

DIFFUSED SEMICONDUCTOR PRESSURE TRANSDUCER

STANDARD AND METRIC MODELS

mV/V Output
0-15 to 0-300 psi-Standard Models
0-1 to 0-25 bar-Metric Models

PX6000/PXM6000 Series



- ✓ High Reliability
- ✓ Long-Term Stability
- ✓ All Stainless Steel Case
- ✓ Vacuum Range Available

Applications

- ✓ Automotive Testing
- ✓ Research and Development
- ✓ Engineering Testing and Evaluation
- ✓ Production Testing
- ✓ Flight Recorders
- ✓ Engine Monitoring
- ✓ Ground Support Equipment
- ✓ Built-In Temperature Sensor

OMEGA's PX6000/PXM6000 Series pressure transducers fit easily into your application. These low-cost transducers are small and light, and mounting requires no bulky structures. You select from 3 electrical terminations and 6 pressure fittings. The sensor is a small [about 2.54 cm (0.1") square silicon chip with 4 diffused strain gages, 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 PX6000/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.

SPECIFICATIONS

ELECTRICAL

Excitation: 10 Vdc
Output: 3 mV/V \pm 10%
Input Resistance: 2000 Ω minimum
Output Resistance: 1000 Ω minimum, 1500 Ω maximum
Zero Balance: 0 mV \pm 5% FSO
Dielectric Isolation Resistance: 100 M Ω 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 Ω

Temperature Coefficient:
 8% minimum, 10% maximum per 55.5°C (100°F)

PERFORMANCE

Accuracy: \pm 0.25% FS combined linearity, hysteresis and repeatability for all ranges

ENVIRONMENTAL

Operating 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 0.02% of FS/°F
Zero: \leq \pm 0.02% of FS/°F

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 15 psi range to 0.005% FS/g for 100 psi and above

Natural Frequency: Greater than 35 kHz for 100 psi and above

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



PX6000L1-100GV
 MS33656-4 pressure
 ports standard,
 shown actual size.

PRESSURE

Proof Pressure: 2 times rated pressure will not cause changes in performance beyond the specified tolerances

Burst Pressure: 3 times rated pressure for pressure ranges below 200 psi, or 2.5 times rated pressure for pressure ranges above 200 psi will not cause rupture of the pressure sensor

MECHANICAL

Wetted Parts: 316 stainless steel, silicon nitride, Pyrex® glass, epoxy, Kovar®

Electrical Connection:
 PTIH-10-6P or 0.6 m (2') cable, 4-pin solder terminal header, or mini-DIN connector

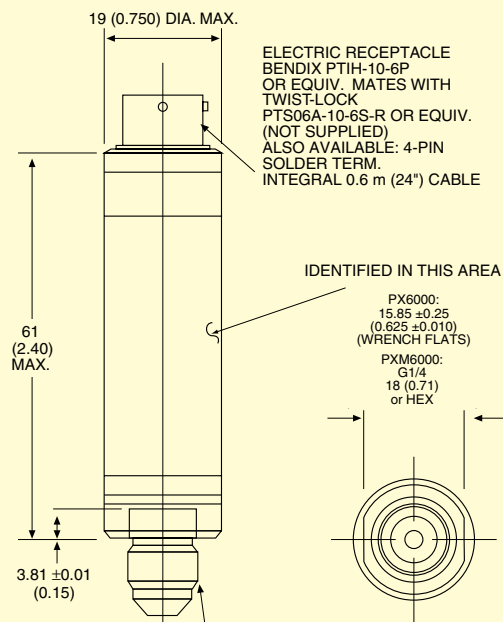
Pressure Port: See custom configurations

Weight: 4 oz max, excluding pressure fitting and electrical connection

Mating Connector:
 PTS06A-10-6S-R (sold separately)

Dimensions: mm (inch)

PX6000L1



Pin Wire
A = + Input (Red)
B = + Output (Green)
C = - Output (Blue)
D = - Input (White)
E = Temp. Sensor (Black)
F = Temp. Sensor (Orange)
Shield = N/C

PRESSURE PORT PER MS33656-4 (1/4 TUBE)
 ALSO AVAILABLE: MS33649-4 (FEMALE)
 1/4-18 NPT (MALE OR FEMALE)
 1/8-27 NPT (MALE OR FEMALE)
 G1/8 B (MALE OR FEMALE)
 G1/4 B (MALE)

