

**DESCRIPTION:**

The 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 (IP65) 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. 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:**

Measurement range: see table

Linearity

- 2", 2.8", 3.8", 4.7" ranges:  $\pm 1.0\%$ FS
- 10" to 25" ranges:  $\pm 0.5\%$ FS
- 30" to 80" ranges:  $\pm 0.25\%$ FS

Repeatability:  $\pm 0.02\%$ FS

Resolution: essentially infinite

Construction: Thermoplastic body

Sensing device: precision potentiometer

Wire rope:  $\varnothing 018$  Jacketed stainless steel

Wire rope tension: see table

Connections: electrical cable, or plastic connector

Weight: 180gm

**Electrical**

Input impedance:  $1000\Omega \pm 15\%$

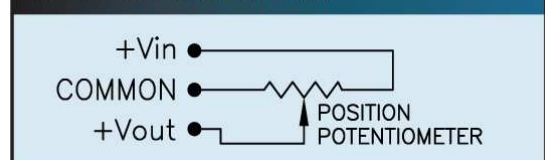
Output impedance: 0-1000 $\Omega$

Excitation voltage: 30V Max.

Output voltage change over

Full range of transducer: 92% to 98% of excitation voltage

**CIRCUIT DIAGRAM**



**Environmental**

Operating Temp.: -25°C ~ +75°C  
 Storage Temp.: -50°C ~ +80°C  
 Operating humidity: 95%RH max. non-condensing  
 Vibration: 15G's 0.1 ms max.  
 Shock: 50G's 0.1 ms max.  
 Ingress protection: NEMA4, IP65

**MODEL NUMBER CONFIGURATION:**

**JX-PA-** 0 1 2 3 4 5 6 7 8 9

**BASIC CONFIGURATION (FOR ALL RANGES)**  
**JX-PA-50-N11-21S-31N**

**0 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" (390 mm)
20.....	20" (500 mm)
25.....	25" (640 mm)
30.....	30" (750 mm)
40.....	40" (1000 mm)
50.....	50" (1250 mm)
60.....	60" (1500 mm)
80.....	80" (2000 mm)

**1 WIRE ROPE**

N.....	Ø.018 (0,45 mm) Nylon Jacketed Stainless Steel
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**2 WIRE ROPE TENSION**

1.....	Standard (See Table A & B for values)
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**3 WIRE ROPE EXIT DIRECTION**  
 Use Number designators shown

**4 INGRESS PROTECTION**

1.....	IP-65 (NEMA 4X) dust and spraying water protection
2.....	IP-52 (NEMA12) dust and dripping liquids

**5 POTENTIOMETER VALUE**

1.....	1K ohm
2.....	2K ohm
3.....	5K ohm
4.....	10K ohm

**6 ELECTRICAL OUTPUT POLARITY**

S.....	Standard (increasing output as wire rope is extended)
R.....	Reversed (decreasing output as wire rope is extended)

**7 ELECTRICAL CONNECTION**

1.....	Bulkhead fitting with electrical cable
3.....	3 pin connector with mating connector (electrical cable with connector optional)

**Notes:** With **option 1**, electrical cable must be included from option box 9.  
 With **option 3**, mating connector may be ordered with or without electrical cable. See Electrical Cable options for cable lengths.

**8 CONNECTOR LOCATION**  
 Use Number designators shown

**9 ELECTRICAL CABLE**

N.....	No Electrical Cable <sup>1)</sup>
1.....	1 m (3') <sup>2)</sup>
2.....	2 m (6.5') <sup>2)</sup>
3.....	3 m (10') <sup>2)</sup>
4.....	4 m (13.5') <sup>2)</sup>
5.....	5 m (16.5') <sup>2)</sup>

1) Selection **N** applies to (option box 7) Electrical Connection **option 3** only (3 pin connector with mating connector).  
 2) One of options **1** through **5** is required when (option box 7) 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.

**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

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## DIMENSIONS:

### JX SERIES – RANGES TO 50" (1250 mm)

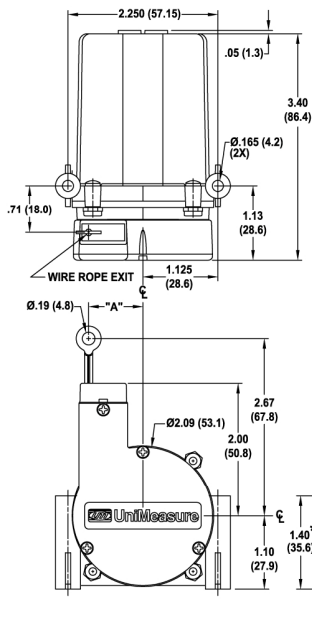


TABLE A

RANGE	DIM "A"		NOMINAL WIRE ROPE TENSION	
	(in)	(mm)	(oz)	(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

### JX SERIES – RANGES 60" (1.5 m) AND 80" (2 m)

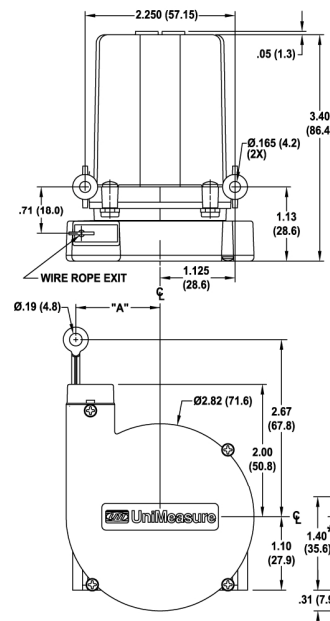


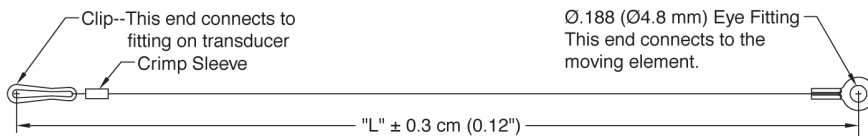
TABLE B

RANGE	DIM "A"		NOMINAL WIRE ROPE TENSION	
	(in)	(mm)	(oz)	(N)
60	.98	24.9	10	2.8
80	1.28	32.5	8.6	2.4

(dimensions in brackets are millimeters)

### 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. Clip and crimp fitting are included with the unterminated version.



## 10067- 1 -CM- 2

#### 1 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")

#### 2 UNTERMINATED CLIP END

Leave Blank..... Completed kit (No designator required)  
U..... Unterminated Clip End  
(clip and crimp sleeve included in kit)

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