

Cable-Extension Position Transducer

- ▼ Long Range
- ▼ Industrial Grade
- ▼ Position and Velocity Transducer

EXTENDED RANGE

PT9301

Specifications:

Full Stroke Ranges-on this datasheet. 0-600 to 0-1700 inches, see ① back page

POSITION

Output Signal voltage divider (potentiometer)
 Accuracy $\pm 0.10\%$ full stroke
 Repeatability $\pm 0.02\%$ full stroke
 Resolution essentially infinite
 Sensor plastic-hybrid precision potentiometer
 Potentiometer Cycle Life 250,000, min.
 Input Resistance 500, 1K, 5K, and 10K ohms $\pm 10\%$, 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% $\pm 4\%$ of input voltage

VELOCITY

Output Signal DC tachometer output
 Linearity better than $\pm 0.10\%$ of output at any velocity
 Repeatability $\pm 0.10\%$ of reading
 Maximum velocity see ④
 Sensor tach generator
 Input Voltage none
 Output Voltage @ 100 IPM 361 mV $\pm 3\%$
 Output Impedance 350 ohm $\pm 10\%$
 Output Ripple .. $\pm 3\%$ rms of velocity output (for velocities > 1.29 inches per second)

GENERAL

Measuring Cable nylon-coated stainless steel or thermoplastic, see ②
 Enclosure Material powder-painted aluminum or stainless steel, see ③
 Maximum Retraction Acceleration see ⑤
 Weight, Aluminum (Stainless Steel) Enclosure 14 lbs. (28 lbs.), max.

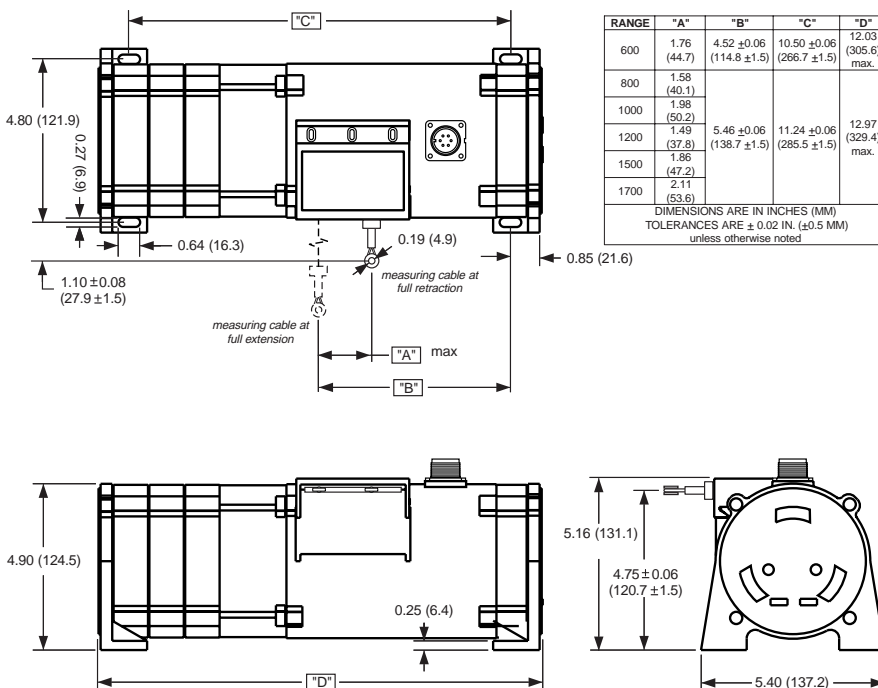
ENVIRONMENTAL

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

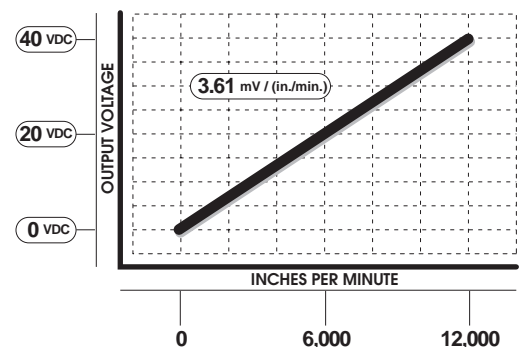


The PT9301 is a combination position and velocity transducer for demanding long-range applications requiring a linear position measurements in ranges up to 1700". A precision plastic-hybrid potentiometer provides accurate position feedback while a self-generating DC tachometer provides a velocity signal that is proportional to the speed of the traveling stainless-steel measuring cable.

As a member of Celesco's innovative family of NEMA 4 rated cable-extension transducers, the PT9301 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".



Velocity Output Signal:



celesco

PT9301 • Extended Range • Cable-Extension Transducer • Position and Velocity Transducer

▼ Ordering Information

Model Number:

PT9301- _____ **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:

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

Output Signals:

I order code:	1	2	3	4
⑥ position & velocity circuits:				

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Electrical Connection:

① order code:

electrical connection:

	1	3	4																																		
	6-pin plastic connector and mating plug	6-pin metal connector and mating plug	25 ft. instrumentation cable																																		
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IP rating:	67	65	67																																		
NEMA rating:	6, 4X*	4	6																																		

note: *applies to stainless steel enclosure, see ③

⑦
⑧



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▼ Sample Model Number

PT9301-1500 - 1 1 1 - 1 1 1 0
order code: ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Specifications: Full Stroke Range: 1500 inches
 Enclosure Material: powder-painted aluminum
 Measuring Cable: 0.015-in dia. stainless steel cable
 Cable Exit: front
 Output Signals: DC tachometer generated velocity signal and 500 ohm potentiometer for position
 Electrical Connection: 6-pin plastic connector