

# All Stainless Steel Transducer/Transmitter Multimedia Compatibility High-Performance Silicon Technology Metric Model



**350 mbar to 20 bar Absolute Pressure  
70 mbar to 700 bar Gage Pressure**

## PXM309 Series



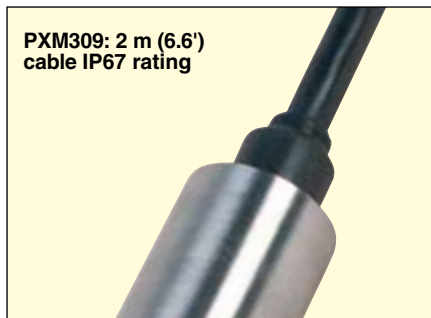
- ✓ 5-Point Traceable Calibration Certificate
- ✓ High Accuracy,  $\pm 0.25\%$  FS BSL (Linearity, Hysteresis and Repeatability)
- ✓ 1% Total Error Band on Most Ranges
- ✓ Reverse Polarity and Over Voltage Protected
- ✓ -40 to 85°C (-40 to 185°F) Operating Temperature
- ✓ 0 to 10 Vdc or 4 to 20 mA Output
- ✓ Terminations: Cable, mini DIN or M12 Connector
- ✓ G 1/4 Male Pressure Fitting
- ✓ IP65 Environmental Rating



OMEGA's PXM309 Series industrial pressure transducers utilize two of our precision manufacturing techniques. Low pressure ranges from 70 mb to 3.5 bar, and absolute ranges to 20 bar use a precision micromachined silicon sensor protected by a stainless steel diaphragm. A thin film of oil transfers

the pressure and assures the high accuracy and stability of the sensor. Medium and high gage pressure ranges, from 7 bar up to 700 bar, use precision semiconductor strain gages that are fused directly to the stainless steel diaphragm yielding a rugged, durable bond that assures long

life and high stability. These precision techniques produce an accuracy of 0.25% FS BSL @25°C and a total error band of 1% on most ranges. The PXM309 Series transducers are available in absolute, or gage (relative) pressure and are sealed to an IP65 environmental rating.



## SPECIFICATIONS

### Supply Voltage

Reverse polarity and over voltage protected

**0 to 10 Vdc Output:** 15 to 30 Vdc at 10 mA

**4 to 20 mA:** 9 to 30 Vdc

**Static Accuracy 350 mB to 700 bar:**  $\pm 0.25\%$  FS BSL at 25°C (includes linearity, hysteresis and repeatability)

**Long Term Stability (1 yr):**  $\pm 0.25\%$  FS

### Total Error Band\*

70 mB  $\pm 4.5\%$  gage

140 mB  $\pm 3\%$  gage

350 mB  $\pm 1.5\%$  gage and absolute

1 to 20 bar  $\pm 1\%$  absolute

1 to 700 bar  $\pm 1\%$  gage

*Note\*:* Total error band includes all accuracy errors, thermal errors, span and zero tolerances.

