

# PT1A

## Industrial Grade • Voltage Divider

Absolute Linear Position to 50 inches (1270 mm)

Aluminum and Polycarbonate Enclosure

Compact Design

IP65 • NEMA 4 Protection



### GENERAL

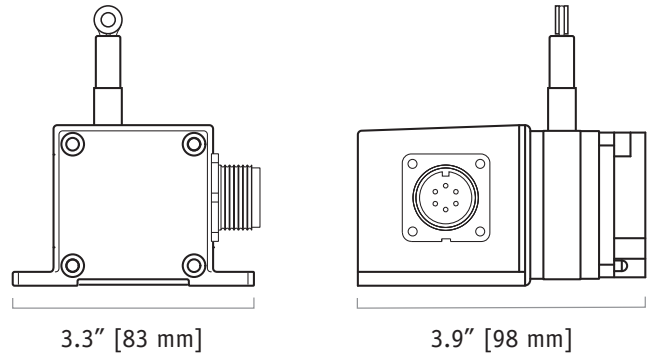
Full Stroke Range Options	0-2 to 0-50 inches
Output Signal Options	voltage divider (potentiometer)
Accuracy	see ordering information
Repeatability	± 0.02% full stroke
Resolution	essentially infinite
Measuring Cable	.019-in. dia. nylon-coated stainless steel
Enclosure	glass-filled polycarbonate and black 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	see ordering information
Power Rating, Watt	see ordering information
Recommended Maximum Input Voltage	see ordering information
Output Signal Change Over Full Stroke Range	94% ±4% of input voltage

### ENVIRONMENTAL

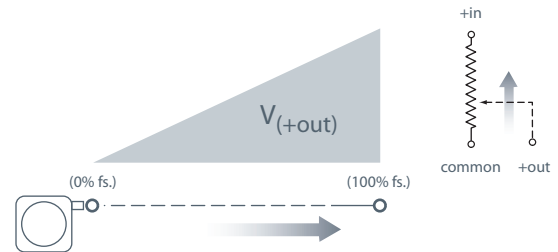
Enclosure	NEMA 4, IP 65
Operating Temperature	0° to 200°F (-17° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum



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:



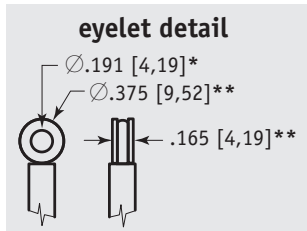
-- bridge circuit option available, see ordering information

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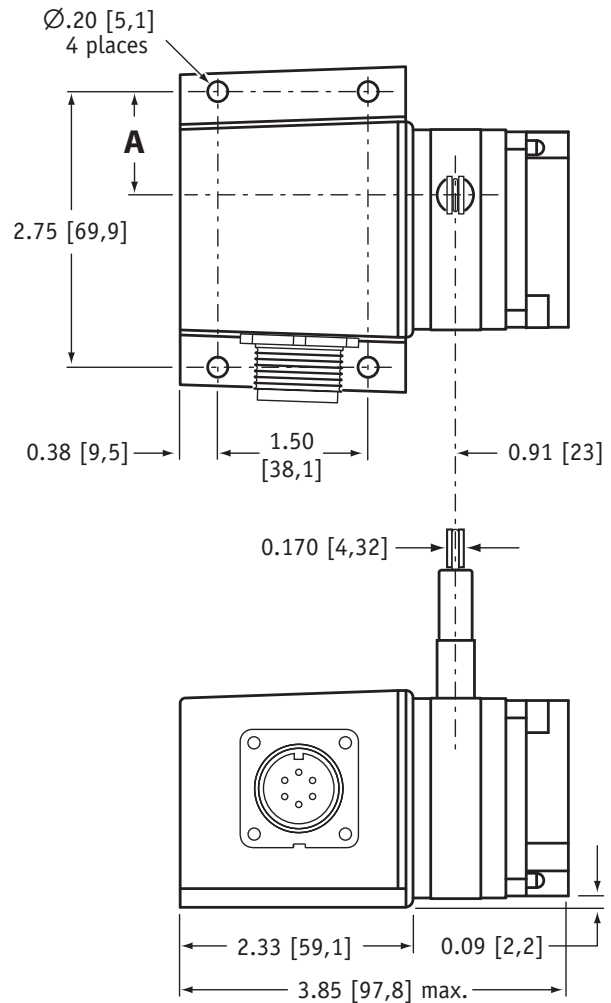
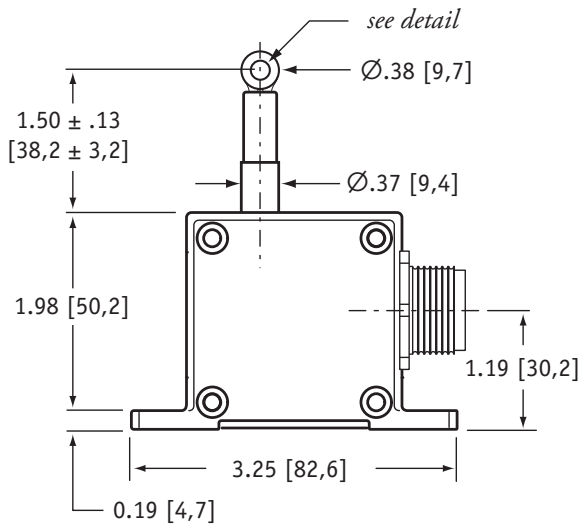
**celesco**  
celesco.com • info@celesco.com

