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480-897-0300

For use in: Industrial Fluid Power Equipment Steel, Aluminum, and Paper Mills Steam and Hydro Power Plants Factory Automation Systems

LRS-18 Series

Spring Loaded LVIT Linear Position Sensor

Long Lasting, Contactless, Inductive Sensors

The LRS-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 such as automotive testing, mil/aero test stands, robotic arms, and packaging equipment, where the sensing element cannot be attached to the object being measured. LRS-18s are offered in full scale ranges from 12.5 to 100 mm (0.5 to 4.0 inches) with excellent resolution and high stroke-to-body-length ratios. The maximum tip force on the item being measured is 1 pound.

LRS-18 sensors have a 19 mm (0.75 inch) diameter aluminum or stainless steel body with an M18 x 1 thread and come with two hex jam nuts for easy installation in place of an 18 mm analog prox sensor. These sensors use a 0.25 inch diameter probe equipped with an AGD No. 9 contact tip, and are offered with either an axial cable or a connector. Operating from a variety of DC voltages, the sensors are available with a choice of four analog outputs and they all include ASG's proprietary SenSet[™] field calibration feature.

Additional information can be found at www.alliancesensors.com.

Features:

- Spring loaded LVIT Technology[™] (Linear Variable Inductance Transducer)
- Ranges from 0.5 to 4.0 inches (12.5 to100 mm)
- · Contactless operation prevents internal wearout from dithering or rapid cycling
- Excellent stroke-to-body-length ratio
- Proprietary SenSet[™] field adjustable range scaling

Specifications:

| Analog I/Os | 0 - 5 V or 0.5 - 4.5 V DC output with 8 - 30 V input, 35 mA max. 0 - 10 V DC 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 | 12.5 mm to 100 mm (0.5 to 4.0 inches) full scale |
| Linearity Error | ±0.15% of Full Scale Output (FSO) typical, ±0.25% max. |
| Resolution | 0.025% of FS |
| Operating Temperature | -20 to 85 C (-40 to 105 C Extended Range) |
| Temperature Coefficient | ≤±0.015% of FS/K |
| Vibration | 5-20 Hz 0.5 inch p-p; 20-2000 Hz 4.2 g p-p |
| Shock | 1000 g, 11 msec. |
| Terminations | IEC IP-67 |
| Humidity | 95% RH, non-condensing |

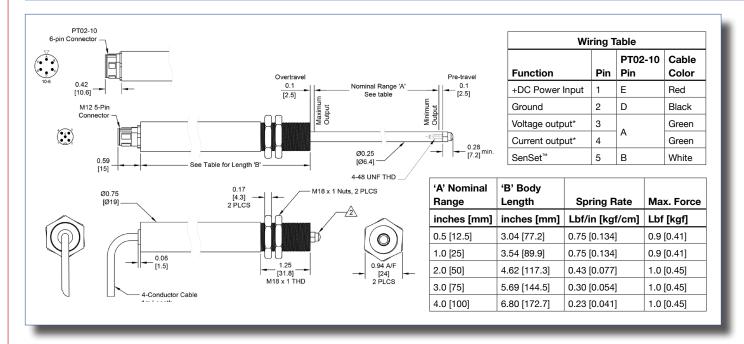
Measurement Solutions www.MEASOL.com ALLIANCE SENSORS GROUP A DIVISION OF H.G. SCHAEVITZ LLC

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LRS-18 Series



Ordering Information

| | | | | Electrical Termination | | | |
|--------|------------|-------------------|----------------------|------------------------|-----------------------|-------------------------|---------------------|
| Series | Output | Housing Thread | Range (mm) | Axial or Radial | Termination | Output | Housing Material |
| LRS | X- | XX- | XXX- | X- | XX- | XX | X- |
| | E- Voltage | 18 - M18 | 013 (12.7 mm) | A - Axial | 00- 1 m cable | 05 - 0.5-4.5 VDC | A- Aluminum |
| | I- Current | | 025 | | 01 - 5-pin M12 | 06 - 4.5-0.5 VDC | S- 300 Series SS |
| | | | 050 | | 02- 6-pin PT02 | 10 - 0-10 VDC | |
| | | | 075 | | 03 - 3 m cable | 11 - 10-0 VDC | |
| | | | 100 | | | 20 - 4-20 mA | |
| | | | | | | 21 - 20-4 mA | |
| | | | | | | 50 - 0-5 VDC | |
| | | | | | | 51 - 5-0 VDC | |

Off The Shelf Connection Solutions





Standard ADG Contact Tip

Industry Standard M18 x 1 Threads

6042 E. Vermillion Cir.

Mesa, AZ 85215-7716

Industry Standard Connectors and Cable Options

Measurement Solutions

www.MEASOL.com

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