

DIFFUSED SEMICONDUCTOR PRESSURE TRANSMITTER

PXM6000 Series 4-20 mA Output 0-1 to 0-25 bar

PXM6000

\$550

All Ranges



- ✓ High Reliability
- ✓ Long Term Stability
- ✓ All Stainless Steel Case
- ✓ Vacuum Range Available
- ✓ Built-In Temperature Sensor

Applications

- ✓ Automotive Test
- ✓ Research & Development
- ✓ Engineering Test & Evaluation
- ✓ Production Testing
- ✓ Flight Recorders
- ✓ Engine Monitoring

OMEGA's PXM6000 Series Pressure Transducer fits easily into your application. This low cost transducer is small and light, and mounting requires no bulky structures. The sensor is a small, about 2.5 mm square, silicon chip with four diffused strain gauges, mounted in the stainless steel case. Laser trimmed resistors provide temperature compensation and adjust zero balance and span. The 4-20 mA output easily interfaces with most control and data acquisition systems. The PXM6000 uses solid state media isolation for improved reliability. Thin films of chemically inert materials are deposited or grown on the chip surface to provide electrical isolation between the sensor and pressure medium. The sensor is less sensitive to vibration and more dependable in high shock environments because the films add no significant mass. Corrosion resistance is outstanding, and the isolation will remain effective because there is no gel or oil column to deteriorate.



PXM6000MC6-004BARAI
Shown Smaller Than
Actual Size



PXM6000MC0-004BARAI
Shown Smaller Than
Actual Size

SPECIFICATIONS:

4-20 mA Models

Excitation: 10 to 40 Vdc Unregulated

Output: 4-20 mA Adjustable $\pm 10\%$ FS

Load Impedance (Max):

$50 \times (V - 10) \Omega$ where V = Supply voltage
(40Vdc max)

Zero Balance:

4mA Adjustable $\pm 10\%$ FS

Dielectric Isolation Resistance:

100 M Ω minimum at 45 Vdc applied
between the case or a conductive medium
and the bridge circuit

MOST POPULAR MODELS HIGHLIGHTED

To Order (Specify Model Number)

Models with G 1/4 Male Pressure Connection, Cable or micro DIN & 4-20mA Output

RANGE (Bar)	MODEL NO.	PRICE	COMPATIBLE METERS**
Absolute Pressure:			
0 to 1	PXM6000MC[*]-001BARAI	\$550	DP41-E, DP25B-E, DP24-E
0 to 1.6	PXM6000MC[*]-1.60BARAI	550	DP41-E, DP25B-E, DP24-E
0 to 4	PXM6000MC[*]-004BARAI	550	DP41-E, DP25B-E, DP24-E
0 to 6	PXM6000MC[*]-006BARAI	550	DP41-E, DP25B-E, DP24-E
0 to 10	PXM6000MC[*]-010BARAI	550	DP41-E, DP25B-E, DP24-E
0 to 16	PXM6000MC[*]-016BARAI	550	DP41-E, DP25B-E, DP24-E
0 to 25	PXM6000MC[*]-025BARAI	550	DP41-E, DP25B-E, DP24-E
Gauge Pressure:			
0 to 1	PXM6000MC[*]-001BARGI	\$550	DP41-E, DP25B-E, DP24-E
0 to 1.6	PXM6000MC[*]-1.60BARGI	550	DP41-E, DP25B-E, DP24-E
0 to 4	PXM6000MC[*]-004BARGI	550	DP41-E, DP25B-E, DP24-E
0 to 6	PXM6000MC[*]-006BARGI	550	DP41-E, DP25B-E, DP24-E
0 to 10	PXM6000MC[*]-010BARGI	550	DP41-E, DP25B-E, DP24-E
0 to 16	PXM6000MC[*]-016BARGI	550	DP41-E, DP25B-E, DP24-E
0 to 25	PXM6000MC[*]-025BARGI	550	DP41-E, DP25B-E, DP24-E

[*] = insert "0" for 0.6 m Cable or "6" for micro DIN connector

**See Section D for compatible Meters

Ordering Examples:

1.) PXM6000MC0-004BARGI is a 4 bar Gauge Pressure transducer with 4-20 mA output, 0.6 m cable and G 1/4 Male Pressure Port, \$550.

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SPECIFICATIONS (cont)

Sensing Element:

4 active-arm bridge using a micro-machined diffused silicon diaphragm sensor, thin-film media and dielectric isolation barriers

Temperature Sensor:

Output resistance @ 24°C (75°F)
900 to 1500 Ω

Temperature Coefficient: 8% min.,
10% max. per 55.5°C (100°F)

Accuracy:

Combined Linearity, Hysteresis and Repeatability $\leq \pm 0.25\%$ FS for all ranges

Operational Temp Range:

-29° to 85°C (-20° to 185°F)

Compensated Temp Range:

-29° to 85°C (-20° to 185°F)

Thermal Effects:

Span: $\leq \pm 0.04\%$ of FS/°C.

