

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

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

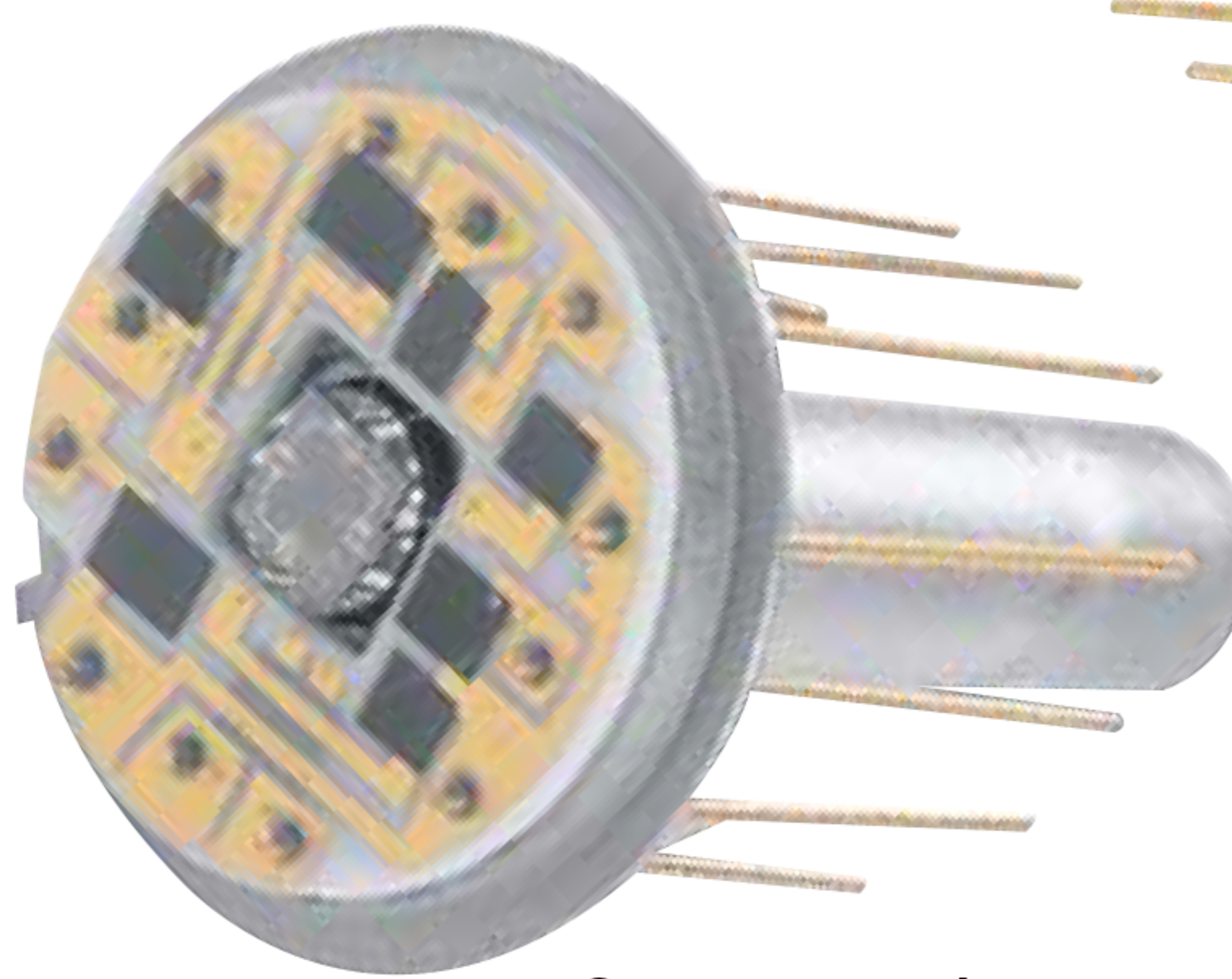
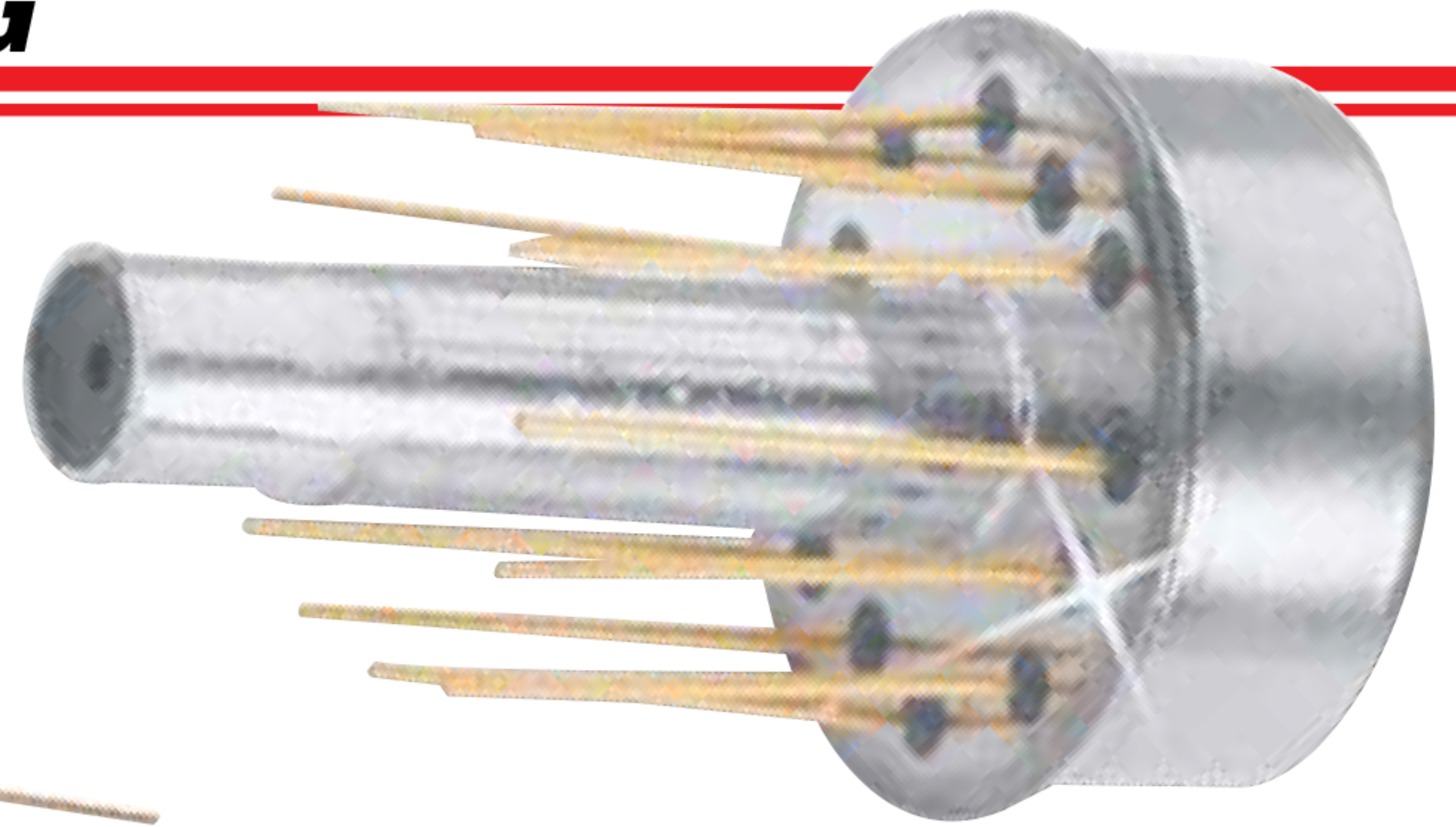
PX4600 Series



