bar)

Safe Overpressure:

1000 psi (70 bar) each side

Burst Pressure:

2500 psi (170 bar) minimum

### Mechanical:

Wetted Parts:

17-4 PH stainless steel and

Inconel 625

Pressure Port: See dimensional drawings on following pages

### Electrical Connection:

Style 0: 1.2 m (4') cable

Style 1: PTIH-10-6P (or equal)

Style 6: mini DIN

### Mating Connector:

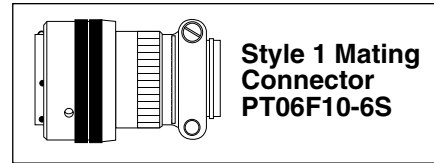
Style 1: PT06F10-6S

(sold separately)

Style 6: Mating connector

(included)

Weight: 1.8 kg (4 lb)



## STANDARD AND METRIC CUSTOM CONFIGURATIONS

MODEL NUMBER SPECIFICATION:

**PXM82B0-002DV**

psi  
RANGES

METRIC bar  
RANGES

OUTPUT:

V = 1.5 mV/V nominal

5V = 0.5 to 5.5 Vdc

I = 4 to 20 mA

DIFFERENTIAL PRESSURE

RANGE IN psi FOR PX82, IN bar FOR PXM82

ELECTRICAL CONNECTION:

0 = 1.2 m (4') cable

1 = PTIH-10-6P connector

or equivalent

6 = mini DIN connector

(no shunt)

PRESSURE PORT: = Three 1/8-27 FNPT and one 1/4 NPT male per side  
MB = Three G1/8 and one G1/4 female per side

Extra cable length: add suffix "--(Length in feet)FT"; additional price per foot over standard length 1.2 m (4') on 5 V and 4 to 20 mA output.

Ordering Examples: **PX82D0-500WCDI**, 500 inH<sub>2</sub>O pressure range with 4 to 20 mA output and 1.2 m (4') PVC cable.

**PX82D0-010DV-50FT**, 10 psi pressure range with mV/V output and 15.2 m (50') PVC cable.

**PX82D1-200WCDI**, 200 inH<sub>2</sub>O pressure range with 4 to 20 mA output and twist-lock connector, **PT06F10-6S**, mating connector (sold separately).

# mV/V OUTPUT STANDARD RANGES

**mV/V Output**  
**0-50 inH<sub>2</sub>O to 0-22 psi**  
**(0-130 to 0-1500 mbar)**  
**Differential Pressure**

## PX82 Series

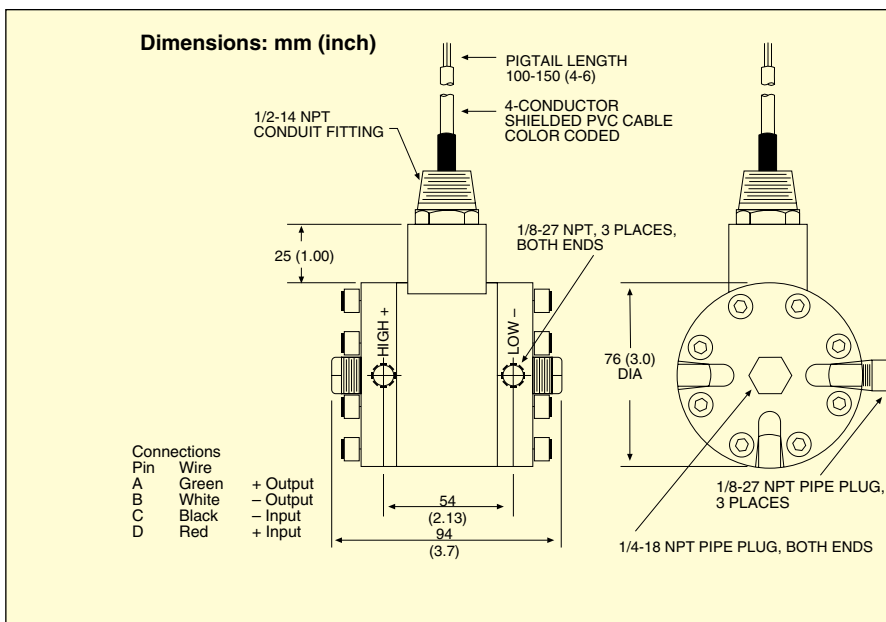


- ✓ inH<sub>2</sub>O Differential at Line Pressure—Up to 1500 psi
- ✓ Stainless Steel/Inconel® Construction for Harsh Industrial Environments
- ✓ High Overpressure Capability and High Operating Temperature
- ✓ 5-Point Calibration Provided: 0%, 50%, 100%, 50%, 0%

**STANDARD**  
 PX82B1-005DV  
 shown smaller  
 than actual  
 size.



Twist-lock style.



