

## SK1

### Cable Actuated Sensor Voltage Divider Output Signal

The SK1 is a perfect solution for applications ranging from mobile construction equipment to hydraulic lift tables and anything else in between. Available in both 250 and 400-inch stroke ranges, this model offers the ultimate ease-of-use, compact design and user flexibility. Need to mount it upside down? Simply rotate its stainless mounting bracket to where you want it. Need the electrical connector to point in a different direction? Just rotate the rear cover to point the connector to the desired direction.

The SK1 is manufactured with a precision high-cycle plastic hybrid potentiometer and durable spring-loaded stainless steel measuring cable to deliver an accurate reliable voltage divider position feedback signal over the entire stroke.

#### FEATURES

- Flexibility - Every unit offers linear position up to 400" (10m) providing flexibility to work across a wide range of aerial applications. This off-the-shelf series offers a wide selection of industry standard output signals (4-20mA, 0-10Vdc, CANOpen and J1939 CANbus).
- Ease of use - A compact design, a stainless-steel mounting bracket for multiple installation options and an easily-adjustable measuring cable orientation make this sensor easy to install and manage.
- Superior engineering - TE provides engineering partnership to customize for specific applications. There is also an option to have two sensors elements in the same package with no additional space requirement. This provides fail-safe security for aerial applications.

#### APPLICATIONS

Accurate measurement in customized applications industrial and commercial transportation like:

- Fork lifts
- Telescopic arms
- Boom lifts
- Scissor lifts

# SK1

## Voltage Divider Output Signal

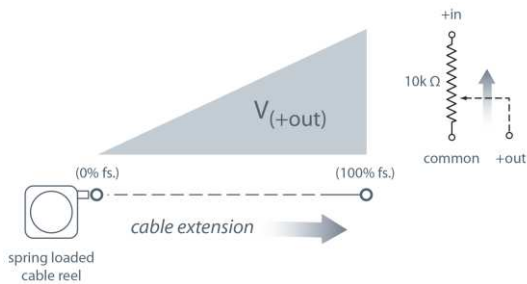
Linear Position to 400 inches (10 m)

Compact Design • Simple to Install

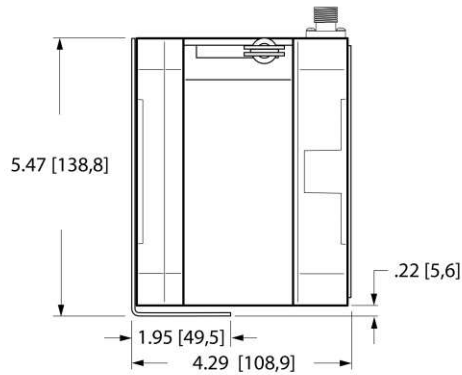
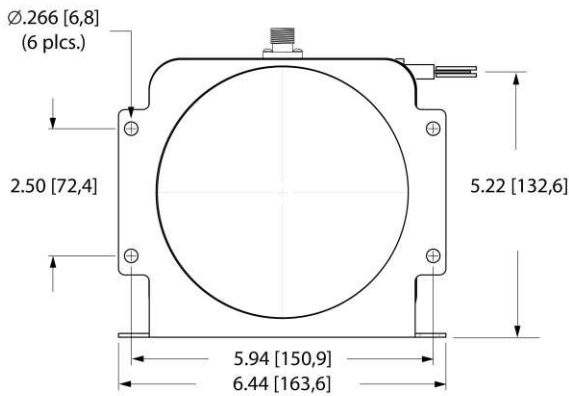
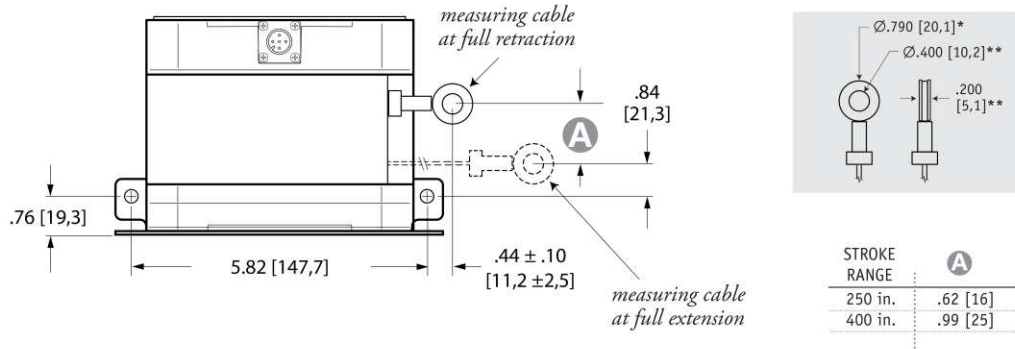
User Adjustable Measuring Cable Orientation

