

Series LLU65X

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



Description

The Series LLU65X is a high performance long stroke DC powered LVDT displacement transducer with a free unguided armature. These units have built-in LVDT electronics which allows for a DC supply of 12 to 36Vdc and a 4-20 mA current output. The unguided armature is loose fit in the bore of the LVDT body and is attached to the moving part by a males thread. Precise alignment along the bore produces a frictionless movement. The Series LLU65X is suited for mechanical vibration measurements. The armature can be separated from the body without disconnecting either part. These LVDT's have stroke ranges from ± 0.5 inches to ± 8 inches. The Series LLU65X displacement transducers can be used for both static and dynamic applications. These displacement transducers are ruggedly constructed of all stainless steel. All Series LLU65X displacement transducers are shipped with traceable calibration certificates.

Standard Features

- Stroke ranges from ± 0.5 inches to ± 8 inches
- 4-20 mA Current Output
- Free Unguided Armature
- 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
- Mounting Blocks

Performance

Stroke Ranges

± 0.5 inches to ± 8.0 inches

Linearity

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

Output Voltage

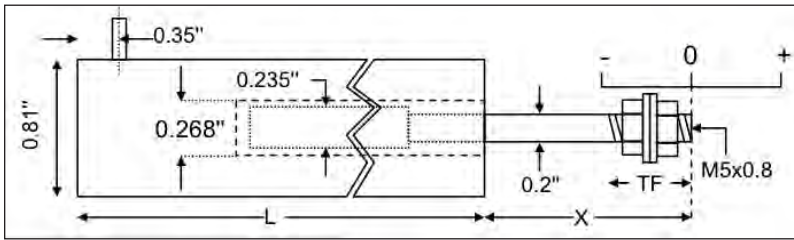
4-20 mA current

LLU65X

Series LLU65X Specifications

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

Dimensions (inches)



Range	Linearity error (% F.S.)	L	X	Total Weight	Armature Weight	TF	Inward over-travel
±0.5"	<± 0.5	6.9"	1.7"	8oz	0.6oz	0.6"	0.63"
±1"	<± 0.5	8.0"	2.7"	10oz	0.8oz	0.6"	0.87"
±2"	<± 0.5	12.5"	3.2"	13oz	1.3oz	0.6"	0.63"
±3"	<± 0.5	16.9"	4.7"	1.1lb	1.9oz	0.6"	1.14"
±4"	<± 0.5	18.7"	5.2"	1.4lb	2.5oz	0.6"	0.63"
±6"	<± 0.5	26.2"	7.2"	1.9lb	3.5oz	0.6"	0.63"
±8"	<± 0.5	33.7"	10.2"	2.8lb	4.9oz	1.2"	1.06"

Mechanical Characteristics

Case Material
Stainless steel.

Armature Type
Unguided.

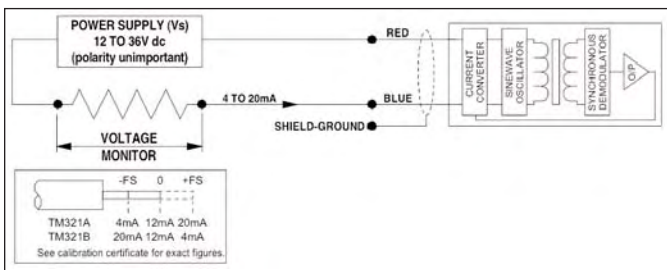
Probe Thread
M5 x 0.8.

Set-ups

Please Specify Set-up Required:

	(-)	(0)	(+)
Set-ups 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 +160°F.

Temperature Effect on Zero
±0.006%/°F (typical).

Temperature Effect on Span
±0.017%/°F (typical).

MODEL IDENTIFICATION

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

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