

# SOLID STATE ISOLATED TRANSDUCER IN A TO8 TRANSISTOR CASE FOR OEM AND PC BOARD MOUNTING

**PX4600 Series**  
mV/V Output  
0-15 to 0-300 psi  
0-1 to 0-20 bar

All Ranges  
**\$242**



PX4600-015GV,  
\$242, shown  
2x actual size.



**SUITABLE FOR  
MOST FLUIDS AND  
INDUSTRIAL OILS**



Cover removed to show detail.

-54 to 121°C (-65 to 250°F), and users can adjust zero balance and span to tight tolerances. The unusually high performance of this transducer comes from a 4-active-arm bridge sensor using a micro-machined diffused silicon diaphragm and proprietary thin-film media and dielectric isolation barriers. See next page for specifications.

- ✓ Small, Lightweight OEM Package
- ✓ Solid State Media Isolation Suitable for Use with Most Industrial Fluids and Oils
- ✓ Broad Temperature-Compensated Range of -55 to 121°C Yields High Stability with Changing Temperatures
- ✓ Electrical Isolation to 100 MΩ Ensures Long-Term Reliability
- ✓ Rugged, High Shock and Vibration Design for Tough OEM Applications
- ✓ 100,000 Hours MTBF Typical
- ✓ Constant Voltage Operation—Easy to Use
- ✓ Built-In Temperature Sensor Standard

OMEGA's PX4600 Series consists of accurate, highly reliable pressure transducers suitable for printed circuit board mounting. The small size and light weight of the PX4600 transducers make them ideal for tough vibration and shock environments. The sensor is a small silicon chip with 4 diffused silicon strain gages. Laser-trimmed resistors provide excellent temperature compensation from

**MOST POPULAR MODELS HIGHLIGHTED!**

<b>To Order (Specify Model Number)</b>				
RANGE		MODEL NO.	PRICE	COMPATIBLE METERS*
<b>ABSOLUTE PRESSURE</b>				
0 to 15 psi	0 to 1.0 bar	<b>PX4600-015AV</b>	<b>\$242</b>	DP41-S, DP25B-S
0 to 20 psi	0 to 1.4 bar	<b>PX4600-020AV</b>	<b>242</b>	DP41-S, DP25B-S
0 to 50 psi	0 to 3.4 bar	<b>PX4600-050AV</b>	<b>242</b>	DP41-S, DP25B-S
0 to 100 psi	0 to 6.9 bar	<b>PX4600-100AV</b>	<b>242</b>	DP41-S, DP25B-S
0 to 200 psi	0 to 13.8 bar	<b>PX4600-200AV</b>	<b>242</b>	DP41-S, DP25B-S
0 to 300 psi	0 to 20.7 bar	<b>PX4600-300AV</b>	<b>242</b>	DP41-S, DP25B-S
<b>GAGE PRESSURE</b>				
0 to 15 psi	0 to 1.0 bar	<b>PX4600-015GV</b>	<b>\$242</b>	DP41-S, DP25B-S
0 to 20 psi	0 to 1.4 bar	<b>PX4600-020GV</b>	<b>242</b>	DP41-S, DP25B-S
0 to 50 psi	0 to 3.4 bar	<b>PX4600-050GV</b>	<b>242</b>	DP41-S, DP25B-S
0 to 100 psi	0 to 6.9 bar	<b>PX4600-100GV</b>	<b>242</b>	DP41-S, DP25B-S
0 to 200 psi	0 to 13.8 bar	<b>PX4600-200GV</b>	<b>242</b>	DP41-S, DP25B-S
0 to 300 psi	0 to 20.7 bar	<b>PX4600-300GV</b>	<b>242</b>	DP41-S, DP25B-S

Metric ranges available – consult Engineering.

\* See section D for compatible meters.

**Note:** Higher-performance units are available. Consult our custom design group for details.

**Ordering Examples:** PX4600-100GV, 100 psi gage pressure transducer, \$242.  
PX4600-050AV, 50 psi absolute pressure transducer, \$242.

**ACCESSORY**

MODEL NO.	PRICE	DESCRIPTION
CM-4549	\$110	Reference Book: A Century of Excellence in Measurements, Standards, and Technology

MILLIVOLT OUTPUT  
PRESSURE TRANSDUCERS  
**B**

# SOLID STATE ISOLATED TRANSDUCER FOR OEM AND PC BOARD MOUNTING

## SPECIFICATIONS

**Electrical Excitation:** 10 Vdc

**Output:** 30 mV  $\pm 10\%$  @ 10 Vdc

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

**Input Resistance:** 2000  $\Omega$  minimum

**Output Resistance:** 1000 to 1500  $\Omega$

**Dielectric Isolation Resistance:**

100 M $\Omega$  min @ 50 Vdc applied between the case or conductive media and the bridge circuit

## PERFORMANCE

**Accuracy:**  $\pm 0.25\%$  FSO combined linearity, hysteresis, and repeatability

**Sensing Element:** 4-active-arm bridge using a micro-machined diffused silicon diaphragm sensor and 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)

## ENVIRONMENTAL

**Operating Temperature:**

-55 to 150°C (-67 to 300°F)

**Compensated Temperature:**

-55 to 121°C (-67 to 250°F)

**Thermal Effects:**

**Zero:**  $\pm 0.036\%$  FSO/°C

**Span:**  $\pm 0.036\%$  FSO/°C

**Vibration Sensitivity:** At 35 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, decreasing to 0.005% FSO/g for 100 psi and above.

