

SP1

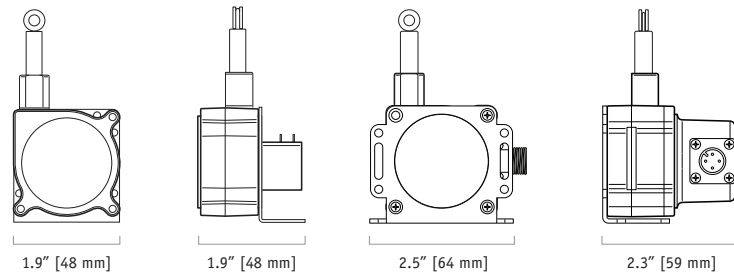
Compact String Pot • Voltage Divider Output

Linear Position to 50 inches (1270 mm)

Rugged Polycarbonate Enclosure • IP67 Optional

Mounting Bracket & Optional Sensor Cover w/Connector

IN STOCK for Quick Delivery!



COMPLETE SPECIFICATIONS

Full Stroke Range Options	0-4.75, 0-12.5, 0-25, 0-50 inches
Output Signal	voltage divider (potentiometer)
Accuracy	±0.25 to ±1.00% (see ordering info)
Repeatability	± 0.05% full stroke
Resolution	essentially infinite
Measuring Cable	0.019-in. dia. nylon-coated stainless steel
Measuring Cable Tension	7 oz. (1.9 N) ±25%
Maximum Cable Acceleration, SP1-xx	15 g
Maximum Cable Acceleration, SP1-xx-3	13 g
Enclosure Material	polycarbonate
Sensor	plastic-hybrid precision potentiometer
Weight, max. (includes bracket)	.4 lbs (.19 kg)

ELECTRICAL

Input Resistance	10K ohms, ±10%
Power Rating, Watts	2.0 at 70°F derated to 0 at 250°
Recommended Maximum Input Voltage	30 V (AC/DC)
Output Signal Change Over Full Stroke Range	94% ±4% of input voltage
Electrical Connection, SP1-xx	solder terminals
Electrical Connection, SP1-xx-3	4-pin, M12 connector

ENVIRONMENTAL

Enclosure	IP 50 (SP1-xx), IP67 (SP1-xx-3)
Operating Temperature, SP1-xx	0° to 160°F (-18° to 70°C)
Operating Temperature, SP1-xx-3	-40° to 160°F (-40° to 70°C)
Vibration	up to 10 g to 2000 Hz maximum

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This compact stringpot with “voltage divider” output, provides the ultimate in ease-of-use and flexibility for measurement ranges up to 50 inches. Made of rugged polycarbonate, the SP1 fits in small spaces, doesn’t need perfect alignment and ships with a stainless steel mounting bracket to let the user easily orient this sensor in just about any direction imaginable.

The SP1 comes in two different versions: one complete with a connector, mating plug and sensor cover to protect against IP67 (wet) environments and the other, a lower cost, open sensor design priced for both the budget conscious single piece user and the OEM alike.

ORDERING INFORMATION

full stroke range	Part No.	Part No.	accuracy	cycle life
4.75 in (120 mm)	SP1-4	SP1-4-3	1.00%	2.5M
12.5 in (317 mm)	SP1-12	SP1-12-3	.25%	500K
25 in (635 mm)	SP1-25	SP1-25-3	.25%	500K
50 in (1270 mm)	SP1-50	SP1-50-3	.25%	250K

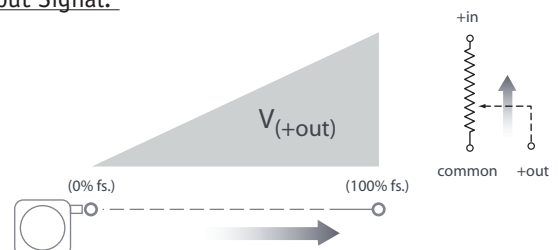
optional cordset



Part No. **9036810-0040**

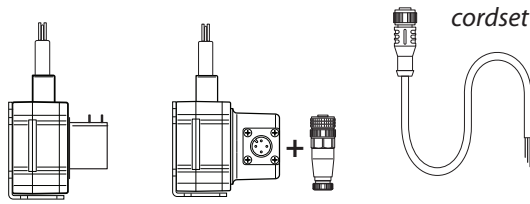
4-pin M12 connector, 13 ft (4 m), 22 AWG (.34mm²)
For all SP1-xx-3 versions, an optional convenient 13-ft. long cordset is available for short-run connections.