DIFFUSED SEMICONDUCTOR PRESSURE TRANSDUCER



MILLIVOLT OUTPUT
PRESSURE TRANSDUCERS
B

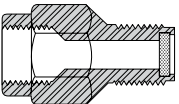
STANDARD CUSTOM CONFIGURATIONS

PX6000 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (psi) [3]	UNITS [4]	OUTPUT [5]	CALIBRATION OPTION [6]
	A = 1/8-27 NPT Male B = 1/8-27 NPT Female C = 1/4-18 NPT Male D = 1/4-18 NPT Female L = MS33656-4 Male M = MS33649-4 Female		30* 015 020 050 100 200 300	VAC G,A G,A G,A G,A G,A G,A	V = mV/V output	CA11 = 11-point NIST calibration additional cost [7] CABLE LENGTH -XXXFT ** available when selection [2] = 0 **
<p>0 = 0.6 m (2') cable (std) additional cost/ft over 0.6 m (2')</p> <p>1 = PTIH-10-6P connector or equal (no charge). Mating connector (not included), order PTS06A-10-6S-R.</p> <p>3 = 4-pin eyelet header (no charge). Temp sensor not available</p> <p>6 = mini DIN connector (no charge). Temp sensor not available.</p>			<p>* Referenced to atmospheric pressure, 30 Vac range is 30 to 0 inHg vacuum, all other ranges are psi</p>		<p>To order a custom configuration:</p> <ol style="list-style-type: none"> 1. Select a pressure port 2. Select electrical connection 3. Select a pressure range 4. Select pressure units 5. Select output 6. Select options and agency approvals 7. Select extra length cable 	
<p>Note: All mV/V models meet CE requirements.</p>						

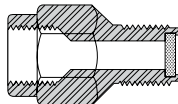
Ordering Examples: **PX6000M1-100GI**, 100 psi vented gage pressure transducer with MS33649-4 female pressure connection, PTIH-10-6P electrical connector and 4 to 20 mA output. **PTS06A-10-6S-R**, mating connector (sold separately).

PX6000A0-30VACV-25FT, 30 to 0 inHg vacuum transducer with a 1/8-27 NPT male pressure connection, a reverse-acting (30 inHg vacuum = full scale output) mV/V output, and a 7.6 m (25') cable.

PX6000L1-015A5T, 15 psi absolute pressure transducer with MS33656-4 male pressure connection, PTIH-10-6P electrical connector and 0 to 5 Vdc output. **PTS06A-10-6S-R**, mating connector (sold separately).



1/4 NPT Pressure Snubbers:
PS-4G = Gas
PS-4E = Lt Oil
PS-4D = Dense Lq



G1/4 Pressure Snubbers:
PS-4G-MG = Gas
PS-4E-MG = Lt Oil
PS-4D-MG = Dense Liquid

METRIC CUSTOM CONFIGURATIONS

PXM6000 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (BAR) [3]	UNITS [4]	OUTPUT [5]	CALIBRATION OPTION [6]
	MA = G1/8B Male additional cost MB = G1/8B Female no charge MC = G1/8B Male additional cost		1.0 1.6 4.0 6.0 10 16	A, G A, G A, G A, G A, G A, G	V = mV/V	CAL11 = 11-point NIST calibration additional cost [7] CABLE LENGTH -XXXM ** available when selection [2] = 0 **
<p>0 = 0.6 m (2') cable (std) additional cost/ft over 0.6 m (2')</p> <p>1 = PTIH-10-6P connector (or equal, no charge)</p> <p>3 = 4-pin eyelet* *no shunt cal (no charge)</p> <p>6 = mini DIN connector* *no shunt cal (no charge)</p>			<p>Note: All mV/V models meet CE requirements.</p>		<p>To order a custom configuration:</p> <ol style="list-style-type: none"> 1. Select a pressure port 2. Select electrical connection 3. Select a pressure range 4. Select pressure units – absolute, gage 5. Select output 6. Select options and agency approvals 7. Select extra length cable 	

Ordering Examples: **PXM6000MB0-010BARAV**, 10 bar absolute pressure transducer with G1/8 B female connection and 0.6 m (2') cable termination.

PXM6000MD1-010BARAV, 10 bar absolute pressure transducer with G1/4 B female connection and twist-lock connector **PTS06A-10-6S-R** mating connector (sold separately).



STANDARD
PX6000C0-015AV,
with 1/4 NPT male port,
shown actual size.

STANDARD MODELS

To Order			
Models with MS33656-4 Pressure Connection, Integral Connector & mV/V Output			
RANGE		MODEL NO.	COMPATIBLE METERS*
psi	bar		
VACUUM			
30 to 0 (inHg)	-1 to 0	PX6000L1-30VACV	DP41-S, DP25B-S
ABSOLUTE PRESSURE			
0 to 15	0 to 1.0	PX6000L1-015AV	DP41-S, DP25B-S
0 to 20	0 to 1.4	PX6000L1-020AV	DP41-S, DP25B-S
0 to 50	0 to 3.4	PX6000L1-050AV	DP41-S, DP25B-S
0 to 100	0 to 6.9	PX6000L1-100AV	DP41-S, DP25B-S
0 to 200	0 to 13.8	PX6000L1-200AV	DP41-S, DP25B-S
0 to 300	0 to 20.7	PX6000L1-300AV	DP41-S, DP25B-S
GAGE PRESSURE			
0 to 15	0 to 1.0	PX6000L1-015GV	DP41-S, DP25B-S
0 to 20	0 to 1.4	PX6000L1-020GV	DP41-S, DP25B-S
0 to 50	0 to 3.4	PX6000L1-050GV	DP41-S, DP25B-S
0 to 100	0 to 6.9	PX6000L1-100GV	DP41-S, DP25B-S
0 to 200	0 to 13.8	PX6000L1-200GV	DP41-S, DP25B-S
0 to 300	0 to 20.7	PX6000L1-300GV	DP41-S, DP25B-S

Comes complete with 5-point NIST traceable calibration.