**Natural Frequency:**

>35 kHz for 100 psi range

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

**MTBF:** Typical 100,000 hours @ 55°C (131°F), fixed-wing aircraft service

## PRESSURE

**Standard Ranges:** 0 to 15, 20, 50, 100, 200, 300 psi gage and absolute pressure

**Proof Pressure:**

250% rated pressure, 500 psi max, will not cause changes in performance beyond specified tolerance

**Burst Pressure:**

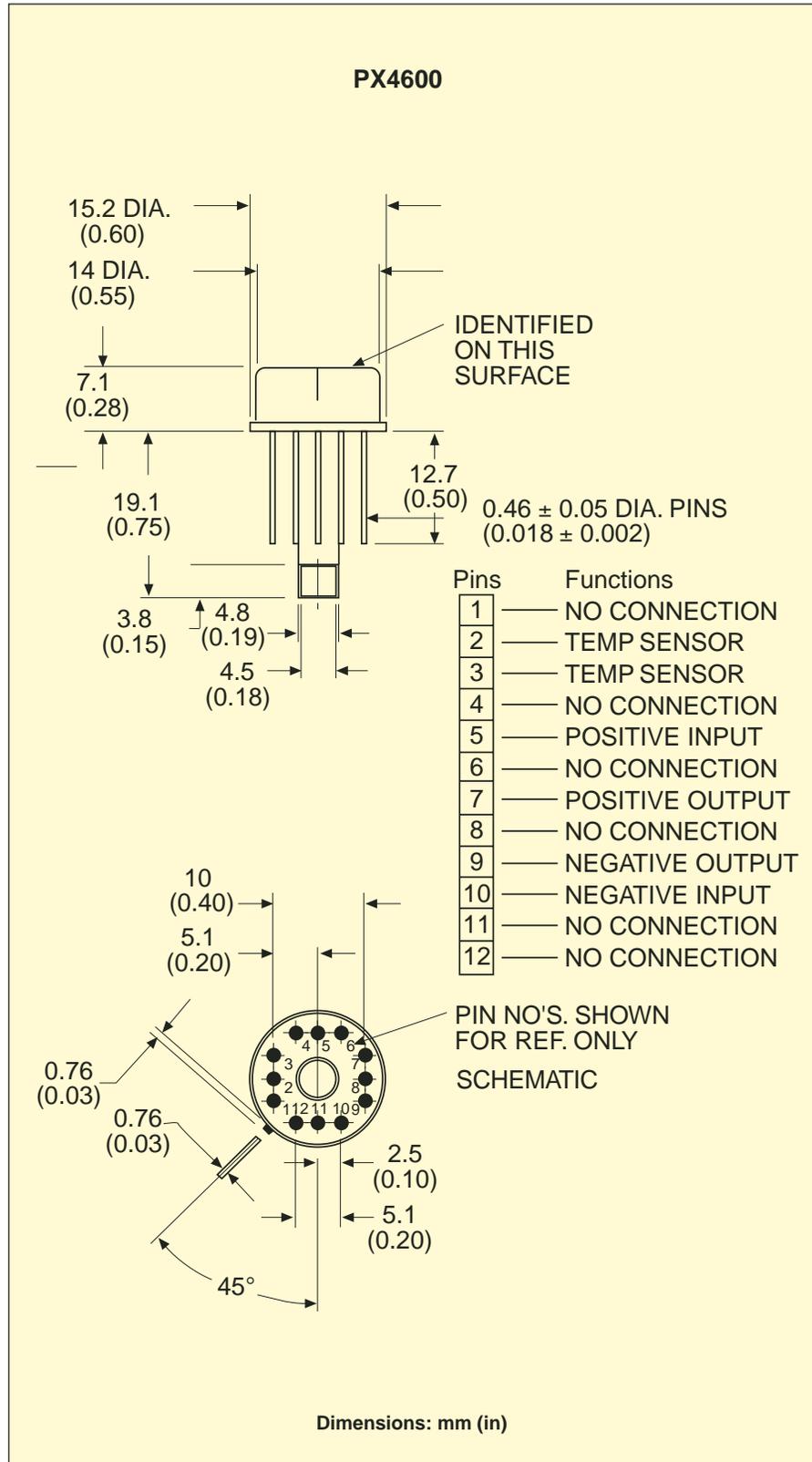
300% rated pressure, 500 psi max

## MECHANICAL

**Wetted Parts:**

Nitride, Pyrex® glass, epoxy and Kovar®

**Weight:** 5 g (0.2 oz) maximum



# omega.co.uk<sup>®</sup>

Your One-Stop Source for Process Measurement and Control!

Freephone 0800 488 488 | International +44(0) 161 777 6622 | Fax +44(0) 161 777 6622 | Sales@omega.co.uk

[www.omega.co.uk](http://www.omega.co.uk)



#### UNITED STATES

[www.omega.com](http://www.omega.com)

1-800-TC-OMEGA  
Stamford, CT.

#### UNITED KINGDOM

[www.omega.co.uk](http://www.omega.co.uk)

Manchester, England  
0800-488-488  
+44-(0)161-777-6611

#### CANADA

[www.omega.ca](http://www.omega.ca)

Laval(Quebec)  
1-800-TC-OMEGA

#### FRANCE

[www.omega.fr](http://www.omega.fr)

0800-466-342

#### GERMANY

[www.omega.de](http://www.omega.de)

Deckenfronn, Germany  
0800-8266342

#### BENELUX

[www.omega.nl](http://www.omega.nl)

0800-099-33-44



## More than 100,000 Products Available!

### • Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

### • Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

### • pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

### • Data Acquisition

Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

### • Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

### • Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters