

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.

**ENVIRONMENTAL** 

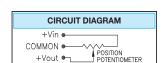
Output Voltage Change Over

# **SPECIFICATIONS**

See Range Table below
Precision Potentiometer
Essentially Infinite
±1.0% Full Scale
±0.5% Full Scale
±0.25% Full Scale
±0.02% Full Scale
Thermoplastic Body
Ø.018 (0.46 mm) Jacketed Stainless Stee
See Supplemental Data[1]
6.3 oz. (180 gm)
Electrical cable, or plastic connector
2,000,000 full stroke cycles
500,000 full stroke cycles
250,000 full stroke cycles

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 $\Omega$ ±15% Standard
Output Impedance	0 to 1000 Ω
Excitation Voltage	30 V Max.

Full Range of Transducer .......92% to 98% of Excitation Voltage



FOOTNOTES TO SPECIFICATIONS:

Supplemental Data section located at end of JX Series pages.

# MODEL NUMBER CONFIGURATION









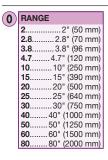


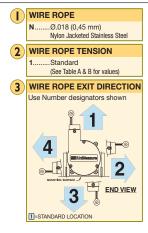


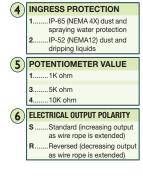


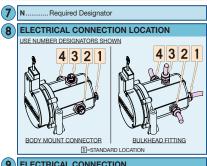


JX-PA-50-N11-21S-N1C





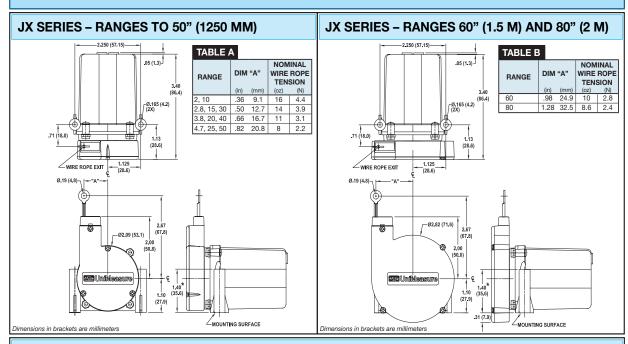








# **DIMENSIONAL INFORMATION**



# 10067 - AUXILIARY WIRE ROPE EXTENSION KIT







# **JX-P420** Duty Application 4-20 mA Output



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.

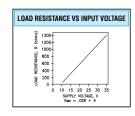
The JX-P420 series transducer is a loop powered device with a 4 to 20 mA current output that requires a two wire connection. The transducer, power supply, and current monitor are connected in series. Zero and span adjustment potentiometers are accessible by removing two sealing screws in the rear of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

# **SPECIFICATIONS**

See Range Table below
Precision Potentiometer
.Essentially Infinite
±1.0% Full Scale
±0.5% Full Scale
±0.25% Full Scale
±0.02% Full Scale
Thermoplastic Body
Ø.018 (0.46 mm) Jacketed Stainless Ste
See Supplemental Data[1]
6.7 oz. (190 gm)
.Electrical cable, or plastic connector
2,000,000 full stroke cycles
500,000 full stroke cycles
250,000 full stroke cycles
25°C to 75°C
50°C to 80°C
100% R.H. NEMA 4,
90% R.H. non-condensing NEMA 12
15 G's 0.1 ms max.
50 G's 0.1 ms max.
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	(.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





