

# Cable-Extension Position Transducer

- ▼ Short to Medium Range
- ▼ Industrial Grade - High Cycle Applications
- ▼ Precision Potentiometric Output



# PT5A



## Specification Summary:

### GENERAL

Full Stroke Ranges ..... 0-10 to 0-150 inches, see ① next page  
 Output Signal ..... voltage divider (potentiometer)  
 Accuracy .....  $\pm 0.25$  to  $\pm 0.10$  full stroke, max., see ②  
 Repeatability .....  $\pm 0.02\%$  full stroke, max.  
 Resolution ..... essentially infinite  
 Measuring Cable ..... thermoplastic or stainless steel, see ③  
 Enclosure Material ..... hard-anodized aluminum  
 Sensor ..... plastic-hybrid precision potentiometer  
 Maximum Measuring Cable Velocity ..... 300 inches per second  
 Maximum Measuring Cable Acceleration ..... 5 g  
 Weight ..... 5 lbs., max

### ELECTRICAL

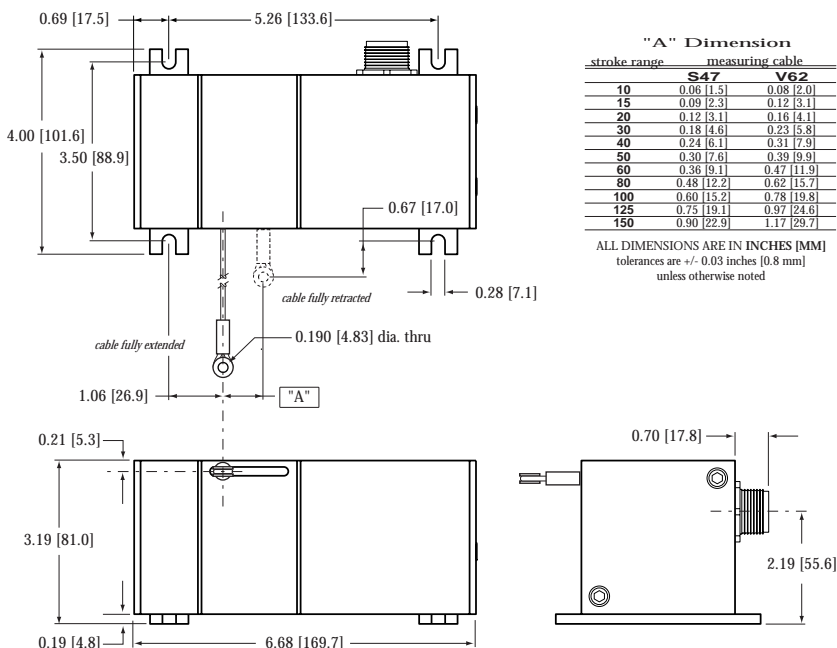
Input Resistance .. 500, 1K, 5K & 10K ohms (+10%) or adjustable bridge, see ④  
 Power Rating, Watts ..... 2.0 at 70°F (derated to 0 @ 250°F)  
 Recommended Maximum Voltage ..... 30 V  
 Output Signal Change Over Measurement Range ..... 93%  $\pm 4\%$  of input voltage  
 Temperature Coefficient of Sensing Element ..... 88 P.P.M./°F

### ENVIRONMENTAL

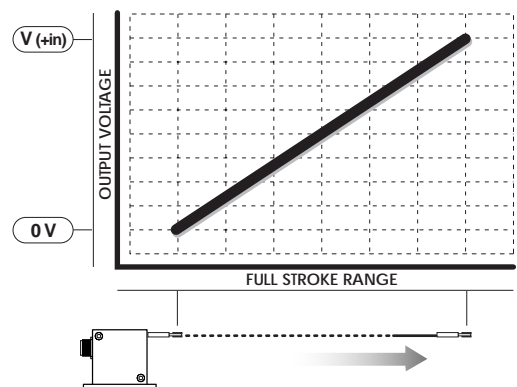
Enclosure Design ..... NEMA 4, IP65/67, see ⑤ and ⑥  
 Operating Temperature ..... -30° F to +200°F  
 Vibration ..... up to 10 G's to 2000 Hz

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.



