SP1

Compact String Pot • Voltage Divider

Linear Position to 50 inches (1270 mm)

Rugged Polycarbonate Enclosure • IP67 Optional

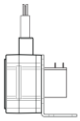
Mounting Bracket & Optional Sensor Cover w/Connector

IN STOCK for Quick Delivery!

This compact stringpot with "voltage divider" output, provides 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.

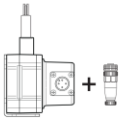
The SP1 is available with a connector, mating plug and sensor cover to protect against IP67 (wet) environments and a lower cost, "open" sensor version priced for both the budget conscious single piece user and the OEM alike.

Ordering Information



includes sensor & mounting bracket.

Part Number	full stroke range	accuracy	max. acceleration	measuring cable tension (± 25%)	cycle life
SP1-4	4.75 in (120 mm)	1.00%	15 g	7oz. (1,9 N)	2.5M
SP1-12	12.5 in (317 mm)	.25%	15 g	7oz. (1,9 N)	500K
SP1-25	25 in (635 mm)	.25%	15 g	7oz. (1,9 N)	500K
SP1-50	50 in (1270 mm)	.25%	15 g	7oz. (1,9 N)	250K



includes sensor, mounting bracket & mating connector.

Part Number	full stroke range	accuracy	max. acceleration	measuring cable tension (± 25%)	cycle life
SP1-4-3	4.75 in (120 mm)	1.00%	11 g	11.5 oz. (3,2 N)	2.5M
SP1-12-3	12.5 in (317 mm)	.25%	11 g	13.9 oz. (3,7 N)	500K
SP1-25-3	25 in (635 mm)	.25%	11 g	11.5 oz. (3,2 N)	500K
SP1-50-3	50 in (1270 mm)	.25%	11 g	11.5 oz. (3,2 N)	250K

Optional Cordset

Part No. **9036810-0040** for all SP1-xx-3 versions, an optional 13-ft. cordset with 4-pin M12 connector

Complete Specifications

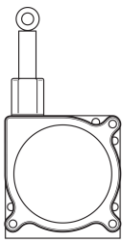
Available Stroke Ranges	0-4.75, 0-12.5, 0-25, 0-50 inches
Output Signal	voltage divider (potentiometer)
Accuracy	±0.25 to ±1.00% (see ordering info)
Repeatability	± 0.05% full stroke
Resolution	essentially infinite
Measuring Cable	0.019-in. dia. nylon-coated stainless steel
Measuring Cable Tension	see ordering information
Maximum Cable Acceleration	see ordering information
Enclosure Material	Polycarbonate
Sensor	plastic-hybrid precision potentiometer
Weight, max. (includes bracket)	.4 lbs (.19 kg)

Electrical

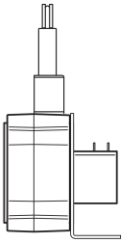
Input Resistance	10K ohms, ±10%
Power Rating, Watts	2.0 at 70°F derated to 0 at 250°
Recommended Maximum Input Voltage	30 V (AC/DC)
Output Signal Change Over Full Stroke Range	94% ±4% of input voltage
Electrical Connection, SP1-xx	solder terminals
Electrical Connection, SP1-xx-3	4-pin, M12 connector

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



1.9" [48 mm]



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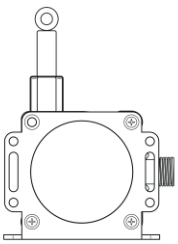
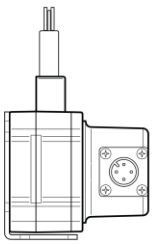
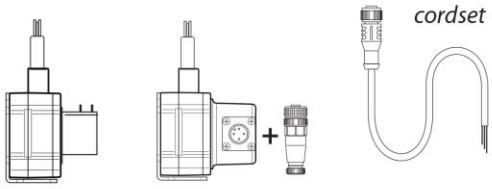


2.5" [64 mm]