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 IN. [0.5 MM] unless otherwise noted.

\* tolerance = +.005 - .001 [+.13 -.03]  
\*\* tolerance = +.005 - .005 [+.13 -.13]

Ordering Information:

Model Number:

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

Sample Model Number:

**PT1A - 30 - UP - 500 - MC4 - SG**

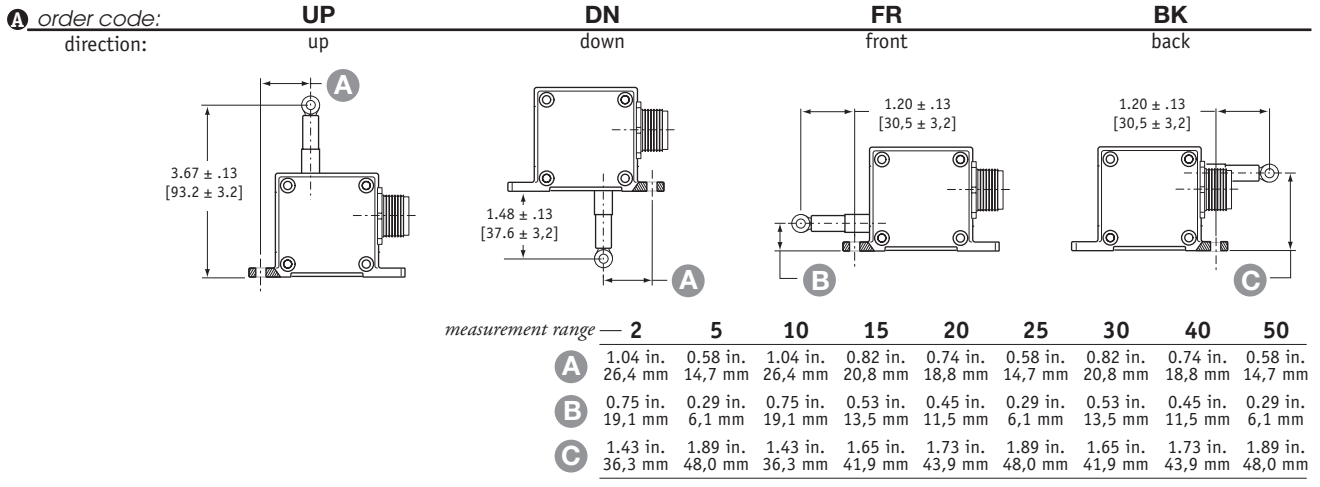
- R** range: 30 inches
- A** measuring cable exit: up
- B** output signal: 500-ohm pot.
- C** electrical connection: 4-pin micro connector
- D** cable guide: spring-loaded guide

Full Stroke Range:

<b>R</b> 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.
max. cable acceleration:	11 g	3 g	11 g	5 g	4 g	3 g	5 g	4 g	3 g

