



**For use in:**  
 PV Solar Cell Positioner  
 Wind Energy Systems  
 Packaging Machinery  
 Motorsport Vehicles  
 Automotive Testing  
 Factory Automation  
 OEM Test Stands

# LR-19 Series

## LVIT Linear Position Sensor

Long Lasting, Contactless, Inductive Sensors

The LR-19 series LVIT (Linear Variable Inductance Transducer) position sensors by Alliance Sensors Group are contactless devices designed for factory automation and a variety of industrial and commercial applications such as motor sport vehicles, automotive testing, solar cell positioners, wind turbine prop pitch and brake position, and packing equipment. With their compact device, superior performance, and excellent stroke-to-length ratio, the LR-19 sensors are ideal for both industrial testing, laboratories, and OEM applications.

LR-19 series sensors are offered in 6 full scale ranges from 25 to 200 mm (1 to 8 inches). Operating from a variety of DC voltages, these sensors offer a choice of four analog outputs and all include ASG's proprietary SenSet™ field calibration feature. LR-19 series products are available with axial cable or connector terminations, or with radial exiting cable and two swivel rod eye ends for easy installation.

The LR series also include a larger body version, the LR-27, for those applications needing a heavier duty unit. Additional information can be found at [www.alliancesensors.com](http://www.alliancesensors.com).

### Features:

- LVIT Technology™ (Linear Variable Inductance Transducer)
- Contactless operation
- Excellent stroke-to-length ratio
- Proprietary SenSet™ field adjustable range scaling

### Specifications:

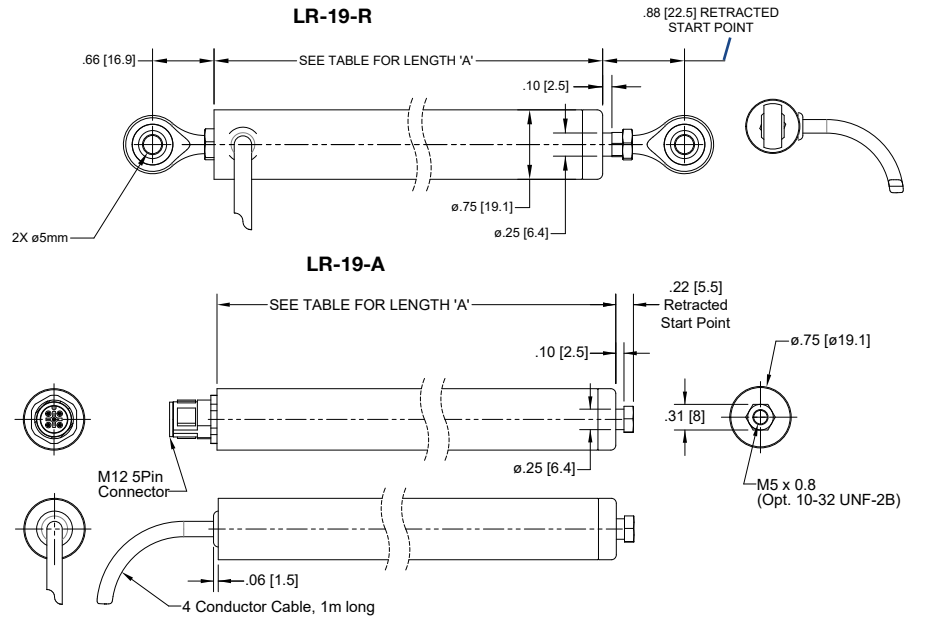
<b>Analog I/Os</b>	0 – 5 V or 0.5 – 4.5 V output with 8 – 30 V input, 35 mA max. 0 – 10 V output with 12 – 30 V input, 35 mA max. 4 – 20 mA (3-wire) output with 18 – 30 V input, 60 mA max. (75 C max.)
<b>Measuring Range</b>	25 mm to 200 mm (1 to 8 inches) full scale (nominal)
<b>Linearity Error</b>	±0.15% of Full Scale Output (FSO) typical, ±0.25% max.
<b>Resolution</b>	0.025% of FS
<b>Update Rate</b>	300 Hz nominal
<b>Operating Temperature</b>	-20 C to 85 C (-40 C to 105 C Extended Range)
<b>Temperature Coefficient</b>	±±0.015% of FS/deg C
<b>Vibration</b>	5-20 Hz 0.5 inch p-p; 20-2000 Hz 4.2 g p-p
<b>Shock</b>	1000 g, 11 ms
<b>Terminations</b>	IEC IP-67
<b>Humidity</b>	95% RH, non-condensing

# LR-19 Series



Wiring Table		
Function	Pin	Cable Color
DC power input	1	Red
Ground	2	Black
LRE voltage output	3	Green
LRI current output	4	Green
SenSet™	5	White

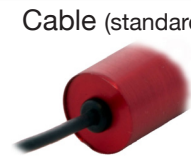
Unit Length Table	
Linear Range	Length "A"
1.0 inch [25 mm]	3.74 inches [95.0 mm]
2.0 inches [50 mm]	4.74 inches [120.4 mm]
3.0 inches [75 mm]	5.74 inches [145.8 mm]
4.0 inches [100 mm]	6.74 inches [171.2 mm]
6.0 inches [150 mm]	8.74 inches [222.0 mm]
8.0 inches [200 mm]	10.74 inches [272.8 mm]



Rod Eye Ends



5 MM Threaded End (standard)



Cable (standard)



Axial M-12 Connector

## Ordering Information:

Series	Output	Housing Diameter	Range (mm)	Electrical Termination		Output	Housing Material
				Axial or Radial	Termination		
LR	X-	XX-	XXX-	X-	XX-	XX-	X-
	E - Voltage	19 - 19mm	025	A - Axial	00 - 1 m cable	05 - 0.5 to 4.5 V	A - Aluminum
	I - Current		050	R - Radial (cable only)	01 - 5-pin M12	06 - 4.5 to 0.5 V	S - 300 Series
			075			10 - 0 to 10.0 V	
			100			11 - 10.0 to 0 V	
			150			20 - 4 to 20 mA	
			200			21 - 20 to 4 mA	
						50 - 0 to 5 V	
						51 - 5 to 0 V	

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

Alliance Sensors Group  
102 Commerce Drive, Unit 8  
Moorestown, New Jersey 08057 USA  
Ph: 856-727-0250  
www.alliancesensors.com  
info@alliancesensors.com