

# Compact String Pot

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

# SP2

**40-inch Electrical Cable**  
 Sealed strain relief

**Water and Chemical Resistant Design**  
 Polycarbonate enclosure with sealed electrical connections

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

**CE** **Tolerant of Cable Misalignment**  
 Long cable life, even when installation isn't perfect



## 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  
 Mounting Bracket Material ..... stainless steel  
 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

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

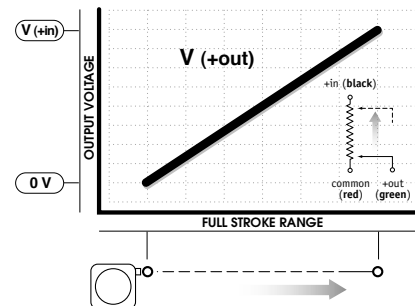
## Ordering Information:

Item Number:	SP2-4	SP2-12	SP2-25	SP2-50
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 SP2 String Pot from Celesco 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.

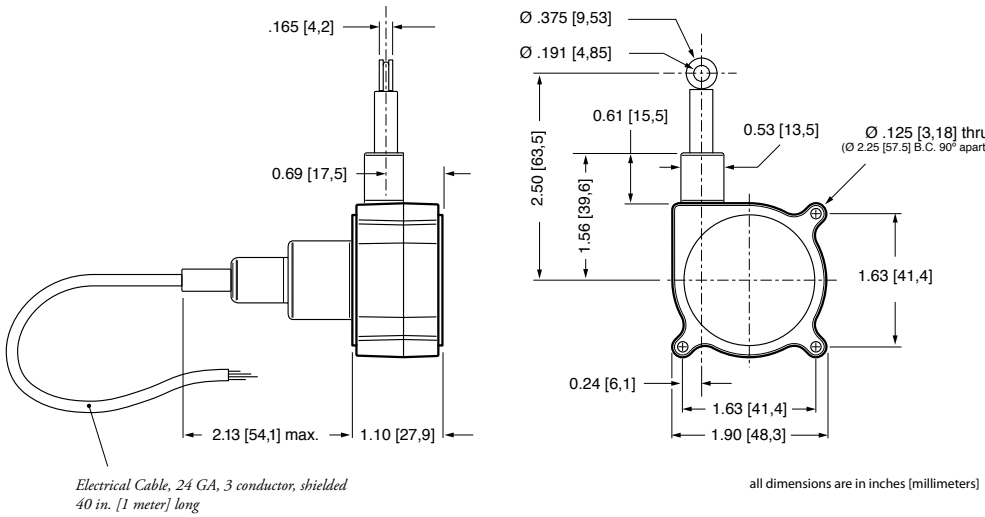
The SP2 is identical to the SP1 except for an added 40-inch electrical cable with a watertight rubber strain relief. The SP2 has been compactly designed for tight spaces and high cycle applications and generously allows for measuring cable misalignment. With 4 different ranges and a handy mounting bracket,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

## Output Signal

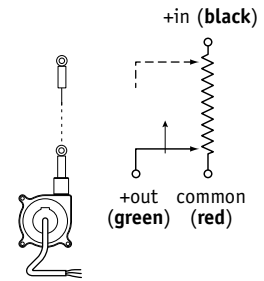


**Installation Information:**

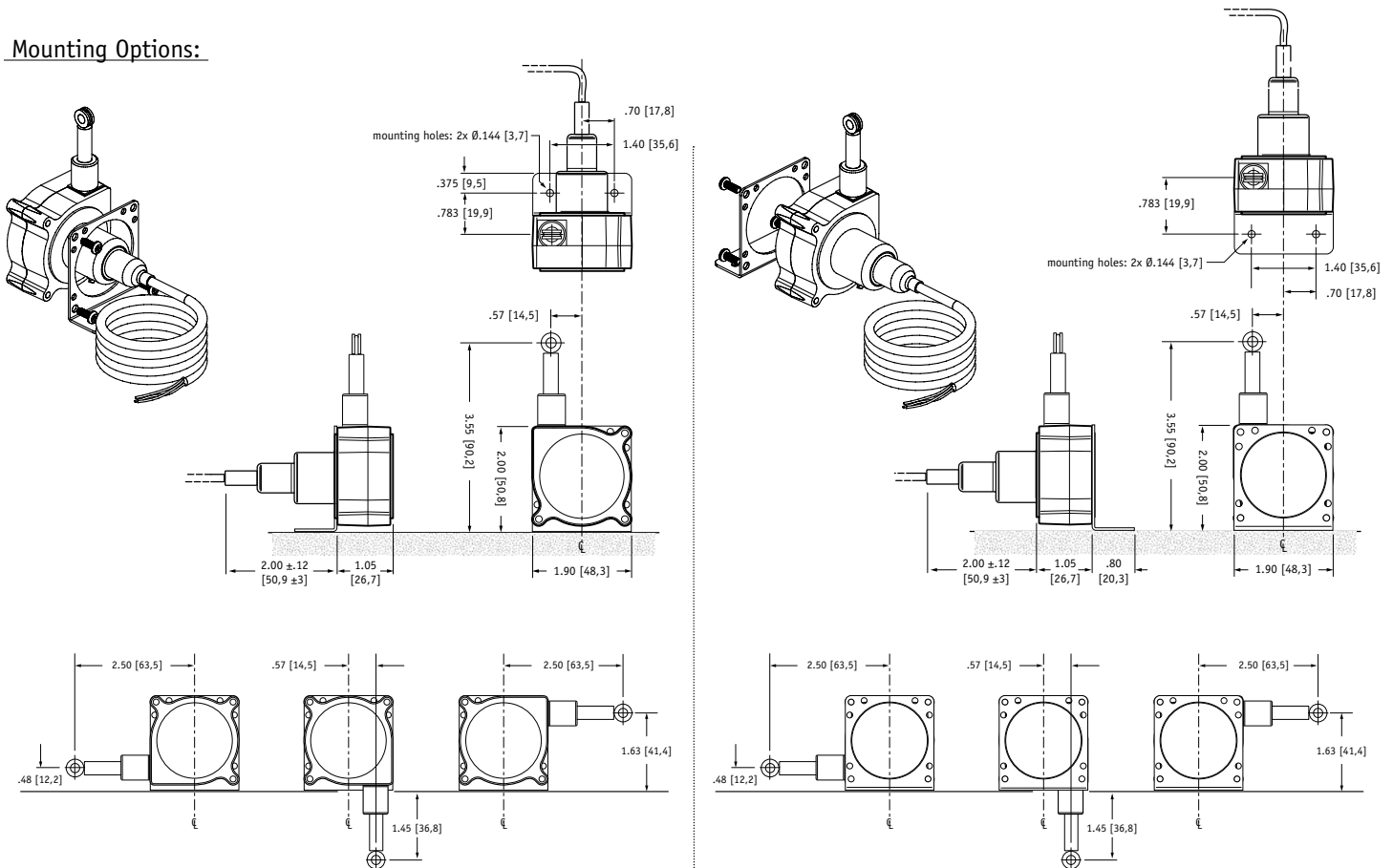
Outline Drawing (w/o bracket):



Electrical Connection:



Mounting Options:



version: 4.0 last updated: July 1, 2006