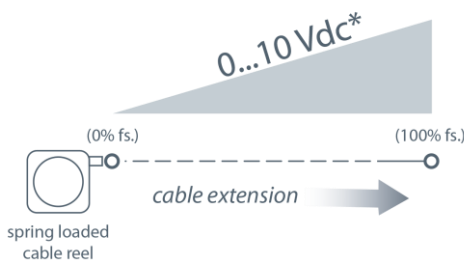


The PT5DC cable-extension transducer uses a unique thermoplastic cable that has virtually an infinite fatigue life. This cable, known as V62, has properties that are superior for high cycle and rugged applications.

Like our 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.

#### Output Signal



*\*Also Available: 0...5, -5...+5, -10...+10 Vdc*

## PT5DC

### Cable Actuated Sensor Industrial Grade • 0...5, 0...10 Vdc

**Absolute Linear Position to 250 inches (6350 mm)**

**Hard Anodized Aluminum Enclosure**

**High Cycle Applications**

**IP67 • NEMA 6 Protection**

#### General

<b>Full Stroke Range</b>	0-10 to 0-250 inches
<b>Options</b>	
<b>Output Signal Options</b>	0...5, 0...10, -5...+5, -10...+10 VDC
<b>Accuracy</b>	± 0.75% to ±0.18% full stroke (see ordering information)
<b>Repeatability</b>	±0.02% to ±0.1% full stroke (see ordering information)
<b>Resolution</b>	essentially infinite
<b>Measuring Cable</b>	stainless steel or thermoplastic
<b>Enclosure</b>	hard anodized aluminum
<b>Sensor</b>	plastic-hybrid precision potentiometer
<b>Potentiometer Cycle Life</b>	see ordering information
<b>Maximum Measuring Cable Velocity</b>	see ordering information
<b>Maximum Retraction Acceleration</b>	see ordering information
<b>Weight</b>	5 lbs. max.

#### Electrical

<b>Input</b>	14.5-40 VDC (10.5-40 VDC for 0...5 and -5...+5 volt output)
<b>Input Current</b>	10 mA maximum
<b>Output Impedance</b>	1000 ohms
<b>Maximum Load</b>	5000 ohms
<b>Zero and Span Adjustment</b>	see ordering information

#### Environmental

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

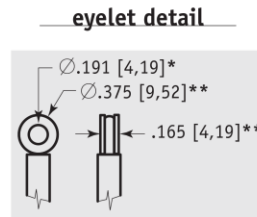
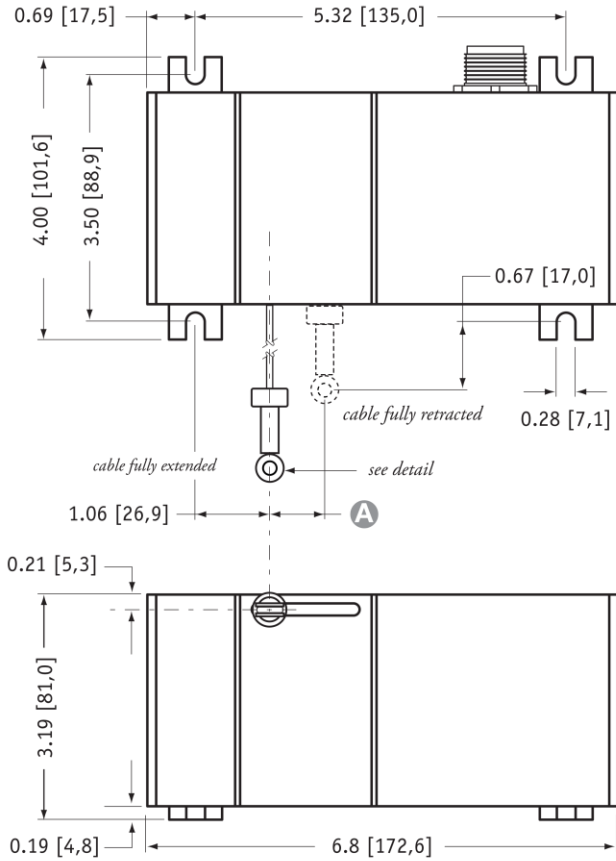
#### EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

<b>Emission/Immunity</b>	EN50081-2 / EN50082-2
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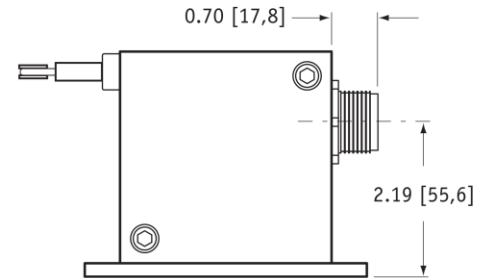
# PT5DC

Industrial Grade • 0...5, 0...10 Vdc

## 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:

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

### Sample Model Number:

**PT5DC - 100 - N34 - FR - Z10 - M6**

- R** range: 100 inches
- A** measuring cable: .034 nylon-coated stainless
- B** cable exit: front
- C** output signal: 0...10 vdc
- 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		

