

Cable-Extension Position Transducer

- ▼ Long Range
- ▼ Industrial Grade
- ▼ Precision Potentiometric Output



EXTENDED RANGE

PT9101



Specification Summary:

GENERAL

Full Stroke Ranges-on this datasheet..... 0-600 to 0-1700 inches, see ① next page
 Output Signal..... voltage divider (potentiometer)
 Accuracy..... $\pm 0.10\%$ full stroke, max.
 Repeatability..... $\pm 0.02\%$ full stroke, max.
 Resolution..... essentially infinite
 Measuring Cable..... stainless steel, nylon-coated or thermoplastic, see ②
 Enclosure Material..... powder-painted aluminum or stainless steel, see ③
 Sensor..... plastic-hybrid precision potentiometer
 Potentiometer Cycle Life*..... 250,000, min.
 Maximum Retraction Acceleration..... see ⑤
 Maximum Velocity..... see ④
 Weight, Aluminum (Stainless Steel) Enclosure..... 14 lbs. (28 lbs.), max.

ELECTRICAL

Input Resistance..... 500, 1K, 5K, 10K ohms ($\pm 10\%$) or bridge, see ⑥
 Power Rating, Watts..... 2.0 at 70°F (derated to 0 @ 250°F)
 Recommended Maximum Input Voltage..... 30 V(AC or DC)
 Output Signal Change Over Measurement Range..... 94% $\pm 3\%$ of input voltage

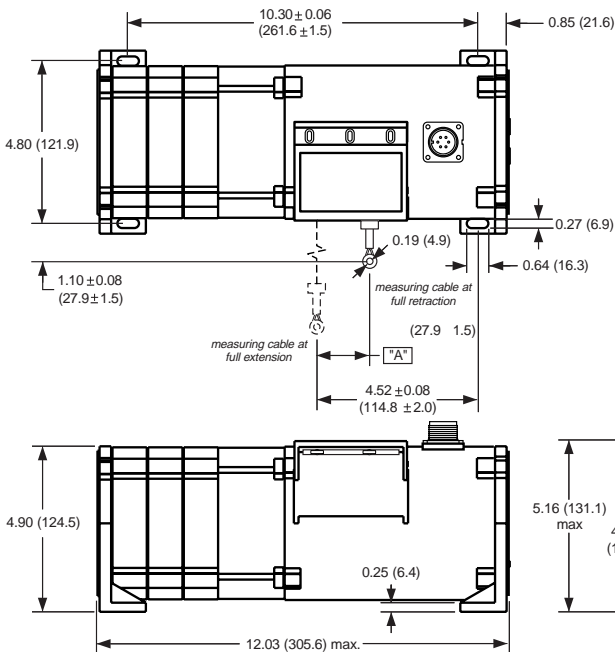
ENVIRONMENTAL

Enclosure Design..... NEMA 4/4X/6, IP 65/67/68, see ⑦ and ⑧
 Operating Temperature..... -40° to 200°F
 Vibration..... up to 10 G's to 2000 Hz maximum

note: potentiometer cycle life is defined as the minimum number of times the measuring cable can be fully extended and retracted before any measureable degradation of the output signal occurs.

The PT9101 is a work-horse for demanding long-range applications requiring a linear position measurements in ranges up to 1700 inches. Available with either a 500, 1K, 5K, or 10K ohm potentiometer, the PT9101 operates with any basic panel meter or programmable controller.

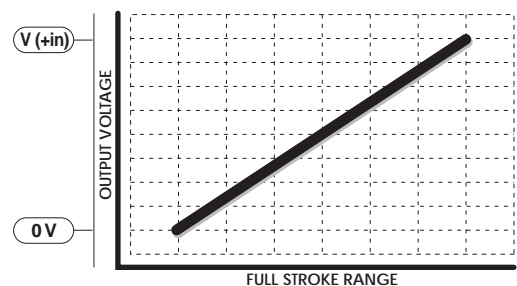
As a member of Celesco's innovative family of NEMA 4 rated cable-extension transducers, the PT9101 offers numerous benefits. It installs in minutes, works without perfect parallel alignment, and when it's stainless-steel cable is retracted, it measures only 6".



RANGE	"A" DIMENSION
600	1.76 (44.7)
800	1.58 (40.1)
1000	1.98 (50.2)
1200	1.49 (37.8)
1500	1.86 (47.2)
1700	2.11 (53.6)

DIMENSIONS ARE IN INCHES (MM)
TOLERANCES ARE ± 0.02 IN. (± 0.5 MM)
UNLESS OTHERWISE NOTED

Electrical Output Signal:



Latin Tech, Inc.

