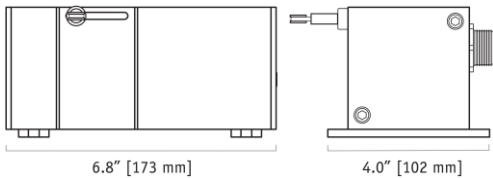




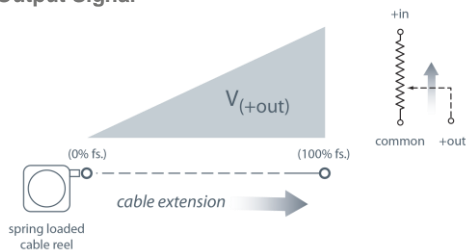
CE



The PT5A potentiometric cable-extension transducer uses a unique thermoplastic cable that has virtually an infinite fatigue life. This cable, known as V62, has properties that are superior for high cycle and rugged applications.

Like Celesco's other transducers, the PT5A installs in minutes, functions properly without perfectly parallel alignment, and fits easily into small areas. The PT5A offers additional installation flexibility since its cable exit can be rotated relative to the mounting surface, providing four different cable exit orientations.

#### Output Signal



— bridge circuit option available, see ordering information

## PT5A

### Cable Actuated Sensor Industrial Grade • Voltage Divider Output

**Absolute Linear Position to 250 inches (6350 mm)**

**Hard Anodized Aluminum Enclosure**

**High Cycle Applications**

**IP67 • NEMA 6 Protection**

#### General

<b>Full Stroke Range</b>	0-10 to 0-250 inches
<b>Options</b>	
<b>Output Signal Options</b>	voltage divider (potentiometer)
<b>Accuracy</b>	±0.18% to ±0.75% full stroke (see ordering information)
<b>Repeatability</b>	±0.02% to ±0.1% full stroke (see ordering information)
<b>Resolution</b>	essentially infinite
<b>Measuring Cable</b>	stainless steel or thermoplastic
<b>Enclosure</b>	hard anodized aluminum
<b>Sensor</b>	plastic-hybrid precision potentiometer
<b>Potentiometer Cycle Life</b>	see ordering information
<b>Maximum Measuring Cable Velocity</b>	see ordering information
<b>Maximum Retraction Acceleration</b>	see ordering information
<b>Weight</b>	5 lbs. max.

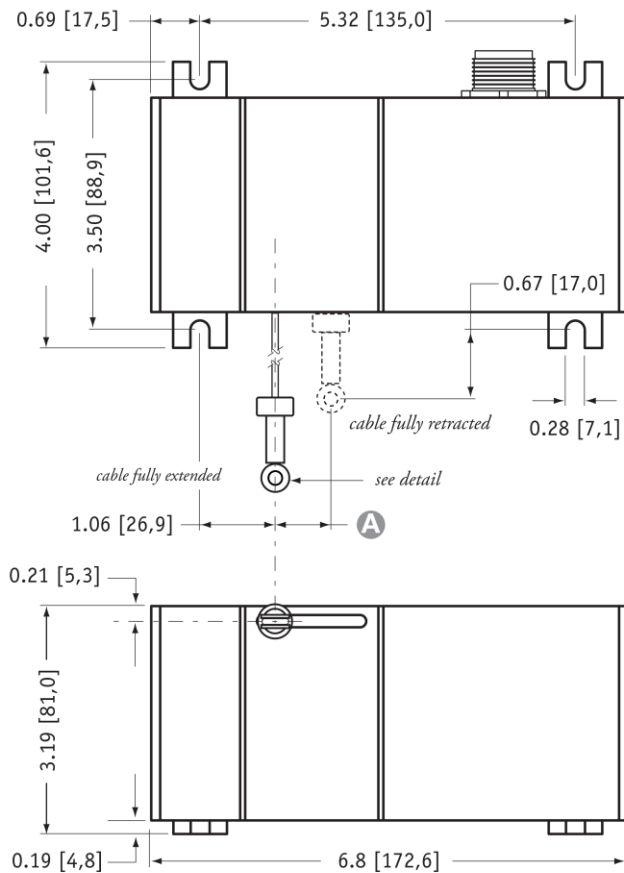
#### Electrical

<b>Input Resistance</b>	500, 1K, 5K, 10K ohms or bridge
<b>Options</b>	
<b>Power Rating, Watt</b>	see ordering information
<b>Recommended</b>	see ordering information
<b>Maximum Input Voltage</b>	
<b>Output Signal Change Over Full Stroke Range</b>	94% ±4% of input voltage

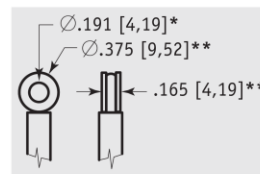
#### Environmental

<b>Enclosure</b>	NEMA 4/6, IP 65/67
<b>Operating Temperature</b>	-40° to 200°F (-40° to 90°C)
<b>Vibration</b>	up to 10 g to 2000 Hz maximum

