

PT101

Instrument Grade • Voltage Divider

Absolute Linear Position • Classic Stringpot Design
 Stroke Range Options: 0–2 to 0–100 inches
 Powder Painted & Anodized Aluminum Enclosure
 Industrial Automation & Testing Applications

GENERAL

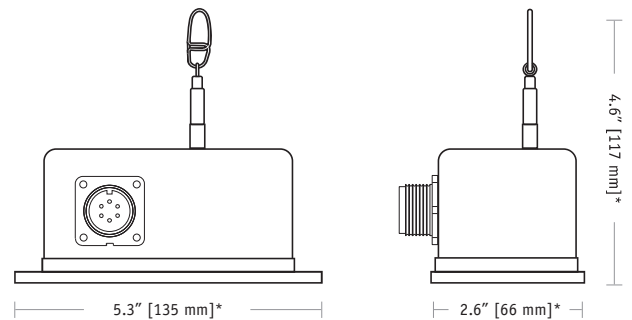
Full Stroke Range Options	0-2 to 0-100 inches
Output Signal Options	voltage divider (potentiometer)
Accuracy	see ordering information
Repeatability	± 0.02% full stroke
Resolution	essentially infinite
Measuring Cable	see ordering information
Enclosure Material	powder-painted and anodized aluminum
Sensor	plastic-hybrid precision potentiometer
Potentiometer Cycle Life	see ordering information
Maximum Retraction Acceleration	see ordering information
Weight	2 lbs. max.

ELECTRICAL

Input Resistance Options	500, 1K, 5K, 10K or bridge
Maximum Input Voltage	see ordering information
Power Rating	see ordering information
Output Signal Change Over Full Stroke Range	94% ±4% of input voltage

ENVIRONMENTAL

Enclosure	IP50, NEMA 1
Temperature Coefficient of Sensing Element	88 PPM/°F
Humidity	100% RH @ 90°F (32°C)
Operating Temperature	-40° to 200°F (-40° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

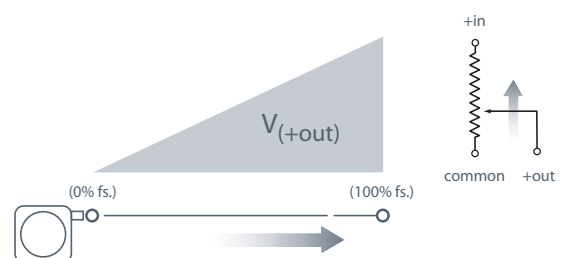


*50-inch range model, dimensions may differ for other ranges

Based on Celesco's original string pot design dating back to the late 1960's, the PT101 has become a standard throughout the years for literally thousands of applications including aircraft structural testing, hydraulic cylinder control, valve stem opening, and factory automation.

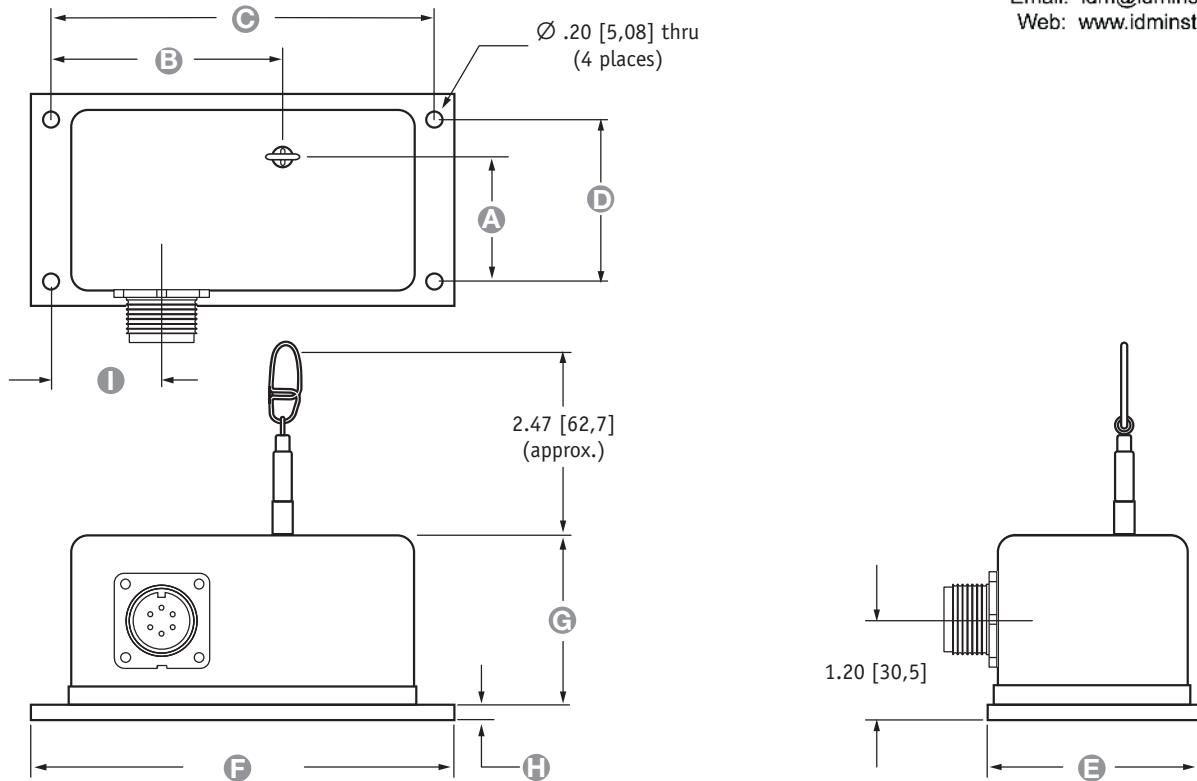
Available in full stroke ranges up to 100-inches, the PT101 provides a voltage feedback signal linearly proportional to the position of its traveling stainless steel measuring cable. Additionally the PT101 installs in minutes and doesn't require perfect parallel alignment. Simply secure the base to a fixed surface and attach the measuring cable to your moving object.