### Isolation (Body to Any Lead):

1 M  $\Omega$  at 25 Vdc

**Pressure Cycles:** 1 x 10<sup>7</sup> full scale cycles

### Pressure Overload

**70 mB to 3.5 bar Gage:** 3 x rated pressure or 1.38 bar whichever is greater

**350 mB to 20 bar Absolute:** 3 x rated pressure or 1.38 bar whichever is greater

**7 to 700 bar Gage:** 2 x rated pressure

### Burst Pressure

**70 mB to 3.5 bar Gage:** 5 x rated pressure or 1.72 bar whichever is greater

**350 mB to 20 bar Absolute:** 5 x rated pressure or 1.72 bar whichever is greater

**7 to 700 bar Gage:** 5 x rated pressure

### Compensated Temperature

**70 to 350 mbar Gage/Abs:** 0 to 50°C (32 to 122°F)

**1 to 700 bar Gage:** -20 to 85°C (-4 to 185°F)

**1 to 20 bar Absolute:** -20 to 85°C (-4 to 185°F)

**Operating Temperature:** -40 to 85°C (-40 to 185°F)

**Response Time:** 1 mS

**Bandwidth:** DC to 1 kHz type

**Pressure Connection:** G ¼ Male

### Wetted Parts

**70 mB to 3.5 bar Gage:** 316 SS

**350 mB to 20 bar Absolute:** 316 SS

**7 to 700 bar Gage:** 17-4PH SS

**CE Compliant:** EC55022, EC55011 Emissions Class A&B

**IEC:** 61000-2,-3,-4,-5,-6,&-9

**Shock:** 50 g 11 mSec half sine shock

**Vibration:**  $\pm 20$  g

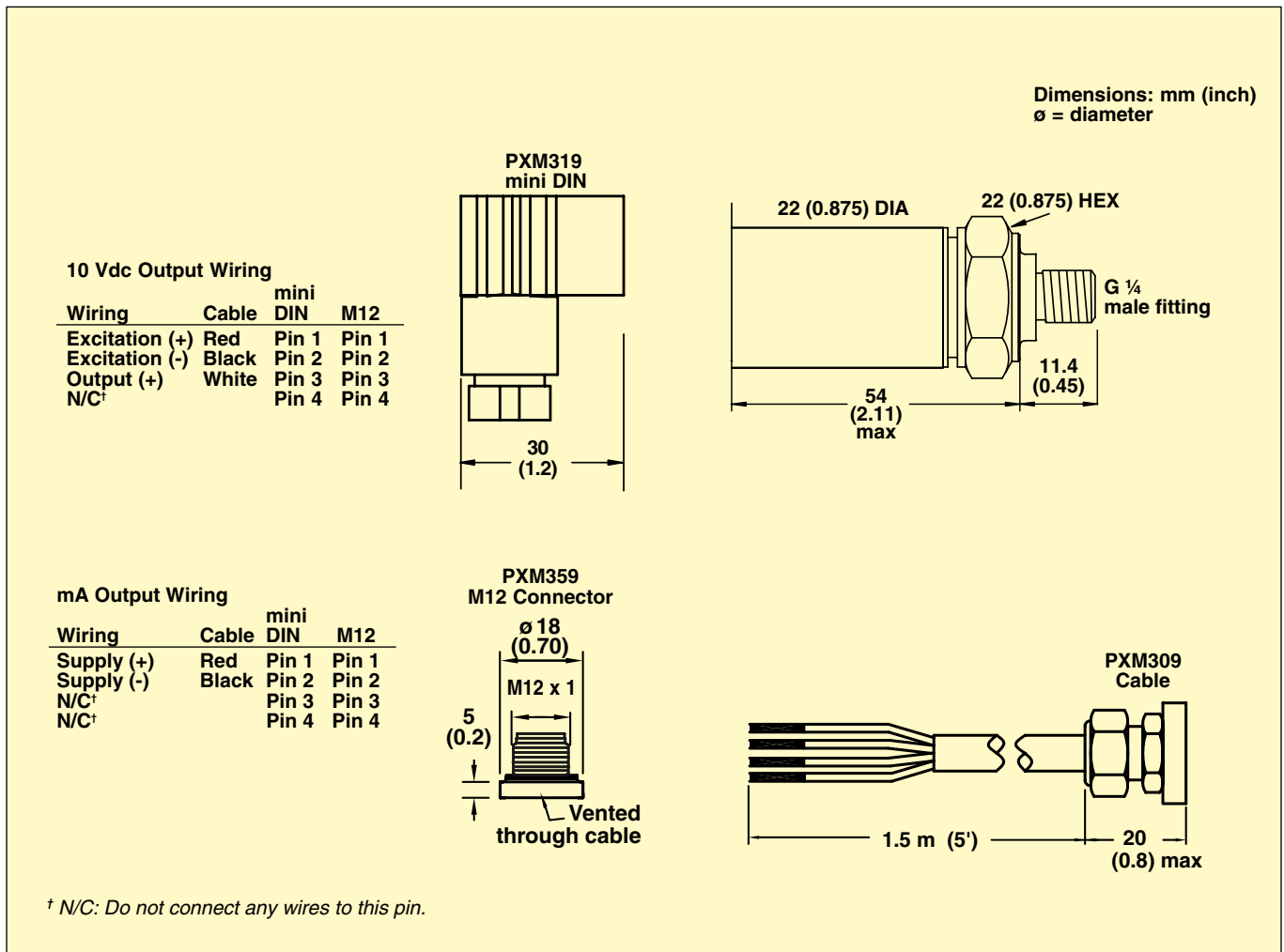
### Electrical Connections

**PXM309:** 1.5 m (5') 2 or 3-conductor cable, mA or 10V outputs, respectively

**PXM319:** mini DIN connector with mating connector included

**PXM359:** M12 4-pin connector

**Weight:** Typical 150 g (5.3 oz) depending upon configuration





DP25B, shown smaller than actual size.



DP41-B, shown smaller than actual size.

