

The SP2 String Pot is a compact, economical and water resistant device that utilizes a flexible cable, a spring-loaded spool, and a potentiometer to detect and measure linear position.

The SP2 is identical to the SP1 except for an added 40-inch electrical cable with a watertight rubber strain relief. The SP2 has been compactly designed for tight spaces and high cycle applications and generously allows for measuring cable misalignment. With 4 different ranges and a handy mounting bracket, the SP2 is a perfect solution for many applications from light industrial to OEM.

SP2 Compact String Pot | Incremental

Linear Position to 50 inches (1270 mm)

Low-Cost, Long Life | Rugged Polycarbonate Enclosure

40-in. Electrical Cable | Free-Release Tolerant

SPECIFICATIONS

Free Stroke Range Options	0-4.75, 0-12.5, 0-25, 0-50 inches
Output Signal	voltage divider (potentiometric)
Accuracy	±0.25% to ±1.00% FS. (See ordering info)
Repeatability	± 0.05% full Stroke
Resolution	essentially infinite
Measuring Cable	.019-inch dia. nylon-coated stainless steel
Maximum Cable Tension	7 oz. (1,9 N) ±25%
Measuring Cable Acceleration	15 g
Enclosure Material	Polycarbonate
Sensor	Plastic-hybrid precision potentiometer
Weight, max. (includes bracket)	5 oz. (w/o mounting bracket) max.

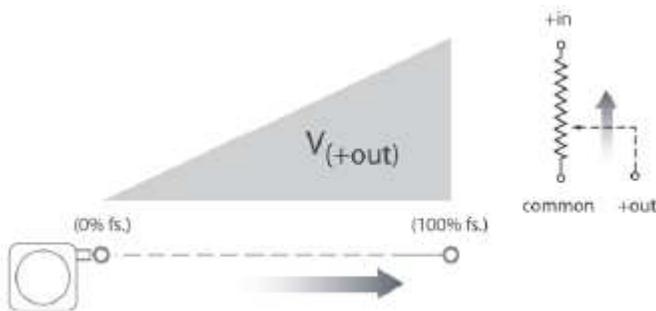
Electrical

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	40-inch long, 24 gauge shielded electrical cable

Environmental

Enclosure	IP 50
Operating Temperature	0° to 160°F (-18° to 70°C)
Vibration	up to 10 g to 2000 Hz maximum

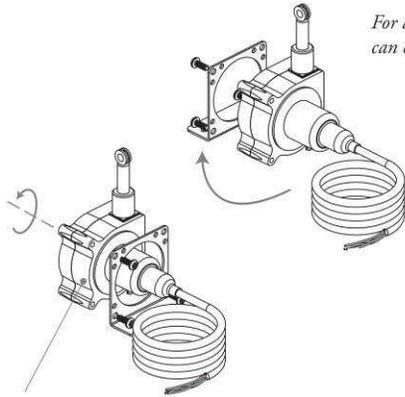
Output Signal:



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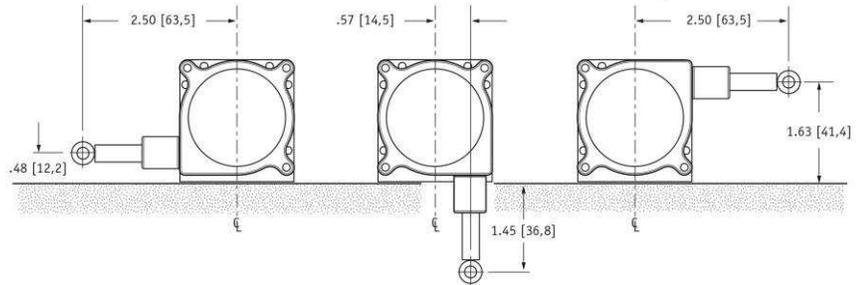
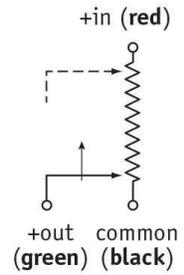
Mounting Options:



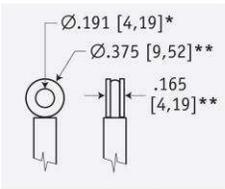
To change measuring cable direction simply remove the 3 bracket attaching screws and rotate sensor body to desired direction.

