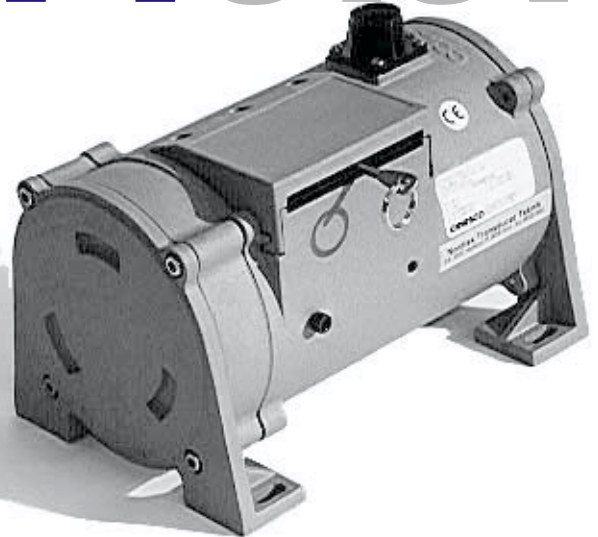


Cable-Extension Position Transducer

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



PT9101



Specification Summary:

GENERAL

Full Stroke Ranges-*on this datasheet* 0-75 to 0-550 inches,
(1.9m to 14m) see ① next page
Output Signal voltage divider (potentiometer)
Accuracy $\pm 0.10\%$ full stroke
Repeatability $\pm 0.02\%$ full stroke
Resolution essentially infinite
Measuring Cable stainless steel, nylon-coated or thermoplastic, see ⑥
Enclosure Material powder-painted aluminum or stainless steel, see ②
Sensor plastic-hybrid precision potentiometer
Maximum Retraction Acceleration see ⑤
Maximum Velocity see ④
Weight, Aluminum (Stainless Steel) Enclosure 3.6kg. (7kg), max.

ELECTRICAL

Input Resistance 500, 1K, 5K, 10K ohms ($\pm 10\%$) or bridge, see ⑦
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

Environmental Suitability NEMA 4/4x, IP 65/67/68, see ⑧ and ⑨
Operating Temperature -10° to 60°C
Vibration up to 10 G's to 2000 Hz maximum

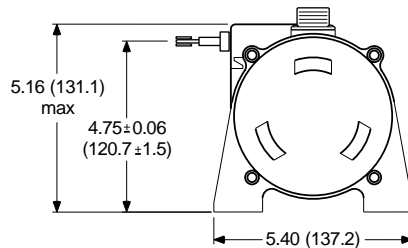
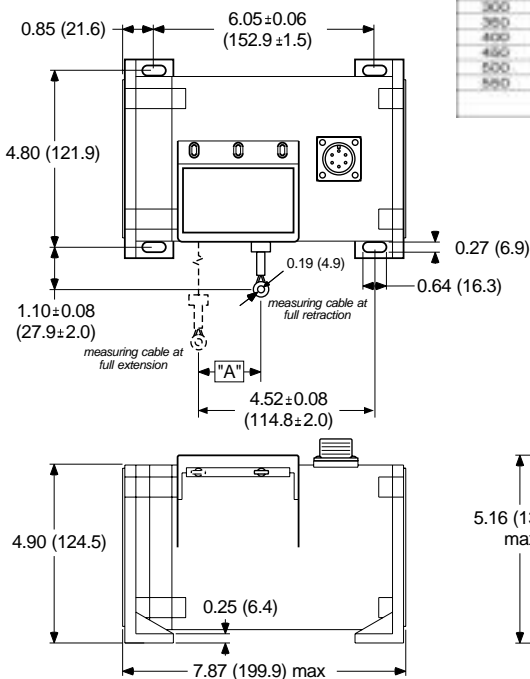
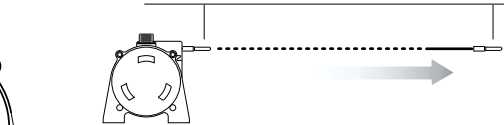
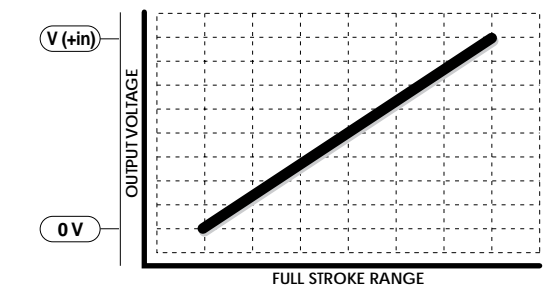
The PT9101 is a work-horse for demanding long-range applications requiring a linear position measurements in ranges up to 1700 inches. Available with either a 500, 1K, 5K, or 10K ohm potentiometer, the PT9101 operates with any basic panel meter or programmable controller.