* Visit us online for compatible meters.

Ordering Example: PX6000L1-050GV, 50 psi gage pressure transducer with PTIH-10-6P electrical connection and MS33656-4 male pressure port. PTS06A-10-6S-R, mating connector (sold separately).

ACCESSORY

MODEL NO.	DESCRIPTION
PTS06A-10-6S-R	Mating connector for PX6000 units with PTIH-10-6P electrical connection

mini DIN
style, cable
not included.

METRIC MODELS

To Order			
Models with G 1/4 Male Pressure Connection, Cable or mini DIN and mV/V Output			
RANGE		MODEL NO.	COMPATIBLE METERS*
ABSOLUTE PRESSURE			
0 to 1 bar	0 to 15 psi	PXM6000MC[*]-001BARAV	DP41-S, DP25B-S
0 to 1.60 bar	0 to 23 psi	PXM6000MC[*]-1.60BARAV	DP41-S, DP25B-S
0 to 4 bar	0 to 58 psi	PXM6000MC[*]-004BARAV	DP41-S, DP25B-S
0 to 6 bar	0 to 87 psi	PXM6000MC[*]-006BARAV	DP41-S, DP25B-S
0 to 10 bar	0 to 145 psi	PXM6000MC[*]-010BARAV	DP41-S, DP25B-S
0 to 16 bar	0 to 232 psi	PXM6000MC[*]-016BARAV	DP41-S, DP25B-S
GAGE PRESSURE			
0 to 1 bar	0 to 15 psi	PXM6000MC[*]-001BARGV	DP41-S, DP25B-S
0 to 1.60 bar	0 to 23 psi	PXM6000MC[*]-1.60BARGV	DP41-S, DP25B-S
0 to 4 bar	0 to 58 psi	PXM6000MC[*]-004BARGV	DP41-S, DP25B-S
0 to 6 bar	0 to 87 psi	PXM6000MC[*]-006BARGV	DP41-S, DP25B-S
0 to 10 bar	0 to 145 psi	PXM6000MC[*]-010BARGV	DP41-S, DP25B-S
0 to 16 bar	0 to 232 psi	PXM6000MC[*]-016BARGV	DP41-S, DP25B-S
0 to 25 bar	0 to 319 psi	PXM6000MC[*]-025BARGV	DP41-S, DP25B-S

Comes complete with 5-point calibration.

* Visit us online for compatible meters.

[*] = Insert "0" for 0.6 m (2') cable or "6" for mini DIN connector.

Ordering Example: PXM6000MC0-004BARGV, 4 bar gage pressure transducer with 0.6 m (2') cable and G 1/4 male pressure port.



METRIC
PXM6000MC6-004BARAV,
shown installed,
smaller than actual size.

DIFFUSED SEMICONDUCTOR PRESSURE TRANSDUCER

STANDARD AND METRIC MODELS

0-5 Vdc Output

0-15 to 0-300 psi-Standard Models

0-1 to 0-16 bar-Metric Models

1 bar = 14.5 psi

1 kg/cm² = 14.22 psi

1 atmosphere = 14.7 psi = 29.93

inHg = 760.2 mmHg = 1.014 bar



PX6000C1-100G5T,
shown actual size.



VOLTAGE OUTPUT
PRESSURE TRANSDUCERS

B

PX6000/PXM6000 Series



Standard

- High Reliability
- Long-Term Stability
- All Stainless Steel Case
- Vacuum Range Available

OMEGA's PX6000/PXM6000 pressure transducers fit easily into your applications. This low-cost transducer is small and light, and mounting requires no bulky structures. You select from 3 electrical terminations and 6 pressure fittings. The sensor is a small [about 2.5 mm (0.1")] square silicon chip with 4 diffused strain gages, mounted in the stainless steel case. Laser-trimmed resistors provide temperature compensation and adjust zero balance and span.

The PX6000 Series 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 the 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.

SPECIFICATIONS

Excitation: 16 to 38 Vdc unregulated

Output: 0 to 5 Vdc ± 0.1 Vdc
adjustable $\pm 10\%$ FSO

Input Current:
15 mA maximum with no load

Output Resistance: Less than 200 Ω

Zero Balance: 0V ± 0.1 Vdc
Adjustable $\pm 5\%$ FSO

Dielectric Isolation Resistance:
100 M Ω minimum at 45 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 Ω

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

Accuracy: Combined linearity,
hysteresis and repeatability $\leq \pm 0.25\%$
FSO for all ranges

Operational Temp Range:
-54 to 121°C (-65 to 250°F)

Compensated Temp Range:
-18 to 82°C (0 to 180°F)

Thermal Effects:

Span: $\leq \pm 0.03\%$ FSO/°C (0.054%/°C)

Zero: $\leq \pm 0.03\%$ FSO/°C (0.054%/°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% FSO/g for 15 psi range to
0.005% FSO/g for 100 psi and above

Natural Frequency: Greater than
35 kHz for 7 bar (100 psi) and above

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

Proof Pressure:

