

Cable-Extension Position Transducer

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



PT8101

Specification Summary:

GENERAL
 Full Stroke Ranges 50mm to 1500mm, see ① next page
 Output Signal voltage divider (potentiometer)
 Accuracy ± 0.25 to 0.10% full stroke, see ②
 Repeatability $\pm 0.02\%$ full stroke
 Resolution essentially infinite
 Measuring Cable stainless steel, nylon-coated or thermoplastic, see ⑤
 Enclosure Material powder-painted aluminum or stainless steel, see ④
 Sensor plastic-hybrid precision potentiometer
 Weight, Aluminum (Stainless Steel) Enclosure 1.5 kg (3kg), max.

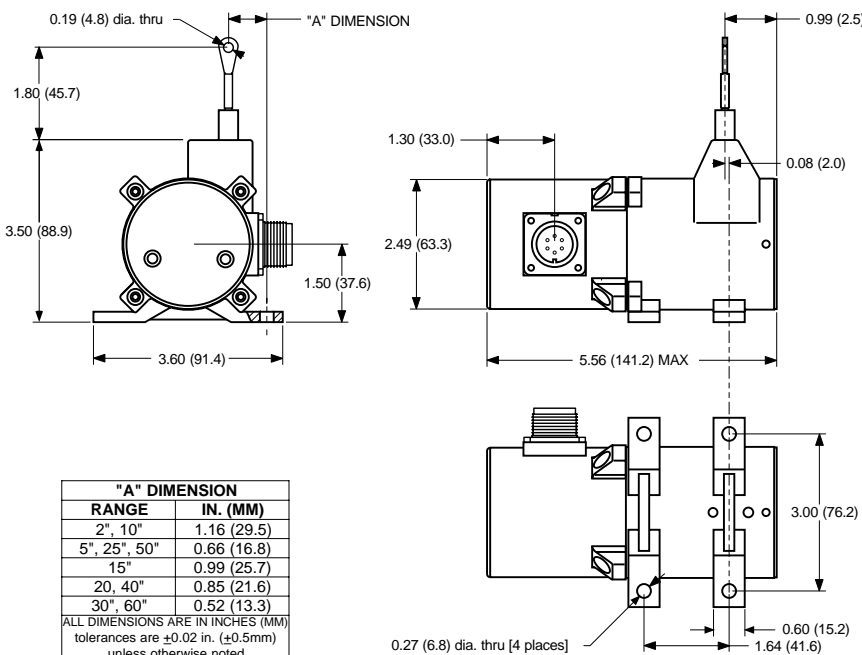
ELECTRICAL
 Input Resistance 500, 1K, 5K, 10K ohms ($\pm 10\%$) or bridge, see ⑨
 Power Rating, Watts 2.0 at 70°F (derated to 0 @ 250°F)
 Recommended Maximum Input Voltage 30 V(AC or DC)
 Output Signal Change Over Measurement Range 94% $\pm 3\%$ of input voltage

ENVIRONMENTAL
 Enclosure Design NEMA 4/4X, IP65/67/68, see ⑥ and ⑦
 Operating Temperature -10° to 70°C
 Vibration up to 10 G's to 2000 Hz maximum

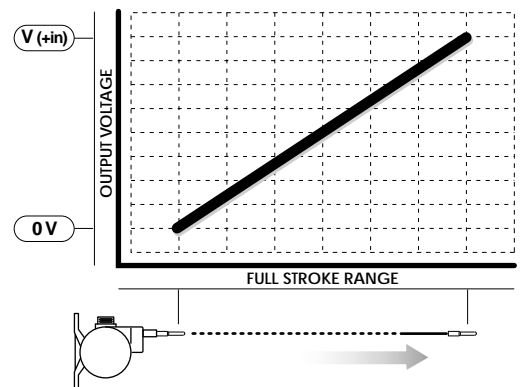


The PT8101, using a high cycle plastic-hybrid potentiometer, operates with any basic panel meter or programmable controller in factories and harsh environments requiring linear position measurements in ranges up to 60".

As a member of Celesco's innovative family of NEMA 4 rated cable-extension transducers, the PT8101: installs in minutes by mounting it's body to a fixed surface and attaching it's cable to the movable object, works without perfect parallel alignment, and when it's stainless-steel cable is retracted, it measures only 125mm.

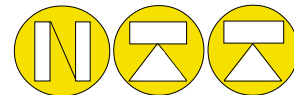


Electrical Output Signal:





PT8101 • Cable-Extension Transducer • Potentiometric Output



▼ Ordering Information

Model Number:

PT8101- _____ **1** - _____ **1** _____ **R** _____ **A** _____ **B** _____ **C** _____ **D** _____ **E** _____ **F** _____ **G**

order code: _____

Full Stroke Range:

③ order code:	0002	0005	0010	0015	0020	0025	0030	0040	0050	0060
① full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.	60 in.
② accuracy (% of f.s.):	0.25%	0.25%	0.15%	0.15%	0.15%	0.15%	0.15%	0.10%	0.10%	0.10%
maximum cable acceleration:	25 G's	5 G's	25 G's	10 G's	8 G's	5 G's	3 G's	8 G's	5 G's	3 G's
③ std. cable tension (±20%):	28 oz.	12 oz.	28 oz.	19 oz.	15 oz.	12 oz.	9 oz.	15 oz.	12 oz.	9 oz.
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

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

Enclosure Material and Measuring Cable Tension:

④ order code:	1	2	3	4
enclosure material:	powder-painted aluminum		303 stainless steel	
cable tension* multiplier:	1x	3x	1x	3x

*note: refer to ③ above

Measuring Cable:

⑤ order code:	1*	2**	3***
cable construction:	nylon-coated stainless steel	stainless steel	thermoplastic

notes: *available in all ranges **5, 15, 20, 25, 30-inch ranges only ***available in ranges up to 25-inches only

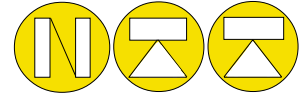
Output Signals:

⑥ 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>





PT8101 • Cable-Extension Transducer • Potentiometric Output



Electrical Connection:

	1	2	3	4																																														
① order code:																																																		
electrical connection:	6-pin plastic connector and mating plug	10 ft. waterproof cable	6-pin metal connector and mating plug	25 ft. instrumentation cable																																														
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⑦ IP rating:	67	67, 68*	67	67																																														
⑧ NEMA rating:	4, 4X**	4, 4X**	4	4																																														

note: *requires factory submersion test

**applies to stainless steel enclosure, see ④

Cable Guide Options:

④ order code:	0	1	2*	3
	standard nylon cable guide	stainless steel cable guide	polyurethane cable bellows	integral cable brush

note: *will limit measurement range to 25 inches (635 mm) maximum

▼ Sample Model Number

PT8101-0030 - 1 2 1 - 4 1 1 0

order code:

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Specifications: Full Stroke Range: 30 inches
 Enclosure Material: powder-painted aluminum
 Measuring Cable: 0.047-in dia. stainless steel cable
 Output Signals: 10 K ohm potentiometer sensor
 Electrical Connection: 6-pin plastic connector
 Cable Guide: standard nylon

celesco

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