- ✓ 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 -54 to 121°C (-65 to 250°F), and users can adjust zero balance

PX4600-015GV, shown larger than actual size.



Cover removed to show detail.

SUITABLE FOR MOST FLUIDS AND INDUSTRIAL OILS

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.

Actual size.



To Order			
RANGE		MODEL NO.	COMPATIBLE METERS*
ABSOLUTE PRESSURE			
0 to 15 psi	0 to 1.0 bar	PX4600-015AV	DP41-S, DP25B-S
0 to 20 psi	0 to 1.4 bar	PX4600-020AV	DP41-S, DP25B-S
0 to 50 psi	0 to 3.4 bar	PX4600-050AV	DP41-S, DP25B-S
0 to 100 psi	0 to 6.9 bar	PX4600-100AV	DP41-S, DP25B-S
0 to 200 psi	0 to 13.8 bar	PX4600-200AV	DP41-S, DP25B-S
0 to 300 psi	0 to 20.7 bar	PX4600-300AV	DP41-S, DP25B-S
GAGE PRESSURE			
0 to 15 psi	0 to 1.0 bar	PX4600-015GV	DP41-S, DP25B-S
0 to 20 psi	0 to 1.4 bar	PX4600-020GV	DP41-S, DP25B-S
0 to 50 psi	0 to 3.4 bar	PX4600-050GV	DP41-S, DP25B-S
0 to 100 psi	0 to 6.9 bar	PX4600-100GV	DP41-S, DP25B-S
0 to 200 psi	0 to 13.8 bar	PX4600-200GV	DP41-S, DP25B-S
0 to 300 psi	0 to 20.7 bar	PX4600-300GV	DP41-S, DP25B-S

Metric ranges available – consult Engineering.

* Visit us online for compatible meters.

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

Ordering Examples: PX4600-100GV, 100 psi gage pressure transducer.

PX4600-050AV, 50 psi absolute pressure transducer.