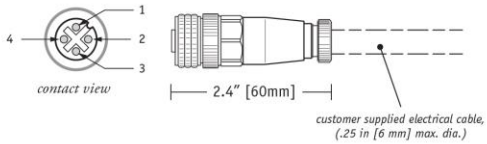
2.3" [59 mm]

Electrical Connection

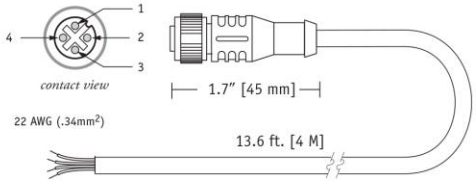


Signals	solder terminals	pin	pin - colorcode
+in	#3 (cw)	1	1 - brown
common	#1 (ccw)	2	2 - white
+out	#2 (s)	3	3 - blue
n/c		4	4 - black

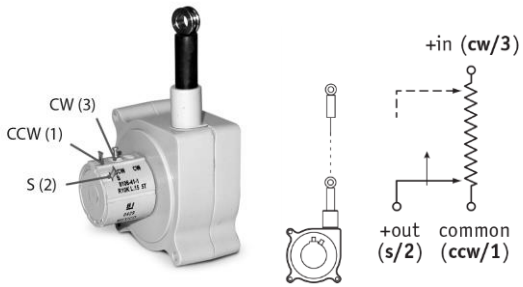
field installable connector (included)



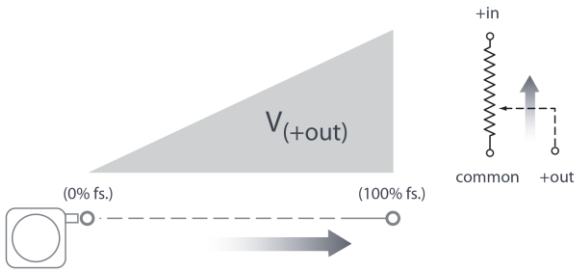
cordset, part no. 9036810-0040 (optional)



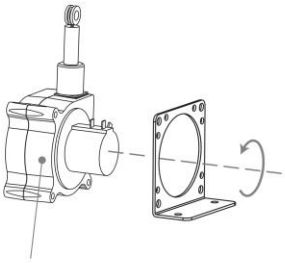
Terminal/Pin Location (SP1-xx)



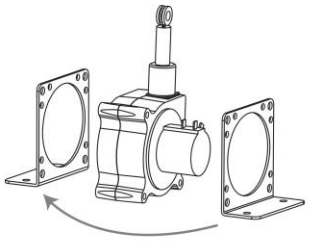
Output Signal



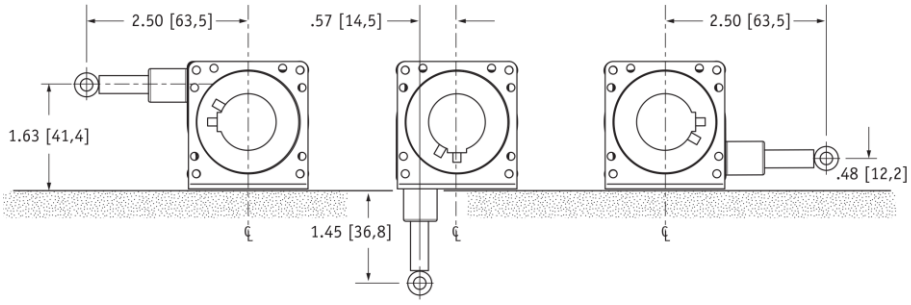
Mounting Options for SP1-xx:



