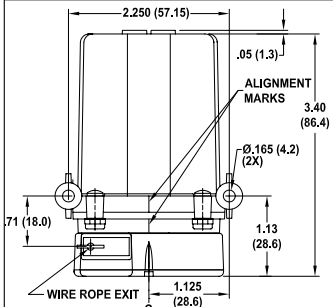


# JX-P420 Series Installation Guide

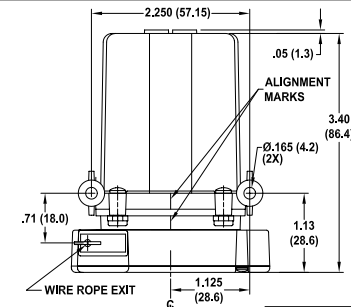
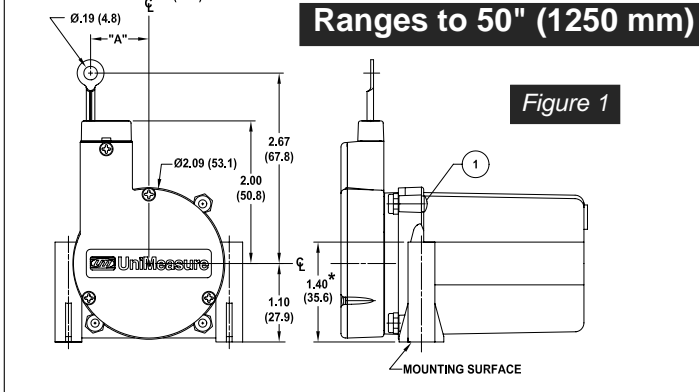


**Table A**

Range Designator	Dim A (in)	Dim A (mm)	Nominal Cable Tension (oz)	Nominal Cable Tension (N)
2, 10	.36	9.1	16	4.4
2.8, 15, 30	.50	12.7	14	3.9
3.8, 20, 40	.66	16.7	11	3.1
4.7, 25, 50	.82	20.8	8	2.2

## Ranges to 50" (1250 mm)

**Figure 1**

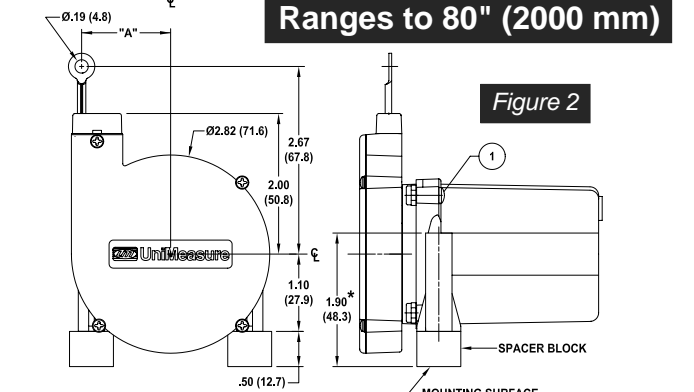


**Table B**

Range Designator	Dim A (in)	Dim A (mm)	Nominal Cable Tension (oz)	Nominal Cable Tension (N)
6, 60	.98	24.9	10	2.8
8, 80	1.28	32.5	8.6	2.4

## Ranges to 80" (2000 mm)

**Figure 2**



\*Mounting screws must accommodate this distance.

\*Mounting screws must accommodate this distance.

### Mounting

- To maximize wire rope life, align transducer with moving element so that wire rope exits perpendicular to axis of wire rope exit hole within 2° (see Figure 3).
- Use Table A or B to determine wire rope exit location relative to transducer mounting holes.
- Mount unit with two #8 or two M4 (or smaller) pan head machine screws. On units with ranges of 60" (1500 mm) or 80" (2000 mm), place spacer blocks under mounting pods as shown in Figure 2. Torque 8-32 screws to **8 lb-in** maximum. Torque M4 screws to **0.80 N-m** maximum.

### Rotation of Wire Rope Exit

To rotate wire rope exit location, loosen four screws (item 1, Figures 1 & 2) which retain mechanism to mounting housing. Note that alignment marks on mechanism occur at 45° intervals. Rotate housing to desired position and torque screws to **50 oz-in (0.35 N-m)**.