Electrical Output Signal



-- bridge circuit option available, see ordering information

Fig. 1, Top Exit:



ALL DIMENSIONS ARE IN INCHES [MM] • tolerances are ±0.02 in. [±0,5mm]

Range	A	B	C	D	E	F	G	H	I
2", 10", 20"	1.34 [34,0]	2.88 [73,1]	4.75 [120,6]	2.00 [50,8]	2.63 [66,8]	5.25 [133,4]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
5", 25", 50"	1.83 [46,5]	2.88 [73,1]	4.75 [120,6]	2.00 [50,8]	2.63 [66,8]	5.25 [133,4]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
15", 30"	1.56 [39,6]	2.88 [73,1]	4.75 [120,6]	2.00 [50,8]	2.63 [66,8]	5.25 [133,4]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
40"	1.64 [41,6]	2.88 [73,1]	4.75 [120,6]	2.00 [50,8]	2.63 [66,8]	5.25 [133,4]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
60"	2.16 [54,9]	2.88 [73,1]	6.75 [171,4]	2.37 [60,2]	3.25 [82,5]	7.50 [190,5]	2.60 [66,0]	.19 [4,8]	1.37 [34,8]
75", 80"	2.45 [62,2]	2.38 [60,4]	6.75 [171,4]	2.50 [63,5]	3.63 [92,2]	7.50 [190,5]	2.86 [72,6]	.19 [4,8]	1.37 [34,8]
100"	3.10 [78,7]	2.47 [62,8]	7.38 [187,5]	3.00 [76,2]	4.25 [108,0]	8.00 [203,2]	3.79 [96,3]	.19 [4,8]	3.69 [93,7]

Ordering Information:

Model Number:

PT101 - - 1 - 1 - 0
 order code: R A B C D E F G

Sample Model Number:

PT101 - 0025 - 111 - 1110

- R range: 25 inches
- A measuring cable tension: standard - 5 oz.
- C cable exit: top
- D sensing circuit: 500 ohms
- F electrical connection: 6-pin plastic connector

Full Stroke Range:

R order code:	0002	0005	0010	0015	0020	0025	0030	0040	0050	0060	0075	0080	0100
full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.	60 in.	75 in.	80 in.	100 in.
accuracy (% of f.s.):	0.25%		0.15%		0.10%		0.15%		0.10%				
potentiometer cycle life*:	2.5 x 10 ⁶		5 x 10 ⁵		2.5 x 10 ⁵		5 x 10 ⁵		2.5 x 10 ⁵				

*-1 cycle is defined as the travel of the measuring cable from full retraction to full extension and back to full retraction

Ordering Information (cont.):

Measuring Cable Tension:

	1		H		2*	3*
	standard tension	high tension	tension, ±20%	max acceleration		
2, 10, 20 inch range:	12 oz.	• 11 g	65 oz.	• 53 g	72 oz.	144 oz.
5, 25, 50 inch range:	5 oz.	• 2 g	26 oz.	• 11 g	30 oz.	60 oz.
15, 30 inch range:	8 oz.	• 3 g	43 oz.	• 23 g	48 oz.	96 oz.
40 inch range:	6 oz.	• 4 g	33 oz.	• 16 g	36 oz.	72 oz.
60 inch range:	13 oz.	• 4 g	22 oz.	• 8 g	26 oz.	52 oz.
75, 80 inch range:	10 oz.	• 3 g	31 oz.	• 12 g	20 oz.	40 oz.
100 inch range:	13 oz.	• 5 g	52 oz.	• 20 g	26 oz.	52 oz.
measuring cable:	.019-in. dia. nylon-coated stainless steel				.024-in. dia. stainless steel	

**note – outline dimensions for these options are not controlled on this datasheet!*

Measuring Cable Exit:

order code:	1	2	3	4
	top exit (see fig. 1)	front exit (see fig. 3)	rear exit (see fig. 4)	bottom exit (see fig. 2)

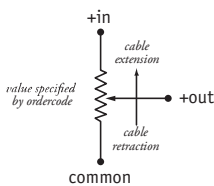
Sensing Circuit:

order code:	1	2	3	4	5	6
	500 ohm*	1000 ohm*	5000 ohm*	10,000 ohm*	fixed bridge (2 mV/V)	adjustable bridge (0...30 mV/V)
	*tolerance ±10%					

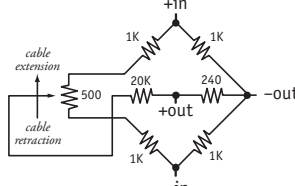
max. input voltage and power rating, options 1-4

	2-inch, 5-inch range	10-inch to 100-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)

circuit, options 1-4

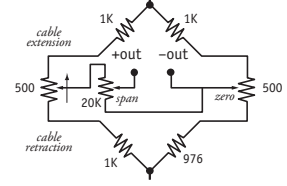


fixed bridge circuit



full scale output: 2 mV/V
 zero adjust: not available

adjustable bridge



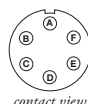
full scale output: adjustable from 0 to 30mV/V
 zero adjust: to 50% of full stroke

Electrical Connection:

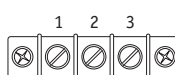
order code:	1	2	3	4
	6-pin plastic connector with mating plug	terminal strip	6-pin metal connector with mating plug	25-ft. instrumentation cable 24 AWG, shielded
	3.0 in. [78 mm]		2.4 in. [60 mm]	
	1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S		3/8-in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	25 ft. x 0.2-in. dia. [7.5 M x 5 mm dia.] 24 AWG, shielded

6-pin mating plug:

pin	standard	bridge
A	+ in	+ in
B	common	- in
C	+ out	- out
D	-	+ out



Terminal Strip:

