

Cable-Extension Position Transducer

- ▼ Industrial Grade – Short to Medium Range
- ▼ 4...20 mA Output Signal
- ▼ Intrinsically Safe



PT8420



Specification Summary:

GENERAL

Full Stroke Ranges 0-2 to 0-60 inches, see ① next page
 Output Signal 4 - 20 mA (2-wire), 0 - 20 mA (3-wire), see ⑥
 Accuracy ± 0.28 to $\pm 0.15\%$ full stroke, see ②
 Repeatability $\pm 0.05\%$ full stroke, max.
 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 3 lbs. (6 lbs.) max.

ELECTRICAL

Input Voltage 12 to 40 VDC
 Input Current 20 mA, max.
 Loop Resistance (Load) (loop supply voltage - 12) / 0.02, max.
 Circuit Protection 38 mA maximum
 Impedance 100 M Ω @ 100 VDC, min.
 Zero and Span Adjustment 2:1 turndown

ENVIRONMENTAL

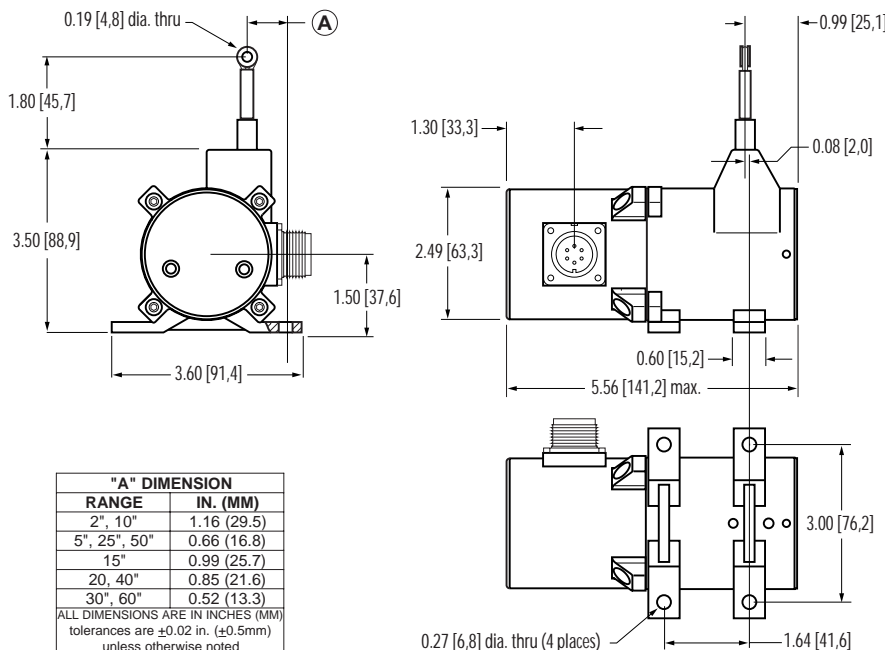
Enclosure Design NEMA 4/4X/6, IP 65/67/68, see ⑧ and ⑨
 Hazardous Area Certification (see ⑦)
 CSA 22.2: Class 1, Groups A, B, C and D
 Cenelec: LCIE EEx ia IIc T4
 Operating Temperature -40° F to 200° F
 Thermal Effects
 Zero 0.01% full stroke / °F, max.
 Span 0.01% / °F, max.
 Vibration up to 10 G's to 2000 Hz max.

EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

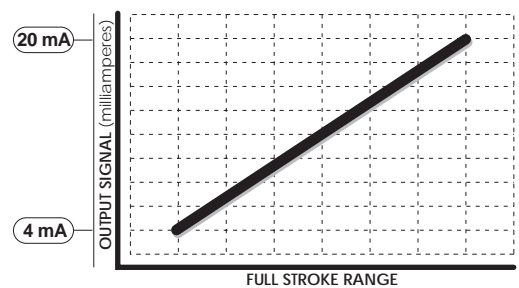
Emission / Immunity EN50081-2 / EN50082-2

The PT8420 with its 4-20 mA feedback signal, is ideal for monitoring the stroke of a hydraulic cylinder and other applications requiring position data acquisition in harsh environments.

