

## D5 & D6 LVDT Displacement Transducer

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



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.

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

All dimensions and specifications are nominal.

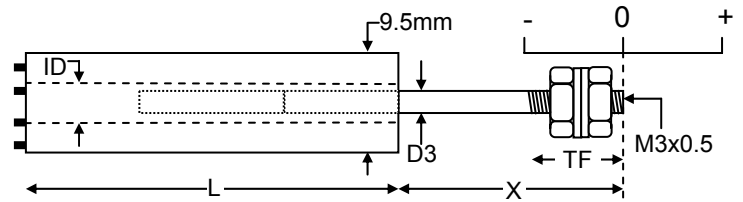
Due to our policy of on-going development, specifications may change without notice. Any modification may affect some or all of the specifications for our equipment.

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)	±0.01% F.S. /°C (typical)
Operating temperature range	-20°C to 125°C
Electrical termination	2m (integral cable) Longer available to order.

# Unguided version.

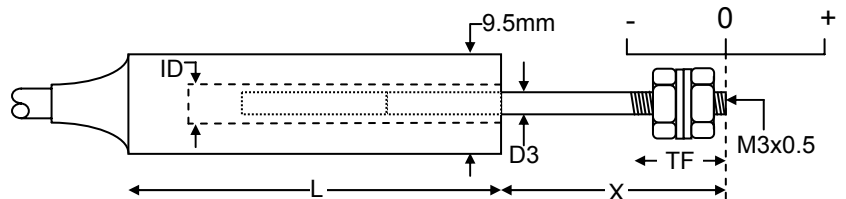
On our unguided LVDTs the armature assembly is a separate component, to make a measurement the user must guide the armature inside the body without touching the sides. Unguided position measurement transducers are appropriate where external guidance is available and give truly non-contact operation

No cable fitted (cable fitted by user).



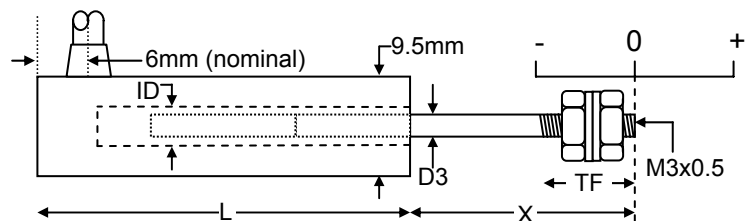
Type	Range	Linearity error (% F.S.)	L	X	D3	ID	Total weight	Armature weight	TF	Inward over-travel	Sensitivity (nom)
D5/25K	±0.65mm	<±0.5/±0.25	19mm	28mm	2.00mm	3.17mm	14g	1.3g	19mm	7.9mm	43mV/V
D5/100K	±2.5mm	<±0.5/±0.25/±0.1	32mm	19mm	2.36mm	2.59mm	16g	1.4g	15mm	1.3mm	193mV/V
D5/200K	±5mm	<±0.5/±0.25/±0.1	34mm	25mm	2.36mm	2.59mm	18g	1.8g	18mm	1.5mm	365mV/V
D5/300K	±7.5mm	<±0.5/±0.25/±0.1	47mm	30mm	2.00mm	2.54mm	20g	1.8g	18mm	3.9mm	502mV/V
D5/400K	±10mm	<±0.5/±0.25	52mm	33mm	2.00mm	2.54mm	26g	1.9g	18mm	4.4mm	576mV/V
MD5/500K	±12.5mm	<±0.5/±0.25	68mm	35mm	2.00mm	2.54mm	34g	2.3g	18mm	4.3mm	775mV/V

End (axial) exit cable.



Type	Range	Linearity error (% F.S.)	L	X	D3	ID	Total weight	Armature weight	TF	Inward over-travel	Sensitivity (nom)
D5/25HK	±0.65mm	<±0.5/±0.25	35mm	28mm	2.00mm	3.17mm	14g	1.3g	19mm	7.9mm	43mV/V
D6/02500U	±2.5mm	<±0.5/±0.25/±0.1	43mm	19mm	2.00mm	2.90mm	17g	1.8g	15mm	1.5mm	375mV/V
D6/05000U	±5mm	<±0.5/±0.25/±0.1	56mm	25mm	2.00mm	2.90mm	21g	1.8g	18mm	2.0mm	700mV/V
D5/300HK	±7.5mm	<±0.5/±0.25/±0.1	58mm	30mm	2.00mm	2.54mm	20g	1.8g	18mm	3.9mm	502mV/V
D5/400HK	±10mm	<±0.5/±0.25	63mm	33mm	2.00mm	2.54mm	26g	1.9g	18mm	4.4mm	576mV/V
MD5/500HK	±12.5mm	<±0.5/±0.25	79mm	35mm	2.00mm	2.54mm	34g	2.3g	18mm	4.3mm	775mV/V

Side (radial) exit cable.

