

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 ± 0.5 inches to ± 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

± 0.5 inches to ± 18.5 inches

Linearity

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

Output Voltage

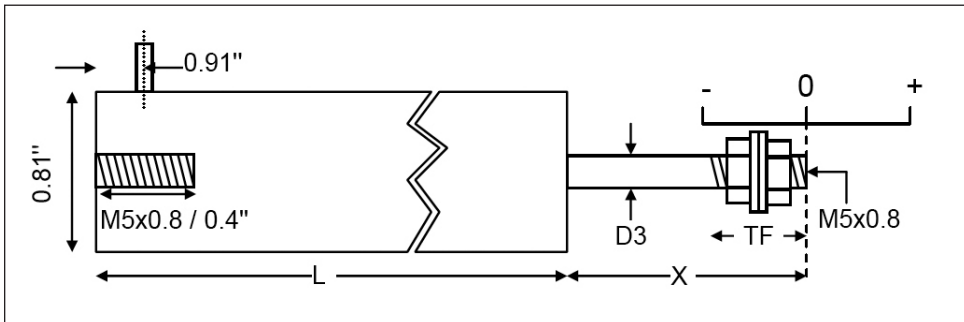
4-20 mA current

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

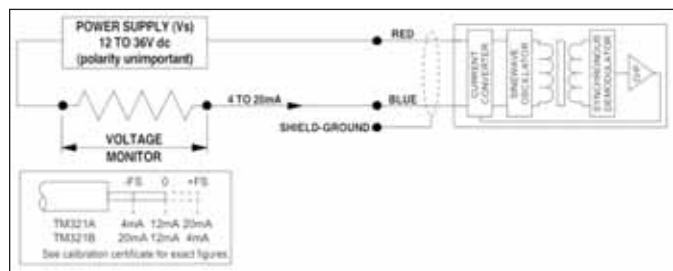
M5 x 0.8.

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 μ 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 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 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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