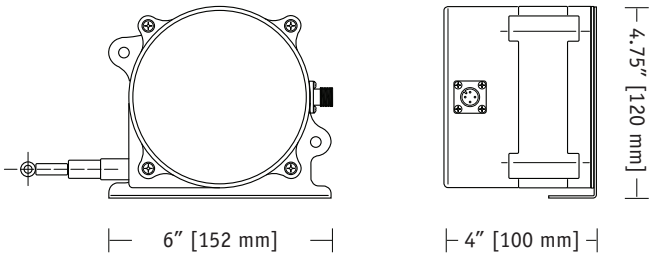
SR1E

Industrial • Incremental Encoder Output

Linear Position up to 175 inches (3 meters)
0-125, 0-175 inch Full Stroke Range Options
Designed for Outdoor & IP67 environments
In Stock for Quick Delivery!



175-inch model shown



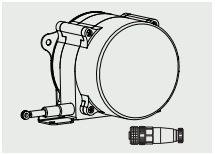
The SR1E is rugged, low-cost, high performance string pot built to withstand wet environments and outdoor applications. Designed for construction equipment and factory use, the SR1E is the perfect low-cost solution for OEM and stocking distributors.

At the heart of this sensor is a robust incremental encoder that delivers a linear resolution of 101 pulses per inch. The SR1E ships with an industry standard push-pull encoder driver that can be powered by 5-30 VDC. (Other resolutions and complimentary channels are available, please consult factory). Each sensor ships with a 4-pin, field installable, M12 connector and an additional 13 ft. (4 m) cordset is also available. Just like the rest of our SR1 series, the SR1E is in stock for quick delivery.

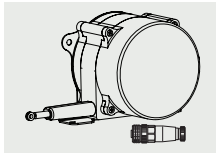
SPECIFICATIONS

Full Stroke Range, **SR1E-125**	125 inches (3175 mm)
Full Stroke Range, **SR1E-175**	175 inches (4445 mm)
Output Signal	incremental encoder
Resolution	101 ±2 pulses per inch
Accuracy	± .1% FS.
Repeatability	± .05% FS.
Input Voltage	5-30 VDC
Input Current	100 mA max., no load
Sensor	incremental encoder
Output Driver Type	push-pull (note: Vin = Vout)
Output Driver Current	20 mA max., source/sink
Maximum Velocity	80 inches (2 meters) per second
Maximum Acceleration	10 g (retraction)
Measuring Cable Tension	23 oz. (6,4 N) ±30%
Enclosure	polycarbonate
Measuring Cable	.034-inch dia. nylon-coated stainless
Electrical Connection	M12 Connector (mating plug included)
Environmental Suitability	NEMA 6, IP67
Operating Temperature	-4˚ to 185˚ F (-20˚ to 85˚ C)
Weight	2.5 lbs. (1.3 Kg)

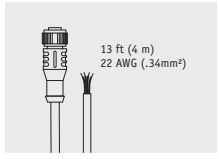
ORDERING INFORMATION



Order No.
SR1E-125
125-inch stroke range, incremental encoder output, 4-pin M12 mating plug & mounting bracket included.

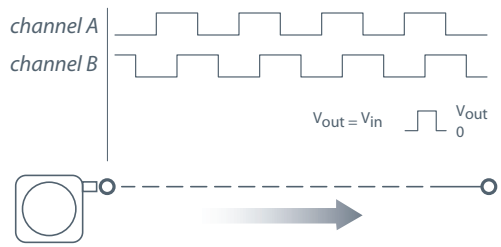


Order No.
SR1E-175
175-inch stroke range, incremental encoder output, 4-pin M12 mating plug & mounting bracket included.



Order No.
9036810-0040
for short-run connections, optional 13-ft cordset with 4-pin M12 mating plug.

Output Signal:

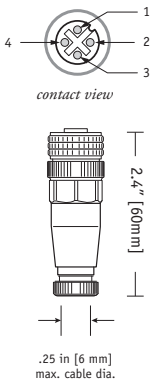


Consult factory for alternate resolution and differential output signals.