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

Burst Pressure: 3 times rated
pressure for pressure ranges below
14 bar (200 psi), or 2.5 times rated
pressure for pressure ranges above
200 psi will not cause rupture of the
pressure sensor

Wetted Parts: 316 stainless steel,
silicon, Pyrex® glass, epoxy, Kovar®

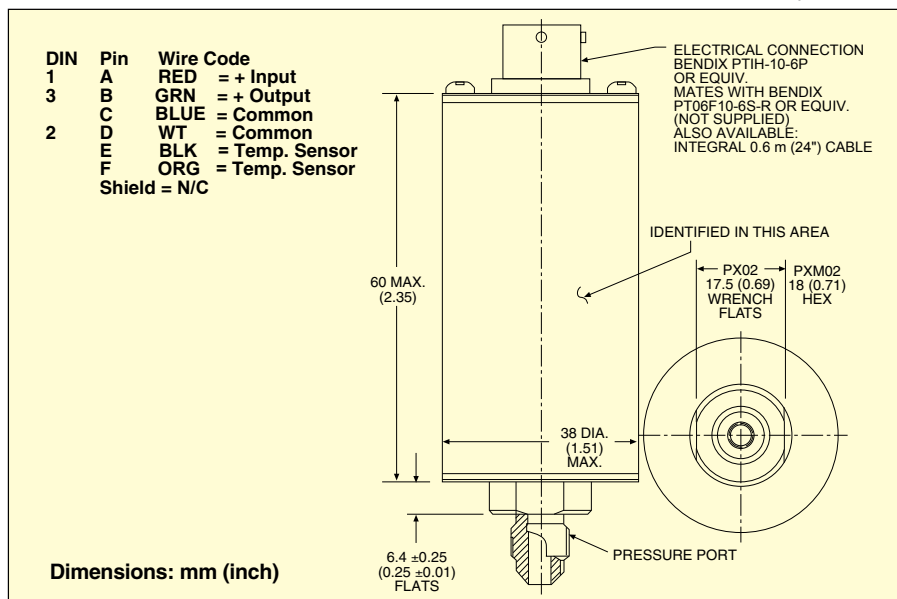
Electrical Connection: See Custom
Configurations, next page

Pressure Port: See Custom
Configurations, next page

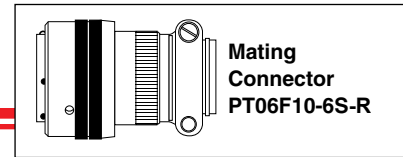
Weight: 170 g (6 oz) typical

Mating Connector (Style 1):

PT06F10-6S-R (sold separately)



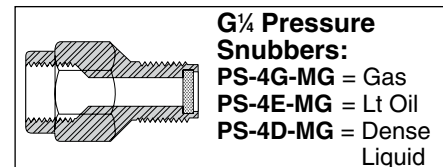
DIFFUSED SEMICONDUCTOR TRANSDUCER



STANDARD CUSTOM CONFIGURATIONS

PX6000 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (psi) [3]	UNITS [4]	OUTPUT [5]	CALIBRATION OPTION [6]
A = 1/8-27 NPT male			30*	VAC	5T = 0 to 5 Vdc output	CAL11 = 11-point NIST calibration additional cost
B = 1/8-27 NPT female			015	G,A		
C = 1/4-18 NPT male			020	G,A		
D = 1/4-18 NPT female			050	G,A		
L = MS33656-4 male			100	G,A		
M = MS33649-4 female			200	G,A		
			300	G,A		
<p>0 = 0.6 m (2') cable (std) additional cost/ft over 0.6 m (2')</p> <p>1 = PTIH-10-6P connector (or equal, no charge). Mating connector (sold separately), order PT06F10-6S-R.</p> <p>6 = mini DIN connector (no charge); (no temp sensor)</p>			<p>* Referenced to atmospheric pressure, 30 Vac range is 30 to 0 inHg vacuum, all other ranges are psi.</p>			
			<p>To order a custom configuration:</p> <ol style="list-style-type: none"> 1. Select a pressure port 2. Select electrical connection 3. Select a pressure range 4. Select pressure units 5. Select output 6. Select options and agency approvals 7. Select extra length cable 			
			<p>[7] CABLE LENGTH -XXXFT ** available when selection [2] = 0 **</p>			

Ordering Examples: *PX6000M1-100G5T*, 100 psi vented gage pressure transducer with MS33649-4, female pressure connection, PTIH-10-6P, electrical connector and 0 to 5 V output. *PT06F10-6S-R*, mating connector (sold separately).
PX6000A0-30VAC5T-25FT, 30 to 0 inHg vacuum transducer with a 1/8-27 NPT male pressure connection, a reverse-acting (30 inHg vacuum = full scale output) 0 to 5 output, and 7.6 m (25') cable. *PX6000L1-015A5T*, 15 psi absolute pressure transducer with MS33656-4, male pressure connection, PTIH-10-6P, electrical connector and 0 to 5 Vdc output.
PT06F10-6S-R, mating connector (sold separately).



