

Compact String Pot

Ranges: Up to 50 inches  
Precision Potentiometric Output  
Low Cost • Fast Delivery

SP1

**Handy Mounting Bracket**  
Mounts easily and quickly in several directions

**Designed for Cable Misalignment**  
Long cable life, even when installation isn't perfect

**Polycarbonate Enclosure**  
Withstands impacts and chemicals

**“Free-Release” Tolerant**  
Greatly reduces damage due to mis-handling of cable

Specification Summary:

**GENERAL**  
Full Stroke Range Options ..... 0-4.75, 0-12.5, 0-25, 0-50 inches  
Output Signal ..... voltage divider (potentiometer)  
Accuracy .....  $\pm 0.25$  to  $\pm 1.00\%$  *see ordering information*  
Repeatability .....  $\pm 0.05\%$  full stroke  
Resolution ..... essentially infinite  
Measuring Cable ..... 0.019-in. dia. nylon-coated stainless steel  
Enclosure Material ..... polycarbonate  
Sensor ..... plastic-hybrid precision potentiometer  
Weight ..... 3 oz. (w/o mounting bracket) max.

**ELECTRICAL**  
Input Resistance ..... 10K ohms,  $\pm 10\%$   
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%  $\pm 4\%$  of input voltage

**ENVIRONMENTAL**  
Enclosure ..... IP 50  
Operating Temperature ..... 0° to 160°F (-18° to 71°C)  
Vibration ..... up to 10 G's to 2000 Hz maximum

Ordering Information:

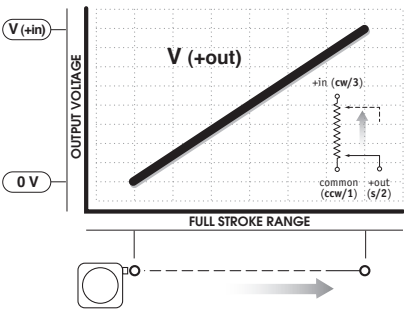
Item Number:	SP1-4	SP1-12	SP1-25	SP1-50
full stroke range:	4.75 in.	12.5 in.	25 in.	50 in.
accuracy (% of f.s.):	1.00%	0.25%	0.25%	0.25%
potentiometer cycle life:	2.5M cycles	500K cycles	500K cycles	250K cycles
cable tension ( $\pm 25\%$ ):	7 oz.	7 oz.	7 oz.	7 oz.
max. cable acceleration:	30 G	30 G	30 G	30 G



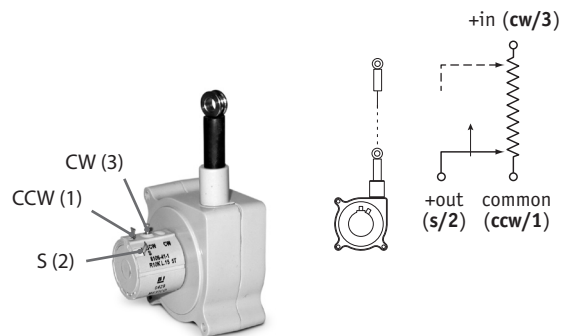
The CeleSCO SP1 String Pot is a compact, economical and durable device that utilizes a flexible cable, a spring-loaded spool, and a potentiometer to detect and measure linear position.

The SP1 is designed for tight spaces, high-cycle applications and generously allows cable misalignment. With 4 different measurement ranges and handy mounting brackets, the SP1 is a perfect solution for many applications, from light industrial to OEM.

Output Signal



### Electrical Connection:



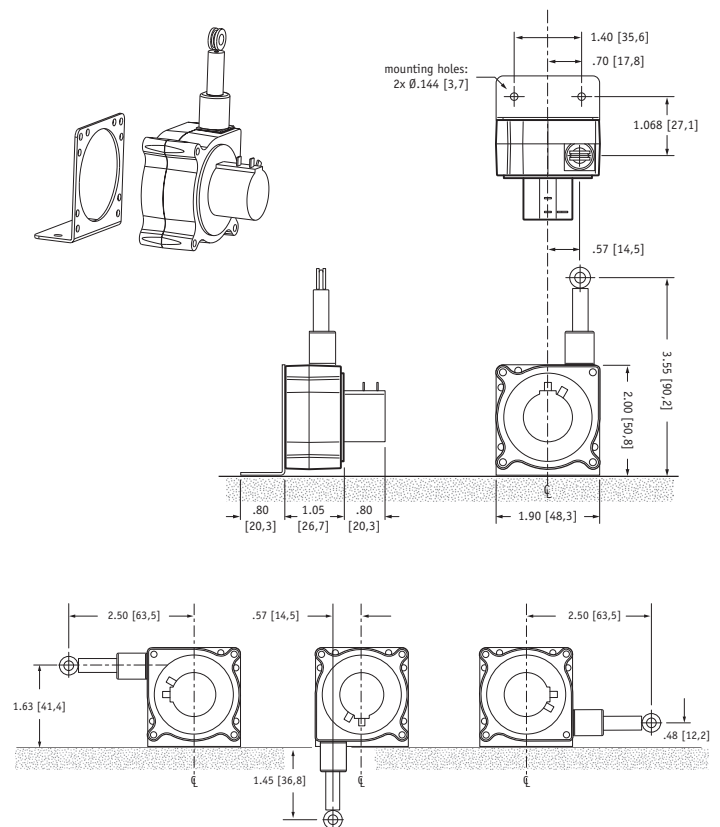
Technical drawings of the 100mm x 100mm x 50mm enclosure, showing isometric, front, side, and top views with dimensions in inches and millimeters.

**Isometric View:** Shows the enclosure with a cable entry on top and a mounting flange on the side.

**Front View:** Shows the enclosure with a cable entry on top. Dimensions include: mounting holes: 2x Ø.144 [3,7]; .783 [19,9]; .375 [9,5]; 1.40 [35,6]; .70 [17,8]; .57 [14,5]; 3.55 [90,2]; 2.00 [50,8]; 1.90 [48,3]; 1.05 [26,7]; .80 [20,3].

**Side View:** Shows the enclosure with a cable entry on top. Dimensions include: 1.63 [41,4]; 2.50 [63,5]; .57 [14,5]; 1.45 [36,8]; .48 [12,2].

**Top View:** Shows the enclosure with a cable entry on top. Dimensions include: 2.50 [63,5]; .57 [14,5]; 1.45 [36,8]; .48 [12,2].



**celesco**  
celesco.com • info@celesco.com