20630 Plummer Street • Chatsworth, CA 91311
tel: 800.423.5483 • +1.818.701.2750 • fax: +1.818.701.2799

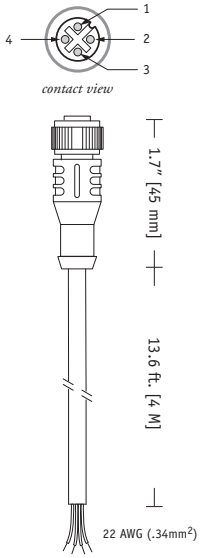
Electrical Connection

Field Installable Connector



pin	*signal*
1	5...30 VDC
2	common
3	channel A
4	channel B

Cord Set Connections



pin	*conductor*	*signal*
1	brown	5...30 VDC
2	white	common
3	blue	channel A
4	black	channel B

cable specifications	
length:	13 ft. (4m)
wire size:	22 AWG (.34mm^2)
cable material:	PVC
cable color:	gray

Changing the Cable Exit

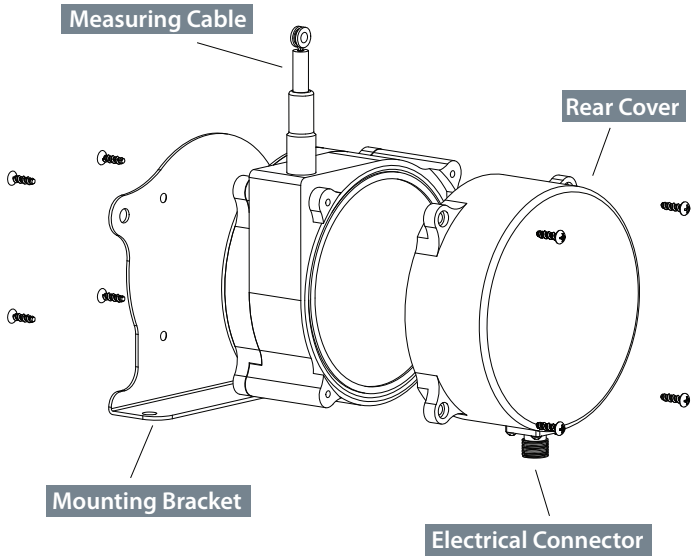
Changing Measuring Cable Exit

To change the direction of the measuring cable, remove the 4 mounting bracket screws and rotate bracket to one of four available positions. See figures 1 - 4 on the following pages for mounting dimensions.

Changing Electrical Connector Direction

To change the position of the electrical connector, remove the 4 rear cover screws and carefully separate rear cover from the sensor body.

Rotate the rear cover to desired position being careful to not tangle the wiring harness that runs to the connector.



Cable Exit Direction Options

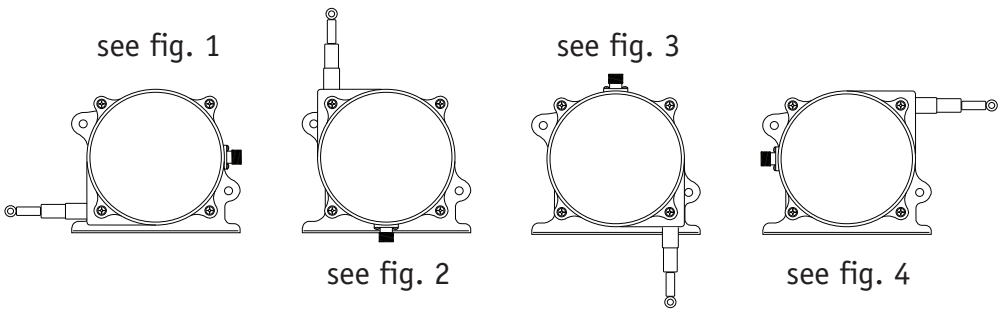
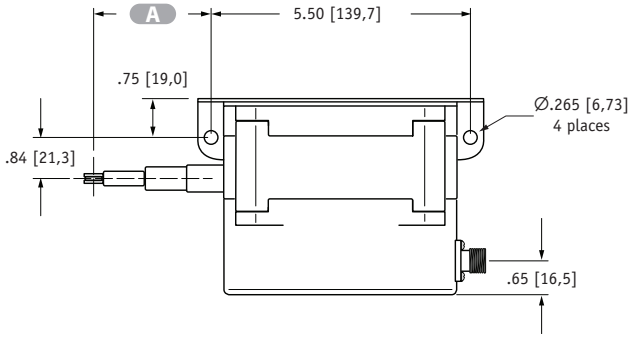
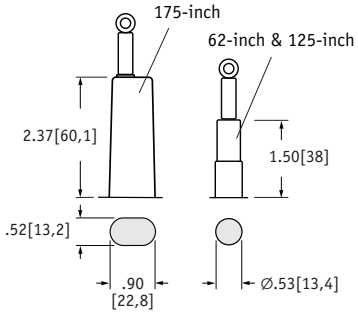


