

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

LZ-19 Series LVIT Linear Position Sensor

Through-bore LVIT Linear Position Sensor for applications needing superior stroke-to-body-length

The LZ-19 Series of LVIT (Linear Variable Inductance Transducer) position sensors are contactless devices designed for use 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 2.5 to 750 mm (0.100 to 30 inches) with an excellent stroke-to-length ratio. The sensor has a 19.0 mm (3/4 inch) outside diameter aluminum or optional stainless steel body with a 1m axial cable for I/O connections. The 7.5 mm (0.295 inch) diameter through-bore of an LZ-19 provides clearance for its 6.00 mm (0.236 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.

Technical datasheets and additional information can be found at www.alliancesensors.com

Features:

- Contactless operation prevents internal wearout from dithering or rapid cycling
- LVIT Technology[™] (Linear Variable Inductance Transducer)
- Through-bore design eliminates mechanical over stroking
- Full Scale ranges from 2.5 to 750 mm (0.100 to 30 inches)
- Proprietary SenSet[™] field adjustable range scaling
- DC in / DC out operation with built-in electronics
- Excellent stroke-to-body-length ratio

Specifications:

Analog I/Os	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)
Measuring Ranges	12.5 to 900 mm (1/2 to 36 inches) full scale
Linearity Error	$\leq \pm 0.15\%$ of Full Scale Output (FSO) typical, $\pm 0.25\%$ max
Resolution	0.025% of FS
Update Rate	300 Hz nominal
Terminations	IEC IP-67



LZ-19 Series

Specifications Con't:

Operating Temperature Temperature Coefficient Humidity Shock Vibration -20 to 85 C (-40 to 105 C Extended Range)

≤±0.015% of FS/C

95% RH, non-condensing

1000 gs, 11 msec.

5-20 Hz 0.5 inch p-p; 20-2000 Hz 4.2 g p-p

L	Z-19 Range	Table			
Nominal Range Length "A"				ASSEMBLY	
Inches	mm	Inches (mm)			[6.0] T SEE TABLE FOR LENGTH 'A'
0.10	2.5	1.38 (35.0)			
0.20	5.0	1.38 (35.0)			
0.30	7.5	1.38 (35.0)			
0.40	10	1.38 (35.0)			
0.50	12.5	1.38 (35.0)			
0.60	15	1.38 (35.0)			
0.80	20	1.38 (35.0)			
1.00	25	1.38 (35.0)			
1.20	30	1.63 (41.3)	LZ-19 Connection Table		& CONNECTIONS
2.00	50	2.38 (60.5)	I/O Function	Color	-4-Conductor Shielded Cable, 1m long
3.00	75	3.38 (85.9)			
4.00	100	4.38 (111.1)	+Power Input	Red	. 38 .
6.00	150	6.50 (165.1)	Ground	Black	
8.00	200	8.50 (215.9)		Black	
10.00	250	10.50 (266.7)	Analog output	Green	
12.00	300	12.50 (317.5)	SenSet ™	White	
15.00	375	15.75 (400.0)	Sensel ""	VVIIILE	
18.00	450	18.75 (476.2)	Shield/ drain*	Shield	OD20
24.00	600	25.00 (635.0)	*Shield unconne	noted internally	[5.2]
30.00	750	31.00 (787.4)	"Silieiu ulicolilie		

Ordering Information:

		Housing	Range	Electrical Termination			Housing/Rod
Series	Output	Diameter	(mm)	Axial	Termination	Output	Material
LZ	Х-	XX-	XXX-	Х-	XX-	XX-	Х-
	E- Voltage	19 - 19 mm	2.5 - 15mm	A - Axial	00 - 1 m cable	05 - 0.5 to 4.5 V	A - Aluminium
	I - Current		(2.5mm increments)			06 - 4.5 to 0.5 V	S - 300 Series SS
						10 - 0 to 10.0 V	
			15 – 30mm			11 - 10.0 to 0 V	
			(5mm increments)			20 - 4 to 20 mA	
						21 - 20 to 4 mA	
			050 - 300			50 - 0 to 5 V	
			(50mm increments)			51 - 5 to 0 V	
			300 - 450				
			(75mm increments)				
			450 - 750				
			(150mm increments)				