Zero: $\leq \pm 0.04\%$ of FS/°C

Vibration Sensitivity: At 20 g peak sinusoidal vibration from 10 Hz to 2000 Hz ($\frac{1}{2}$ " D.A.), the output shall not exceed 0.04% FS/g for 1 bar range to 0.005% FS/g for 7 bar and above

Natural Frequency: Greater than 35 kHz for 7 bar and above

Shock: 100g, 11 milliseconds half sine wave without damage

Proof Pressure:

2.0 times rated pressure will not cause changes in performance beyond the specified tolerances

Burst Pressure:

3.0 times rated pressure for pressure ranges below 14 bar, or 2.5 times rated pressure for pressure ranges above 14 bar will not cause rupture of the pressure sensor

Wetted Parts: 316 Stainless Steel, Silicon, pyrex glass, epoxy, Kovar

Electrical Connection:

0.6 m (2 ft) cable or microDIN Connector – see Custom Configurations

Pressure Port:

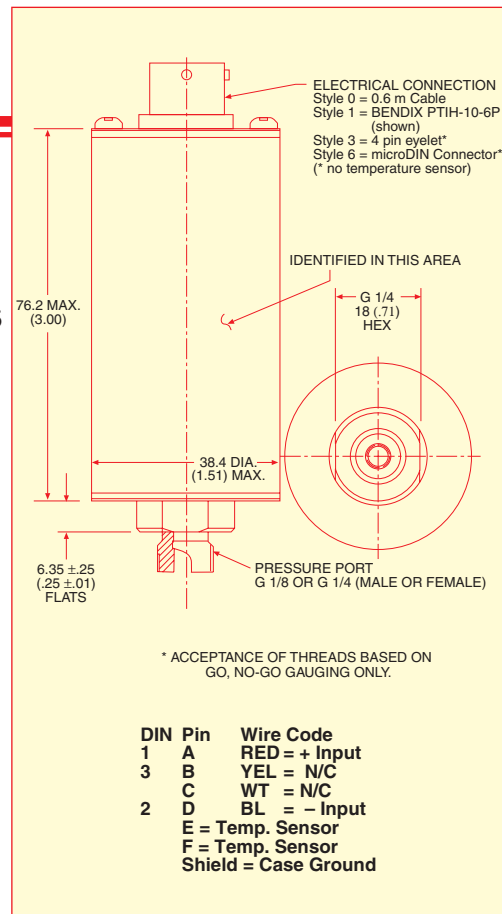
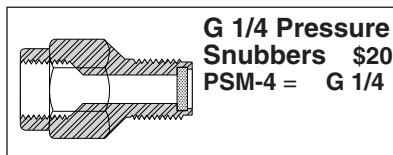
Optional: G 1/4 Male (std),
G 1/8 Male or Female

Weight: 170g (6 oz) Typical

Mating Connector:

Included with microDIN

Style 1: PTS06A-10-6S Not Included



CUSTOM CONFIGURATIONS

-MODEL NUMBER SPECIFICATION:

PXM6000MC0-006BARAI

OPTION CODES (add to end of model number)

- CAL5 (for 5 point calibration certificate)
- CAL11 (for 11 point calibration certificate)
- []m (Optional cable length
Example:
-12m = 12 metres total of cable)

OUTPUT: V = 3 mV/V nominal
5T = 0 to 5 Vdc
I = 4 to 20 mA

UNITS (A = absolute, S = sealed gauge, G = gauge)

RANGE

ELECTRICAL CONNECTION:

- 0 = 0.6 m cable
- 1 = PTIH-10-6P connector or equiv.
- 3 = 4 pin eyelet*
- 6 = micro DIN connector* (*no temp sensor)

PRESSURE PORT: MA = G 1/8 male
MB = G 1/8 female
MC = G 1/4 male - (std)
MD = G 1/4 female

Style 1 Mating Connector PTS06A-10-6S, £33.00

Ordering Examples:

1.) **PXM6000MD1-010BARGI** is a 10 bar Vented Gauge pressure transducer with an G 1/4 female pressure connection, a PTIH-10-6P Electrical Connector and 4 to 20 mA output, **\$550**. Mating Connector (not included) **PTS06A-10-6S, \$26.50**.

2.) **PXM6000MA0-01.6BARAI** is a 1.6 bar Absolute Pressure transducer with a G 1/8 male pressure connection, a 0.6 m cable, and 4 to 20 mA output, **\$550**.

3.) **PXM6000MC6-006BARAI** is a 6 bar Absolute Pressure transducer with an G 1/4 male pressure connection, a microDIN Connector and 4 to 20 mA output, **\$550**. Mating Connector included.