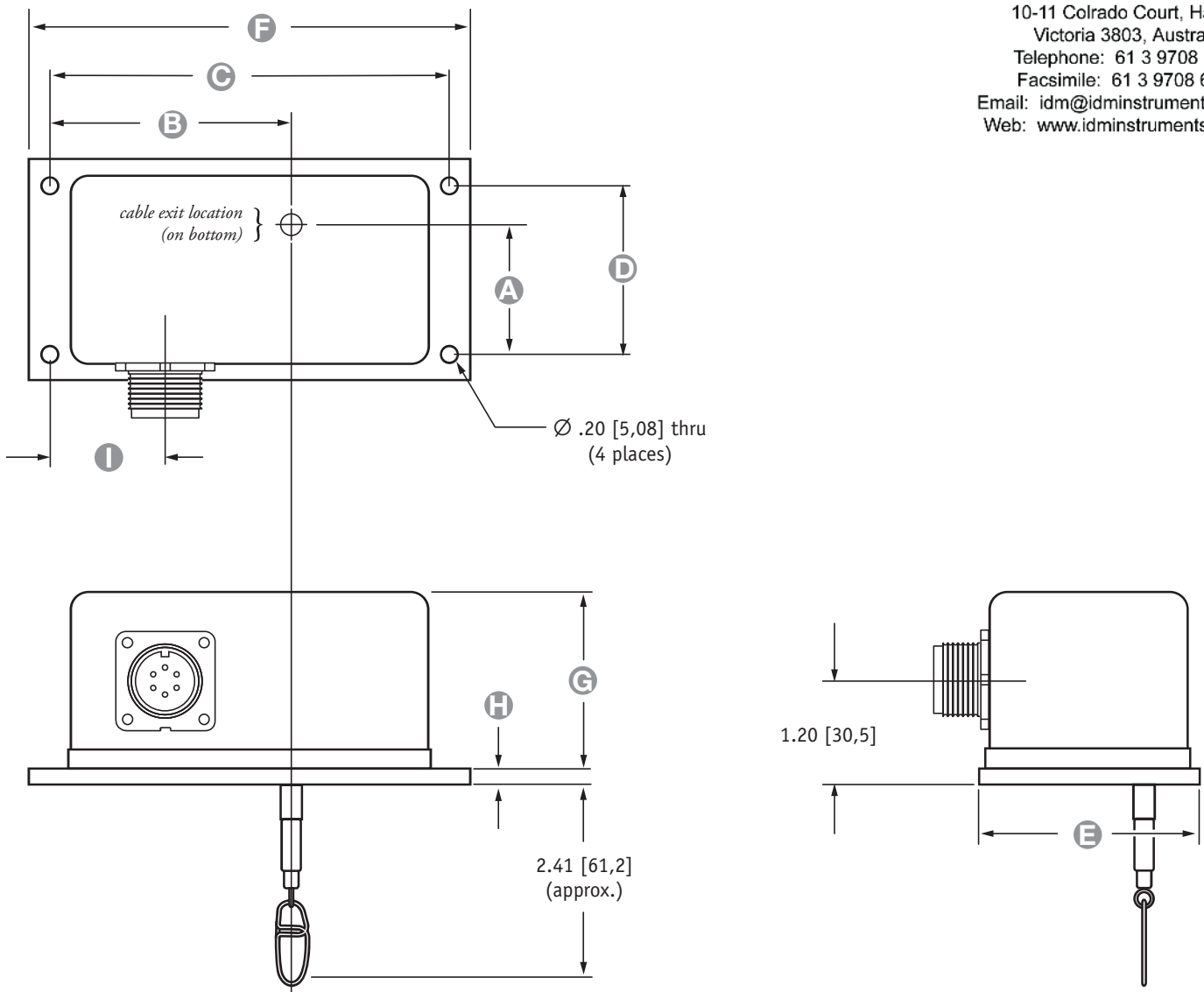


terminal	signals
1	+ in
2	common
3	+ out

25-ft. instrumentation cable:

color code	standard	bridge
RED	+ in	+ in
BLACK	common	- in
GREEN	+ out	+ out
WHITE	-	- out

Fig. 2, Bottom Exit:



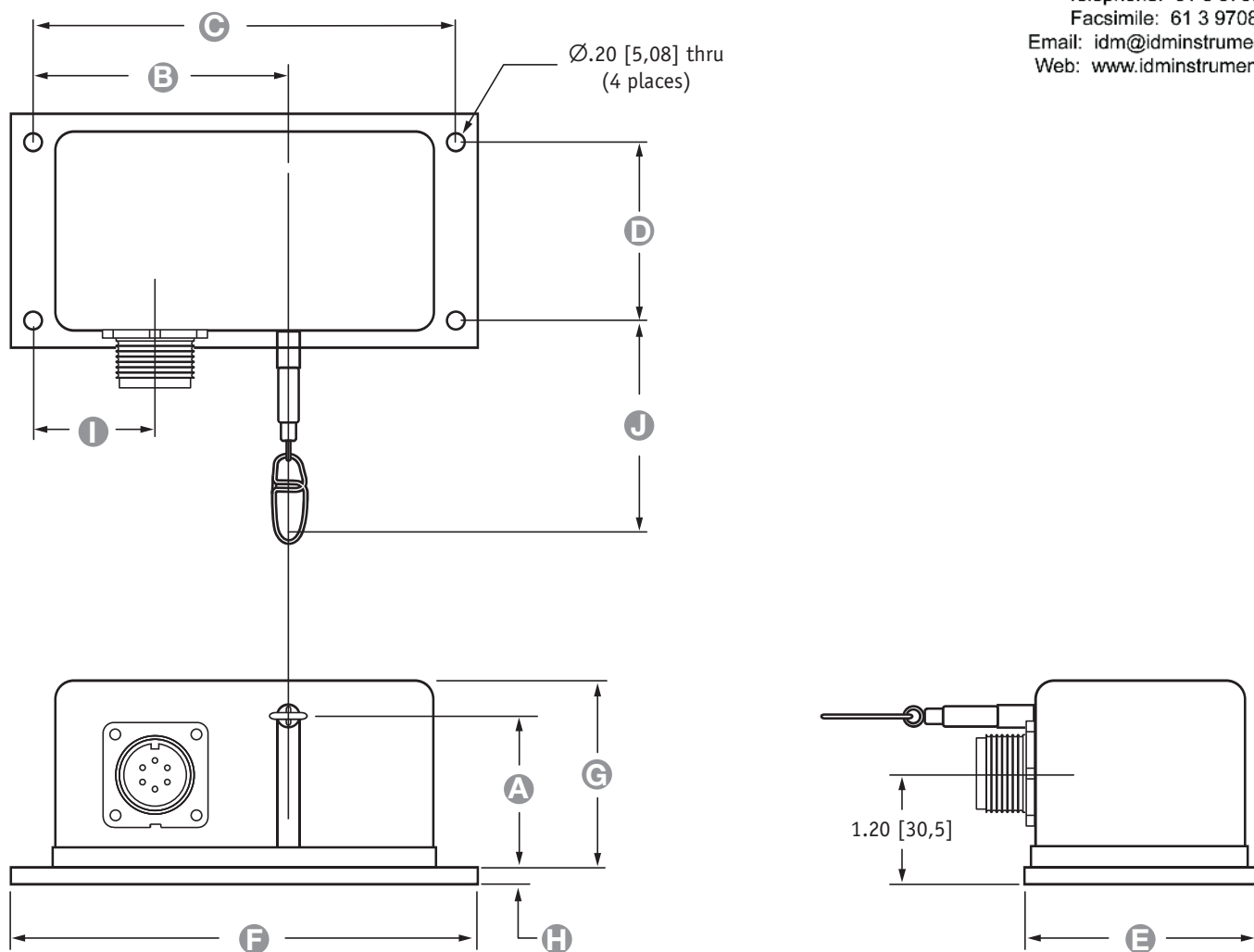
10-11 Colorado Court, Hallam
 Victoria 3803, Australia
 Telephone: 61 3 9708 6885
 Facsimile: 61 3 9708 6770
 Email: idm@idminstruments.com.au
 Web: www.idminstruments.com.au

ALL DIMENSIONS ARE IN INCHES [MM] • tolerances are ±0.02 in. [±0,5mm]

