

LZ-33 Series

LVIT Linear Position Sensor

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

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

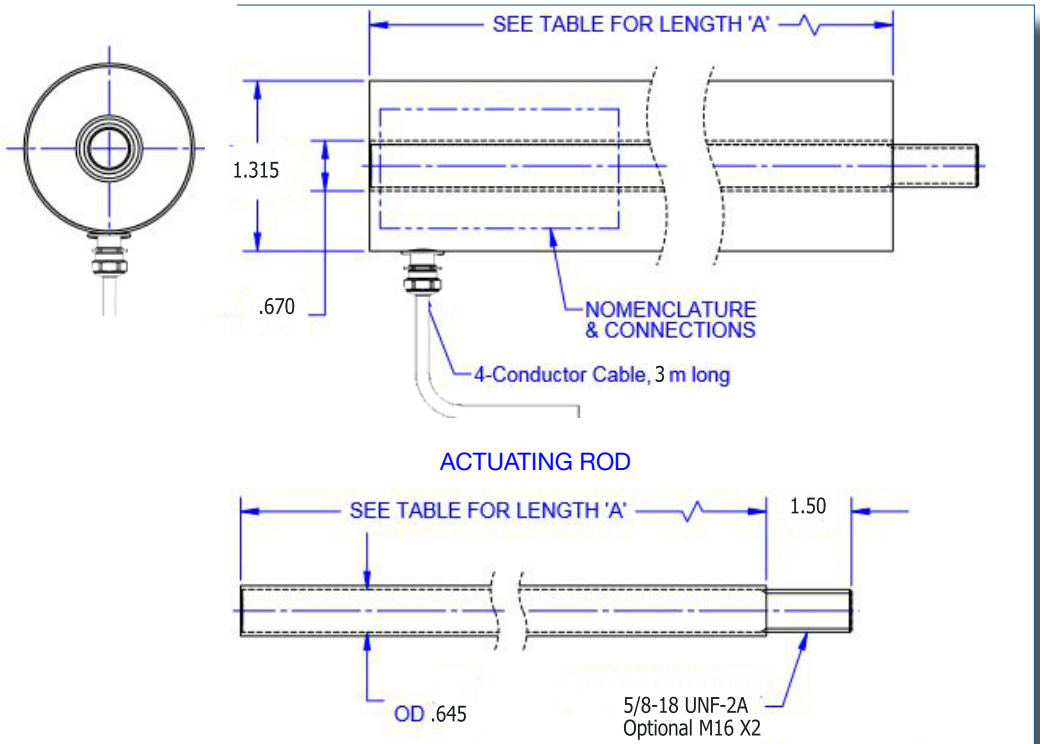
Analog I/Os	0 – 5 V or 0.5 – 4.5 V DC output; 8 – 30 V input, 35 mA max, 0 – 10 V DC output; 12 – 30 V input, 35 mA max 4 – 20 mA (3-wire) output; 18 – 30 V input, 60 mA max. (75 C max)
Measuring Ranges	150 to 900 mm (6 to 36 inches) full scale (nominal)
Linearity Error	±0.15% of Full Scale Output (FSO) typical, ±0.25% max.
Resolution	0.025% of FS
Update Rate	300 Hz nominal
Operating Temperature	-20 to 85 C (-40 to 105 C Extended Range)
Temperature Coefficient	≤±0.015% of FS/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

LZ-33 Series



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

LZ-33 Range Table		
Nominal Range		Length "A"
Inches	mm	Inches [mm]
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	33 - 33 mm	150 - 450	R - Radial	00 - 1 m cable	05 - 0.5 to 4.5 V	A - Aluminum
	I - Current		(75 mm increments)		03 - 3 m cable	06 - 4.5 to 0.5 V	S - 300 Series SS
			450 - 900			10 - 0 to 10.0 V	
			(150 mm increments)			11 - 10.0 to 0 V	
						20 - 4 to 20 mA	
						21 - 20 to 4 mA	
						50 - 0 to 5 V	
						51 - 5 to 0 V	

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

Alliance Sensors Group
102 Commerce Drive, Unit 8
Moorestown, New Jersey 08057 USA
Ph: 856-727-0250
www.alliancesensors.com
info@alliancesensors.com