

**For use in:**  
 Cylinder/Actuator Position Feedback  
 Steel/Aluminum/Paper Mills  
 Factory Automation  
 Food Processing  
 Valve Position

# LHA-19-A Series

## Hermetically Sealed AC-LVDT

Rugged for Harsh Environments

The LHA-19-A series AC-LVDT (Linear Variable Differential Transformer) linear position sensors by H.G.Schae-vitz LLC dba Alliance Sensors Group are hermetically sealed, contactless devices designed for industrial and commercial applications such as factory automation, metal and paper mills, valve position, robotic assembly systems, pharmaceutical and food processing, and outdoor wet environment applications. These ruggedized linear devices have excellent price-vs-performanc and stroke-to-length ratios, making LHA-19-A AC-LVDT sensors ideal for use in power generation and industrial automation equipment, and many OEM positioning appli-cations.

LHA-19-A series AC-LVDTs are offered in 11 ranges from  $\pm 0.050$  to  $\pm 10.0$  inches ( $\pm 1.27$  to  $\pm 254.0$  mm) with ex-cellent linearity and infinite resolution. LHA-19-A series AC-LVDTs operate from a nominal 3 Vrms, 2.5 - 3.3 kHz excitation source. They are packaged in a 0.750 inch (19.0 mm) OD SShousing and are offered with either an imperial or metric threaded 0.188 inch (4.8 mm) diameter core, 6-pin PTO2A-10-6P connector, and have a 0.235 inch (6.0 mm) ID for good core-to-bore clearance. They feature a wide operating temperature range.

When mated with ASG's industrial AC-LVDT DIN-rail-mountable signal conditioner, a LHA-19-A series AC-LVDT becomes part of a complete measurement solution. ASG AC LVDTs are also offered in other diameters and longer range versions, including the LA-9.5, LA-19, LA-20.6, LA-21, LA-25, and LA-27.

For more information, go to [www.alliancesensors.com](http://www.alliancesensors.com).

### Features:

- Hermetically Sealed AC-LVDT
- Welded 3/4 inch stainless steel housing
- Axial PTO2A-10-6P connector

### Options:

- Metric Threaded Core

### Electrical Specifications:

Available ranges	$\pm 0.050$ , 0.125, 0.250, 0.500, 1.0, 2.0, 3.0, 4.0, 5.0, 7.5, and 10.0 inches
Excitation Frequency	2.5 to 3.3 kHz
Excitation Voltage	3 V ACrms nominal
Linearity Error	$\leq \pm 0.25\%$ of FSO (typical 0.15%)
Null Voltage	$\leq 0.05\%$ of FSO<405511899220442478361
Operating Temperature	-65 to 220°F (-55 to 105 C°)
Temperature Coefficient	$\leq -0.02\%$ FSO/K
Humidity	90% R.H., 240 hours
Shock	1000 g, 11 msec
Vibration	20 g to 2 kHz

# LHA-19-A Series



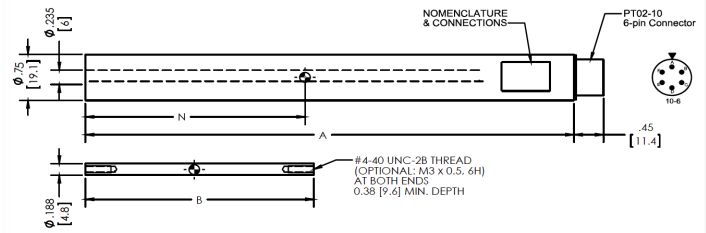
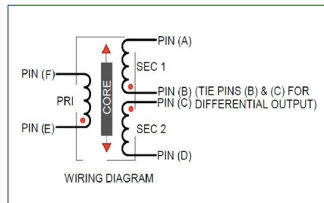
Ordering information:

Series	Body Diameter	Termination Topology	Bipolar Range, Inches (XXX)	I/O Connection	Options
MR	19 -19 mm (0.75 inch)	A-axial	XXX-	02-6-pin PT02H-10-6P	06-Metric threaded Core
			0.05 - ±.050 inches		
			0.12 - ±.125 inches		
			0.25 - ±.250 inches		
			0.5 - ±.500 inches		
			01 - ± 1.0 inches		
			02 - ± 2.0 inches		
			03 - ± 3.0 inches		
			04 - ± 4.0 inches		
			05 - ± 5.0 inches		
			07.5 - ± 7.5 inches		
			10 - ± 10.0 inches		

## PT02-10-6P Connector

A	Secondary 1
B	Secondary 1*
C	Secondary 2*
D	Secondary 2
E	Primary
F	Primary

\*Connect pin B to pin C for differential secondary output



Nominal Range	Sensitivity	Primary Z	Body Length A	Body Length B	Null Point N	Body Weight	Core Weight
inches [mm]	mV/V/.001in[mm]	Ohms inches	[mm]	inches [mm]	inches [mm]	oz. [grams]	oz. [grams]
±0.05 [1.3]	6.10 [240]	325	2.01 [51.1]	0.80 [20.3]	0.63 [16]	1.6 [45]	0.08 [2.4]
±0.12 [3.0]	3.9 [155]	735	2.64 [67.1]	1.25 [31.7]	0.94 [24]	2.1 [59]	0.12 [3.7]
±0.25 [6.3]	2.40 [96]	1400	3.35 [85.1]	1.65 [41.9]	1.32 [33]	2.5 [71]	0.18 [4.8]
±0.50 [12.5]	0.63 [25]	1200	5.92 [150.4]	3.45 [87.6]	2.57 [65]	3.3 [93]	0.40 [11.6]
±1.00 [25]	0.61 [ 24]	1250	7.38 [ 167.5]	3.45 [87.6]	3.32 [84]	4.3 [122]	0.40 [11.6]
±2.00 [50]	0.37 [15]	2150	10.91 [277.1]	5.30 [314.6]	5.07 [129]	6.2 [176]	0.65 [18.0]
±3.00 [75]	0.25 [9.8]	2150	13.85 [346.1]	6.20 [157.5]	6.29 [160]	8.2 [232]	0.80 [22.0]
±4.00 [100]	0.17 [6.7]	420	16.17 [410.7]	6.20 [157.5]	7.65 [194]	9.2 [260]	0.80 [22.0]
±5.00 [125]	0.12 [4.7]	600	18.65 [473.8]	6.20 [157.5]	8.94 [227]	10.0 [283]	0.80 [22.0]
±7.50 [190]	0.11 [4.3]	775	23.85 [605.8]	7.00 [177.8]	11.52 [293]	14.2 [402]	0.90 [25.5]
±10.00 [250]	0.07 [208]	620	31.68 [804.7]	9.50 [241.3]	15.42 [392]	18.3 [519]	1.20 [34.0]

**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