

Interchangeable with  
CEC Models 1004 and 1009

**SPEC SHEET**  
PX1004/PX1009

# High Temperature Pressure Transducers

**\$2500**

Model Shown

**PX1004/PX1009 Series**

mV/V Output

0-15 to 0-10,000 psi

0-1 to 0-700 bar

1 bar = 14.5 psi

1 kg/cm<sup>2</sup> = 14.22 psi

1 Atmosphere = 14.7 psi =

29.93 in-Hg = 760.2 mm-Hg =

1.014 bar

## Features

- Two Versions that Operate from -65°F to +450°F (PX1004) or -65°F to +650°F (PX1009)
- High Performance
- Proven High Reliability
- Exceptional Calibration Stability

## Applications

- Engine and Test Stands
- High Temperature Testing
- Process Monitoring
- Ground Support Equipment
- High Temperature Geothermal Generators

For Sales and Service  
In U.S.A. and Canada

**1-800-872-3963<sup>SM</sup>**  
**1-800-USA-DYNE**

International Customers Dial

**(614) 965-9340**

24-Hour FAX (614) 965-9438

**OMEGADYNE<sup>SM</sup> FAX**

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**T-HYDRONICS, INC.**

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Model PX1009L1-1KAV \$2500  
Shown Actual Size

Model PX1004L1-1KAV \$2500  
Shown Actual Size

The OMEGADYNE<sup>TM</sup> PX1004 and PX1009 Sputtered Thin Film Pressure Transducers were designed for high-temperature service. These instruments can operate in temperatures from -65°F to +450°F or +650°F.

Yet, even in these difficult temperatures, they provide outstanding accuracy, long-term calibration stability and reliability. Static accuracy is ±0.25%, and thermal zero and sensitivity shifts over their compensated range are less than ±0.01%/°F.

OMEGADYNE's thin film technology makes this premium performance

possible. The strain gages are sputter-deposited, forming a molecular bond with the substrate. There is virtually no shift, drift, or creep to cause the transducer's calibration to change. The all-welded stainless-steel pressure cavity and double-isolated case ensures pressure integrity and reliability in these tough environments.

These high-temperature transducers are available in many standard ranges from 15 psi to 10,000 psi. A NIST traceable calibration record is available for these units.

Prices Shown in U.S. Dollars

## To Order: (Specify Model Number)

Range (psi)	Model Number PX1004	Price	Model Number PX1009	Price	Compatible Meter
<b>Absolute Pressure (All Ranges Available in Sealed Gage Pressure)</b>					
0-15	PX1004L1-015AV	\$1850	PX1009L1-015AV	\$2500	INFS, INFCS
0-25	PX1004L1-025AV	1850	PX1009L1-025AV	2500	INFS, INFCS
0-50	PX1004L1-050AV	1850	PX1009L1-050AV	2500	INFS, INFCS
0-100	PX1004L1-100AV	1850	PX1009L1-100AV	2500	INFS, INFCS
0-250	PX1004L1-250AV	1850	PX1009L1-250AV	2500	INFS, INFCS
0-500	PX1004L1-500AV	1850	PX1009L1-500AV	2500	INFS, INFCS
0-1000	PX1004L1-1KAV	1850	PX1009L1-1KAV	2500	INFS, INFCS
0-1500	PX1004L1-1.5KAV	1850	PX1009L1-1.5KAV	2500	INFS, INFCS
0-2000	PX1004L1-2KAV	1850	PX1009L1-2KAV	2500	INFS, INFCS
0-2500	PX1004L1-2.5KAV	1850	PX1009L1-2.5KAV	2500	INFS, INFCS
0-5000	PX1004L1-5KAV	1850	PX1009L1-5KAV	2500	INFS, INFCS
0-10000	PX1004L1-10KAV	1850	PX1009L1-10KAV	2500	INFS, INFCS

Interchangeable with CEC Model 1004 and 1009 Metric Ranges Available - Consult Engineering

To order Sealed Gage Pressure, change "A" in the part number to "S". No additional charge.