### STANDARD MODELS

To Order			
Models with mV/V Output and 1.2 m (4') Cable			
RANGE		MODEL NO.	COMPATIBLE METERS
0 to 50 inH <sub>2</sub> O	0 to 125 mbar	PX82B[*]-050WCDV	DP41-S, DP25B-S
0 to 100 inH <sub>2</sub> O	0 to 249 mbar	PX82B[*]-100WCDV	DP41-S, DP25B-S
0 to 150 inH <sub>2</sub> O	0 to 374 mbar	PX82B[*]-150WCDV	DP41-S, DP25B-S
0 to 200 inH <sub>2</sub> O	0 to 498 mbar	PX82B[*]-200WCDV	DP41-S, DP25B-S
0 to 300 inH <sub>2</sub> O	0 to 748 mbar	PX82B[*]-300WCDV	DP41-S, DP25B-S
0 to 500 inH <sub>2</sub> O	0 to 1245 mbar	PX82B[*]-500WCDV	DP41-S, DP25B-S
0 to 800 inH <sub>2</sub> O	0 to 1993 mbar	PX82B[*]-800WCDV	DP41-S, DP25B-S
0 to 2 psi	0 to 0.14 bar	PX82B[*]-002DV	DP41-S, DP25B-S
0 to 3 psi	0 to 0.20 bar	PX82B[*]-003DV	DP41-S, DP25B-S
0 to 4 psi	0 to 0.27 bar	PX82B[*]-004DV	DP41-S, DP25B-S
0 to 5 psi	0 to 0.34 bar	PX82B[*]-005DV	DP41-S, DP25B-S
0 to 6 psi	0 to 0.41 bar	PX82B[*]-006DV	DP41-S, DP25B-S
0 to 8 psi	0 to 0.55 bar	PX82B[*]-008DV	DP41-S, DP25B-S
0 to 10 psi	0 to 0.69 bar	PX82B[*]-010DV	DP41-S, DP25B-S
0 to 15 psi	0 to 1.0 bar	PX82B[*]-015DV	DP41-S, DP25B-S
0 to 18 psi	0 to 1.2 bar	PX82B[*]-018DV	DP41-S, DP25B-S
0 to 22 psi	0 to 1.5 bar	PX82B[*]-022DV	DP41-S, DP25B-S

Comes complete with 5-point NIST traceable calibration.

[\*] Insert "0" for 1.2 m (4') 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 additional price per foot beyond standard length.

**Ordering Examples:** PX82B0-100WCDV, 100 inH<sub>2</sub>O differential pressure transducers with 1.5 mV/V output and 1.2 m (4') of shielded cable.

PX2B0-010DV-25FT, 10 psi differential pressure transducer with 1.5 mV/V output and 7.6 m (25') of shielded cable.

