



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 |



4-pin M12 connector
13 ft (4 m)
22 AWG (34cm²)

Optional Cordset

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

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!

Complete Specifications

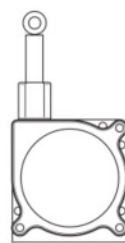
| | |
|---------------------------------|---|
| Available Stroke Ranges | 0-4.75, 0-12.5, 0-25, 0-50 inches |
| Output Signal | voltage divider (potentiometer) |
| Accuracy | ±0.25 to ±1.00% (see ordering info) |
| Repeatability | ± 0.05% full stroke |
| Resolution | essentially infinite |
| Measuring 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

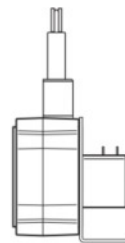
| | |
|---|----------------------------------|
| Input Resistance | 10K ohms, ±10% |
| Power Rating, Watts | 2.0 at 70°F derated to 0 at 250° |
| Recommended Maximum Input Voltage | 30 V (AC/DC) |
| Output Signal Change Over Full Stroke Range | 94% ±4% of input voltage |
| Electrical Connection, SP1-xx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

Environmental

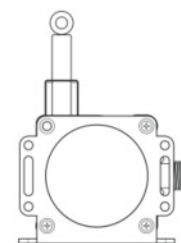
| | |
|---------------------------------|---------------------------------|
| Enclosure | IP 50 (SP1-xx), IP67 (SP1-xx-3) |
| Operating Temperature, SP1-xx | 0° to 160°F (-18° to 70°C) |
| Operating Temperature, SP1-xx-3 | -40° to 160°F (-40° to 70°C) |
| Vibration | up to 10 g to 2000 Hz maximum |



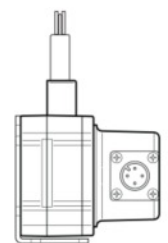
1.9" [48 mm]



1.9" [48 mm]



2.5" [64 mm]



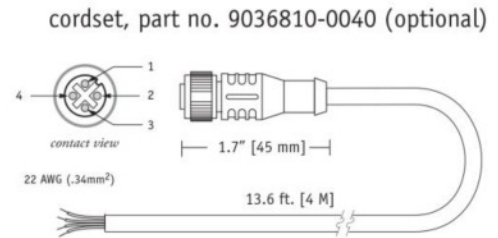
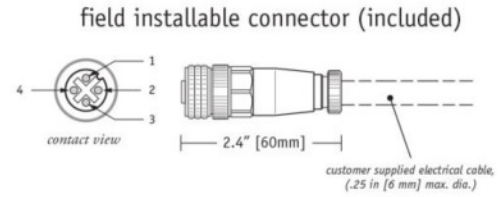
2.3" [59 mm]

SP1

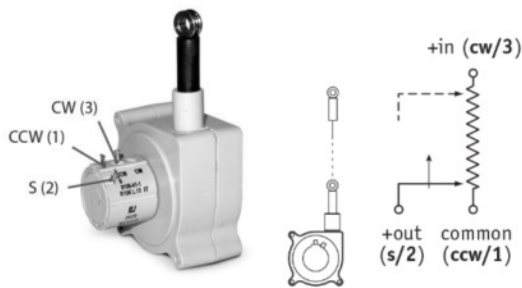
Compact String Pot • Voltage Divider Output

Electrical Connection

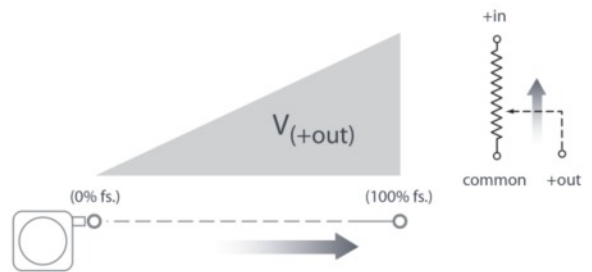
| Signals | solder terminals | pin | pin - colorcode |
|---------|------------------|-----|-----------------|
| +in | #3 (cw) | 1 | 1 - brown |
| common | #1 (ccw) | 2 | 2 - white |
| +out | #2 (s) | 3 | 3 - blue |
| n/c | | 4 | 4 - black |



