

## Model K2 Pressure Transducer



### APPLICATIONS:

*Hydraulic, machine tool, test and measurement, and all general purpose industrial process applications*

### FEATURES:

- *0.5% and 1.0% accuracy*
- *Vac.-20,000 psi pressure range*
- *Superior long-term stability and repeatability*
- *Stainless steel NEMA 4X enclosure*
- *Conditioned millivolt output*
- *Wide range of pressure and electrical connections available*

The K2 is similar to the K1 Series except offering mV/V output options. The K2 is a proven and versatile pressure transducer incorporating polysilicon thin film technology. Modern low-pressure chemical vapor deposition methods provide simple, stable molecular bonds between the metal diaphragm and a polysilicon strain gage bridge. There are no epoxies or bonding agents to contribute to signal instability or drift. The integral metal diaphragm and polysilicon bridge are virtually unaffected by shock, vibration or mounting.

These transducers are offered in many standard pressure ranges with high-quality millivolt output signal ratiometric to supply voltage. Transducer performance is directly traceable to the National Institute of Standards and Technology. A calibration test certificate is available with each transducer.

### PERFORMANCE SPECIFICATIONS

**Accuracy Class (Span):**             $\pm 0.5\%$              $\pm 1.0\%$

Includes non-linearity (Terminal Point Method), hysteresis non-repeatability zero offset and span setting errors

Best Fit Straight Line (BFSL)     $\pm 0.25\%$      $\pm 0.4\%$

Non-linearity

**Interchangeability**                     $\pm 0.5\%$              $\pm 1.0\%$

**Durability:** 10<sup>8</sup> with negligible performance change

**Stability:**  $\pm 0.5\%$  Span/yr

### ENVIRONMENTAL SPECIFICATIONS

#### Temperature Limits:

Storage:            -54 to 121°C    (-65 to +250°F)

Operating:        -28 to 82°C    (-20 to +180°F)

Comp. Range:    -28 to 71°C    (-20 to +160°F)

**Thermal Coefficients: (68°F (20°C) ref.) % Span/°F:**

**Accuracy Class: 0.5%                    1%**

ZERO                 $\pm 0.028\%$              $\pm 0.04\%$

SPAN                 $\pm 0.028\%$              $\pm 0.04\%$

#### Optional (0.5% Accuracy Class only):

ZERO                 $\pm 0.014\%$             N/A

SPAN                 $\pm 0.014\%$             N/A

Multiply zero thermal coefficients by 1.5 on 0/30 psi range and by 3 and 0/15 and vac/0 ranges

**Humidity:** No performance effect at 95% relative humidity – noncondensing

### FUNCTIONAL SPECIFICATIONS

#### Standard Ranges (psi)

0/15*	0/300	0/5000	vac./60*
0/30*	0/500	0/7500*	vac./45*
0/60*	0/750	0/10,000*	vac./30*
0/100	0/1000	0/15,000*	vac./15*
0/150	0/2000	0/20,000*	vac./0*
0/200	0/3000		

\*1% accuracy ranges only.

Consult factory for nonstandard ranges.

#### Overpressure Limits (F.S.):

	15- 2000	3000- 5000	7500- 20,000
Proof	200%	150%	120%
Burst	800%	300%	150%

**Vibration:** Less than  $\pm 0.1\%$  F.S. effect for 0-2000 Hz at 20 g's in any axis

**Shock:** Less than  $\pm 0.05$  F.S. effect for 100 g's, 20 ms shock in any axis

**Response Time:** Less than 5 ms

**Position Effect:** Less than 0.01% Span

### ELECTRICAL SPECIFICATIONS

#### Output (Sensitivity):

2mV/V

3mV/V

10mV/V

20mV/V

**Power Requirements:** 5-10 Vdc regulated, <3mA

**Circuit to Case Insulation Resistance:**

100 M ohms @ 50 Vdc

## Model K2 Pressure Transducer

### PHYSICAL SPECIFICATIONS

**Enclosure:** NEMA 4X(NEMA 1 only if <500 psig if electrical termination is Bendix® or Hirschmann®)

**Weight:** 2 oz. (approx. w/o cable)

**MATERIALS:**

**Case:** 300 series stainless steel

**Cable:** No. 24 AWG, 36" PVC, shielded, vented, UL approved

**Diaphragm:** 17-4 PH stainless steel

**Standard Process Connections:**

**(316 stainless steel)**

¼ NPT male or female

¼ NPT male or female

¼ SAE-J-514 male

¼ AMINCO female required for pressures over 10,000 psi

Other connections available

**Shunt calibration feature is available as an option.**

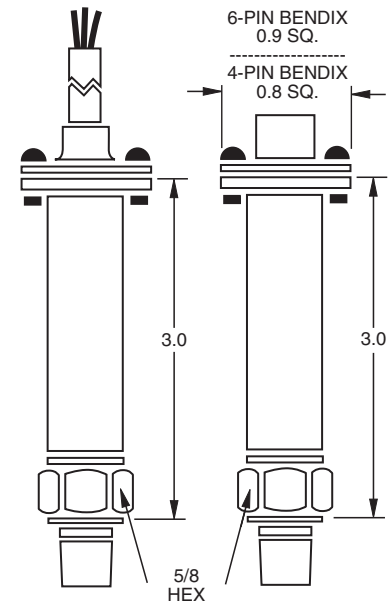
**Calibration report is standard with 0.5% and optional with 1% accuracy units. Consult factory for pricing, availability and required minimums for nonstandard products.**

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### DIMENSIONS (in inches)



### How To Order

<div style="border: 1px solid black; padding: 2px; width: 40px; height: 20px; margin: 0 auto;">K 2</div>	<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div>
<b>Type Configuration</b> (K2)	<b>Accuracy/TC</b> (3) 0.50% ±0.014%/°F (5) 0.50% ±0.028%/°F (7) 1.0% ±0.040%/°F	<b>Pressure Connection</b> (M01) ¼ NPT-M (F01) ¼ NPT-F (M02) ¼ NPT-M (F02) ¼ NPT-F (MEK) ¼"-20 SAE (F09) ¾"-18 Female	<b>Sensitivity</b> (02) 2mV/V (03) 3mV/V (10) 10mV/V (20) 20mV/V	<b>Electrical Termination</b> (F2) 36" Cable, Shielded, PVC Sheathing (B4) Bendix 4-pin #PTQ2A-8-4P* (B6) Bendix 6-pin #PTQ2A-10-6P* (C1) ¼ NPT-M Conduit and 36" cable (HM) Hirschmann Miniature*	<b>Pressure Range</b> (Vac/0) Vac/0 through (20,000) 20,000 psi (see Standard Ranges) Call for more options	<b>X Variations</b> (Consult factory for options)

\*Mating connector available as option