# mV/V OUTPUT METRIC RANGES

**mV/V Output**  
**0-130 mbar to 0-2 bar**  
**0-2 to 0-30 psi**  
**Differential Pressure**

## PXM82 Series

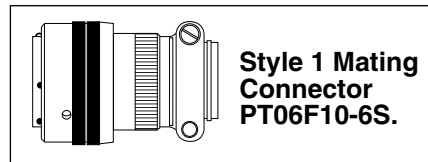
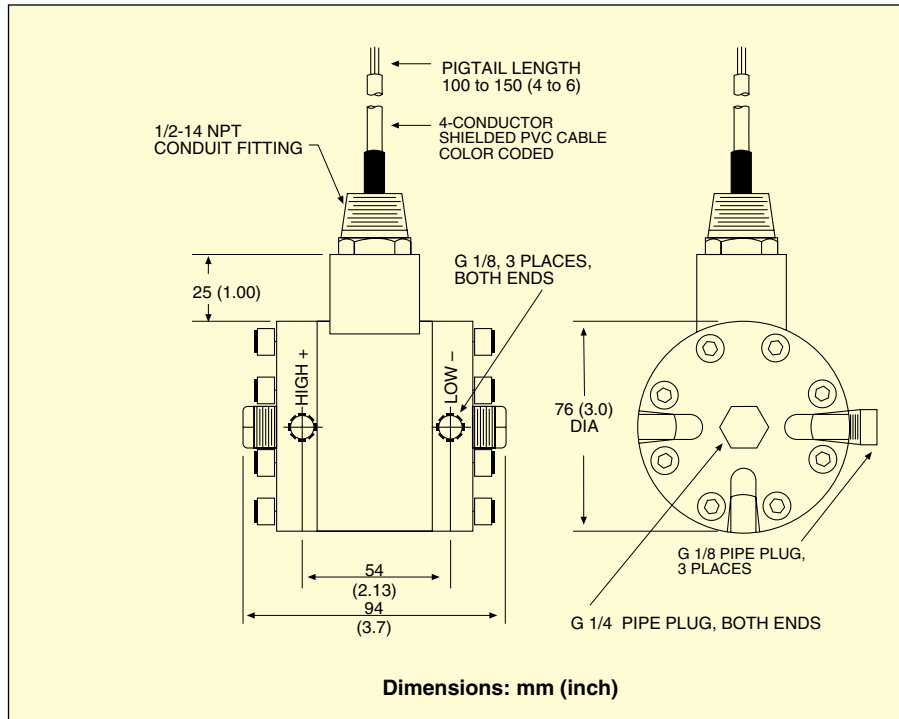


- ✓ mbar Differential at Line Pressure—Up to 100 bar
- ✓ Stainless Steel/Inconel Construction for Harsh Industrial Environments
- ✓ High Overpressure Capability
- ✓ High Operating Temperature
- ✓ 5-Point Calibration Provided: 0%, 50%, 100%, 50%, 0%

**METRIC**  
 PXM82MB1-190mBARDI  
 shown smaller than actual size.



Twist-lock style.



### CONNECTIONS mV/V

	PIN	Cable	DIN
+Output	A	Green	2
-Output	B	White	3
-Input	C	Black	GRND
+Input	D	Red	1

### METRIC MODELS

To Order			
mV/V Output with G 1/4 Pressure Connection, Specify Electrical Termination			
RANGE		MODEL NO.	COMPATIBLE METERS
<b>DIFFERENTIAL PRESSURE</b>			
0 to 130 mbar	0 to 1.9 psi	PXM82MB[*]-130mBARDV	DP41-S, DP25B-S
0 to 190 mbar	0 to 2.8 psi	PXM82MB[*]-190mBARDV	DP41-S, DP25B-S
0 to 250 mbar	0 to 3.6 psi	PXM82MB[*]-250mBARDV	DP41-S, DP25B-S
0 to 370 mbar	0 to 5.4 psi	PXM82MB[*]-370mBARDV	DP41-S, DP25B-S
0 to 500 mbar	0 to 7.3 psi	PXM82MB[*]-500mBARDV	DP41-S, DP25B-S
0 to 750 mbar	0 to 11 psi	PXM82MB[*]-750mBARDV	DP41-S, DP25B-S
0 to 1.00 bar	0 to 15 psi	PXM82MB[*]-001BARDV	DP41-S, DP25B-S
0 to 1.25 bar	0 to 18 psi	PXM82MB[*]-1.25BARDV	DP41-S, DP25B-S
0 to 2.00 bar	0 to 30 psi	PXM82MB[*]-002BARDV	DP41-S, DP25B-S

Comes complete with 5-point NIST traceable calibration.

[\*] Insert "0" for 1.2 m (4') cable, "1" for twist-lock connector or "6" for mini DIN connector.

To order extra cable on cable style models, add suffix "--(total length in meters)M" and additional price per meter beyond the standard length.

Ordering Examples: PXM82MD0-130mBARDV-10M, 130 mbar differential pressure transducer with 1.5 mV/V output and 10 m (32') cable.

PXM82MD1-001BARDV, 1 bar differential pressure transducer with 1.5 mV/V output and twist-lock connector. PT06F10-6S, mating connector (sold separately).

