

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 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.

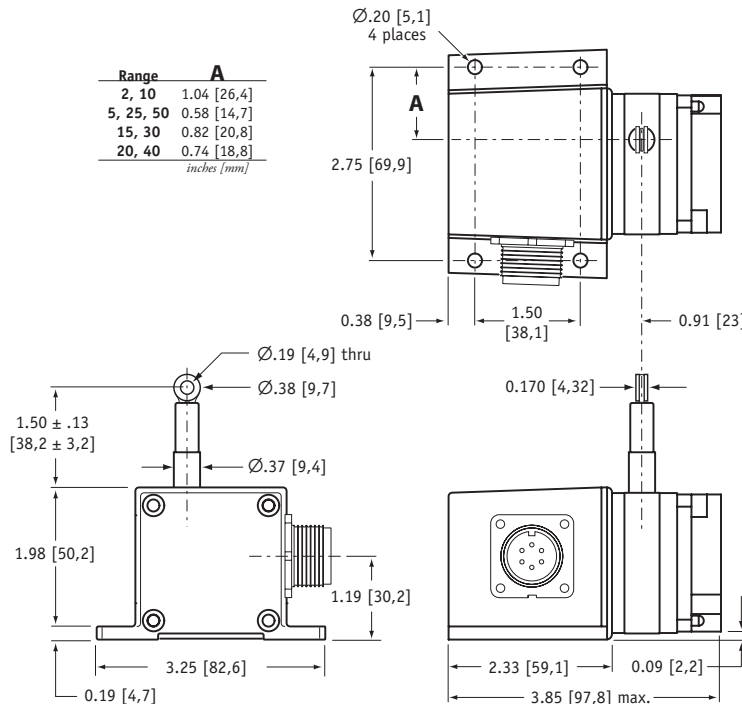
ELECTRICAL

Input 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° to 200°F (-17° to 90°C)
 Vibration..... up to 10 G's to 2000 Hz maximum

Outline Drawing



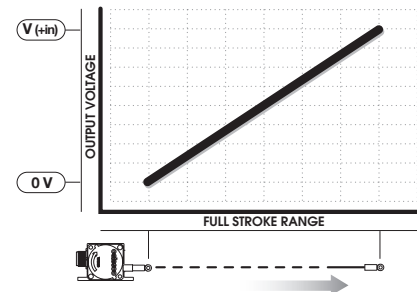
dimensions are in inches [mm], tolerances are .003 inches [0,8 mm]



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



Precision Sales Inc
 38 Bishop Hollow Rd
 Newtown Square PA 19073

610-359-1002
 eparts@precisionsales.com
 www.precisionsales.com

PT1A • Cable-Extension Transducer: Precision Potentiometric Output

Ordering Information:

Model Number:

PT1A - - - - - -
order code: **R** **A** **B** **C** **D**

Sample Model Number:

PT1A - 30 - UP - 500 - MC4 - SG

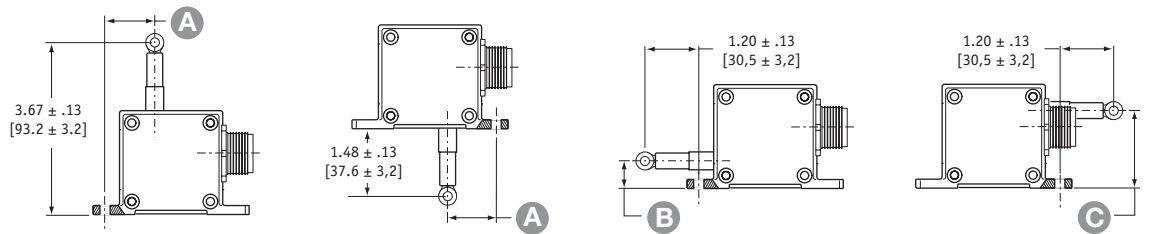
- R** range: 30 inches
- A** measuring cable exit: up
- B** output signal: 500-ohm pot.
- C** electrical connection: 4-pin micro connector
- D** cable guide: spring-loaded guide

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.):	0.25%		0.15%			0.10%			
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:

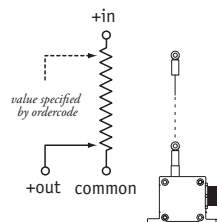
B order code: **500** **1K** **5K** **10K** **AB**
 500 ohm* 1000 ohm* 5000 ohm* 10,000 ohm* adjustable bridge
 (0...30 mV/V)

*tolerance = ±10%

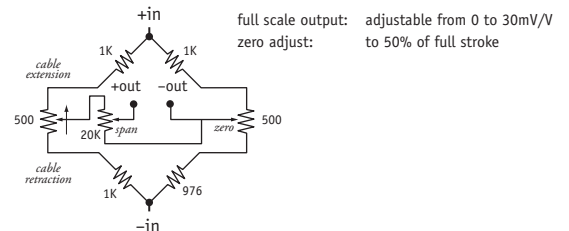
max. input voltage and power rating, options: 500, 1K, 5K, 10K

	2-inch, 5-inch range	10-inch to 50-inch range
500-ohms:	20 V AC/DC (1 W)	30 V AC/DC (2 W)
1K to 10K-ohms:	30 V AC/DC (1 W)	30 V AC/DC (2 W)

circuit options: 500, 1K, 5K, 10K



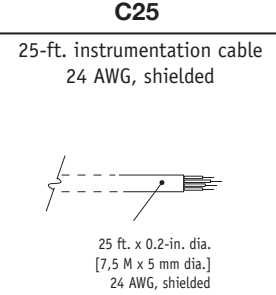
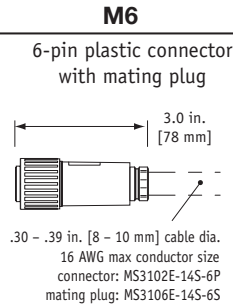
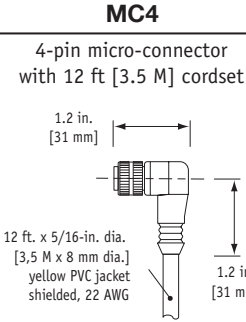
circuit option: AB (adjustable bridge)



Ordering Information (cont.)

Electrical Connection:

ⓐ order code:

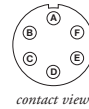


4-pin mating plug and cord set:



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

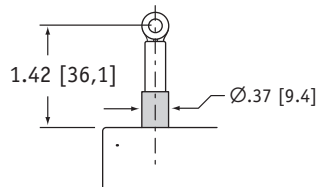
25-ft. cable:

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

Cable Guide:

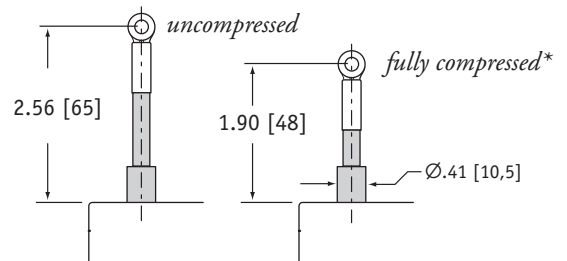
ⓓ order code:

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).