

Model KX Flush Mount Pressure Transducer



APPLICATIONS:

Pulp/paper, waste water, spray booths and all heavy medium and pumping processes

FEATURES:

- Available with PMC adapter (shown)
- Flush-mounted integral 316 stainless steel diaphragm
- Stainless steel NEMA 4X enclosure
- Current/voltage output

The Ashcroft® KX transmitter combines the proven benefits of poly-silicon thin film performance with the utility of a flush-mounting sensing diaphragm. 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 flush sensing element is provided by an integral, silicone filled stainless steel diaphragm seal. The small sensing area and low internal volume ensure accurate measurement under severe conditions.

The polysilicon strain resistors combine very low noise levels with very high signal output. The integral metal diaphragm and polysilicon bridge are virtually unaffected by shock, vibration or mounting position.

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.

PERFORMANCE SPECIFICATIONS

Accuracy Class (Span): ±1.0%
 Includes non-linearity, (Terminal Point Method), hysteresis, non-repeatability, zero offset and span setting errors
Best fit straight line (BFSL) ±0.75%
 Includes non-linearity, hysteresis and non-repeatability error

ENVIRONMENTAL SPECIFICATIONS

Temperature

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

Thermal Coefficients: (68°F ref.) % Span/°F Standard:

ZERO ±0.04%
 SPAN ±0.04%

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

FUNCTIONAL SPECIFICATIONS

Standard Ranges (psi)

0/100	0/500	0/3000
0/150	0/750	0/5000
0/200	0/1000	
0/300	0/2000	

Consult factory for nonstandard ranges.

Overpressure: (F.S. psi)

	0/100-0/2000	0/30000/5000
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Proof	200%	150%
Burst	800%	300%

Vibration Sweep: Less than ±0.1%F.S. effect for 0-400 Hz at 20 g's in any axis

Shock: Less than ±0.1%F.S. effect for 20 g's 20ms shock in any axis

ELECTRICAL SPECIFICATIONS

Output Signal:

4-20mA (2 wire)
 1-5 Vdc (3 wire)
 1-6 Vdc (3 wire)

Power Requirements:

10-36 Vdc unregulated

Supply Current: Less than 3mA for voltage output

Output Impedance: 100 ohms

Circuit to Case Insulation Resistance:

100 M ohms @ 50 Vdc

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PHYSICAL SPECIFICATIONS

Enclosure: NEMA 4X

Weight: 10 oz (approx. without cable)

MATERIALS

Case: 300 series stainless steel

Connection: 316 stainless steel

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

Diaphragm: 316Ti stainless steel

Standard Process Connections:

G-½ metric pipe thread*

O-ring seal (max. 150 psi)

½ NPT male pipe thread used in conjunction with XWB, XWC and XWE screw-on adapters

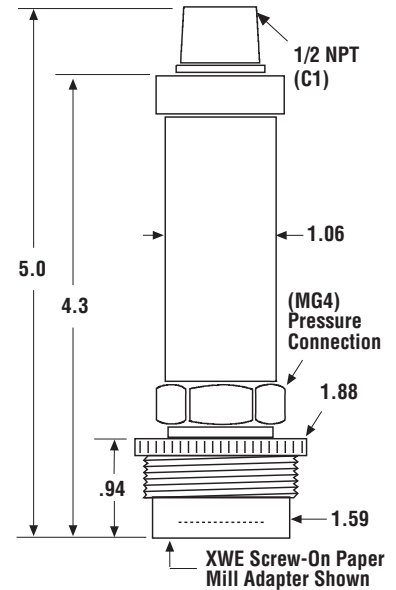
*Mating connection available upon request

OPTIONS

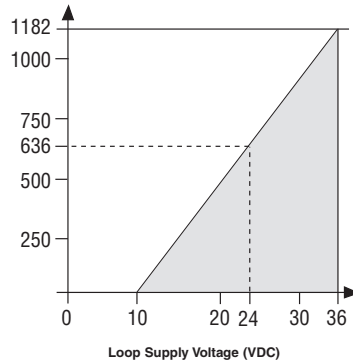
- (XWB) Flush weldnut
- (XWC) Recessed weldnut
- (XWD) Weldnut plug
- (XWE) Paper mill adapter (shown in photo)
- (XWG) Halocarbon fill

Warning: Sensitive Diaphragm

DIMENSIONS



Load Limitations 4-20mA Output Only
(R_{LOOP})



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

$$R_L = R_S + R_W$$

R_L = Loop Resistance (ohms)

R_S = Sense Resistance (ohms)

R_W = Wire Resistance (ohms)

How To Order

K X	7						#	-	X	
Model Configuration (KX)	Accuracy (7) 1.0%									
		Pressure Connection	Output Signal	Electrical Termination	Pressure Range	Options				
		(MG4) G-½ (RS1) O-Ring seal (Max 150 psi) (MO4) ½ NPT-M	(15) 1-5 Vdc (16) 1-6 Vdc (42) 4-20mA	(C1) ½ NPT-M Conduit and 36" Cable (RT) ½ NPT-M with RTD Head (4-20mA only) (DN) DIN 43650 Connector (M1) DIN 43650 w/mating connector G4WIF (M2) DIN 43650 w/mating connector G4WIF w/36" cable	(100) 100 psi (150) 150 psi (200) 200 psi (300) 300 psi (500) 500 psi (750) 750 psi (1000) 1000 psi (2000) 2000 psi (3000) 3000 psi (5000) 5000 psi	(XWB) Flush weldnut (XWC) Recessed weldnut (XWD) Weldnut plug (XWE) Paper mill adapter (XWG) Halocarbon fill				