Ordering Information (cont.):

**Cable Exit:**



**Output Signals:**

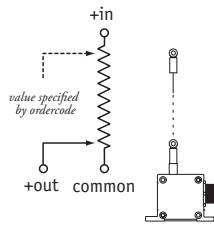
**B** order code:

	500	1K	5K	10K	AB
	500 ohm*	1000 ohm*	5000 ohm*	10,000 ohm*	adjustable bridge (0...30 mV/V)
	*tolerance = ±10%				

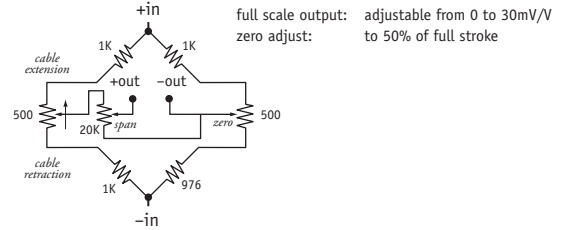
max. input voltage and power rating, options: 500, 1K, 5K, 10K

	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)

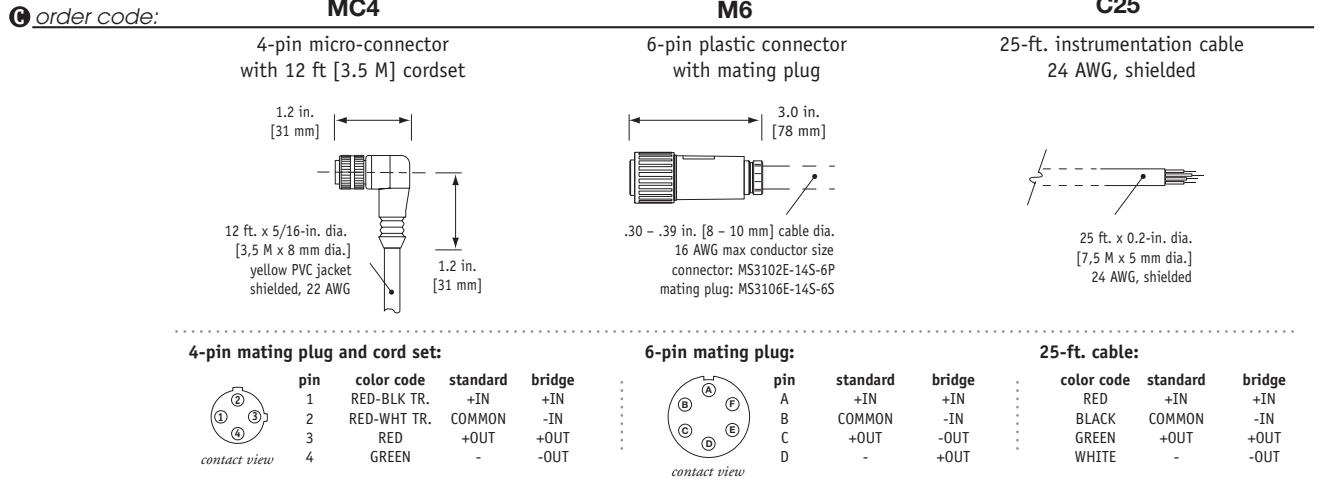
circuit options: 500, 1K, 5K, 10K



circuit option: AB (adjustable bridge)



**Electrical Connection:**

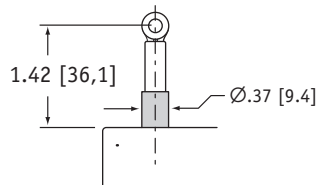


**Cable Guide:**

① *order code:*

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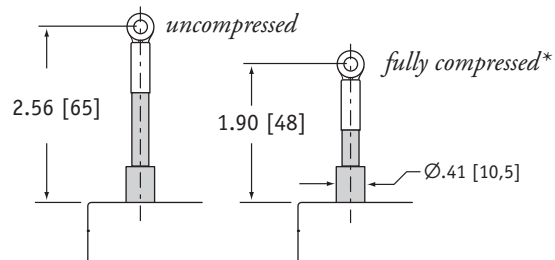
standard cable guide



**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).*



version: 7.0 last updated: March 11, 2014