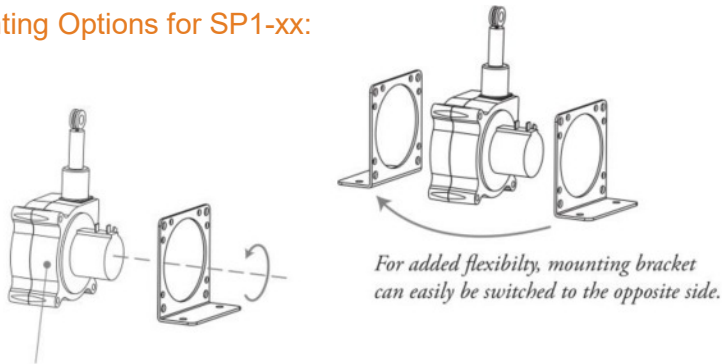
Terminal/Pin Location (SP1-xx)



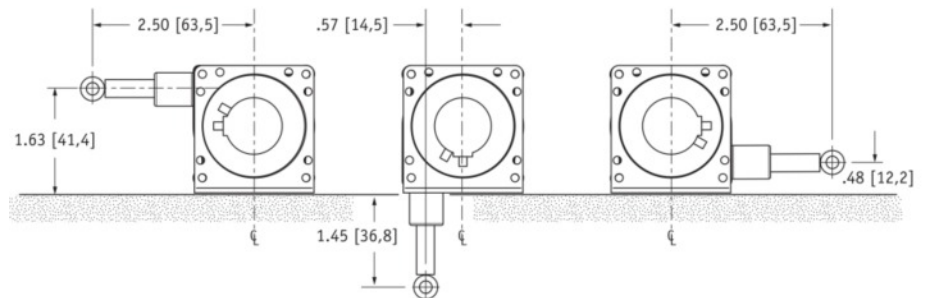
Output Signal



Mounting Options for SP1-xx:



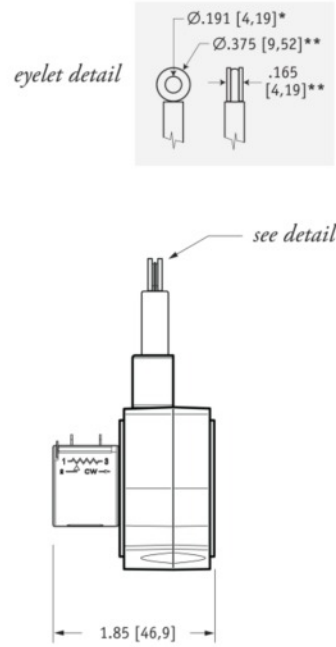
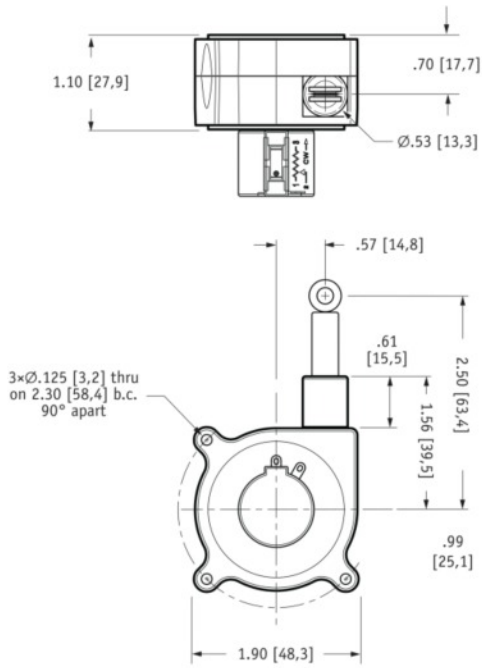
To change measuring cable direction simply remove the 3 bracket attaching screws and rotate sensor body to desired direction.



