

LA-19-A Series

General Purpose AC-LVDT



Well Suited for Many Industrial Position Sensing Applications

The LA-19-A series AC-LVDT (Linear Variable Differential Transformer) linear position sensors by H.G. Schaevitz LLC dba Alliance Sensors Group are contactless devices designed for industrial and commercial applications such as factory automation, metal and paper mills, valve position, robotic assembly systems, and engine throttle position feedback. These general purpose linear position sensing devices have excellent price-to-performance and stroke-to-length ratios, making LA-19-A AC-LVDT sensors ideal for use in test and measurement laboratories, industrial automation equipment, and many OEM position sensing applications.

LA-19-A series AC-LVDTs are offered in 11 ranges from ± 0.050 to ± 10.0 inches (± 1.27 to ± 254 mm) with excellent linearity and infinite resolution. LA-19-A 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 mm) OD stainless steel housing, come with either a unified or metric threaded 0.25 inch (6.35 mm) diameter core, have an 0.313 inch (8.0 mm) ID bore for good core-to-bore clearance, feature 12 inch (300 mm) long lead wires, and operate over a wide temperature range. When mated with one of ASG's industrial DIN-rail-mount AC-LVDT signal conditioners, an LA-19-A AC-LVDT becomes part of a complete measurement solution.

ASG AC-LVDTs are also offered in larger body and longer range versions, including the LA-9.5, LHA-19, LA-21, LA-25, and LA-27. For more information, go to www.alliancesensors.com.

Features:

- General Purpose AC LVDT
- 0.750 inch OD Stainless Steel Housing

Options:

- Metric Threaded Core

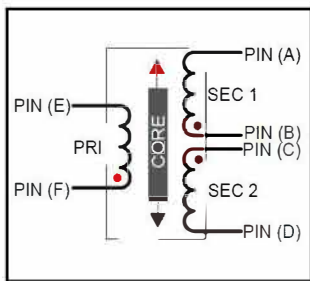
Electrical Specifications:

| | |
|-------------------------|----------------------------------------------------------------------------------------|
| Available Ranges | ± 0.05 , 0.100, 0.200, 0.500, 1.00, 2.00, 3.00, 4.00, 5.00, 7.50, and 10.00 inches |
| Excitation Frequency | 2.5 to 3.3 kHz |
| Excitation Voltage | 3 V ACrms nominal |
| Linearity Error | $\leq \pm 0.25\%$ of FSO (typical $\pm 0.15\%$) |
| Null Voltage | $\leq 0.05\%$ of FSO |
| Operating Temperature | -67 to 221° F (-65 to 105 C) |
| Temperature Coefficient | $\leq -0.02\%$ FSO/degree K |
| Humidity | 90% R.H., 240 hours |
| Shock | 1000 gs, 11 msec |
| Vibration | 20 gs to 2 kHz |

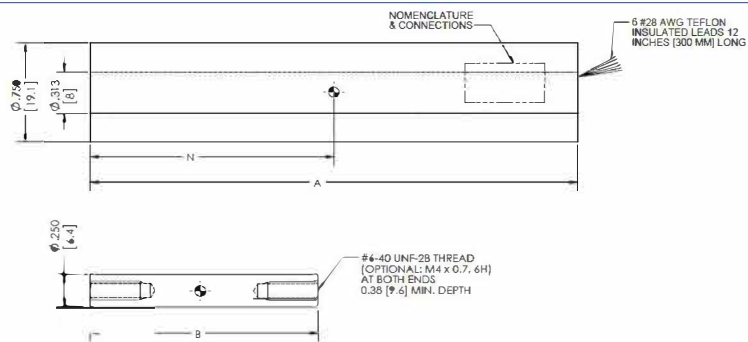
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Ordering Information:

| Series | Body Diameter (mm) | Termination Topology | Bipolar Range (inches) | I/O Connection | Options |
|-----------|--------------------------------|----------------------|----------------------------|---------------------------|----------------------------------|
| LA | XX- | X- | XX- | XX- | XX- |
| | 19 - 19 mm (0.750 inch) | A - Axial | 0.05 - ±.050 inches | 12 - 12-inch leads | 06 - Metric threaded Core |
| | | | 0.1 - ±.100 inches | | |
| | | | 0.2 - ±.200 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 | | |



Wiring Diagram
Connect Blue to Green for Differential Output



| 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] | 6.50 [255] | 400 | 1.13 [28.7] | 0.80 [20.3] | 0.56 [14.3] | 1.02 [29] | 0.14 [4.0] |
| ±0.10 [2.5] | 4.00 [155] | 1000 | 1.75 [44.5] | 1.25 [31.7] | 0.88 [22.2] | 1.41 [40] | 0.22 [6.2] |
| ±0.20 [5.0] | 2.40 [95] | 1900 | 2.50 [63.5] | 1.65 [41.9] | 1.25 [31.7] | 1.73 [48] | 0.30 [8.5] |
| ±0.50 [12.5] | 0.65 [25] | 1400 | 5.02 [127.5] | 3.45 [87.6] | 2.51 [63.7] | 2.82 [80] | 0.72 [20.4] |
| ±1.00 [25] | 0.65 [25] | 1650 | 6.51 [165.4] | 3.45 [87.6] | 3.25 [82.5] | 3.81 [108] | 0.72 [20.4] |
| ±2.00 [50] | 0.39 [15] | 1875 | 10.02 [254.5] | 5.30 [134.6] | 5.01 [127.2] | 5.00 [142] | 1.20 [34.0] |
| ±3.00 [75] | 0.26 [10] | 1950 | 12.75 [323.9] | 6.20 [157.5] | 6.38 [161.9] | 7.69 [218] | 1.47 [41.7] |
| ±4.00 [100] | 0.18 [7.1] | 425 | 15.20 [386.1] | 6.20 [157.5] | 7.60 [193.0] | 9.80 [278] | 1.47 [41.7] |
| ±5.00 [125] | 0.13 [5.1] | 1050 | 17.75 [450.9] | 6.20 [157.5] | 8.88 [225.4] | 11.71 [332] | 1.47 [41.7] |
| ±7.50 [190] | 0.12 [4.3] | 1380 | 22.85 [580.4] | 7.00 [177.8] | 11.43 [290.2] | 16.93 [480] | 1.51 [42.8] |
| ±10.00 [250] | 0.08 [3.1] | 1050 | 30.64 [778.3] | 9.50 [241.3] | 15.32 [389.1] | 20.53 [582] | 2.20 [62.4] |

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