The UniMeasure JX-P420 series linear position measuring transducer is a low cost device for use in moderate duty applications in hostile wet or dry environments. The chemical resistant thermoplastic case of the transducer provides IP-65 (NEMA 4X) ingress protection for applications where exposure to washdown, rain, oil and other liquids may occur. The sealed case is achieved through the use of o-rings and a low friction shaft seal. An integral dust wiper insures that the wire rope stays clear of debris as it is extracted and retracted. The standard electrical connection includes a sealed bulkhead fitting and multi-conductor electrical cable. An optional connector and mating connector are also available. As a convenience, optional connector locations on the transducer body are offered. The wire rope exit direction may be specified at time of order or may be user adjusted at time of installation.

The JX-P420 series transducer is a loop powered device with a 4 to 20 mA current output that requires a two wire connection. The transducer, power supply, and current monitor are connected in series. Zero and span adjustment potentiometers are accessible by removing two sealing screws in the rear of the transducer housing. Zero and span allow for two wire connection. The transducer, power supply, and current monitor are connected in series. Zero and span adjustment potentiometers are accessible by removing two sealing screws in the rear of the transducer housing. Zero and span allow for adjustment for a full 4 to 20 mA output at between 50% and 100% of maximum linear travel.

**SPECIFICATIONS**

**GENERAL**
- Measurement Range: See Range Table below
- Sensing Device: Precision Potentiometer
- Resolution: Essentially Infinite
- Linearity: 2", 2.8", 3.8", 4.7" ranges = ±0.1% Full Scale
- 10" to 25" ranges = ±0.5% Full Scale
- 30" to 80" ranges = ±0.25% Full Scale
- Repeatability: ±0.02% Full Scale
- Construction: Thermoplastic Body
- Wire Rope: Ø.018 (0.46 mm) Jacketed Stainless Steel
- Wire Rope Tension: See Supplemental Data\(^*\)
- Weight: 6.7 oz. (190 gm)
- Connections: Electrical, or plastic connector
- Life: Ranges to 4.7" = 2,000,000 full stroke cycles
- Ranges 10" to 25" = 500,000 full stroke cycles
- Ranges 30" to 80" = 250,000 full stroke cycles

**ENVIROMENTAL**
- Operating Temperature: -25°C to 75°C
- Storage Temperature: -50°C to 80°C
- Operating Humidity: 100% R.H., NEMA 4.
- Vibration: 15 G’s 0.1 ms max.
- Shock: 50 G’s 0.1 ms max.
- Ingress Protection: IP-65 (NEMA 4X) or IP-52 (NEMA 12)

**ELECTRICAL**
- Output: 4 to 20 mA
- Load Resistance (Total Loop): See Graph Below
- Excitation Voltage: 9 to 35 VDC
- Minimum Supply Voltage: ( 0 V Load Res.) + 9 VDC
- Insulation Resistance: 100 Megohms min. at 100 VDC
- Zero Set Adjustment Range: 0 to 30% of Range
- Span Set Adjustment Range: 80% to 100% of Range
- Protection: Fused & Reversed Polarity

**MODEL NUMBER CONFIGURATION**

JX-P420-50-N11-20S-N1C

**LOAD RESISTANCE VS INPUT VOLTAGE**

**ZERO & SPAN ACCESS**

**FOOTNOTES TO SPECIFICATIONS**
1. Supplemental Data section located at end of JX Series pages.
### DIMENSIONAL INFORMATION

#### JX SERIES – RANGES TO 50” (1250 MM)

**TABLE A**

<table>
<thead>
<tr>
<th>RANGE</th>
<th>DIM “A” (in)</th>
<th>NOMINAL WIRE ROPE TENSION (oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.10</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>0.15</td>
<td>1.28</td>
<td>1.28</td>
</tr>
<tr>
<td>0.20</td>
<td>1.89</td>
<td>1.89</td>
</tr>
<tr>
<td>0.25</td>
<td>2.38</td>
<td>2.38</td>
</tr>
</tbody>
</table>

#### JX SERIES – RANGES 60” (1.5 M) AND 80” (2 M)

**TABLE B**

<table>
<thead>
<tr>
<th>RANGE</th>
<th>DIM “A” (in)</th>
<th>NOMINAL WIRE ROPE TENSION (oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.60</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>0.78</td>
<td>1.28</td>
<td>1.28</td>
</tr>
<tr>
<td>0.95</td>
<td>1.67</td>
<td>1.67</td>
</tr>
<tr>
<td>1.25</td>
<td>2.38</td>
<td>2.38</td>
</tr>
</tbody>
</table>

The auxiliary wire rope extension may be used to facilitate mounting the transducer remotely from the measurement point. The clip on the extension attaches to the eye fitting on the transducer. The eye fitting on the opposite end, which is identical to the fitting on the transducer, mounts to the moving element. The extension kit is also available with the clip end unterminated for situations where it is more convenient to size the wire rope length during installation. Clip and crimp fitting are included with the unterminated version.

**DIMENSION “L”**

Specify Dimension “L” in centimeters to the nearest whole centimeter.

**NOTES:**
1. 1 cm = 0.394”, 1 inch = 2.54 cm
2. Shortest length “L” is 5 cm (approximately 2”)

**UNTERMINATED CLIP END**

Leave Blank .... Completed kit
(No designator required)

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**10067 – AUXILIARY WIRE ROPE EXTENSION KIT**

- **DIMENSION “L”**
  - Specify Dimension “L” in centimeters to the nearest whole centimeter
  - L = 0.188 (4.8 mm) Eye Fitting
  - This end connects to the moving element.

- **UNTERMINATED CLIP END**
  - Leave Blank ...
  - Completed kit (No designator required)
  - L = 0.188 (4.8 mm) Eye Fitting
  - Clip and crimp sleeve included in kit