FOOTNOTES TO SPECIFICATIONS

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

#### MODEL NUMBER CONFIGURATION

JX-P420-



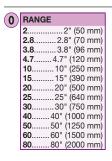


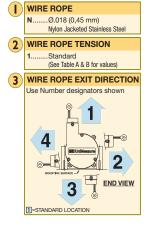




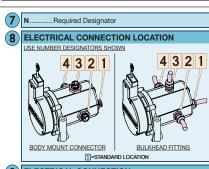


BASIC CONFIGURATION (FOR ALL RANGES) JX-P420-50-N11-20S-N1C









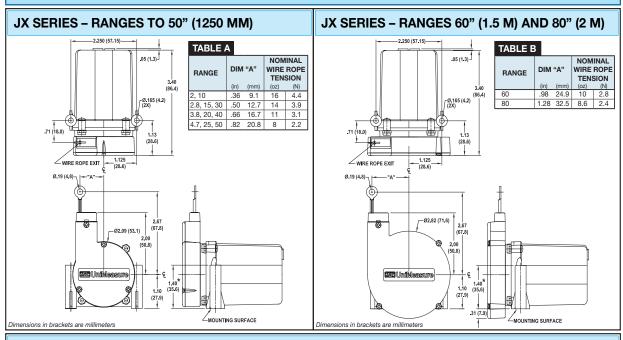




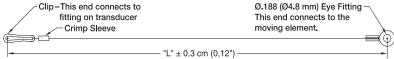
# JX-P420 Duty Application 4-20 mA Output







# 10067 - AUXILIARY WIRE ROPE EXTENSION KIT







# **JX-P510 Duty Application Analog Output**



The JX-P510 series transducer offers a voltage output with wide adjustability to give a 0 to 5, 0 to 10, ±5 or ±10 VDC output. The device may be powered with any voltage in the range of 4.9 to 30 VDC. Zero and span adjustment potentiometers are accessible by removing two sealing screws in the rear of the transducer housing. With the zero position set anywhere within the first 30% of total travel, the span may be adjusted to give a full 0 to 5 or 0 to 10 VDC output with the span set anywhere within the last 20% of travel. Alternatively, the zero position may be set anywhere between 40% and 60% of full travel to give an output of ±5 or ±10 VDC with the span set between 80% to 100% of the longest travel

The JX-P510 series 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. An integral dust wiper prevents the entry of debris as the wire rope is retracted. The electrical connection methodology includes an optional sealed bulkhead fitting with multi-conductor electrical cable or an optional connector with mating connector. As a convenience, optional electrical connection 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.



#### **SPECIFICATIONS**

GENERAL	
Measurement RangeSe	
Sensing DevicePre	ecision Potentiometer
Resolution Es	sentially 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
ConstructionThe	ermoplastic Body
Wire RopeØ.0	018 (0.46 mm) Jacketed Stainless Stee
Wire Rope TensionSe	
Weight	
ConnectionsEle	
Life	• •
Ranges to 4.7"2,0	00,000 full stroke cycles
Ranges 10" to 25"500	
Ranges 30" to 80"	0.000 full stroke cycles
ENVIRONMENTAL	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Operating Temperature25	6°C to 75°C
Storage Temperature50	
Operating Humidity100	0% R.H. NEMA 4,
	% R.H. non-condensing NEMA 12
Vibration	G's 0.1 ms max.
Shock	G's 0.1 ms max
Ingress ProtectionIP-	

ELECTRICAL		
Output		0 to 5, 0 to 10, ±5, ±10 VDC
Excitation Voltage	e	4.9 to 30 VDC
Excitation Curre	nt	25 mA max
Output Impedan	ce	10Ω max
Output Load		5KΩ min
ADJUSTMENT	RANGE-0 TO 5 OR 0 TO 10 VD	C
Zero		0 to 30% of Range
Span		80% to 100% of Range
ADJUSTMENT	RANGE-±5 OR ±10 VDC	
Zero		40% to 60% of Range
Span		80% to 100% of Longest Possible
Travel from Zero	Position	
Protection		Reversed Polarity
		1
	ZERO & SPAN ACCESS	



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

#### MODEL NUMBER CONFIGURATION







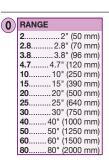


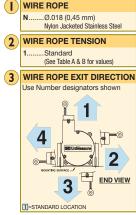


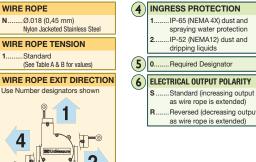


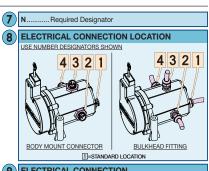


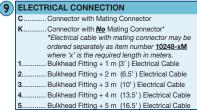
# BASIC CONFIGURATION (FOR ALL RANGES) JX-P510-50-N11-20S-N1C