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 150mm.

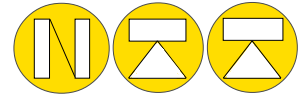
RANGE	"A" DIMENSION MEASURING CABLE DIAMETER		
	0.034 in.	0.047 in.	0.062 in.
75	0.22	0.29	0.37
100	0.29	0.39	0.49
150	0.44	0.59	0.73
200	0.68	0.79	0.98
250	0.73	0.98	1.29
300	0.86	1.16	1.47
350	1.02	1.38	1.71
400	1.17	1.57	1.98
450	1.31	1.77	N/A
500	1.46	1.97	N/A
550	1.61	N/A	N/A

DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED. SEE LISTING FOR TOLERANCES.

Electrical Output Signal:



PT9101 • Cable-Extension Transducer • Potentiometric Output



▼ Ordering Information

Model Number:

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

Full Stroke Range:

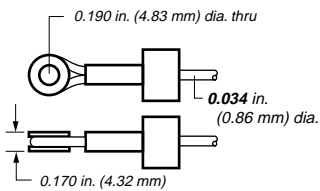
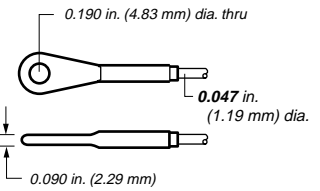
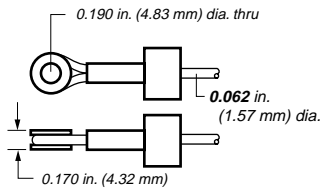
	R order code:	A order code:	B order code:	C order code:	D order code:	E order code:	F order code:	G order code:
① full stroke range, min:	0075	0100	0150	0200	0250	0300		
	75 inches	100 inches	150 inches	200 inches	250 inches	300 inches		
	0350	0400	0450*	0500*	0550*			
full stroke range, min:	350 inches	400 inches	450 inches	500 inches	550 inches			

*note: *42 oz. cable tension (see ③ below) for these ranges is strongly recommended!*

Enclosure Material and Measuring Cable Tension:

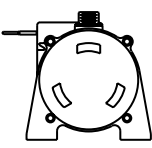
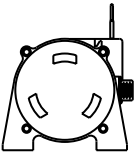
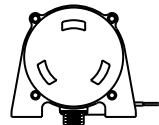
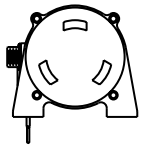
	A order code:	1	2	3	4
enclosure:		see front page	refer to supplement 9-A	see front page	refer to supplement 9-A
② enclosure material:		powder-painted aluminum		303 stainless steel	
③ cable tension (±30%):		26 oz.	42 oz.	26 oz.	42 oz.
④ maximum velocity:		60 inches per second	200 inches per second	20 inches per second	80 inches per second
⑤ max. retraction acceleration:		1 G	5 G's	0.33 G	2 G's

Measuring Cable:

	B order code:	1*	2**	3***
⑥ cable construction:		nylon-coated stainless steel	stainless steel	thermoplastic
				

notes: *available in all ranges **available in ranges up to 500-inches only ***available in ranges up to 400-inches only

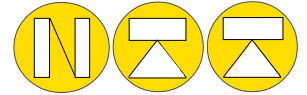
Cable Exit:

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

celesco

Nordisk Transducer Teknik • Als Odde DK9560 Hadsund Denmark
 tel.: +4598581444 • fax: +4598581866 • www.ntt.dk • kd@ntt.dk

PT9101 • Cable-Extension Transducer • Potentiometric Output



Output Signals:

⑦	① order code:	1	2	3	4	5	6
	sensing circuit:	500 ohm	1K ohm	5K ohm	10K ohm	2 mV/V bridge	0...30 mV/V bridge
							<p>full scale output: adjustable from 0 to 30mV/V zero adjust: from full retraction to 50% of full stroke</p>

Electrical Connection:

⑧	⑨	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																												
				<p>3-CONDUCTOR, 18 GA., TYPE SJOW-A -0.35 in. (9 mm) dia.</p>		<p>MULTICONDUCTOR, 24 GA., SHIELDED -0.2 in. (5 mm) dia.</p>																												
			<table border="1"> <tr> <td rowspan="2">contact view</td> <td colspan="2">connections</td> </tr> <tr> <td>standard</td> <td>bridge</td> </tr> <tr> <td></td> <td>A = +IN B = COMMON C = +OUT</td> <td>A = +IN B = -IN C = -OUT D = +OUT</td> </tr> </table>	contact view	connections		standard	bridge		A = +IN B = COMMON C = +OUT	A = +IN B = -IN C = -OUT D = +OUT	<table border="1"> <tr> <td colspan="2">connections</td> </tr> <tr> <td>standard</td> <td>bridge</td> </tr> <tr> <td>WHT = +IN BLK = COMMON GRN = OUT</td> <td>not available</td> </tr> </table>	connections		standard	bridge	WHT = +IN BLK = COMMON GRN = OUT	not available	<table border="1"> <tr> <td rowspan="2">contact view</td> <td colspan="2">connections</td> </tr> <tr> <td>standard</td> <td>bridge</td> </tr> <tr> <td></td> <td>A = +IN B = COMMON C = +OUT</td> <td>A = +IN B = -IN C = -OUT D = +OUT</td> </tr> </table>	contact view	connections		standard	bridge		A = +IN B = COMMON C = +OUT	A = +IN B = -IN C = -OUT D = +OUT	<table border="1"> <tr> <td colspan="2">connections</td> </tr> <tr> <td>standard</td> <td>bridge</td> </tr> <tr> <td>RED = +IN BLK = COMMON GRN = OUT</td> <td>RED = +IN BLK = -IN WHT = -OUT GRN = +OUT</td> </tr> </table>	connections		standard	bridge	RED = +IN BLK = COMMON GRN = OUT	RED = +IN BLK = -IN WHT = -OUT GRN = +OUT
contact view	connections																																	
	standard	bridge																																
	A = +IN B = COMMON C = +OUT	A = +IN B = -IN C = -OUT D = +OUT																																
connections																																		
standard	bridge																																	
WHT = +IN BLK = COMMON GRN = OUT	not available																																	
contact view	connections																																	
	standard	bridge																																
	A = +IN B = COMMON C = +OUT	A = +IN B = -IN C = -OUT D = +OUT																																
connections																																		
standard	bridge																																	
RED = +IN BLK = COMMON GRN = OUT	RED = +IN BLK = -IN WHT = -OUT GRN = +OUT																																	
		IP rating:	67	67, 68*	67	67																												
		NEMA rating:	4, 4X**	4, 4X**	4	4																												

note: *requires factory submersion test **applies to stainless steel enclosure, see ②

▼ Sample Model Number

PT9101-0200 - 1 1 1 - 1 1 1 0
order code: ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Specifications: Full Stroke Range: 200 inches
 Enclosure Material: powder-painted aluminum
 Measuring Cable: 0.034-in dia. nylon coated stainless steel cable
 Cable Exit: front
 Output Signals: 500 ohm potentiometer
 Electrical Connection: 6-pin plastic connector

celesco

Nordisk Transducer Teknik • Als Odde DK9560 Hadsund Denmark
 tel.: +4598581444 • fax: +4598581866 • www.ntt.dk • kd@ntt.dk