mm SE1

■ Description

- Linear Position to 50 inches (1270 mm)
- Low-Cost, Long Life · Rugged Polycarbonate Enclosure
- Free-Release Tolerant Measuring Cable
- In Stock for Quick Delivery!

The SE1 is the digital encoder version of our compact String Pot series. The SE1 is an economical and durable device that utilizes a flexible cable, a spring-loaded spool and an incremental optical encoder to detect and measure linear position.

The SE1 is designed for tight spaces, high-cycle applications and generously allows cable misalignment. With a handy mounting bracket included, and 2 basic measurement ranges, the SE1 is a perfect solution for many applications, from light industrial to OEM.

COMPLETE SPECIFICATIONS

Full Stroke Range Options	0-25, 0-50 inches
Output Signal	incremental encoder (quadrature)
Accuracy	±0.050 inches
Repeatability	± 0.025 inches
Resolution	56.40 ±.32 pulses per inch
Measuring Cable	0.019-in. dia. nylon-coated stainless steel
Measuring Cable Tension	7 oz. (1,9 N) ±25%
Maximum Cable Acceleration	15 g
Enclosure Material	polycarbonate
Sensor	optical encoder
Cycle Life	1.1 million cycles
Enclosure	IP 50
Operating Temperature	14° to 185°F (-10° to 85°C)
Vibration	up to 10 g to 2000 Hz max.
Weight	5 oz. (w/o mounting bracket) max.

ELECTRICAL

|	
Input Voltage	5 VDC
Input Current	50 mA max.
Output Driver	TTL compatible
Sink Current	8 mA max.
Electrical Connection	mating plug with 12-inch leads, included
Electrical Connector	Molex 53048-0410
Mating Plug	Molex 51021-0400 (shell), 50079-8100 (pins)

3.5" [89 mm]

1.9" [48 mm]   1.9" [48 mm]
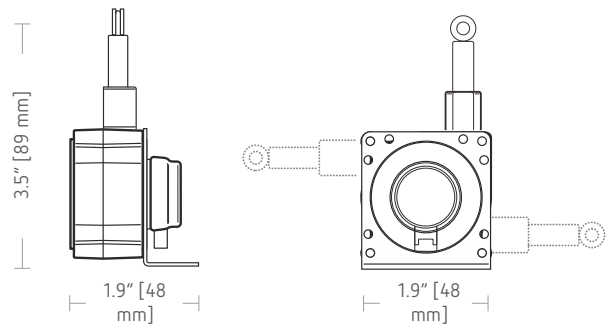
■ Ordering information

includes sensor, mounting bracket & conn. w/12-inch leads

connector

Part No.	full stroke range	accuracy	cycle life
FDSE1-25	25 in (635 mm)	0.050 in.	1.1M cycles
FDSE1-50	50 in (1270 mm)	0.050 in.	1.1M cycles

■ Output signal

channel A
channel B

5 V
0 V

max. sink current: 8mA
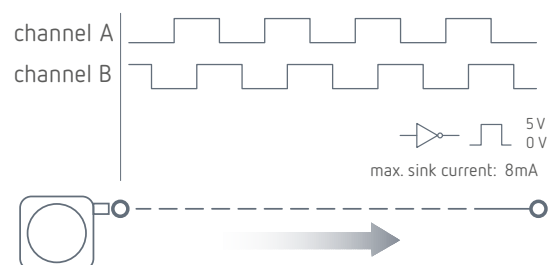
Mounting Options
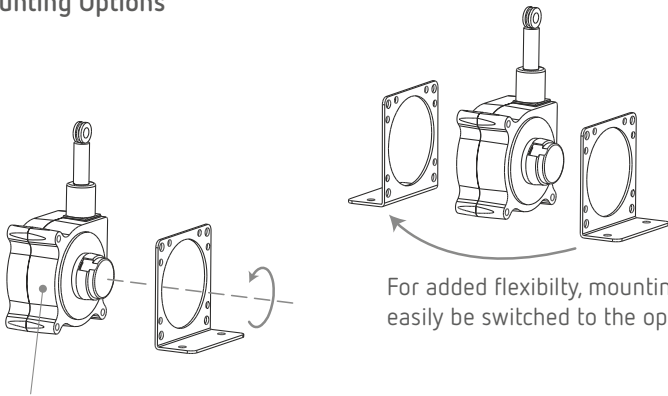
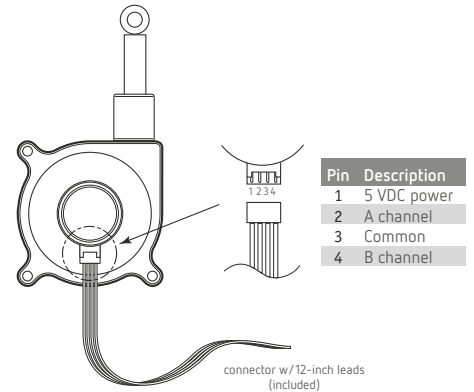For added flexibilty, mounting bracket can easily be switched to the opposite side.
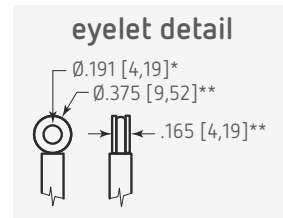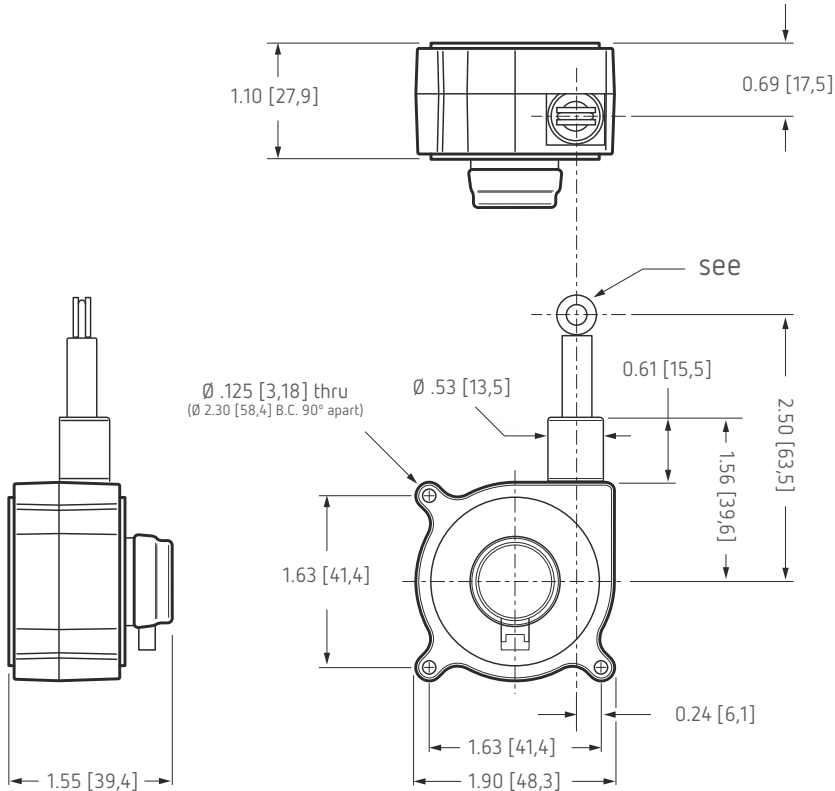
To change measuring cable direction simply remove the 3 bracket attaching screws and rotate sensor body to desired direction.