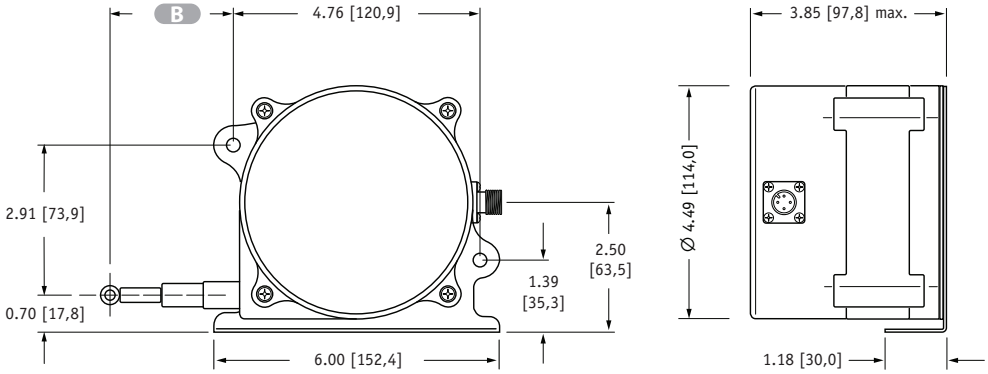
Fig. 1 - Outline Drawing (as shipped)



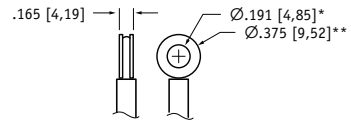
Model	A	B
125-inch	2.00 ±.13 [50,8 ±3,3]	2.37 ±.13 [60,22 ±3,3]
175-inch	2.87 ±.13 [72,8 ±3,2]	3.24 ±.13 [82.2 ±3,2]

Cable Guide Detail





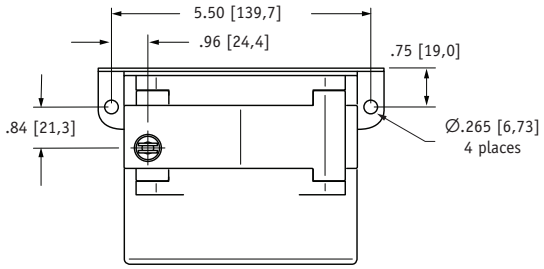
Eyelet Detail



units are in **inches [mm]** tolerances are ± .04 [1,0] unless otherwise noted

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

Fig. 2 - "Up" Cable Exit Direction



Model	A
125-inch	3.64 ±.13 [92,5 ±3,3]
175-inch	4.54 ±.13 [115,3 ±3,3]

