

# Cable-Extension Position Transducer

**Precision Potentiometric Output**  
**Ranges: 0-2 to 0-50 inches**  
**Compact Size • OEM Applications**



# PT1A

## Specification Summary:

### GENERAL

Full Stroke Range Options ..... 0-2 to 0-50 inches  
 Output Signal Options..... voltage divider (potentiometer)  
 Accuracy .....  $\pm 0.25\%$  to  $\pm 0.10\%$  full stroke *see ordering information*  
 Repeatability.....  $\pm 0.02\%$  full stroke  
 Resolution ..... essentially infinite  
 Measuring Cable ..... .019-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 Resistance Options ..... 500, 1K, 5K, 10K or bridge, *see ordering information*  
 Power Rating, Watt ..... *see ordering information*  
 Recommended Maximum Input Voltage ..... *see ordering information*  
 Output Signal Change Over Full Stroke Range.....  $94\% \pm 4\%$  of input voltage

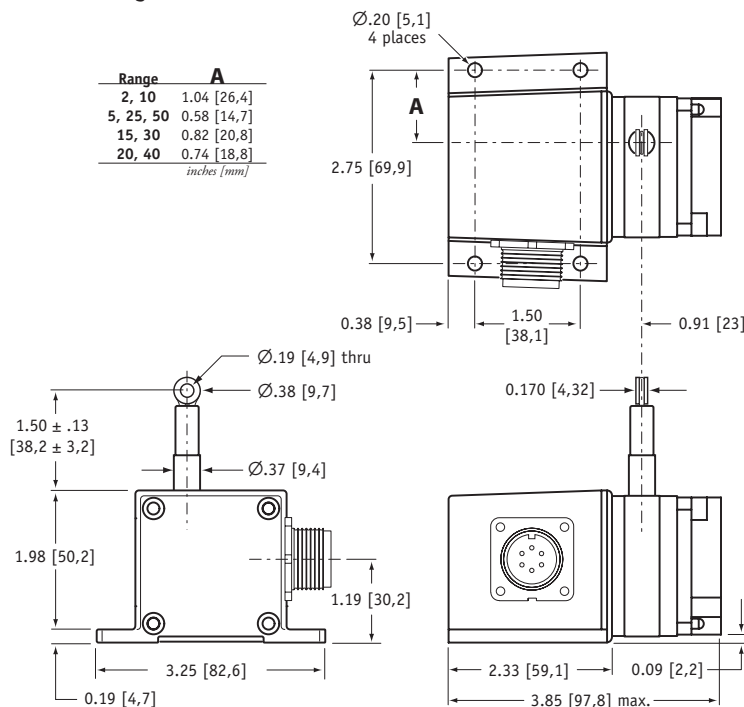
### ENVIRONMENTAL

Enclosure ..... NEMA 4, IP 65  
 Operating Temperature .....  $0^{\circ}$  to  $200^{\circ}\text{F}$  ( $-17^{\circ}$  to  $90^{\circ}\text{C}$ )  
 Vibration..... up to 10 G's to 2000 Hz maximum

### Outline Drawing

Range	A
2, 10	1.04 [26,4]
5, 25, 50	0.58 [14,7]
15, 30	0.82 [20,8]
20, 40	0.74 [18,8]

*inches [mm]*



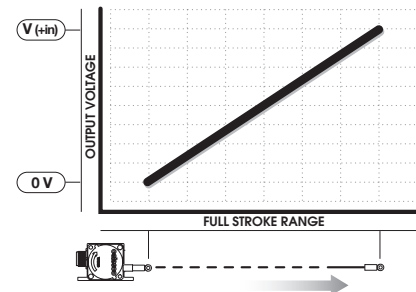
dimensions are in inches [mm], tolerances are 0.03 inches [0,8 mm]



The PT1A is perfect where space and money are limited. The PT1A is part of Celesco's compact line of cable-extension transducers. Using a high cycle plastic-hybrid potentiometer, the PT1A provides a precision voltage divider position feedback signal for full-scale measurement ranges from 2 to 50 inches.

The PT1A has many features to offer including 500 to 10K ohm potentiometer selection, adjustable bridge circuit and multiple measuring cable exit options.

### Output Signal



Celesco Transducer Products, Inc.  
 20630 Plummer Street • Chatsworth, CA 91311  
 tel: 800.423.5483 • +1.818.701.2750 • fax: +1.818.701.2799

**celesco**  
 www.sensorway.cn • sales@sensorway.cn

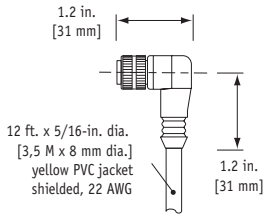


Ordering Information (cont.)

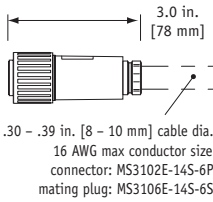
Electrical Connection:

ⓐ order code:

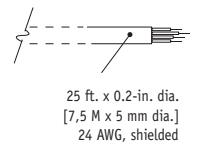
**MC4**  
4-pin micro-connector  
with 12 ft [3.5 M] cordset



**M6**  
6-pin plastic connector  
with mating plug



**C25**  
25-ft. instrumentation cable  
24 AWG, shielded



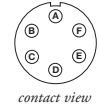
4-pin mating plug and cord set:

pin	color code	standard	bridge
1	RED-BLK TR.	+IN	+IN
2	RED-WHT TR.	COMMON	-IN
3	RED	+OUT	+OUT
4	GREEN	-	-OUT



6-pin mating plug:

pin	standard	bridge
A	+IN	+IN
B	COMMON	-IN
C	+OUT	-OUT
D	-	+OUT



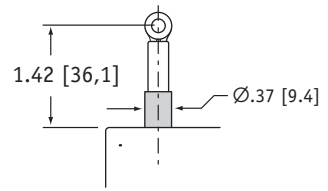
25-ft. cable:

color code	standard	bridge
RED	+IN	+IN
BLACK	COMMON	-IN
GREEN	+OUT	+OUT
WHITE	-	-OUT

Cable Guide:

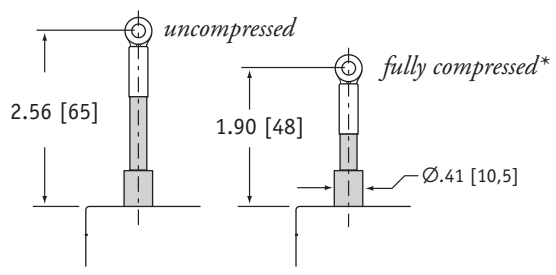
ⓓ order code:

**blank**  
standard cable guide



**SG**  
spring-loaded guide

*cable-guide cushions impact from accidental free release*



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

北京赛斯维测控技术有限公司  
北京市朝阳区望京西路48号  
金隅国际C座1002  
电话: +86 010 8477 5646  
传真: +86 010 5894 9029  
邮箱: [sales@sensorway.cn](mailto:sales@sensorway.cn)  
<http://www.sensorway.cn>

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