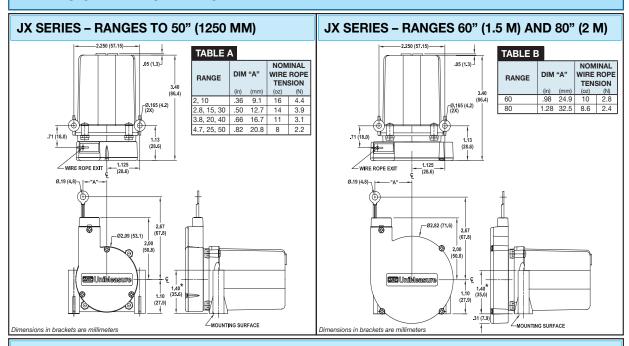




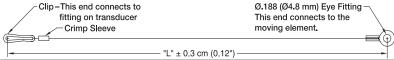




# **DIMENSIONAL INFORMATION**



# 10067 - AUXILIARY WIRE ROPE EXTENSION KIT





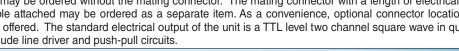






The UniMeasure JX-EP series linear position transducer with digital output is oriented for use in moderate duty applications in hostile wet or dry environments. The chemical resistant thermoplastic case of the transducer with integral dust wiper is factory configurable to IP-52 (NEMA 12) for dust protection or to IP-65 (NEMA 4X) 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. The wire rope exit direction may be specified at time of order or may be user adjusted at time of installation. The standard electrical connection includes a sealed bulkhead fitting and multi-conductor electrical cable. An optional cable to cable connector with mating connector may be added to the electrical cable. Alternatively, the cable to cable connector may be ordered without the mating connector. The mating connector with a length of electrical

cable attached may be ordered as a separate item. As a convenience, optional connector locations on the transducer body are offered. The standard electrical output of the unit is a TTL level two channel square wave in quadrature. Optional outputs include line driver and push-pull circuits.



### **SPECIFICATIONS**

GENERAL	
Measurement Range	. See Range Table below
Sensing Device	.Digital Encoder
Nominal Resolution[2]	
10" range	.445 counts/inch, 17.5 counts/mm
15", 30" range	.327 counts/inch, 12.9 counts/mm
20", 40" range	246 counts/inch, 9.7 counts/mm
	198 counts/inch, 7.8 counts/mm
60" range	. 166 counts/inch, 6.5 counts/mm
80" range	. 126 counts/inch, 5.0 counts/mm
Linearity	±0.10% Full Scale
Repeatability	
(in times 1 counting mode)	±1 Count, ranges to 25"
	±2 Counts, ranges 30" to 80"
Construction	Thermoplastic Body
Wire Rope	.Ø.018 (0.46 mm) Jacketed Stainless Steel
Wire Rope Tension	.See Supplemental Data[1]
Weight	
Connection	24 AWG Shielded Electrical Cable

LIFE (to wire rope replacement)	
Ranges 10" to 25"1,0	00,000 full stroke cycles
Ranges 30" to 80" 500	0,000 full stroke cycles
ENVIRONMENTAL	
Operating Temperature40	°C to 70°C
Storage Temperature40	°C to 80°C
Operating Humidity959	% R.H. non-condensing IP-52
cas	e 100% R.H. IP-65 case
Vibration 20	G's maximum
Ingress Protection IP-0	65 (NEMA 4X) or IP-52 (NEMA 12)
Ingress Protection IP-6 ELECTRICAL	
•	65 (NEMA 4X) or IP-52 (NEMA 12)
ELECTRICAL	05 (NEMA 4X) or IP-52 (NEMA 12) VDC ±5% or 5-28 VDC
ELECTRICAL Excitation Voltage+5	55 (NEMA 4X) or IP-52 (NEMA 12) VDC ±5% or 5-28 VDC nA MAX
ELECTRICAL           Excitation Voltage         +5           Excitation Current         85r           Output         2 c	55 (NEMA 4X) or IP-52 (NEMA 12) VDC ±5% or 5-28 VDC nA MAX
ELECTRICAL           Excitation Voltage         +5           Excitation Current         85r           Output         2 c           Qu	S5 (NEMA 4X) or IP-52 (NEMA 12) VDC ±5% or 5-28 VDC nA MAX hannel square wave in

