**P1010 SERIES**

±10 VDC ANALOG OUTPUT

±10 VDC output adjustable to ±5 VDC output

The P1010 series position transducer provides an output voltage from -10 VDC to +10 VDC with adjustment capability to -5 VDC to +5 VDC. The zero position may be set within 10% to 90% of the total range of the transducer. The output voltage will be positive when the cable is extending from the zero position and negative when retracting from the zero position. The span may be adjusted to the maximum output voltage within 50% to 100% of the longest possible travel, whether positive or negative, from the zero position. A ±15 VDC input is required but optional single inputs of +5, +12, +15, or ±24 VDC are available. With optional inputs, the power supply ground is isolated from the output common.

### SPECIFICATIONS

#### General
- **Linearity**:
  - 2", 3", 4" & 5" Ranges: ±0.30% Full Scale
  - 10", 15", 20" & 25" Ranges: ±0.20% Full Scale
  - All other ranges: ±0.15% Full Scale
- **Repeatability**: ±0.015% Full Scale
- **Resolution**: Essentially Infinite
- **Construction**: Aluminum Cover & Baseplate
- **Sensing Device**: Precision Potentiometer
- **Connector**: MS3102A-14S-6P
- **Wire Rope**: Ø.016 Stainless Steel
- **Wire Rope Tension**: See Supplemental Data, Table 7
- **Wire Rope Inbound Acceleration**: See Supplemental Data, Table 7
- **Weight**: 1.4 lb. (0.63 Kg) 60" & 80"
- **Dimensional Information**: See Supplemental Data, Fig. 1 & 2
- **Options and Accessories**: See Supplemental Data

#### Environmental
- **Operating temperature**: 0°C to +70°C
- **Storage Temperature**: -40°C to +85°C
- **Operating humidity**: 90% R.H. max. non-condensing
- **Vibration**: 15 G's 0.1 ms max.
- **Shock**: 50 G's 0.1 ms max.
- **Ingress Protection**: NEMA 1, IP-40

#### Electrical
- **Output**: ±10 VDC adjustable to ±5 VDC
- **Excitation Voltage**: +15 VDC ±10% & -15 VDC ±10%
- **Input Current**: 25 mA max.
- **Output Impedance**: 1.0 kΩ min.
- **Output Load**: 5 kΩ min.
- **Capacitive Load**: 1000 pF
- **Zero Adjustment Range**: 10% to 90% of Range
- **Span Adjustment Range**: 50% to 100% of Longest Possible
- **Temperature Stability**: ±0.02%/°C of Span

#### Model Number Configuration

**P1010-**

- **DS**
  - Standard (increasing output as wire rope is extended)
- **L3M**
  - Mating Connector Included
- **L6M**
  - Mating Conn with 3 m (10') electrical cable
- **L7M**
  - Mating Conn with 5 m (16.5') electrical cable
- **L6M**
  - Mating Conn with 6 m (20') electrical cable
- **L7M**
  - Mating Conn with 7 m (23') electrical cable
- **NJC**
  - Standard ±15 VDC Input
- **SI5**
  - Standard ±15 VDC Input
- **SI12**
  - +12 VDC Single Input
- **SI15**
  - +15 VDC Single Input
- **SI24**
  - +24 VDC Single Input

#### NOTES
1. Asterisk items are standard configuration. No option designator is required.
2. Shaded options available at additional cost.

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*Example*

P510-50-NJC-CEB-TS

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### ADDITIONAL OPTIONS

| OPTION改变了不锈钢钢丝绳与Ø0.018尼龙套钢丝绳。提高了钢丝绳的寿命，但可能增加非线性，如±0.05%的全量程。
<table>
<thead>
<tr>
<th>OPTION DESIGNATOR</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Nylon jacketed wire rope</td>
<td>NJC</td>
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<tr>
<td>Reduced Wire Rope Tension</td>
<td>004</td>
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<tr>
<td>Increased Wire Rope Tension</td>
<td>HG</td>
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<tr>
<td>Dust wiper</td>
<td>DS</td>
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<tr>
<td>Terminal strip</td>
<td>TS</td>
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<tr>
<td>Reversed output</td>
<td>R</td>
</tr>
<tr>
<td>Non-standard potentiometer (applies to PA series only)</td>
<td>PXK</td>
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</table>

Note: This option is subject to potentiometer availability.

### ACCESSORIES

**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. The clip and crimp sleeve are included as loose parts for user termination.

**Dimension “L”**
Specify dimension “L” in centimeters to the nearest whole centimeter.

Note 1. 1 cm = 0.394", 1 inch = 2.54 cm
Note 2. Shortest length “L” is 5 cm (approximately 2”).

**Replacement Wire Rope Kit**

The replacement Wire Rope Kit includes a new wire rope with all end terminations, wire rope guide, felt dust wiper where applicable and installation instructions. To order, replace “xx” in the part number with the applicable measurement range in inches.

- 10077-xx Replacement Wire Rope Kit—Standard Ø0.016” stainless steel wire rope.
- 10088-xx Replacement Wire Rope Kit—NJC option, Ø0.018” nylon jacketed stainless steel wire rope.
- 10127-xx Replacement Wire Rope Kit—DS option, Standard Ø0.016” stainless steel wire rope with dust wiper.
- 10128-xx Replacement Wire Rope Kit—NJC and DS options, Ø0.018” nylon jacketed stainless steel wire rope with dust wiper.
### STANDARD SERIES SUPPLEMENTAL DATA

#### ADDITIONAL SPECIFICATIONS

### TABLE 7

<table>
<thead>
<tr>
<th>Range Designator</th>
<th>Range</th>
<th>Wire Rope Standard Tension (Nominal) (in)</th>
<th>Wire Rope Standard Acceleration (G's)</th>
<th>Wire Rope Reduced Tension (004 option) (oz)</th>
<th>Wire Rope Reduced Acceleration (004 option) (G's)</th>
<th>Wire Rope Reduced Tension (004 option) (oz)</th>
<th>Wire Rope Reduced Acceleration (004 option) (G's)</th>
<th>Wire Rope Reduced Tension (004 option) (oz)</th>
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</table>

### DIMENSIONAL INFORMATION

- **PA, PB, P420, P510, P1010, EP & V Series**

#### RANGES TO 50” (1250 mm)

- **Figure 1**

#### RANGES TO 60” (1500 mm) and 80” (2000 mm)

- **Figure 2**

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