DISPLACEMENT

D5W Submersible LVDT Displacement Transducer

- High accuracy
- Miniature
- High cycle life
- Submersible
- Stainless steel
- Infinite resolution

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.

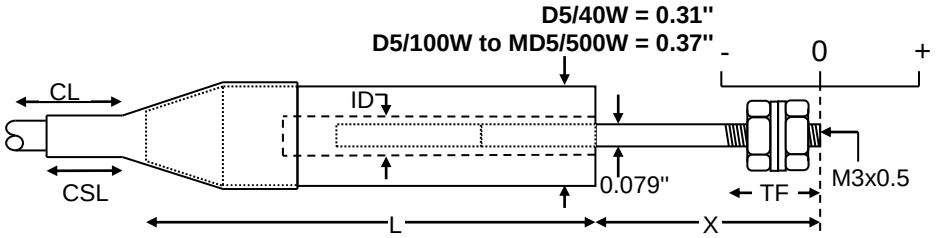
Our submersible displacement transducers are designed to make measurements whilst submerged in suitable liquids. Fluids which are non-magnetic can be allowed to flood the armature tube without affecting the operation of the transducer.

The LVDTs are available as either unguided or spring return versions.

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

End (axial) exit cable.

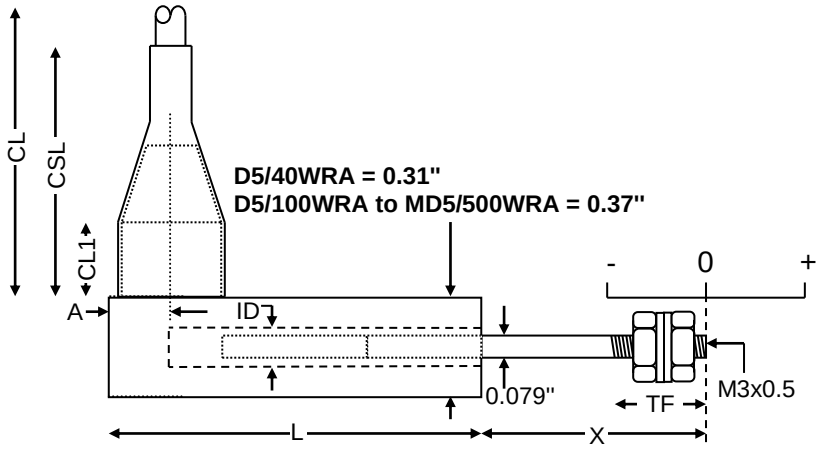


CL (Cable length). - See specification.
CSL (Cable sleeve length). - See specification.

Type	Range	Linearity error (% F.S.)	L	X	ID	Total weight	Armature weight	TF	Inward over-travel	Sensitivity (nom)
D5/40W	±1mm (±0.04")	<±0.5/±0.25	1.8"	0.62"	0.09"	0.7oz	0.05oz	0.5"	0.08"	143mV/V
D5/100W	±2.5mm (±0.1")	<±0.5/±0.25	2.1"	0.77"	0.09"	0.8oz	0.05oz	0.6"	0.06"	375mV/V
D5/200W	±5mm (±0.2")	<±0.5/±0.25/±0.1	2.2"	1.04"	0.09"	0.8oz	0.06oz	0.7"	0.11"	320mV/V
D5/300W	±7.5mm (±0.3")	<±0.5/±0.25/±0.1	2.8"	1.18"	0.10"	0.9oz	0.06oz	0.7"	0.16"	435mV/V
D5/400W	±10mm (±0.4")	<±0.5/±0.25	2.9"	1.28"	0.10"	1.2oz	0.07oz	0.7"	0.15"	567mV/V
MD5//500W	±12.5mm (±0.5")	<±0.5/±0.25	3.5"	1.38"	0.10"	1.5oz	0.08oz	0.7"	0.15"	773mV/V

Side (radial) exit cable.