METRIC CUSTOM CONFIGURATIONS

PXM6000 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (BAR) [3]	UNITS [4]	OUTPUT [5]	CALIBRATION OPTION [6]
MA = G 1/8B Male additional cost			1.0	G,A	5T= 0 to 5 Vdc output	CAL11 = 11-point NIST calibration additional cost
MB = G 1/8B Female no charge			1.6	G,A		
MC = G 1/4B Male additional cost			4.0	G,A		
MD = G 1/4B Female no charge			6.0	G,A		
			10	G,A		
			16	G,A		
<p>0 = 0.6 m (2') cable (std) additional cost/m over 0.6 m (2')</p> <p>1 = PTIH-10-6P connector (or equal, no charge)</p> <p>6 = mini DIN connector (no charge) (no temp sensor)</p>			<p>** available when selection [2] = 0 **</p>			
			<p>To order a custom configuration:</p> <ol style="list-style-type: none"> 1. Select a pressure port 2. Select electrical connection 3. Select a pressure range 4. Select pressure units – absolute, gage 5. Select output 6. Select options and agency approvals 7. Select extra length cable 			
			<p>[7] CABLE LENGTH -XXXM</p>			
<p>Visit us online for additional options including extended compensated temperatures.</p>						

Ordering Examples: *PXM6000MB0-010BARG5T*, 10 bar gage pressure transducer with G 1/8B female connection and 0.6 m (2') cable termination, 0 to 5V output.
PXM6000MD1-010BARA5T, 10 bar absolute pressure transducer with G 1/8B female connection, 0 to 5V output, and twist-lock connector.
PT06F10-6S-R, mating connector (sold separately).



STANDARD MODELS

To Order

MODELS WITH 0 TO 5 VDC OUTPUT, 1/4NPT-M PRESSURE CONNECTION

RANGE		MODEL NO.	COMPATIBLE METERS**
VACUUM			
30 to 0 inHg	102 to 0 kPa	PX6000C[*]1-30VAC5T	DP41-E, DP25B-E, DP24-E
ABSOLUTE PRESSURE			
0 to 15 psi	0 to 1.0 bar	PX6000C[*]-015A5T	DP41-E, DP25B-E, DP24-E
0 to 20 psi	0 to 1.4 bar	PX6000C[*]-020A5T	DP41-E, DP25B-E, DP24-E
0 to 50 psi	0 to 3.4 bar	PX6000C[*]-050A5T	DP41-E, DP25B-E, DP24-E
0 to 100 psi	0 to 6.9 bar	PX6000C[*]-100A5T	DP41-E, DP25B-E, DP24-E
0 to 200 psi	0 to 13.8 bar	PX6000C[*]-200A5T	DP41-E, DP25B-E, DP24-E
0 to 300 psi	0 to 20.7 bar	PX6000C[*]-300A5T	DP41-E, DP25B-E, DP24-E
GAGE PRESSURE			
0 to 15 psi	0 to 1.0 bar	PX6000C[*]-015G5T	DP41-E, DP25B-E, DP24-E
0 to 20 psi	0 to 1.4 bar	PX6000C[*]-020G5T	DP41-E, DP25B-E, DP24-E
0 to 50 psi	0 to 3.4 bar	PX6000C[*]-050G5T	DP41-E, DP25B-E, DP24-E
0 to 100 psi	0 to 6.9 bar	PX6000C[*]-100G5T	DP41-E, DP25B-E, DP24-E
0 to 200 psi	0 to 13.8 bar	PX6000C[*]-200G5T	DP41-E, DP25B-E, DP24-E
0 to 300 psi	0 to 20.7 bar	PX6000C[*]-300G5T	DP41-E, DP25B-E, DP24-E

Comes complete with 5-point NIST traceable calibration.

[*] Insert "0" for 0.6 m cable, "1" for twist-lock connector or "6" for mini DIN connector.

** Visit us online for compatible meters.

Ordering Examples: PX6000C1-050G5T, 50 psi gage pressure transducer with 0 to 5 Vdc output, PTIH-10-6P electrical connection and MS33656-4 male pressure port. PT06F10-6S-R, mating connector (sold separately).

PX6000C1-015A5T, 15 psi absolute pressure transducer with 0 to 5 Vdc output, PTIH-10-6P electrical connection and MS33656-4 male pressure port. PT06F10-6S-R, mating connector (sold separately).

ACCESSORY

MODEL NO.	DESCRIPTION
PT06F10-6S-R	Mating connector for PX6000 Series units with twist-lock connector

