

Series LSS61X

Short Stroke LVDT Displacement Transducer, DC/DC,
Spring Armature



Description

The Series LSS61X is a short stroke precision LVDT that takes a DC supply and provides a DC output. These displacement sensors operate from unregulated power supplies of +24 Vdc to +40 Vdc or dual ± 12 Vdc to ± 20 Vdc and utilizes an internal amplifier to generate a ± 5 Vdc output signal. The internal electronics also includes a filter circuit. The LSS61X has an internal spring return armature that fully extends the length of the armature. These LVDT's have low-friction, non-rotating ball-ended probes designed to withstand side loads that can occur in many industrial applications. The body and probe are constructed from stainless steel. This design is used where it is not possible to connect the transducer armature to the moving part being measured. The compact size of the LSS61X series makes it ideal for applications requiring limited space. All Series LSS61X displacement transducers are shipped with traceable calibration certificates.

Standard Features

- Stroke ranges from ± 0.10 inches to ± 0.40 inches
- Internal Signal Conditioning
- DC/DC
- Compact Size
- Spring Return Armature
- Low Friction Bearing Assembly
- $\pm 0.5\%$ Linearity
- Broad Temperature Range
- All Stainless Steel Construction
- Traceable Calibration Certificate

Optional Features

- Improved Linearity
- Threaded Sleeve (for Special Mounting)
- Probe Types
- Mounting Blocks

Performance

Stroke Ranges

± 0.10 inches to ± 0.40 inches

Linearity

$\pm 0.5\%$ of full stroke (maximum)

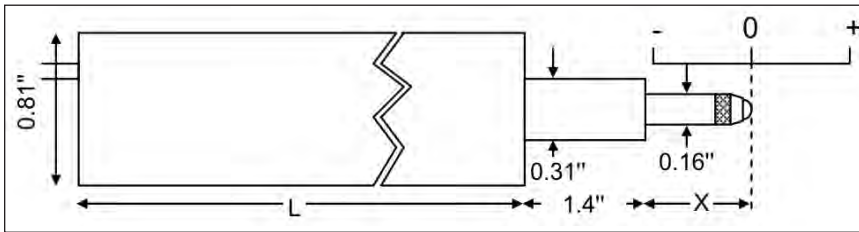
$\pm 0.25\%$ or ± 0.1 (as available options)

LSS61X

Series LSS61X Specifications

Baseline Configuration Specs Represented.
Modifications Encouraged - See Below
Custom Designs Available

Dimensions (inches)



Range	Linearity error (% F.S.)	L	X	Total Weight	Spring Force at X	Spring Rate	Inward over-travel	Outward over-travel
±0.1"	<± 0.5	2.5"	0.5"	2.9oz	4oz.	8.5oz/inch	0.09"	0.05"
±0.2"	<± 0.5	2.5"	0.5"	2.9oz	4oz.	7.1oz/inch	0.01"	0.05"
±0.3"	<± 0.5	2.5"	0.7"	2.9oz	5oz.	5.8oz/inch	0.06"	0.05"
±0.4"	<± 0.5	2.5"	0.9"	2.9oz	6oz.	7.2oz/inch	0.05"	0.05"

Mechanical Characteristics

Residual Null Output

0.1% of full stroke output.

Repeatability

Within 20 micrometers.

Case Material

Stainless steel.

Armature Type

Spring Return.

Probe Type

Ball End.

Set-ups

Please Specify Set-up Required:

	(-)	(0)	(+)
Standard			
1	0V	5V	10V(+0%-5%)
2	-5V(+0%-5%)	0V	+5V(+0%-5%)
Optional			
3	10V(+0%-5%)	5V	0V
4	+5V(+0%-5%)	0V	-5V(+0%-5%)

Electrical Characteristics

Supply Voltage (Dual)

±12Vdc to ±20Vdc, 30 mA.

Supply Voltage (Single)

24Vdc to 40Vdc (must be floating), 30 mA.

Output Impedance

2 Ohms.

Output Load (Optimum)

10K Ohms.

Output Ripple

30mV.

Electrical Output Bandwidth

200 Hz.

Electrical Termination

High Quality Polyurethane Shielded Cable (6 ft.) (Optional lengths available).

Environmental Characteristics

Operating Temperature Range

-58°F to +176°F.

Temperature Effect on Zero

±0.006%/°F.

Temperature Effect on Span

±0.017%/°F.

MODEL IDENTIFICATION

L S S 6 1 X
 L: SERIES
 S: ELECTRICAL TERMINATIONS
 Please specify termination required:
 X = 1 Axial Cable Exit (Standard)
 2 Radial Cable Exit (Optional)
 3 Axial Connector (Optional)
 4 Radial Connector (Optional)



MODIFICATIONS: We realize LVDT applications vary greatly and as such our designs are flexible. Choice of electrical termination, material compatibility and performance characteristics are a few of the many options available. Specifications on this datasheet represent the standard configuration only. Product and company names listed are trademarks of their respective companies. Specifications subject to change without notice.

WARRANTY: Stellar Technology warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that Stellar Technology's obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by Stellar Technology. This warranty is in lieu of all other warranties expressed or implied.

Find More Information at:
stellartech.com

Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.

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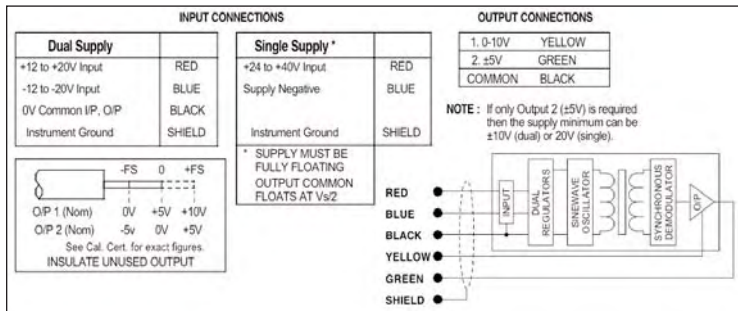


Series LSS61X Specifications

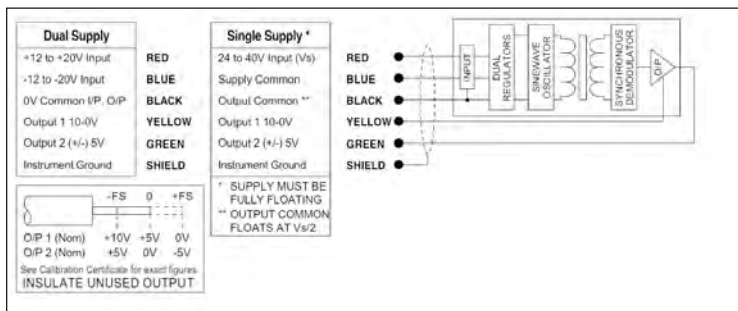
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Connection Details

Standard



Optional



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Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.