

# 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

**CE** **"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

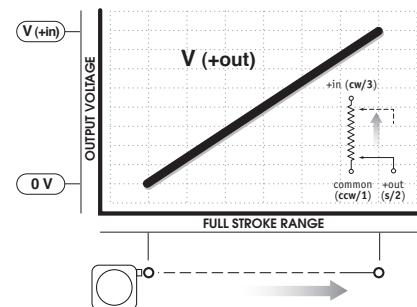
## Ordering Information:

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:	15 G	15 G	15 G	15 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.

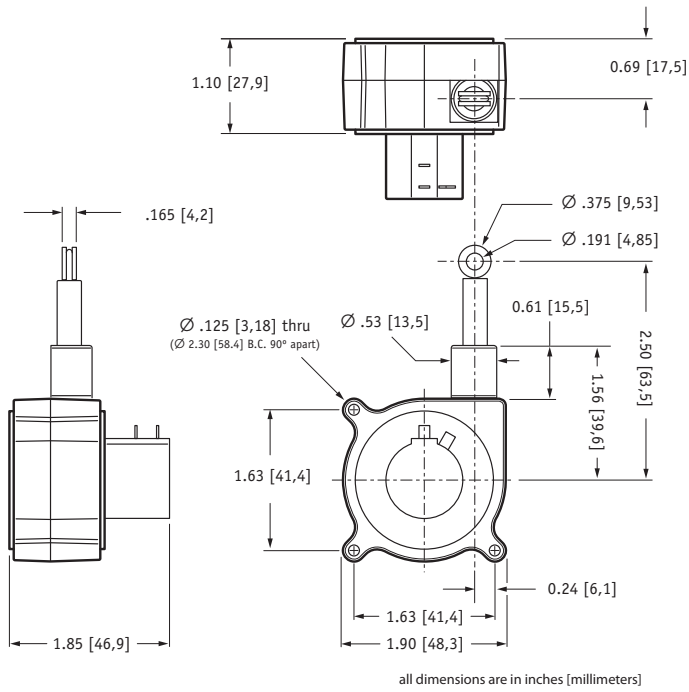
## Output Signal



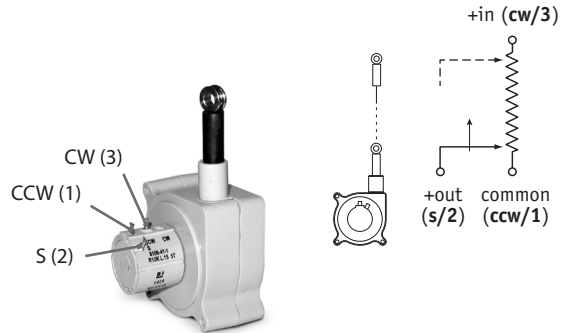
# SP1 • Compact String Pot • Precision Potentiometric Output

## Installation Information:

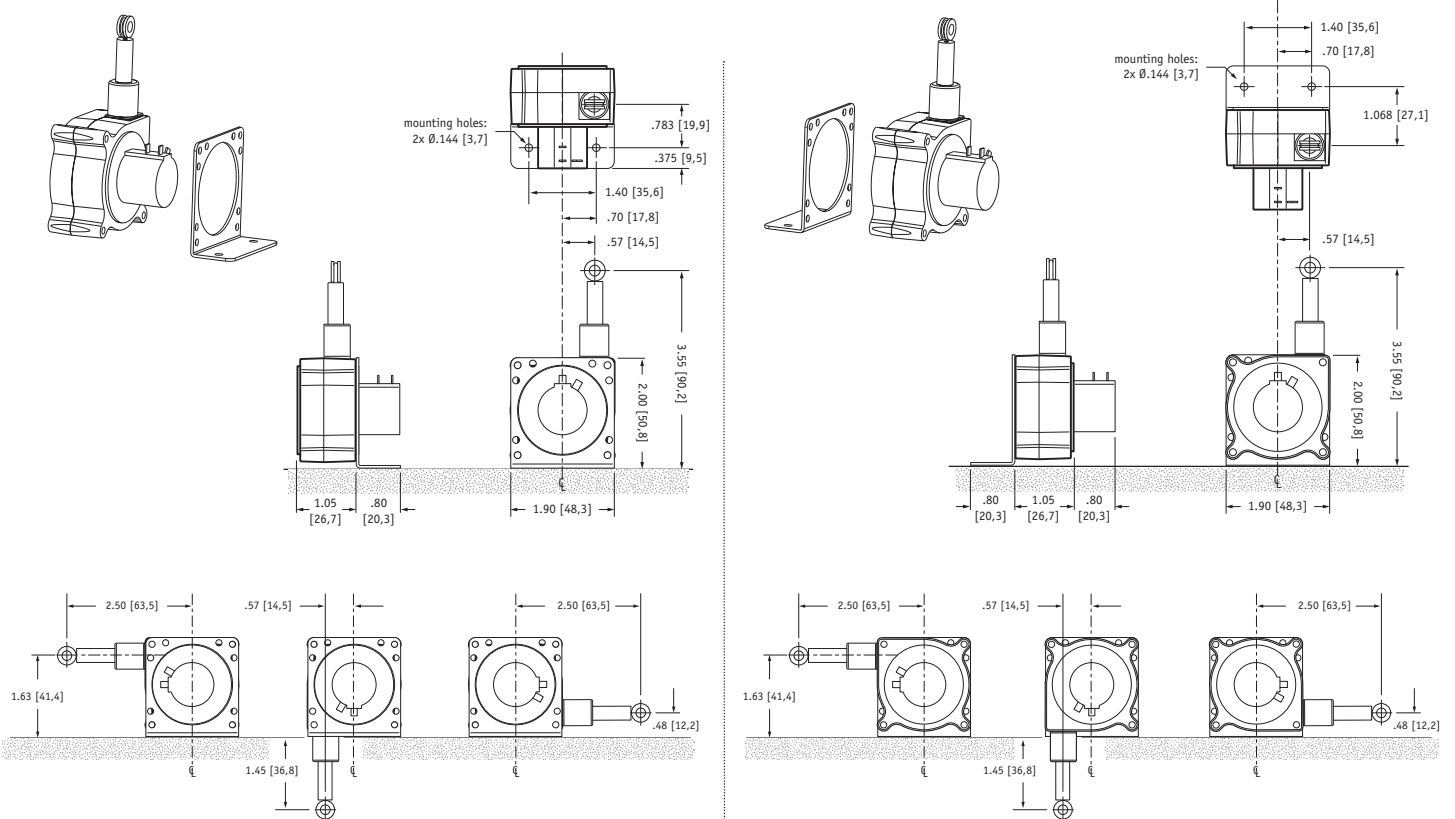
### Outline Drawing (w/o bracket):



### Electrical Connection:



### Mounting Options:



version: 7.1 last updated: May 19, 2009