METRIC MODELS

MODELS WITH G1/4 MALE PRESSURE CONNECTION, CABLE OR CONNECTOR AND 0 TO 5 VDC OUTPUT

RANGE		MODEL NO.	COMPATIBLE METERS**
ABSOLUTE PRESSURE			
0 to 1 bar	0 to 15 psi	PXM6000MC[*]-001BARA5T	DP41-E, DP25B-E
0 to 1.60 bar	0 to 23 psi	PXM6000MC[*]-1.60BARA5T	DP41-E, DP25B-E
0 to 4 bar	0 to 58 psi	PXM6000MC[*]-004BARA5T	DP41-E, DP25B-E
0 to 6 bar	0 to 87 psi	PXM6000MC[*]-006BARA5T	DP41-E, DP25B-E
0 to 10 bar	0 to 145 psi	PXM6000MC[*]-010BARA5T	DP41-E, DP25B-E
0 to 16 bar	0 to 232 psi	PXM6000MC[*]-016BARA5T	DP41-E, DP25B-E
GAGE PRESSURE			
0 to 1 bar	0 to 15 psi	PXM6000MC[*]-001BARG5T	DP41-E, DP25B-E
0 to 1.60 bar	0 to 23 psi	PXM6000MC[*]-1.60BARG5T	DP41-E, DP25B-E
0 to 4 bar	0 to 58 psi	PXM6000MC[*]-004BARG5T	DP41-E, DP25B-E
0 to 6 bar	0 to 87 psi	PXM6000MC[*]-006BARG5T	DP41-E, DP25B-E
0 to 10 bar	0 to 145 psi	PXM6000MC[*]-010BARG5T	DP41-E, DP25B-E
0 to 16 bar	0 to 232 psi	PXM6000MC[*]-016BARG5T	DP41-E, DP25B-E
0 to 25 bar	0 to 363 psi	PXM6000MC[*]-025BARG5T	DP41-E, DP25B-E

Comes complete with 5-point NIST traceable calibration.

[*] Insert "0" for 0.6 m cable, "1" for twist-lock connector or "6" for mini DIN connector.

** Visit us online for compatible meters.

Ordering Examples: PXM6000MC0-010BARG5T, 10 bar gage pressure transducer with 0 to 5 Vdc output, 0.6 m (2') cable and G1/4 male pressure port.

PXM6000MC6-01.6BARA5T, 1.6 bar absolute pressure transducer with 0 to 5 Vdc output, mini DIN electrical connector and G1/4 male pressure port. Mating connector included.

DIFFUSED SEMICONDUCTOR PRESSURE TRANSMITTER

STANDARD AND METRIC MODELS



4 to 20 mA Output
0-15 to 0-300 psi-Standard Models
0-1 to 0-25 bar-Metric Models

PX6000/PXM6000 Series



STANDARD
PX6000L1-100GI,
 shown actual size.

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

Applications

- ✓ Automotive Testing
- ✓ Research and Development
- ✓ Engineering Testing and Evaluation
- ✓ Production Testing
- ✓ Flight Recorders
- ✓ Engine Monitoring
- ✓ Ground Support Equipment

The Omega™ PX6000/PXM6000 Series pressure transducers fit easily into many applications. These low-cost transducers are small and light, and mounting requires no bulky structures. Users can select from 3 electrical terminations and 6 pressure fittings. The sensor is a small [about 2.54 mm (0.1") square] silicon chip, with 4 diffused strain gages mounted in the stainless steel case. Laser-trimmed resistors provide temperature compensation and adjust zero balance and span. The 4 to 20 mA output easily interfaces with most control and data acquisition systems. The PX6000/PXM6000 uses solid state media isolation for improved reliability. Thin films of chemically inert materials are deposited or grown on the chip surface to

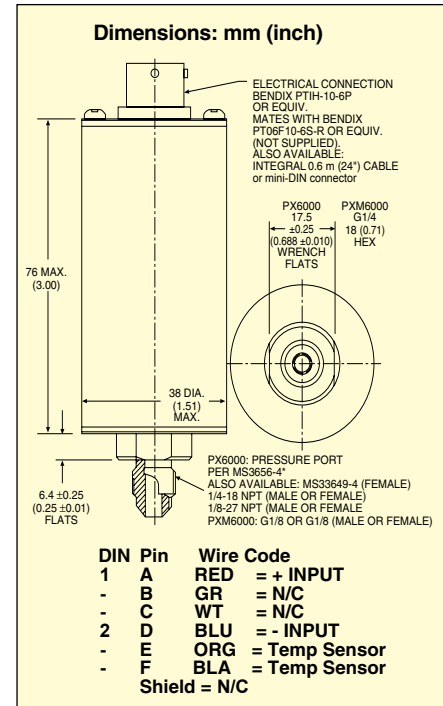
provide electrical isolation between the sensor and pressure medium. These sensors are less sensitive to vibration and more dependable in high-shock environments because the films add no significant mass. Corrosion resistance is outstanding, and the isolation will remain effective because there are no gel or oil columns to deteriorate.

