

# Cable-Extension Position Transducer

- ▼ Short to Medium Range
- ▼ Industrial Grade - High Cycle Applications
- ▼ 0...5 or 0...10 VDC Output Signal



# PT5DC



## Specification Summary:

### GENERAL

Full Stroke Ranges ..... 0-10 to 0-150 inches, see ① next page  
 Output Signal ..... 0-10, 0-5 VDC, see ④  
 Accuracy .....  $\pm 0.28$  to  $\pm 0.15\%$  full stroke, see ②  
 Repeatability .....  $\pm 0.05\%$  full stroke  
 Resolution ..... essentially infinite  
 Measuring Cable ..... thermoplastic or stainless steel, see ③  
 Enclosure Material ..... hard-anodized aluminum  
 Sensor ..... plastic-hybrid precision potentiometer  
 Weight ..... 5 lbs., max.

### ELECTRICAL

Input Voltage ..... 14.5-40VDC (10.5-40VDC for 0-5 volt output)  
 Input Current ..... 10 mA maximum  
 Output Impedance ..... 10 ohms max.  
 Output Load ..... 5000 ohms min.  
 Zero and Span Adjustment ..... 2:1 turndown

### ENVIRONMENTAL

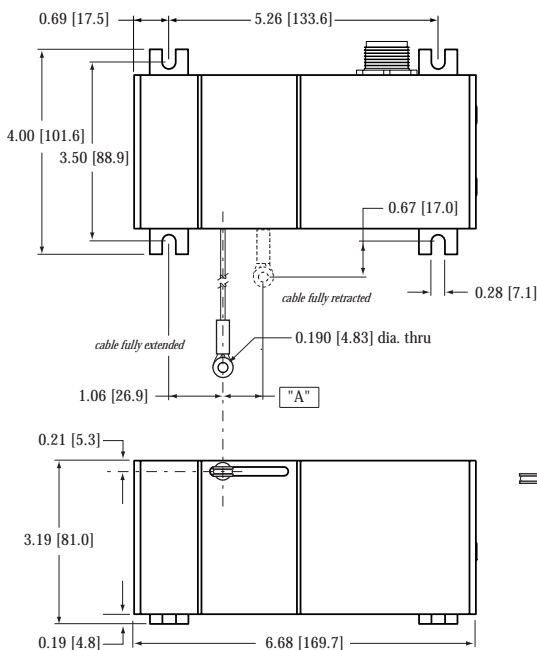
Enclosure Design ..... NEMA 4, IP 65/67 see ⑤ and ⑥  
 Operating Temperature ..... -40° to 200°F  
 Vibration ..... up to 10 G's to 2000 Hz maximum

### CE EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

Emission / Immunity ..... EN50081-2 / EN50082-2

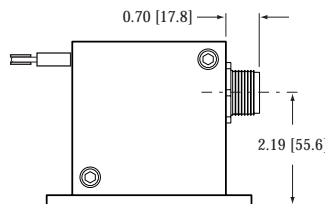
The PT5DC cable-extension transducer uses a unique thermoplastic cable that has virtually an infinite fatigue life. This cable, known as V62, has properties that are superior for high cycle and rugged applications.

Like Celesco's other transducers, the PT5DC installs in minutes, functions properly without perfectly parallel alignment, and fits easily into small areas. The PT5DC offers additional installation flexibility since its cable exit can be rotated relative to the mounting surface, providing four different cable exit orientations.

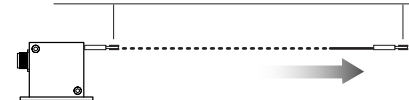
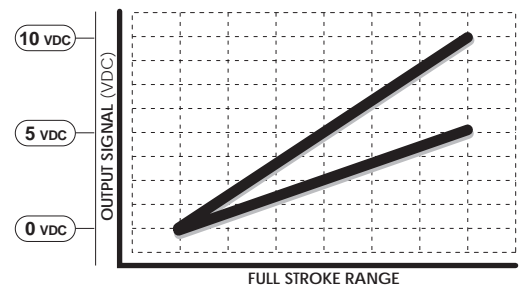


stroke range	"A" Dimension measuring cable	
	S47	V62
10	0.06 [1.5]	0.08 [2.0]
15	0.09 [2.3]	0.12 [3.1]
20	0.12 [3.1]	0.16 [4.1]
30	0.18 [4.6]	0.23 [5.8]
40	0.24 [6.1]	0.31 [7.9]
50	0.30 [7.6]	0.39 [9.9]
60	0.36 [9.1]	0.47 [11.9]
80	0.48 [12.2]	0.62 [15.7]
100	0.60 [15.2]	0.78 [19.8]
125	0.75 [19.1]	0.97 [24.6]
150	0.90 [22.9]	1.17 [29.7]

ALL DIMENSIONS ARE IN INCHES [MM]  
 tolerances are +/- 0.03 inches [0.8 mm] unless otherwise noted



### Electrical Output Signal:



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# PT5DC • Cable-Extension Transducer • 0...10 VDC Output Signal

## ▼ Ordering Information

### Model Number:

**PT5DC** -      -      -      -      -       
*order code:*                      **R**                      **A**                      **B**                      **C**                      **D**

### Full Stroke Range:

<b>R</b> <i>order code:</i>	<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>
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:

<b>A</b> <i>order code:</i>	<b>V62</b>	<b>S47</b>
③ cable construction:	.062 thermoplastic	.047 stainless steel

### Cable Exit:

<b>B</b> <i>order code:</i>	<b>UP</b>	<b>DN</b>	<b>FR</b>	<b>BK</b>
direction:	up	down	front	back

### Output Signals:

<b>B</b> <i>order code:</i>	<b>Z10</b>	<b>10Z</b>	<b>Z5</b>	<b>5Z</b>
④ output signal configuration:	0...10 VDC	10...0 VDC	0...5 VDC	5...0 VDC

# PT5DC • Cable-Extension Transducer • 0...10 VDC Output Signal

## 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>contact view</th> <th>connections</th> </tr> </thead> <tbody> <tr> <td></td> <td>A = input voltage B = output signal C = common</td> </tr> </tbody> </table>	contact view	connections		A = input voltage B = output signal C = common	<table border="1"> <thead> <tr> <th>connections</th> </tr> </thead> <tbody> <tr> <td>RED = input voltage GRN = output signal BLK = common</td> </tr> </tbody> </table>	connections	RED = input voltage GRN = output signal BLK = common	<table border="1"> <thead> <tr> <th>contact view</th> <th>connections</th> </tr> </thead> <tbody> <tr> <td></td> <td>A = input voltage B = output signal C = common</td> </tr> </tbody> </table>	contact view	connections		A = input voltage B = output signal C = common
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⑤ IP rating:	67	67	65										
⑥ NEMA rating:	6	6	4										

## ▼ Sample Model Number

**PT5DC - 30 - V62 - UP - Z10 - M6**  
order code:      ⑥      ⑥      ⑥      ⑥      ⑥

Specifications:

- Full Stroke Range: 30 inches
- Measuring Cable: 0.062-in dia. thermoplastic cable
- Measuring Cable Exit: Up
- Output Signals: 0...10 VDC, output increasing with cable extension
- Electrical Connection: 6-pin plastic connector