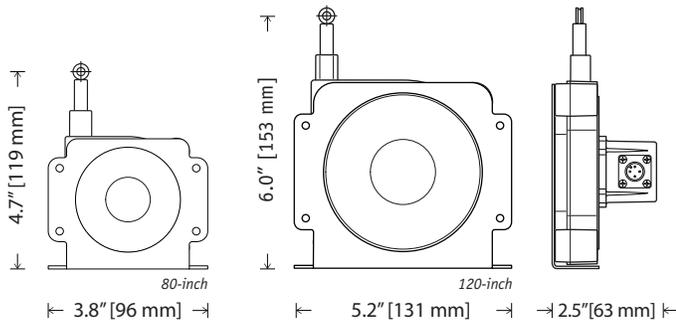# SGD

4..20mA • 0..10 Vdc Output Signal

Compact Mid-Range String Pot • Absolute Position
80, 120-inch Stroke Range Options
Polycarbonate Enclosure • IP67
In Stock for Quick Delivery

80-inch

4.7" [119 mm]

← 3.8" [96 mm] →

120-inch

6.0" [153 mm]
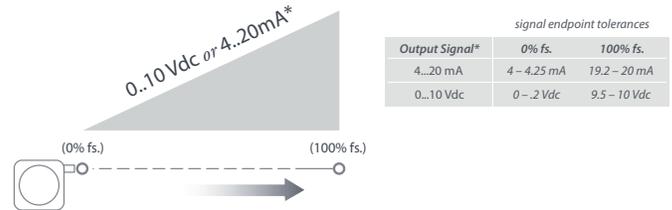
← 5.2" [131 mm] →   → 2.5"[63 mm] ←

Suited for IP67 (wet) environments, the SGD provides a user-selectable 4-20mA or 0-10VDC absolute linear position signal over an 80-inch or 120-inch full stroke range option. Signal selection is simply made by connecting the appropriate pins on the included connector or selecting the proper wires in the optional cordset.

Additionally, this sensor is constructed with a rugged polycarbonate body, an extremely durable spring-loaded stainless steel measuring cable and a mounting bracket that lets the customer mount this sensor in just about any direction. The SGD is in stock for quick delivery.
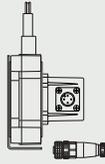
Customized options are also available for OEM customers.

SPECIFICATIONS

Stroke Range	80 inches (2032 mm), 120 inches (3048 mm)
User Selectable Output Signal	4...20 mA (2-wire) / 0...10 Vdc
Input Voltage, 4...20 mA option	8-40 VDC
Input Voltage, 0...10 Vdc option	12-32 VDC
Accuracy	.35% FS.
Repeatability	.05% FS.
Resolution	essentially infinite
Measuring Cable	.019-inch dia. nylon-coated stainless steel
Maximum Acceleration	10 g
Measuring Cable Tension	9 oz. (2,5 N) ±30%
Sensor	plastic-hybrid precision potentiometer
Cycle Life	≥ 250,000
Electrical Connection	M12 connector (mating plug included)
Enclosure	glass-filled polycarbonate
Environmental	IP 67
Operating Temperature	0˚ to 160˚ F (-18˚ to 70˚ C)
Weight, 80-inch (not including bracket)	.6 lbs. (272 g)
Weight, 120-inch (not including bracket)	1 lb. (453 g)

Output Signal:

0..10 Vdc or 4..20mA*

(0% fs.)   (100% fs.)

Output Signal*	0% fs.	100% fs.
		signal endpoint tolerances
4...20 mA	4 – 4.25 mA	19.2 – 20 mA
0...10 Vdc	0 – .2 Vdc	9.5 – 10 Vdc

*note: signal endpoints are set at the time of manufacture and cannot be adjusted

ORDERING INFORMATION

Part No.
SGD-80-3
80-inch stroke range,
4–20 mA / 0–10 Vdc output
M12 connector,
IP67 environments,
mounting bracket included

Part No.
SGD-120-3
120-inch stroke range,
4–20 mA / 0–10 Vdc output
M12 connector,
IP67 environments,
mounting bracket included

4-pin M12 connector
13 ft (4 m)
22 AWG (.34mm²)

Optional Cordset

Part No.
9036810-0040

for short-run connections, a convenient optional 13-ft. cordset with a 4-pin M12 connector is available for the SGD-80-3 and SGD-120-3.