As a member of Celesco's family of NEMA 4-rated cable-extension transducers, the PT8420 provides a 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.



Electrical Output Signal:



Latin Tech, Inc.

PT8420 • Cable-Extension Transducer • 4...20 mA Output Signal

▼ Ordering Information

Model Number:

PT8420- _____ - _____ **1** - **1** _____ _____ _____
 order code: **R** **A** **B** **C** **D** **E** **F** **G**

Full Stroke Range:

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.):	0.28%	0.28%	0.18%	0.18%	0.18%	0.18%	0.18%	0.15%	0.15%	0.15%
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

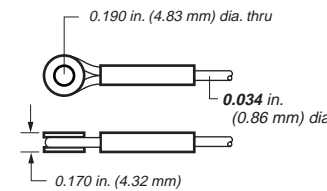
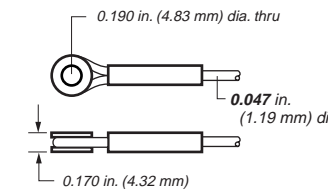
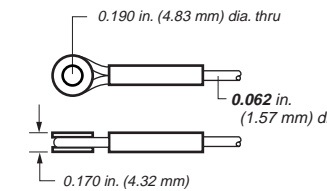
note: *potentiometer cycle life is defined as the minimum number of times the measuring cable can be fully extended and retracted before any measurable degradation of the output signal occurs.

Enclosure Material and Measuring Cable Tension:

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

note: *refer to ③ above

Measuring Cable:

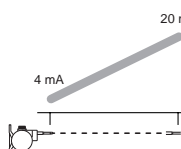
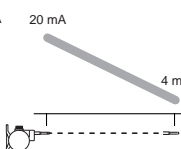
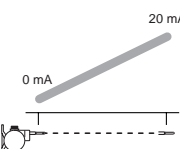
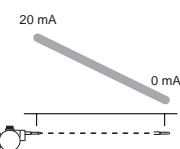
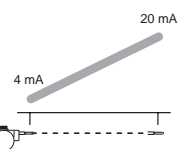
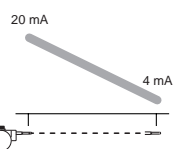


order code:	1*	2**	3***
⑤ cable construction:	.034 nylon-coated stainless steel	.047 stainless steel	.062 thermoplastic
			

notes: *available in all ranges

**5, 15, 20, 25, 30-inch ranges only

***available in ranges up to 30-inches only

Output Signals:

order code:	1	2	3	4	5*	6*
	4...20 mA [2-wire]	20...4 mA [2-wire]	0...20 mA [3-wire]	20...0 mA [3-wire]	4...20 mA [2-wire]	20...4 mA [2-wire]
⑥ output signal configuration						
⑦ hazardous area certification	none	none	none	none	 CSA Standard 22.2 Class 1 Groups A, B, C and D	 Cenelec LCIE EEx ia IIc T4

*Important: Intrinsically Safe when powered from a CSA certified zener barrier rated 28 VDC max, 110 mA max as per Installation Drawing 677984.

PT8420 • Cable-Extension Transducer • 4...20 mA Output Signal

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																																																												
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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

⑧

⑨

Cable Guide Options:

⑥ 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

PT8420-0030-111-1110
order code: ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Specifications:

- Full Stroke Range: 30 inches
- Enclosure Material: powder-painted aluminum
- Measuring Cable: 0.034-in dia. nylon coated stainless steel cable
- Output Signals: 4-20 mA, 2-wire, output increasing with cable extension
- Electrical Connection: 6-pin plastic connector
- Cable Guide: standard nylon