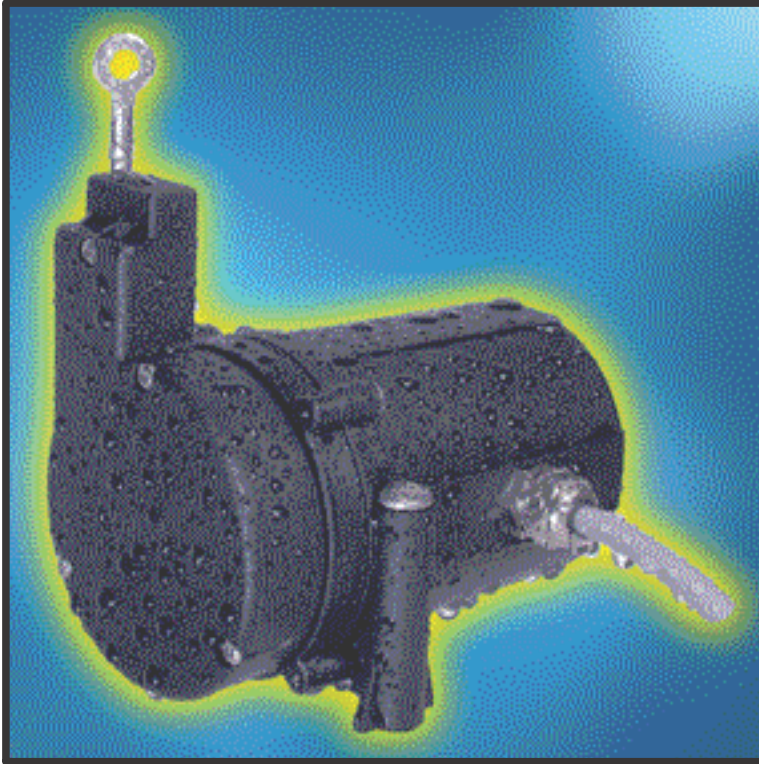


Linear Position Transducer

JX-P420 series

Environmentally Sealed



Featuring

- Environmentally Sealed
- 4 to 20 mA Current Output
- 80" (2000mm) Max. Range
- Non-Critical Alignment
- Thermoplastic Case
- Infinite Resolution
- Easy Installation
- Lightweight

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 NEMA 4 (IP-65) 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.

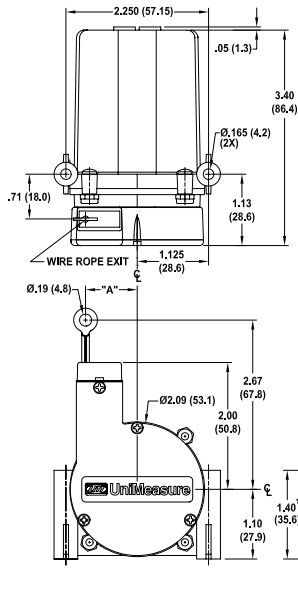
The JX-P420 series transducer is a loop powered device with a 4 to 20 mA current output that requires a two wire connection. The transducer, power supply, and current monitor are connected in series. Zero and span adjustment potentiometers are accessible by removing two sealing screws in the rear of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

How it works:

Operationally, the unit is mounted at a fixed position. A multi-stranded stainless steel wire rope that wraps around an internal capstan is attached to the object whose position is to be measured. Near constant tension is maintained on the wire rope by an internal motor spring. As movement occurs, the extensible wire rope rotates the internal capstan, which in turn rotates a precision potentiometer. With power applied to the unit, a current output directly proportional to wire rope extension is produced.

 **UniMeasure**

Ranges to 50" (1.25m)



JX-P420 SERIES Specifications

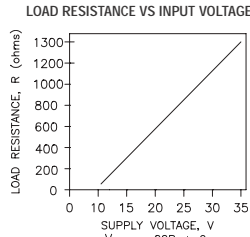
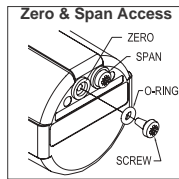
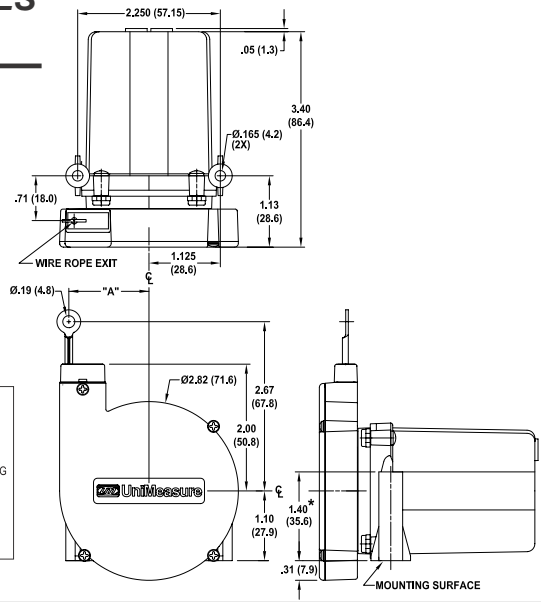


