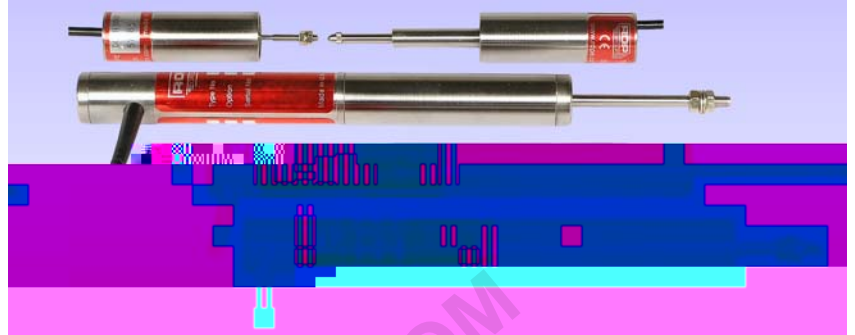




DISPLACEMENT

DCTH Series DC to DC LVDT Displacement Transducer

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



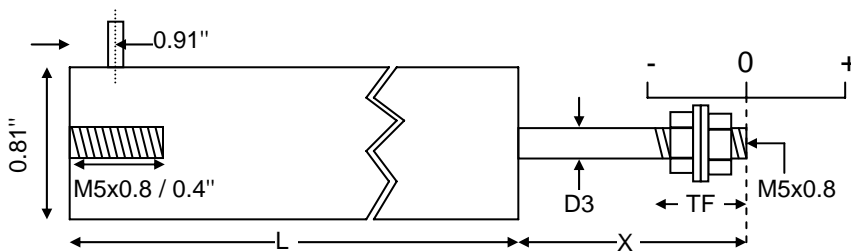
These transducers are for displacement / position measurement. They make an accurate position measurement of the movement of the armature (the sliding part) relative to the body of the displacement transducer.

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.

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

Captive guided version.



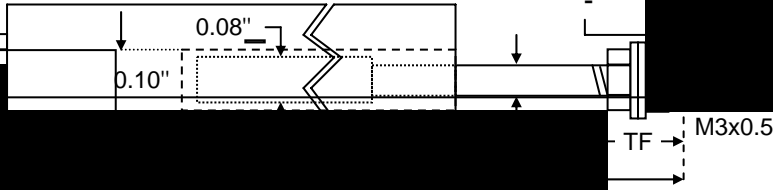
Our captive guided displacement transducer has bearings to guide the armature inside the measurement sensor. Captive LVDTs are for position measurement applications where guidance may be poor and end bearings may be required.

Type	Range	Linearity error (% F.S.)	L	X	D3	Total weight	TF	Inward over-travel	Outward over-travel
DCTH500C	±12.5mm (±0.5")	<±0.5/±0.25/±0.1	7.6"	1.5"	0.187"	12oz	0.6"	0.39"	0.47"
DCTH1000C	±25mm (±1")	<±0.5/±0.25/±0.1	8.7"	2.5"	0.187"	14oz	0.6"	0.51"	0.39"
DCTH2000C	±50mm (±2")	<±0.5/±0.25/±0.1	13.2"	3.0"	0.187"	1.1lb	0.6"	0.39"	0.55"
DCTH3000C	±75mm (±3")	<±0.5/±0.25/±0.1	17.6"	4.5"	0.187"	1.4lb	0.6"	0.94"	0.6"
DCTH4000C	±100mm (±4")	<±0.5/±0.25/±0.1	19.4"	5.0"	0.187"	1.7lb	0.6"	0.31"	0.6"
DCTH6000C	±150mm (±6")	<±0.5/±0.25	26.9"	7.0"	0.187"	2.3lb	0.6"	0.47"	0.67"
DCTH8000C	±200mm (±8")	<±0.5/±0.25	34.4"	10.0"	0.187"	3.2lb	1.3"	0.87"	0.98"
DCTH10000C	±250mm (±10")	<±0.5/±0.25	42.0"	12.0"	0.187"	3.7lb	1.1"	1.34"	1.38"
DCTH15000C	±375mm (±15")	<±0.5	58.0"	16.0"	0.187"	4.9lb	0.8"	0.51"	0.51"
DCTH18500C	±470mm (±18.5")	<±0.5	68.5"	20.0"	0.236"	5.8lb	1.1"	0.20"	1.30"

Unguided version.

DCTH100 to DCTH400

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



X	Total weight	Armature weight	TF	Inward over-travel
1.3"	2.6oz	0.05oz	0.7"	0.46"
1.3"	2.6oz	0.06oz	0.7"	0.35"
1.3"	2.6oz	0.06oz	0.7"	0.26"
1.3"	2.6oz	0.07oz	0.7"	0.15"
1.7"	8oz	0.6oz	0.6"	0.63"
2.7"	10oz	0.8oz	0.6"	0.87"
3.2"	13oz	1.3oz	0.6"	0.63"
4.7"	1.1lb	1.9oz	0.6"	1.14"
5.2"	1.4lb	2.5oz	0.6"	0.63"
7.2"	1.9lb	3.5oz	0.6"	0.63"
10.2"	2.8lb	4.9oz	1.2"	1.06"

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.

X	Total weight	Spring force at X	Spring rate	Inward over-travel	Outward over-travel
0.5"	2.9oz	4oz.	8.5oz/inch	0.09"	0.05"
0.5"	2.9oz	4oz.	7.1oz/inch	0.01"	0.05"
0.7"	2.9oz	5oz.	5.8oz/inch	0.06"	0.05"
0.9"	2.9oz	6oz.	7.2oz/inch	0.05"	0.05"
1.5"	8oz	4.6oz	2.0oz/inch	0.04"	0.51"
2.5"	10oz	7.2oz	3.0oz/inch	0.12"	0.39"
3.0"	14oz	6oz	1.8oz/inch	0.31"	0.55"
4.5"	1.1lb	1lbs	3.2oz/inch	0.59"	0.59"

