SSD Seawater Submersible LVDT Displacement Transducer

- High resolution
- Voltage / 4-20mA output
- High cycle life
- Seawater submersible
- Stainless steel

These transducers are for displacement / position measurement. They make an accurate position measurement of the movement of the armature (the sliding part) relative to the body of the displacement transducer.

This transducer uses the Linear Variable Differential Transformer (LVDT) principle which means that it is probably the most robust and reliable position sensor type available. The strength of the LVDT sensor's principle is that there is no electrical contact across the transducer position sensing element which for the user of the sensor means clean data, infinite resolution and a very long life.

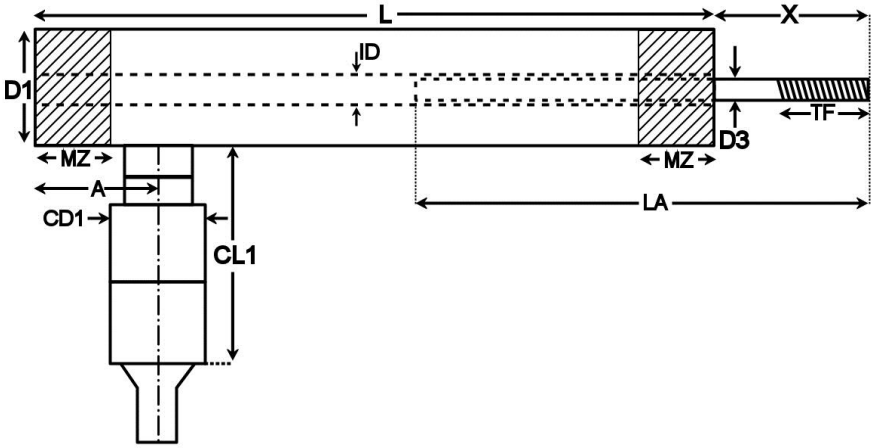
Our DC to DC LVDT transducer has all of the benefits of the LVDT sensor principle with the added convenience of built-in LVDT electronics enabling a dc supply and dc output. As an option we can offer a 4-20mA 2 wire connection to the transducer on some models.

Our submersible displacement transducers are designed to make measurements whilst submerged in suitable liquids. Fluids which are non-magnetic can be allowed to flood the armature tube without affecting the operation of the transducer.

The SS series LVDTs are specially designed for use in sea water and heavy industrial environments with some corrosive chemicals. These LVDTs are made of welded 316 stainless steel and have a through bore plus very heavy construction. Therefore, the SS series LVDTs are capable of withstanding the most arduous industrial applications as well as 10 years seawater submersion at a depth of up to 2,3km.

Unguided version.

On our unguided LVDTs the armature assembly is a separate component, to make a measurement the user must guide the armature inside the body without touching the sides. Unguided position measurement transducers are appropriate where external guidance is available and give truly non-contact operation



A = 48mm
CD1 = 35mm
CL1 = 92mm
D1 = 38,1mm
D3 = 10mm
ID = 13mm
MZ = 27mm (Optimum sensor mounting zone)
TF = M10x1,5, 30mm

Type	Range	Linearity error (% F.S.)	L	X	LA	Total weight	Armature weight
SSD500	±12,5mm	<±0,5	224mm	53mm	145mm	1,2kg	90g
SSD1000	±25mm	<±1	251mm	66mm	170mm	1,3kg	100g
SSD2000	±50mm	<±0,5	346mm	91mm	265mm	1,8kg	160g
SSD3000	±75mm	<±0,5	435mm	117mm	349mm	2,0kg	210g
SSD4000	±100mm	<±0,5	536mm	142mm	440mm	2,2kg	260g

Specification		
V output	Supply voltage (dual)	±12V to ±20V dc, 30mA
	Supply voltage (single, must be floating)	24V to 40V dc, 30mA
	Change in output for change in supply	5mV/V (typical)
	Output load	10kOhms
	Output ripple	30mV peak-to-peak (typical)
	Electrical output bandwidth	200Hz
	Output impedance	2 Ohms
	Operating temperature range	-40°C to 60°C
4-20mA output	Supply voltage	12V to 36V dc
	Max loop resistance	(Supply voltage-11) x 50 Ohms
	Output ripple	50uA (peak-to-peak)
	Electrical output bandwidth	200Hz
	Operating temperature range	-10°C to 60°C
Both outputs	Temperature coefficient (zero)	±0,01% F.S. /°C (typical)
	Temperature coefficient (span)	±0,03% F.S. /°C (typical)
	Electrical termination	2m (integral cable)
	Maximum static pressure	23MPa

Output details				
Option code	Note	- position	0	+ position
Standard		-5V (+0% - 5%)	0V	+5V (+0% - 5%)
TM0627		+5V (+0% - 5%)	0V	-5V (+0% - 5%)
TM85A		0V	5V	10V (+0% - 5%)
TM85B		10V (+0% - 5%)	5V	0V
TM0321A	>=±12,5mm	4mA	12mA	20mA
TM0321B	>=±12,5mm	20mA	12mA	4mA

All dimensions and specifications are nominal.

Due to our policy of on-going development, specifications may change without notice. Any modification may affect some or all of the specifications for our equipment.

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