

# **Model K1 Pressure Transmitter**



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#### **APPLICATIONS**

Hydraulic, refrigeration, machine tool, test/measurement, pump control, HVAC, medical, construction equipment and all general purpose industrial process applications

# **FEATURES:**

- 0.5% and 1.0% accuracy
- Vac.-20,000 psi pressure range
- FM approved (optional)
- Superior long-term stability and repeatability
- Stainless steel NEMA 4X enclosure
- Current/voltage output
- Wide range of electrical connections available
- Optional panel meter digital display see Ashcroft model 2269

The Ashcroft® K1 is a proven and versatile pressure transducer/transmitter 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 transmitters are offered in many standard pressure ranges with either current or voltage output signals. Transmitter performance is directly traceable to the National Institute of Standards and Technology. A calibration test certificate is available with each transmitter.

#### 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 ±0.5% ±1.0% Durability: 108 cycles 20/80% span with negligible

performance change **Stability:** ±0.5% Span/vr

#### **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 ±0.028% ±0.04% SPAN ±0.028% ±0.04% **Optional (0.5% Accuracy Class only):** ZERO ±0.014% N/A SPAN ±0.014% N/A

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

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

#### **FUNCTIONAL SPECIFICATIONS**

#### Standard Ranges (psi) gauge, compound: 0/15\* 0/300 0/5000 vac./60\* 0/7500\* 0/30\* 0/500 vac./45\* 0/10,000\* vac./30\* 0/60\* 0/750 0/15.000\* vac./15\* 0/100 0/1000 0/20.000\* vac./0\* 0/150 0/2000

\*1% accuracy ranges only.

0/200

Consult factory for nonstandard ranges\.

## Overpressure Limits (F.S.):

0/3000

15- 2000	3000- 5000	7500- 20,000
200%	150%	120%
800%	300%	150%
	<b>2000</b> 200%	<b>2000 5000</b> 200% 150%

Vibration Sweep: 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, 20ms shock in any axis

**Response Time:** Less than 5 ms

## Position Effect: Less than 0.01% F.S. ELECTRICAL SPECIFICATIONS

# Output Signal (consult factory for options):

Output Signal (consult factory for 4-20mA (2 wire)

1-5 Vdc (3 wire) 1-6 Vdc (3 wire)

1-11 Vdc (3 wire) (minimum excitation 15 Vdc) **Power Requirements:** 10-36 Vdc unregulated,

<3mA for voltage output





# Model K1 Pressure Transducer/Transmitter

#### 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) **Reverse Polarity Protected** 

**MATERIALS:** 

Case: 300 series stainless steel

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

approved

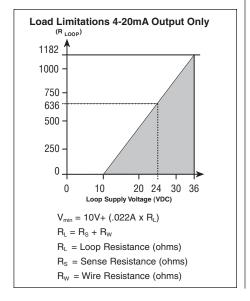
Diaphragm: 17-4 PH stainless steel Standard Process Connections: (316 stainless steel)

% NPT male or female 1/4 NPT male or female 1/4 SAE-J-514 (male)

%-18 UNF 2B AMINCO (female) required for

pressures over 10,000 psi

Other connections available on request

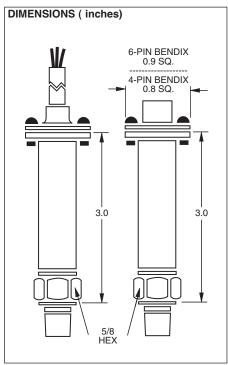


## **HAZARDOUS LOCATION CERTIFICATIONS**

Factory Mutual approvals:\*
Intrinsically Safe for use in: Class I, II, III, Div. 1, Groups A, B, C,D, F, G when used with safety barriers in accordance with Ashcroft drawing 71B212 Sht (1-3).

Nonincendive for: Class I, Div. 2, Groups A, B, C, D Special Protection for: Class II, III, Div. 2, Group F, G

\*Note: Available with 4-20mA output only



#### **How To Order**

