



**For Use in:**  
Packaging Machinery  
Chute/Gate Position  
Factory Automation  
Automotive Testing

# LRL-27 Series

## LVIT Linear Position Sensor for Extended Ranges

Long Lasting, Contactless, Inductive Sensors

Alliance Sensor Group's LRL-27 series LVIT (Linear Variable Inductance Transducer) contactless position sensors complement the LR series devices with extended ranges up to 18 inches (450 mm) in a compact package. These sensors are designed for use in factory automation systems and a wide variety of industrial and commercial applications. Cost effective high-end performance and excellent stroke-to-length ratios make these sensors ideal choices for practically any industrial application.

LRL-27 sensors are offered in 5 nominal ranges from 250 to 450 mm (10 to 18 inches). Operated from a variety of DC voltages, these sensors offer a user a choice of four analog outputs and include ASG's proprietary SenSet™ field adjustable range scaling feature. LRL-27 products are available with either a radial exiting cable and two spherical rod eye ends with axial cable or connector terminations.

The LR series also include a smaller body version, the LR-19, for applications where a reduced body envelope is required or the LR-27 for shorter stroke lengths from 50 to 200 mm. 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 Ranges</b>	250 mm to 450 mm (10 to 18 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

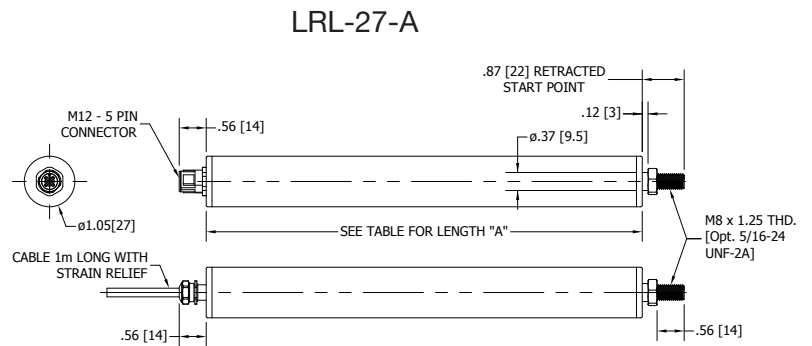
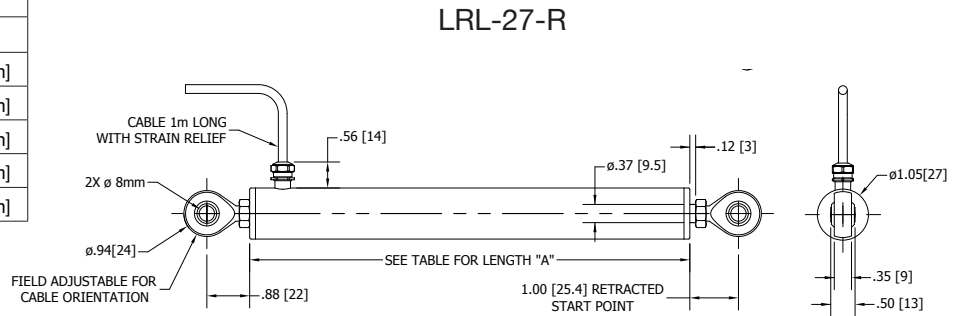
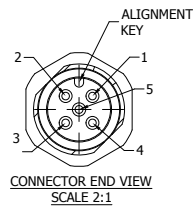
# LRL-27 Series



Unit Length Table	
Linear Range	Length "A"
10.0 inches [250 mm]	13.50 inches [342.9 mm]
12.0 inches [300 mm]	15.50 inches [393.7 mm]
14.0 inches [350 mm]	17.50 inches [444.5 mm]
16.0 inches [400 mm]	19.50 inches [495.3 mm]
18.0 inches [450 mm]	21.50 inches [546.1 mm]

Wiring Table - LRL-27-A		
Function	M-12 Pin	Cable Color
+ Power input	1	Red
Ground	2	Black
Voltage output	3	Green
Current output	4	Green
SenSet™	5	White

Wiring Table - LRL-27-R	
Function	Cable Color
+ Power input	Red
Ground	Black
Analog output	Green
SenSet™	White



## Ordering information:

Series	Output	Housing Diameter	Range (mm)	Electrical Terminal		Output	Housing Material
				Axial or Radial	Termination		
LRL	X-	XX-	XXX-	X-	XX-	XX-	X
	E - Voltage	27 - 27 mm	250	A - Axial	00 - 1 m cable	05 - 0.5 to 4.5 V	A - Aluminum
	I - Current		300	R - Radial (cable only)	01 - 5-pin M12	06 - 4.5 to 0.5 V	S - 300 Series SS
			350			10 - 0 to 10.0 V	
			400			11 - 10.0 to 0 V	
			450			20 - 4 to 20 mA	
						21 - 20 to 4 mA	
						50 - 0 to 5 V	
						51 - 5 to 0 V	

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