

# Diffused Semiconductor Pressure Transducer

## PXM6000 Series

mV/V Output  
0-1 to 0-25 bar

PXM6000  
All Ranges

£344



- ✓ Supplied with 5 Point Calibration Certificate
- ✓ High Reliability
- ✓ Long Term Stability
- ✓ All Stainless Steel Case
- ✓ Vacuum Range Available
- ✓ Built-In Temperature Sensor

### Applications

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

OMEGA's PXM6000 Series pressure transducers fit easily into your application. These low cost transducers are 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 30 mV full range output is compatible with most amplifiers 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. Corrosion resistance is outstanding, and the isolation will remain effective because there is no gel or oil column to deteriorate.



PXM6000MC0-004AV  
Shown smaller than actual size

### SPECIFICATIONS:

#### mV/V Models

Excitation: 10 Vdc

Output: 3 mV/V  $\pm$  10%

Input Resistance: 2500  $\Omega$  minimum

Output Resistance: 1000  $\Omega$  minimum, 1500  $\Omega$  maximum

Zero Balance: 0 mV  $\pm$  5% FSO

**Dielectric Isolation Resistance:** 100 M $\Omega$  minimum at 50 Vdc applied between the case or a conductive medium and the bridge circuit

**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  $\Omega$

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

#### PXM6000MC6-004AV

Shown installed, smaller than actual size



### MOST POPULAR MODELS HIGHLIGHTED

To Order: (Specify Model Number)			
Models with G 1/4 Male Pressure Connection, Cable or micro DIN & mV/V Output			
RANGE (Bar)	MODEL NUMBER	PRICE	COMPATIBLE METERS**
<b>Absolute Pressure:</b>			
0 to 1	PXM6000MC[*]-001AV	£344	DP41-S, DP25B-S
0 to 1.6	PXM6000MC[*]-1.60AV	344	DP41-S, DP25B-S
0 to 4	PXM6000MC[*]-004AV	344	DP41-S, DP25B-S
0 to 6	PXM6000MC[*]-006AV	344	DP41-S, DP25B-S
0 to 10	PXM6000MC[*]-010AV	344	DP41-S, DP25B-S
0 to 16	PXM6000MC[*]-016AV	344	DP41-S, DP25B-S
0 to 25	PXM6000MC[*]-025AV	344	DP41-S, DP25B-S
<b>Gauge Pressure:</b>			
0 to 1	PXM6000MC[*]-001GV	344	DP41-S, DP25B-S
0 to 1.6	PXM6000MC[*]-1.60GV	344	DP41-S, DP25B-S
0 to 4	PXM6000MC[*]-004GV	344	DP41-S, DP25B-S
0 to 6	PXM6000MC[*]-006GV	344	DP41-S, DP25B-S
0 to 10	PXM6000MC[*]-010GV	344	DP41-S, DP25B-S
0 to 16	PXM6000MC[*]-016GV	344	DP41-S, DP25B-S
0 to 25	PXM6000MC[*]-025GV	344	DP41-S, DP25B-S

[\*] = insert "0" for 0.6 m Cable or "6" for micro DIN connector or "1" for PTIH-10-6P Twist Lock Connector.

\*\*See Section S for compatible Meters

Ordering Example: 1.) PXM6000MC0-004GV is a 4 bar Gauge Pressure transducer with 0.6 m cable and G 1/4 Male Pressure Port, £344 ea.



# Diffused Semiconductor Pressure Transducer Rugged, Dependable Performance

## SPECIFICATIONS (cont)

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

**Operational Temp Range:** -54° to 150°C (-65° to 300°F)

**Compensated Temp Range:** -54° to 121°C (-65° to +250°F)

**Thermal Effects:** Span:  $\leq \pm 0.04\%$  of FS/°C. Zero:  $\leq \pm 0.04\%$  of FS/°C

**Vibration Sensitivity:** At 35g 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

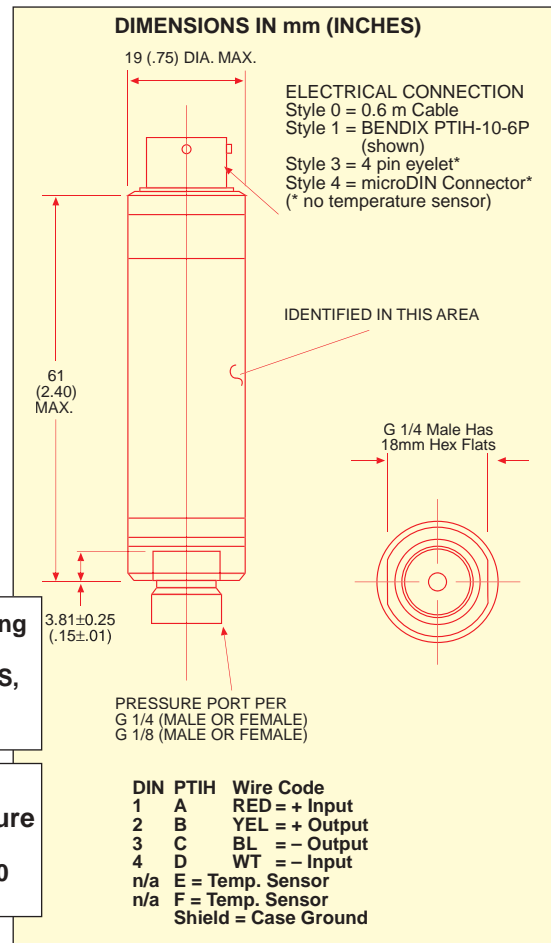
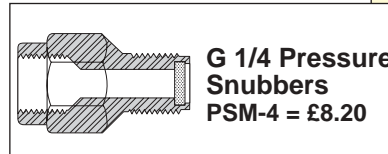
**Wetted Parts:** 316 Stainless Steel, Silicon Nitride, pyrex glass, epoxy, Kovar

