

Cable-Extension Position Transducer

Precision Potentiometric Output
Ranges: 0-10 to 0-250 inches
Industrial Grade • High Cycle Applications



PT5A

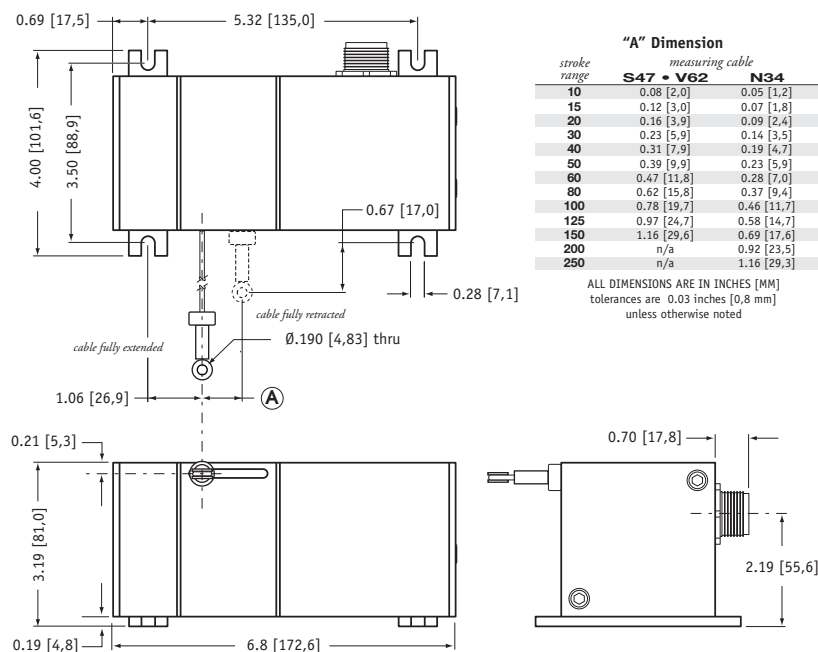
Specification Summary:

GENERAL
 Full Stroke Range Options 0-10 to 0-250 inches
 Output Signal Options..... voltage divider (potentiometer)
 Accuracy $\pm 0.75\%$ to $\pm 0.18\%$ full stroke *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 or bridge, *see ordering information*
 Power Rating, Watt *see ordering information*
 Recommended Maximum Input Voltage *see ordering information*
 Output Signal Change Over Full Stroke Range..... 94% $\pm 4\%$ 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's to 2000 Hz maximum

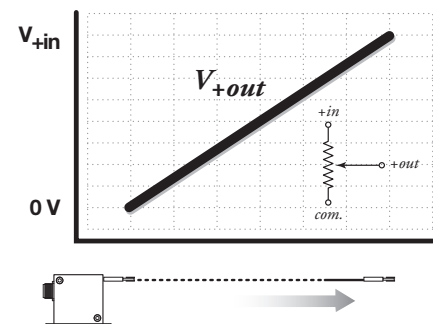
Outline Drawing



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



PT5A • Cable-Extension Transducer: Precision Potentiometric Output

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 steel
- B** cable exit: front
- C** output signal: 500 ohm potentiometer
- D** electrical connection: 6-pin plastic connector

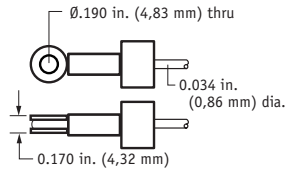
Full Stroke Range:

R 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's						120 in./sec • 2 G's							

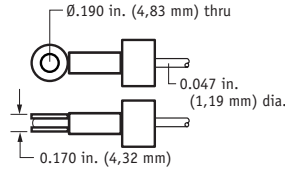
Measuring Cable:

A order code:

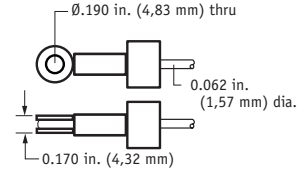
N34
 .034 nylon-coated stainless steel
available in all ranges



S47
 .047 stainless steel
all ranges up to 150 inches

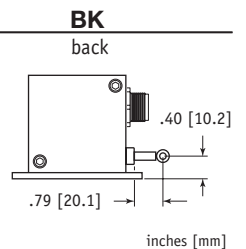
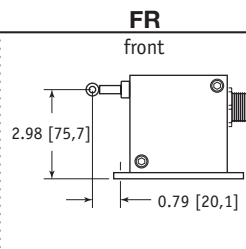
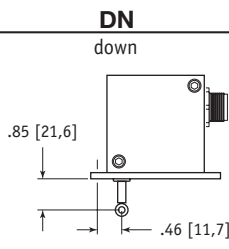
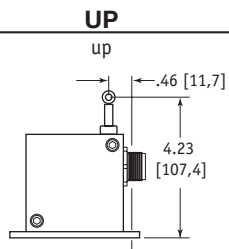


V62
 .062 thermoplastic
all ranges up to 150 inches



Cable Exit:

B order code:



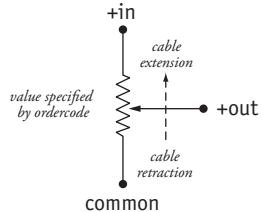
inches [mm]

Output Signals:

C order code:

500 500 ohm* **1K** 1000 ohm* **5K** 5000 ohm* **10K** 10,000 ohm*

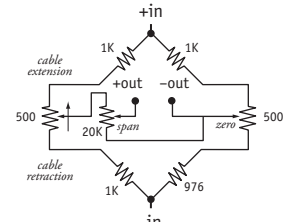
*tolerance = ±10%



max. input voltage and power rating

	10 to 30-inch range	40 to 250-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)

B
 adjustable bridge
 (0...30 mV/V)

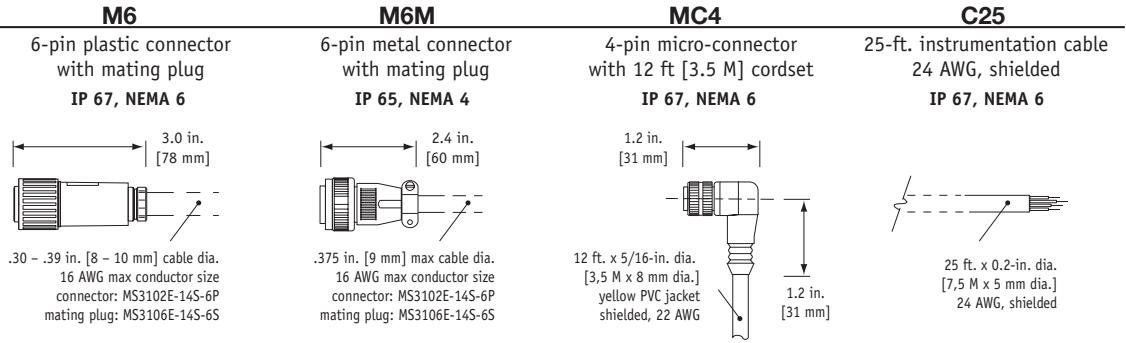


full scale output: adjustable from 0 to 30mV/V
 zero adjust: to 50% of full stroke

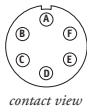
Ordering Information (cont.)

Electrical Connection:

① order code:



6-pin mating plug:



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

4-pin mating plug and cord set:



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

version: 4.0 last updated: June 1, 2011