

RUGGED SOLID STATE PRESSURE TRANSMITTERS SMALL LIGHTWEIGHT PACKAGE



Vacuum to 25,000 psig
Vacuum to 1724 bar Gage Pressure
15 psia to 200 psia
1 bar to 14 bar Absolute Pressure

PX170 Series



- ✓ **Small, Lightweight Package Fits in Tight Places**
- ✓ **Extremely Rugged Sputtered or CVD Thin Film Technology**
- ✓ **Exceptional Long Term Stability**
- ✓ **Reverse Polarity and Over Voltage Protected**
- ✓ **IP67 Environmental Ratings**
- ✓ **Stainless Steel Body and Wetted Parts for Harsh Environments**
- ✓ **Excellent Shock and Vibration Ratings**
- ✓ **0 to 5 Vdc or 4 to 20 mA Outputs Available**

Designed for heavy duty service, OMEGA's PX170 Series industrial pressure transmitters utilize two of our precision manufacturing techniques. Low range, models to 50 psi gage and all absolute ranges, use our precision CVD technology which deposits an extremely durable, precision solid state sensor directly on small beam that is actuated by the diaphragm. High range models, above 50 psi gage, have the solid state sensors sputtered directly onto the diaphragm forming an extremely rugged molecular bond.

These models are designed to give long term stability and high performance in industrial applications. The low range models have $\pm 0.5\%$ zero and $\pm 1\%$ span interchangeability and the high range models have $\pm 0.5\%$ zero and span interchangeability. All models have industrial RFI, EMI and ESD protection and their solid state construction give them long life in high cycle applications, typically 100M cycles.



PX171 IP67

Mating connector included.



PX172 IP67

All models shown actual size.



PX173 IP67

Mating cable sets sold separately.

SPECIFICATIONS

Output: 0 to 5 Vdc, 3-wire
Excitation: 8 to 30 Vdc @ 4.5 mA
Output: 4 to 20 mA 2-wire
Excitation: 8 to 24 Vdc (at the input to the transducer)
Load Resistance: 50 x (supply voltage - 8) in ohms
Accuracy: 0.25% full scale
Long Term Stability: 0.2% full scale/year (non-cumulative)
Operating Temperature:
Ranges ≤ 50 psig and All Absolute Ranges: -40 to 125°C (-40 to 257°F)
Ranges > 50 psig: -40 to 120°C (-40 to 250°F)
Compensated Temperature:
Ranges ≤ 50 psig and All Absolute Ranges: -20 to 100°C (-4 to 212°F)
Ranges > 50 psig: -40 to 120°C (-40 to 250°F)
Thermal Error:
Ranges ≤ 50 psig and All Absolute Ranges: $\pm 1\%$ maximum/80°C (176°F)
Ranges > 50 psig: $\pm 1\%$ typical $\pm 1.5\%$ maximum/100°C (212°F)

Setting Tolerance:

Ranges ≤ 50 psig and All Absolute Ranges: Span: $\pm 1\%$ of span maximum
 Zero: $\pm 0.5\%$ of span maximum
Ranges > 50 psig: Span: $\pm 0.5\%$ of span maximum; Zero: $\pm 0.5\%$ of span maximum

Shock: BSEN 60068-2-27 (Ea) 50 g, 11 ms

Vibration: BSEN 60068-2-6 (FC), BSEN 60068-2-64 (FH)

Proof Pressure:

Ranges ≤ 300 psi: 3 x full scale
Ranges 500 to 15,000 psi: 2 x full scale
Ranges $> 15,000$ psi: 1.4 x full scale

Burst Pressure:

Ranges to 6000 psi: > 10 x full scale
Ranges > 6000 psi: 60,000 psi

Pressure Fitting:

Ranges to 10,000 psi: $\frac{1}{8}$ - 27 NPT male
Ranges $> 10,000$ psi: M12 x 1.5 (6 g)

Electrical Termination: M12 4-pin connector, 9.4 mm mini-DIN, Packard MetriPack

Environmental Rating: M12, Packard Termination and mini-DIN Termination IP67

Wetted Parts: 17-4 PH stainless steel

Weight: 35 to 150 gm (1.2 to 5 oz)

MODEL	PX171	PX172	PX173
5 Vdc			
Pin 1 (C)	V supply	V supply	V out
Pin 2 (A)	Common	V out	Common
Pin 3 (B)	V out	Common	V Supply
Pin 4	no connect	no connect	n/a
4 to 20 mA			
Pin 1 (C)	V supply	V supply	no connect
Pin 2 (A)	Return	no connect	Return
Pin 3 (B)	no connect	Return	V supply