**Electrical Connection:** 0.6 m (2 ft) cable or microDIN Connector standard – see Custom Configurations

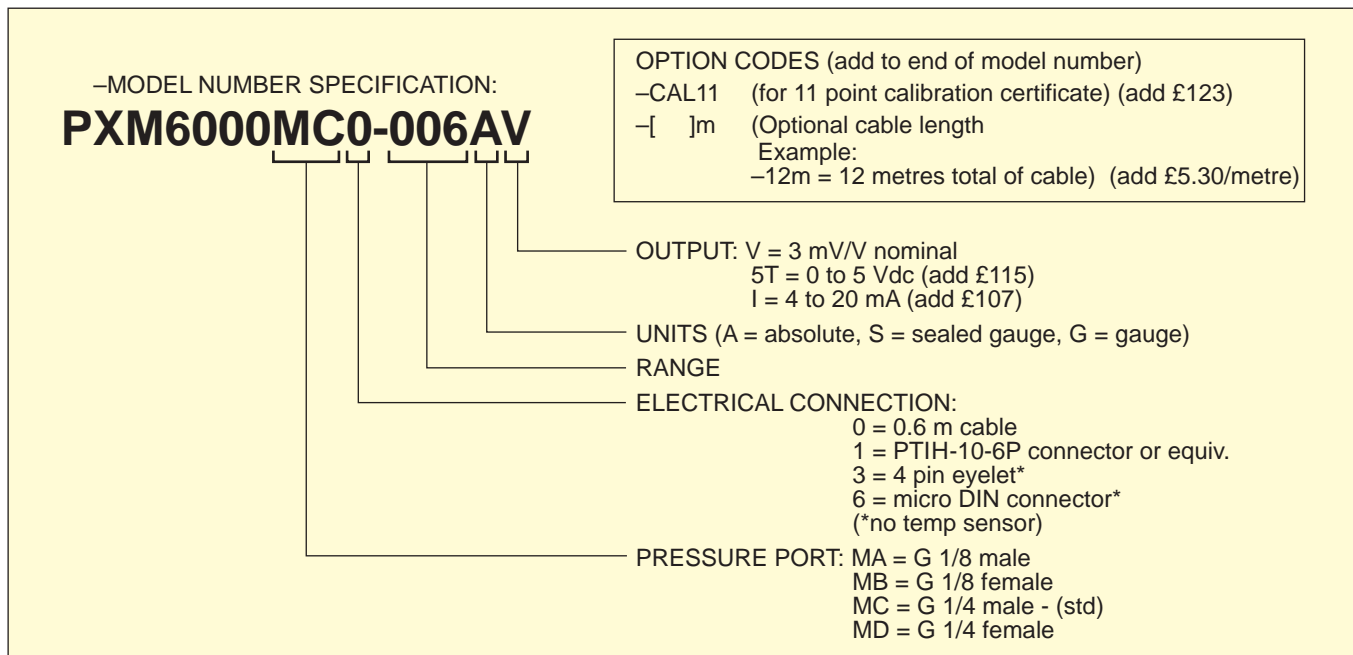
**Pressure Port:** G 1/4 Male (std) Optional: G 1/4 Female, G 1/8 Male or Female

**Weight:** 15 g (4 oz) maximum, excluding pressure fitting and electrical connection

**Mating Connector:** Included with MicroDIN Connector; Style 1 PTS06A10-6S Not Included



## CUSTOM CONFIGURATIONS



**ORDERING EXAMPLES:** 1.) PXM6000MA1-1.60GV is a 1.6 bar Gauge pressure transducer with a G 1/8 male pressure connection, a PTIH-10-6P Electrical Connector and a mV/V output, £344. Mating Connector (not included) PTS06A10-6S, £38.50.  
2.) PXM6000MC0-006GV is a 6 bar gauge pressure transducer with a G 1/4 male pressure connection, a 0.6 m cable and a mV/V output, £344  
3.) PXM6000MD6-004AV is a 4 bar Absolute Pressure transducer with an G 1/4 female pressure connection, a microDIN Connector and mV/V output, £344. Mating Connector included.