SPECIFICATIONS

- Excitation:** 10 to 40 Vdc unregulated
- Output:** 4 to 20 mA adjustable $\pm 10\%$ FS
- Load Impedance (Maximum):** $50 \times (V - 10) \Omega$ where V = supply voltage (40 Vdc maximum)
- Zero Balance:** 4 mA 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
- 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
- Temperature Coefficient:** 8% minimum, 10% maximum per 55.5°C (100°F)
- Accuracy:** Combined linearity, hysteresis and repeatability $\leq \pm 0.25\%$ FS for all ranges
- Operating Temp Range:** -29 to 85°C (-20 to 185°F)
- Compensated Temp Range:** -29 to 85°C (-20 to 185°F)
- Thermal Effects:**

- Span:** $\leq \pm 0.02\%$ of FS/°F
- Zero:** $\leq \pm 0.02\%$ of FS/°F
- Vibration Sensitivity:** At 20 g peak sinusoidal vibration from 10 to 2000 Hz ($\frac{1}{2}$ " D.A.), the output shall not exceed 0.04% FS/g for 15 psi range to 0.005% FS/g for 100 psi and above

- Natural Frequency:** Greater than 35 kHz for 100 psi and above
- Shock:** 100 g, 11 ms half sine wave without damage
- Proof Pressure:** 2 times rated pressure will not cause changes in performance beyond the specified tolerances
- Burst Pressure:** 3 times rated pressure for pressure ranges below 200 psi, or 2.5 times rated pressure for pressure ranges above 200 psi, will not cause rupture of the pressure sensor
- Wetted Parts:** 316 stainless steel, silicon, Pyrex® glass, epoxy, Kovar®
- Electrical Connection:** PT1H-10-6P (standard) or 0.6 m (2') cable or mini-DIN connector
- Pressure Port:** See dimensional drawing below
- Weight:** 170 g (6 oz) typical
- Mating Connector:** PT06F10-6S-R (sold separately)



DIFFUSED SEMICONDUCTOR PRESSURE TRANSMITTER

STANDARD CUSTOM CONFIGURATIONS

PX6000 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (psi) [3]	UNITS [4]	OUTPUT [5]	CALIBRATION OPTION [6]
A = 1/8-27 NPT male			30*	VAC	I = 4 to 20 mA output	CAL11 = 11-point NIST calibration additional cost
B = 1/8-27 NPT female			015	A,G		
C = 1/4-18 NPT male			020	A,G		
D = 1/4-18 NPT female			050	A,G		
L = MS33656-4 male			100	A,G		[7] CABLE LENGTH -XXXFT
M = MS33649-4 female			200	A,G		** available when selection [2] = 0 **
			300	A,G		

* Referenced to atmospheric pressure, 30 Vac range is 30 to 0 inHg vacuum, all other ranges are psi

0 = 0.6 m (2') Teflon cable (std) **additional cost/ft** over 0.6 m (2')

1 = PTIH-10-6P connector (or equal, no charge). Mating connector (sold separately), order **PT06F10-6S-R**

6 = mini DIN connector (no charge) (no temp sensor)

To order a custom configuration:

1. Select a pressure port
2. Select electrical connection
3. Select a pressure range
4. Select pressure units
5. Select output
6. Select options and agency approvals
7. Select extra length cable

Ordering Examples: *PX6000M1-100GI*, 100 psi vented gage pressure transducer with MS33649-4, female pressure connection, PTIH-10-6P electrical connector, 4 to 20 mA output. *PT06F10-6S-R*, mating connector (sold separately).
PX6000L1-015AI, 15 psi absolute pressure transducer with MS33656-4, male pressure connection, PTIH-10-6P, electrical connector and 4 to 20 mA output. *PT06F10-6S-R*, mating connector (sold separately).

METRIC CUSTOM CONFIGURATIONS

PXM6000 SERIES	PRESSURE PORT [1]	ELECTRICAL CONNECTION [2]	RANGE (BAR) [3]	UNITS [4]	OUTPUT [5]	CALIBRATION OPTION [6]
MA = G1/8 Male additional cost			-1	VAC	I = 4 to 20 mA	CAL11 = 11-point NIST calibration additional cost
MB = G1/8 Female no charge			1.0	A, G		
MC = G1/8 Male additional cost			1.6	A, G		
MD = G1/8 Female no charge			4.0	A, G		
			6.0	A, G		[7] CABLE LENGTH -XXXM
			10	A, G		** available when selection [2] = 0 **
			16	A, G		
			25	A, G		

0 = 0.6 m (2') Teflon cable (std) **additional cost/ft** over 0.6 m (2')

1 = PTIH-10-6P connector (or equal, no charge) Mating connector (sold separately), order **PT06F10-6S-R**

6 = mini DIN connector (no charge) no temp sensor

To order a custom configuration:

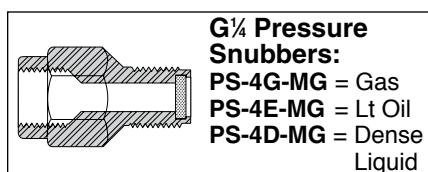
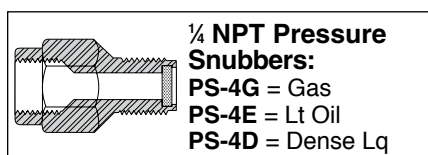
1. Select a pressure port
2. Select electrical connection
3. Select a pressure range
4. Select pressure units – absolute, gage
5. Select output
6. Select options and agency approvals
7. Select extra length cable

Ordering Examples: *PXM6000MB0-010BARGI*, 10 bar gage pressure transducer with G1/8 female connection and 0.6 m (2') cable termination.

PXM6000MD1-010BARAI, 10 bar absolute pressure transducer with G1/8 female connection and twist-lock connector. *PT06F10-6S-R*, mating connector (sold separately).



