

## 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)**

|  |               |               |
|--|---------------|---------------|
|  | <b>0/100-</b> | <b>0/3000</b> |
|  | <b>0/2000</b> | <b>0/5000</b> |

|       |      |      |
|-------|------|------|
| 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

## Model KX Flush Mount Pressure Transducer

### 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

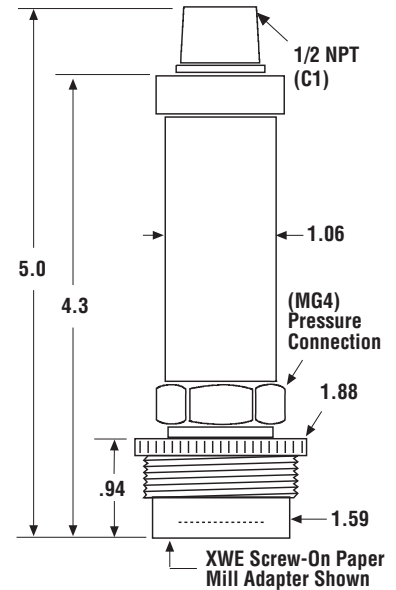
\*Mating connection available upon request

### OPTIONS

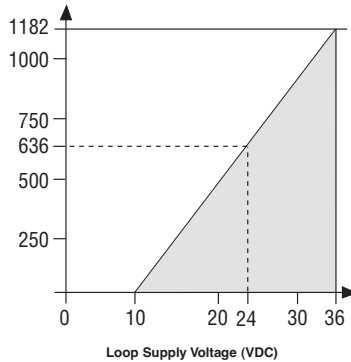
- (XWB) Flush weldnut
- (XWC) Recessed weldnut
- (XWD) Weldnut plug
- (XWE) Paper mill adapter (shown in photo)
- (XWG) Halocarbon fill

**Warning: Sensitive Diaphragm**

### DIMENSIONS



### Load Limitations 4-20mA Output Only



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

$$R_L = R_S + R_W$$

$R_L$  = Loop Resistance (ohms)

$R_S$  = Sense Resistance (ohms)

$R_W$  = Wire Resistance (ohms)

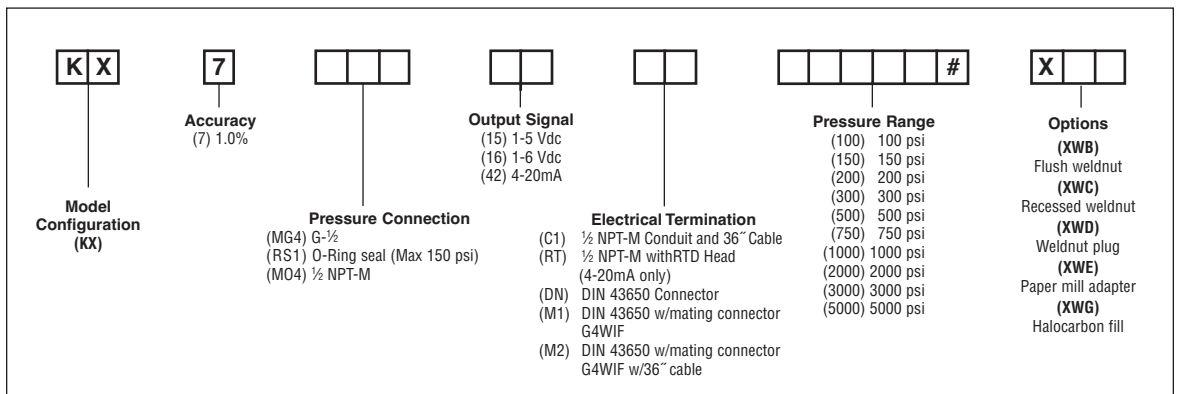
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BULLETIN PT-5

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