# 0.5 to 5.5 Vdc OUTPUT STANDARD RANGES

**0.5 to 5.5 Vdc Output**  
**0-50 inH<sub>2</sub>O to 0-22 psi**  
**(0-130 to 0-1500 mbar)**  
**Differential Pressure**

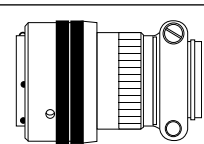
## PX82 Series



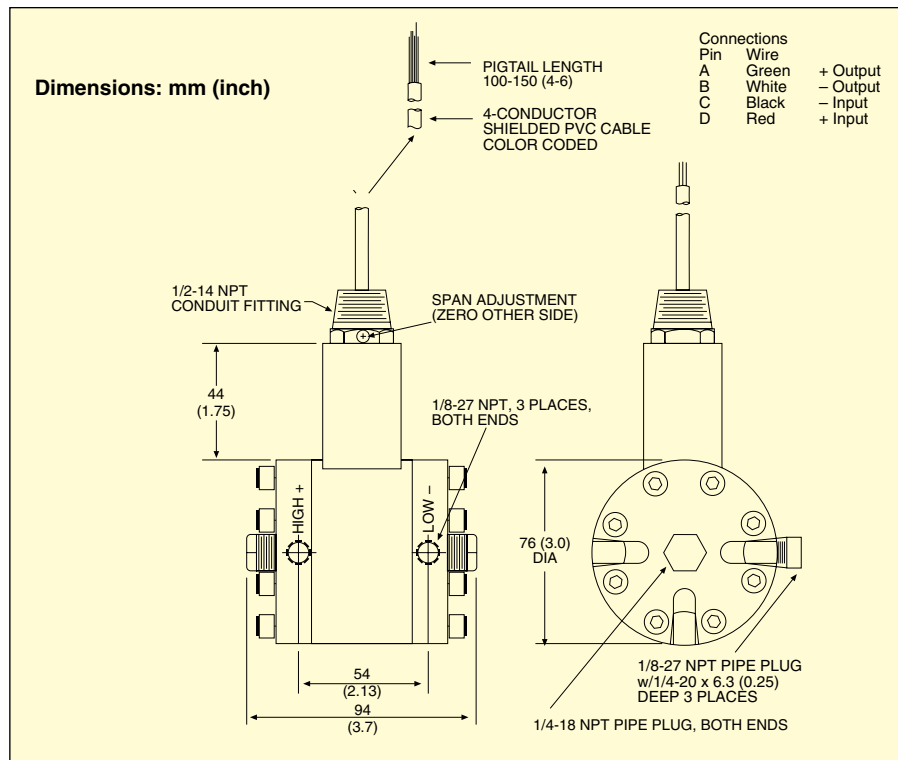
- ✓ inH<sub>2</sub>O Differential at Line Pressure—Up to 1500 psi
- ✓ Stainless Steel/Inconel® Construction for Harsh Industrial Environments
- ✓ High Overpressure Capability and High Operating Temperature
- ✓ 5-Point Calibration Provided: 0%, 50%, 100%, 50%, 0%

### CONNECTIONS Volts

	PIN	Cable	DIN
+ Output	A	Green	2
- Output	B	White	3
- Input	C	Black	GRND
+ Input	D	Red	1



**Style 1 Mating Connector**  
**PT06F10-6S.**



### STANDARD MODELS

#### To Order

#### Models with 5 V Output

RANGE	MODEL NO.	COMPATIBLE METERS	
0 to 50 inH <sub>2</sub> O	0 to 125 mbar	PX82B[*]-050WCD5V	DP41-S, DP25B-S
0 to 100 inH <sub>2</sub> O	0 to 249 mbar	PX82B[*]-100WCD5V	DP41-S, DP25B-S
0 to 150 inH <sub>2</sub> O	0 to 374 mbar	PX82B[*]-150WCD5V	DP41-S, DP25B-S
0 to 200 inH <sub>2</sub> O	0 to 498 mbar	PX82B[*]-200WCD5V	DP41-S, DP25B-S
0 to 300 inH <sub>2</sub> O	0 to 748 mbar	PX82B[*]-300WCD5V	DP41-S, DP25B-S
0 to 500 inH <sub>2</sub> O	0 to 1245 mbar	PX82B[*]-500WCD5V	DP41-S, DP25B-S
0 to 800 inH <sub>2</sub> O	0 to 1993 mbar	PX82B[*]-800WCD5V	DP41-S, DP25B-S
0 to 2 psi	0 to 0.14 bar	PX82B[*]-002D5V	DP41-S, DP25B-S
0 to 3 psi	0 to 0.20 bar	PX82B[*]-003D5V	DP41-S, DP25B-S
0 to 4 psi	0 to 0.27 bar	PX82B[*]-004D5V	DP41-S, DP25B-S
0 to 5 psi	0 to 0.34 bar	PX82B[*]-005D5V	DP41-S, DP25B-S
0 to 6 psi	0 to 0.41 bar	PX82B[*]-006D5V	DP41-S, DP25B-S
0 to 8 psi	0 to 0.55 bar	PX82B[*]-007D5V	DP41-S, DP25B-S
0 to 10 psi	0 to 0.69 bar	PX82B[*]-010D5V	DP41-S, DP25B-S
0 to 15 psi	0 to 1.0 bar	PX82B[*]-015D5V	DP41-S, DP25B-S
0 to 18 psi	0 to 1.2 bar	PX82B[*]-018D5V	DP41-S, DP25B-S
0 to 22 psi	0 to 1.5 bar	PX82B[*]-022D5V	DP41-S, DP25B-S