Range	A	B	C	D	E	F	G	H	I	J
2", 10", 20"	1.34[34,0]	2.88[73,1]	4.75[120,6]	2.00[50,8]	2.63[66,8]	5.25[133,4]	2.10[53,3]	.16[4,1]	1.37[34,8]	2.57[65,3]
5", 25", 50"	1.83[46,5]	2.88[73,1]	4.75[120,6]	2.00[50,8]	2.63[66,8]	5.25[133,4]	2.10[53,3]	.16[4,1]	1.37[34,8]	2.57[65,3]
15", 30"	1.56[39,6]	2.88[73,1]	4.75[120,6]	2.00[50,8]	2.63[66,8]	5.25[133,4]	2.10[53,3]	.16[4,1]	1.37[34,8]	2.57[65,3]
40"	1.64[41,6]	2.88[73,1]	4.75[120,6]	2.00[50,8]	2.63[66,8]	5.25[133,4]	2.10[53,3]	.16[4,1]	1.37[34,8]	2.57[65,3]
60"	2.16[54,9]	2.88[73,1]	6.75[171,4]	2.37[60,2]	3.25[82,5]	7.50[190,5]	2.60[66,0]	.19[4,8]	1.37[34,8]	2.63[66,8]
75", 80"	2.45[62,2]	2.38[60,4]	6.75[171,4]	2.50[63,5]	3.63[92,2]	7.50[190,5]	2.86[72,6]	.19[4,8]	1.37[34,8]	2.69[68,3]
100"	3.10[78,7]	2.47[62,8]	7.38[187,5]	3.00[76,2]	4.25[108,0]	8.00[203,2]	3.79[96,3]	.19[4,8]	3.69[93,7]	2.90[73,7]

Fig. 3, Front Exit:

10-11 Colorado Court, Hallam
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 Web: www.idminstruments.com.au

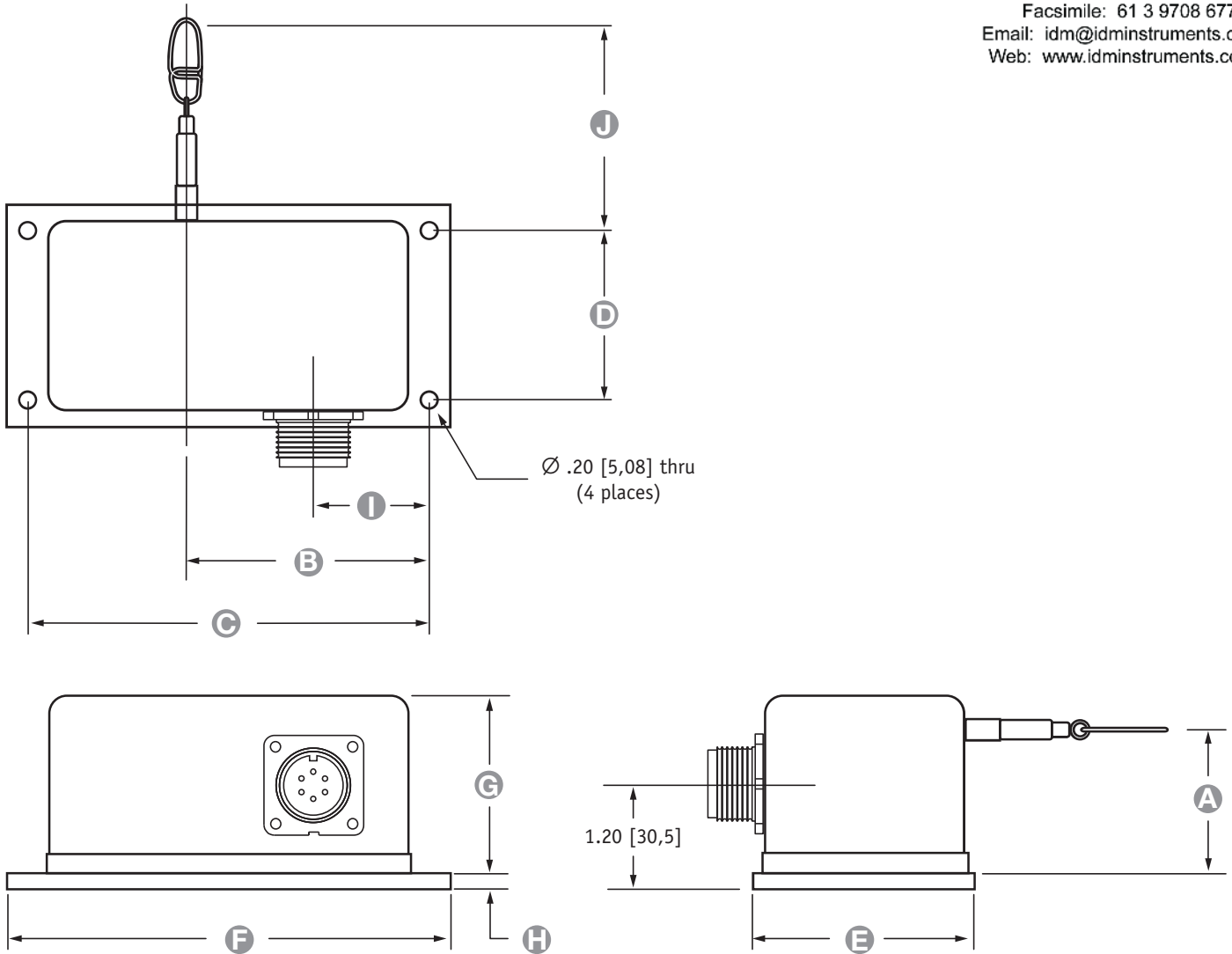


ALL DIMENSIONS ARE IN INCHES [MM] • tolerances are ±0.02 in. [±0,5mm]

Range	A	B	C	D	E	F	G	H	I	J
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15", 30"	1.56[39,6]	2.88[73,1]	4.75[120,6]	2.00[50,8]	2.63[66,8]	5.25[133,4]	2.10[53,3]	.16[4,1]	1.37[34,8]	2.57[65,3]
40"	1.64[41,6]	2.88[73,1]	4.75[120,6]	2.00[50,8]	2.63[66,8]	5.25[133,4]	2.10[53,3]	.16[4,1]	1.37[34,8]	2.57[65,3]
60"	2.16[54,9]	2.88[73,1]	6.75[171,4]	2.37[60,2]	3.25[82,5]	7.50[190,5]	2.60[66,0]	.19[4,8]	1.37[34,8]	2.63[66,8]
75", 80"	2.45[62,2]	2.38[60,4]	6.75[171,4]	2.50[63,5]	3.63[92,2]	7.50[190,5]	2.86[72,6]	.19[4,8]	1.37[34,8]	2.69[68,3]
100"	3.10[78,7]	2.47[62,8]	7.38[187,5]	3.00[76,2]	4.25[108,0]	8.00[203,2]	3.79[96,3]	.19[4,8]	3.69[93,7]	2.90[73,7]

Fig. 4, Rear Exit:

10-11 Colrado Court, Hallam
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ALL DIMENSIONS ARE IN INCHES [MM] • tolerances are ±0.02 in. [±0,5mm]

