

OEM Series: Cable-Extension Position Transducer

Precision Potentiometric Output
Ranges: 0-2 to 0-100 inches
Compact Size • OEM Applications

PTX101

Specification Summary:

GENERAL

Full Stroke Range Options 0-2 to 0-100 inches
 Output Signal Options voltage divider (potentiometer)
 Accuracy $\pm 0.25\%$ to $\pm 0.10\%$ full stroke *see ordering information*
 Repeatability $\pm 0.02\%$ full stroke
 Resolution essentially infinite
 Measuring Cable
 with standard cable tension019-in. dia. nylon-coated stainless steel
 with increased or high tension024-in. dia. nylon-coated stainless steel
 Enclosure Material anodized aluminum
 Sensor plastic-hybrid precision potentiometer
 Potentiometer Cycle Life *see ordering information*
 Maximum Retraction Acceleration *see ordering information*
 Weight 2 lbs. max.

ELECTRICAL

Input Resistance Options 500, 1K, 5K, 10K ohms, *see ordering information*
 Maximum Input Voltage *see ordering information*
 Power Rating *see ordering information*
 Output Signal Change Over Full Stroke Range $94\% \pm 4\%$ of input voltage

ENVIRONMENTAL

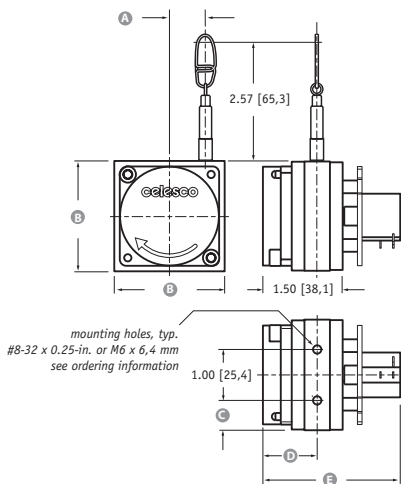
Enclosure NEMA 1
 Temperature Coefficient of Sensing Element 88 PPM/°F
 Humidity 100% RH @ 90°F (32 C)
 Operating Temperature -40° to 200°F (-40° to 90°C)
 Vibration up to 10 G's to 2000 Hz maximum



The PTX101 is a low cost, compact and easy-to-use cable-extension transducer. It is available with full-scale measurement ranges from 2 to 100 inches. The PTX101 provides a voltage feedback signal that is proportional to the linear movement of a traveling stainless-steel extension cable.

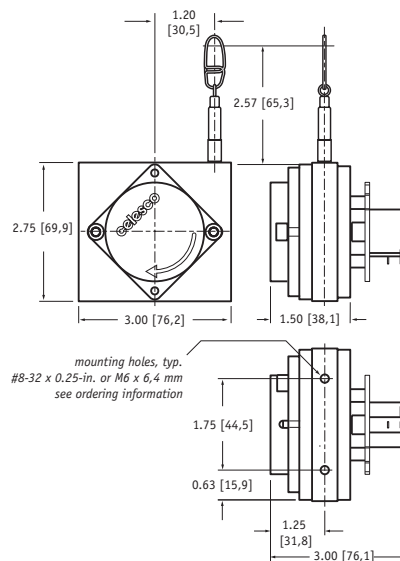
Simply mount the body of the transducer to a fixed surface and attach the extension cable to the moving object. The PTX101 is recommended for applications where space and money is limited.

2 to 60-inch Ranges

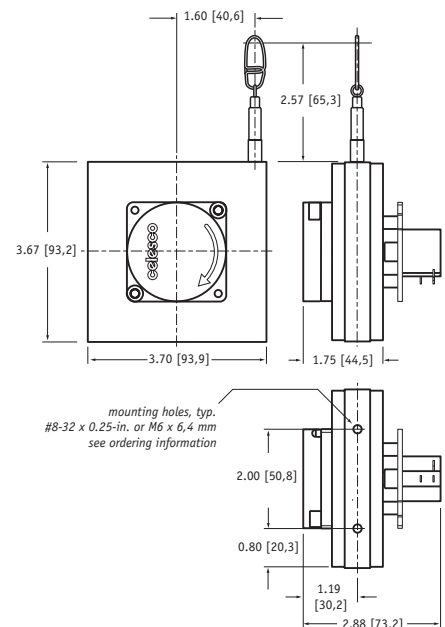


| Range | A | B | C | D | E |
|--------------|------------|-------------|------------|-------------|-------------|
| 2", 10", 20" | .34 [8.6] | 2.00 [50.8] | .50 [12.7] | .88 [22.0] | 2.60 [66.0] |
| 5", 25", 50" | .83 [21.1] | 2.00 [50.8] | .50 [12.7] | .88 [22.0] | 2.60 [66.0] |
| 15", 30" | .56 [14.2] | 2.00 [50.8] | .50 [12.7] | .88 [22.0] | 2.60 [66.0] |
| 40" | .64 [16.2] | 2.00 [50.8] | .50 [12.7] | .88 [22.0] | 2.60 [66.0] |
| 60" | .97 [24.6] | 2.50 [63.5] | .75 [19.1] | 1.25 [31.6] | 3.00 [76.1] |