Electrical Connection:

cordset

Output Signals

0...10 Vdc	4...20 mA	pin	pin - colorcode
12...32 Vdc	8...40 Vdc	1	1 - brown
0...10 Vdc	n/c	2	2 - white
n/c	n/c	3	3 - blue
common	4...20 mA	4	4 - black
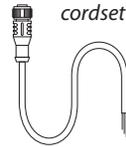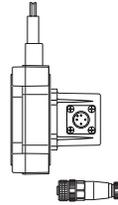
field installable connector (included)

4 — contact view

1
2
3

← 2.4" [60mm] →

customer supplied electrical cable, (.25 in [6 mm] max. dia.)
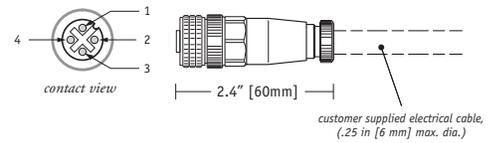
cordset, part no. 9036810-0040 (optional)

4 — contact view

1
2
3

← 1.7" [45 mm] →

22 AWG (.34mm²)

13.6 ft. [4 M]

0..10 Vdc

brown - pin 1
black - pin 4
white - pin 2

12–32 Vdc

0–10 Vdc
common

4..20 mA

brown - pin 1
black - pin 4

8–40 Vdc

4–20 mA
return

Mounting Options (SGD-80-3):

.50 [12,7]

4.70 [119,3]

1.42 [36,1]

.53 [13,5]

1.42 [36,1]

2.77 [70,4]

1.40 [35,6]

.50 [12,7]

INCHES [MM]

Mounting Options (SGD-120-3):

.50 [12,7]

6.04 [153,3]

1.42 [36,2]

.49 [12,4]

1.42 [36,1]

4.11 [104,4]

1.44 [36,5]