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SOLID STATE ISOLATED TRANSDUCER FOR OEM AND PC BOARD MOUNTING

SPECIFICATIONS

Electrical Excitation: 10 Vdc
Output: 30 mV ±10% @ 10 Vdc
Zero Balance: 0 mV ±5% FSO
Input Resistance: 2000 Ω minimum
Output Resistance: 1000 to 1500 Ω
Dielectric Isolation Resistance: 100 MΩ min @ 50 Vdc applied between the case or conductive media and the bridge circuit

PERFORMANCE

Accuracy: ±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 Ω

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: ±0.036% FSO/°C
Span: ±0.036% FSO/°C

Vibration Sensitivity: At 35 g peak sinusoidal vibration from 10 Hz to 2000 Hz (½" 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:

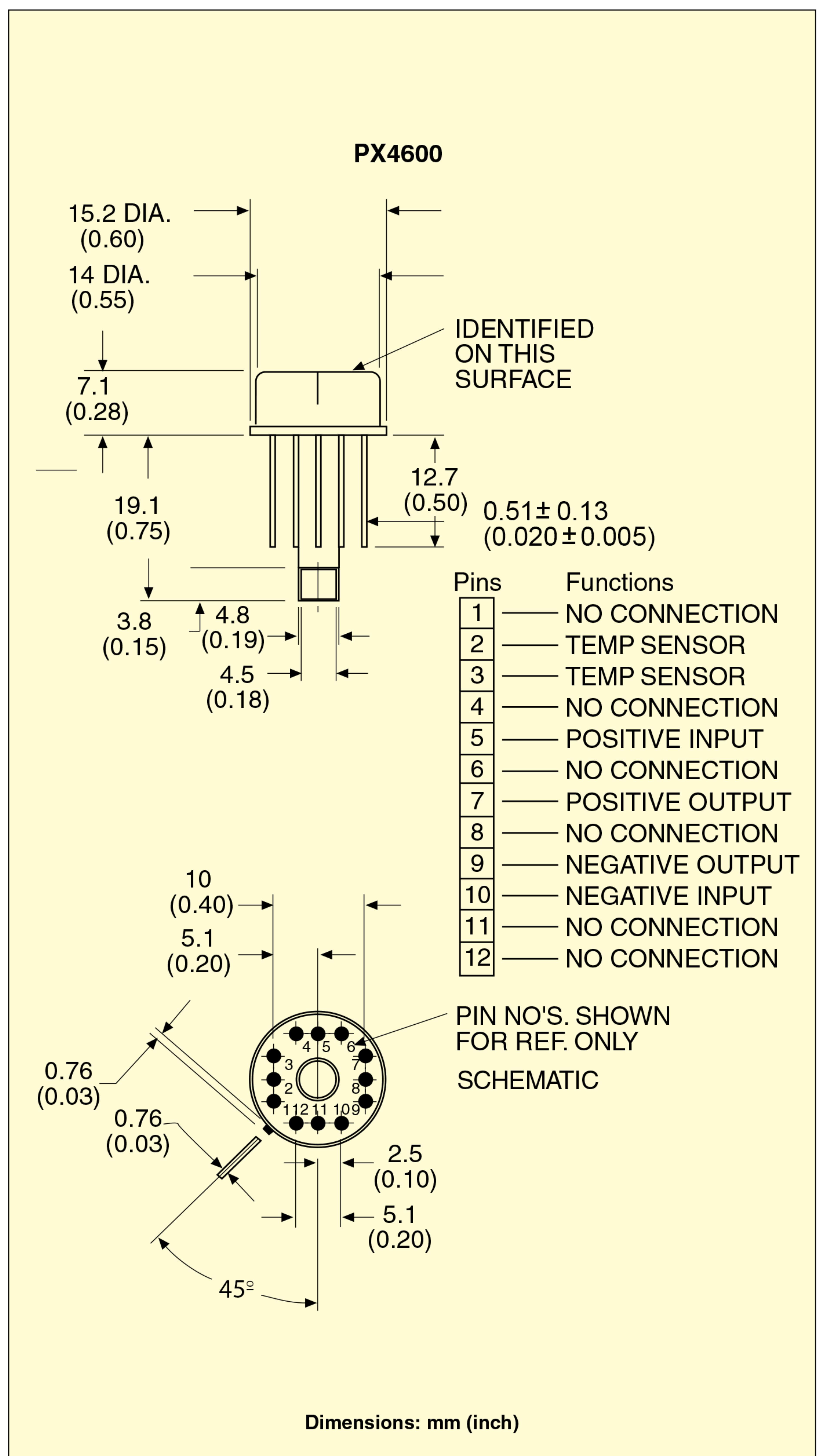
300% rated pressure, 500 psi max

MECHANICAL

Wetted Parts:

Nitride, Pyrex® glass, epoxy and Kovar®

Weight: 5 g (0.2 oz) maximum



MILLIVOLT OUTPUT
PRESSURE TRANSDUCERS
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