**Ordering Examples:** 1.) **PX1004L1-100AV** is a 100 psi Absolute Pressure transducer, with a male pressure connection per MS33656-4 and a Bendix electrical connector, \$1850. Mating Connector, **PCS06E-10-6S(SR)**, \$135 ea. 2.) **PX1009L1-1KSV** is a 1,000 psi Sealed Gage Pressure transducer, with a male pressure connection per MS33656-4 and a 30 inch long high temperature cable, \$2500.

**SPECIFICATIONS:**

**Electrical:**

**Excitation:** 10 Vdc rated (15 Vdc Max)

**Full Range Output:** 30 mV nominal, 26 mV minimum

**Residual Unbalance:** 0 mV ±5% FSO at zero pressure

**Input Resistance:** 300 ohms minimum, 600 ohms maximum

**Output Resistance:** 300 ohms minimum, 500 ohms maximum

**Insulation Resistance:**

PX1004: 100 Megohms or greater @ 45 Vdc. PX1009: 50 Megohms or greater @ 45 Vdc.

**Electrical Connections:**

PX1004: Bendix PCIH0-10-6P or equivalent. PX1009: Color coded pigtail leads, 30 inches (.8m) long, minimum.

**Performance:**

**Sensing Element:** 4 active-arm bridge using sputter-deposited thin film elements.

**Accuracy:** Combined Linearity, Hysteresis and Repeatability: ±0.25% FSO, BSL (over the compensated temperature range)

(Note: Performance is determined at 25°C ± 1°C (77°F ±2°F), open circuit, rated excitation, unless otherwise specified)

**Environmental:**

**Operating Temp Range:**

PX1004: -54 to 232°C (-65 to 450°F)

PX1009: -54 to 343°C (-65 to 650°F)

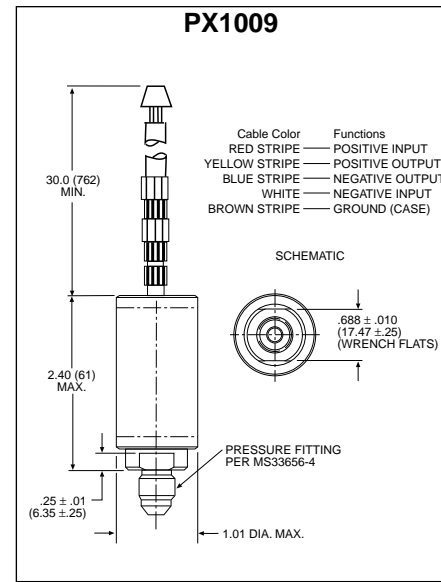
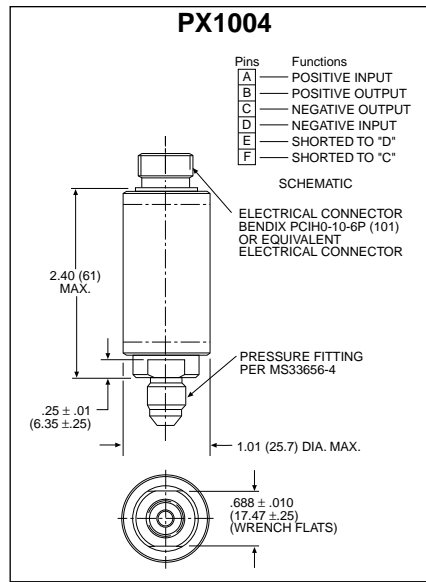
**Compensated Temp Range:**

PX1004: +24 to 204°C (+75 to 400°F)

PX1009: +24 to 316°C (+75 to 600°F)

**Thermal Effects:** Span: ±0.01% FSO/°F Zero: ±0.01% FSO/°F

**Natural Frequency:** 50 kHz at 5000 psi decreasing logarithmically 5 kHz at 15 psi



Dimensions shown in Inches (mm)

