



For use in:

Steel, Aluminum, and Paper Mills  
Power Generation Steam Valves  
Material Creep Measurements  
Roadway/Bridge Expansion  
Hydro Power Plants

# LV-45 Series LVIT Linear Position Sensor

Designed Specifically for Heavy Duty Industrial and Civil Engineering Applications

Alliance Sensors Group's LV-45 series LVIT (Linear Variable Inductance Transducer) position sensors are specifically targeted for measuring applications requiring rugged devices, whether measuring position of steam turbine valves, mounted in a paper mill head box or calendar roll stand, or operating outdoors fastened to a bridge or structure.

LV-45 sensors use a contactless inductive technology that allows them to replace other technology sensors like potentiometers and DC-LVDTs in most applications. With a simple coil design, a captive connecting rod, and a thick-walled housing, the sensors are both shorter and more robust than their DC-LVDT counterparts while operating over a wider temperature range. They can withstand the vibration and shock levels found in mills and power plants, as well as the temperature and humidity found in outdoor applications. Once a sensor has been installed, ASG's SenSet™ range adjustment process permits a user to match the sensor's zero and full scale output to the workpiece's actual range of motion.

## Features:

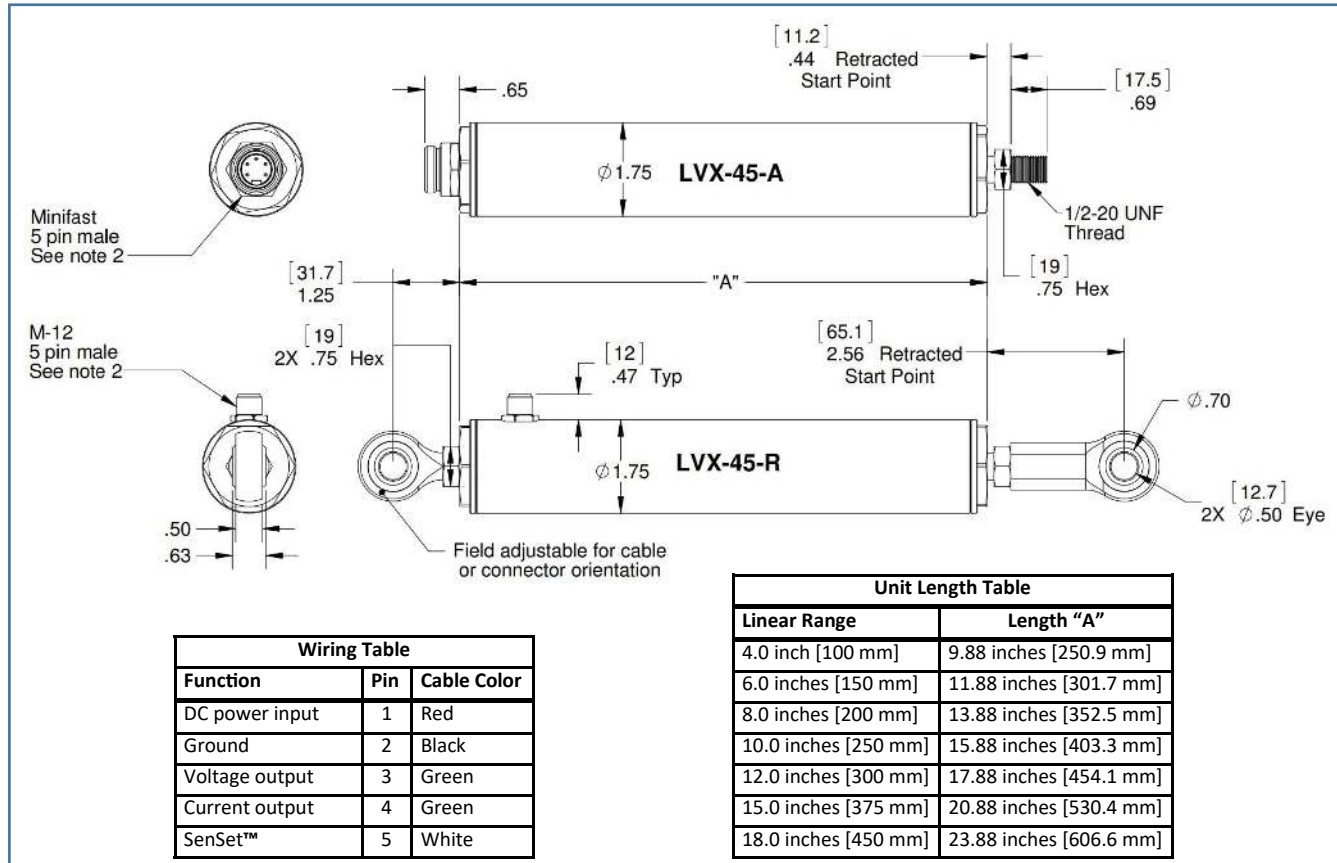
- LVIT Technology™ (Linear Variable Inductance Transducer)
- Contactless operation
- Excellent stroke-to-length ratio
- Proprietary SenSet™ field adjustable range scaling

## 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>	100 mm to 450 mm (4 to 18 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 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>Vibrations:</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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## Ordering Information:

Series	Output Type	Body Diameter	Range (mm)	Termination Direction	Termination	Output	Housing Material
LV	X-	XX-	XXX-	X-	XX-	XX-	X-
	E- Voltage	45- 45 mm	100	A- Axial	00- 1 m cable	05- 0.5 to 4.5 VDC	A- Aluminum
	I- Current		150	R- Radial	01- 5-pin M12	06- 4.5 to 0.5 VDC	S- Stainless Steel
			200		03- 3 m cable	10- 0 to 10 VDC	
			250		A: 05- 5-pin Minifast	11- 10 to 0 VDC	
			300		R: 05- 5 m cable	20- 4 to 20 mA	
			375			21- 20 to 4 mA	
			450			50- 0 to 5 VDC	
						51- 5 to 0 VDC	

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