Figure 1



Ranges 60" (1.5m) & 80" (2m)



General

- Measurement Range See Range Table below
- Sensing Device Precision Potentiometer
- Resolution Essentially Infinite
- Linearity
 - 2", 2.8", 3.8", 4.7" ranges ±1.0% 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
- Weight 6.7 oz. (190 gm)
- Connections Electrical cable, 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

Electrical

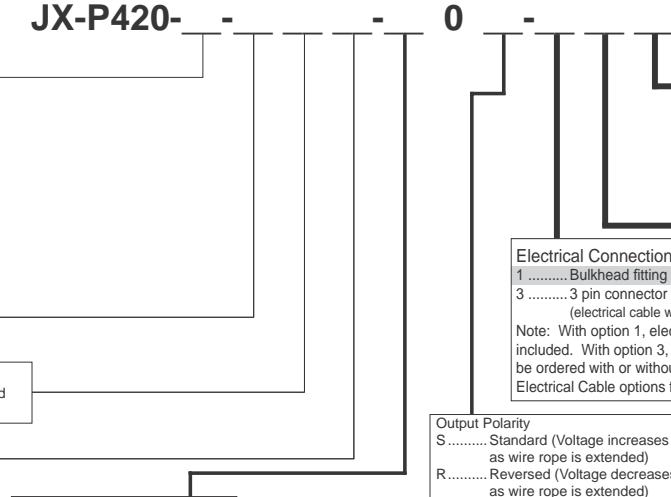
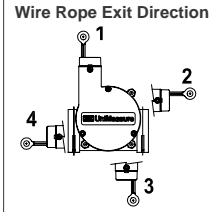
- Output 4 to 20 mA
- Load Resistance (Total Loop) See Graph Figure 1
- Excitation Voltage 9 to 35 VDC
- Minimum Supply Voltage (.02 x Load Res.) + 9 VDC
- Insulation Resistance 100 Megohms min. at 100 VDC
- Zero Set Adjustment Range 0 to 30% of Range
- Span Set Adjustment Range 80% to 100% of Range
- Protection Fused & Reversed Polarity
- Environmental
 - Operating Temperature -25°C to 60°C
 - Storage Temperature -50°C to 80°C
 - Operating Humidity 100% R.H. NEMA 4, 90% R.H. non-condensing NEMA 12
- Vibration 15 G's 0.1 ms max.
- Shock 50 G's 0.1 ms max.
- Ingress Protection NEMA 4X (IP-65) or NEMA 12 (IP-52)

Model Number Configuration

- Range
- 2 2" (50 mm)
 - 2.8 2.8" (70 mm)
 - 3.8 3.8" (96 mm)
 - 4.7 4.7" (120 mm)
 - 10 10" (250 mm)
 - 15 15" (380 mm)
 - 20 20" (500 mm)
 - 25 25" (625 mm)
 - 30 30" (750 mm)
 - 40 40" (1000 mm)
 - 50 50" (1250 mm)
 - 60 60" (1500 mm)
 - 80 80" (2000 mm)

- Wire Rope
- N Ø.018" nylon jacketed stainless steel

- Wire Rope Tension
- 1 Standard (See Table A and Table B for values)



Ingress Protection
 1 IP-65 (NEMA 4X) dust and spraying water protection
 2 IP-52 (NEMA 12) dust and dripping liquids

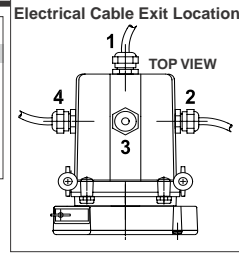
Example
JX-P420-25-N11-20S-31N

NOTE
 1) Shaded options available at additional cost.

- Electrical Cable
- N No Electrical Cable (See note 1 below)
 - 1 1 m (3') (See note 2 below)
 - 2 2 m (6.5') (See note 2 below)
 - 3 3 m (10') (See note 2 below)
 - 4 4 m (13.5') (See note 2 below)
 - 5 5 m (16.5') (See note 2 below)

Note:
 1) Selection N applies to Electrical Connection option 3 only (3 pin connector with mating connector).
 2) One of options 1 through 5 is required when Electrical Connection option 1 (Bulkhead Fitting) is selected or if electrical cable is required with mating connector when Electrical Connection option 3 (3 pin connector with mating connector) is required.

- Electrical Connection
- 1 Bulkhead fitting with electrical cable
 - 3 3 pin connector with mating connector (electrical cable with connector optional)
- Note: With option 1, electrical cable must be included. With option 3, mating connector may be ordered with or without electrical cable. See Electrical Cable options for cable lengths.



- Output Polarity
- S Standard (Voltage increases as wire rope is extended)
 - R Reversed (Voltage decreases as wire rope is extended)