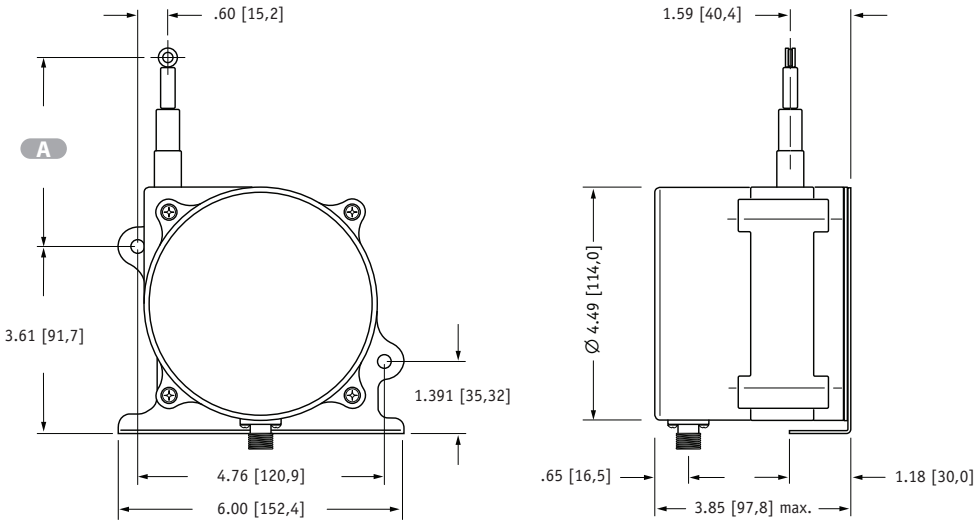
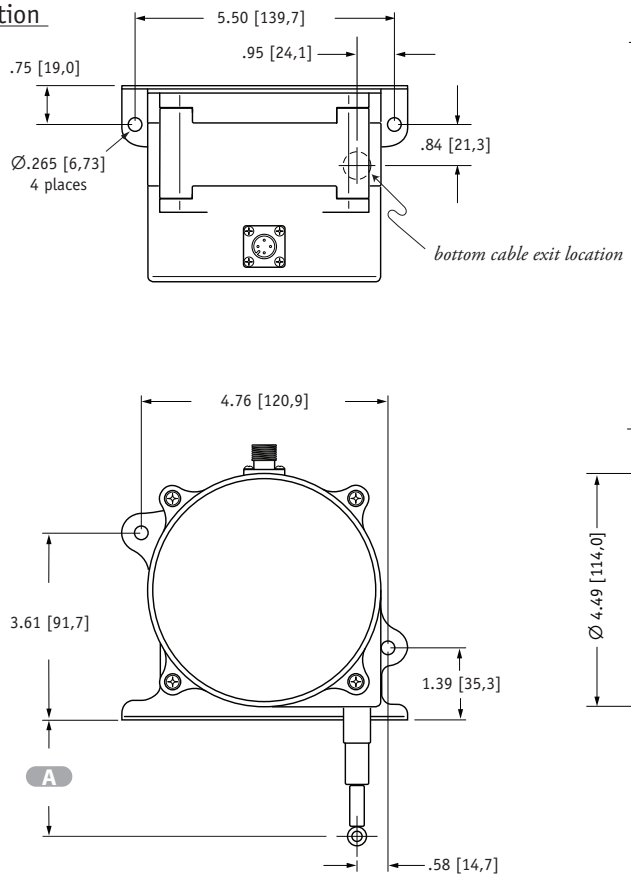
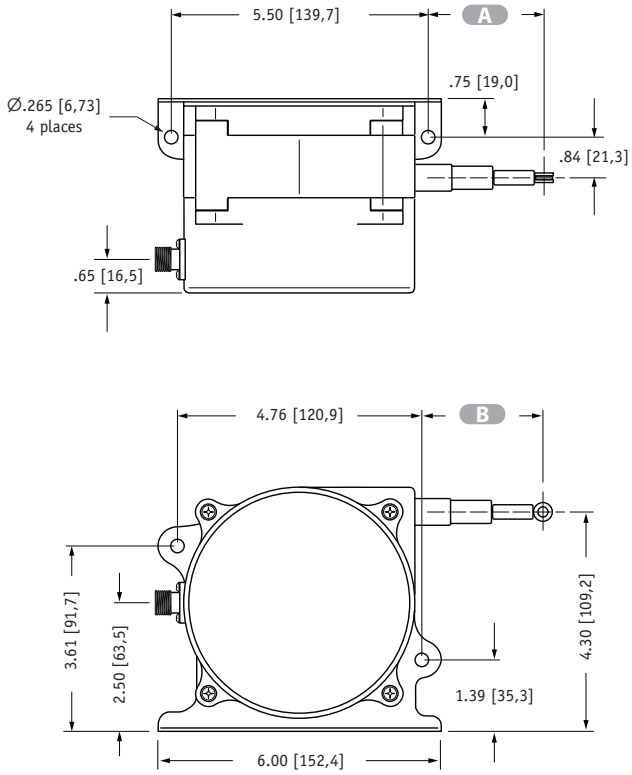


Fig. 3 - "Down" Cable Exit Direction



Model	A
125-inch	2.25 ±.13 [57,2 ±3,3]
175-inch	3.17 ±.13 [80,5 ±3,3]

Fig. 4 - "Rear" Cable Exit Direction



Model	A	B
125-inch	2.00 ±.13 [50,8 ±3,3]	2.37 ±.13 [60,22 ±3,3]
175-inch	2.87 ±.13 [72,8 ±3,2]	3.24 ±.13 [82.2 ±3,2]

version: **3.0** last updated: **March 5, 2013**

units are in **inches [mm]** tolerances are ± .04 [1,0] unless otherwise noted