75-inch Range



100-inch Range



All Dimensions are in INCHES [MM] tolerances are ± 0.03 in. [0.8 mm]

Ordering Information:

Model Number:

PTX101 - - **1** - **1** - **0**
order code: R A B C D E F G

Sample Model Number:

PTX101 - 0025 - 111 - 1110

- R** range: 25 inches
- A** measuring cable tension: standard - 5 oz.
- C** mounting holes: 8-32 x .25 in. threaded
- D** sensing circuit: 500 ohms
- F** electrical connection: solder terminals

Full Stroke Range:

| R order code: | 0002 | 0005 | 0010 | 0015 | 0020 | 0025 | 0030 | 0040 | 0050 | 0060 | 0075 | 0100 |
|----------------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| full stroke range, min: | 2 in. | 5 in. | 10 in. | 15 in. | 20 in. | 25 in. | 30 in. | 40 in. | 50 in. | 60 in. | 75 in. | 100 in. |
| accuracy (% of f.s.): | 0.25% | 0.25% | 0.15% | 0.15% | 0.10% | 0.15% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| potentiometer cycle life*: | 2.5 x 10 ⁶ | 2.5 x 10 ⁶ | 5 x 10 ⁵ | 5 x 10 ⁵ | 5 x 10 ⁵ | 5 x 10 ⁵ | 5 x 10 ⁵ | 2.5 x 10 ⁵ | 2.5 x 10 ⁵ | 2.5 x 10 ⁵ | 2.5 x 10 ⁵ | 2.5 x 10 ⁵ |

*-1 cycle is defined as the travel of the measuring cable from full retraction to full extension and back to full retraction

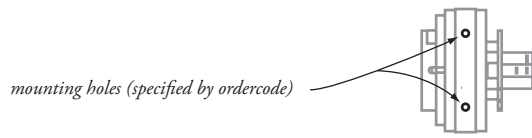
Measuring Cable Tension:

| A order code: | 1 | 2** | 3** |
|-----------------------|---------------------------------------|--------------------|---------------|
| | standard tension* (max. acceleration) | increased tension* | high tension* |
| 2, 10, 20 inch range: | 12 oz. (11 G) | 72 oz. | 144 oz. |
| 5, 25, 50 inch range: | 5 oz. (2 G) | 30 oz. | 60 oz. |
| 15, 30 inch range: | 8 oz. (3 G) | 48 oz. | 96 oz. |
| 40 inch range: | 6 oz. (4 G) | 36 oz. | 72 oz. |
| 60 inch range: | 13 oz. (4 G) | 26 oz. | 52 oz. |
| 75, 80 inch range: | 10 oz. (3 G) | 20 oz. | 40 oz. |
| 100 inch range: | 13 oz. (5 G) | 26 oz. | 52 oz. |

*- tolerance: ±20% **-Options 2, 3 for re-orders only, Option 7 no longer available.

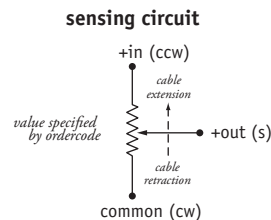
Mounting Holes:

| C order code: | 1 | 2 |
|----------------------|---------------------------------|----------------------------|
| | #8-32 x 0.25-in. threaded holes | M6 x 6,4 mm threaded holes |



Sensing Circuit:

| D order code: | 1 | 2 | 3 | 4 |
|----------------------|----------|-----------|-----------|-------------|
| | 500 ohm* | 1000 ohm* | 5000 ohm* | 10,000 ohm* |



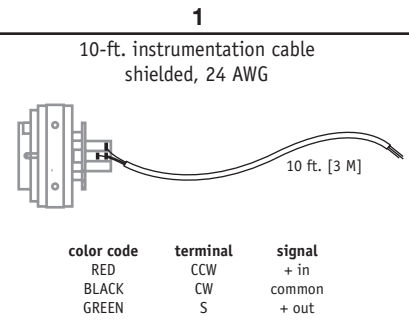
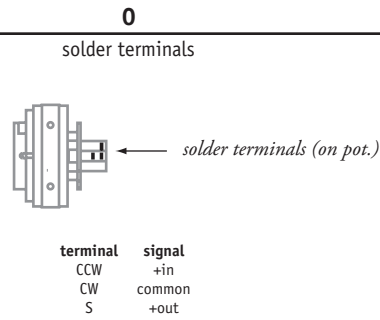
max. input voltage and power rating

| | 2-inch, 5-inch range | 10-inch to 100-inch range |
|-----------------|----------------------|---------------------------|
| 500-ohms: | 20 V AC/DC (1 W) | 30 V AC/DC (2 W) |
| 1K to 10K-ohms: | 30 V AC/DC (1 W) | 30 V AC/DC (2 W) |

*tolerance = ±10%

Electrical Connection:

F order code:



version: 5.0 last updated: June 2, 2011

PTX101 | 199