



STELLAR TECHNOLOGY

ISO 9001/AS9100 Certified

LWU654

SUBSEA LVDT DISPLACEMENT TRANSDUCER, DC/DC,
WITH 4-20 MA OUTPUT, UNGUIDED ARMATURE

YOUR ENGINEERED SOLUTION SOURCE SM



DESCRIPTION

The Series LWU654 is a submersible LVDT displacement transducer with an unguided armature. This DC to DC LVDT incorporates a built-in LVDT amplifier thus enabling a DC supply and 4-20 mA current output.

These units are specifically designed for use in sea water and other very demanding environments including some corrosive liquids. The LWU654 displacement transducers are made of welded 316 stainless steel and have a thru bore. Because of their heavy duty construction, these units are suitable for the most rigorous applications including 10 years submersible in seawater at a depth of 7500 ft. (2300 m).

The armature is loose fit in the bore of the LVDT and is attached to the moving point by a male thread. Non-magnetic fluids enter the armature tube without affecting the operation on the transducer. In addition, this thru-hole design helps overcome the problems of marine growth.

All Series LWU654 displacement transducers are shipped with traceable calibration certificates.

PERFORMANCE

STROKE RANGES

± 0.5 inches to ± 4.0 inches

LINEARITY

± 0.5% of full stroke max

± 1% of full stroke for ±1 inch range

F.S. OUTPUT

4-20 mA current

STANDARD FEATURES

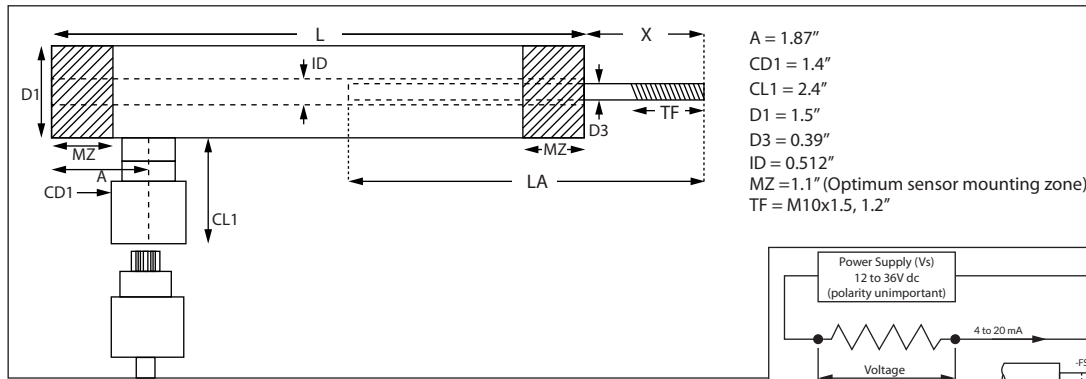
- Stroke ranges from ±0.5 inches to ±4 inches
- DC/DC
- 4-20 mA Output
- Unguided Armature
- Submersible in Sea Water to 7500 ft.
- Mating Connector and 6 ft. Cable
- ±1% Linearity
- 316 Stainless Steel Welded Construction
- High Cycle Life
- Traceable Calibration Certificate

OPTIONAL FEATURES

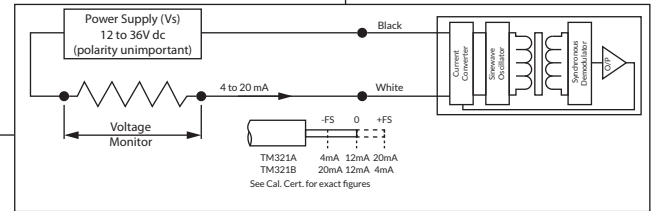
- Extended Cable Lengths



A US Manufacturer of: Pressure, Temperature, Load/
Force/Torque, and Displacement Sensors.



Connection details



RANGE	LINEARITY ERROR (% F.S.)	L	X	LA	TOTAL WEIGHT	ARMATURE WEIGHT
±0.5"	<± 0.5	8.8"	2.09"	5.7"	2.5lb	3.2oz
±1"	<± 0.5	9.9"	2.60"	6.7"	2.9lb	3.5oz
±2"	<± 0.5	13.6"	3.58"	10.4"	3.9lb	5.6oz
±3"	<± 0.5	17.1"	4.61"	13.7"	4.3lb	7.4oz
±4"	<± 0.5	21.1"	5.59"	17.3"	4.7lb	9.2oz

MECHANICAL CHARACTERISTICS

CASE MATERIAL

Stainless steel.

ARMATURE TYPE

Unguided.

PROBE THREAD

M10 x 1/5 (1.2 inches long).

STATIC PRESSURE

3500 psi (maximum).

MAXIMUM WORKING DEPTH

7500 ft. (2300 meters).

SET-UPS

Please Specify Set-up Required:

SET-UP	(-) POSITION	(0) POSITION	(+) POSITION
1	4mA	12mA	20mA
2	20mA	12mA	4mA

ELECTRICAL CHARACTERISTICS

EXCITATION / SUPPLY

12 to 36Vdc.

LOOP RESISTANCE (MAXIMUM)

(Supply voltage - 11) x 50 Ohms.

OUTPUT LOAD

10K Ohms.

OUTPUT RIPPLE

50 µA (peak-to-peak).

ELECTRICAL OUTPUT BANDWIDTH

200 Hz.

ELECTRICAL TERMINATION

Mating Connector with Polyurethane Shielded Cable (6 ft.).

Additional Cable Lengths (available option).

Radial Exit (standard).

ENVIRONMENTAL CHARACTERISTICS

OPERATING TEMPERATURE RANGE

+14°F to +140°F

TEMPERATURE EFFECT ON ZERO

±0.006% F.S./°F (typical).

TEMPERATURE EFFECT ON SPAN

±0.017% F.S./°F (typical).

MODEL IDENTIFICATION

L W U 6 5 4
Series

ELECTRICAL TERMINATIONS

Please specify termination required:

4 Radial Connector

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.



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