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

NIST CE
Standard

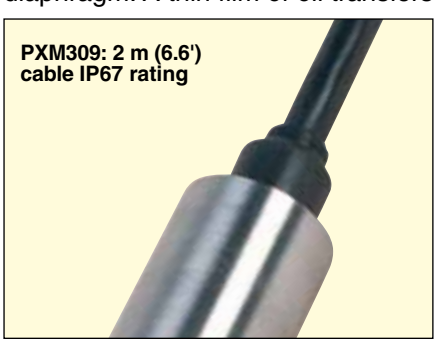
PXM309-007GI, shown smaller than actual size.

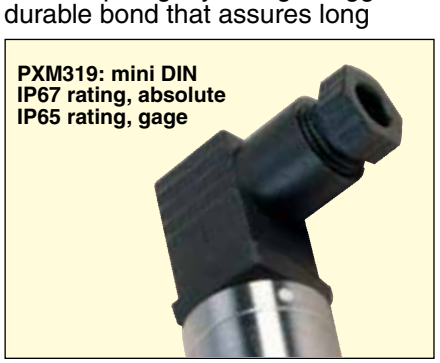
PXM319-007G10V, shown smaller than actual size.

PXM359-020G10V, shown smaller than actual size.

- **5-Point Traceable Calibration Certificate**
- **High Accuracy, ±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 ¼ 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: ±0.25% FS BSL at 25ºC (includes linearity, hysteresis and repeatability)

Long Term Stability (1 yr): ±0.25% FS

Total Error Band*

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

Isolation (Body to Any Lead): 1 M Ω at 25 Vdc

Pressure Cycles: 1 x 10^7 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 50ºC (32 to 122ºF)

1 to 700 bar Gage: -20 to 85ºC (-4 to 185ºF)

1 to 20 bar Absolute: -20 to 85ºC (-4 to 185ºF)

Operating Temperature: -40 to 85ºC (-40 to 185ºF)

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

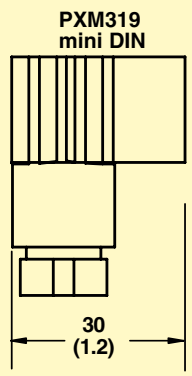
PXM359: M12 4-pin connector

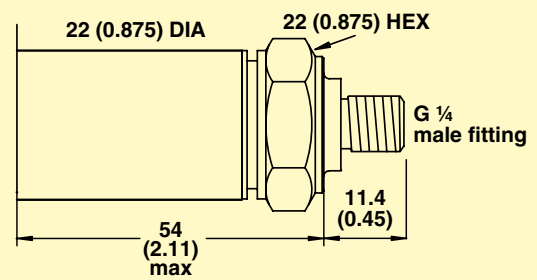
Weight: Typical 150 g (5.3 oz) depending upon configuration

Dimensions: mm (inch)
ø = diameter

10 Vdc Output Wiring

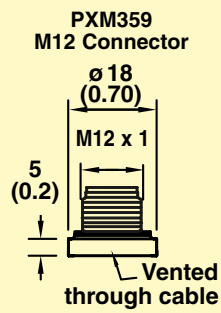
Wiring	Cable	mini DIN	M12
Excitation (+)	Red	Pin 1	Pin 1
Excitation (-)	Black	Pin 2	Pin 2
Output (+)	White	Pin 3	Pin 3
N/C†		Pin 4	Pin 4

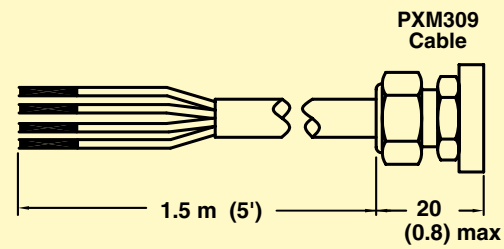




mA Output Wiring

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





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

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
Absolute Pressure				
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
Gage (Relative) Pressure				
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
Vacuum and Compound Gage Pressure				
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

***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.*