### Replacement Wire Rope Wipers

The JX transducer contains wire rope dust wipers which are located just beneath the wire rope exit location. Periodic replacement of the dust wipers may be necessary depending upon the amount of dust in the operating environment.

To access the dust wipers, remove the dust wiper cover by placing a small blade screwdriver into the slot as shown in Figure 4 and pry upward while squeezing the ends of the cover. The wipers may be removed with tweezers and cleaned or replaced. The replacement wiper kit which contains six pair of prelubricated wipers is UniMeasure part number 10198.

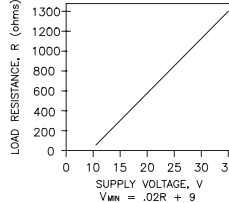
To install replacement wipers, place a wiper into wiper opening on both sides of the wire rope. Press wiper cover into place until detented.

### 4 to 20 mA Adjustment

The 4 to 20 mA output transducer is a 2-wire, loop powered device. The transducer, power supply, and current monitor must be connected in series as illustrated in Fig. 5. For best noise immunity, use twisted pair shielded cable between each of the electrical components. The shield of the cable should be open at the transducer and grounded at the electrical interface.

The minimum supply voltage is a function of total loop resistance. It may be calculated using the formula:  $V = (0.02 \times \text{Load Res.}) + 9 \text{ VDC}$ . Supply Voltage may also be determined from the graph at right.

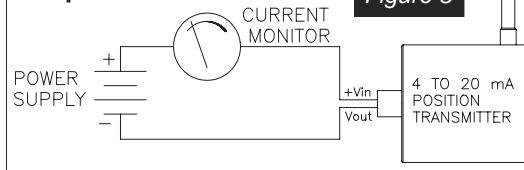
To adjust the zero and span, first remove the two Phillips head screws from the potentiometer access holes located on the end of the transducer (see Fig. 6). Visually locate the adjustment screws on each potentiometer. The screws are very small and will require a small blade type screwdriver (.06" (1.5mm) max. blade width x .016" (.4mm) max. blade thickness) for the adjustment. Extend the wire rope of the transducer to the desired zero position (must be within 0% to 30% of range) and adjust the *Zero* potentiometer to give a 4 mA output. Extend the wire rope to the desired maximum position (must be within 80% to 100% of range) and adjust the *Span* potentiometer for the maximum output current of 20 mA. Since the zero and span controls are somewhat interactive, recheck the zero and span settings and adjust as necessary. Insure that a sealing o-ring (see Fig. 6) is on each of the two Phillips head screws. Thread each screw into each potentiometer access hole until the head of the screw bottoms against the raised shoulder. Do **not** tighten the screw against the shoulder.



**Figure 3**

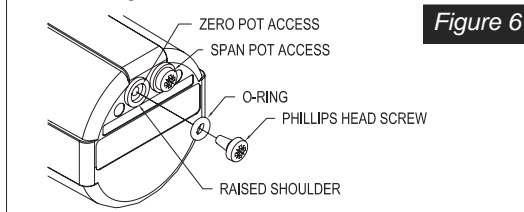
**Figure 4**

### Loop Circuit



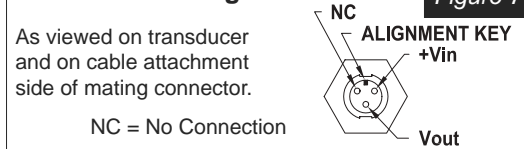
**Figure 5**

### Zero & Span Potentiometer Access



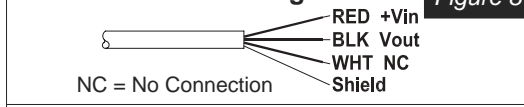
**Figure 6**

### Connector Wiring



**Figure 7**

### Electrical Cable Wiring



**Figure 8**

### Specifications

- Output ..... 4 to 20 mA
- Excitation Voltage ..... 9 to 35 VDC
- Load Resistance (Total Loop) .... See Graph
- Min. Supply Voltage ..... (.02 x Load Res.) + 9
- Linearity:
- Ranges to 4.7" ..... ±1.0% Full Scale
- 10" to 25" range ..... ±0.5% Full Scale
- 30" to 80" range ..... ±0.25% Full Scale
- Operating Temperature ..... -15°C to 60°C