A - 0.3" (nominal)
CL1 - 0.7"



CL (Cable length). - See specification.
CSL (Cable sleeve length). - See specification.

Type	Range	Linearity error (% F.S.)	L	X	ID	Total weight	Armature weight	TF	Inward over-travel	Sensitivity (nom)
D5/40WRA	±1mm (±0.04")	<±0.5/±0.25	1.9"	0.75"	0.09"	0.7oz	0.05oz	0.5"	0.08"	143mV/V
D5/100WRA	±2.5mm (±0.1")	<±0.5/±0.25	2.07"	0.77"	0.09"	0.8oz	0.05oz	0.6"	0.06"	375mV/V
D5/200WRA	±5mm (±0.2")	<±0.5/±0.25/±0.1	2.2"	1.04"	0.09"	0.8oz	0.06oz	0.7"	0.11"	320mV/V
D5/300WRA	±7.5mm (±0.3")	<±0.5/±0.25/±0.1	2.8"	1.18"	0.10"	0.9oz	0.06oz	0.7"	0.16"	435mV/V
D5/400WRA	±10mm (±0.4")	<±0.5/±0.25	2.9"	1.3"	0.10"	1.2oz	0.07oz	0.7"	0.15"	567mV/V
MD5/500WRA	±12.5mm (±0.5")	<±0.5/±0.25	3.5"	1.4"	0.10"	1.5oz	0.08oz	0.7"	0.15"	773mV/V

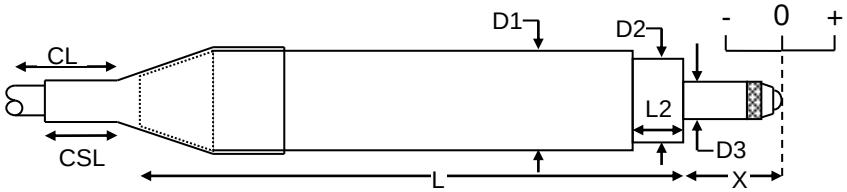
Spring return version.

Our spring displacement transducer has bearings to guide the armature inside the measurement sensor and a spring which pushes the armature to the fully out position. Spring return LVDTs are appropriate where it is not possible to connect the transducer armature to the moving component being measured.

Spring return transducers should be cleared of air as trapped air may compress under pressure an cause errors. The mechanical frequency response of transducers may be reduced by fluid in the internal tubes.

End (axial) exit cable.

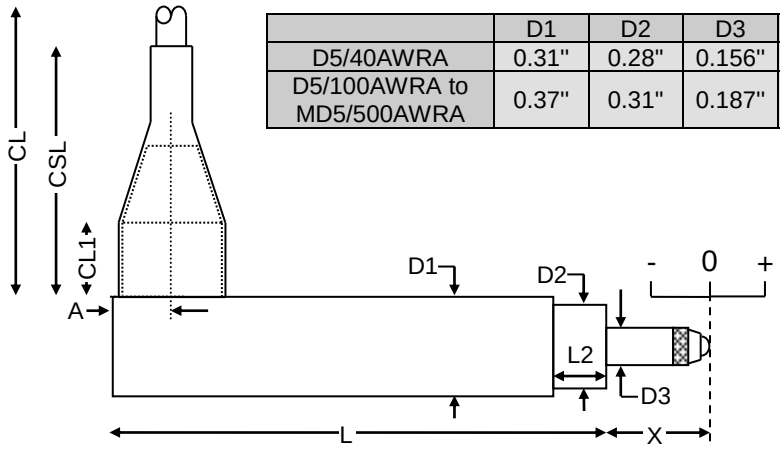
	D1	D2	D3	L2
D5/40AW	0.31"	0.28"	0.156"	0.3"
D5/100AW to MD5/500AW	0.37"	0.31"	0.187"	0.3"



CL (Cable length). - See specification.
CSL (Cable sleeve length). - See specification.