Comes complete with 5-point NIST traceable calibration.

[\*] Insert "0" for 1.2 m (4') cable, "1" for twist-lock connector, or "6" for mini DIN connector.

Extra cable length: add suffix "--(length in feet)FT", additional price per foot over standard length.

**Ordering Examples:** PX82B0-100WCD5V, 100 inH<sub>2</sub>O differential pressure transducer with 0.5 to 5.5 Vdc output and 1.2 m (4') shielded PVC cable.

PX82B1-010D5V, 10 psi differential pressure transducer with 0.5 to 5.5 Vdc output and twist-lock connection. PT06F10-6S, mating connector (sold separately).

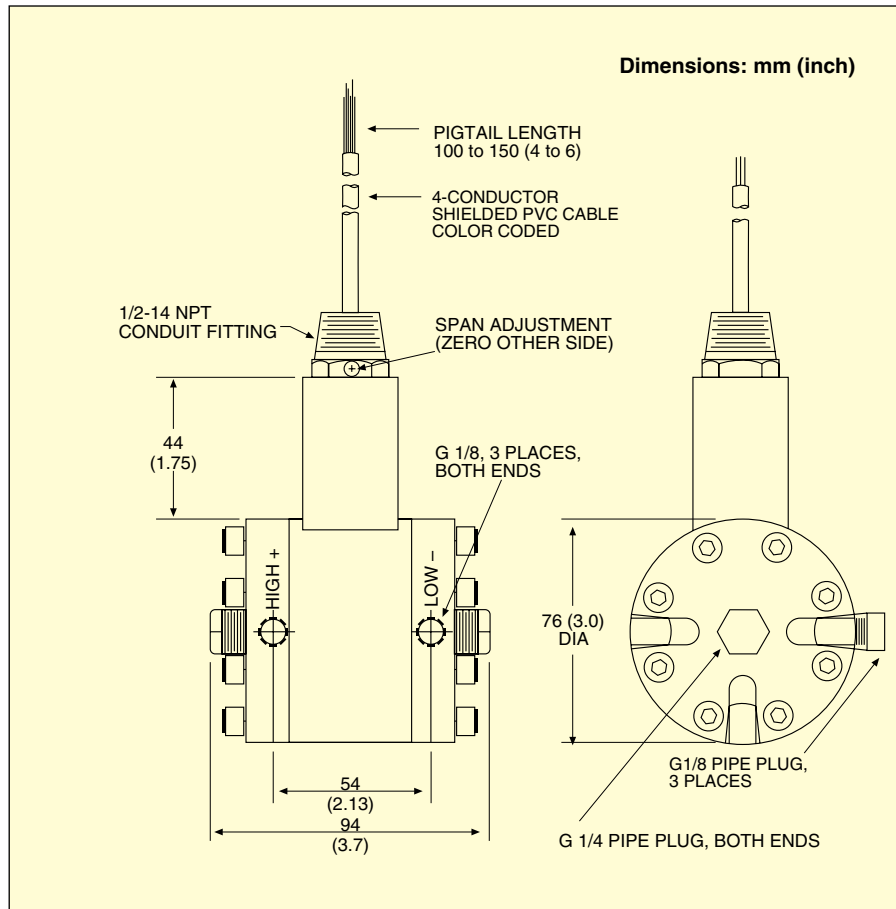
# 0.5 to 5.5 Vdc OUTPUT **METRIC** RANGES

**0.5 to 5.5 Vdc Output**  
**0-130 mbar to 0-2 bar**  
**0-2 to 0-30 psi**  
**Differential Pressure**

## PXM82 Series



- ✓ mbar Differential at Line Pressure—Up to 100 bar
- ✓ Stainless Steel/Inconel® Construction for Harsh Industrial Environments
- ✓ High Overpressure Capability
- ✓ High Operating Temperature
- ✓ 5-Point Calibration Provided: 0%, 50%, 100%, 50%, 0%



