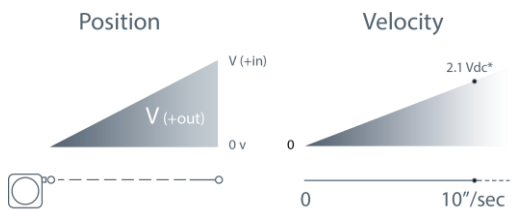


The PT5AV is a combination position and velocity transducer. A precision plastic-hybrid potentiometer provides accurate position feedback while a self-generating DC tachometer provides a velocity signal that is proportional to the speed of the traveling measuring cable.

Like Celesco's other transducers, the PT5AV installs in minutes, functions properly without perfectly parallel alignment, and fits easily into small areas. The PT5AV also has an optional unique thermoplastic measuring cable that has virtually an infinite fatigue life for high-cycle applications.

Output Signal



*velocity output rate = 354 mV ± 4% @ 100 inches per min.

PT5AV

Cable Actuated Sensor Industrial Grade • Position/Velocity Output

Linear Position/Velocity to 250 inches (6350 mm)

Hard Anodized Aluminum Enclosure

High Cycle Applications

IP67 • NEMA 6 Protection

General

Full Stroke Range Options 0-10 to 0-250 inches

Position

Full Stroke Range Options 0-10 to 0-250 inches

Output Signal voltage divider (potentiometer)

Accuracy ±0.18% to ±0.75% full stroke (see ordering information)

Repeatability ±0.02% to ±0.1% full stroke (see ordering information)

Resolution essentially infinite

Sensor plastic-hybrid precision potentiometer

Potentiometer Cycle Life see ordering information

Input Resistance Options 500, 1K, 5K or 10K Ω

Power Rating, Watts see ordering information

Recommended see ordering information

Maximum Input Voltage

Output Signal Change Over Full Stroke Range 94% ±4% of input voltage

Velocity

Output Signal DC voltage

Linearity better than ±0.10% of output at any velocity

Repeatability ±0.10% of reading

Maximum Velocity • Retraction see ordering information

Acceleration

Sensor tach generator

Output Voltage @ 100 in. per minute (varies slightly w/measuring cable)

N34 cable option 354 mV ±4%

S47 cable option 352 mV ±4%

V62 cable option 351 mV ±4%

Output Impedance 350 ohms ±10%

Output Ripple (for velocity ≥ 1.35 inches per second) ±3% rms

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

General

Measuring Cable stainless steel or thermoplastic

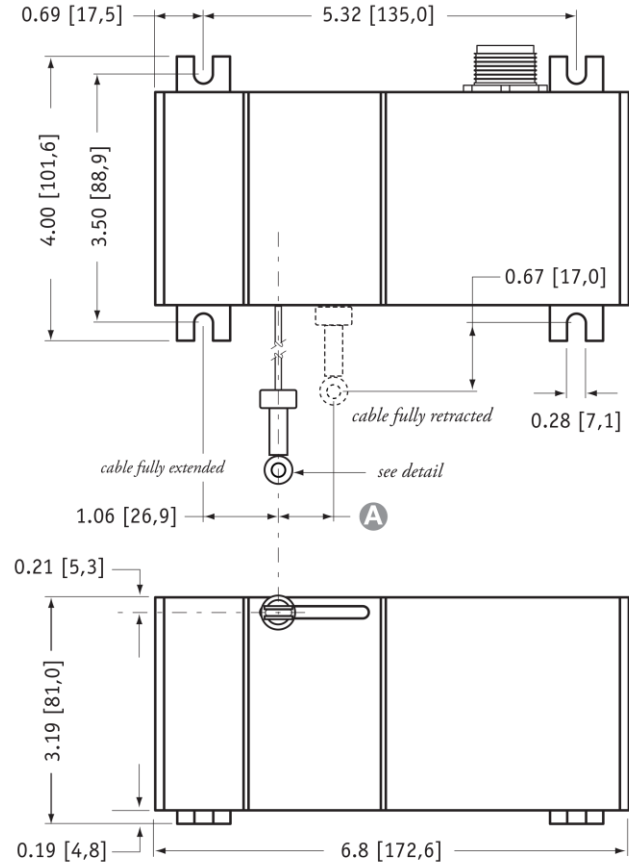
Enclosure hard anodized aluminum

Weight 5 lbs. max.

PT5AV

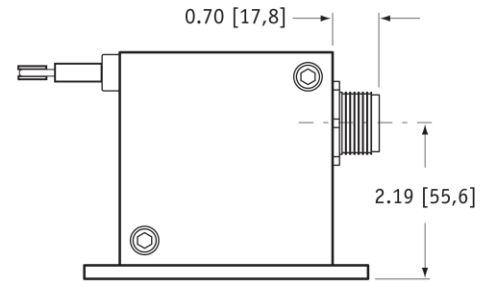
Industrial Grade • Position/Velocity Output

Outline Drawing



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:

PT5AV - _____
order code: **R** **A** **B** **C** **D**

Sample Model Number:

