



# JX-PA SERIES

## RATIOMETRIC VOLTAGE OUTPUT

The UniMeasure JX-PA series linear position transducer with analog output is primarily for use in moderate duty applications in wet or dry environments. The chemical resistant thermoplastic case of the transducer provides optional 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. Electrical connection options include body mounted sealed plastic connector with mating connector or a sealed bulkhead fitting and three conductor electrical cable of user specified length. If connector with mating connector option is chosen, the mating connector is available with or without electrical cable attached. As an installation convenience, optional connector locations on the transducer body are offered. In addition, the wire rope exit direction may be specified at time of order or may be user adjusted at time of installation. Typical applications include but are not limited to forklift positioning, suspension travel measurement, valve positioning, liquid level measurement, flood and irrigation gate monitoring, and saw blade positioning.



### SPECIFICATIONS

#### 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
Wire Rope Tension .....	See Supplemental Data <sup>1</sup>
Weight .....	6.3 oz. (180 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

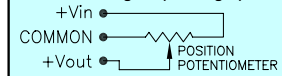
#### Electrical

Input Impedance .....	1000 Ω ±15% Standard
Output Impedance .....	0 to 1000 Ω
Excitation Voltage .....	25 V Max.
Nominal Output Voltage .....	$\frac{940}{\text{Range in inches}}$ mV/V/inch
(Use Range from table below)	$\frac{940}{\text{Range in mm}}$ mV/V/mm

#### Environmental

Operating Temperature .....	-25°C to 60°C
Storage Temperature .....	-50°C to 80°C
Operating Humidity .....	100% R.H.
Vibration .....	15 G's 0.1 ms max.
Shock .....	50 G's 0.1 ms max.
Ingress Protection .....	NEMA 12 or 4X, IP-52 or 65

#### Circuit Diagram (All Ranges)



#### FOOTNOTES TO SPECIFICATIONS

1. Supplemental Data section located at end of JX Series pages.

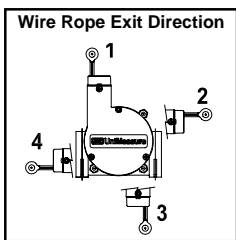
## Model Number Configuration

JX-PA- - - - -

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

Potentiometer Value	
1	1K ohm
2	2K ohm
3	5K ohm
4	10K ohm

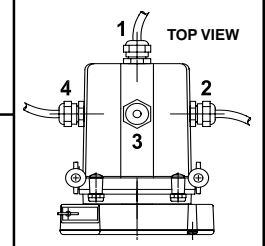
Output Polarity	
S	Standard (Voltage increases as wire rope is extended)
R	Reversed (Voltage decreases as wire rope is extended)

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 Cable Exit Location



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.

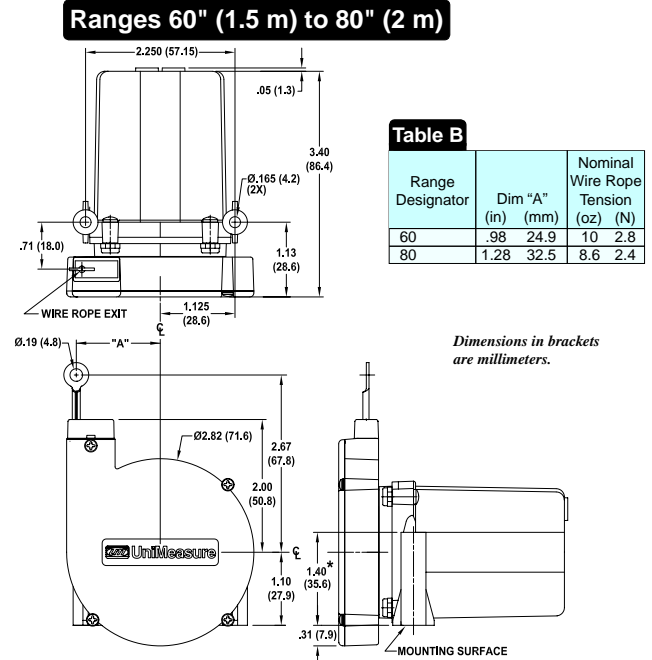
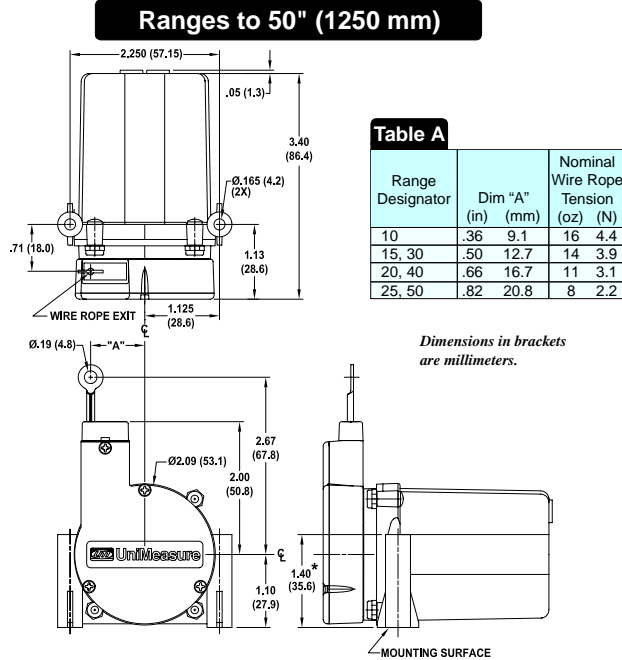
#### NOTE

1) Shaded options available at additional cost.

#### Example

JX-PA-25-N11-21S-311

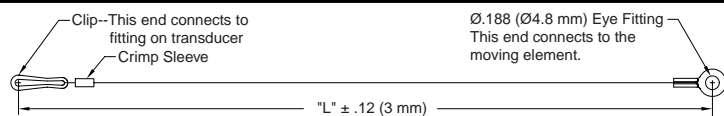
### DIMENSIONAL INFORMATION



### TABLE 3—Electrical Output Options—JX-EP Series

Option	Output Type	Output Stage	Waveform
1	<b>5 VDC TTL Two Channel Current Sinking</b> Two channels in quadrature with 65KΩ internal pullup resistors. 5 VDC input voltage		
2	<b>5 VDC TTL Current Sinking Differential Line Drive</b> Current sinking line drive output. 2KΩ internal pullup resistors. 5 VDC input voltage		
3	<b>5 VDC Push-Pull Differential Line Drive</b> Push-Pull, current sourcing and current sinking output. 5 VDC input voltage. Output is compliant with requirements of TIA/EIA-422-B.		
4	<b>8 to 28 VDC Current Sinking Differential Line Drive</b> Current sinking line drive output with 10KΩ internal pullup resistors. 8 to 28 VDC input voltage		
5	<b>8 to 28 VDC Push-Pull Differential Line Drive</b> Push-Pull, current sourcing and current sinking output. 8 to 28 VDC input voltage.		

### Accessory—10067 Auxiliary Wire Rope Extension Kit



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. The clip and crimp sleeve are included as loose parts for user termination.

### 10067- CM-

- \* ..... Completed kit (no designator required)
- U ..... Unterminated clip end (clip and crimp sleeve included in kit)
- \* Leave blank. No designator required.

**Dimension "L"**  
Specify dimension "L" in centimeters to the **nearest whole centimeter**.  
Note 1. 1 cm = 0.394", 1 inch = 2.54 cm  
Note 2. Shortest length "L" is 5 cm (approximately 2").