METRIC
PXM6000MC1-010BARAI,
shown actual size.



ACCESSORY

MODEL NO.	DESCRIPTION
PT06F10-6S-R	Mating connector for PX6000 units with PTIH-10-6P electrical connection

STANDARD MODELS

To Order			
Models with 4 to 20 mA Output, 1/4 NPT-M Pressure Connection, Integral Connector			
RANGE		MODEL NO.	COMPATIBLE METERS*
VACUUM			
30 to 0 inHg	102 to 0 kPa	PX6000L[*]-30VACI	DP41-E, DP25B-E, DP24-E
ABSOLUTE PRESSURE			
0 to 15 psi	0 to 1.0 bar	PX6000L[*]-015AI	DP41-E, DP25B-E, DP24-E
0 to 20 psi	0 to 1.4 bar	PX6000L[*]-020AI	DP41-E, DP25B-E, DP24-E
0 to 50 psi	0 to 3.4 bar	PX6000L[*]-050AI	DP41-E, DP25B-E, DP24-E
0 to 100 psi	0 to 6.9 bar	PX6000L[*]-100AI	DP41-E, DP25B-E, DP24-E
0 to 200 psi	0 to 13.8 bar	PX6000L[*]-200AI	DP41-E, DP25B-E, DP24-E
0 to 300 psi	0 to 20.7 bar	PX6000L[*]-300AI	DP41-E, DP25B-E, DP24-E
GAGE PRESSURE			
0 to 15 psi	0 to 1.0 bar	PX6000L[*]-015GI	DP41-E, DP25B-E, DP24-E
0 to 20 psi	0 to 1.4 bar	PX6000L[*]-020GI	DP41-E, DP25B-E, DP24-E
0 to 50 psi	0 to 3.4 bar	PX6000L[*]-050GI	DP41-E, DP25B-E, DP24-E
0 to 100 psi	0 to 6.9 bar	PX6000L[*]-100GI	DP41-E, DP25B-E, DP24-E
0 to 200 psi	0 to 13.8 bar	PX6000L[*]-200GI	DP41-E, DP25B-E, DP24-E
0 to 300 psi	0 to 20.7 bar	PX6000L[*]-300GI	DP41-E, DP25B-E, DP24-E

Comes complete with 5-point NIST traceable calibration.

* Visit us online for compatible meters.

[*] = Insert "0" for 0.6 m (2') cable, "1" for twist-lock connector, or "6" for mini DIN connector.

Ordering Examples: PX6000L1-050GI, 50 psi gage pressure transducer with 4 to 20 mA output, PTIH-10-6P, electrical connector and MS33656-4, male pressure port.

PT06F10-6S-R, mating connector (sold separately).

PX6000L1-015AI, 15 psi absolute pressure transducer with 4 to 20 mA output, PTIH-10-6P electrical connector and MS33656-4, male pressure port. PT06F10-6S-R, mating connector (sold separately).

METRIC MODELS

Models with G 1/4 Male Pressure Connection, Cable or mini DIN and 4 to 20 mA Output			
RANGE		MODEL NO.	COMPATIBLE METERS*
ABSOLUTE PRESSURE			
0 to 1 bar	0 to 15 psi	PXM6000MC[*]-001BARAI	DP41-S, DP25B-S
0 to 1.60 bar	0 to 23 psi	PXM6000MC[*]-1.60BARAI	DP41-S, DP25B-S
0 to 4 bar	0 to 58 psi	PXM6000MC[*]-004BARAI	DP41-S, DP25B-S
0 to 6 bar	0 to 87 psi	PXM6000MC[*]-006BARAI	DP41-S, DP25B-S
0 to 10 bar	0 to 145 psi	PXM6000MC[*]-010BARAI	DP41-S, DP25B-S
0 to 16 bar	0 to 232 psi	PXM6000MC[*]-016BARAI	DP41-S, DP25B-S
GAGE PRESSURE			
0 to 1 bar	0 to 15 psi	PXM6000MC[*]-001BARGI	DP41-S, DP25B-S
0 to 1.60 bar	0 to 23 psi	PXM6000MC[*]-1.60BARGI	DP41-S, DP25B-S
0 to 4 bar	0 to 58 psi	PXM6000MC[*]-004BARGI	DP41-S, DP25B-S
0 to 6 bar	0 to 87 psi	PXM6000MC[*]-006BARGI	DP41-S, DP25B-S
0 to 10 bar	0 to 145 psi	PXM6000MC[*]-010BARGI	DP41-S, DP25B-S
0 to 16 bar	0 to 232 psi	PXM6000MC[*]-016BARGI	DP41-S, DP25B-S
0 to 25 bar	0 to 363 psi	PXM6000MC[*]-025BARGI	DP41-S, DP25B-S

Comes complete with 5-point calibration.

* Visit us online for compatible meters.

[*] = Insert "0" for 0.6 m (2') cable, "1" for twist-lock connector, or "6" for mini DIN connector.

Ordering Example: PXM6000MC0-004BARGI, 4 bar gage pressure transmitter with 4 to 20 mA output, 0.6 m (2') cable and G 1/4 male pressure port.