Output Signal:



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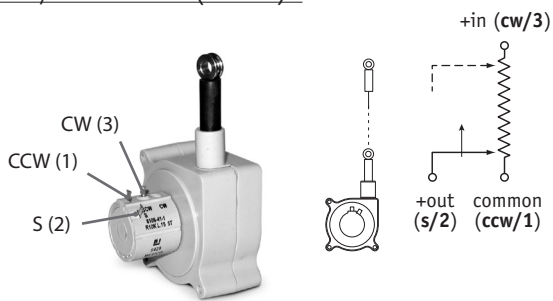
Electrical Connection:



Signals

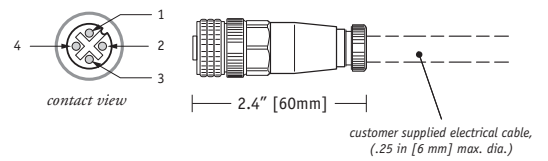
	<i>solder terminals</i>	<i>pin</i>	<i>pin - colorcode</i>
+in	#3 (cw)	1	1 - brown
common	#1 (ccw)	2	2 - white
+out	#2 (s)	3	3 - blue
n/c		4	4 - black

Terminal/Pin Location (SP1-xx):

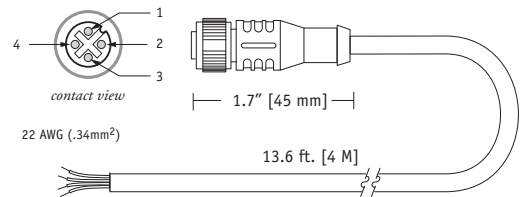


Connector/ Cordset (SP1-xx-3):

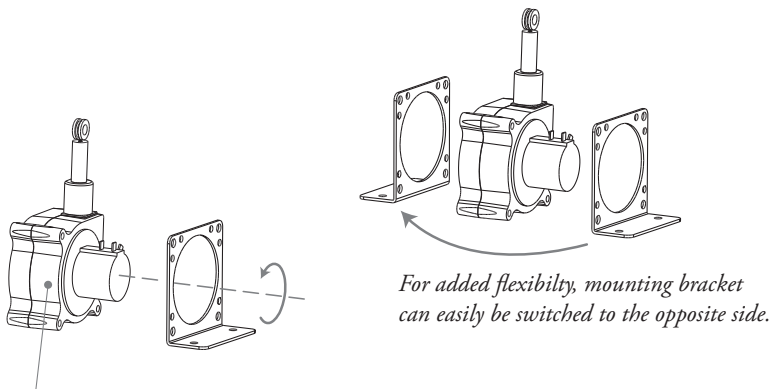
field installable connector (included)



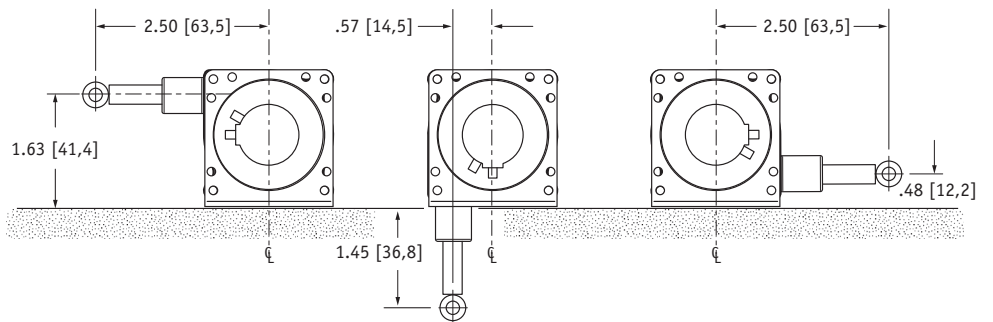
cordset, part no. 9036810-0040 (optional)