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15", 30"	1.56[39,6]	2.88[73,1]	4.75[120,6]	2.00[50,8]	2.63[66,8]	5.25[133,4]	2.10[53,3]	.16[4,1]	1.37[34,8]	2.57[65,3]
40"	1.64[41,6]	2.88[73,1]	4.75[120,6]	2.00[50,8]	2.63[66,8]	5.25[133,4]	2.10[53,3]	.16[4,1]	1.37[34,8]	2.57[65,3]
60"	2.16[54,9]	2.88[73,1]	6.75[171,4]	2.37[60,2]	3.25[82,5]	7.50[190,5]	2.60[66,0]	.19[4,8]	5.38[136,7]	2.63[66,8]
75", 80"	2.45[62,2]	2.38[60,4]	6.75[171,4]	2.50[63,5]	3.63[92,2]	7.50[190,5]	2.86[72,6]	.19[4,8]	5.38[136,7]	2.69[68,3]
100"	3.10[78,7]	2.47[62,8]	7.38[187,5]	3.00[76,2]	4.25[108,0]	8.00[203,2]	3.79[96,3]	.19[4,8]	3.69[93,7]	2.90[73,7]

PT420

Instrument Grade • 4...20mA / 0...20mA

Absolute Linear Position • Classic Stringpot Design
Stroke Range Options: 0–2 to 0–100 inches
Powder Painted & Anodized Aluminum Enclosure
Industrial Automation & Testing Applications

GENERAL

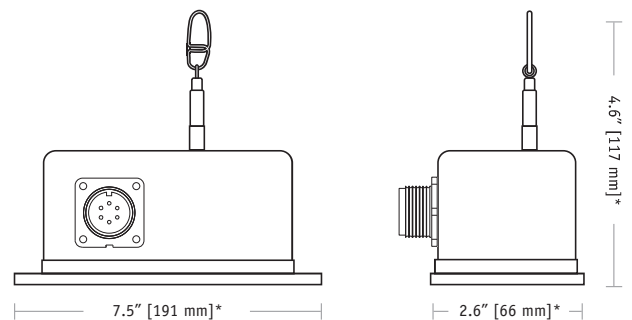
Full Stroke Range Options	0-2 to 0-100 inches
Output Signal Options	4...20 mA (2-wire) and 0...20 mA (3-wire)
Accuracy	see ordering information
Repeatability	± 0.05% full stroke
Resolution	essentially infinite
Enclosure Material	powder-painted and anodized aluminum
Sensor	plastic-hybrid precision potentiometer
Weight	2 lbs. max.

ELECTRICAL

Input Voltage	see ordering information
Input Current	20 mA max.
Maximum Loop Resistance (Load)	(loop supply voltage - 8)/0.020
Circuit Protection	38 mA max.
Impedance	100M ohms@100 VDC, min.
Signal Adjustment, Zero	from factory set zero to 50% of full stroke range
Signal Adjustment, Span	to 50% of factory set span
Thermal Effects, Zero	0.01% f.s./°F, max.
Thermal Effects, Span	0.01% f.s./°F, max.

ENVIRONMENTAL

Enclosure	IP50, NEMA 1
Operating Temperature	-40° to 200°F (-40° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

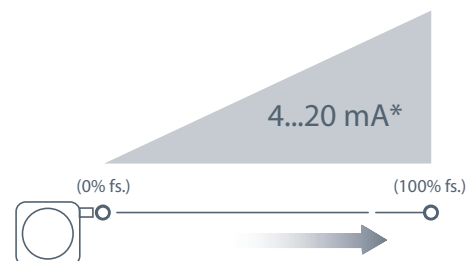


*50-inch range model, dimensions may differ for other ranges

The PT420 is available with full-scale measurement ranges from 2 to 100 inches, providing a 0/4-20 mA feedback signal that is linearly proportional to the position of a traveling stainless-steel extension cable. Use the PT420 to provide position feedback on hydraulic cylinders in factories and utilities, gate position in fresh or wastewater distribution systems, or valve opening in process-related applications.

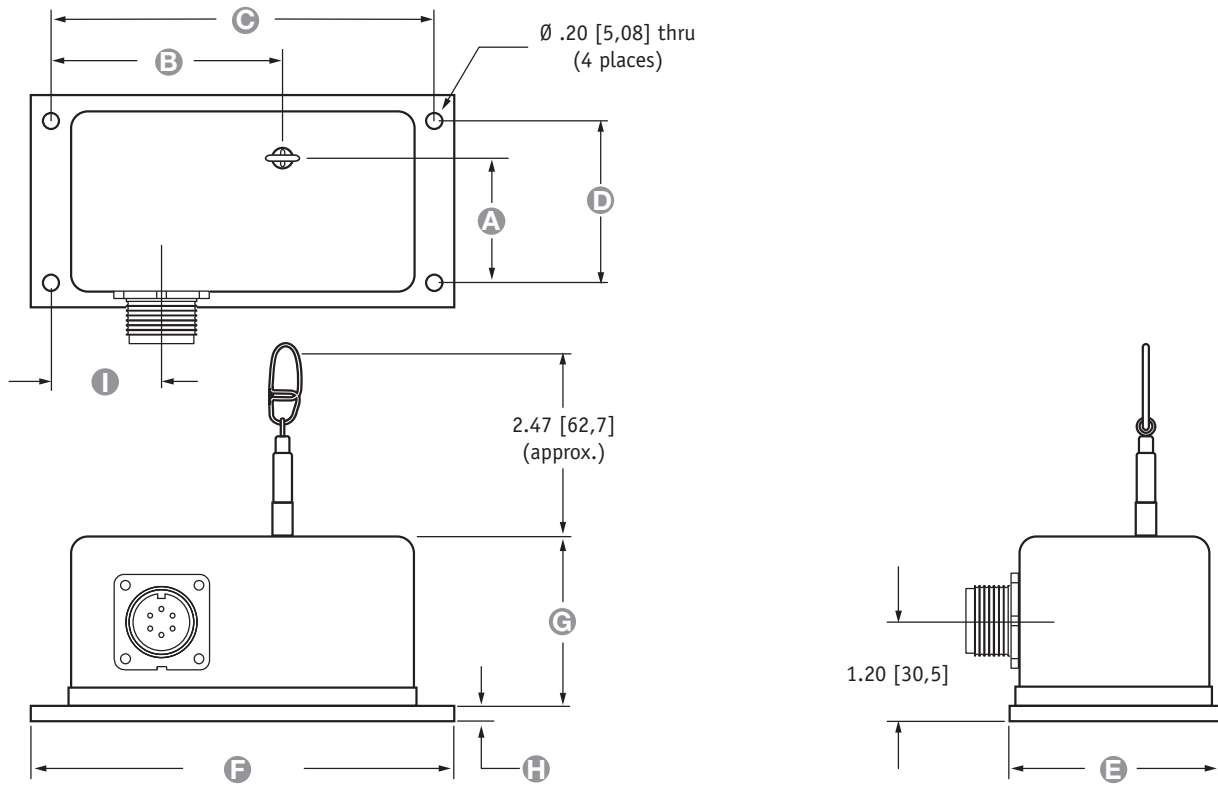
The PT420 installs in minutes by mounting its base to a fixed surface and attaching its cable to the movable object. The PT420 works without perfect parallel alignment, and when its stainless steel cable is retracted, its height is less than 5".

