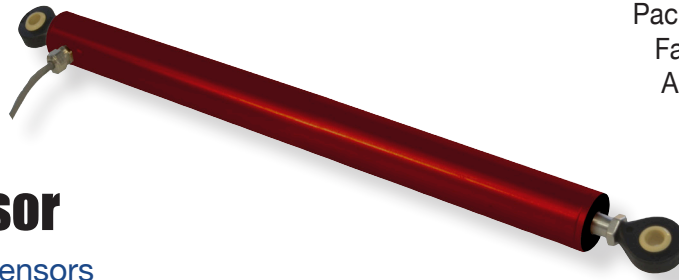


# LR-27 Series

## LVIT Linear Position Sensor

Long Lasting, Contactless, Inductive Sensors



Alliance Sensor Group's LR-27 series LVIT (Linear Variable Inductance Transducer) contactless position sensors are heavy duty contactless devices designed for factory automation systems and a variety of industrial and commercial applications such as solar cell positioners, wind turbine prop pitch and brakes, chute or gate positioners on off-road or agri-vehicles, and packaging machinery. The modular design, high end performance, and excellent stroke-to-length ratio make the LR-27 sensors an ideal choice for in-plant or mobile equipment OEMs.

LR-27 series sensors are currently offered in 5 full scale ranges from 50 mm to 150 mm (2 to 6 inches). Operated from a variety of DC voltages, these sensors offer a choice of four analog outputs and include ASG's proprietary SenSet™ field recalibration feature. LR-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 LRL-27 for longer strokes lengths up to 450 mm. Additional information can be found at [www.alliancesensors.com](http://www.alliancesensors.com).

### Features:

- LVIT Technology™ (Linear Variable Inductance Transducer)
- Contactless operation prevents wearout from dithering or cycling
- Excellent stroke-to-length ratio
- Proprietary SenSet™ field adjustable range scaling

### Specifications:

Analog I/Os	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.)
Measuring Ranges	50 mm to 150 mm (2 to 6 inches) full scale (nominal)
Linearity Error	±0.15% of Full Scale Output (FSO) typical, ±0.25% max.
Resolution	0.025% of FS
Update Rate	300 Hz nominal
Operating Temperature	-20 C to 85 C (-40 C to 105 C Extended Range)
Temperature Coefficient	±±0.015% of FS/deg C
Vibration	5-20 Hz 0.5 inch p-p; 20-2000 Hz 4.2 g p-p
Shock	1000 g, 11 ms
Terminations	IEC IP-67
Humidity	95% RH, non-condensing

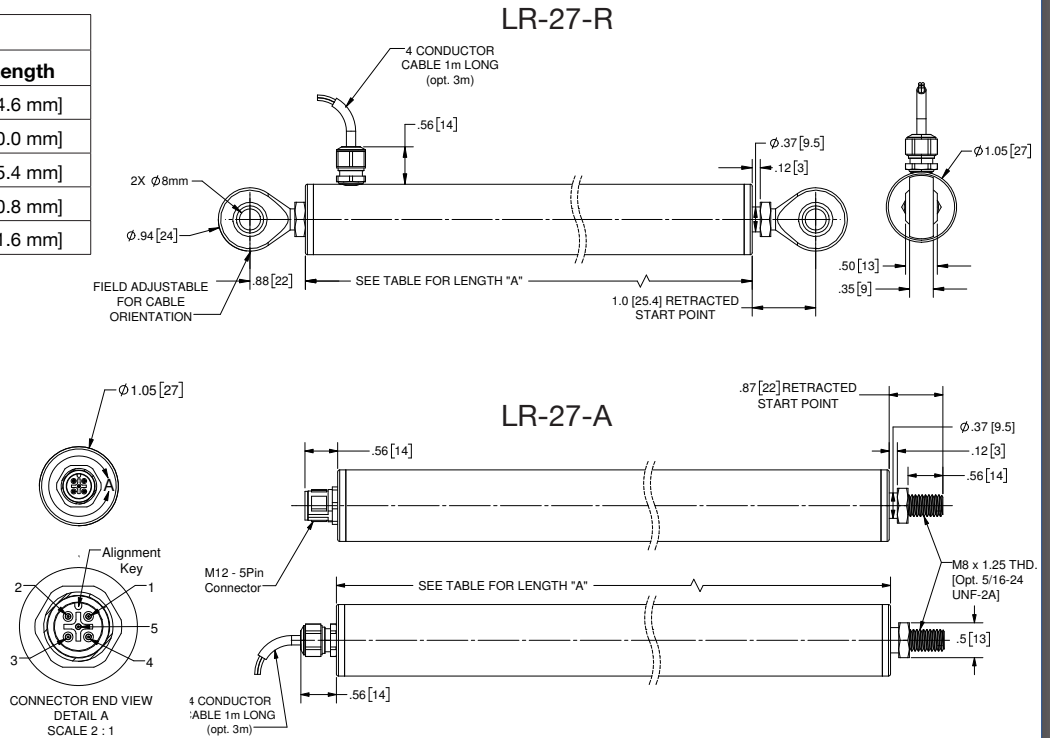
# LR-27 Series



Unit Length Table		
Nominal Range		"A" Body Length
1.0 inch [25 mm]		4.12 inches [104.6 mm]
2.0 inches [50 mm]		5.12 inches [130.0 mm]
3.0 inches [75 mm]		6.12 inches [155.4 mm]
4.0 inches [100 mm]		7.12 inches [180.8 mm]
6.0 inches [150 mm]		9.12 inches [231.6 mm]

Wiring Table - LR-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 - LR-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		
LR	X-	XX-	XXX-	X-	XX-	XX-	X
	E - Voltage	27 - 27 mm	050	A - Axial	00 - 1 m cable	05 - 0.5 to 4.5 V	A - Aluminum
	I - Current		075	R - Radial (cable only)	01 - 5-pin M12	06 - 4.5 to 0.5 V	S - 300 Series SS
			100			10 - 0 to 10.0 V	
			150			11 - 10.0 to 0 V	
						20 - 4 to 20 mA	
						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