.50 [12,7]
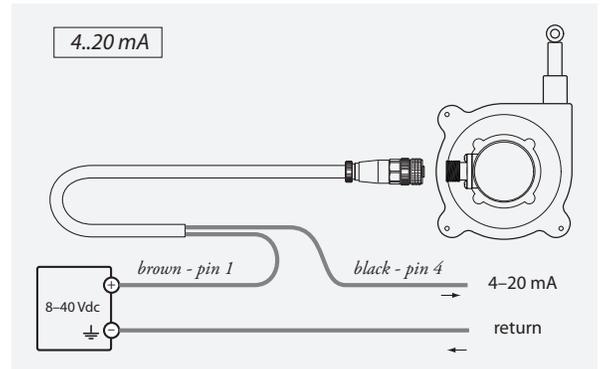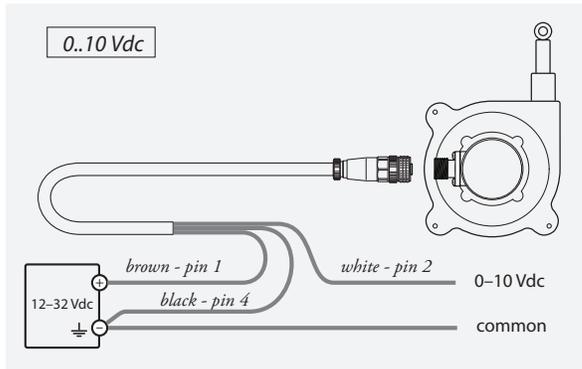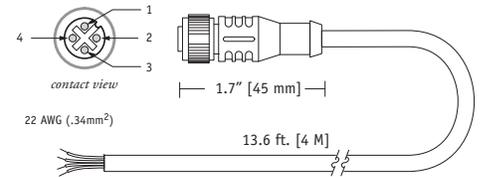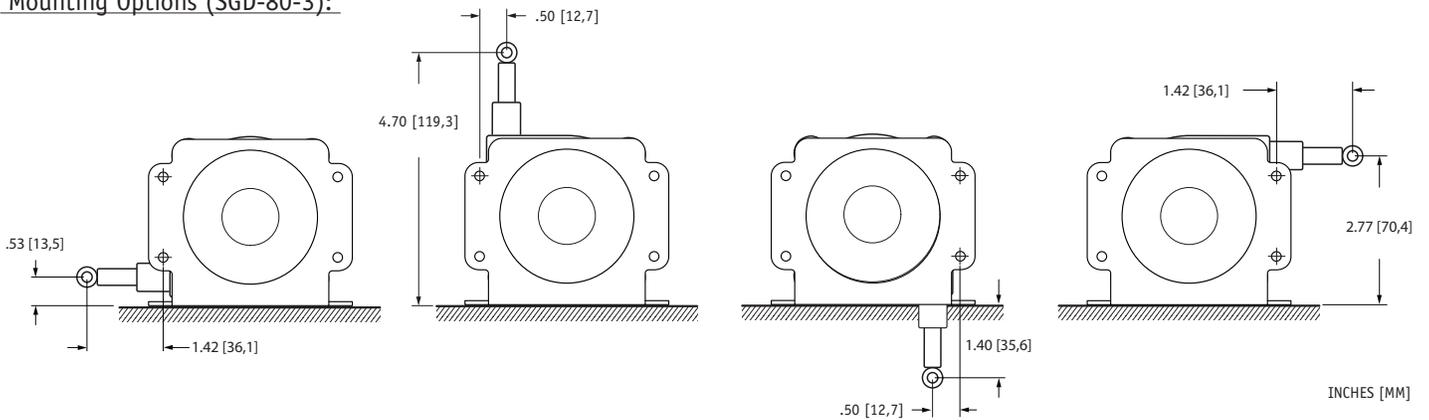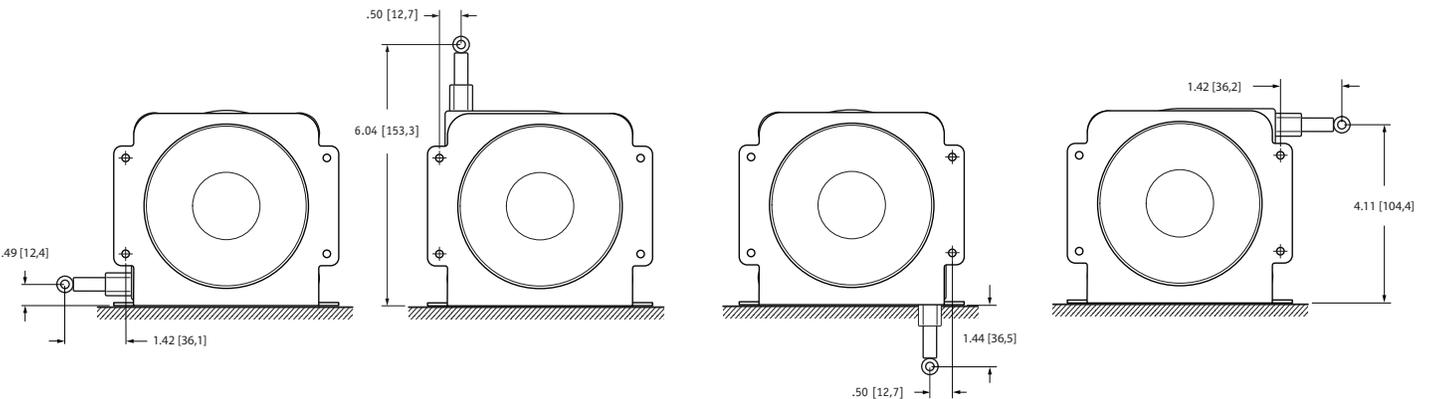
SGD-80-3 w/ Mounting Bracket:

1.43 [36,2]

.56 [14,3]

Ø.22 [5,6] 2 plc.

.65 [16,5]   .69 [17,5]

3.38 [85,7]

.50 [12,7]

4.70 [119,3]

Ø.18 [4,5] 4 plc.

