

# Series LLC65X

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



## Description

The Series LLC65X is a high performance long stroke DC powered LVDT displacement transducer with a captive guided armature. These units have built-in LVDT electronics which allows for a DC supply of 12 to 36 Vdc and a 4-20 mA current output. The armature is captured in the LVDT housing and is guided by a low-friction bearing assembly. These LVDT's have a total stroke range of 1 to 37 inches. The Series LLC65X displacement transducers can be used for both static and dynamic applications. These displacement transducers are ruggedly constructed of all stainless steel. All Series LLC65X displacement transducers are shipped with traceable calibration certificates.

## Standard Features

- Stroke ranges from  $\pm 0.5$  inches to  $\pm 18.5$  inches
- 4-20 mA Current Output
- Captive 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
- Self Aligning Rod-End Bearings
- Sealing Against Moisture Ingress
- Mounting Blocks

## Performance

### Stroke Ranges

$\pm 0.5$  inches to  $\pm 18.5$  inches

### Linearity

$\pm 0.5\%$  of full stroke max  
 $\pm 0.25\%$  or  $\pm 0.1$  options on some ranges

### Output Voltage

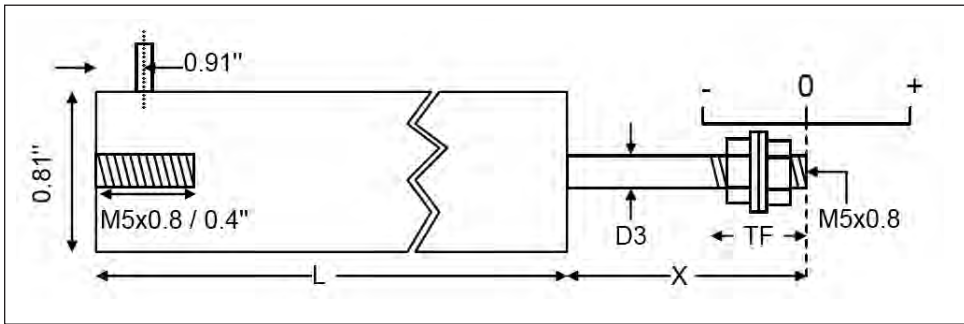
4-20 mA current

LLC65X

# Series LLC65X Specifications

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

## Dimensions (inches)



Range	Linearity error (% F.S.)	L	X	D3	Total Weight	TF	Inward over-travel	Outward over-travel
±0.5"	<± 0.5	7.6"	1.5"	0.187"	12oz	0.6"	0.39"	0.47"
±1"	<± 0.5	8.7"	2.5"	0.187"	14oz	0.6"	0.51"	0.39"
±2"	<± 0.5	13.2"	3.0"	0.187"	1.1lb	0.6"	0.39"	0.55"
±3"	<± 0.5	17.6"	4.5"	0.187"	1.4lb	0.6"	0.94"	0.6"
±4"	<± 0.5	19.4"	5.0"	0.187"	1.7lb	0.6"	0.31"	0.6"
±6"	<± 0.5	26.9"	7.0"	0.187"	2.3lb	0.6"	0.47"	0.67"
±8"	<± 0.5	34.4"	10.0"	0.187"	3.2lb	1.3"	0.87"	0.98"
±10"	<± 0.5	42.0"	12.0"	0.187"	3.7lb	1.1"	1.34"	1.38"
±15"	<± 0.5	58.0"	16.0"	0.187"	4.9lb	0.8"	0.51"	0.51"
±18.5"	<± 0.5	68.5"	20.0"	0.236"	5.8lb	1.1"	0.20"	1.30"

## Mechanical Characteristics

### Case Material

Stainless steel.

### Armature Type

Captive Guided.

### Probe Thread

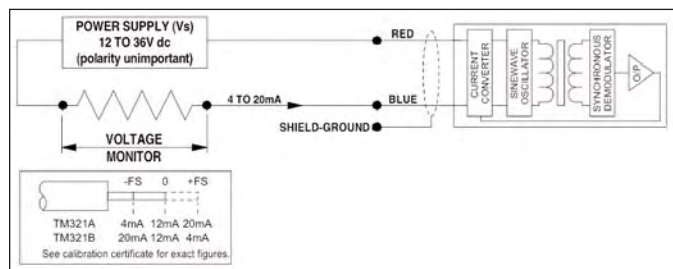
M5 x 0.8.

## Set-ups

Please Specify Set-up Required:

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

## Connection Details



## Electrical Characteristics

### Supply Voltage

12 Vdc to 36 Vdc.

### Max Loop Resistance

(Supply Voltage – 11) x 50 Ohms.

### Output Ripple

50 μA (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 C 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)



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.

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