

Utilizing a precision potentiometer, the **UniMeasure HX-PA Series** position transducer provides basic absolute positioning with an analog output. With a steady state input voltage, and with the potentiometer connected as a voltage divider, the ratiometric output voltage is directly proportional to wire rope extension. The unit will function with any input voltage up to 30 volts maximum. To obtain best output linearity, the input voltage should be well regulated.



**SPECIFICATIONS**

**GENERAL**

Measurement Ranges..... See Supplemental Data<sup>1)</sup>, Table 12  
Sensing Device..... Precision Potentiometer  
Connector..... MS3102E-14S-6P  
Mating Connector (included)..... MS3106E-14S-6S

**PERFORMANCE**

Linearity  
2", 3", 4", 5" & 6" Ranges..... ±0.25% Full Scale  
10", 15", 20" & 25" Ranges..... ±0.15% Full Scale  
All other ranges..... ±0.10% Full Scale  
Repeatability..... ±0.015% Full Scale  
Resolution..... Essentially Infinite

**ENVIRONMENTAL**

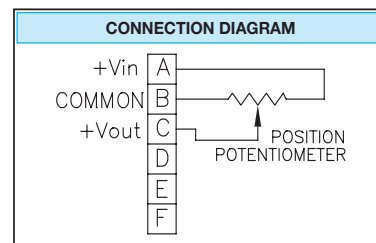
Operating temperature..... -40°C to +95°C  
Storage Temperature..... -55° to +100°C  
Operating humidity..... 100%  
Vibration..... 15 G's 0.1 ms max.  
Shock..... 50 G's 0.1 ms max.

**INGRESS PROTECTION (Exclusive of Wire Rope Area)**

Standard..... IP-65 (NEMA 4)  
Optional..... IP-68 (NEMA 6)

**ELECTRICAL**

Input Impedance..... 1000Ω ±10%  
Output Impedance..... 0 to 1000 Ω  
Excitation Voltage..... 30 Volts Max. AC or DC  
Output Voltage Change Over  
Full Range of Transducer..... 92% to 98% of Excitation Voltage



**FOOTNOTES TO SPECIFICATIONS**

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

**MODEL NUMBER CONFIGURATION**

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

**BASIC CONFIGURATION (FOR ALL RANGES)**

**HX-PA-50-S10-N1S-1BC**

**0 RANGE**  
Select Measurement Range From Supplemental Data **Table 12** (next page), Insert Corresponding Measurement Range Designator

**1 WIRE ROPE**  
**S**..... Stainless Steel (See Supplemental Data, Table 12)  
**N**..... Ø.018 (0,45 mm)  
Nylon Jacketed Stainless Steel Ranges to 80" (2m) only. (formerly NJC)  
**J**..... Ø.037 (0,94 mm)  
Nylon Jacketed Stainless Steel Ranges 100" (2.5m) to 500" (12.7m) only.

**2 WIRE ROPE TENSION**  
**1**..... Standard  
**2**..... Reduced (Ranges to 80" only)

**3 WIRE ROPE EXIT DIRECTION**  
Use Number designators shown RANGES TO 80" (2000 mm)

RANGES 100" TO 2000" (2.5 m TO 50 M)

**4 N**..... Required Designator

**5 POTENTIOMETER VALUE**  
**1**.....1K ohm  
**3**......5K ohm\*  
**4**.....10K ohm\*  
\*Not Available Ranges 2" to 6"  
See Supplemental Data for Linearity Option

**6 ELECTRICAL OUTPUT POLARITY**  
**S**.....Standard (increasing output as wire rope is extended)  
**R**.....Reversed (decreasing output as wire rope is extended)

**7 INGRESS PROTECTION**  
**1**..... IP-65 (NEMA 4)  
**2**..... IP-68 (NEMA 6)  
**3**..... IP-68 (NEMA 6) Corrosion Resistant Construction

**8 IP-65-NEMA 4 CONNECTOR**  
**B**..... 6 Pin 3102E Body Mounted Connector

**IP-68-NEMA 6 ELECTRICAL CABLE**  
**P**..... Bulkhead Fitting w/ 0.3m (12") Electrical Cable  
**3**..... Bulkhead Fitting w/ 3m (10') Electrical Cable  
**4**..... Bulkhead Fitting w/ 4m (13.5') Electrical Cable  
**5**..... Bulkhead Fitting w/ 5m (16.5') Electrical Cable  
**6**..... Bulkhead Fitting w/ 6m (20') Electrical Cable  
**7**..... Bulkhead Fitting w/ 7m (23') Electrical Cable

**9 IP-65-NEMA 4 MATING CONNECTOR**  
**C**..... IP-65 Mating Connector Included  
**K**..... IP-65 Mating Connector Omitted\*

\*Electrical cable with mating connector may be ordered separately as part number **10119-xM** where 'x' is the length required in meters.

**IP-68-NEMA 6 CABLE MOUNTED CONNECTOR**  
**N**..... No connector on end of electrical cable  
**K**..... IP-68 Cable to cable connector with **NO** mating connector\*\*  
\*\*Electrical cable with mating connector may be ordered separately as part number **10424-xM** where 'x' is the length required in meters. Mating connector alone unavailable.

**NOTES FOR OPTION BOXES 7, 8, and 9**

**IP-65 (NEMA 4):** Transducer equipped with body mounted connector and with or without mating connector. Mating connector with electrical cable available separately as part number **10119-xM** where 'x' is length of electrical cable in meters.

**IP-68 (NEMA 6):** Transducer equipped with bulkhead fitting and length of electrical cable. Remote end of electrical cable may be outfitted with water proof connector. Mating connector with electrical cable available separately as part number **10424-xM** where 'x' is length of electrical cable in meters.