



**For use in:**  
Chutes and Gates  
Automation Systems  
Assembly Machinery  
Packaging Equipment  
Large Truck & Agri Suspension

# LZ-33 Series LVIT Linear Position Sensor

Through-bore LVIT Linear Position Sensor with Superior Stroke-to-Length Ratio

The LZ-33 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.

This sensor is offered in nominal full scale ranges from 150 to 900 mm (6 to 36 inches) with an excellent stroke-to-length ratio. The sensor's overall length is only 3 inches (76 mm) longer than the linear range of the unit. The sensor has a 1.315 inch (33.4 mm) outside diameter aluminum or optional stainless steel body with a 1 or 3 m radial cable for I/O connections. The 0.670 inch (17 mm) diameter through-bore of an LZ-33 provides clearance for its 0.645 inch (16.4 mm) 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.

## Features:

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

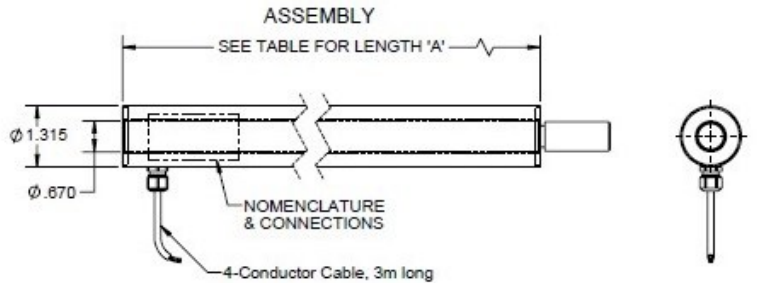
## Specifications:

<b>Analog I/Os:</b>	0-5 V or 0.5-4.5 V output with 8 -30 V input, 35 mA max. 0-10 V 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).
<b>Measuring Ranges:</b>	150 to 900 mm (6 to 36 inches) Full Scale (nominal)
<b>Linearity Error:</b>	± 0.15% of FSO typical, ± 0.25% of FSO max.
<b>Resolution:</b>	0.025% of FSO
<b>Update Rate:</b>	300 Hz nominal
<b>Operating Temperature:</b>	-20 to 85 C (-40 to 105 C extended temperature range)
<b>Temperature Coefficient:</b>	± 0.015% of FS/deg 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

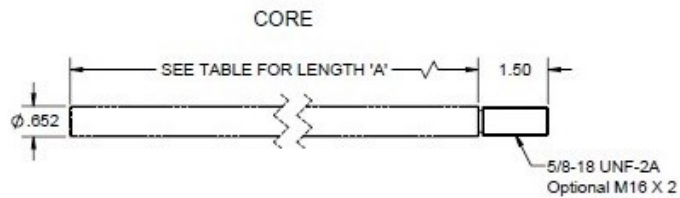
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# LZ-33 Series

LZ-33 Connection Table	
I/O Function	Cable Color
+ Power Input	Red
Ground	Black
Analog Output	Green
SenSet™	White



Unit Length Table	
Nominal Range	Length "A"
6.0 inches [150 mm]	9.00 inches [228.6 mm]
9.0 inches [225 mm]	12.0 inches [304.8 mm]
12.0 inches [300 mm]	15.00 inches [381.0 mm]
15.0 inches [375 mm]	18.00 inches [457.2 mm]
18.0 inches [450 mm]	21.00 inches [533.4 mm]
24.0 inches [600 mm]	27.00 inches [685.8 mm]
30.0 inches [750 mm]	33.00 inches [838.2 mm]
36.0 inches [900 mm]	39.00 inches [990.6 mm]



## Ordering Information:

Series	Output Type	Body Diameter	Range, Metric	Termination Direction	Termination	Output	Housing Material
LZ	X-	XX-	XXX-	X-	XX-	XX-	X-
	E- Voltage	33- 33 mm	150 - 450	R- Radial	00- 1 m cable	05- 0.5 to 4.5 VDC	A- Aluminum
	I- Current		(75 mm increments)		03- 3 m cable	06- 4.5 to 0.5 VDC	S- 300 Series SS
			450 - 900			10- 0 to 10 VDC	
			(150 mm increments)			11- 10 to 0 VDC	
						20- 4 to 20 mA	
						21- 20 to 4 mA	
						50- 0 to 5 VDC	
						51- 5 to 0 VDC	

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