For use in:
- Oil and Gas
- Power Generation
- Chemical or Food Process Control

LZ-19-UL Series

LVIT Linear Position Sensor for Hazardous Locations — UL Approved



Through-bore LVIT Linear Position Sensor for Applications Needing Superior Stroke-to-Length Ratio

The LZ-19 Series of LVIT (Linear Variable Inductance Transducer) position sensors are contactless devices designed for use in hazardous locations such as oil and gas exploration, power generation valve feedback and chemical/food processing where UL approval is required.

The LVIT is offered in nominal full scale ranges from 0.1 to 30 inches (2.5 to 750 mm) with an excellent stroke-to-length ratio. The sensor has a 19 mm (3/4 inch) outside diameter stainless steel with a 1 m axial cable for I/O connections. The 6 mm (0.236 inch) diameter through-bore of an LZ-19 provides clearance for its 5.2 mm (0.200 inch) diameter, PVDF-sheathed moving rod, which is made of the same material as its housing. This through-bore feature also means that the sensor is not subject to damage from typical mechanical overstroking.

Features:

- LVIT Technology™ (Linear Variable Inductance Transducer)
- UL and CUL approved for Class 1 Div 2 Groups C and D locations
- Contactless operation prevents wearout from dithering or cycling
- Excellent stroke-to-body-length ratio
- Full Scale ranges from 0.1 to 30 inches (2.5 to 750 mm)
- Through-bore design eliminates mechanical overstroking
- Proprietary SenSet™ field adjustable range scaling
- DC in / DC out operation with built-in electronics

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; 12—30 V input; 35 mA max. 4-20 mA (3-wire sourcing) output; 18-30 V input, 60 mA max (75 C max).
Measuring Ranges	0.10 to 30 inches (2.5 to 750 mm) full scale (nominal)
Linearity Error	± 0.15% of Full Scale Output (FSO) typical, ± 0.25%max
Resolution	0.025% of FSO
Update Rate	300 Hz nominal
Operating Temperature	-20 to 85 C (-40 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 msec
Terminations	IEC IP-67
Humidity	95% RH, non-condensing

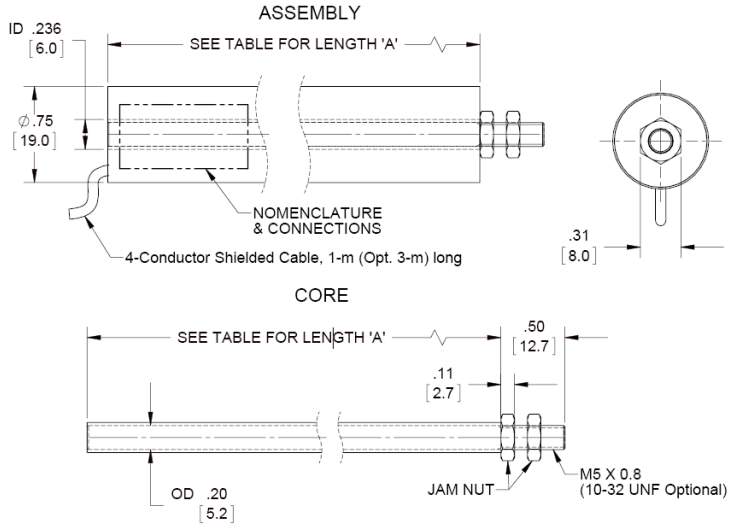
All specifications are subject to change without notice.

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

© Alliance Sensors Group, 2024
V1.0 Rev. 12052024

LZ-19-UL Series

Unit Length Table	
Nominal Range	**Length "A"**
0.1 inches [2.5 mm]	1.38 inches [35.0 mm]
0.25 inches [6.4 mm]	1.38 inches [35.0 mm]
0.50 inches [12.7 mm]	1.38 inches [35.0 mm]
0.75 inches [19 mm]	1.38 inches [35.0 mm]
1.00 inches [25 mm]	1.38 inches [35.0 mm]
1.25 inches [32 mm]	1.63 inches [41.3 mm]
2.0 inches [50 mm]	2.38 inches [60.5 mm]
3.0 inches [50 mm]	3.38 inches [85.9 mm]
4.0 inches [100 mm]	4.38 inches [111.1 mm]
6.0 inches [150 mm]	6.50 inches [165.1 mm]
8.0 inches [200 mm]	8.50 inches [215.9 mm]
10.0 inches [250 mm]	10.50 inches [266.7 mm]
12.0 inches [300 mm]	12.50 inches [317.5 mm]
15.0 inches [375 mm]	15.75 inches [400.0 mm]
18.0 inches [450 mm]	18.75 inches [476.2 mm]
24.0 inches [600 mm]	25.00 inches [635.0 mm]
30.0 inches [750 mm]	31.00 inches [787.4 mm]



LZ-19 Connections Table					
I/O Function	+ Power input	Common Ground	Analog output	SenSet™	Shield / drain * *Shield connected internally
Cable Color	Red	Black	Green	White	Shield

Ordering Information:

Series	Output	Housing Diameter	Range, Metric	Termination Direction	Termination	Output	Housing Material	UL
LZ	X-	XX-	XXX-	X-	XX-	XX-	X-	XXXX-
	E- Voltage	**19**– 19 mm	**2.5-750** (2.5 mm increments)	**A**– Axial	**00**- 1-m cable	**05**- 0.5-4.5 VDC	**S**- 300 Series SS	**UL00** – UL approved
	I- Current			**R**- Radial		**06**- 4.5-0.5 VDC		
						10- 0-10 VDC		
						11- 10-0 VDC		
						20- 4-20 mA		
						21- 20-4 mA		
						50- 0-5 VDC		
						51- 5-0 VDC		

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

Alliance Sensors Group
7300 Rt 130 N, Suite 22
Pennsauken, NJ 08110 USA
Ph: 856-727-0250
www.alliancesensors.com

© Alliance Sensors Group, 2024

V1.0 Rev. 12052024