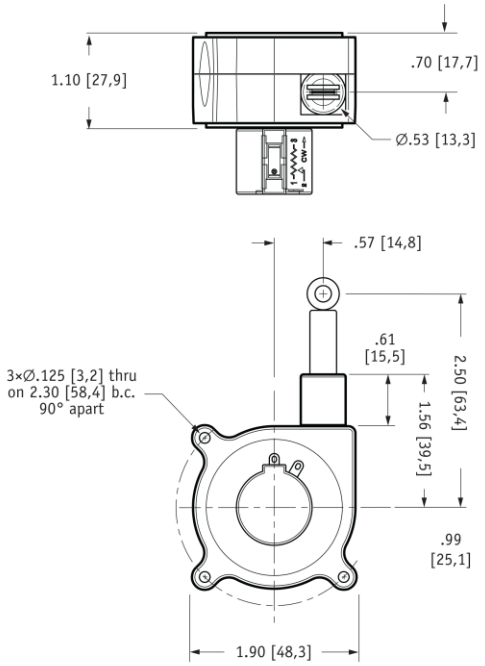
To change measuring cable direction simply remove the 3 bracket attaching screws and rotate sensor body to desired direction.

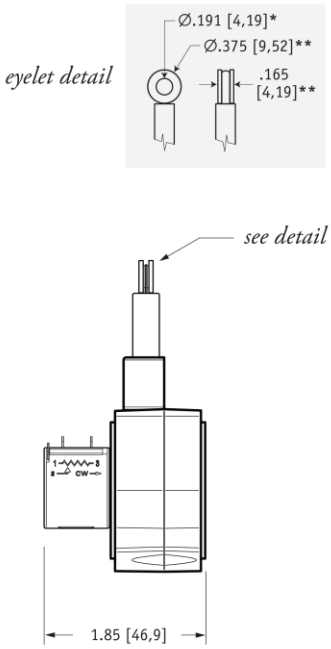


For added flexibilty, mounting bracket can easily be switched to the opposite side.



SP1-xx w/o Mounting Bracket

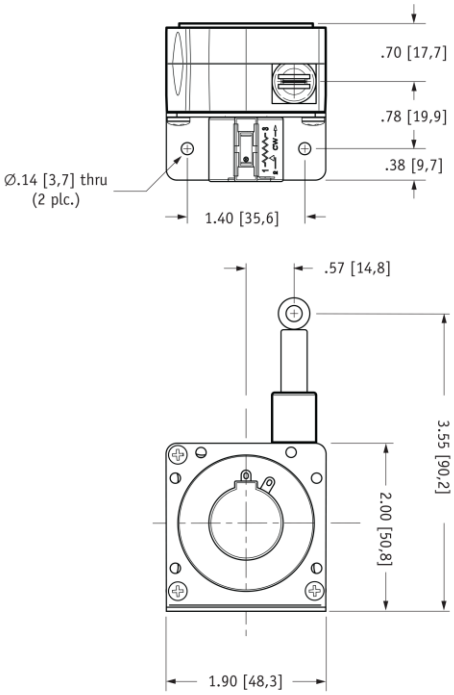


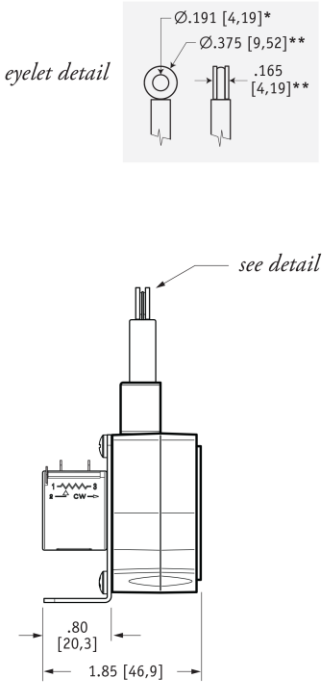


DIMENSIONS ARE IN INCHES [MM]
tolerances are 0.04 IN. [1,0 MM] unless otherwise noted.

