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 ±0.5 inches to ±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 ±0.5 inches to ±3 inches
- 4-20 mA Current Output
- Spring Return Armature
- Low Friction Bearing Assembly
- DC/DC
- ±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

<table>
<thead>
<tr>
<th>Stroke Ranges</th>
<th>± 0.5 inches to ± 3.0 inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linearity</td>
<td>± 0.5% of full stroke max</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>± 0.25% or ± 0.1 options on some ranges</td>
</tr>
<tr>
<td></td>
<td>4-20 mA current</td>
</tr>
</tbody>
</table>
Series LLS65X
Specifications

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

Dimensions (inches)

<table>
<thead>
<tr>
<th>Range</th>
<th>Linearity error (% F.S.)</th>
<th>L</th>
<th>X</th>
<th>Total Weight</th>
<th>Spring Force at X</th>
<th>Spring Rate</th>
<th>Inward over-travel</th>
<th>Outward over-travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>±0.5&quot;</td>
<td>±0.5</td>
<td>7.2&quot;</td>
<td>1.5&quot;</td>
<td>8oz</td>
<td>4.6oz</td>
<td>2.0oz/inch</td>
<td>0.04&quot;</td>
<td>0.51&quot;</td>
</tr>
<tr>
<td>±1&quot;</td>
<td>±0.5</td>
<td>8.3&quot;</td>
<td>2.5&quot;</td>
<td>10oz</td>
<td>7.2oz</td>
<td>3.0oz/inch</td>
<td>0.12&quot;</td>
<td>0.39&quot;</td>
</tr>
<tr>
<td>±2&quot;</td>
<td>±0.5</td>
<td>12.8&quot;</td>
<td>3.0&quot;</td>
<td>14oz</td>
<td>6oz</td>
<td>1.8oz/inch</td>
<td>0.31&quot;</td>
<td>0.55&quot;</td>
</tr>
<tr>
<td>±3&quot;</td>
<td>±0.5</td>
<td>17.2&quot;</td>
<td>4.5&quot;</td>
<td>1.1lb</td>
<td>1lbs</td>
<td>3.2oz/inch</td>
<td>0.59&quot;</td>
<td>0.59&quot;</td>
</tr>
</tbody>
</table>

Mechanical Characteristics
Case Material
Stainless steel.

Armature Type
Spring Guided.

Probe Type
Ball End.

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 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.