Type	Range	Linearity error (% F.S.)	L	X	Total weight	Inward over-travel	Outward over-travel	Sensitivity (nom)
D5/40AW	±1mm (±0.04")	<±0.5/±0.25	2.3"	0.45"	0.4oz	0.04"	0.06"	143mV/V
D5/100AW	±2.5mm (±0.1")	<±0.5/±0.25	2.7"	0.49"	1.1oz	0.04"	0.04"	375mV/V
D5/200AW	±5mm (±0.2")	<±0.5/±0.25/±0.1	3.0"	0.54"	1.2oz	0.06"	0.01"	320mV/V
D5/300AW	±7.5mm (±0.3")	<±0.5/±0.25/±0.1	3.9"	0.60"	1.3oz	0.06"	0.05"	435mV/V
D5/400AW	±10mm (±0.4")	<±0.5/±0.25	4.3"	0.75"	1.6oz	0.05"	0.05"	567mV/V
MD5/500AW	±12.5mm (±0.5")	<±0.5/±0.25	5.2"	0.85"	1.8oz	0.07"	0.05"	773mV/V

Side (radial) exit cable.



	D1	D2	D3	L2
D5/40AWRA	0.31"	0.28"	0.156"	0.3"
D5/100AWRA to MD5/500AWRA	0.37"	0.31"	0.187"	0.3"

A - 0.3" (nominal)
CL1 - 0.7"

CL (Cable length). - See specification.
CSL (Cable sleeve length). - See specification.

Type	Range	Linearity error (% F.S.)	L	X	Total weight	Inward over-travel	Outward over-travel	Sensitivity (nom)
D5/40AWRA	±1mm (±0.04")	<±0.5/±0.25	2.3"	0.45"	0.4oz	0.04"	0.06"	143mV/V
D5/100AWRA	±2.5mm (±0.1")	<±0.5/±0.25	2.7"	0.49"	1.1oz	0.04"	0.04"	375mV/V
D5/200AWRA	±5mm (±0.2")	<±0.5/±0.25/±0.1	3.0"	0.54"	1.2oz	0.06"	0.01"	320mV/V
D5/300AWRA	±7.5mm (±0.3")	<±0.5/±0.25/±0.1	3.9"	0.60"	1.3oz	0.06"	0.05"	435mV/V
D5/400AWRA	±10mm (±0.4")	<±0.5/±0.25	4.3"	0.75"	1.6oz	0.05"	0.05"	567mV/V
MD5/500AWRA	±12.5mm (±0.5")	<±0.5/±0.25	5.2"	0.85"	1.8oz	0.07"	0.05"	773mV/V

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.

Specification	
Excitation/supply (acceptable)	0.5V to 7V rms, 2kHz to 10kHz (sinusoidal)
Excitation/supply (calibrated)	5V rms, 5kHz (sinusoidal)
Output load	100k Ohms
Temperature coefficient (span)	±0.006% F.S. /°F (typical)
Operating temperature range	-4°F to 257°F
Maximum pressure when sealed on inner cable with TM0960	250psi
Maximum pressure when sealed on cable sleeve	500psi

Cable length	Standard cable	CSL (Cable sleeve length) = 6.6ft, CL (Cable length) = 6.6ft
	Maximum cable sleeve length	23ft
	Option code TM0828	CSL (Cable sleeve length) = 24", CL (Cable length) = 24" to 3281ft
	Option code TM0960	CSL (Cable sleeve length) = 2", CL (Cable length) = 24" to 3281ft

RDP Electrosense
2216 Pottstown Pike
Pottstown, PA 19465
USA
Tel: 610-469-0850
Tel: 800-334-5838
Fax: 610-469-0852
Email: info@rdpe.com

Distribuidor

Brasil e América do Sul

CONTATO

Endereço
Rua Sete de Setembro, 2656 - Centro
13560-181 - São Carlos - SP - Brasil

Telefone
+ 55 (16) 3371-0112
+ 55 (16) 3372-7800

Internet
www.metrolog.net
metrolog@metrolog.net

Metrolog Controles de Medição