

**For use in:**  
Medical and Automotive Test Stand  
Packaging Equipment  
Factory Automation  
Material Testing

# LHA-19-R Series

**Hermetically Sealed AC-LVDT with Radial Connector**

Reduced Length for Easier Fit

The LHA-19-R series AC-LVDT (Linear Variable Differential Transformer) linear position sensors by H.G. Schaevitz LLC dba Alliance Sensors Group are hermetically sealed, contactless devices with a radial connector, designed for industrial and commercial applications, such as: factory automation, metal and paper mills, valve position, robotic assembly systems, pharmaceutical and food manufacturing, and wet environment applications. These ruggedized linear devices have excellent price-vs-performance and stroke-to-length ratio, making LHA-19-R AC-LVDT sensors ideal for use in power generation and industrial automation equipment, and many OEM positioning applications.

LHA-19-R series AC-LVDTs are offered in 12 ranges from  $\pm 0.050$  to  $\pm 10.0$  inches ( $\pm 1.27$  to  $\pm 254.0$  mm) with excellent linearity and infinite resolution. LHA-19-R series AC-LVDTs operate from a nominal 3 Vrms, 2.5 to 3.3 kHz excitation source. They are packaged in a 0.750 inch (19.0 mm) OD SS housing and are offered with either an imperial or metric threaded 0.188 inch (4.8 mm) diameter core, a radial PTO2-10-6P (6-pin) connector, and have a 0.235 inch (6.0 mm) ID for good core-to-bore clearance. It has a wide operating temperature range.

When mated with ASG's industrial AC-LVDT DIN-rail-mountable signal conditioner, an LHA-19-R series AC-LVDT becomes part of a complete measurement solution especially when space comes at a premium.

ASG's AC-LVDTs are also offered in larger and smaller body and longer range versions, including the LA-9.5, LA-19, LA-20.6, LA-21, LA-25, and LA-27.

## Features:

- Hermetically Sealed AC-LVDT
- Welded 3/4 inch OD Housing with radial connector
- Sealed to IP-69

## Options:

- Metric Threaded Core

## Electrical Specifications:

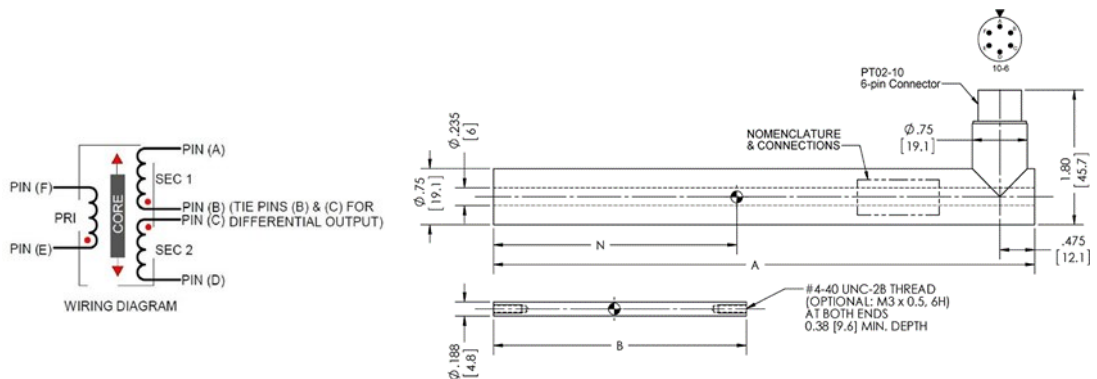
Available Ranges:	$\pm 0.050''$ , $0.125''$ , $0.250''$ , $0.500''$ , $1.0''$ , $2.0''$ , $3.0''$ , $4.0''$ , $5.0''$ , $6.0''$ , $7.5''$ , and $10.0''$
Excitation Frequency:	2.5 to 3.3 kHz
Excitation Voltage:	3 V ACrms nominal
Linearity Error:	$\leq \pm 0.25\%$ of FSO (typical .15%)
Null Voltage:	$< 0.05\%$ of FSO
Operating Temperature:	-55 to 125 C (-65 to 257°F)
Operating Coefficient:	$< -0.02\%$ FSO/K
Humidity:	95% RH, non-condensing
Shock:	1000 g, 11 msec.
Vibration:	20 g to 2kHz

**ALLIANCE SENSORS GROUP**  
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Nominal Range	Sensitivity	Primary Z	Body Length A	Core 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]	3.90 [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]	0.34 [13.4]	785	7.38 [167.5]	3.45 [87.6]	3.32 [84]	4.3 [122]	0.40 [11.6]
±2.00 [50]	0.20 [8.0]	575	10.91 [277.1]	5.30 [134.6]	5.07 [129]	6.2 [176]	0.65 [18.0]
±3.00 [75]	0.23 [9.0]	1200	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]
±6.00 [150]	0.11 [4.3]	500	18.65 [473.8]	5.30 [134.6]	8.94 [227]	10.0 [283]	0.65 [18.0]
±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 [2.8]	620	31.68 [804.7]	9.50 [241.3]	15.42 [392]	18.3 [519]	1.20 [34.0]

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



## Ordering Information:

Series Name	Body Diameter, mm (XX)	Termination Topology (X)	Bipolar Range, Inches (XXX)	I/O Connection (XX)	Options (XX)
LHA	19 - 19 mm (0.75 inch)	R - Radial	0.05 - ±0.050 inches	02 - PT02-10-6P (6-pin)	06- Metric Threaded Core
			0.125 - ±.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		
			06 - ±6.0 inches		
07.5 - ±7.5 inches					
10 - ±10.0 inches					

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