

Cable-Extension Position Transducer

0/4...20 mA Output

Ranges: 0-2 to 0-50 inches

Compact Size • OEM Applications



PT1MA

Specification Summary:

GENERAL

Full Stroke Range Options 0-2 to 0-50 inches
 Output Signal Options 4...20 mA (2-wire) and 0...20 mA (3-wire)
 Accuracy $\pm 0.28\%$ to $\pm 0.15\%$ full stroke *see ordering information*
 Repeatability $\pm 0.05\%$ full stroke
 Resolution essentially infinite
 Measuring Cable019-in. dia. nylon-coated stainless steel
 Enclosure Material glass-filled polycarbonate and black anodized aluminum
 Sensor plastic-hybrid precision potentiometer
 Potentiometer Cycle Life *see ordering information*
 Maximum Retraction Acceleration *see ordering information*
 Weight 1 lb. max.

ELECTRICAL

Input Voltage *see ordering information*
 Input Current20 mA max.
 Maximum Loop Resistance (Load) (loop supply voltage - 8)/0.020
 Circuit Protection38 mA max.
 Impedance 100M ohms@100 VDC, min.
 Output Signal Adjustment
 Zero Adjustment from factory set zero to 50% of full stroke range
 Span Adjustment to 50% of factory set span
 Thermal Effects
 Zero 0.01% f.s./°F, max.
 Span 0.01% f.s./°F, max.

ENVIRONMENTAL

Enclosure NEMA 4, IP 65
 Operating Temperature 0° to 200°F (-17° to 90°C)
 Vibration up to 10 G's to 2000 Hz maximum

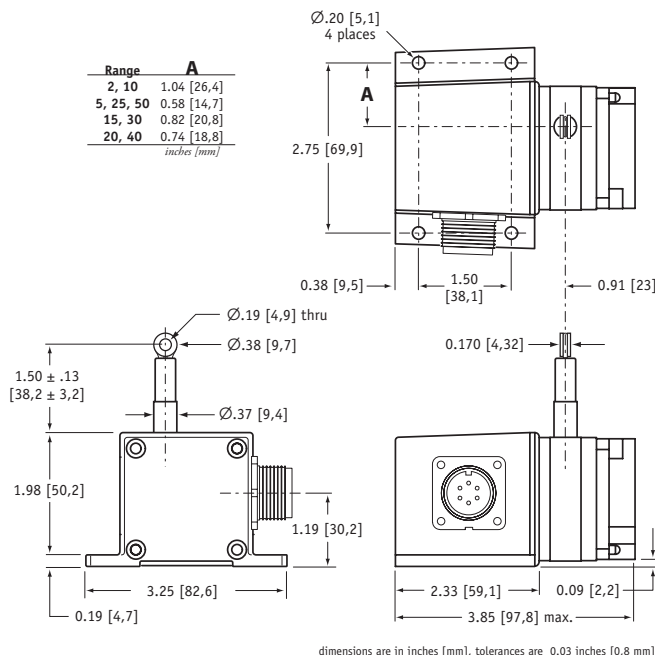
EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

Emission/Immunity EN50081-2/EN50082-2

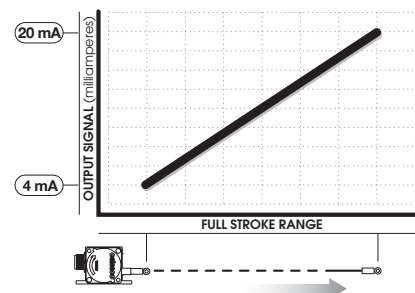


PT1MA는 4...20mA 위치 피드백 신호를 Celesco의 소형 케이블 연장 변환기 라인에 추가합니다. PT1MA는 전체 범위 출력을 정확한 측정 범위에 정확하게 일치시키기 위해 조정 가능한 제로 및 스패 설정으로 최대 50인치에서 최소 2인치의 전체 스트로크 범위에서 사용할 수 있습니다.

PT1MA는 순방향 및 역방향 0...20 및 4...20 mA 출력 신호, 대체 측정 케이블 출구 및 몇 가지 다른 전기 연결 옵션을 포함한 여러 옵션을 제공합니다.



Output Signal



Ordering Information:

Model Number:

PT1MA - - - - -

order code:

R

A

B

C

D

Sample Model Number:

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

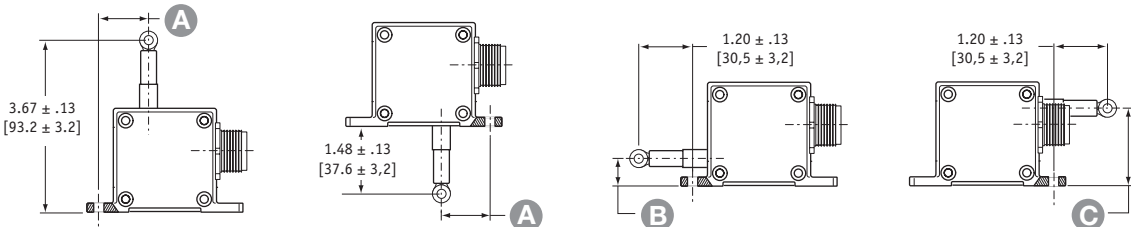
- R range: 30 inches
- A measuring cable exit: up
- B output signal: 4...20mA
- C electrical connection: 4-pin micro connector
- D cable guide: spring-loaded guide