## Electrical Output Signal:



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 Nordisk Transducer Teknik DK-9560 Hadsund Denmark  
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# PT5A • Cable-Extension Transducer • Potentiometric Output

## ▼ Ordering Information

### Model Number:

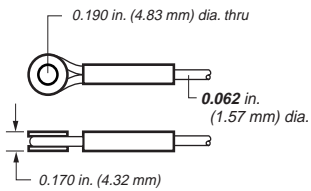
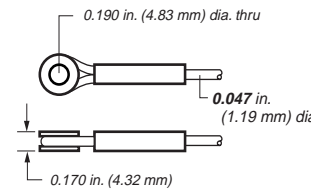
**PT5A** - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_  
 order code:                      **R**                      **A**                      **B**                      **C**                      **D**

### Full Stroke Range:

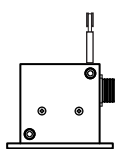
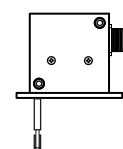
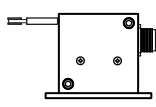
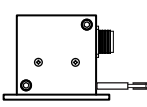
① order code:	10	15	20	25	30	40	50	60	80	100	125	150
① full stroke range, min:	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.	60 in.	80 in.	100 in.	125 in.	150 in.
② accuracy (% of f.s.):	0.25 %	0.25 %	0.25 %	0.25%	0.25%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.10%
std. cable tension (±20%):	20 oz.	20 oz.	19 oz.	19 oz.	18 oz.	18 oz.	17 oz.	17 oz.	16 oz.	16 oz.	15 oz.	15 oz.
potentiometer cycle life*:	2.5 x 10 <sup>6</sup>	2.5 x 10 <sup>6</sup>	2.5 x 10 <sup>6</sup>	2.5 x 10 <sup>6</sup>	2.5 x 10 <sup>6</sup>	5 x 10 <sup>5</sup>	5 x 10 <sup>5</sup>	5 x 10 <sup>5</sup>	5 x 10 <sup>5</sup>	5 x 10 <sup>5</sup>	5 x 10 <sup>5</sup>	2.5 x 10 <sup>5</sup>

\*note: **potentiometer cycle life** is defined as the minimum number of times the measuring cable can be fully extended and retracted before any measurable degradation of the output signal occurs.

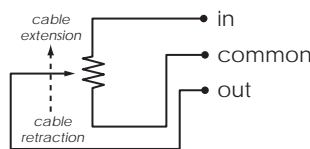
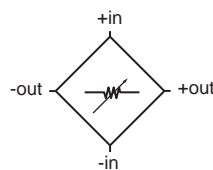
### Measuring Cable:

③ order code:	V62	S47
cable construction:	.062 thermoplastic	.047 stainless steel
		

### Cable Exit:

③ order code:	UP	DN	FR	BK
direction:	up	down	front	back
				

### Output Signals:

④ order code:	500	1K	5K	10K	B
sensing circuit:	500 ohm	1K ohm	5K ohm	10K ohm	0...30 mV/V bridge
					full scale output: adjustable from 0 to 30mV/V zero adjust: from full retraction to 50% of full stroke 

# PT5A • Cable-Extension Transducer • Potentiometric Output

## Electrical Connection:

① order code:

	M6	C25	M6M																																				
electrical connection:	6-pin plastic connector and mating plug	25 ft. instrumentation cable	6-pin metal connector and mating plug																																				
	<table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>A = +IN</td> <td>A = +IN</td> </tr> <tr> <td>B = COMMON</td> <td>B = -IN</td> </tr> <tr> <td>C = +OUT</td> <td>C = -OUT</td> </tr> <tr> <td></td> <td>D = +OUT</td> </tr> </tbody> </table>	connections		standard	bridge	A = +IN	A = +IN	B = COMMON	B = -IN	C = +OUT	C = -OUT		D = +OUT	<table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>RED = +IN</td> <td>RED = +IN</td> </tr> <tr> <td>BLK = COMMON</td> <td>BLK = -IN</td> </tr> <tr> <td>GRN = OUT</td> <td>WHT = -OUT</td> </tr> <tr> <td></td> <td>GRN = +OUT</td> </tr> </tbody> </table>	connections		standard	bridge	RED = +IN	RED = +IN	BLK = COMMON	BLK = -IN	GRN = OUT	WHT = -OUT		GRN = +OUT	<table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>A = +IN</td> <td>A = +IN</td> </tr> <tr> <td>B = COMMON</td> <td>B = -IN</td> </tr> <tr> <td>C = +OUT</td> <td>C = -OUT</td> </tr> <tr> <td></td> <td>D = +OUT</td> </tr> </tbody> </table>	connections		standard	bridge	A = +IN	A = +IN	B = COMMON	B = -IN	C = +OUT	C = -OUT		D = +OUT
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IP rating:	67	67	65																																				
NEMA rating:	6	6	4																																				

⑤

⑥

## ▼ Sample Model Number

**PT5A - 30 - V62 - UP - 10K - M6**

Specifications: Full Stroke Range: 30 inches  
 Measuring Cable: 0.062-in dia. thermoplastic cable  
 Measuring Cable Exit: Up  
 Output Signals: 10K ohm potentiometer sensor  
 Electrical Connection: 6-pin plastic connector

**celesco**

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