## Outline Drawing

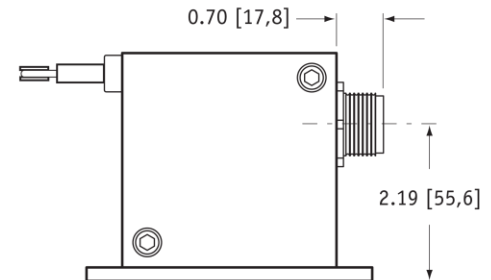


## eyelet detail



## A DIMENSION (inches[mm])

RANGE	N34	S47 & V62
	measuring cable	measuring cable
10	0.05 [1,2]	0.08 [2,0]
15	0.07 [1,8]	0.12 [3,0]
20	0.09 [2,4]	0.16 [3,9]
30	0.14 [3,5]	0.23 [5,9]
40	0.19 [4,7]	0.31 [7,9]
50	0.23 [5,9]	0.39 [9,9]
60	0.28 [7,0]	0.47 [11,8]
80	0.37 [9,4]	0.62 [15,8]
100	0.46 [11,7]	0.78 [19,7]
125	0.58 [14,7]	0.97 [24,7]
150	0.69 [17,6]	1.16 [29,6]
200	0.92 [23,5]	n/a
250	1.16 [29,3]	n/a



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:

**PT5A** - \_\_\_\_\_  
order code:      **R**      **A**      **B**      **C**      **D**

## Sample Model Number:

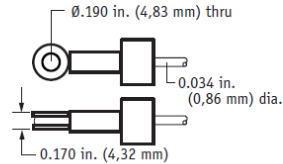
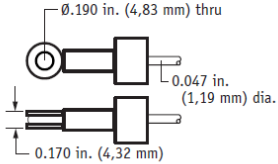
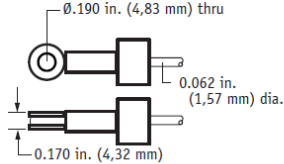
**PT5A - 100 - N34 - FR - 500 - M6**

<b>R</b> range:	100 inches
<b>A</b> measuring cable:	.034 nylon-coated stainless
<b>B</b> cable exit:	front
<b>C</b> output signal:	500 ohm potentiometer
<b>D</b> electrical connection:	6-pin plastic connector

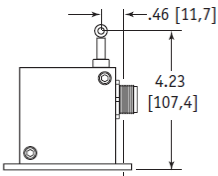
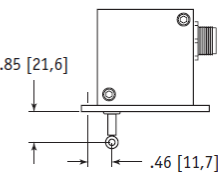
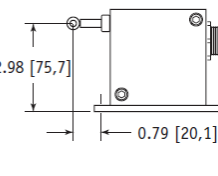
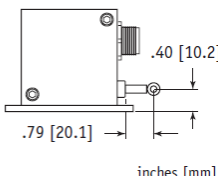
## Full Stroke Range:

<b>® order code:</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>40</b>	<b>50</b>	<b>60</b>	<b>80</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>200</b>	<b>250</b>
full stroke range, min:	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.	60 in.	80 in.	100 in.	125 in.	150 in.	200 in.	250 in.
accuracy (±% of f.s.):	.75%	.6%	.5%	.5%	.5%	.3%	.3%	.25%	.25%	.25%	.25%	.18%	.18%	.18%
repeatability (±% of f.s.):	.1%	.1%	.05%	.05%	.05%	.05%	.05%	.02%	.02%	.02%	.02%	.02%	.02%	.02%
potentiometer cycle life:	2,500,000 cycles						500,000 cycles						250,000 cycles	
cable tension (20%):	41 ounces												21 ounces	
max. cable velocity/acceleration:	300 in./sec • 5 g												120 in./sec • 2 g	


## Measuring Cable:

A order code:	N34	S47	V62
	.034 nylon-coated stainless steel available in all ranges	.047 stainless steel all ranges up to 150 inches	.062 thermoplastic all ranges up to 150 inches
			

## Cable Exit:

B order code:	UP	DN	FR	BK
	up	down	front	back
				
	inches [mm]			

## Output Signals:

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

## Electrical Connection:

**D** *order code:*

**M6**

6-pin plastic connector  
with mating plug  
IP 67, NEMA 6

.30 - .39 in. [8 - 10 mm] cable dia.  
16 AWG max conductor size  
connector: MS3102E-14S-6P  
mating plug: MS3106E-14S-6S

**M6M**

6-pin metal connector  
with mating plug  
IP 65, NEMA 4

.375 in. [9 mm] max cable dia.  
16 AWG max conductor size  
connector: MS3102E-14S-6P  
mating plug: MS3106E-14S-6S

**MC4**

4-pin micro-connector  
with 12 ft [3.5 M] cordset  
IP 67, NEMA 6

**C25**

25-ft. instrumentation cable  
24 AWG, shielded  
IP 67, NEMA 6

**6-pin mating plug:**

*contact view*

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

**4-pin mating plug and cord set:**

*contact view*

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

**25-ft. cable:**

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