MINIATURE LIGHTWEIGHT PRESSURE TRANSMITTERS

To Order Visit omega.com/px170_series for Pricing and Details

	RANGE psi	RANGE bar	mini-DIN CONNECTOR PX171 SERIES	M12 CONNECTOR PX172 SERIES	PACKARD CONNECTOR PX173 SERIES
ABSOLUTE PRESSURE					
CVD TECHNOLOGY	0 to 15	0 to 1	PX171-015A[*]	PX172-015A[*]	PX173-015A[*]
	0 to 30	0 to 2	PX171-030A[*]	PX172-030A[*]	PX173-030A[*]
	0 to 50	0 to 3	PX171-050A[*]	PX172-050A[*]	PX173-050A[*]
	0 to 100	0 to 7	PX171-100A[*]	PX172-100A[*]	PX173-100A[*]
	0 to 150	0 to 10	PX171-150A[*]	PX172-150A[*]	PX173-150A[*]
	0 to 200	0 to 14	PX171-200A[*]	PX172-200A[*]	PX173-200A[*]
GAGE PRESSURE					
SPUTTERED TECHNOLOGY	Vac	-1 to 0	PX171-VACV[*]	PX172-VACV[*]	PX173-VACV[*]
	Vac to +15	-1 to +1	PX171-VAC15V[*]	PX172-VAC15V[*]	PX173-VAC15V[*]
	Vac to +30	-1 to +2	PX171-VAC30V[*]	PX172-VAC30V[*]	PX173-VAC30V[*]
	Vac to +50	-1 to +3	PX171-VAC50V[*]	PX172-VAC50V[*]	PX173-VAC50V[*]
	0 to 15	0 to 1	PX171-015G[*]	PX172-015G[*]	PX173-015G[*]
	0 to 30	0 to 2	PX171-030G[*]	PX172-030G[*]	PX173-030G[*]
	0 to 50	0 to 3	PX171-050G[*]	PX172-050G[*]	PX173-050G[*]
	Vac to +100	-1 to +7	PX171-VAC100V[*]	PX172-VAC100V[*]	PX173-VAC100V[*]
	0 to 100	0 to 7	PX171-100G[*]	PX172-100G[*]	PX173-100G[*]
	0 to 150	0 to 10	PX171-150G[*]	PX172-150G[*]	PX173-150G[*]
	0 to 200	0 to 14	PX171-200G[*]	PX172-200G[*]	PX173-200G[*]
	0 to 300	0 to 20	PX171-300G[*]	PX172-300G[*]	PX173-300G[*]
	0 to 500	0 to 34	PX171-500G[*]	PX172-500G[*]	PX173-500G[*]
	0 to 750	0 to 50	PX171-750G[*]	PX172-750G[*]	PX173-750G[*]
0 to 1000	0 to 69	PX171-1.0KG[*]	PX172-1.0KG[*]	PX173-1.0KG[*]	
0 to 1500	0 to 100	PX171-1.5KG[*]	PX172-1.5KG[*]	PX173-1.5KG[*]	
0 to 2000	0 to 138	PX171-2.0KSG[*]	PX172-2.0KSG[*]	PX173-2.0KSG[*]	
0 to 3000	0 to 200	PX171-3.0KSG[*]	PX172-3.0KSG[*]	PX173-3.0KSG[*]	
0 to 3500	0 to 240	PX171-3.5KSG[*]	PX172-3.5KSG[*]	PX173-3.5KSG[*]	
0 to 5000	0 to 345	PX171-5.0KSG[*]	PX172-5.0KSG[*]	PX173-5.0KSG[*]	
0 to 7500	0 to 515	PX171-7.5KSG[*]	PX172-7.5KSG[*]	PX173-7.5KSG[*]	
0 to 10,000	0 to 690	PX171-10KSG[*]	PX172-10KSG[*]	PX173-10KSG[*]	
0 to 15,000**	0 to 1034	PX171-15KSG[*]	PX172-15KSG[*]	PX173-15KSG[*]	
0 to 20,000**	0 to 1379	PX171-20KSG[*]	PX172-20KSG[*]	PX173-20KSG[*]	
0 to 25,000**	0 to 1724	PX171-25KSG[*]	PX172-25KSG[*]	PX173-25KSG[*]	
ACCESSORIES					
CX5302		Extra 9.4 mm (0.37") DIN connector 3 contacts plus ground terminal			
PX172-CABLE-1M		1 m (3') cord set, M12 connector/flying leads			
PX172-CABLE-3M		3 m (10') cord set, M12 connector/flying leads			
PX172-CABLE-5M		5 m (15') cord set, M12 connector/flying leads			
PX173-CABLE-1M		1 m (3') cord set, packard connector/flying leads			
PX173-CABLE-2M		2 m (6') cord set, packard connector/flying leads			
PX173-CABLE-5M		4.5 m (14.5') cord set, packard connector/flying leads			

Comes complete with operator's manual.

