Compact String Pot

Description:

This compact stringpot provides the ultimate in ease-of-use and flexibility. This sensor fits in small spaces, doesn't need perfect alignment, mounts in just about any direction imaginable and has a unique circuit that lets the user choose 4-20mA or 0-10Vdc output on the fly. The SPD comes in 2 different stroke ranges up to 50 inches and is constructed with a rugged polycarbonate body sealed against IP67 (wet) environments for both indoor and outdoor applications. Every unit ships with a stainless steel mounting bracket that lets the user easily point the measuring cable in the direction needed. High value and economical price makes this sensor the perfect choice for the OEM and single-piece user alike. Customer specific designs available for the OEM, please contact factory for more information.

Specifications:

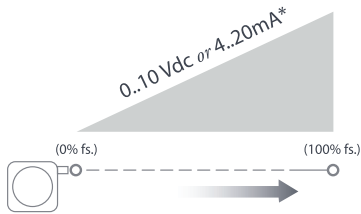|	
Full Stroke Range Options	: 0 to 4.75 Inches to 0 to 50 Inches
User Selectable Output Signal	: 4 to 20mA (2-wire) / 0 to 10V DC
Input Voltage, 4 to 20mA option	: 8 to 40V DC
Input Voltage, 0 to 10V DC option	: 12 to 32V DC
Repeatability	: .05%FS.
Resolution	: Essentially Infinite
Measuring Cable	: .019-inch dia. nylon-coated stainless steel
Maximum Acceleration	: 13g
Measuring Cable Tension	: 7oz. (1,9 N) ±30%
Sensor	: Plastic-hybrid precision potentiometer
Electrical Connection	: M12 connector (mating plug included)
Enclosure	: Glass-filled polycarbonate
Environmental	: IP 67
Operating Temperature	: -40°F to 160°F (-40°C to 70°C)
Weight (includes sensor, bracket and connector)	: 0.4 lbs (0.19kg)

Ordering Information:

Part Number	Full Stroke Range	accuracy (% of f.s.)	Cycle Life
SPD-25-3	25 Inches (635 mm)	0.25%	500K cycles
SPD-50-3	50 Inches (1270 mm)	0.25%	250K cycles

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Output Signal:

0..10 Vdc *or* 4..20mA*

(0% fs.)   (100% fs.)

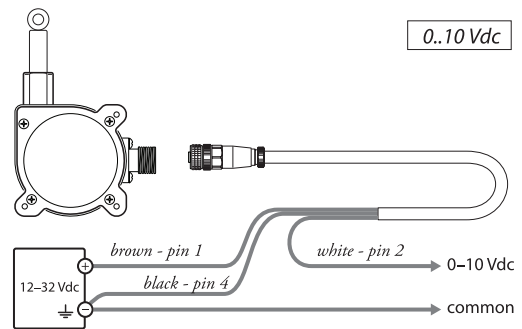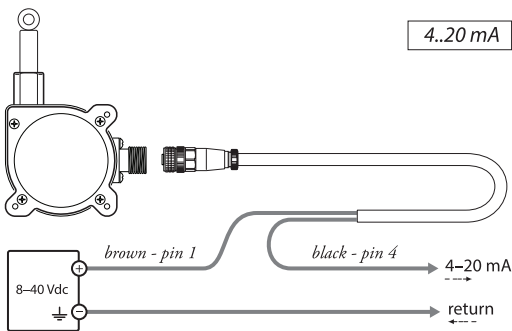|	Signal Endpoint Tolerances	
Output Signal*	**0% fs.**	**100% fs.**
4 to 20mA	4 – 4.25mA	19.2 – 20mA
0 to 10V DC	0 – 0.2V DC	9.5 – 10V DC

*Note: signal endpoints are set at the time of manufacture and cannot be adjusted
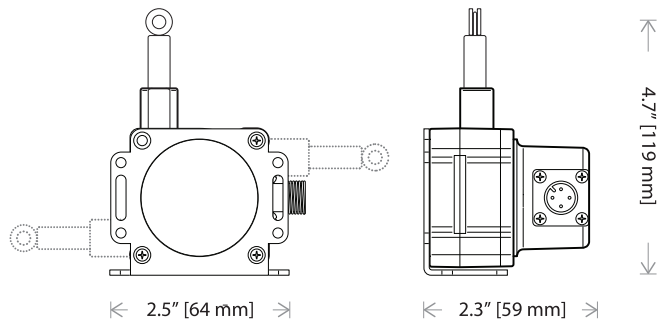
Electrical Connection:

cordset
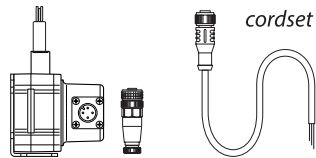
Output Signals			
0 to 10V DC	**4 to 20mA**	**Pin**	**Pin - Colour Code**
12 to 32V DC	8 to 40V DC	1	1 - Brown
0 to 10V DC	n/c	2	2 - White
n/c	n/c	3	3 - Blue
Common	4 to 20mA	4	4 - Black