Electrical Output Signal



*Optional 3-wire, 0...20mA output signal available.

Fig. 1, Top Exit:



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Range	A	B	C	D	E	F	G	H	I
2", 10", 20"	1.34 [34,0]	4.00 [101,6]	7.00 [177,8]	2.00 [50,8]	2.63 [66,8]	7.50 [190,5]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
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40"	1.64 [41,6]	4.00 [101,6]	7.00 [177,8]	2.00 [50,8]	2.63 [66,8]	7.50 [190,5]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
60"	2.16 [54,9]	4.19 [106,4]	7.00 [177,8]	2.37 [60,2]	3.25 [82,5]	7.50 [190,5]	2.60 [66,0]	.19 [4,8]	1.37 [34,8]
75", 80"	2.45 [62,2]	4.38 [111,3]	6.75 [171,4]	2.50 [63,5]	3.63 [92,2]	7.50 [190,5]	2.86 [72,6]	.19 [4,8]	1.37 [34,8]
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Ordering Information:

Model Number:

PT420 - - 1 - 1 0
order code: R A B C D E F G

Sample Model Number:

PT420 - 0025 - 111 - 1110

- R** range: 25 inches
- A** measuring cable tension: standard - 5 oz.
- B** cable exit: top
- C** output signal: 4...20 mA
- F** electrical connection: 6-pin plastic connector

Full Stroke Range:

R order code:	0002	0005	0010	0015	0020	0025	0030	0040	0050	0060	0075	0100
full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.	60 in.	75 in.	100 in.
accuracy (% of f.s.):	0.28%	0.28%	0.18%	0.18%	0.15%	0.18%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
potentiometer cycle life*:	2.5 x 10 ⁶	2.5 x 10 ⁶	5 x 10 ⁵	5 x 10 ⁵	5 x 10 ⁵	5 x 10 ⁵	5 x 10 ⁵	2.5 x 10 ⁵	2.5 x 10 ⁵	2.5 x 10 ⁵	2.5 x 10 ⁵	2.5 x 10 ⁵

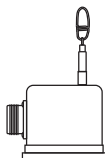
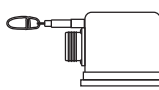
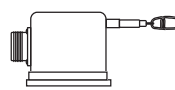
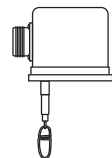
*-1 cycle is defined as the travel of the measuring cable from full retraction to full extension and back to full retraction

Ordering Information (cont.):

Measuring Cable Tension:





	1		H		2*		3*	
	standard tension		high tension		72 oz.		144 oz.	
	tension, ±20%	max acceleration	tension, ±40%	max acceleration	*note – outline dimensions for these options are not controlled on this datasheet!			
2, 10, 20 inch range:	12 oz.	• 11 g	65 oz.	• 53 g				
5, 25, 50 inch range:	5 oz.	• 2 g	26 oz.	• 11 g				
15, 30 inch range:	8 oz.	• 3 g	43 oz.	• 23 g				
40 inch range:	6 oz.	• 4 g	33 oz.	• 16 g				
60 inch range:	13 oz.	• 4 g	22 oz.	• 8 g				
75, 80 inch range:	10 oz.	• 3 g	31 oz.	• 12 g				
100 inch range:	13 oz.	• 5 g	52 oz.	• 20 g				
measuring cable:	.019-in. dia. nylon-coated stainless steel				.024-in. dia. stainless steel			

Measuring Cable Exit:



order code:	1	2	3	4
	top exit (see fig. 1)	front exit*	rear exit*	bottom exit*
				

*-note: dimensions for optional cable exits not controlled on this datasheet, please contact factory

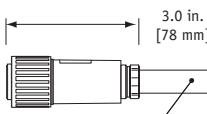
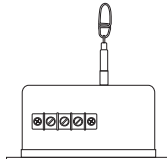
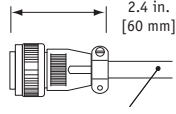
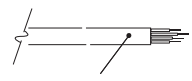
Sensing Circuit:

order code:	1	2	3	4
output signal options:	4...20 mA 	20...4 mA 	0...20 mA 	20...0 mA 
sensitivity:	16 mA/full stroke ±0.25%		20 mA/full stroke ±0.25%	
wiring configuration:	2 - wire		3 - wire	
input voltage:	8 - 34 VDC		14 - 29 VDC	

Example:

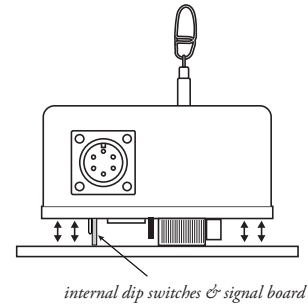
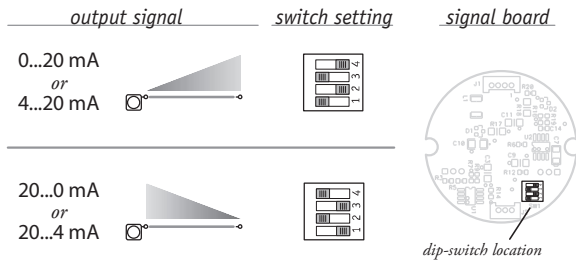
ordercode = 1 = 4...20 mA {  = 4 mA  = 20 mA

Electrical Connection:

order code:	1	2	3	4																																									
	6-pin plastic connector with mating plug	terminal strip	6-pin metal connector with mating plug	25-ft. instrumentation cable 24 AWG, shielded																																									
	 3.0 in. [78 mm]		 2.4 in. [60 mm]																																										
	1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S		3/8-in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	25 ft. x 0.2-in. dia. [7,5 M x 5 mm dia.] 24 AWG, shielded																																									
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Output Signal Selection:

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.



internal dip switches & signal board

To gain access to the signal board, remove the two 4-40 screws on top and lift up cover.

version: **8.0** last updated: **May 21, 2013**

PT510

Instrument Grade • 0..5 Vdc / 0..10 Vdc

Absolute Linear Position • Classic Stringpot Design
 Stroke Range Options: 0–2 to 0–100 inches
 Powder Painted & Anodized Aluminum Enclosure
 Industrial Automation & Testing Applications

