DISPLACEMENT

ACT LVDT Displacement Transducer

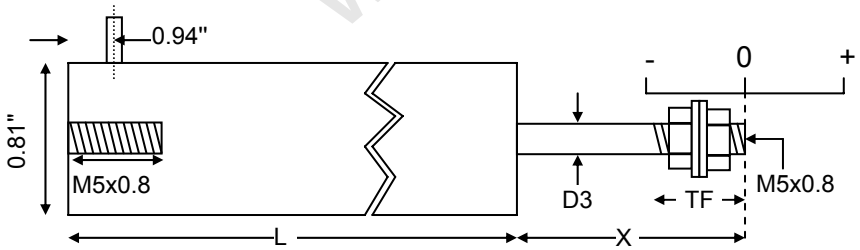
- High accuracy
- High cycle life
- Infinite resolution
- Stainless steel

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.

This series of displacement transducer is available as either an unguided, captive or spring return version.

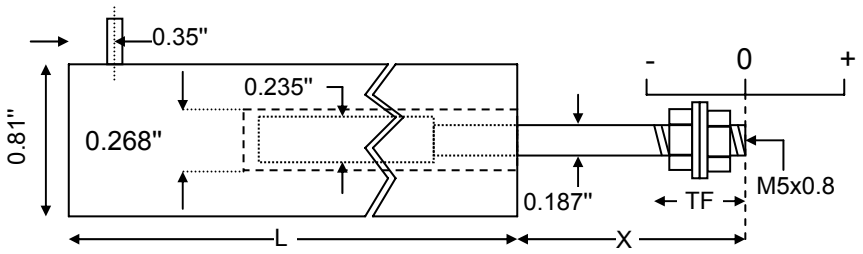
Captive guided version.



Our captive guided displacement transducer has bearings to guide the armature inside the measurement sensor. Captive LVDTs are for position measurement applications where guidance may be poor and end bearings may be required.

Type	Range	Linearity error (% F.S.)	L	X	D3	Total weight	TF	Inward over-travel	Outward over-travel	Sensitivity (nom)
ACT500C	±12.5mm (±0.5")	<±0.5/±0.25/±0.1	6.0"	1.5"	0.187"	10oz	0.6"	0.4"	0.47"	0.7V/V
ACT1000C	±25mm (±1")	<±0.5/±0.25/±0.1	7.1"	2.5"	0.187"	12oz	0.6"	0.5"	0.39"	0.9V/V
ACT2000C	±50mm (±2")	<±0.5/±0.25/±0.1	11.6"	3.0"	0.187"	1.1lb	0.6"	0.4"	0.55"	1.5V/V
ACT3000C	±75mm (±3")	<±0.5/±0.25/±0.1	16.0"	4.5"	0.187"	1.4lb	0.6"	0.9"	0.59"	1.5V/V
ACT4000C	±100mm (±4")	<±0.5/±0.25/±0.1	17.8"	5.0"	0.187"	1.6lb	0.6"	0.3"	0.55"	3.2V/V
ACT6000C	±150mm (±6")	<±0.5/±0.25	25.3"	7.0"	0.187"	2.3lb	0.6"	0.5"	0.67"	2.4V/V
ACT8000C	±200mm (±8")	<±0.5/±0.25	32.8"	10.0"	0.187"	3.1lb	1.3"	0.9"	0.98"	1.5V/V
ACT10000C	±250mm (±10")	<±0.5/±0.25	40.6"	12.0"	0.187"	3.5lb	1.1"	1.3"	1.38"	2.0V/V
ACT15000C	±375mm (±15")	<±0.5	56.5"	16.0"	0.187"	4.7lb	0.8"	0.5"	0.51"	3.2V/V
ACT18500C	±470mm (±18.5")	<±0.5	67.0"	20.0"	0.236"	5.6lb	1.1"	0.2"	1.30"	3.6V/V

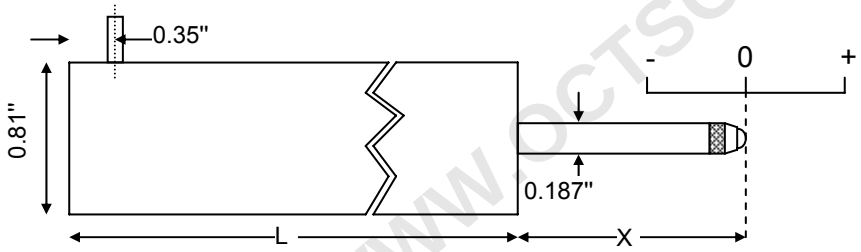
Unguided version.



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

Type	Range	Linearity error (% F.S.)	L	X	Total weight	Armature weight	TF	Inward over-travel	Sensitivity (nom)
ACT500	±12.5mm (±0.5")	<±0.5/±0.25/±0.1	5.0"	1.7"	6oz	0.6oz	0.6"	0.6"	0.7V/V
ACT1000	±25mm (±1")	<±0.5/±0.25/±0.1	6.1"	2.7"	8oz	0.8oz	0.6"	0.9"	0.9V/V
ACT2000	±50mm (±2")	<±0.5/±0.25/±0.1	10.6"	3.2"	11oz	1.3oz	0.6"	0.6"	1.5V/V
ACT3000	±75mm (±3")	<±0.5/±0.25/±0.1	15.0"	4.7"	1.0lb	1.9oz	0.6"	1.1"	1.5V/V
ACT4000	±100mm (±4")	<±0.5/±0.25/±0.1	16.8"	5.2"	1.3lb	2.5oz	0.6"	0.6"	3.2V/V
ACT6000	±150mm (±6")	<±0.5/±0.25	24.3"	7.2"	1.8lb	3.5oz	0.6"	0.6"	2.4V/V
ACT8000	±200mm (±8")	<±0.5/±0.25	31.8"	10.2"	2.6lb	4.9oz	1.1"	1.1"	1.5V/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.

Type	Range	Linearity error (% F.S.)	L	X	Total weight	Spring force at X	Spring rate	Inward over-travel	Outward over-travel	Sensitivity (nom)
ACT500A	±12.5mm (±0.5")	<±0.5/±0.25/±0.1	5.3"	1.5"	6oz	4.7oz	2.0oz/inch	0.04"	0.51"	0.7V/V
ACT1000A	±25mm (±1")	<±0.5/±0.25/±0.1	6.4"	2.5"	8oz	7.2oz	3.0oz/inch	0.1"	0.39"	0.9V/V
ACT2000A	±50mm (±2")	<±0.5/±0.25/±0.1	10.9"	3.0"	14oz	6oz	1.8oz/inch	0.3"	0.55"	1.5V/V
ACT3000A	±75mm (±3")	<±0.5/±0.25/±0.1	15.3"	4.5"	1.1lb	1lbs	3.2oz/inch	0.6"	0.59"	1.5V/V

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 (zero)	±0.006% F.S. /°F (typical)
Temperature coefficient (span)	±0.006% F.S. /°F (typical)
Operating temperature range	-58°F to 257°F
Electrical termination	6.6ft (integral cable) Longer available to order.

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.

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