4..20 mA

brown - pin 1   *black - pin 4*   4–20 mA

8–40 Vdc   return

0..10 Vdc

brown - pin 1   *white - pin 2*   0–10 Vdc

12–32 Vdc   *black - pin 4*   common

Dimensions:

2.5″ [64 mm]   2.3″ [59 mm]   4.7″ [119 mm]
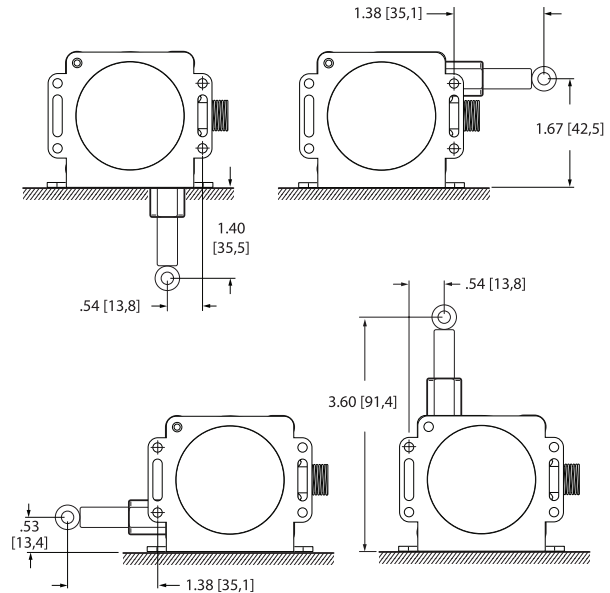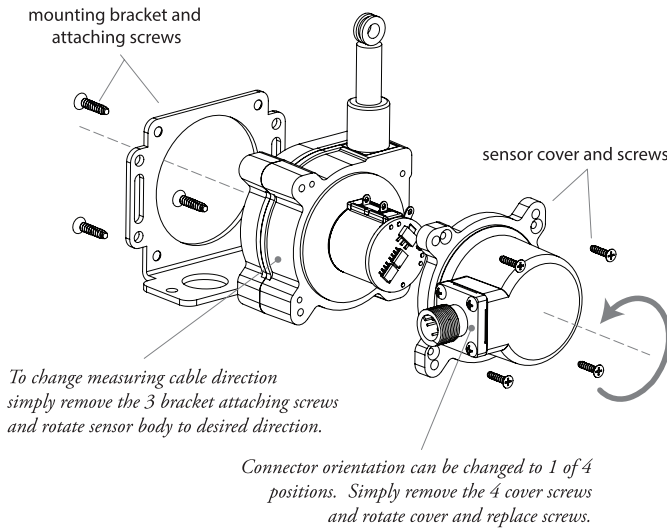
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Mounting Options:

mounting bracket and attaching screws

sensor cover and screws

To change measuring cable direction simply remove the 3 bracket attaching screws and rotate sensor body to desired direction.

Connector orientation can be changed to 1 of 4 positions. Simply remove the 4 cover screws and rotate cover and replace screws.

1.38 [35,1]

1.67 [42,5]

1.40 [35,5]

.54 [13,8]

.54 [13,8]

3.60 [91,4]

.53 [13,4]

1.38 [35,1]

Dimensions : Inches (Millimetres)

SPD-xx-3 w/o Mounting Bracket:
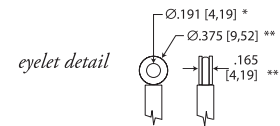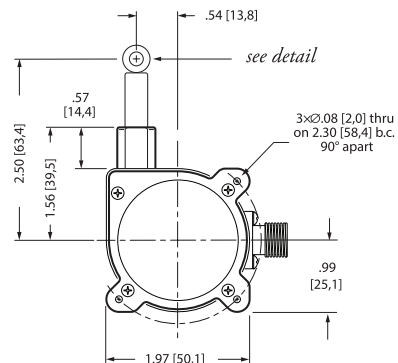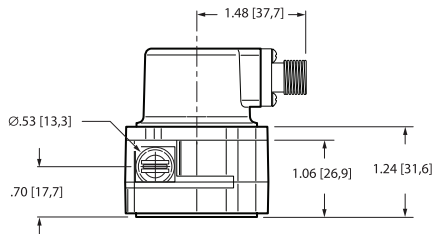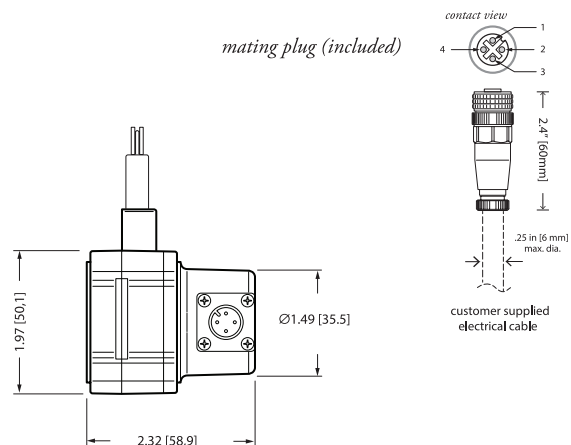
1.48 [37,7]

