

HIGH-PERFORMANCE PRESSURE TRANSDUCER

LONG-TERM RELIABILITY

PX5500 Series

0-5 Vdc Output

0-15 to 0-10,000 psi

0-1 to 0-700 bar

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

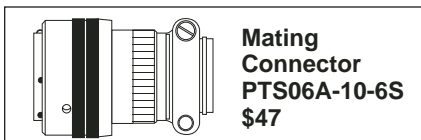
All Ranges
\$695



- ✓ High 0.1% Accuracy
- ✓ Solid State Reliability
- ✓ Sputtered Strain Gage Design
- ✓ High Shock and Vibration Resistance
- ✓ Low Drift
- ✓ 5-Point NIST Calibration Standard

Applications

- ✓ Testing
- ✓ R&D/Engineering Test Laboratories
- ✓ Functional Test Systems
- ✓ Production Testing
- ✓ Product Quality Assurance
- ✓ Flight Testing
- ✓ Gas Turbine and Engine Test Standards
- ✓ Ground Support Equipment
- ✓ Hydraulic Systems
- ✓ Custody Transfer Measurements



OMEGA'S PX5500 transducer series provides high performance in demanding industrial and research applications where accuracy, reliability, and price are important. This transducer has a 10-year MTBF rate and is stable to



PX5500L1-100G5T, \$695, shown smaller than actual size.

0.1% of FSO over an 18-month period. This translates into less downtime, fewer test reruns, more time between calibrations, and high confidence in your pressure data. When recalibration is impossible, relying on the high stability of the PX5500 Series transducer may be the only cost-effective way to obtain pressure data over the long term. OMEGA's

VOLTAGE OUTPUT PRESSURE TRANSDUCERS **B**

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)				
Models with 0 to 5 Vdc Output, MS33656-4 Connection, Integral Connector				
RANGE		MODEL NO.	PRICE	COMPATIBLE METERS*
ABSOLUTE PRESSURE (All Ranges Available in Absolute Pressure)				
0 to 15 psi	0 to 1.0 bar	PX5500L1-015A5T	\$695	DP41-E, DP25B-E, DP24-E
0 to 25 psi	0 to 1.7 bar	PX5500L1-025A5T	695	DP41-E, DP25B-E, DP24-E
0 to 50 psi	0 to 3.4 bar	PX5500L1-050A5T	695	DP41-E, DP25B-E, DP24-E
0 to 100 psi	0 to 6.9 bar	PX5500L1-100A5T	695	DP41-E, DP25B-E, DP24-E
GAGE PRESSURE (All Ranges Also Available in Sealed Gage Pressure)				
0 to 15 psi	0 to 1.0 bar	PX5500L1-015G5T	\$695	DP41-E, DP25B-E, DP24-E
0 to 25 psi	0 to 1.7 bar	PX5500L1-025G5T	695	DP41-E, DP25B-E, DP24-E
0 to 50 psi	0 to 3.4 bar	PX5500L1-050G5T	695	DP41-E, DP25B-E, DP24-E
0 to 100 psi	0 to 6.9 bar	PX5500L1-100G5T	695	DP41-E, DP25B-E, DP24-E
0 to 250 psi	0 to 17.2 bar	PX5500L1-250G5T	695	DP41-E, DP25B-E, DP24-E
0 to 500 psi	0 to 34.5 bar	PX5500L1-500G5T	695	DP41-E, DP25B-E, DP24-E
0 to 1000 psi	0 to 68.9 bar	PX5500L1-1KG5T	695	DP41-E, DP25B-E, DP24-E
0 to 1500 psi	0 to 103 bar	PX5500L1-1.5KG5T	695	DP41-E, DP25B-E, DP24-E
0 to 2500 psi	0 to 172 bar	PX5500L1-2.5KG5T	695	DP41-E, DP25B-E, DP24-E
0 to 3000 psi	0 to 207 bar	PX5500L1-3KG5T	695	DP41-E, DP25B-E, DP24-E
0 to 5000 psi	0 to 345 bar	PX5500L1-5KG5T	695	DP41-E, DP25B-E, DP24-E
0 to 10,000 psi	0 to 689 bar	PX5500L1-10KG5T	695	DP41-E, DP25B-E, DP24-E

Comes with 5-point calibration.

* See section D for compatible meters.

Metric ranges available – consult Engineering.

To order absolute pressure transducers, change "G" in model number to "A" (no extra charge). To order sealed gage transducers, change "G" in model number to "S" (no extra charge).

Ordering Examples: PX5500L1-1KS5T, 1000 psi sealed gage transducer with 0 to 5 Vdc output, PTIH-10-6P, electrical connection, and MS33656-4, male pressure port, \$695.

PTS06A-10-6S, mating connector (not included), \$47. PX5500L1-100A5T, 100 psi absolute pressure transducer with 0 to 5 Vdc output, PTIH-10-6P, electrical connection, and MS33656-4, male pressure port, \$695. PTS06A-10-6S, mating connector (not included), \$47.