SP1

Compact String Pot • Voltage Divider Output

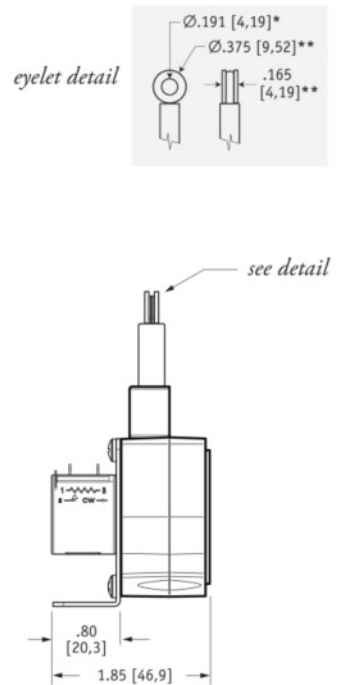
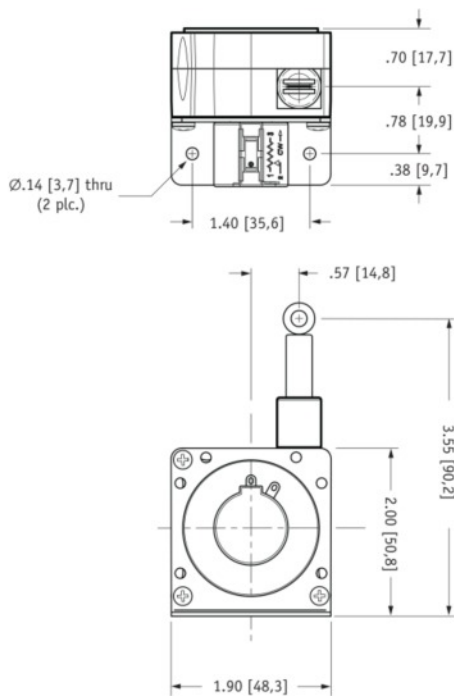
SP1-xx w/o Mounting Bracket



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

* tolerance = +0.005 -0.001 [+0,1 -0,0]
** tolerance = +0.005 -0.005 [+0,1 -0,1]

SP1-xx w/ Mounting Bracket



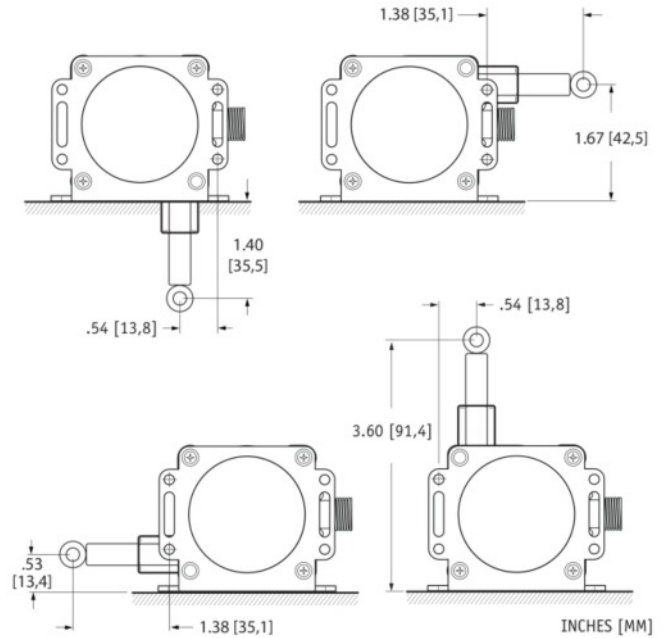
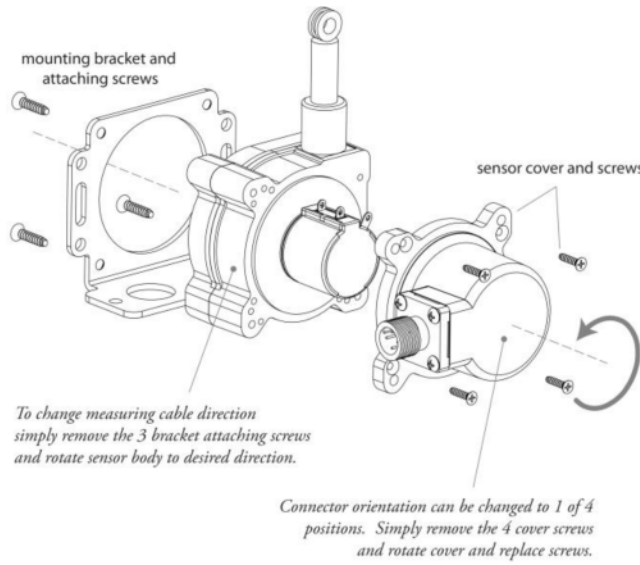
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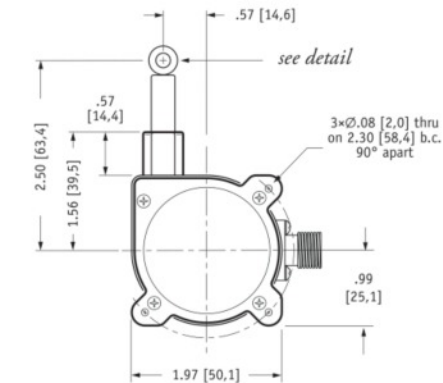
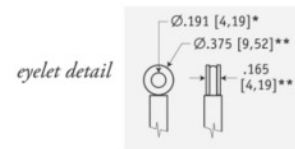
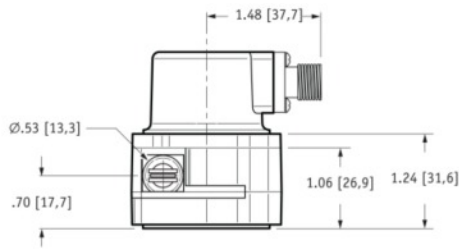
SP1