### METRIC MODELS

To Order			
Models with G 1/8 and G 1/4 Female Pressure Connection, Specify Electrical Termination			
RANGE		MODEL NO.	COMPATIBLE METERS
<b>DIFFERENTIAL PRESSURE</b>			
0 to 130 mbar	0 to 1.9 psi	PXM82MB[*]-130mBARD5V	DP41-S, DP25B-S
0 to 190 mbar	0 to 2.8 psi	PXM82MB[*]-190mBARD5V	DP41-S, DP25B-S
0 to 250 mbar	0 to 3.6 psi	PXM82MB[*]-250mBARD5V	DP41-S, DP25B-S
0 to 370 mbar	0 to 5.4 psi	PXM82MB[*]-370mBARD5V	DP41-S, DP25B-S
0 to 500 mbar	0 to 7.3 psi	PXM82MB[*]-500mBARD5V	DP41-S, DP25B-S
0 to 750 mbar	0 to 11 psi	PXM82MB[*]-750mBARD5V	DP41-S, DP25B-S
0 to 1.00 bar	0 to 15 psi	PXM82MB[*]-001BARD5V	DP41-S, DP25B-S
0 to 1.25 bar	0 to 18 psi	PXM82MB[*]-1.25BARD5V	DP41-S, DP25B-S
0 to 2.00 bar	0 to 30 psi	PXM82MB[*]-002BARD5V	DP41-S, DP25B-S

Comes complete with 5-point NIST traceable calibration.

[\*] Insert "0" for 1.2 m (4') cable, "1" for twist-lock connector or "6" for mini DIN connector.

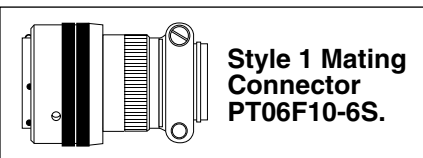
To order extra cable on cable-style models, add suffix "-(Total length in meters)M" and additional price per meter beyond the standard length.

Ordering Examples: PXM82MD0-130mBARD5V-10M, 130 mbar differential pressure transmitter with 0.5 to 5.5 Vdc output and 10 m (32') cable.

PXM82MD1-001BARD5V, 1 bar differential pressure transmitter with 0.5 to 5.5 Vdc output and twist-lock connector. PT06F10-6S, mating connector (sold separately).

### CONNECTIONS Volts

	PIN	Cable	DIN
+ Output	A	Green	2
- Output	B	White	3
- Input	C	Black	GRND
+ Input	D	Red	1



