



**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

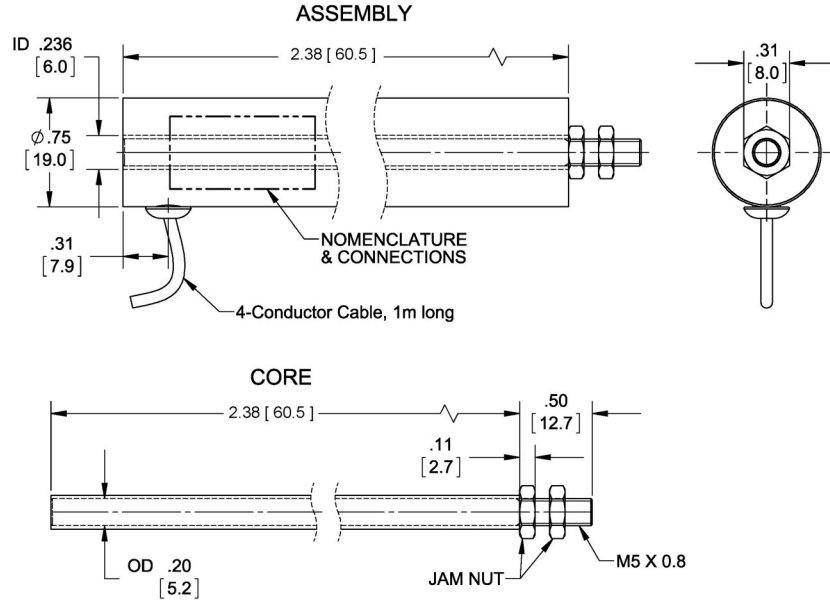
All specifications are subject to change without notice.

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



## 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	A- Axial	00- 1-m cable	05- 0.5-4.5 VDC	S- 300 Series SS	UL00 – UL approved
	I- Current		(2.5 mm increments)	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		

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