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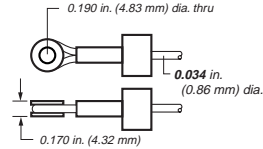
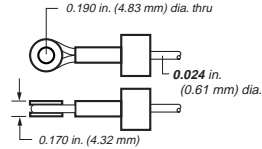
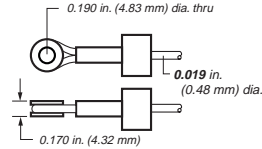
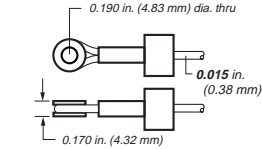
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▼ Ordering Information

Model Number:

PT9101- _____ **1** _____ **1** _____ **0**
 order code: **R** **A** **B** **C** **D** **E** **F** **G**

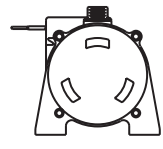
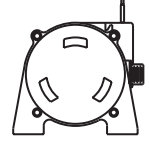
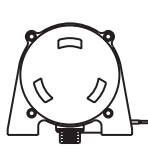
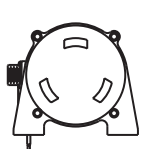
Full Stroke Range:

	R order code:	0600	0800	1000	1200	1500	1700
①	full stroke range, min:	600 inches	800 inches	1000 inches	1200 inches	1500 inches	1700 inches
	cable tension (±30%):	25 oz.	25 oz.	24 oz.	24 oz.	23 oz.	23 oz.
②	cable construction:	.034 nylon-coated stainless	.024 nylon-coated stainless	.019 nylon-coated stainless	.015 stainless steel		
							

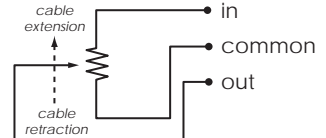
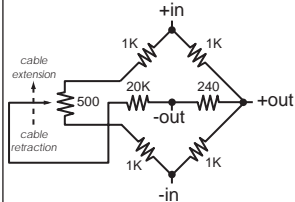
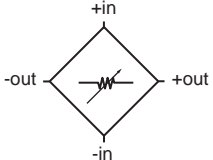
Enclosure Material:

	A order code:	1	3
③	enclosure material:	powder-painted aluminum	303 stainless steel
④	maximum velocity:	60 inches per second	20 inches per second
⑤	max. retraction acceleration:	1 G	0.33 G

Cable Exit:

D order code:	1	2	3	4
direction:	front	top	rear	bottom
				

Output Signals:

	D order code:	1	2	3	4	5	6
⑥	sensing circuit:	500 ohm	1K ohm	5K ohm	10K ohm	2 mV/V bridge	0...30 mV/V bridge
							
						full scale output: adjustable from 0 to 30mV/V	zero adjust: from full retraction to 50% of full stroke

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Electrical Connection:

① order code:

	1	2	3	4																																														
electrical connection:	6-pin plastic connector and mating plug	10 ft. waterproof cable	6-pin metal connector and mating plug	25 ft. instrumentation cable																																														
	<table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>A = +IN</td> <td>A = +IN</td> </tr> <tr> <td>B = COMMON</td> <td>B = -IN</td> </tr> <tr> <td>C = +OUT</td> <td>C = -OUT</td> </tr> <tr> <td></td> <td>D = +OUT</td> </tr> </tbody> </table>	connections		standard	bridge	A = +IN	A = +IN	B = COMMON	B = -IN	C = +OUT	C = -OUT		D = +OUT	<table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>WHT = +IN</td> <td>not available</td> </tr> <tr> <td>BLK = COMMON</td> <td></td> </tr> <tr> <td>GRN = OUT</td> <td></td> </tr> </tbody> </table>	connections		standard	bridge	WHT = +IN	not available	BLK = COMMON		GRN = OUT		<table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>A = +IN</td> <td>A = +IN</td> </tr> <tr> <td>B = COMMON</td> <td>B = -IN</td> </tr> <tr> <td>C = +OUT</td> <td>C = -OUT</td> </tr> <tr> <td></td> <td>D = +OUT</td> </tr> </tbody> </table>	connections		standard	bridge	A = +IN	A = +IN	B = COMMON	B = -IN	C = +OUT	C = -OUT		D = +OUT	<table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>RED = +IN</td> <td>RED = +IN</td> </tr> <tr> <td>BLK = COMMON</td> <td>BLK = -IN</td> </tr> <tr> <td>GRN = OUT</td> <td>WHT = -OUT</td> </tr> <tr> <td></td> <td>GRN = +OUT</td> </tr> </tbody> </table>	connections		standard	bridge	RED = +IN	RED = +IN	BLK = COMMON	BLK = -IN	GRN = OUT	WHT = -OUT		GRN = +OUT
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IP rating:	67	67, 68*	65	67																																														
NEMA rating:	6, 4X**	6, 4X**	4	6																																														

note: *requires factory submersion test

**applies to stainless steel enclosure, see ④

⑦

⑧

▼ Sample Model Number

PT9101-1500 - 1 1 1 - 1 1 1 0
order code: ⑥ ④ ⑥ ⑥ ① ⑥ ⑥ ⑥

Specifications: Full Stroke Range: 1500 inches
 Enclosure Material: 0.015-in dia. stainless steel cable
 Cable Exit: front
 Output Signals: 500 ohm potentiometer
 Electrical Connection: 6-pin plastic connector