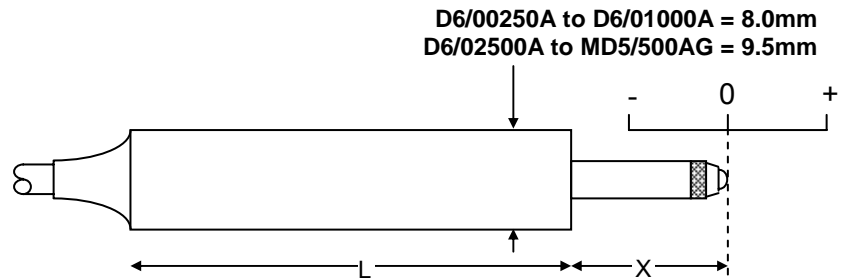


Type	Range	Linearity error (% F.S.)	L	X	D3	ID	Total weight	Armature weight	TF	Inward over-travel	Sensitivity (nom)
D6/02500URA	±2.5mm	<±0.5/±0.25/±0.1	45mm	19.3mm	2.00mm	2.92mm	17g	1.8g	15mm	1.5mm	375mV/V
D6/05000URA	±5mm	<±0.5/±0.25/±0.1	60mm	25.4mm	2.00mm	2.92mm	21g	1.8g	18mm	2.0mm	700mV/V
D5/300HKRA	±7.5mm	<±0.5/±0.25/±0.1	60mm	30.0mm	2.00mm	2.54mm	20g	1.8g	18mm	3.9mm	502mV/V
D5/400HKRA	±10mm	<±0.5/±0.25	65mm	32.5mm	2.00mm	2.54mm	26g	1.9g	18mm	4.4mm	576mV/V
MD5/500HKRA	±12.5mm	<±0.5/±0.25	81mm	34.9mm	2.00mm	2.54mm	34g	2.3g	18mm	4.3mm	775mV/V

# Spring return version.

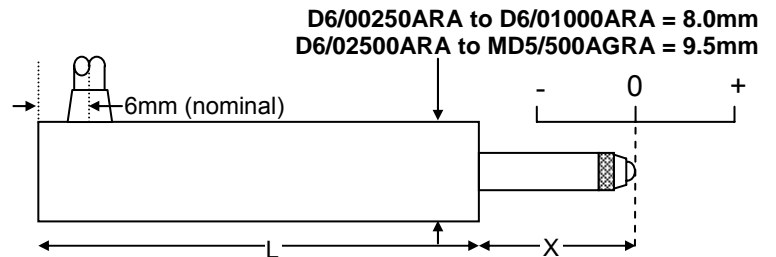
Our spring displacement transducer has bearings to guide the armature inside the measurement sensor and a spring which pushes the armature to the fully out position. Spring return LVDTs are appropriate where it is not possible to connect the transducer armature to the moving component being measured.

End (axial) exit cable.



Type	Range	Linearity error (% F.S.)	L	X	Total weight	Spring force at X	Spring rate	Inward over-travel	Outward over-travel	Sensitivity (nom)
D6/00250A	±0.25mm	<±0.5/±0.25	49mm	12.2mm	11g	0.6N	1.2N/cm	0.6mm	0.6mm	38mV/V
D6/00500A	±0.5mm	<±0.5/±0.25	49mm	12.2mm	11g	0.6N	1.2N/cm	0.3mm	0.3mm	75mV/V
D6/01000A	±1mm	<±0.5/±0.25/±0.1	52mm	13.1mm	12g	0.4N	1.2N/cm	2.5mm	0.2mm	150mV/V
D6/02500A	±2.5mm	<±0.5/±0.25/±0.1	61mm	11.5mm	25g	0.9N	0.9N/cm	1.3mm	1.3mm	375mV/V
D6/05000A	±5mm	<±0.5/±0.25/±0.1	78mm	12.3mm	30g	0.9N	0.8N/cm	1.1mm	1.4mm	700mV/V
D5/300AG	±7.5mm	<±0.5/±0.25/±0.1	88mm	15.3mm	34g	1.1N	0.6N/cm	1.1mm	1.6mm	502mV/V
D5/400AG	±10mm	<±0.5/±0.25	99mm	19.0mm	40g	1.4N	0.4N/cm	2.5mm	1.3mm	576mV/V
MD5/500AG	±12.5mm	<±0.5/±0.25	121mm	21.6mm	48g	1.4N	0.4N/cm	2.5mm	1.3mm	775mV/V

Side (radial) exit cable.



Type	Range	Linearity error (% F.S.)	L	X	Total weight	Spring force at X	Spring rate	Inward over-travel	Outward over-travel	Sensitivity (nom)
D6/00250ARA	±0.25mm	<±0.5/±0.25	50mm	12.2mm	11g	0.6N	1.2N/cm	0.6mm	0.6mm	38mV/V
D6/00500ARA	±0.5mm	<±0.5/±0.25	50mm	12.2mm	11g	0.6N	1.2N/cm	0.3mm	0.3mm	75mV/V
D6/01000ARA	±1mm	<±0.5/±0.25/±0.1	53mm	13.1mm	12g	0.4N	1.2N/cm	2.5mm	0.2mm	150mV/V
D6/02500ARA	±2.5mm	<±0.5/±0.25/±0.1	64mm	11.5mm	25g	0.9N	0.9N/cm	1.3mm	1.3mm	375mV/V
D6/05000ARA	±5mm	<±0.5/±0.25/±0.1	83mm	12.3mm	30g	0.9N	0.8N/cm	1.1mm	1.4mm	700mV/V
D5/300AGRA	±7.5mm	<±0.5/±0.25/±0.1	90mm	15.3mm	34g	1.1N	0.6N/cm	1.1mm	1.6mm	502mV/V
D5/400AGRA	±10mm	<±0.5/±0.25	102mm	19.0mm	40g	1.4N	0.4N/cm	2.5mm	1.3mm	576mV/V
MD5/500AGRA	±12.5mm	<±0.5/±0.25	124mm	21.6mm	48g	1.4N	0.4N/cm	2.5mm	1.3mm	775mV/V

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