**Vibration Sensitivity:** At 35g peak from 10 Hz to 2000 Hz (limited to 1/2" D.A.) , the output shall not exceed:

	PX1004	PX1009
15 psi	0.04% FSO/g	0.15% FSO/g
50 psi	0.02% FSO/g	0.07% FSO/g
100 psi	0.015% FSO/g	0.05% FSO/g
500 psi	0.006% FSO/g	0.02% FSO/g
≥1000 psi	0.003% FSO/g	0.02% FSO/g

**Shock:** 100g, 11 msec half sine wave without calibration shift or damage

**Humidity:** Per MIL-STD-810, Method 507.1

**Pressure:**

**Standard Ranges:** 0-15, 25, 50, 100, 250, 500, 1000, 1500, 2000, 2500, 5000 and 10,000 psia. Sealed gage available in ranges from 100 psi and above.

**Proof Pressure:**

PX1004: 200% of rated pressure  
 PX1009: 150% of rated pressure

**Burst Pressure:**

PX1004: 300% of rated pressure  
 PX1009: 200% of rated pressure

**Mechanical:**

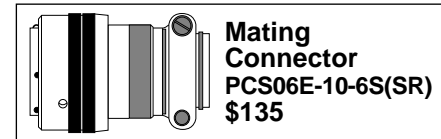
**Wetted Parts:** 17-4 PH vacuum melt or 15-5 stainless steel

**Pressure Fitting:** 3/16-20 male per MS33656-4

**Mounting Isolation:** Case isolation assures that the sensing element will not be affected by external stresses

**Mating Connector (PX1004):** PCS06E-106S(SR) (not included)

**Weight:** 5 oz (145g) maximum



**CUSTOM CONFIGURATIONS**

SERIES	PRESSURE PORT	ELECTRICAL CONNECTION	RANGE	UNITS	OUTPUT	OPTIONS
PX1004/1009	[ 1 ]	[ 2 ]	[ 3 ]	[ 4 ]	[ 5 ]	[ 6 ]
	L = MS33656-4		015 psi	A	V = mV/V Output <b>\$1850</b>	<b>CAL5</b> = 5 point NIST traceable Calibration <b>+\$75</b> <b>CAL11</b> = 11 point NIST traceable calibration <b>+\$150</b>
			025	A		
			050	A		
			100	A, S		
			250	A, S		
			500	A, S		
			1K	A, S		
			1.5K	A, S		
			2K	A, S		
			2.5K	A, S		
			5K	A, S		
			10K	A, S		
<p><b>To Order a Custom Configuration:</b></p> <ol style="list-style-type: none"> <li>1. Select a Pressure Port</li> <li>2. Select Electrical Connection</li> <li>3. Select a Pressure Range</li> <li>4. Select Pressure Units</li> <li>5. Select Output</li> <li>6. Select Options and Agency Approvals</li> </ol>						

Interchangeable with CEC Models 1004 and 1009

Metric Ranges Available - Consult Engineering

**Ordering Examples:** 1.) **PX1004L1-100AV** has a MS33656-4 male pressure port, Bendix connector, 100 psi Absolute Pressure Range, and a mV/V output, **\$1850**. Mating Connector (not included) **PCS06E-10-6S(SR)**, **\$135.00 ea.**

2.) **PX1004L1-015SV** has a MS33656-4 male pressure port, Bendix style connector, 15 psi Sealed Gage Pressure Range, and a mV/V output, **\$1850**. Mating Connector (not included) **PCS06E-10-6S(SR)**, **\$135.00 ea.**

3.) **PX1009L1-1KSV-CAL11** has a MS33656-4 male pressure port, 30" (.8m) high temperature cable, 1,000 psi Sealed Gage Pressure Range, mV/V output and an 11 point NIST traceable calibration, **\$2500+\$150=\$2650.**