To Order				
Range	Cable Models PXM309 Series	mini Din Models PXM319 Series	M12 Models PXM359 Series	Compatible Meters
<b>Absolute Pressure</b>				
350 mbar	PXM309-0.35A[*]	PXM319-0.35A[*]	PXM359-0.35A[*]	DP25B-E, DP41-B
1 bar	PXM309-001A[*]	PXM319-001A[*]	PXM359-001A[*]	DP25B-E, DP41-B
2 bar	PXM309-002A[*]	PXM319-002A[*]	PXM359-002A[*]	DP25B-E, DP41-B
3.5 bar	PXM309-3.5A[*]	PXM319-3.5A[*]	PXM359-3.5A[*]	DP25B-E, DP41-B
7 bar	PXM309-007A[*]	PXM319-007A[*]	PXM359-007A[*]	DP25B-E, DP41-B
15 bar	PXM309-015A[*]	PXM319-015A[*]	PXM359-015A[*]	DP25B-E, DP41-B
20 bar	PXM309-020A[*]	PXM319-020A[*]	PXM359-020A[*]	DP25B-E, DP41-B
<b>Gage (Relative) Pressure</b>				
70 mbar	PXM309-0.07G[*]	PXM319-0.07G[*]	PXM359-0.07G[*]	DP25B-E, DP41-B
140 mbar	PXM309-0.14G[*]	PXM319-0.14G[*]	PXM359-0.14G[*]	DP25B-E, DP41-B
350 mbar	PXM309-0.35G[*]	PXM319-0.35G[*]	PXM359-0.35G[*]	DP25B-E, DP41-B
1 bar	PXM309-001G[*]	PXM319-001G[*]	PXM359-001G[*]	DP25B-E, DP41-B
2 bar	PXM309-002G[*]	PXM319-002G[*]	PXM359-002G[*]	DP25B-E, DP41-B
3.5 bar	PXM309-3.5G[*]	PXM319-3.5G[*]	PXM359-3.5G[*]	DP25B-E, DP41-B
7 bar	PXM309-007G[*]	PXM319-007G[*]	PXM359-007G[*]	DP25B-E, DP41-B
10 bar	PXM309-010G[*]	PXM319-010G[*]	PXM359-010G[*]	DP25B-E, DP41-B
15 bar	PXM309-015G[*]	PXM319-015G[*]	PXM359-015G[*]	DP25B-E, DP41-B
20 bar	PXM309-020G[*]	PXM319-020G[*]	PXM359-020G[*]	DP25B-E, DP41-B
35 bar	PXM309-035G[*]	PXM319-035G[*]	PXM359-035G[*]	DP25B-E, DP41-B
70 bar	PXM309-070G[*]	PXM319-070G[*]	PXM359-070G[*]	DP25B-E, DP41-B
140 bar	PXM309-140G[*]	PXM319-140G[*]	PXM359-140G[*]	DP25B-E, DP41-B
200 bar	PXM309-200G[*]	PXM319-200G[*]	PXM359-200G[*]	DP25B-E, DP41-B
350 bar	PXM309-350G[*]	PXM319-350G[*]	PXM359-350G[*]	DP25B-E, DP41-B
500 bar	PXM309-500G[*]	PXM319-500G[*]	PXM359-500G[*]	DP25B-E, DP41-B
700 bar	PXM309-700G[*]	PXM319-700G[*]	PXM359-700G[*]	DP25B-E, DP41-B
<b>Vacuum and Compound Gage Pressure</b>				
0 to -1 bar	PXM309-001V[*]	PXM319-001V[*]	PXM359-001V[*]	DP25B-E, DP41-B
-1 to 0 to +1 bar	PXM309-001CG[*]	PXM319-001CG[*]	PXM359-001CG[*]	DP25B-E, DP41-B
-1 to 2 bar	PXM309-V002G[*]	PXM319-V002G[*]	PXM359-V002G[*]	DP25B-E, DP41-B
-1 to 3.5 bar	PXM309-V3.5G[*]	PXM319-V3.5G[*]	PXM359-V3.5G[*]	DP25B-E, DP41-B
-1 to 7 bar	PXM309-V007G[*]	PXM319-V007G[*]	PXM359-V007G[*]	DP25B-E, DP41-B
-1 to 10 bar	PXM309-V010G[*]	PXM319-V010G[*]	PXM359-V010G[*]	DP25B-E, DP41-B

Comes complete with 5-point traceable calibration certificate

[\*] Insert "10V" for 0 to 10 Vdc output or "I" for 4 to 20 mA output

Note: M12 models require vented cable with gage units below 70 bar.

### Accessories

Model No.	Description
P002414-1	2 m (6.6') vented cable with mating M12 connector and flying leads for PXM359
P002414-2	5 m (16.4') vented cable with mating M12 connector and flying leads for PXM359
PXMW-4	SEALING WASHER FOR G 1/4, STAINLESS STEEL WITH FKM SEAL (INCLUDED)

Ordering Examples: PXM309-007G10V, cable model, 7 bar range, gage pressure, 0 to 10 Vdc output.

PXM319-007AI, mini DIN model, 7 bar range, absolute pressure, 4 to 20 mA output.

PXM359-070GI, M12 termination, 70 bar range, gage pressure, 4 to 20 mA output, P002414-1, 2 m (6.6') vented cable with mating M12 connector for PXM359.