

# ID/JX-P510 SERIES

## 0 to 5, 0 to 10, ±5, ±10 VDC ANALOG OUTPUT



The **ID/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 from the zero position.

The **ID/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 dustwiper 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 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 .....	6.7 oz. (190 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. NEMA 4, 90% R.H. non-condensing NEMA 12
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

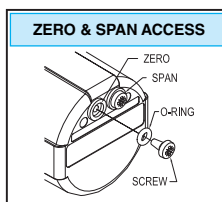
Output .....	0 to 5, 0 to 10, ±5, ±10 VDC
Excitation Voltage .....	4.9 to 30 VDC
Excitation Current .....	25 mA max
Output Impedance.....	10Ω max
Output Load .....	5KΩ min

#### ADJUSTMENT RANGE—0 TO 5 OR 0 TO 10 VDC

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



#### FOOTNOTES TO SPECIFICATIONS

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

### MODEL NUMBER CONFIGURATION

**JX-P510-** 0 1 2 3 4 5 6 7 8 9

### BASIC CONFIGURATION (FOR ALL RANGES)

**ID/JX-P510-50-N11-20S-N1C**

<b>0 RANGE</b>
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)

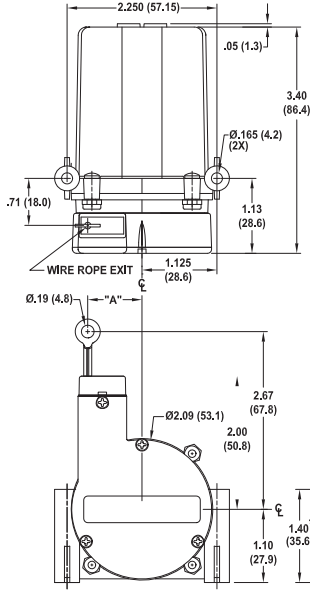
<b>1 WIRE ROPE</b>
N..... Ø.018 (0.45 mm) Nylon Jacketed Stainless Steel
<b>2 WIRE ROPE TENSION</b>
1..... Standard (See Table A & B for values)
<b>3 WIRE ROPE EXIT DIRECTION</b>
Use Number designators shown
T=STANDARD LOCATION

<b>4 INGRESS PROTECTION</b>
1..... IP-65 (NEMA 4X) dust and spraying water protection
2..... IP-52 (NEMA12) dust and dripping liquids
<b>5 0..... Required Designator</b>
<b>6 ELECTRICAL OUTPUT POLARITY</b>
S..... Standard (increasing output as wire rope is extended)
R..... Reversed (decreasing output as wire rope is extended)

<b>7 N..... Required Designator</b>
<b>8 ELECTRICAL CONNECTION LOCATION</b>
USE NUMBER DESIGNATORS SHOWN
T=STANDARD LOCATION
<b>9 ELECTRICAL CONNECTION</b>
C..... Connector with Mating Connector
K..... Connector with <b>No</b> Mating Connector*
*Electrical cable with mating connector may be ordered separately as item number <b>10248-xM</b> 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

**DIMENSIONAL INFORMATION**

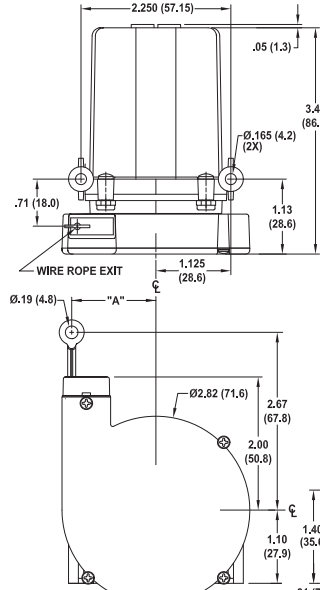
**ID/JX SERIES – RANGES TO 50" (1250 MM)**



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

Dimensions in brackets are millimeters

**ID/JX SERIES – RANGES 60" (1.5 M) AND 80" (2 M)**



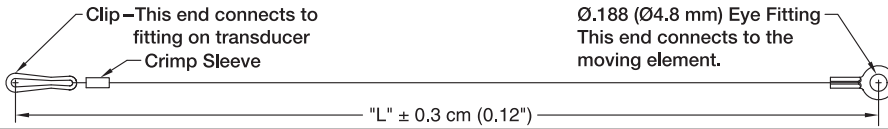
RANGE	DIM "A"		NOMINAL WIRE ROPE TENSION	
	(in)	(mm)	(oz)	(N)
60	.98	24.9	10	2.8
80	1.28	32.5	8.6	2.4

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)