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 IP-65 (NEMA 4X) ingress protection for applications where exposure to wash down, 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[1]
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

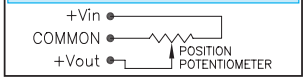
ENVIRONMENTAL

Operating Temperature	-25°C to +75°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	IP-65 (NEMA 4X) or IP-52 (NEMA 12)

ELECTRICAL

Input Impedance	1000 Ω ±15% Standard
Output Impedance	0 to 1000 Ω
Excitation Voltage	30 V Max.
Output Voltage Change Over Full Range of Transducer	92% to 98% of Excitation Voltage

CIRCUIT DIAGRAM



FOOTNOTES TO SPECIFICATIONS:
1. Supplemental Data section located at end of JX Series pages.

MODEL NUMBER CONFIGURATION

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

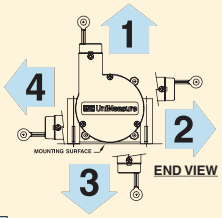
BASIC CONFIGURATION (FOR ALL RANGES)
JX-PA-50-N11-21S-N1C

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)

I WIRE ROPE
- N ..... Ø.018 (0,45 mm) Nylon Jacketed Stainless Steel

2 WIRE ROPE TENSION
- 1 ..... Standard (See Table A & B for values)

3 WIRE ROPE EXIT DIRECTION
Use Number designators shown



[1]=STANDARD LOCATION

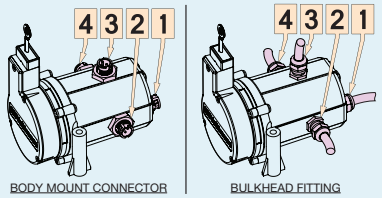
4 INGRESS PROTECTION
- 1 ..... IP-65 (NEMA 4X) dust and spraying water protection
- 2 ..... IP-52 (NEMA12) dust and dripping liquids

5 POTENTIOMETER VALUE
- 1 ..... 1K ohm
- 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
- N ..... Required Designator

8 ELECTRICAL CONNECTION LOCATION
USE NUMBER DESIGNATORS SHOWN



BODY MOUNT CONNECTOR | BULKHEAD FITTING
[1]=STANDARD LOCATION

9 ELECTRICAL CONNECTION
- C ..... Connector with Mating Connector
- K ..... Connector with **No** Mating Connector*
  Electrical cable with mating connector may be ordered separately as item number **10248-xM where 'x' is the required length in meters.*
- 1 ..... Bulkhead Fitting + 1 m (3') Electrical Cable
- 2 ..... Bulkhead Fitting + 2 m (6.5') Electrical Cable
- 3 ..... Bulkhead Fitting + 3 m (10') Electrical Cable
- 4 ..... Bulkhead Fitting + 4 m (13.5') Electrical Cable
- 5 ..... Bulkhead Fitting + 5 m (16.5') Electrical Cable

JX SERIES
SUPPLEMENTAL DATA

DIMENSIONAL INFORMATION

JX SERIES – RANGES TO 50” (1250 MM)

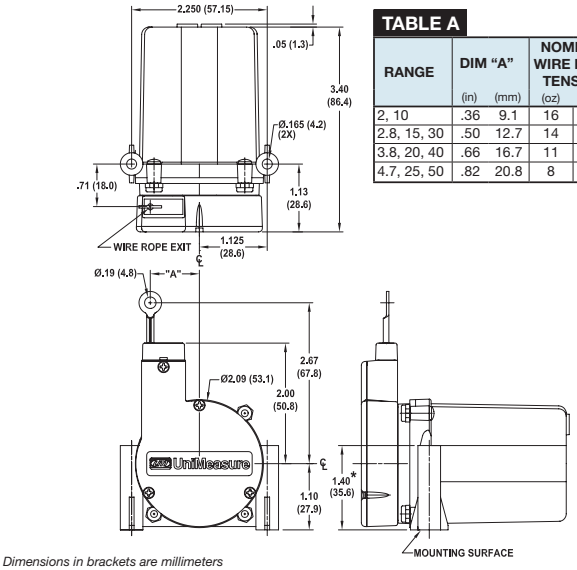


TABLE A

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

Dimensions in brackets are millimeters

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

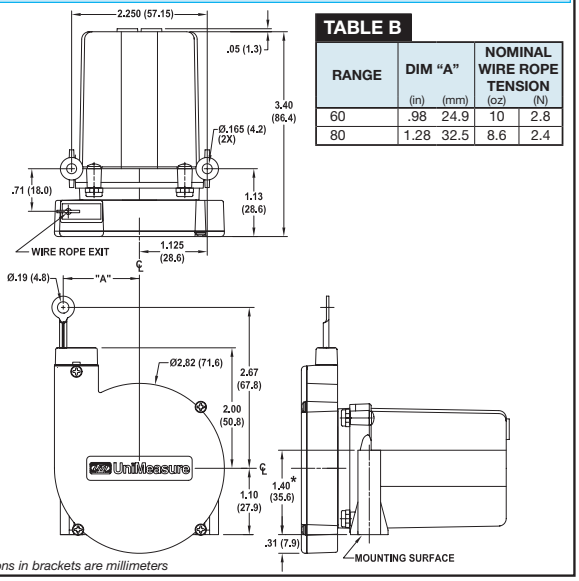


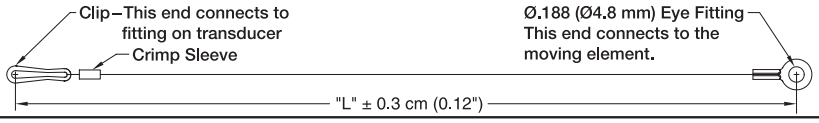
TABLE B

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