Compact String Pot • Voltage Divider Output

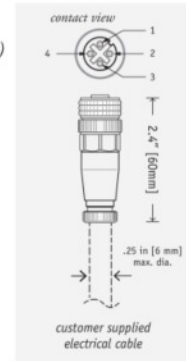
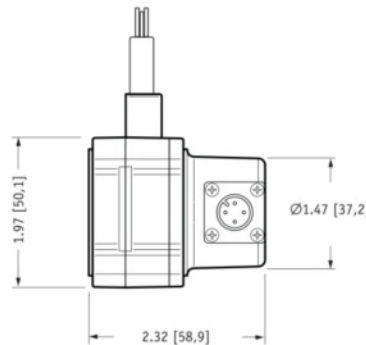
Mounting Options for SP1-xx-3



SP1-xx-3 w/o Mounting Bracket



mating plug (included)



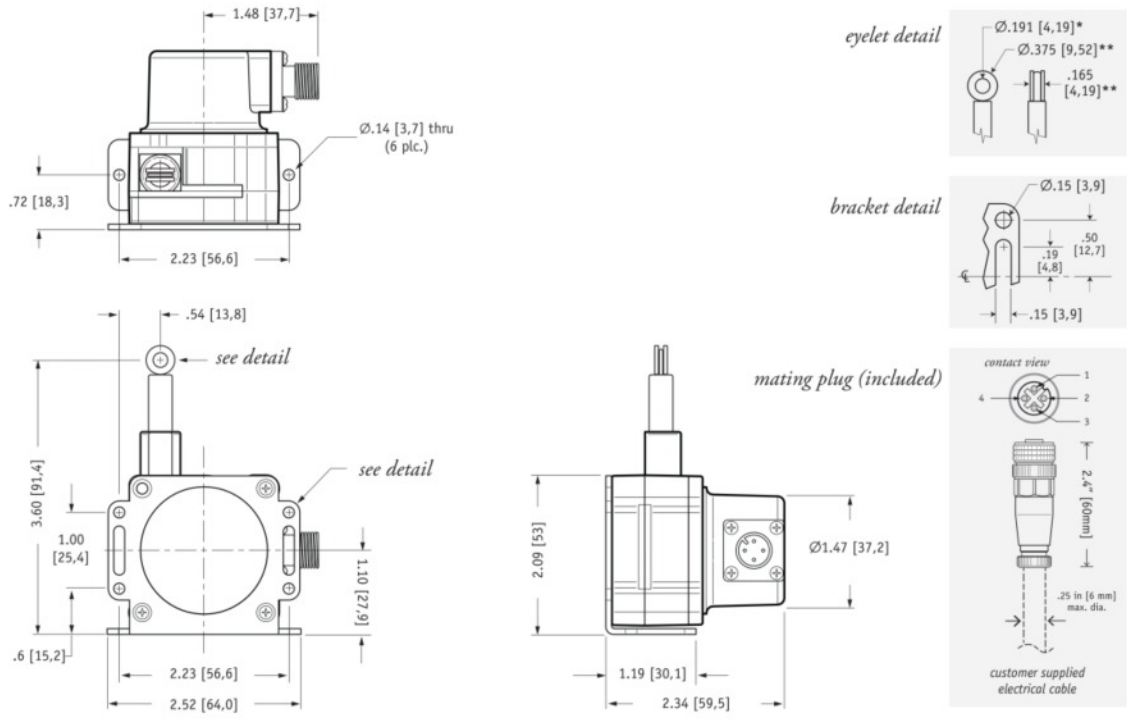
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SP1

Compact String Pot • Voltage Divider Output

SP1-xx-3 w/ Mounting Bracket



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** tolerance = +.005 -0.005 [+0,1 -0,1]

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SP1 12/01/2015