JX-EP SERIES
DIGITAL OUTPUT



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
25", 50" range	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	6.3 oz. (180 gm)
Connection	24 AWG Shielded Electrical Cable

LIFE (to wire rope replacement)

Ranges 10" to 25"	1,000,000 full stroke cycles
Ranges 30" to 80"	500,000 full stroke cycles

ENVIRONMENTAL

Operating Temperature	-40°C to 70°C
Storage Temperature	-40°C to 80°C
Operating Humidity	95% R.H. non-condensing IP-52 case 100% R.H. IP-65 case
Vibration	20 G's maximum
Ingress Protection	IP-65 (NEMA 4X) or IP-52 (NEMA 12)

ELECTRICAL

Excitation Voltage	+5 VDC ±5% or 5-28 VDC
Excitation Current	85mA MAX
Output	2 channel square wave in Quadrature TTL Level Current Sinking with 65 KΩ Pullups

FOOTNOTES TO SPECIFICATIONS

1. Supplemental Data section located at end of JX Series pages.
2. 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

JX-EP- ⓪ - ①②③ - ④⑤⑥ - ⑦⑧⑨

BASIC CONFIGURATION (FOR ALL RANGES)

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

⓪ RANGE

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

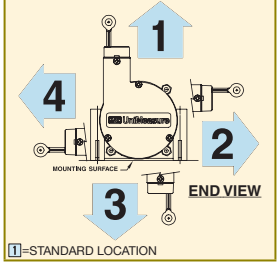
N	Ø.018 (0,45 mm) Nylon Jacketed Stainless Steel

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 (NEMA 12) dust and dripping liquids

⑤ ELECTRICAL OUTPUT

1	5 VDC current sinking, Two channel
2	5 VDC current sinking differential line drive
3	5 VDC push-pull differential line drive
4	8 to 28 VDC current sinking differential line drive
5	8 to 28 VDC push-pull differential line drive

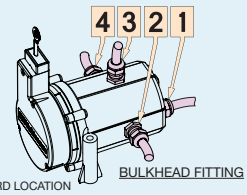
See ***TABLE 3, Electrical Output Options***, **Page 20** for waveform and output stage configuration.

⑥

0	Required Designator

⑦ ELECTRICAL CONNECTION LOCATION

USE NUMBER DESIGNATORS SHOWN



1=STANDARD LOCATION

⑧ ELECTRICAL CABLE

P	150 mm (6") pigtail
1	1 m (3')
2	2 m (6.5')
3	3 m (10')
4	4 m (13.5')
5	5 m (16.5')

⑨ CONNECTOR

N	No connector
C	Cable to cable connector with mating connector
K	Cable to cable connector with ***NO*** mating connector

For Option **"K"**, mating connector with electrical cable is available as **P/N 10325-xM** where **"x"** is required length in meters.

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DIMENSIONAL INFORMATION

JX SERIES – RANGES TO 50" (1250 MM)

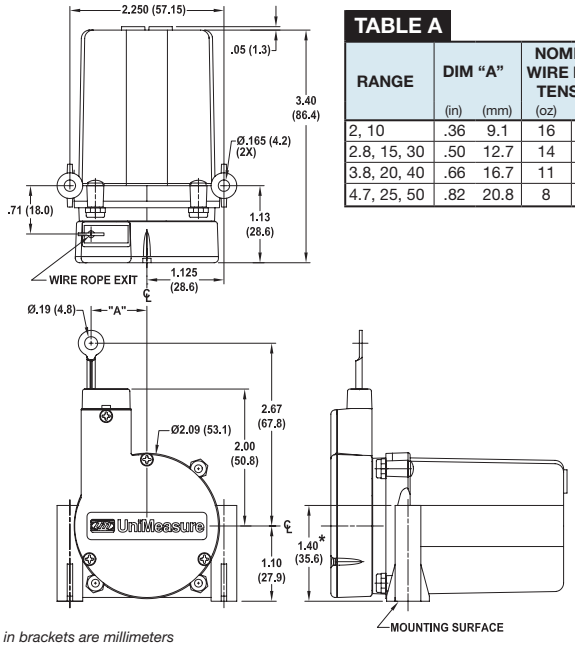


TABLE A

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)

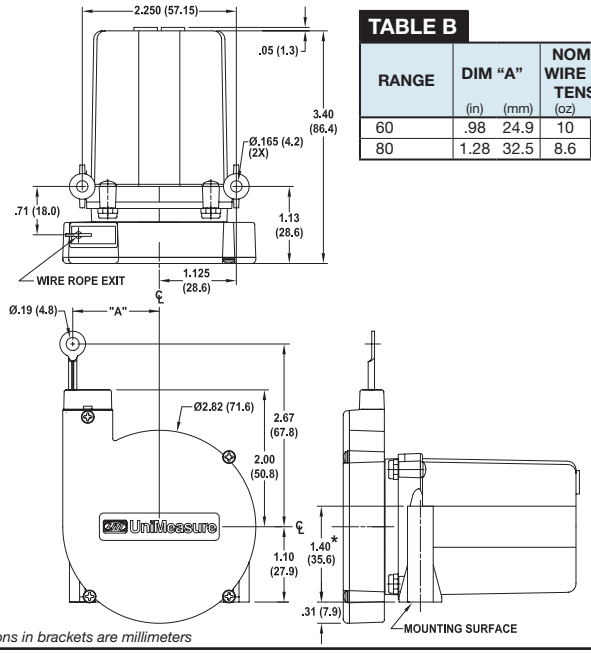
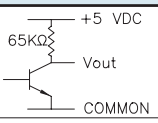
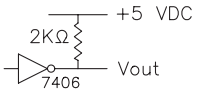
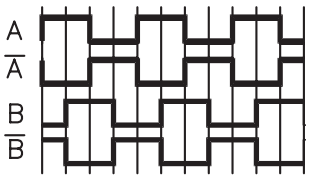
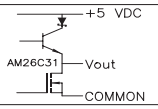
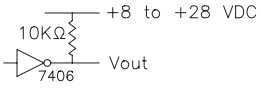
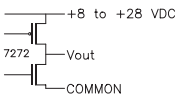


TABLE B

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

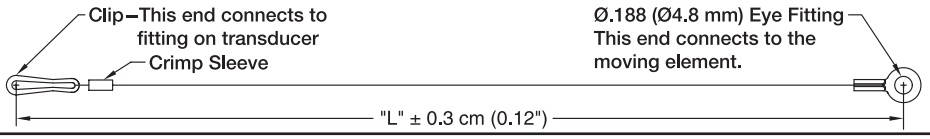
Dimensions in brackets are millimeters

TABLE 3 – JX-EP SERIES ELECTRICAL OUTPUT OPTIONS

OPTION	OUTPUT TYPE	OUTPUT STAGE	WAVEFORM
1	**5 VDC TTL Two Channel Current Sinking** Two channels in quadrature with 65KΩ internal pullup resistors. *Input Voltage: 5 VDC.*		
2	**5 VDC TTL Current Sinking Differential Line Drive** Current sinking line drive output. 2KΩ internal pullup resistors. *Input Voltage: 5 VDC.*		
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.*		
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.*		
5	**8 to 28 VDC Push-Pull Differential Line Drive** Push-Pull, current sourcing and current sinking output. *Input Voltage: 8 to 28 VDC.*		

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)