1.50 [38,1]

1.65 [41,9]

3.25 [82,6]   .9 [22,9]

3.80 [96,4]

3.15 [80]

Ø1.49 [35.5]

1.13 [28,6]

2.47 [62,7]
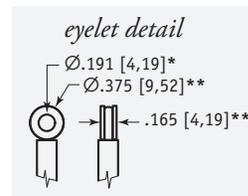
eyelet detail

Ø.191 [4,19]*
Ø.375 [9,52]**
.165 [4,19]**
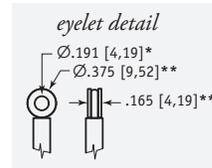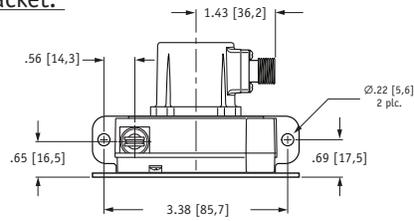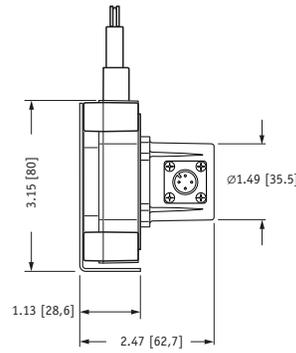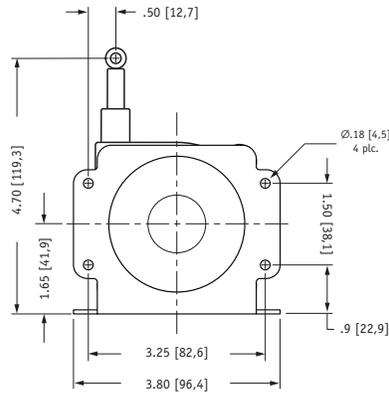
*tolerance = +.005 −.001 [+.13 −.03]
**tolerance = +.005 −.005 [+.13 −.13]

INCHES [MM]

SGD-120-3 w/ Mounting Bracket:

1.43 [36,2]

.56 [14,3]

Ø.22 [5,6] 2 plc.

.65 [16,5]   .69 [17,5]

4.75 [120,1]

.50 [12,7]

6.04 [153,3]

Ø.18 [4,5] 4 plc.

2.20 [55,9]

2.30 [58,4]

4.62 [117,4]   1.20 [30,5]

5.17 [131,3]

4.49 [114]

Ø1.49 [35.5]

1.13 [28,6]

2.48 [63,0]

INCHES [MM]

eyelet detail

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

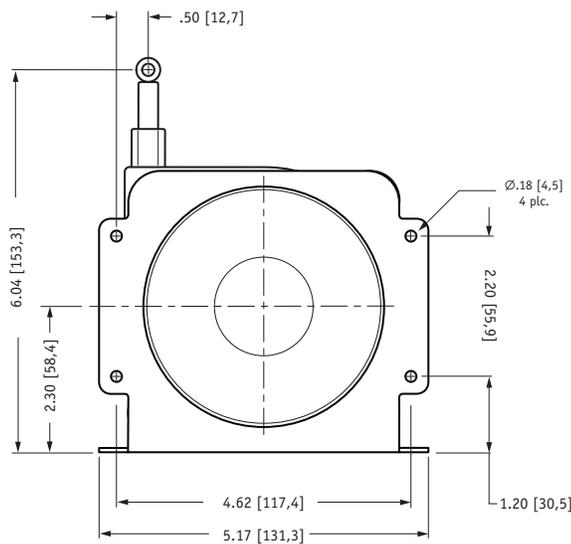*tolerance = +.005 −.001 [+.13 −.03]
**tolerance = +.005 −.005 [+.13 −.13]
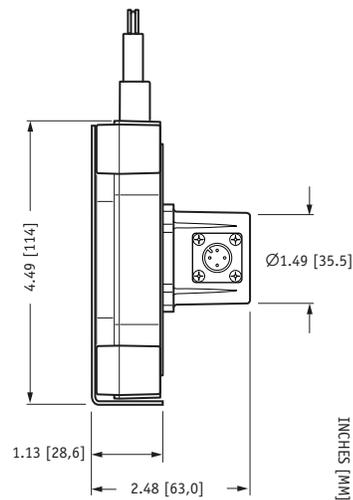
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