GENERAL

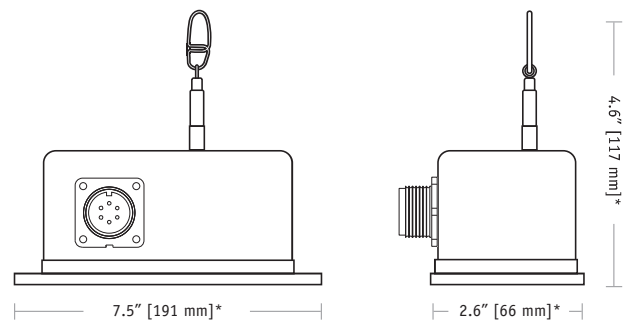
Full Stroke Range Options	0-2 to 0-100 inches
Output Signal Options	0...5, 0...10 VDC
Accuracy	see ordering information
Repeatability	± 0.05% full stroke
Resolution	essentially infinite
Measuring Cable	see ordering information
Enclosure Material	powder-painted and anodized aluminum
Sensor	plastic-hybrid precision potentiometer
Potentiometer Cycle Life	see ordering information
Maximum Retraction Acceleration	see ordering information
Weight	2 lbs. max.

ELECTRICAL

Input	see ordering information
Input Current	10 mA maximum
Output Impedance	1000 ohms
Maximum Load	5000 ohms
Signal Adjustment, Zero	from factory set zero to 50% of full stroke range
Signal Adjustment, Span	to 50% of factory set span

ENVIRONMENTAL

Enclosure	IP50, NEMA 1
Operating Temperature	-40° to 200°F (-40° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

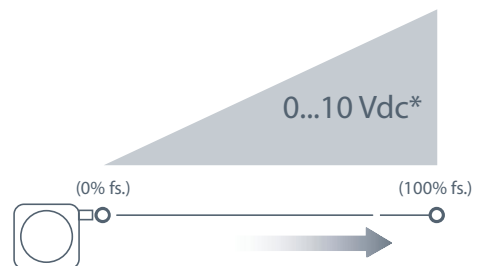


*50-inch range model, dimensions may differ for other ranges

Based on Celesco's original string pot design dating back to the late 1960's, the PT510 has become a standard throughout the years for literally thousands of applications including aircraft structural testing, hydraulic cylinder control, valve stem opening, and factory automation.

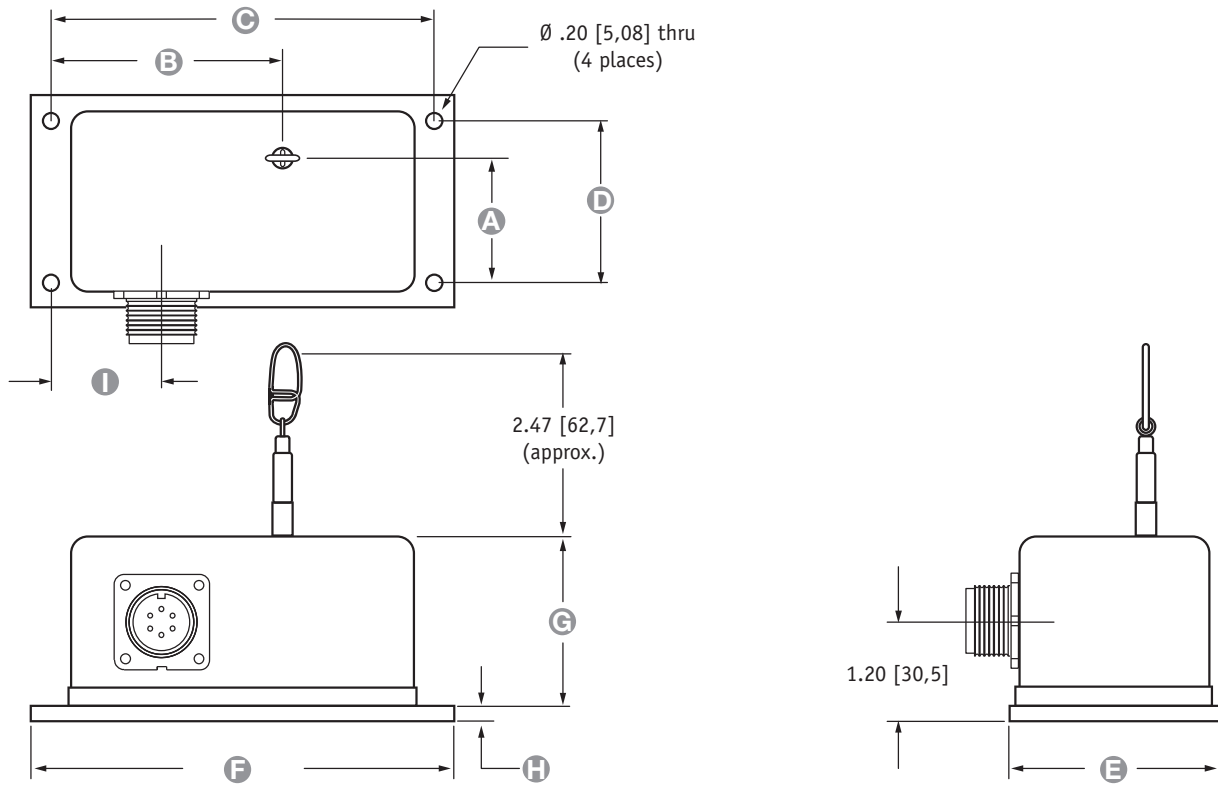
Available in full stroke ranges up to 100-inches, the PT510 provides a regulated voltage feedback signal linearly proportional to the position of its traveling stainless steel measuring cable. Output signal options include 0-5 and 0-10 vdc.

Electrical Output Signal



*Additional Output Options: 0...5, -5...+5, -10...+10 Vdc

Fig. 1, Top Exit:



ALL DIMENSIONS ARE IN INCHES [MM] • tolerances are ±0.02 in. [±0,5mm]

Range	A	B	C	D	E	F	G	H	I
2", 10", 20"	1.34 [34,0]	4.00 [101,6]	7.00 [177,8]	2.00 [50,8]	2.63 [66,8]	7.50 [190,5]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
5", 25", 50"	1.83 [46,5]	4.00 [101,6]	7.00 [177,8]	2.00 [50,8]	2.63 [66,8]	7.50 [190,5]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
15", 30"	1.56 [39,6]	4.00 [101,6]	7.00 [177,8]	2.00 [50,8]	2.63 [66,8]	7.50 [190,5]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
40"	1.64 [41,6]	4.00 [101,6]	7.00 [177,8]	2.00 [50,8]	2.63 [66,8]	7.50 [190,5]	2.10 [53,3]	.16 [4,1]	1.37 [34,8]
60"	2.16 [54,9]	4.19 [106,4]	7.00 [177,8]	2.37 [60,2]	3.25 [82,5]	7.50 [190,5]	2.60 [66,0]	.19 [4,8]	1.37 [34,8]
75", 80"	2.45 [62,2]	4.38 [111,3]	6.75 [171,4]	2.50 [63,5]	3.63 [92,2]	7.50 [190,5]	2.86 [72,6]	.19 [4,8]	1.37 [34,8]
100"	3.10 [78,7]	4.19 [106,4]	7.38 [187,5]	3.00 [76,2]	4.25 [108,0]	8.00 [203,2]	3.79 [96,3]	.19 [4,8]	3.69 [93,7]

