



**mm PT5A**

**Description**

- Absolute Linear Position to 250 inches (6350 mm)
- Hard Anodized Aluminum Enclosure
- High Cycle Applications
- IP67 · NEMA 6 Protection

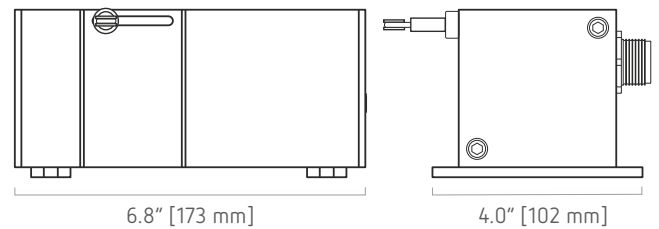


The PT5A potentiometric cable-extension transducer uses a unique thermoplastic cable that has virtually an infinite fatigue life. This cable, known as V62, has properties that are superior for high cycle and rugged applications.

Like our 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.

**GENERAL**

Full Stroke Range Options	0-10 to 0-250 inches
Output Signal Options	voltage divider (potentiometer)
Accuracy	see ordering information
Repeatability	see ordering information
Resolution	essentially infinite
Measuring Cable Options	stainless steel or thermoplastic
Enclosure Material	hard anodized aluminum
Sensor	plastic-hybrid precision potentiometer
Potentiometer Cycle Life	see ordering information
Maximum Measuring Cable Velocity	see ordering information
Maximum Retraction Acceleration	see ordering information
Weight	5 lbs. max.



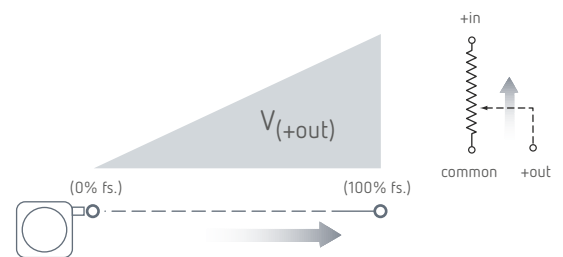
**ELECTRICAL**

Input Resistance Options	500, 1K, 5K, 10K ohms or bridge
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**

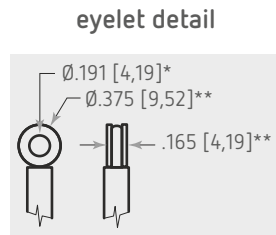
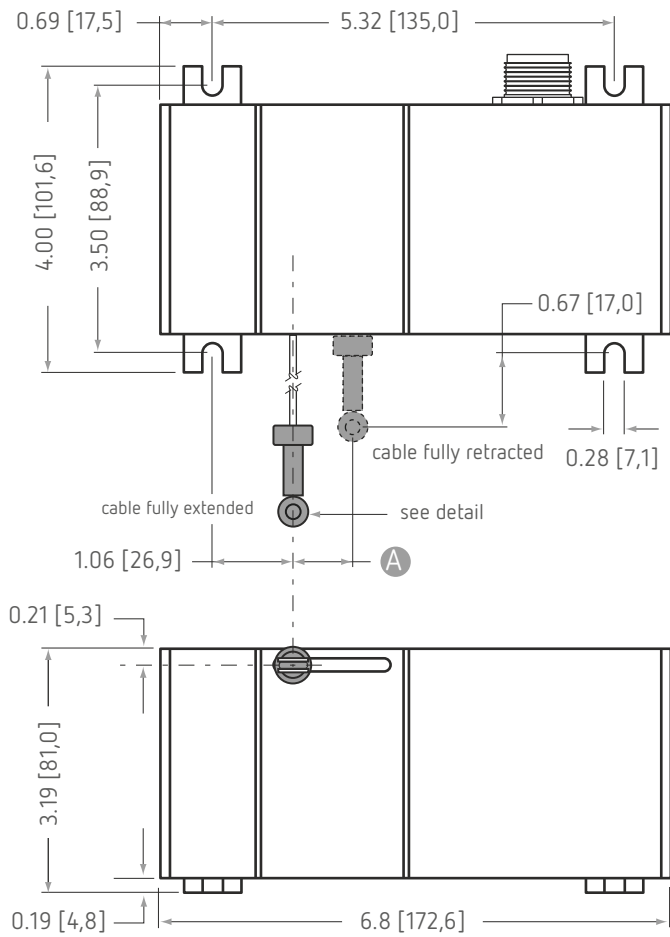
Enclosure	NEMA 4/6, IP 65/67
Operating Temperature	-40° to 200°F (-40° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

**Output signal**



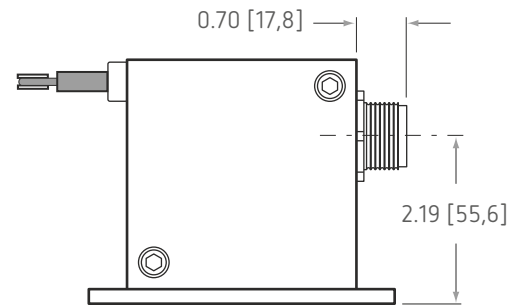
-- bridge circuit option available, see ordering information

**Outline drawing**



**A DIMENSION (inches[mm])**

RANGE	N34 measuring cable	S47 & V62 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**