2.50 [63,5]   .57 [14,5]   2.50 [63,5]

1.63 [41,4]   .48 [12,2]

1.45 [36,8]

Electrical Connection

Pin	Description
1	5 VDC power
2	A channel
3	Common
4	B channel

connector w/12-inch leads
(included)
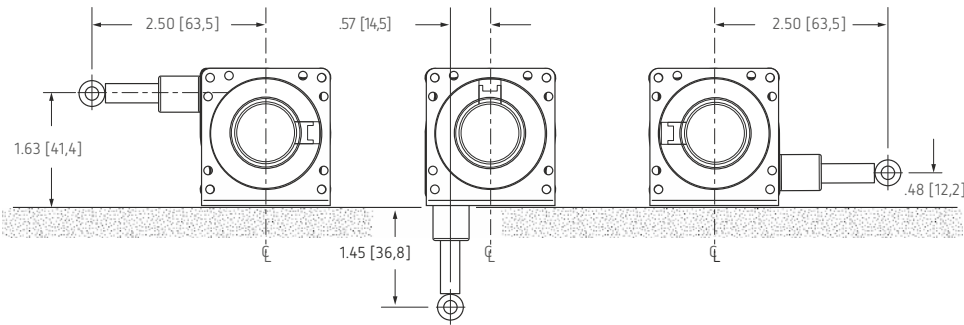
Outline Drawing (w/o bracket)

1.10 [27,9]   0.69 [17,5]

see

eyelet detail

Ø.191 [4,19]*
Ø.375 [9,52]**
.165 [4,19]**

*tolerance = +.005 − .001 [+.13 − .03]
**tolerance = +.005 − .005 [+.13 − .13]

Ø .125 [3,18] thru
(Ø 2.30 [58,4] B.C. 90° apart)

Ø .53 [13,5]

0.61 [15,5]

2.50 [63,5]

1.56 [39,6]

1.63 [41,4]

0.24 [6,1]

1.63 [41,4]

1.90 [48,3]

1.55 [39,4]

INCHES [MM]

01.2016 | version 20130215 - Rev 5

Page 2 / 3

.57 [14,5]

.78 [19,9]

mounting holes
Ø.144 [3,7] (2 plcs)

.38 [9,7]

1.40 [35,6]

see

2.50 [63,5]

2.00 [50,8]

1.05 [26,7]   .80 [20,3]

1.90 [48,3]

eyelet detail

Ø.191 [4,19]*
Ø.375 [9,52]**

.165 [4,19]**

*tolerance = +.005 − .001 [+.13 − .03]
**tolerance = +.005 − .005 [+.13 − .13]

INCHES [MM]

01.2016 | version 20130215 - Rev 5

Althen − Your expert partner in Sensors & Controls | althensensors.com

Althen stands for pioneering measurement and custom sensor solutions. In addition we offer services such as calibration, design & engineering, training and renting of measurement equipment.

Germany/Austria/Switzerland	Benelux	France	Sweden	USA/Canada	Other countries
info@althen.de	sales@althen.nl	info@althensensors.fr	info@althensensors.se	info@althensensors.com	info@althensensors.com