

# HIGH ACCURACY PRESSURE TRANSDUCERS AND TRANSMITTERS **NEW**

## ALL STAINLESS STEEL WETTED PARTS FOR INDUSTRIAL APPLICATIONS

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

**Fast  
Delivery!**

### PXM309 Series



PXM309-007GI, shown smaller than actual size.

**Ranges From  
350 mb to 700 bar**

Cable style.

mini DIN style.

PXM319-007G10V,  
shown smaller than actual size.

M12  
connector  
style.

PXM359-020G10V,  
shown smaller than actual size.

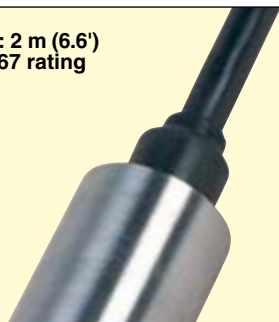
- ✓ 5-Point Traceable Calibration Certificate
- ✓ High Accuracy,  $\pm 0.25\%$  FS BSL (Linearity, Hysteresis and Repeatability)
- ✓ 1% Total Error Band on Most Ranges
- ✓ Reverse Polarity and Over Voltage Protected
- ✓ -40 to 85°C (-40 to 185°F) Operating Temperature
- ✓ 0 to 10 Vdc or 4 to 20 mA Output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

PXM309: 2 m (6.6')  
cable IP67 rating



PXM319: mini DIN  
IP67 rating, absolute  
IP65 rating, gage



PXM359: M12 connector  
IP67 rating, absolute  
IP65 rating, gage





## 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:**

±0.25% FS BSL at 25°C (includes linearity, hysteresis and repeatability)

**Long Term Stability (1 yr):** ±0.25% FS

**Total Error Band<sup>†</sup>**

70 mB ±4.5% gage

140 mB ±3% gage

350 mB ±1.5% gage and absolute

1 to 20 bar ±1% absolute

1 to 700 bar ±1% gage

**Note 1:** 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:** ± 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

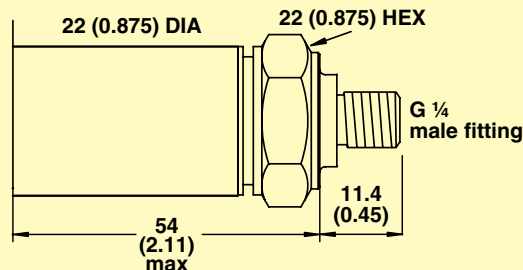
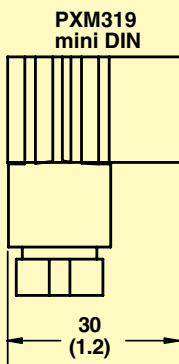
**ROHS Compliant:** Yes

**Weight:** Typical 150 g depending upon configuration

Dimensions: mm (inch)  
ø = diameter

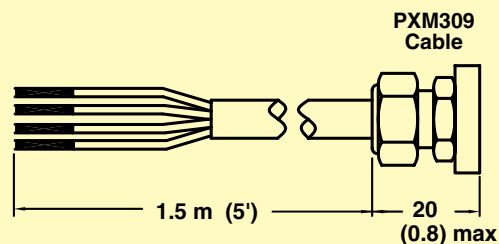
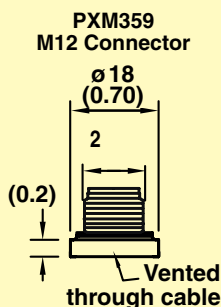
### 10 Vdc Output Wiring

Wiring	Cable	mini DIN	M12
Excitation (+)	Red	Pin 1	Pin 1
Excitation (-)	Black	Pin 2	Pin 2
Output (+)	White	Pin 3	Pin 3
N/C <sup>†</sup>		Pin 4	Pin 4



### mA Output Wiring

Wiring	Cable	mini DIN	M12
Supply (+)	Red	Pin 1	Pin 1
Supply (-)	Black	Pin 2	Pin 2
N/C <sup>†</sup>		Pin 3	Pin 3
N/C <sup>†</sup>		Pin 4	Pin 4



<sup>†</sup> N/C: Do not connect any wires to this pin.



DP25B, shown smaller than actual size.  
For details visit [omega.com/dp25b](http://omega.com/dp25b)



DP41-B, shown smaller than actual size.  
For details visit [omega.com/dp41b](http://omega.com/dp41b)

**NEW**

**To Order Visit [omega.com/pxm309](http://omega.com/pxm309) for Pricing and Details**

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, DP41B
1 bar	PXM309-001A[*]	PXM319-001A[*]	PXM359-001A[*]	DP25B-E, DP41B
2 bar	PXM309-002A[*]	PXM319-002A[*]	PXM359-002A[*]	DP25B-E, DP41B
3.5 bar	PXM309-3.5A[*]	PXM319-3.5A[*]	PXM359-3.5A[*]	DP25B-E, DP41B
7 bar	PXM309-007A[*]	PXM319-007A[*]	PXM359-007A[*]	DP25B-E, DP41B
15 bar	PXM309-015A[*]	PXM319-015A[*]	PXM359-015A[*]	DP25B-E, DP41B
20 bar	PXM309-020A[*]	PXM319-020A[*]	PXM359-020A[*]	DP25B-E, DP41B
<b>GAGE (RELATIVE) PRESSURE</b>				
70 mbar	PXM309-0.07G[*]	PXM319-0.07G[*]	PXM359-0.07G[*]	DP25B-E, DP41B
140 mbar	PXM309-0.14G[*]	PXM319-0.14G[*]	PXM359-0.14G[*]	DP25B-E, DP41B
350 mbar	PXM309-0.35G[*]	PXM319-0.35G[*]	PXM359-0.35G[*]	DP25B-E, DP41B
1 bar	PXM309-001G[*]	PXM319-001G[*]	PXM359-001G[*]	DP25B-E, DP41B
2 bar	PXM309-002G[*]	PXM319-002G[*]	PXM359-002G[*]	DP25B-E, DP41B
3.5 bar	PXM309-3.5G[*]	PXM319-3.5G[*]	PXM359-3.5G[*]	DP25B-E, DP41B
7 bar	PXM309-007G[*]	PXM319-007G[*]	PXM359-007G[*]	DP25B-E, DP41B
10 bar	PXM309-010G[*]	PXM319-010G[*]	PXM359-010G[*]	DP25B-E, DP41B
15 bar	PXM309-015G[*]	PXM319-015G[*]	PXM359-015G[*]	DP25B-E, DP41B
20 bar	PXM309-020G[*]	PXM319-020G[*]	PXM359-020G[*]	DP25B-E, DP41B
35 bar	PXM309-035G[*]	PXM319-035G[*]	PXM359-035G[*]	DP25B-E, DP41B
70 bar	PXM309-070G[*]	PXM319-070G[*]	PXM359-070G[*]	DP25B-E, DP41B
140 bar	PXM309-140G[*]	PXM319-140G[*]	PXM359-140G[*]	DP25B-E, DP41B
200 bar	PXM309-200G[*]	PXM319-200G[*]	PXM359-200G[*]	DP25B-E, DP41B
350 bar	PXM309-350G[*]	PXM319-350G[*]	PXM359-350G[*]	DP25B-E, DP41B
500 bar	PXM309-500G[*]	PXM319-500G[*]	PXM359-500G[*]	DP25B-E, DP41B
700 bar	PXM309-700G[*]	PXM319-700G[*]	PXM359-700G[*]	DP25B-E, DP41B

## 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') vented cable with mating M12 connector and flying leads for PXM359

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.

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.