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

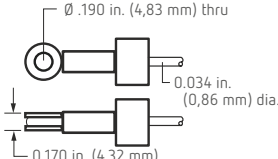
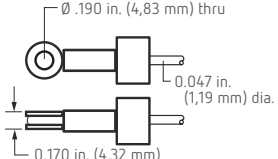
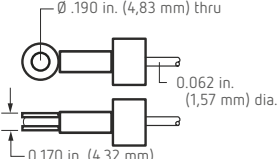
**Full Stroke Range:**

<b>R</b> order code:	10	15	20	25	30	40	50	60	80	100	125	150	200	250
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		

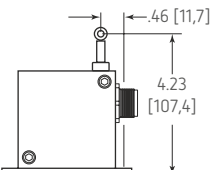
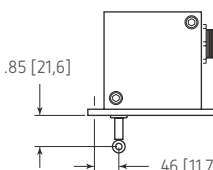
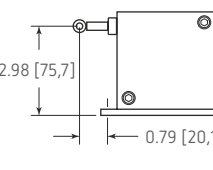
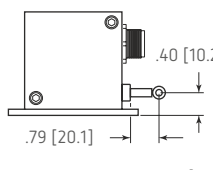
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Ordering information (cont.)

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
			

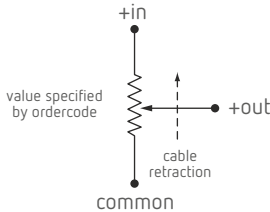
Cable Exit:

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

Output Signals:

**C**

\*tolerance = ±10%

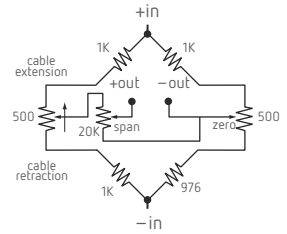


value specified by ordercode

common

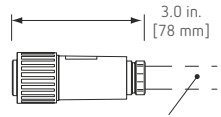
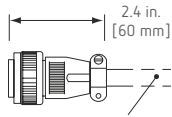
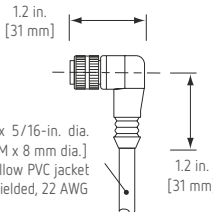

max. input voltage and power rating

10 to 30-inch range	40 to 250-inch range
500-ohms: 20V AC/DC (1W)	30V AC/DC (2W)
1K to 10K-ohms: 30V AC/DC (1W)	30V AC/DC (2W)



full scale output: adjustable from 0 to 30mV/V zero adjust: to 50% of full stroke

Electrical Connection:

D order code:	M6	M6M	MC4	C25																																																	
	6-pin plastic connector with mating plug IP 67, NEMA 6	6-pin metal connector with mating plug IP 65, NEMA 4	4-pin micro-connector with 12 ft [3.5 M] cordset IP 67, NEMA 6	25-ft. instrumentation cable 24 AWG, shielded 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	.375 in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	12 ft. x 5/16-in. dia. [3,5 M x 8 mm dia.] yellow PVC jacket shielded, 22 AWG	25 ft. x 0.2-in. dia. [7,5 M x 5 mm dia.] 24 AWG, shielded																																																	
	<p>6-pin mating plug:</p> <table border="1"> <thead> <tr> <th>pin</th> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>+IN</td> <td>+IN</td> </tr> <tr> <td>B</td> <td>COMMON</td> <td>-IN</td> </tr> <tr> <td>C</td> <td>+OUT</td> <td>-OUT</td> </tr> <tr> <td>D</td> <td>-</td> <td>+OUT</td> </tr> </tbody> </table> <p>contact view</p>	pin	standard	bridge	A	+IN	+IN	B	COMMON	-IN	C	+OUT	-OUT	D	-	+OUT	<p>4-pin mating plug and cord set:</p> <table border="1"> <thead> <tr> <th>pin</th> <th>color code</th> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>RED-BLK TR.</td> <td>+IN</td> <td>+IN</td> </tr> <tr> <td>2</td> <td>RED-WHT TR.</td> <td>COMMON</td> <td>-IN</td> </tr> <tr> <td>3</td> <td>RED</td> <td>+OUT</td> <td>+OUT</td> </tr> <tr> <td>4</td> <td>GREEN</td> <td>-</td> <td>-OUT</td> </tr> </tbody> </table> <p>contact view</p>	pin	color code	standard	bridge	1	RED-BLK TR.	+IN	+IN	2	RED-WHT TR.	COMMON	-IN	3	RED	+OUT	+OUT	4	GREEN	-	-OUT	<p>25-ft. cable:</p> <table border="1"> <thead> <tr> <th>color code</th> <th>standard</th> <th>bridge</th> </tr> </thead> <tbody> <tr> <td>RED</td> <td>+IN</td> <td>+IN</td> </tr> <tr> <td>BLACK</td> <td>COMMON</td> <td>-IN</td> </tr> <tr> <td>GREEN</td> <td>+OUT</td> <td>+OUT</td> </tr> <tr> <td>WHITE</td> <td>-</td> <td>-OUT</td> </tr> </tbody> </table>	color code	standard	bridge	RED	+IN	+IN	BLACK	COMMON	-IN	GREEN	+OUT	+OUT	WHITE	-	-OUT
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The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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