Ø.53 [13,3]

.70 [17,7]

1.06 [26,9]

1.24 [31,6]

.54 [13,8]

see detail

.57 [14,4]

2.50 [63,4]

1.56 [39,5]

3×Ø.08 [2,0] thru on 2.30 [58,4] b.c. 90° apart

.99 [25,1]

1.97 [50,1]

1.97 [50,1]

Ø1.49 [35.5]

2.32 [58,9]

eyelet detail

Ø.191 [4,19] *
Ø.375 [9,52] **
.165 [4,19] **

mating plug (included)

contact view

1
2
3
4

2.4" [60mm]

.25 in [6 mm] max. dia.

customer supplied electrical cable

Dimensions : Inches (Millimetres)
Tolerances are 0.04Inches [1mm] unless otherwise noted.

* tolerance = +.005 −.001 [+0,1 −0,0]
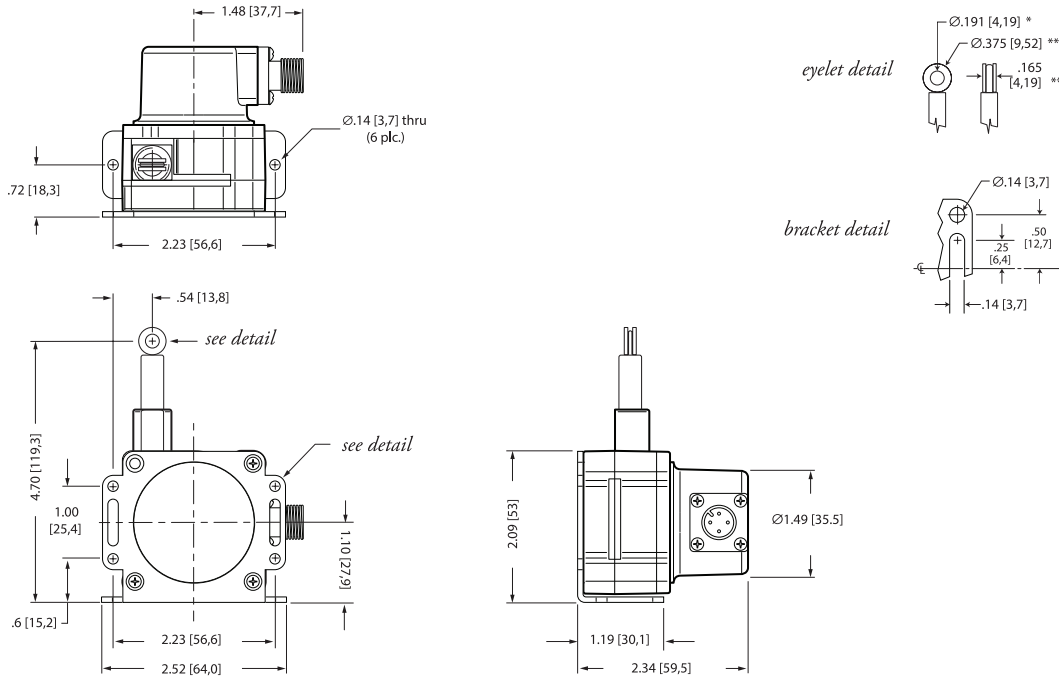** tolerance = +.005 −.005 [+0,1 −0,1]

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SPD-xx-3 w/ Mounting Bracket:

1.48 [37,7]
Ø.14 [3,7] thru (6 plc.)
.72 [18,3]
2.23 [56,6]

.54 [13,8]
see detail
4.70 [119,3]
1.00 [25,4]
see detail
1.10 [27,9]
.6 [15,2]
2.23 [56,6]
2.52 [64,0]

2.09 [53]
Ø1.49 [35.5]
1.19 [30,1]
2.34 [59,5]

eyelet detail
Ø.191 [4,19] *
Ø.375 [9,52] **
.165 [4,19] **

bracket detail
Ø.14 [3,7]
.50 [12,7]
.25 [6,4]
.14 [3,7]

Dimensions : Inches (Millimetres)
Tolerances are 0.04Inches [1mm] unless otherwise noted.

* tolerance = +.005 –.001 [+0,1 –0,0]
** tolerance = +.005 –.005 [+0,1 –0,1]

Part Number Table

Description	Part Number
Cable Extension Transducer, 25"	SPD-25-3
Cable Extension Transducer, 50"	SPD-50-3

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