### Specifications

<b>Stroke Range Options</b>	250 inches (6.4 m), 400 inches (10.2 m)
<b>Output Signal</b>	voltage divider (potentiometric)
<b>Accuracy</b>	.35% FS.
<b>Repeatability</b>	.05% FS.
<b>Resolution</b>	essentially infinite
<b>Measuring Cable</b>	.031-inch dia. bare stainless steel
<b>Maximum Cable Velocity</b>	60 inches per second
<b>Maximum Cable Acceleration</b>	5 g
<b>Measuring Cable Tension</b>	23 oz. (6.4 N) $\pm$ 40%
<b>Sensor</b>	plastic-hybrid precision potentiometer
<b>Input Resistance</b>	10K ohms, $\pm$ 10%
<b>Power Rating, Watts</b>	2.0 at 70°F
<b>Recommended Maximum Input Voltage</b>	30 V (AC/DC)
<b>Output Signal Change Over Full Stroke Range</b>	94% $\pm$ 4% of V(+in)
<b>Cycle Life</b>	$\geq$ 250,000
<b>Electrical Connection</b>	4-pin M12 connector, mating plug included
<b>Enclosure</b>	glass-filled polycarbonate
<b>Environmental</b>	IP67
<b>Operating Temperature</b>	-40° to 185° F (-40° to 85° C)



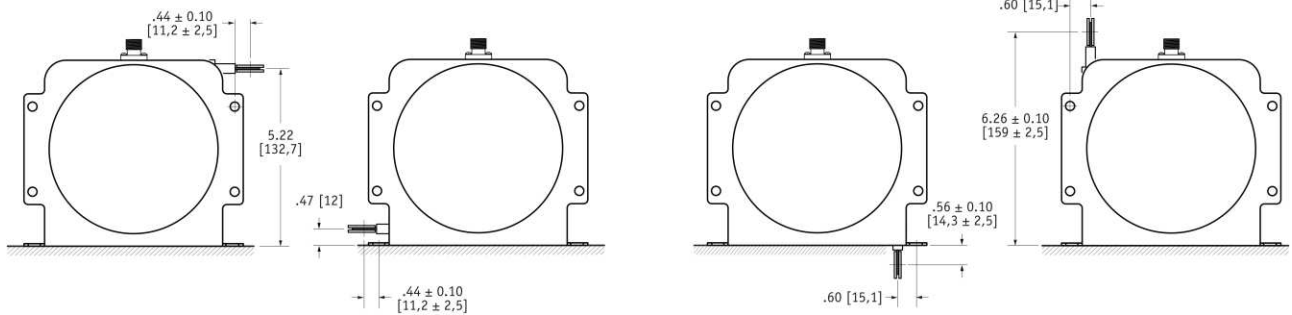
**Outline Drawing**



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

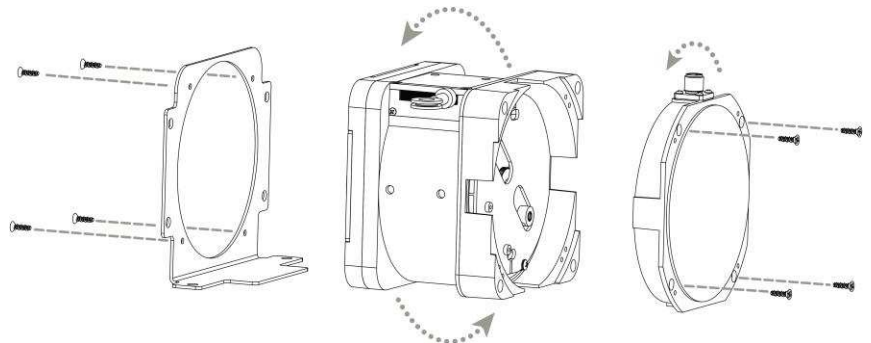
\* tolerance = +.005 - .001 [+0,1 -0,0]  
\*\* tolerance = +.005 - .005 [+0,1 -0,1]

**Mounting Options**



**To change cable exit direction:**  
simply remove the 4 bracket mounting screws and rotate sensor body to desired direction.

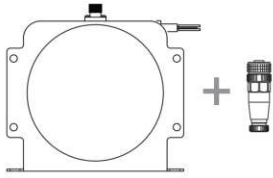
**To change electrical connector orientation:** remove the 4 rear screws and carefully remove the rear cover and rotate cover.



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### Ordering Information



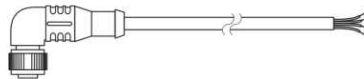
Part Number	full stroke range	accuracy	max. acceleration	measuring cable tension (± 40%)
<b>SK1-250-3</b>	250 in (6.4 m)	.35%	5 g	23 oz. (6,4 N)
<b>SK1-400-3</b>	400 in (10.2 m)	.35%	5 g	23 oz. (6,4N)

includes mounting bracket & mating connector.

### Optional Cordsets

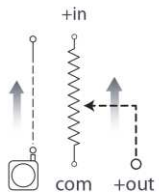


Part Number	length	wire size	connector
<b>9036810-0040</b>	13 ft (4 m)	22 AWG (.34mm <sup>2</sup> )	straight 4-pin M12



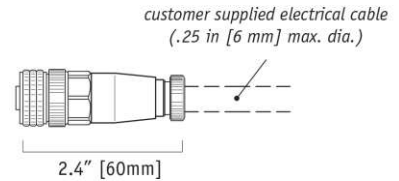
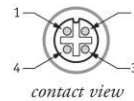
<b>9036810-0041</b>	13 ft (4 m)	22 AWG (.34mm <sup>2</sup> )	90° 4-pin M12
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### Electrical Connection



signals	pin	pin - color
<b>+in</b>	1	1 - brown
<b>common</b>	2	2 - white
<b>+out</b>	3	3 - blue
<b>n/c</b>	4	4 - black

### field installable connector



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