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

SP1-xx w/ Mounting Bracket





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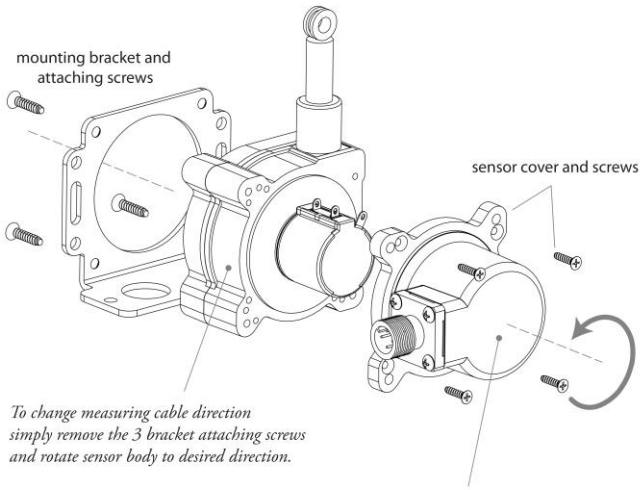
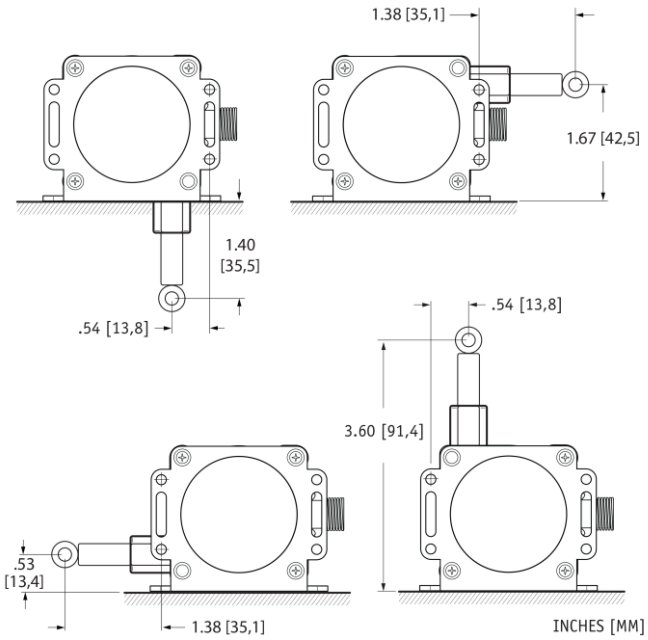
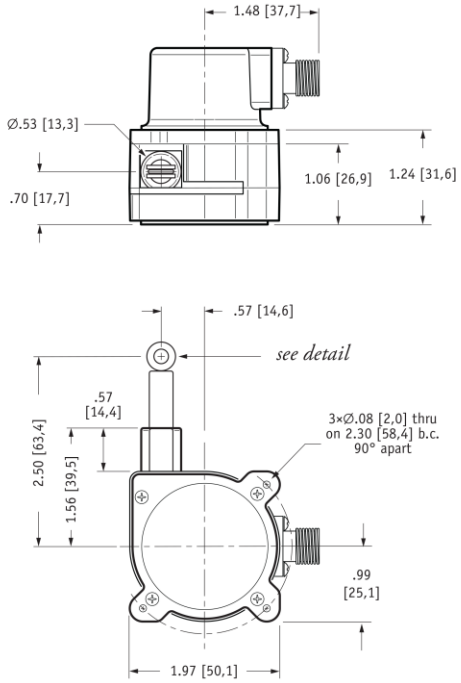
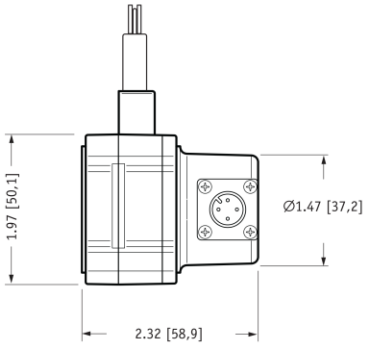
Mounting Options for SP1-xx-3



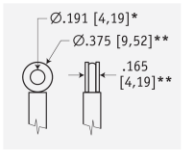


SP1-xx-3 w/o Mounting Bracket

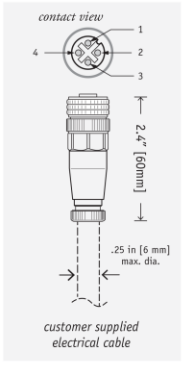




eyelet detail



mating plug (included)



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