

**For use in:**  
Hydraulic Cylinders  
Automation Systems  
Assembly Machinery  
Packaging Equipment

# LZ-25 Series

## LVIT Linear Position Sensor

Through-bore LVIT Linear Position Sensor with superior stroke-to-body-length ratio

The LZ-25 Series of LVIT (Linear Variable Inductance Transducer) position sensors are contactless devices designed for frictionless measurement in factory automation or assembly machinery applications where space is a premium, as well as for external mounting on hydraulic cylinders to sense rod position. The LVIT is offered in nominal full scale ranges from 50 to 900 mm (2 to 36 inches) with an excellent stroke-to-length ratio, so that the sensor's overall length is only 38 mm (1.5 inches) longer than the linear range of the unit. The sensor has a 25.4 mm (1 inch) outside diameter aluminum or optional stainless steel body with a 1m radial cable for I/O connections. The 7.5 mm (0.295 inch) diameter through-bore of an LZ-25 provides clearance for its 6.35 mm (0.25 inch) diameter 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.

Additional information can be found at [www.alliancesensors.com](http://www.alliancesensors.com).

### Features

- LVIT Technology™ (Linear Variable Inductance Transducer)
- Contactless operation...frictionless measurement
- Excellent stroke-to-body-length ratio
- Through-bore design
- Proprietary SenSet™ field adjustable range scaling

### Specifications

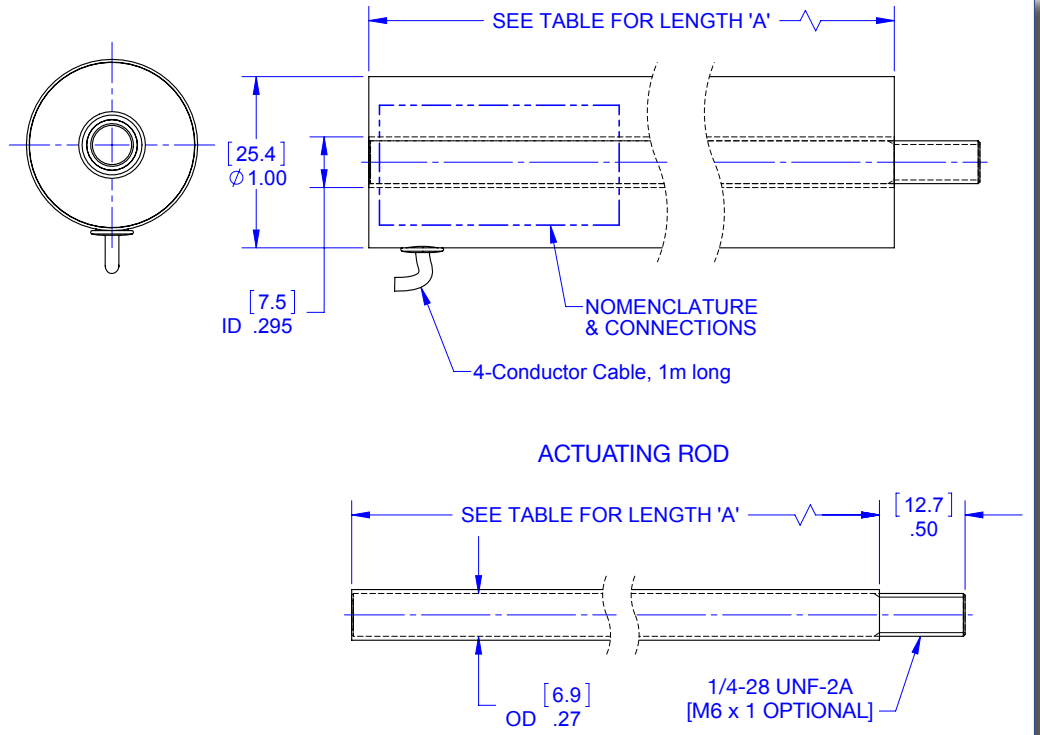
<b>Analog I/Os</b>	0 – 5 V or 0.5 – 4.5 V DC output; 8 – 30 V input, 35 mA max, 0 – 10 V DC output; 12 – 30 V input, 35 mA max 4 – 20 mA (3-wire) output; 18 – 30 V input, 60 mA max. (75 C max)
<b>Measuring Ranges</b>	50 to 900 mm (2 to 36 inches) full scale (nominal)
<b>Linearity Error</b>	±0.15% of 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 to 85 C (-40 to 105 C Extended Range)
<b>Temperature Coefficient</b>	≤±0.015% of FS/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 msec.
<b>Terminations</b>	IEC IP-67
<b>Humidity</b>	95% RH, non-condensing

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LZ-25 Connection Table	
I/O Function	Cable Color
+ Power Input	Red
Ground	Black
Analog output	Green
SenSet™	White

LZ-25 Range Table		
Nominal Range		Length "A"
Inches	mm	Inches [mm]
2.0	50	3.00 [76.2]
4.0	100	5.00 [127.0]
6.0	150	7.00 [177.8]
8.0	200	9.25 [235.0]
10.0	250	11.25 [285.8]
12.0	300	13.25 [336.6]
15.0	375	16.50 [419.1]
18.0	450	19.50 [495.3]
24.0	600	25.50 [647.7]
30.0	750	31.50 [800.1]
36.0	900	37.50 [952.5]



## Ordering information:

Series	Output	Housing Diameter	Range (mm)	Electrical Termination		Output	Housing/Rod Material
				Radial	Termination		
LZ	X-	XX-	XXX-	X-	XX-	XX-	X-
	E - Voltage	25 - 25 mm	050 - 300	R - Radial	00 - 1 m cable	05 - 0.5 to 4.5 V	A - Aluminum
	I - Current		(50 mm increments)			06 - 4.5 to 0.5 V	S - 300 Series SS
			300 - 450			10 - 0 to 10.0 V	
			(75 mm increments)			11 - 10.0 to 0 V	
			450 - 900			20 - 4 to 20 mA	
			(150 mm increments)			21 - 20 to 4 mA	
						50 - 0 to 5 V	
						51 - 5 to 0 V	

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