#### FOOTNOTES TO SPECIFICATIONS

- Supplemental Data section located at end of JX Series pages.
  Resolution shown is for times one counting mode. Resolution may be increased by a factor of four with interface electronics capable of quadrature times 4 counting mode

#### MODEL NUMBER CONFIGURATION











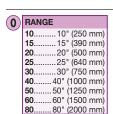


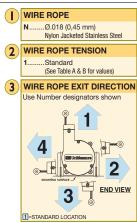


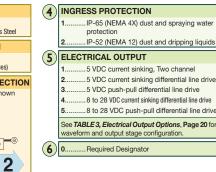
Basic Configuration

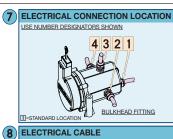
(FOR ALL RANGES)

JX-EP-50-N11-210-1PN







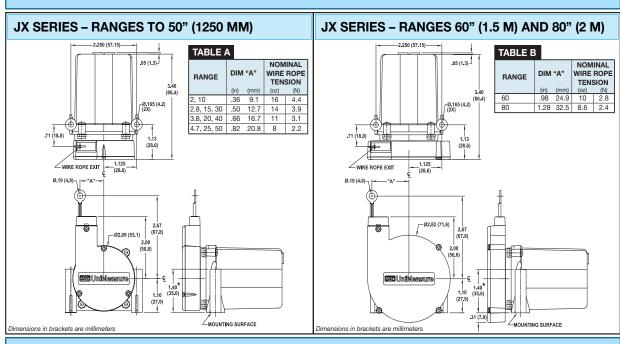


	III-3 IANDAND LOCATION
8)	ELECTRICAL CABLE
	P 150 mm (6") pigtail
	1 1 m (3')
	22 m (6.5')
	3 3 m (10')
	44 m (13.5')
	<b>5</b> 5 m (16.5')

	•	
9	CONNECTOR	
	N	. No connector
	C	Cable to cable connector with mating connector
	К	Cable to cable connector with <b>NO</b> mating connector
		ing connector with electrical P/N 10325-xM where "x" is ters.



# **DIMENSIONAL INFORMATION**



# TABLE 3 - JX-EP SERIES ELECTRICAL OUTPUT OPTIONS

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. <i>Input Voltage: 5 VDC.</i>	+5 VDC 65KQ Vout COMMON	A PTALATALATA
2	5 VDC TTL Current Sinking Differential Line Drive Current sinking line drive output. $2K\Omega$ internal pullup resistors. Input Voltage: 5 VDC.	+5 VDC 2KΩ +5 Vout	
3	5 VDC Push-Pull Differential Line Drive Push-Pull, current sourcing and current sinking output.Output is compliant with requirements of TIA/EIA-422-B.  Input Voltage: 5 VDC.	+5 VDC  AM26C31 Vout  COMMON	
4	8 to 28 VDC Current Sinking Differential Line Drive Current sinking line drive output with 10KΩ internal pullup resistors.  Input Voltage: 8 to 28 VDC.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	B B B B B B B B B B B B B B B B B B B
5	8 to 28 VDC Push-Pull Differential Line Drive Push-Pull, current sourcing and current sinking output. Input Voltage: 8 to 28 VDC.	+8 to +28 VDC 7272	

# 10067 - AUXILIARY WIRE ROPE EXTENSION KIT