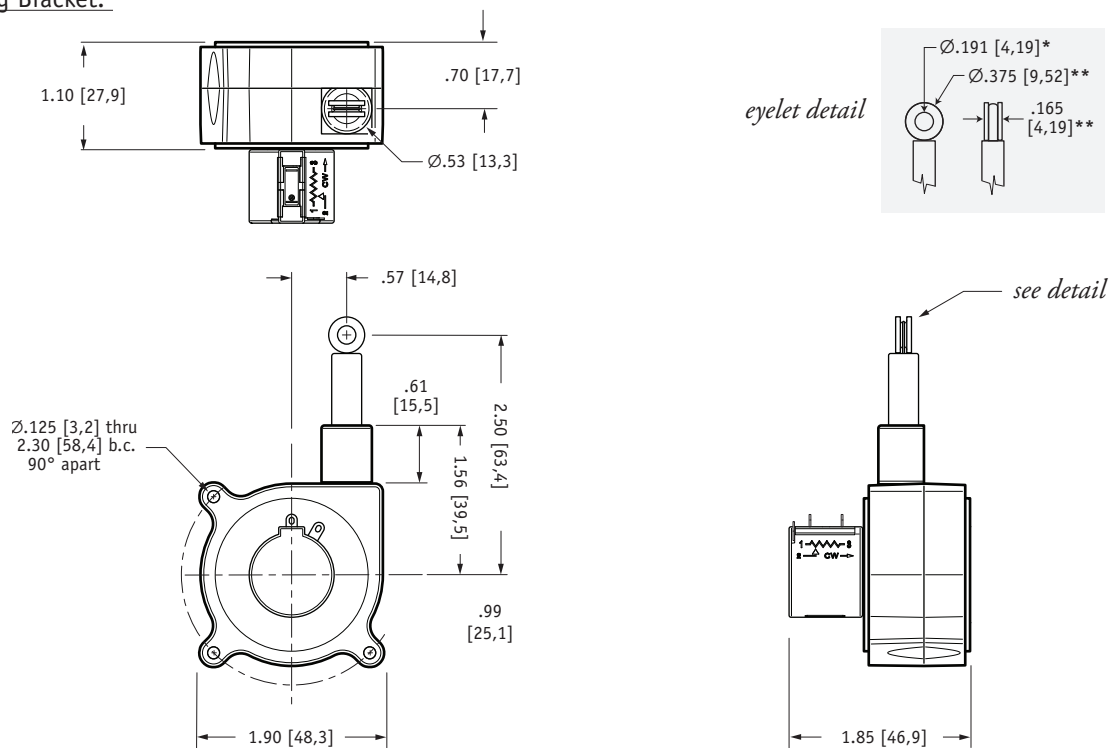
Mounting Options for SP1-xx:



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



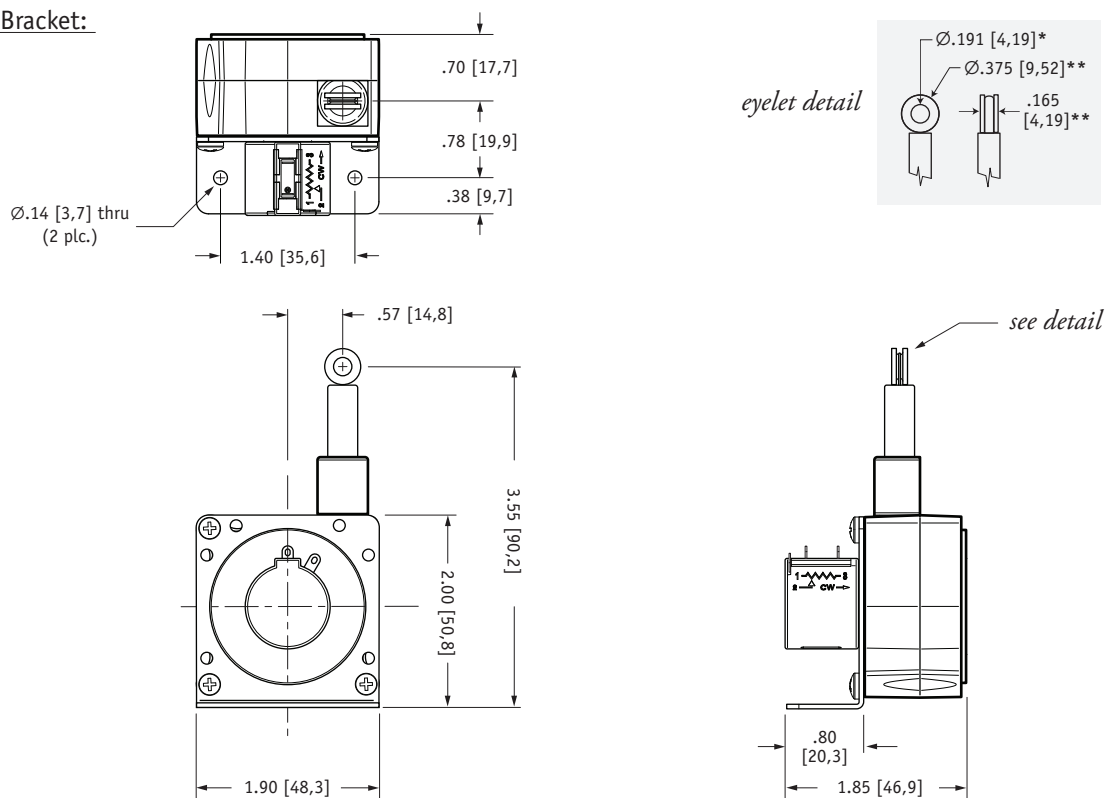
SP1-xx w/o Mounting Bracket:



DIMENSIONS ARE IN INCHES [MM]
tolerances are 0.04 IN. [1,0 MM] unless otherwise noted.