[*] Insert "5V" for 0 to 5 Vdc output or insert "I" for 4 to 20 mA Output (no additional cost).

** Ranges $\geq 15,000$ are available only with M12 x 1.5 Thread

Ordering Examples: PX171-100G5V, mini DIN model, 100 psi range, gage pressure, 0 to 5 Vdc output.

PX172-015AI, M12 model, 15 psi range, absolute pressure, 4 to 20 mA output and PX172-CABLE-M3, 3 m (10') mating cable for PX172.

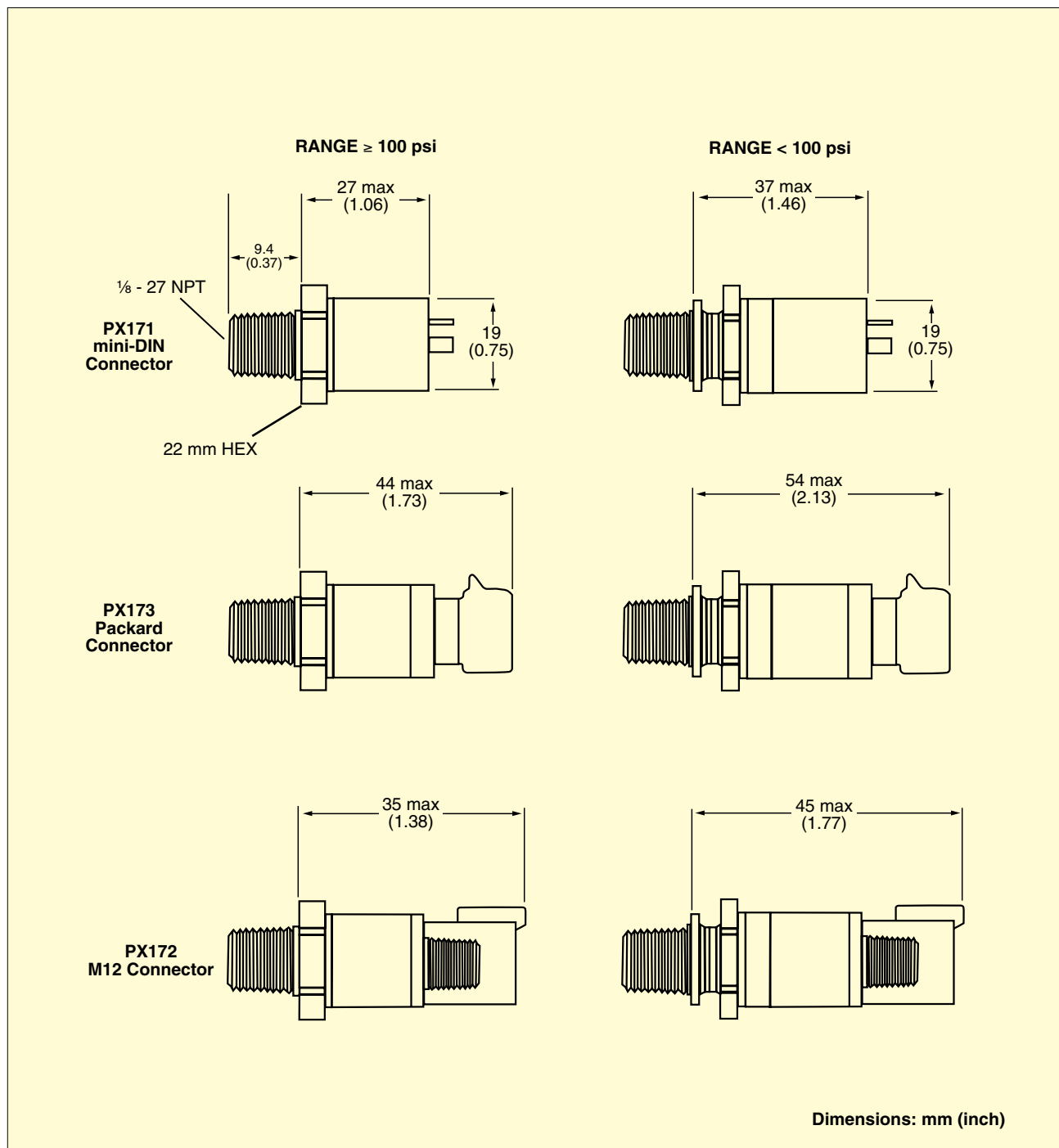
PX173-1.0KGI, packard termination, 1000 psi range, gage pressure, 4 to 20 mA output and PX173-CABLE-M5, 4.5 m (14.5') mating cable for PX173.

RUGGED SOLID STATE PRESSURE TRANSMITTERS

PX171/PX172/PX173



PX170 SERIES DIMENSIONS



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