Full Stroke Range:

R order code:	2	5	10	15	20	25	30	40	50
full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.
accuracy (% of f.s.):	0.28%		0.18%				0.15%		
potentiometer cycle life:	2,500,000 cycles		500,000 cycles				250,000 cycles		
cable tension (20%):	12 oz.	5 oz.	12 oz.	9 oz.	6 oz.	5 oz.	9 oz.	6 oz.	5 oz.
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

Cable Exit:

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



measurement range	2	5	10	15	20	25	30	40	50
A	1.04 in. 26,4 mm	0.58 in. 14,7 mm	1.04 in. 26,4 mm	0.82 in. 20,8 mm	0.74 in. 18,8 mm	0.58 in. 14,7 mm	0.82 in. 20,8 mm	0.74 in. 18,8 mm	0.58 in. 14,7 mm
B	0.75 in. 19,1 mm	0.29 in. 6,1 mm	0.75 in. 19,1 mm	0.53 in. 13,5 mm	0.45 in. 11,5 mm	0.29 in. 6,1 mm	0.53 in. 13,5 mm	0.45 in. 11,5 mm	0.29 in. 6,1 mm
C	1.43 in. 36,3 mm	1.89 in. 48,0 mm	1.43 in. 36,3 mm	1.65 in. 41,9 mm	1.73 in. 43,9 mm	1.89 in. 48,0 mm	1.65 in. 41,9 mm	1.73 in. 43,9 mm	1.89 in. 48,0 mm

Output Signals:

B order code:	420E	420R	020E	020R
output signal options:	4...20 mA	20...4 mA	0...20 mA	20...0 mA
sensitivity:	16 mA/full stroke $\pm 0.25\%$		20 mA/full stroke $\pm 0.25\%$	
wiring configuration:	2 - wire		3 - wire	
input voltage:	8 - 40 vdc		14 - 29 vdc	

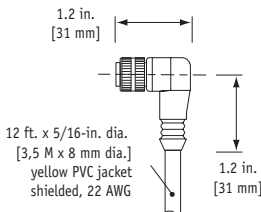
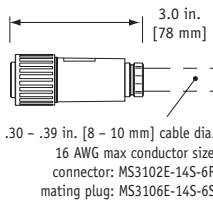
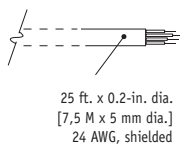
example:

ordercode = 420E = 4...20 mA $\Rightarrow$ 4 mA = 
20 mA = 

Ordering Information (cont.)

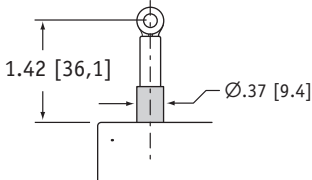
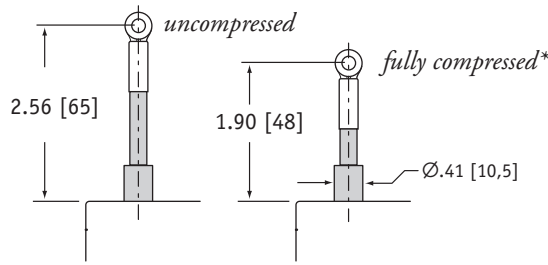
Electrical Connection:

① order code:

MC4		M6		C25		
4-pin micro-connector with 12 ft [3.5 M] cordset		6-pin plastic connector with mating plug		25-ft. instrumentation cable 24 AWG, shielded		
						
12 ft. x 5/16-in. dia. [3,5 M x 8 mm dia.] yellow PVC jacket shielded, 22 AWG		.30 - .39 in. [8 - 10 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S		25 ft. x 0.2-in. dia. [7,5 M x 5 mm dia.] 24 AWG, shielded		
4-pin mating plug and cordset:		6-pin mating plug:		25-ft. cable:		
 contact view	pin	color code	2-wire	3-wire	2-wire	3-wire
	1	RED-BLK TR.	8...40 vdc	14...29 vdc	8...40 vdc	14...29 vdc
	2	RED-WHT TR.	4...20 mA	common	4...20 mA	common
	3	RED	-	0...20 mA	-	-
	4	GREEN	-	-	-	0...20 mA

Cable Guide:

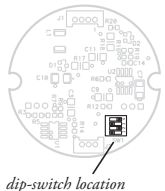
① order code:

blank		SG	
standard cable guide		spring-loaded guide	
		<i>cable-guide cushions impact from accidental free release</i> 	

*note: start of full stroke range begins at full compression point (except 2-inch and 5-inch ranges).

Output Signal Selection:

The output signal direction can be reversed at any time by simply changing the dip-switch settings found on the internal signal board. After the settings have been changed, adjustment of the Zero and Span trimpots will be required to precisely match signal values to the beginning and end points of the stroke.

output signal	switch setting	signal board
0...20 mA or 4...20 mA		 dip-switch location
20...0 mA or 20...4 mA		