ACCESSORY

MODEL NO.	PRICE	DESCRIPTION
ME-1834	\$125	Reference Book: Water Quality Control Handbook

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thin-film technology makes this premium performance possible. The strain gages and associated parts are sputter-deposited directly onto the pressure sensing element, eliminating the need for adhesives. The resulting molecular bond between the sensing element and the strain gage ensures virtually no shifting, drifting, or "creep" in the performance of the transducer. The micro-geometry design of the PX5500 sensing element affords a very small, low-mass sensor that reduces effects of mechanical vibration and shock. The PX5500 gives you accuracy, reliability, and stability at competitive prices.

SPECIFICATIONS

5 Vdc Models

Excitation: 12 to 40 Vdc unregulated
Output (FS): 5 Vdc ± 0.1 Vdc $\pm 10\%$ adj
Zero Balance: 0 Vdc ± 0.1 Vdc $\pm 5\%$ adj
Input Current: 20 mA max with no load
Output Resistance: 100 max
Insulation Resistance: 100 M Ω @ 45 Vdc between all pins shorted together and case
Electrostatic Discharge: Protected to 15 kV max
Sensing Element: 4-active-arm bridge using sputter-deposited thin-film elements

Accuracy: Combined linearity, hysteresis and repeatability: $\pm 0.10\%$ FS (BFSL) <1000 psi $\pm 0.15\%$ FS 1000 psi and above

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 15 psi range, decreasing to 0.003% FS/g for 1000 psi and above

Natural Frequency: 5 kHz for 15 psi, increasing logarithmically to 50 kHz for 5000 psi

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

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

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

Thermal Effects (Over the Compensated Range):

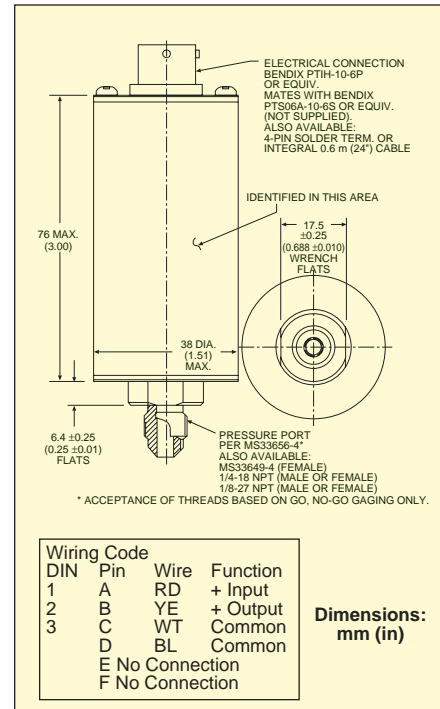
Span: $\pm 0.015\%$ FS/°F
Zero: $\pm 0.015\%$ FS/°F

Proof Pressure: 2 times rated pressure or 15,000 psi, whichever is less, will not cause changes in performance beyond the specified tolerance

Burst Pressure: 3 times rated pressure or 20,000 psi, whichever is less, will not cause rupture of the pressure containment cavity

Wetted Parts: 17-4 PH or 15-5 PH stainless steel

Electrical Connection: PTIH-10-6P standard (see Custom Configurations)



Pressure Port: MS33656-4 (male) standard (see Custom Configurations)

Optional: MS33649-4, 1/4-18 NPT male/female, 1/8-27 NPT male/female

Mating Connector: PTS06A-10-6S (not included)

Weight: 225 g (8 oz) max

CUSTOM CONFIGURATIONS

SERIES	PRESSURE PORT	ELECTRICAL CONNECTION	RANGE	UNITS	OUTPUT	OPTIONS
PX5500	[1]	[2]	[3]	[4]	[5]	[6]
	A = 1/8-27 NPT male		015 psi	A, G, S	V = mV/V \$550	CAL11 = 11-pt cal
	B = 1/8-27 NPT female		025	A, G, S	5T = 0 to 5V \$695	+ \$250
	C = 1/4-18 NPT male		050	A, G, S	I = 4 to 20 mA	
	D = 1/4-18 NPT female		100	A, G, S	\$695	
	L = MS33656-4		250	A, G, S		
	M = MS33649-4		500	A, G, S		
	0 = 0.6 m (2') cable		1K	A, G, S		
	\$2/ft over 0.6 m (2')		1.5K	A, G, S		
	1 = PTIH-10-6P connector		2.5K	A, G, S		
	(or equal, no charge).		3K	A, G, S		
	Mating connector		5K	A, G, S		
	(not included), order		10K	A, G, S		
	PTS06A-10-6S \$47.					
	3 = 4-pin eyelet header					
	6 = DIN connector					
				Metric ranges available – consult Engineering.		

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

Ordering Examples: PX5500A1-015A5T, 1/8-27 NPT male pressure port, Bendix style connector, 15 psi absolute pressure range and 0 to 5 V, \$695. PTS06A-10-6S, mating connector (not included), \$47. PX5500M1-10KG5T, MS33649-4 female pressure port, Bendix style connector, 10,000 psi gage pressure range and 0 to 5 Vdc output, \$695. PTS06A-10-6S, mating connector (not included), \$47. PX5500L0-015A1-25FT, MS33656-4 male pressure port, 8 m (25') lead wire, 15 psi absolute pressure range and 4 to 20 mA output, \$695 + 46 = \$741.

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• 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