

# Cable-Extension Position Transducer

- ▼ Short to Medium Range
- ▼ Industrial Grade - High Cycle Applications
- ▼ Position and Velocity Transducer

# PT5AV



## Specification Summary:

Full Stroke Ranges ..... 0-10 to 0-150 inches, see ① next page

### POSITION

Output Signal ..... voltage divider (potentiometer)  
 Accuracy .....  $\pm 0.25$  to  $0.10\%$  full stroke, see ②  
 Repeatability .....  $\pm 0.02\%$  full stroke  
 Resolution ..... essentially infinite  
 Sensor ..... plastic-hybrid precision potentiometer  
 Input Resistance ..... 500, 1K, 5K, and 10K ohms  $\pm 10\%$ , see ④  
 Power Rating, Watts ..... 2.0 at  $70^\circ\text{F}$  (derated to 0 @  $250^\circ\text{F}$ )  
 Recommended Maximum Input Voltage ..... 30 V(AC or DC)  
 Output Signal Change Over Measurement Range .....  $94\% \pm 4\%$  of input voltage

### VELOCITY

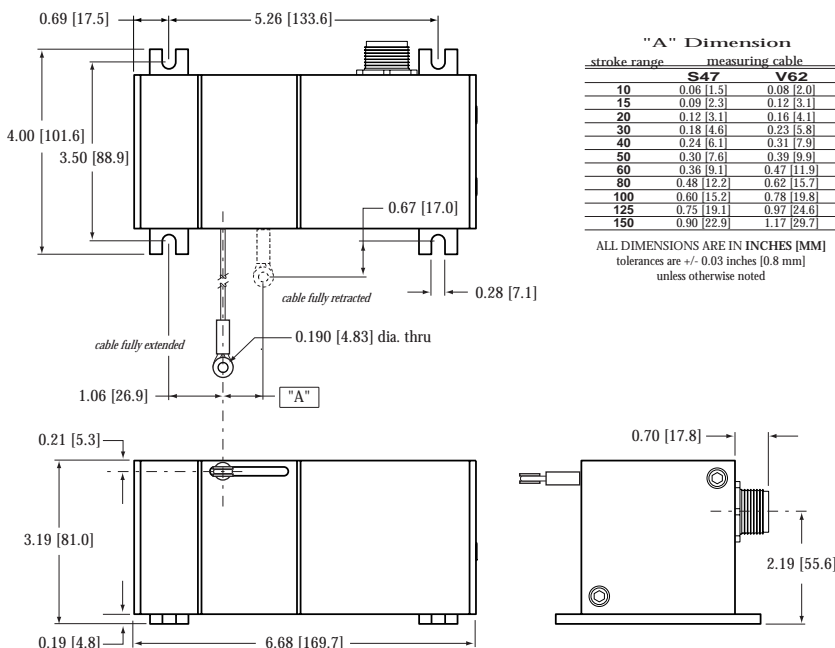
Output Signal ..... 345 mV DC @ 100 IPM  
 Linearity ..... better than  $\pm 0.10\%$  of output at any velocity  
 Repeatability .....  $\pm 0.10\%$  of reading  
 Sensor ..... tach generator  
 Input Voltage ..... none  
 Output Voltage @ 100 IPM ..... 345 mV  
 Output Impedance ..... 350 ohm  $\pm 10\%$   
 Output Ripple .....  $\leq 3\%$  of velocity output (for velocity outputs  $\geq 280$  mV)

### GENERAL

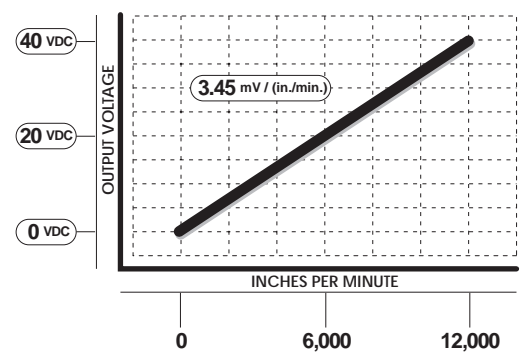
Measuring Cable ..... nylon-coated stainless steel or thermoplastic, see ③  
 Enclosure Material ..... hard-anodized aluminum  
 Maximum Measuring Cable Velocity ..... 300 inches per second  
 Maximum Measuring Cable Retraction Acceleration ..... 5 g's  
 Weight ..... 8 lbs., max.

### ENVIRONMENTAL

Enclosure Design ..... NEMA 4, IP 65/67/68, see ⑤ and ⑥  
 Operating Temperature .....  $-40^\circ$  to  $200^\circ\text{F}$   
 Vibration ..... up to 10 G's to 2000 Hz maximum



## Velocity Output Signal:



**celesco**  
 Nordisk Transducer Teknik  
 Als Odde - DK-9560 Hadsund Denmark  
 tel: +45 98581444 • fax: +45 98581866  
 www.ntt.dk • kd@ntt.dk

# PT5AV • Cable-Extension Transducer • Position and Velocity Transducer

## ▼ Ordering Information

### Model Number:

**PT5AV** - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_  
 order code:                      **R**                      **A**                      **B**                      **C**                      **D**

### Full Stroke Range:

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:

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

### Cable Exit:

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

### Output Signals:

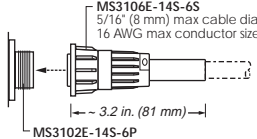
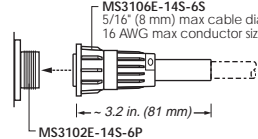
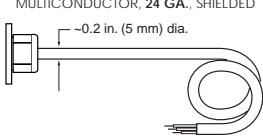


order code:	500	1K	5K	10K
④ position & velocity circuits:				

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## Electrical Connection:

① *order code:*

electrical connection:

	M6	M6M	C25																																		
	6-pin plastic connector and mating plug	6-pin metal connector and mating plug	25 ft. instrumentation cable																																		
																																					
	 <table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>position</th> <th>velocity</th> </tr> </thead> <tbody> <tr> <td>A = +IN</td> <td>E = +OUT</td> </tr> <tr> <td>B = COMMON</td> <td>F = -OUT</td> </tr> <tr> <td>C = +OUT</td> <td></td> </tr> <tr> <td>D = n/c</td> <td></td> </tr> </tbody> </table>	connections		position	velocity	A = +IN	E = +OUT	B = COMMON	F = -OUT	C = +OUT		D = n/c		 <table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>position</th> <th>velocity</th> </tr> </thead> <tbody> <tr> <td>A = +IN</td> <td>E = +OUT</td> </tr> <tr> <td>B = COMMON</td> <td>F = -OUT</td> </tr> <tr> <td>C = +OUT</td> <td></td> </tr> <tr> <td>D = n/c</td> <td></td> </tr> </tbody> </table>	connections		position	velocity	A = +IN	E = +OUT	B = COMMON	F = -OUT	C = +OUT		D = n/c		<table border="1"> <thead> <tr> <th colspan="2">connections</th> </tr> <tr> <th>position</th> <th>velocity</th> </tr> </thead> <tbody> <tr> <td>RED = +IN</td> <td>WHT = +OUT</td> </tr> <tr> <td>BLK = COMMON</td> <td>BRN = -OUT</td> </tr> <tr> <td>GRN = +OUT</td> <td></td> </tr> </tbody> </table>	connections		position	velocity	RED = +IN	WHT = +OUT	BLK = COMMON	BRN = -OUT	GRN = +OUT	
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⑤ IP rating:	67	65	67																																		
⑥ NEMA rating:	6	4	4																																		

## ▼ Sample Model Number

**PT5AV - 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