Ordering Information:

Model Number:

PT510 - - **1** - **1** - **0**
order code: R A B C D E F G

Sample Model Number:

PT510 - 0025 - 111 - 1110

- R** range: 25 inches
- A** measuring cable tension: standard - 5 oz.
- C** cable exit: top
- B** output signal: 0...10 VDC
- F** electrical connection: 6-pin plastic connector

Full Stroke Range:

R order code:	0002	0005	0010	0015	0020	0025	0030	0040	0050	0060	0075	0100
full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.	60 in.	75 in.	100 in.
accuracy (% of f.s.):	0.28%	0.28%	0.18%	0.18%	0.15%	0.18%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
potentiometer cycle life*:	2.5 x 10 ⁶	2.5 x 10 ⁶	5 x 10 ⁵	5 x 10 ⁵	5 x 10 ⁵	5 x 10 ⁵	5 x 10 ⁵	2.5 x 10 ⁵	2.5 x 10 ⁵	2.5 x 10 ⁵	2.5 x 10 ⁵	2.5 x 10 ⁵

*-1 cycle is defined as the travel of the measuring cable from full retraction to full extension and back to full retraction

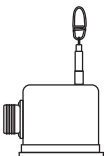
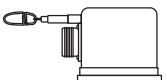
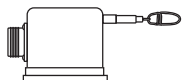
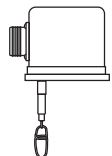
Ordering Information (cont.):

Measuring Cable Tension:

	1		H		2*	3*
	standard tension tension, ±20%	max acceleration	high tension tension, ±40%	max acceleration		
2, 10, 20 inch range:	12 oz.	• 11 g	65 oz.	• 53 g	72 oz.	144 oz.
5, 25, 50 inch range:	5 oz.	• 2 g	26 oz.	• 11 g	30 oz.	60 oz.
15, 30 inch range:	8 oz.	• 3 g	43 oz.	• 23 g	48 oz.	96 oz.
40 inch range:	6 oz.	• 4 g	33 oz.	• 16 g	36 oz.	72 oz.
60 inch range:	13 oz.	• 4 g	22 oz.	• 8 g	26 oz.	52 oz.
75, 80 inch range:	10 oz.	• 3 g	31 oz.	• 12 g	20 oz.	40 oz.
100 inch range:	13 oz.	• 5 g	52 oz.	• 20 g	26 oz.	52 oz.
measuring cable:	.019-in. dia. nylon-coated stainless steel				.024-in. dia. stainless steel	





**note – outline dimensions for these options are not controlled on this datasheet!*

Measuring Cable Exit:

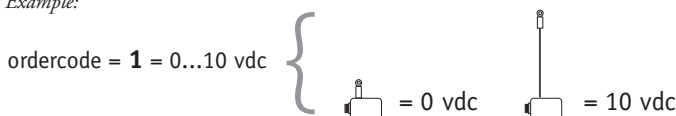
order code:	1	2	3	4
	top exit (see fig. 1)	front exit*	rear exit*	bottom exit*
				

*-note: dimensions for optional cable exits not controlled on this datasheet, please contact factory

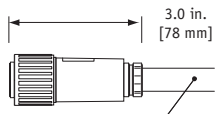
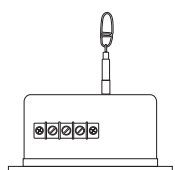
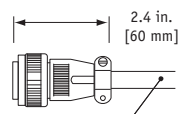


Sensing Circuit:

order code:	1	2	3	4
output signal options:	0...10 VDC 	0...5 VDC 	10...0 VDC 	5...0 VDC 
input voltage:	14.5 - 40 vdc	10.5 - 40 vdc	14.5 - 40 vdc	10.5 - 40 vdc

Example:

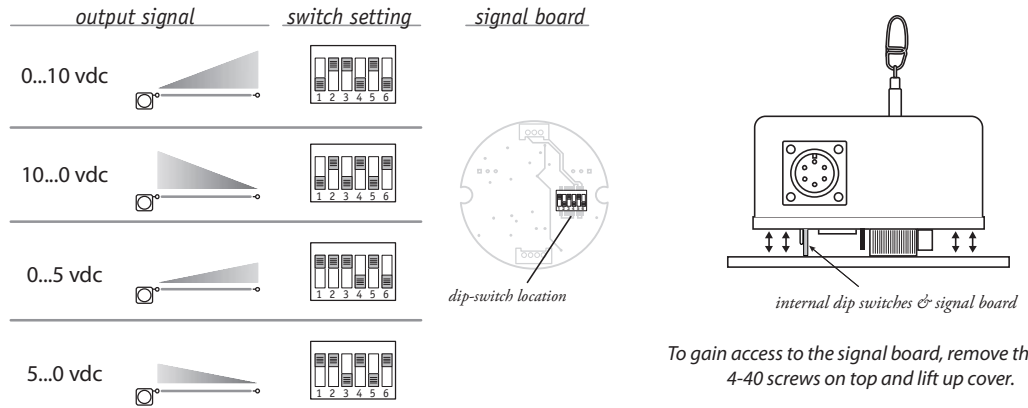


Electrical Connection:

order code:	1	2	3	4															
	6-pin plastic connector with mating plug	terminal strip	6-pin metal connector with mating plug	25-ft. instrumentation cable 24 AWG, shielded															
	 1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S		 3/8-in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	 25 ft. x 0.2-in. dia. [7,5 M x 5 mm dia.] 24 AWG, shielded															
6-pin mating plug:	<table border="1"> <tr><th>pin</th><th>signals</th></tr> <tr><td>A</td><td>input voltage</td></tr> <tr><td>B</td><td>output signal</td></tr> <tr><td>C</td><td>common</td></tr> </table>	pin	signals	A	input voltage	B	output signal	C	common	Terminal Strip:  terminal 1 2 3 signals input voltage output signal common	25-ft. instrumentation cable: <table border="1"> <tr><th>color code</th><th>signals</th></tr> <tr><td>RED</td><td>input voltage</td></tr> <tr><td>BLACK</td><td>common</td></tr> <tr><td>GREEN</td><td>output signal</td></tr> </table>	color code	signals	RED	input voltage	BLACK	common	GREEN	output signal
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version: 6.0 last updated: December 4, 2012