ALLIANCE SENSORS GROUP
A DIVISION OF H.G. SCHAEVITZ LLC

LRSE18/LRSI18 LVIT Linear Position Sensors

LRSE18-050A-00-10A

Low cost, compact, high performance gauging probes

The LRSE-18/LRSI-18 series of LVIT (Linear Variable Inductance Transducer) spring loaded position sensors by Alliance Sensors Group are contactless devices designed for dimension or position measuring applications in factory automation and in various industrial and commercial applications where the sensing element cannot be attached to the object being measured. Typical applications include the following:

- Automotive testing
- Robotic arms
- Packaging equipment
- Mil/aero test stands

LRSE-18/LRSI-18 Linear Variable Inductance Transducers are offered in full scale ranges from 0.5 to 4.0 in [12.7 to 101.6 mm] with excellent resolution and high stroke-to-body-length ratios. The maximum tip force on the item being measured is 1lbf [0.454 kgf].

LRSE-18/LRSI-18 series sensors have a 0.75 in [19mm] diameter aluminum or stainless steel body with an M18x1 thread. These sensors are supplied with two hex jam nuts for easy installation.

These sensors use a 0.25 in [6.35 mm] diameter probe equipped with an AGD No. 9 contact tip and are offered with an axial cable. Operating from a variety of DC voltages, models are available with either 0-10 V or 4-20 mA output (see table below). All include ASG's proprietary SenSet™ field calibration feature.

Features

- Spring loaded LVIT Technology™ (Linear Variable Inductance Transducer)
- Ranges from 0.5 to 4.0 in [12.7 to 101.6 mm]
- Contactless operation prevents internal wear out from dithering or rapid cycling
- Excellent stroke-to-body-length ratio
- Proprietary SenSet™ field adjustable range scaling

LRSE18/LRSI18 Series Linear Position Sensors Selection Chart

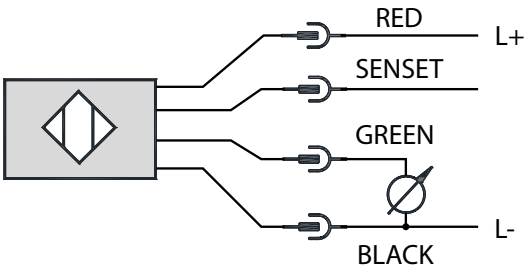
Part Number	Price	Drawing Link	Nominal Range (in [mm])	Body Length (in [mm])	Spring Rate (lbf/in [kgf/cm])	Maximum Force (lbf [kgf])
0-10V models						
LRSE18-013A-00-10A	$-04j6p:	PDF	0.5 [12.7]	3.04 {77.2]	0.75 [0.134]	0.9 [0.41]
LRSE18-025A-00-10A	$-04j6q:	PDF	1.0 [25.4]	3.54 [89.9]	0.75 [0.134]	0.9 [0.41]
LRSE18-050A-00-10A	$-04j6s:	PDF	2.0 [50.8]	4.62 [117.3]	0.43 [0.077]	1.0 [0.45]
LRSE18-075A-00-10A	$;-04j6t:	PDF	3.0 [76.2]	5.69 [144.5]	0.30 [0.054]	1.0 [0.45]
LRSE18-100A-00-10A	$-04j6u:	PDF	4.0 [101.6]	6.80 [172.7]	0.23 [0.041]	1.0 [0.45]
4-20mA models						
LRSI18-013A-00-20A	$-04j6v:	PDF	0.5 [12.7]	3.04 [77.2]	0.75 [0.134]	0.9 [0.41]
LRSI18-025A-00-20A	$-04j6x:	PDF	1.0 [25.4]	3.54 [89.9]	0.75 [0.134]	0.9 [0.41]
LRSI18-050A-00-20A	$-04j6y:	PDF	2.0 [50.8]	4.62 [117.3]	0.43 [0.077]	1.0 [0.45]
LRSI18-075A-00-20A	$-04j6z:	PDF	3.0 [76.2]	5.69 [144.5]	0.30 [0.054]	1.0 [0.45]
LRSI18-100A-00-20A	$;-04j6]:	PDF	4.0 [101.6]	6.80 [172.7]	0.23 [0.041]	1.0 [0.45]

LRSE18/LRSI18 Series Linear Position Sensors Specifications

Analog I/Os	0-10VDC output with 12-30V power source, 35mA max; 4-20mA (3-wire) output with 18-30V power source, 60mA max, 167°F [75°C] max
Measuring Ranges	0.5 to 4.0 in [12.7 to 101.6 mm] full scale
Linearity Error	±0.15% of full scale output (FSO) typical, ±0.25% max
Resolution	0.025% of full scale
Operating Temperature	-4 to 185°F [-20 to +85°C]; -40 to +221°F [-40 to +105°C] extended range
Temperature Coefficient	±0.015% of FS/K
Vibration	5-20 Hz, 0.5 in peak-to-peak; 20-2000 Hz, 4.2 g peak-to-peak
Shock	1000g, 11ms
Terminations	IEC IP-67
Humidity	95% RH, non-condensing
Connection	1M, PUR, 4 conductor, 24AWG

LRSE18/LRSI18 LVIT Linear Position Sensors

Wiring Diagram



Wiring Table	
Function	***Cable Color***
+DC Power Input	Red
Common Ground	Black
Analog Output	Green
SenSet™	White