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

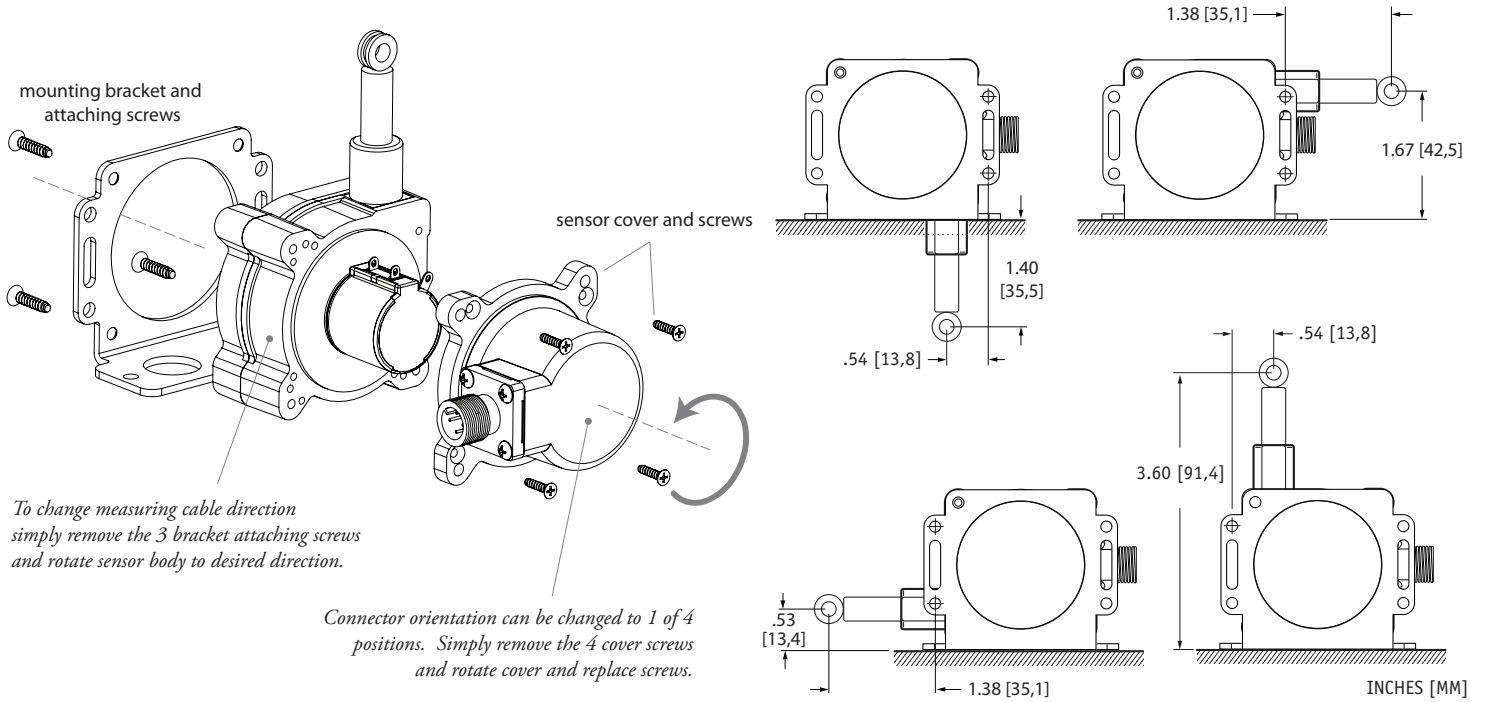
SP1-xx w/ Mounting Bracket:



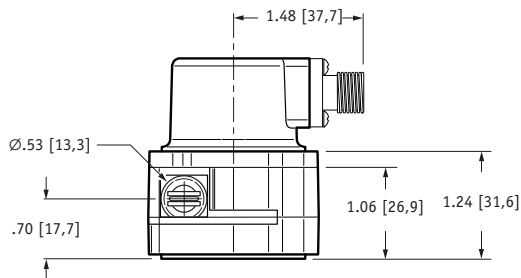
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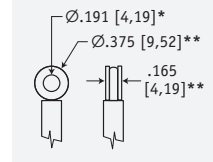
Mounting Options for SP1-xx-3:



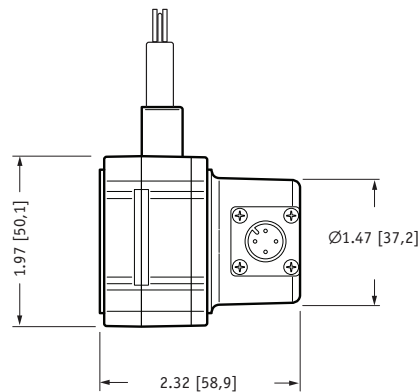
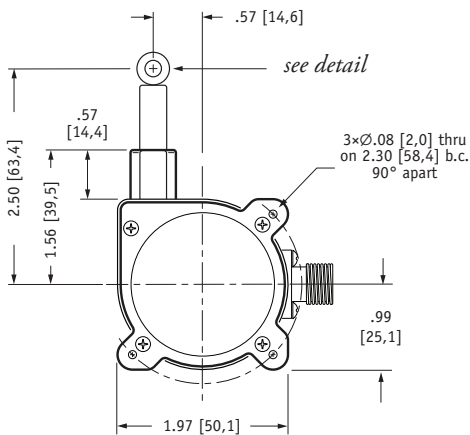
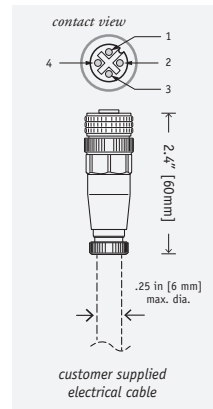
SP1-xx-3 w/o Mounting Bracket:



eyelet detail



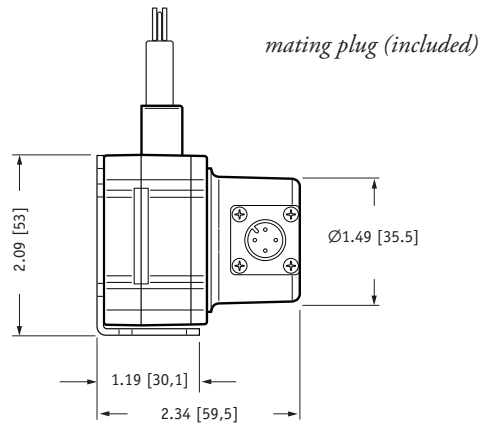
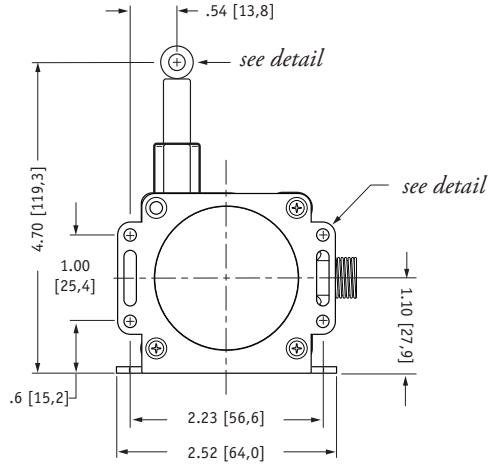
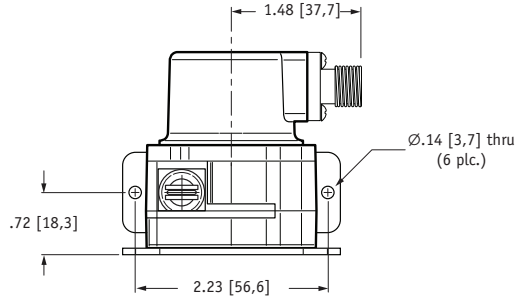
mating plug (included)



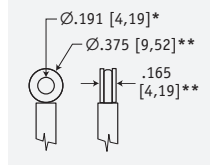
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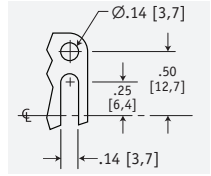
SP1-xx-3 w/ Mounting Bracket:



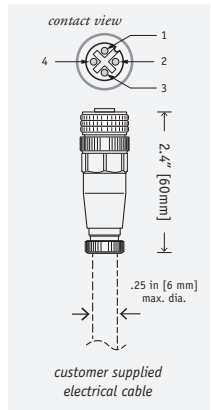
eyelet detail



bracket detail



mating plug (included)



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version: 11.0 last updated: December 16, 2013