

Exclusive K1 Features

- 0.5% and 1.0% terminal point based accuracy
- Vac-20,000 psi pressure range
- FM and UL options available
- Superior long-term stability and repeatability
- Stainless steel NEMA 4X enclosure
- Current/voltage output
- Wide range of electrical and process connections available

Model K1 Pressure Transmitter

The K1 series continues to expand and offer user flexibility while maintaining proven life, reliability and performance characteristics



ISO 9001
REGISTERED FIRM



Measurement
& Control

BULLETIN PT-1

PERFORMANCE CHARACTERISTICS

Accuracy Class (F.S.):	0.5%	1.0%
Nonlinearity		
Terminal Point*	±0.4%	±0.7%
B.F.S.L.	±0.25%	±0.4%
Hysteresis	±0.15%	±0.2%
Nonrepeatability	±0.05%	±0.07%
Interchangeability	±0.5%	±1.0%

*Includes hysteresis

Standard Ranges (psi):

0/15*	0/300	0/5,000	Vac/60*
0/30*	0/500	0/7,500*	Vac/45*
0/60*	0/750	0/10,000*	Vac/30*
0/100	0/1,000	0/15,000*†	Vac/15*
0/150	0/2,000	0/20,000*†	Vac/0*
0/200	0/3,000		

*1% accuracy ranges only.

†Consult factory for FM applications and availability

Consult factory for non-standard ranges

Stability: ±0.5% F.S./year non-cumulative

Durability: 10⁸ cycles 20/80%F.S. with negligible performance change

Response Time: Less than 5m sec

ENVIRONMENTAL CHARACTERISTICS

Temperature Limits:

Storage	-65/+250°F
Operating	-20/+180°F
Compensated	-20/+160°F

Thermal Coefficients (68°F ref.):

Accuracy	Zero and Span
(-3) 0.5%	±0.014% F.S./°F
(-5) 0.5%	±0.028% F.S./°F
(-7) 1.0%	±0.040% F.S./°F

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

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

FUNCTIONAL CHARACTERISTICS

Overpressure (F.S.):

	Proof	Burst
0/15-0/2000	200%	800%
0/3000-0/5000	150%	300%
0/7500-0/20,000	120%	150%

Vibration Sweep: Less than ±0.1% F.S. effect for 0-2000 Hz at 20 g's in any axis

Shock: Less than ±0.05% F.S. effect for 100 g's, 20 ms shock in any axis

Position Effect: Less than 0.01% F.S.

ELECTRICAL SPECIFICATIONS

Output Signal:	Supply Voltage:
4-20mA* (2 wire)	10-36 Vdc unregulated
1-5 Vdc (3 wire)	10-36 Vdc unregulated
1-6 Vdc (3 wire)	10-36 Vdc unregulated
1-11 Vdc (3 wire)	15-36 Vdc unregulated
0.1-10 Vdc (3 wire)†	15-36 Vdc unregulated

*For FM approval version, supply voltage is 10-30 Vdc (unregulated)

†Consult factory for application assistance

Reverse polarity protected.

Zero Offset: ±0.5% F.S. or ±1.0% F.S., dependant on accuracy class

Supply Current: Less than 3 mA for voltage output

Circuit to Case Insulation Resistance: 100 M ohms @ 50 Vdc

PHYSICAL SPECIFICATIONS

Standard Process Connections:

(316 stainless steel)

½ NPT male or female

¼ NPT male or female

7/16-20 SAE male

¼" VCR face seal, male or female

¼ AMINCO (female) required for pressures over 10,000 psi. Other connections available.

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

Case: 300 series stainless steel

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

Diaphragm: 17-4 PH stainless steel

Weight: 2 oz. (approx. without cable)

Calibration report is standard with 0.5% and optional with 1% accuracy units.

Consult factory for pricing, availability and required minimums for non-standard products.

Bendix® is registered trademark of Amphenol Corp.

Hirschmann® is registered trademark of Richard Hirschmann of America Inc.

Factory Mutual approvals:

Intrinsically Safe: Class I, II, III, Div. 1, Groups A, B, C, D, F, G when used in accordance with Dresser drawings 71B212 Shts (1-3).

Non-incendive for: (no barriers needed)

Class I, Div. 2, Groups A, B, C, D

Special Protection:

Class II, III, Div. 2, Groups F, G

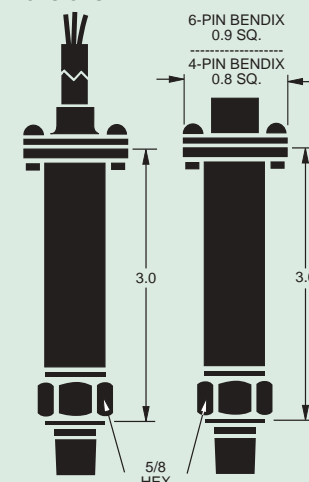
Entity: (contact factory for parameters)

UL approvals:

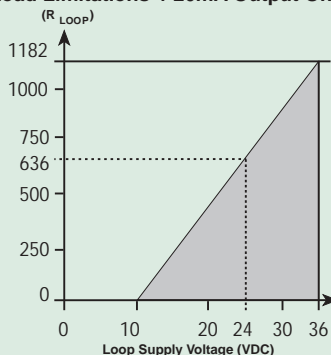
Class I, II, III, Div. 1, Groups A-G rating per drawing 71A256*

*Approved under 5000 psi

Dimensions



Load Limitations 4-20mA Output Only



$$V_{min} = 10V + (.022A \times R_L)$$

$$R_L = R_S + R_W$$

R_L = Loop Resistance (ohms)

R_S = Sense Resistance (ohms)

R_W = Wire Resistance (ohms)



Measurement & Control

DRESSER INSTRUMENT,
DRESSER, INC.
TWO RESEARCH DRIVE
SHELTON, CT 06484
(203) 925-4000 Customer Service
(203) 925-4010 Fax
www.ashcroft.com

How To Order

K 1

Type Configuration
(K1)

Accuracy/TC
(3) 0.50% ±0.014%/°F
(5) 0.50% ±0.028%/°F
(7) 1.0% ±0.040%/°F

Pressure Connection
(MO1) ½ NPT-M
(FO1) ½ NPT-F
(MO2) ¼ NPT-M
(FO2) ¼ NPT-F
(MEK) 7/16-20 SAE
(FO9) ¾-18 Female
(VM2) ¼ VCR-Male
(VF2) ¼ VCR-Female

Output Signal
(42) 4-20mA
(15) 1-5 Vdc
(16) 1-6 Vdc
(11) 1-11 Vdc

Electrical Termination
(F2) 36" Cable, Shielded, PVC Sheathing
(B4) Bendix 4-pin #PTO2A-8-4P*
(B8) WP Bendix 4-pin #PTO2H-8-4P*
(B6) Bendix 6-pin #PTO2A-10-6P*
(B9) WP Bendix 6-pin #PTO2H-10-6P*
(C1) ½ NPT-M Conduit and 36" cable
(HM) Hirschmann Miniature

*(Optional mating connector available)

#

Pressure Range
(100) 100 psi
(20,000) 20,000 psi
(vac/0) 0-30"Hg vacuum
(vac/15) -30"Hg to 15 psig
(see above)

X

X Variations
See dwg 64A234