PT5AV - 100 - N34 - FR - 500 - M6

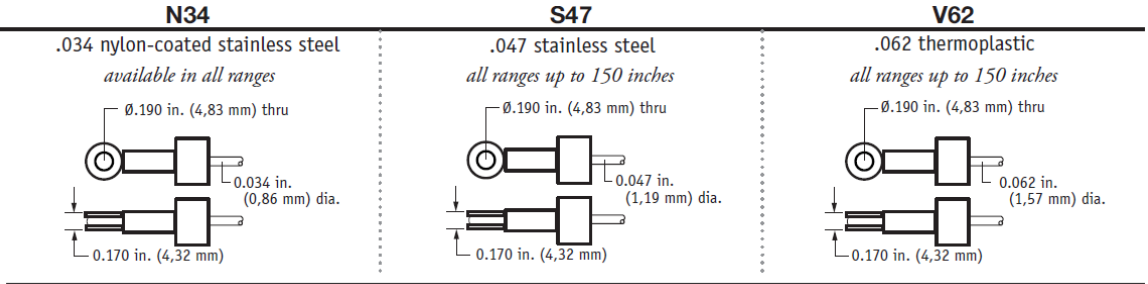
R range: 100 inches
A measuring cable: .034 nylon-coated stainless
B cable exit: front
C output signal: 500 ohm potentiometer
D electrical connection: 6-pin plastic connector

Full Stroke Range:

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												120 in./sec • 2 g		

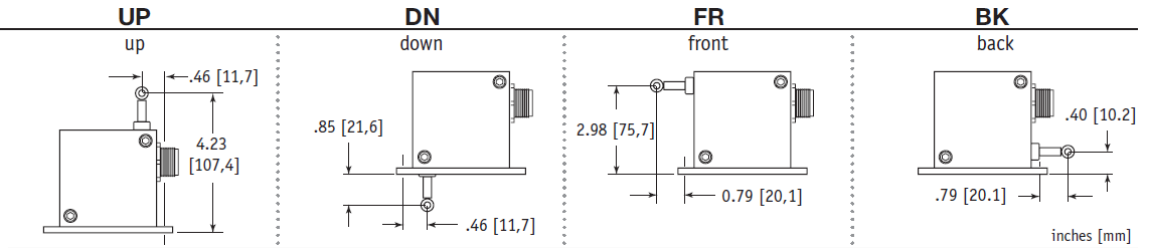
Measuring Cable:

A order code:



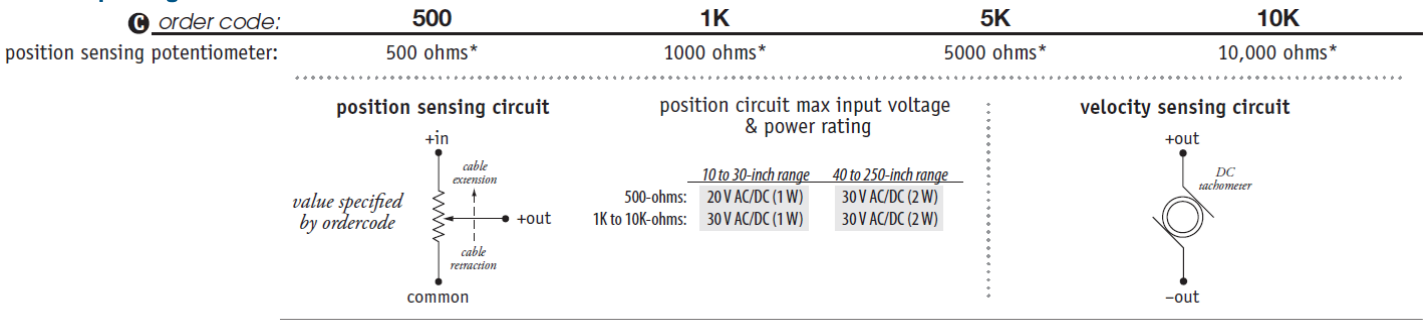
Cable Exit:

B order code:



Output Signals:

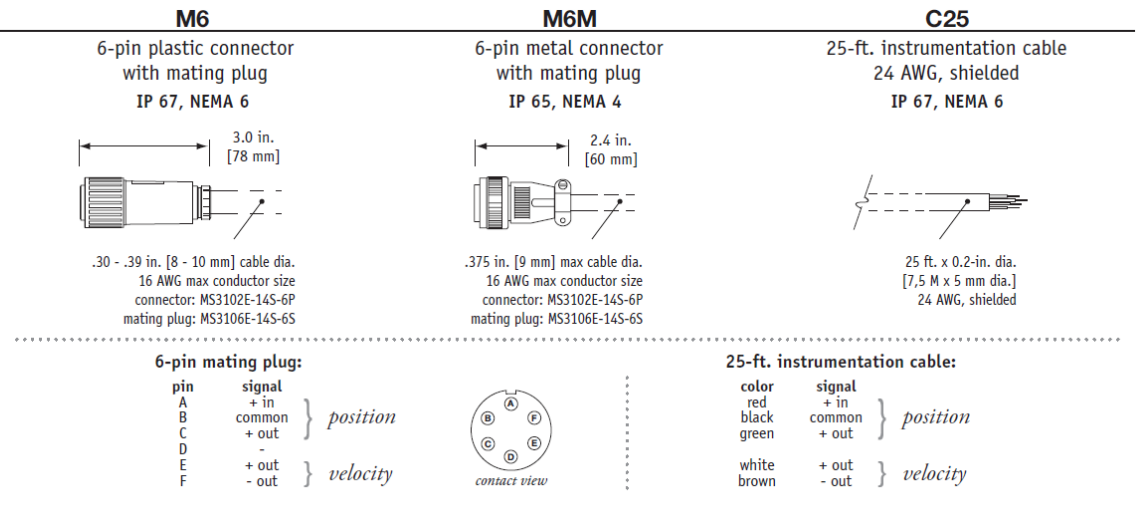
C order code:



*-tolerance = ±10%

Electrical Connection:

D order code:



PT5AV

Industrial Grade • Position/Velocity Output



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PT5AV 12/01/2015