**Measuring Cable:**

<b>A</b> order code:	<b>N34</b>	<b>S47</b>	<b>V62</b>
	.034 nylon-coated stainless steel <i>available in all ranges</i>	.047 stainless steel <i>all ranges up to 150 inches</i>	.062 thermoplastic <i>all ranges up to 150 inches</i>

**Cable Exit:**

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

**Output Signals:**

<b>C</b> order code:	<b>Z10</b>	<b>10Z</b>	<b>Z5</b>	<b>5Z</b>	<b>M0P0</b>	<b>P0M0</b>	<b>M5P5</b>	<b>P5M5</b>
output signal options:	0...10 VDC 	10...0 VDC 	0...5 VDC 	5...0 VDC 	-10...+10 VDC 	+10...-10 VDC 	-5...+5 VDC 	+5...-5 VDC 
input voltage:	14.5 - 40 vdc		10.5 - 40 vdc		14.5 - 40 vdc		10.5 - 40 vdc	
span adjustment:	to 50% of factory set span				to 75% of factory set span			
zero adjustment:	from factory set zero to 50% of full stroke range				from factory set zero to 25% of full stroke range			

example:

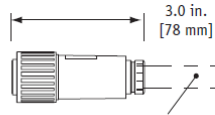


**Electrical Connection:**

① *order code:*

**M6**

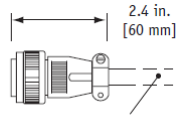
6-pin plastic connector with mating plug  
IP 67, NEMA 6



.30 - .39 in. [8 - 10 mm] cable dia.  
16 AWG max conductor size  
connector: MS3102E-14S-6P  
mating plug: MS3106E-14S-6S

**M6M**

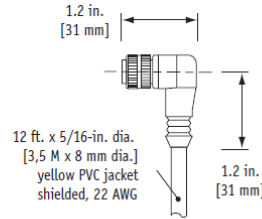
6-pin metal connector with mating plug  
IP 65, NEMA 4



.375 in. [9 mm] max cable dia.  
16 AWG max conductor size  
connector: MS3102E-14S-6P  
mating plug: MS3106E-14S-6S

**MC4**

4-pin micro-connector with 12 ft [3.5 M] cord set  
IP 67, NEMA 6



12 ft. x 5/16-in. dia. [3,5 M x 8 mm dia.]  
yellow PVC jacket shielded, 22 AWG

**C25**

25-ft. instrumentation cable  
24 AWG, shielded  
IP 67, NEMA 6



25 ft. x 0.2-in. dia. [7,5 M x 5 mm dia.]  
24 AWG, shielded

**6-pin mating plug:**



contact view

pin	signals
A	input voltage
B	output signal
C	common

**4-pin mating plug and cord set:**



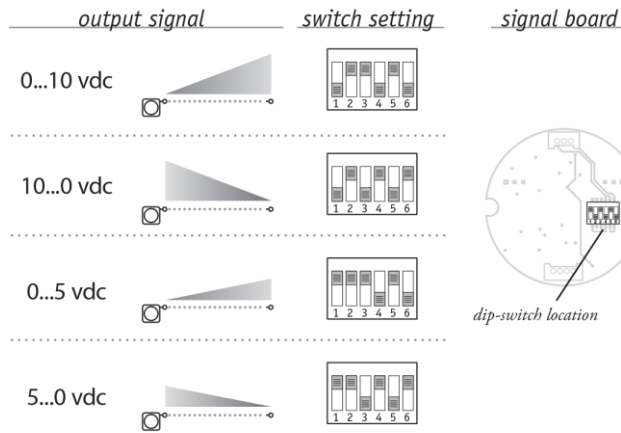
contact view

pin	color code	signals
1	RED-BLK TR.	input voltage
2	RED-WHT TR.	output signal
3	RED	common

**25-ft. cable:**

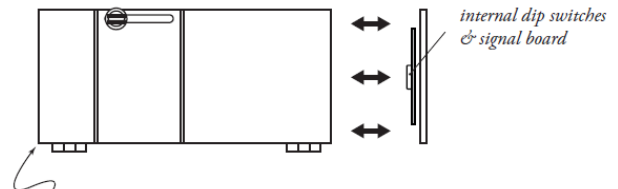
color code	standard
RED	input voltage
BLACK	common
GREEN	output signal

**Output Signal Selection (does not apply to -5 to +5 & -10 to +10 Vdc options)**



The output signal direction can be reversed at any time by simply changing the dip-switch settings found on the internal signal board. After the settings have been changed, adjustment of the Zero and Span trimpots will be required to precisely match signal values to the beginning and end points of the stroke.

To gain access to the signal board, remove four Allen-Head Screws and remove end cover bracket.



**Caution! Do Not Remove Spring-Side End Cover**  
Removing spring-side end cover could cause spring to become unseated and permanently damaged.

**PT5DC**

Industrial Grade • 0...5, 0...10 Vdc

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