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

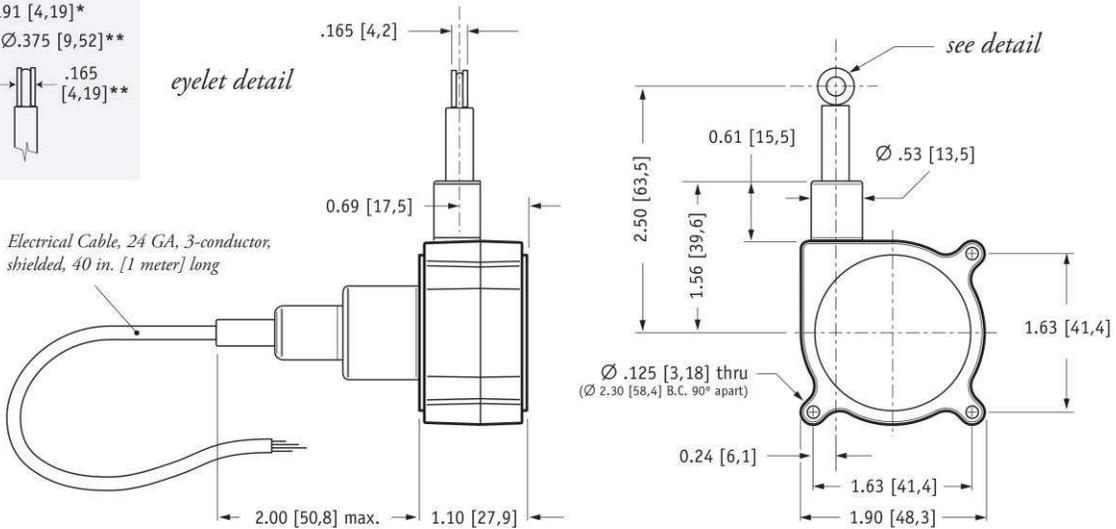
Electrical Connection:



Outline Drawing (w/o bracket):



eyelet detail



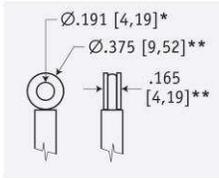
DIMENSIONS ARE IN INCHES [MM]
tolerances are 0.04 IN. [1,0 MM] unless otherwise noted.

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

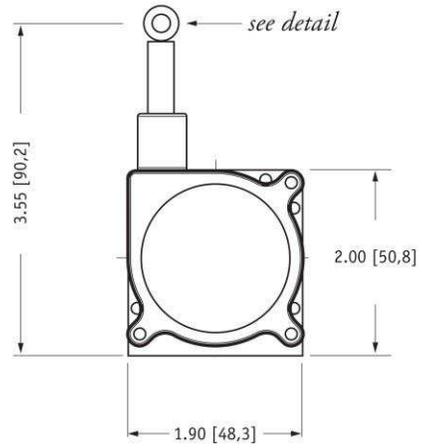
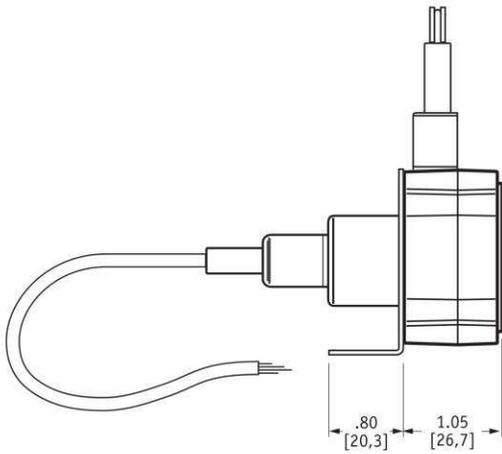
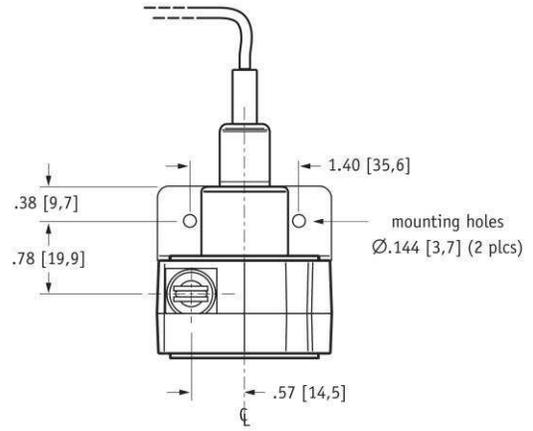
SP2

Compact String Pot | Incremental Encoder

Outline Drawing (w/ bracket)



eyelet detail



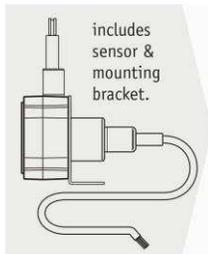
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Ordering Information



Part No.	full stroke range	accuracy (% of f.s.)	cycle life
SP2-4	4.75 in (120 mm)	1.00%	2.5M cycles
SP2-12	12.5 in (317 mm)	0.25%	500K cycles
SP2-25	25 in (635 mm)	0.25%	500K cycles
SP2-50	50 in (1270 mm)	0.25%	250K cycles

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