



For use in:

Steam and Hydroelectric Power Plants
Industrial Fluid Power Equipment
LVDT Linear Position Sensors
Factory Automation Systems

LA-27-A Series

LVDT Linear Position Sensors

Designed Specifically for Power Generation and Harsh Industrial Environments

Alliance Sensors Group LA-27-A series LVDT linear position sensors are designed to handle extreme industrial environments. This robust linear sensor has a thick wall aluminum housing (also available in stainless steel), a core enclosed inside of the core extension rod assembly that cannot break loose, while offering a sturdy male thread for easy mechanical connection, and a pair of double contact shaft seals to keep fluids and solid contaminants out of its bore. The sensor's electrical termination includes the choice of an axial connector or a cord grip with a cable.

An LA-27-A LVDT is ideal for roller gap positioning, head box feedback, process valve displacement, and actuator position feedback with the durability to withstand the harsh environments found in steam and hydro power plants; paper, steel, and aluminum mills; and industrial automation and fluid power systems. It can operate in such hostile factory environments as lubricant mist, cutting oil spray, and airborne grit or dust, and it survives typical industrial steam cleaning and wash downs. Mated with ASG's SC-100 industrial LVDT DIN-rail-mountable signal conditioner, the LA-27-A LVDT becomes an ideal solution for heavy duty industrial applications requiring position sensing. For operating an LA-27-A as a steam valve position sensor in a power plant, ASG's model S1A signal conditioner, which is designed specifically for that application, is recommended.

Standard Features

- Stock ranges from 3 inches to 15 inches (75 mm to 375 mm) Full Scale
- Works in 3-wire, 4-wire, 5-wire, 6-wire, and ratiometric (A-B/A+B) systems
- Core totally enclosed in 3/8 inch (9.5 mm) diameter core extension rod
- Two double contact shaft seals keep out contaminants
- 5/16-24 or 8 mm male threaded shaft end
- Continuous operation to 250 °F (120 C)
- Environmentally sealed to IEC IP-68

Options

- Stainless steel body
- Alternate termination connectors, including one for 350 °F (175 C) operation
- Mild radiation resistant version for nuclear power plants (30 Mrads for 40 years)
- Auxiliary shaft seals
- Mounting hardware including flanges, single hole mounting kits, swivel rod eye ends, ball joints, extension rods, holddown clamps, and tie bars for dual-mounted LVDTs

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LA-27-A Series



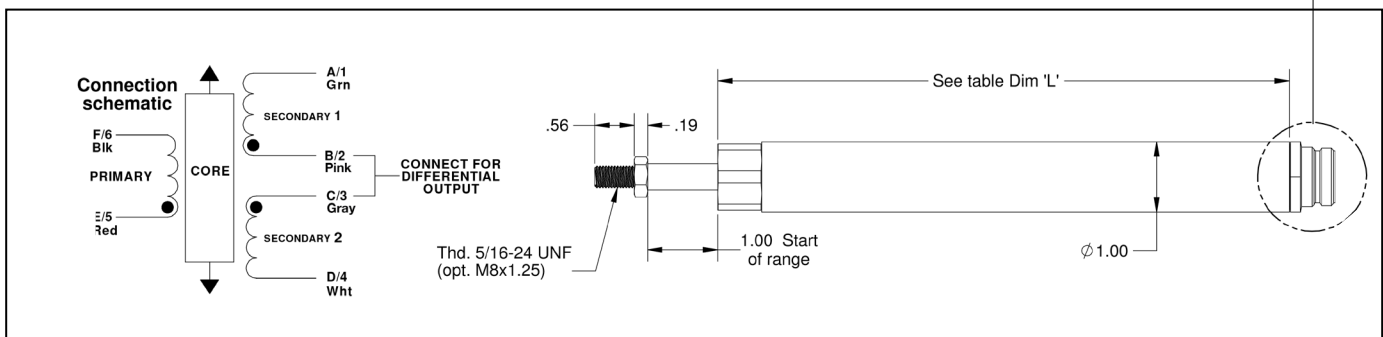
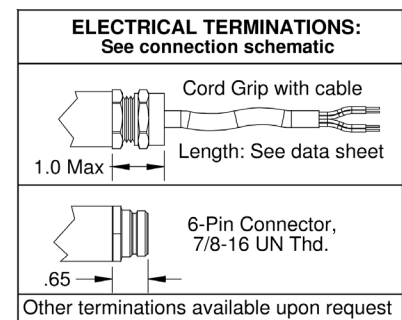
Electrical Specifications:

- Available FS ranges: 0 to 3, 6, 9, 12, or 15 inches (0 to 75, 150, 225, 300, or 375 mm)
- Excitation Frequency: 3 kHz nominal
- Excitation Voltage: 3 V ACrms nominal
- Full Scale Output: 0.9 V ACrms output (nom.) from differentially connected (S1-S2) secondaries (ref: 3 Vrms excitation); sum of secondaries output is constant over range for ratio-metric (S1-S2)/(S1+S2) operation
- Linearity Error: $\leq \pm 0.3\%$ of FSO
- Operating Temperature: -40 to 120 C (-40 to 250 °F)
- Temperature Coefficient: $\leq 0.025\%$ FSO/degree C
- Humidity: 95% RH non-condensing
- Shock: 1000 g, 11 msec
- Vibration: 5-20 Hz, 0.5 inch p-p; 20-2000 Hz, 4.2 g p-p

Ordering information:

Series	Range inches	Termination
LA-27-A-	XX-	XX-
	03 - 3"	00- cord grip with 1 m cable
	06 - 6"	03- cord grip with 3 m cable
	09 - 9"	05- 6-pin Turck minifast connector
	12 - 12"	
	15 - 15"	

LA-27-A-XX Configurations					
LA-27-A-XX	-03	-06	-09	-12	-15
Dim 'L'	8.12"L	11.87"L	14.87"L	18.87"L	22.87"L



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