**Style 1 Mating Connector**  
**PT06F10-6S.**

# 4 to 20 mA OUTPUT STANDARD RANGES

**4 to 20 mA Output**  
**0-50 inH<sub>2</sub>O to 0-22 psi**  
**(0-130 to 0-1500 mbar)**  
**Differential Pressure**

## PX82 Series

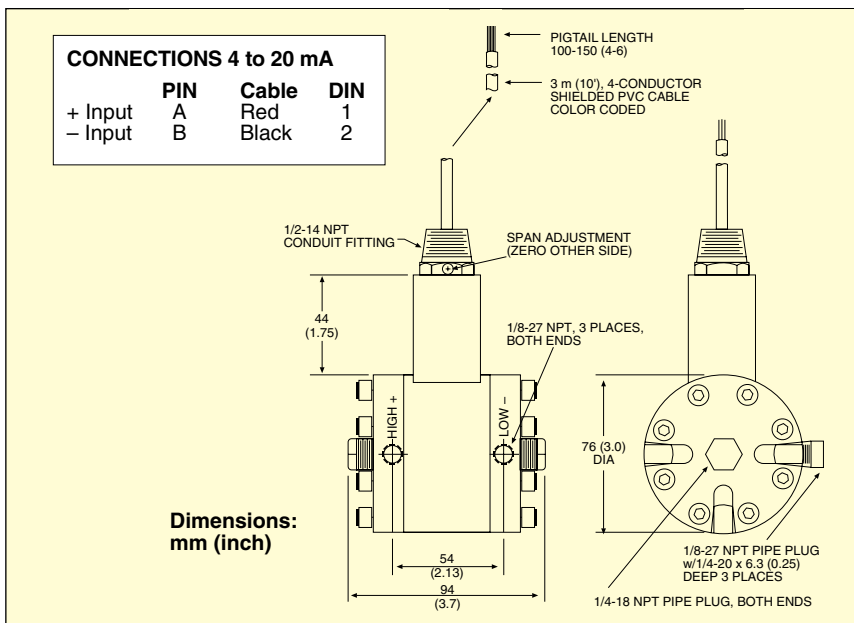


- ✓ inH<sub>2</sub>O Differential at Line Pressure—Up to 1500 psi
- ✓ Stainless Steel/Inconel® Construction for Harsh Industrial Environments
- ✓ High Overpressure Capability and High Operating Temperature
- ✓ 5-Point Calibration Provided: 0%, 50%, 100%, 50%, 0%

**STANDARD**  
 PX82B0-002DI  
 shown smaller  
 than actual size.



Twist-lock style.



### STANDARD MODELS

To Order			
Models with 4 to 20 mA Output			
RANGE		MODEL NO.	COMPATIBLE METERS
0 to 50 inH <sub>2</sub> O	0 to 125 mbar	PX82B[*]-050WCDI	DP41-S, DP25B-S
0 to 100 inH <sub>2</sub> O	0 to 249 mbar	PX82B[*]-100WCDI	DP41-S, DP25B-S
0 to 150 inH <sub>2</sub> O	0 to 374 mbar	PX82B[*]-150WCDI	DP41-S, DP25B-S
0 to 200 inH <sub>2</sub> O	0 to 498 mbar	PX82B[*]-200WCDI	DP41-S, DP25B-S
0 to 300 inH <sub>2</sub> O	0 to 748 mbar	PX82B[*]-300WCDI	DP41-S, DP25B-S
0 to 500 inH <sub>2</sub> O	0 to 1245 mbar	PX82B[*]-500WCDI	DP41-S, DP25B-S
0 to 800 inH <sub>2</sub> O	0 to 1993 mbar	PX82B[*]-800WCDI	DP41-S, DP25B-S
0 to 2 psi	0 to 0.14 bar	PX82B[*]-002DI	DP41-S, DP25B-S
0 to 3 psi	0 to 0.20 bar	PX82B[*]-003DI	DP41-S, DP25B-S
0 to 4 psi	0 to 0.27 bar	PX82B[*]-004DI	DP41-S, DP25B-S
0 to 5 psi	0 to 0.34 bar	PX82B[*]-005DI	DP41-S, DP25B-S
0 to 6 psi	0 to 0.41 bar	PX82B[*]-006DI	DP41-S, DP25B-S
0 to 8 psi	0 to 0.55 bar	PX82B[*]-008DI	DP41-S, DP25B-S
0 to 10 psi	0 to 0.69 bar	PX82B[*]-010DI	DP41-S, DP25B-S
0 to 15 psi	0 to 1.0 bar	PX82B[*]-015DI	DP41-S, DP25B-S
0 to 18 psi	0 to 1.2 bar	PX82B[*]-018DI	DP41-S, DP25B-S
0 to 22 psi	0 to 1.5 bar	PX82B[*]-022DI	DP41-S, DP25B-S

Comes complete with 5-point NIST traceable calibration.

[\*] Insert "0" for 1.2 m (4') cable, "1" for twist-lock connector, or "6" for mini DIN connector. Extra cable length: Add suffix "(length in feet)FT" and additional price per foot beyond standard length.

**Ordering Examples:** PX82B0-100WCDI-25FT, 100 inH<sub>2</sub>O differential pressure transmitter with 4 to 20 mA output and 7.6 m (25') shielded PVC cable.

