

# Series LLS65X

Long Stroke LVDT Displacement Transducer, 4-20 mA Output,  
Spring Armature



## Description

The Series LLS65X is a high performance long stroke DC powered LVDT displacement transducer with an internal spring return armature that fully extends the length of the armature. Series LLS65X displacement transducers have built-in LVDT electronics which allows for a DC supply of 12 to 36Vdc and a 4-20 mA current output. These LVDT's have low-friction ball-ended probes designed to withstand side loads that can occur in many industrial applications. These LVDT's have stroke ranges from  $\pm 0.5$  inches to  $\pm 3$  inches. The Series LLS65X displacement transducers can be used for both static and dynamic applications. These displacement transducers are ruggedly constructed of all stainless steel. All Series LLS65X displacement transducers are shipped with traceable calibration certificates.

## Standard Features

- Stroke ranges from  $\pm 0.5$  inches to  $\pm 3$  inches
- 4-20 mA Current Output
- Spring Return Armature
- Low Friction Bearing Assembly
- DC/DC
- $\pm 0.5\%$  Linearity
- Encapsulated Integral Electronics
- All Stainless Steel Construction
- Traceable Calibration Certificate

## Optional Features

- Improved Linearity
- Probe Types
- Sealing Against Moisture Ingress
- Mounting Blocks

## Performance

### Stroke Ranges

$\pm 0.5$  inches to  $\pm 3.0$  inches

### Linearity

$\pm 0.5\%$  of full stroke max

$\pm 0.25\%$  or  $\pm 0.1$  options on some ranges

### Output Voltage

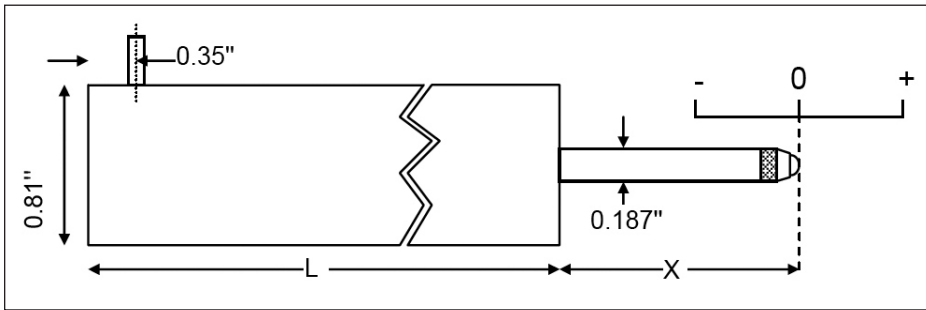
4-20 mA current

LLS65X

# Series LLS65X 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
±0.5"	<± 0.5	7.2"	1.5"	8oz	4.6oz	2.0oz/inch	0.04"	0.51"
±1"	<± 0.5	8.3"	2.5"	10oz	7.2oz	3.0oz/inch	0.12"	0.39"
±2"	<± 0.5	12.8"	3.0"	14oz	6oz	1.8oz/inch	0.31"	0.55"
±3"	<± 0.5	17.2"	4.5"	1.1lb	1lbs	3.2oz/inch	0.59"	0.59"

## Mechanical Characteristics

### Case Material

Stainless steel.

### Armature Type

Spring Guided.

### Probe Type

Ball End.

## Set-ups

Please Specify Set-up Required:

Set-up	(-) Position	(0) Position	(+) Position
1	4mA	12mA	20mA
2	20mA	12mA	4mA

## Electrical Characteristics

### Supply Voltage

12 Vdc to 36 Vdc.

### Max Loop Resistance

(Supply Voltage – 11) x 50 Ohms.

### Output Ripple

50  $\mu$ A (peak-to-peak).

### Electrical Output Bandwidth

200 Hz.

### Electrical Termination

6 ft. Polyurethane Shielded Cable (Radial Exit).

## Environmental Characteristics

### Operating Temperature Range

+14°F to +158°F.

### Temperature Effect on Zero

±0.006%/°F (typical).

### Temperature Effect on Span

±0.017%/°F (typical).

## MODEL IDENTIFICATION

**L L S 6 5 X**

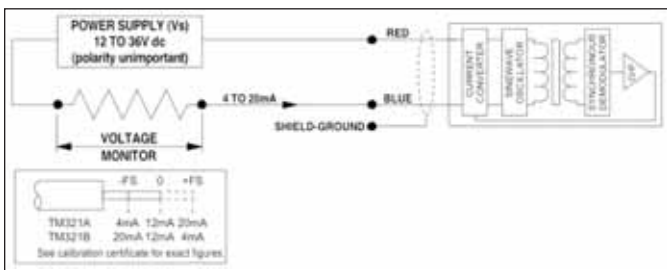
SERIES

ELECTRICAL TERMINATIONS

Please specify termination required:

- X = 1 Axial Cable Exit (Optional)
- 2 Radial Cable Exit (Standard)
- 3 Axial Connector (Optional)
- 4 Radial Connector (Optional)

## Connection Details



## Modifications and Warranty

MODIFICATIONS: We realize transducer applications vary greatly and as such our designs are flexible. Choice of pressure port, 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.

**LORD SENSING**  
Stellar Technology

ISO 9001/AS9100

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

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