

Cable-Extension Position Transducer

- ▼ Short to Medium Range
- ▼ Compact Size • OEM Applications
- ▼ 4...20 mA or 0...20 mA Output Signals



PT1MA



Specification Summary:

GENERAL

Full Stroke Ranges 0-2 to 0- 50 inches, see ① next page
 Output Signal 4 - 20 mA (2-wire), 0 - 20 mA (3-wire), see ③
 Accuracy ± 0.28 to $\pm 0.15\%$ full stroke, see ②
 Repeatability $\pm 0.05\%$ full stroke, max.
 Resolution essentially infinite
 Measuring Cable 0.019-in. dia. nylon-coated stainless steel
 Enclosure Material ABS plastic and black anodized aluminum
 Sensor plastic-hybrid precision potentiometer
 Weight 1 lb., 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

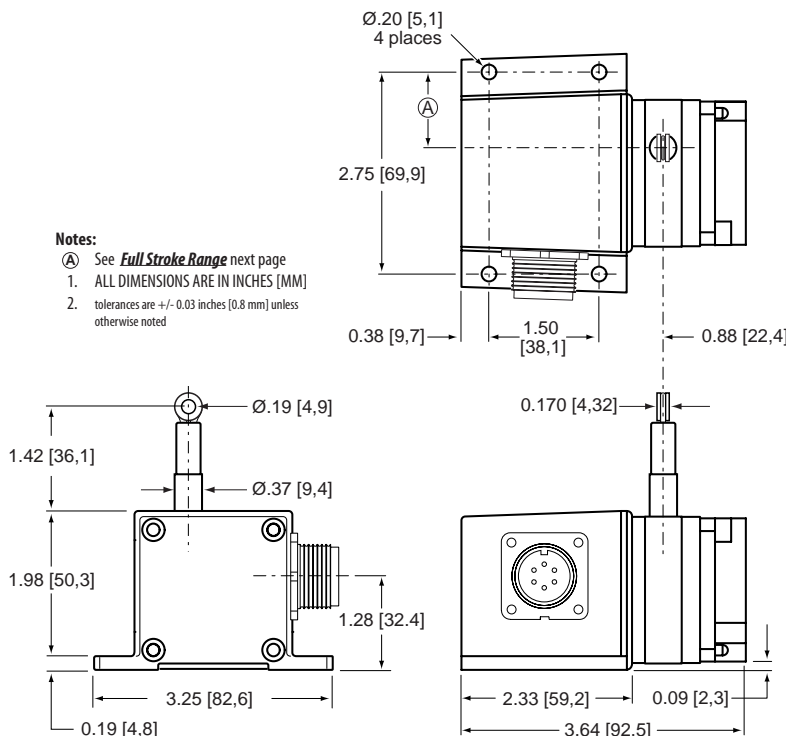
ENVIRONMENTAL

Enclosure Design NEMA 4, IP 67
 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.

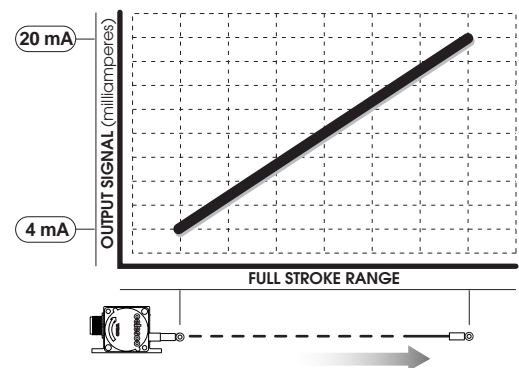
The PT1MA adds 4...20 mA position feedback signal to Celesco's compact line of cable-extension transducers. The PT1MA is available with full stroke ranges from as little as 2 inches on up to 50 inches with adjustable zero and span settings to precisely match the full scale output to your exact measurement range.

The PT1MA offers several options including forward and reverse 0...20 and 4...20 mA output signals, alternate measuring cable exits and a couple different electrical connection options.

CE **EMC COMPLIANCE PER DIRECTIVE 89/336/EEC**
 Emission / Immunity EN50081-2 / EN50082-2



Electrical Output Signal:



Latin Tech, Inc.

PT1MA • Cable-Extension Transducer • 4...20mA Output

Ordering Information

Model Number:

PT1MA - _____
order code: **R** **A** **B** **C** **D**

Sample Model Number:

PT1MA - 30 - UP - 420E - MC4 - SG

- R** range: 30 inches
- A** measuring cable exit: up
- B** output signal: 4...20mA
- C** electrical connection: 4-pin micro connector
- D** cable guide: spring-loaded guide

Full Stroke Range:

R order code:	2	5	10	15	20	25	30	40	50
① full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.
② accuracy (% of f.s.):	0.28%	0.28%	0.18%	0.18%	0.18%	0.18%	0.15%	0.15%	0.15%
maximum cable acceleration:	11 G's	3 G's	11 G's	5 G's	4 G's	3 G's	5 G's	4 G's	3 G's
std. cable tension (±30%):	12 oz.	5 oz.	12 oz.	9 oz.	6 oz.	5 oz.	9 oz.	6 oz.	5 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
③ A - inches (mm)**:	1.04 (26.3)	0.54 (13.8)	1.04 (26.3)	0.82 (20.7)	0.74 (18.7)	0.54 (13.8)	0.82 (20.7)	0.74 (18.7)	0.54 (13.8)
④ B - inches (mm)**:	0.75 (19.1)	0.29 (6.1)	0.75 (19.1)	0.53 (13.5)	0.45 (11.5)	0.29 (6.1)	0.53 (13.5)	0.45 (11.5)	0.29 (6.1)
⑤ C - inches (mm)**:	1.43 (36.3)	1.89 (48.0)	1.43 (36.3)	1.65 (41.9)	1.73 (43.7)	1.89 (48.0)	1.65 (41.9)	1.73 (43.7)	1.89 (48.0)

*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.

**note: refer to Cable Exit below.

Cable Exit:

A order code:	UP	DN	FR	BK
direction:	up	down	front	back

note: **A** — see ③ above **B** — see ④ above **C** — see ⑤ above

Output Signals:

B order code:	420E	420R	020E	020R
⑥ output signal configuration:	4...20 mA (2-wire)	20...4 (2-wire)	0...20 mA (3-wire)	20...0 (3-wire)

▼ **Ordering Information (cont.)**

Electrical Connections:

① *order code:*

electrical connection:

	MC4	M6	C25
	4-pin micro-connector and 12 ft. [3.7 m] cable assembly	6-pin plastic connector and mating plug	25 ft. [7.6 m] instrumentation cable
	<p>12...40 VDC 0/4...20 mA out common earth ground</p> <p>2-wire RED-BLK / pin 1 RED-WHT / pin 2 n/a GREEN / pin 4</p> <p>3-wire RED-BLK / pin 1 RED-WHT / pin 2 RED / pin 3 n/a</p>	<p>12...40 VDC 0/4...20 mA out common earth ground</p> <p>2-wire A B n/a D</p> <p>3-wire A C B n/a</p> <p><i>mating plug</i> (contact view) </p>	<p>12...40 VDC 0/4...20 mA out common earth ground</p> <p>2-wire RED BLK n/a GRN</p> <p>3-wire RED BLK WHT n/a</p>

Cable Guide:

① *order code:*

description:

	blank	SG
	standard cable guide	spring-loaded guide

*note: start of full stroke range begins at **full compression point**