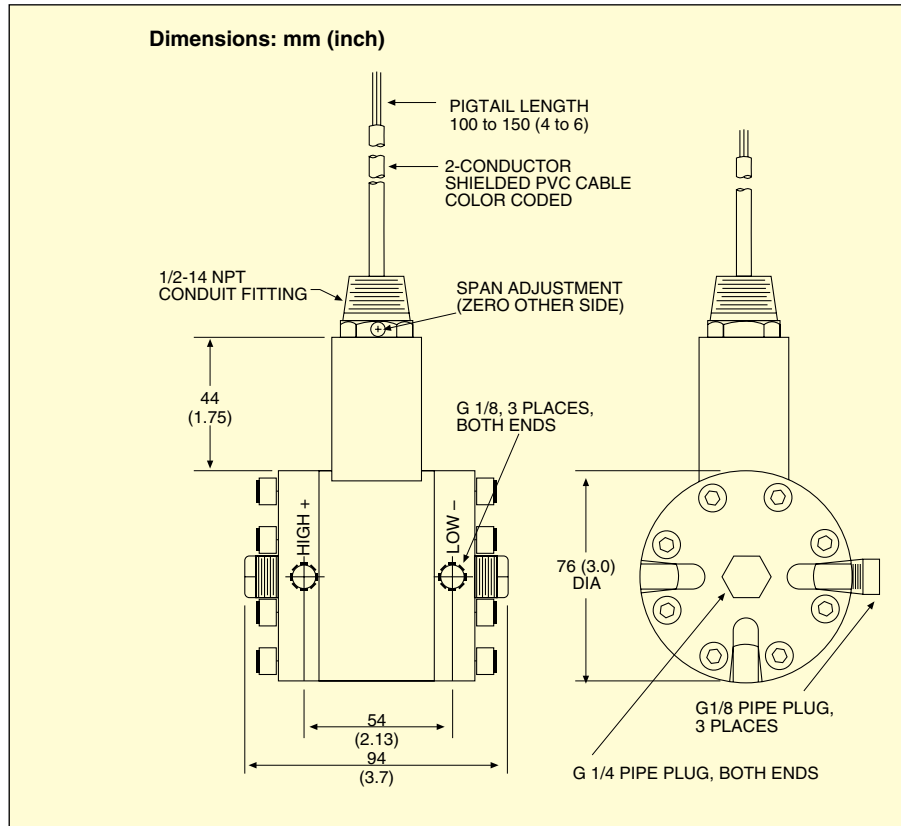
# 4 to 20 mA OUTPUT **METRIC** RANGES

**4 to 20 mA Output**  
**0-130 mbar to 0-2 bar**  
**0-2 to 0-30 psi**  
**Differential Pressure**

## PXM82 Series



- ✓ mbar Differential at Line Pressure—Up to 100 bar
- ✓ Stainless Steel/Inconel® Construction for Harsh Industrial Environments
- ✓ High Overpressure Capability
- ✓ High Operating Temperature
- ✓ 5-Point Calibration Provided: 0%, 50%, 100%, 50%, 0%



**METRIC**  
 PXM82MB1-190mBARDI shown smaller than actual size.



### METRIC MODELS

#### To Order

Models with G 1/8 and G 1/4 Female Pressure Connection, Specify Electrical Termination

RANGE		MODEL NO.	COMPATIBLE METERS
<b>DIFFERENTIAL PRESSURE</b>			
0 to 130 mbar	0 to 1.9 psi	<b>PXM82MB[*]-130mBARDI</b>	DP41-S, DP25B-S
0 to 190 mbar	0 to 2.8 psi	<b>PXM82MB[*]-190mBARDI</b>	DP41-S, DP25B-S
0 to 250 mbar	0 to 3.6 psi	<b>PXM82MB[*]-250mBARDI</b>	DP41-S, DP25B-S
0 to 370 mbar	0 to 5.4 psi	<b>PXM82MB[*]-370mBARDI</b>	DP41-S, DP25B-S
0 to 500 mbar	0 to 7.3 psi	<b>PXM82MB[*]-500mBARDI</b>	DP41-S, DP25B-S
0 to 750 mbar	0 to 11 psi	<b>PXM82MB[*]-750mBARDI</b>	DP41-S, DP25B-S
0 to 1.00 bar	0 to 15 psi	<b>PXM82MB[*]-001BARDI</b>	DP41-S, DP25B-S
0 to 1.25 bar	0 to 18 psi	<b>PXM82MB[*]-1.25BARDI</b>	DP451-S, DP25B-S
0 to 2.00 bar	0 to 30 psi	<b>PXM82MB[*]-002BARDI</b>	DP41-S, DP25B-S

Comes complete with 5-point NIST traceable calibration.

[\*] Insert "0" for 1.2 m (4') cable, "1" for twist-lock connector or "6" for mini DIN connector

To order extra cable on cable-style models, add suffix "-(Total length in meters)M" and additional price per meter beyond the standard length.

**Ordering Examples:** PXM82MD0-130mBARDI-10M, 130 mbar differential pressure transmitter with 4 to 20 mA output and 10 m (32') cable.

PXM82MD1-001BARDI, 1 bar differential pressure transmitter with 4 to 20 mA output and twist-lock connector. PT06F10-6S, mating connector (sold separately).