

DCC Series 4-20mA 2-wire Output Displacement Transducer

- Electrical interface for industrial applications
- 4-20mA 2 wire interface
- Stainless steel
- High accuracy
- High cycle life
- High resolution



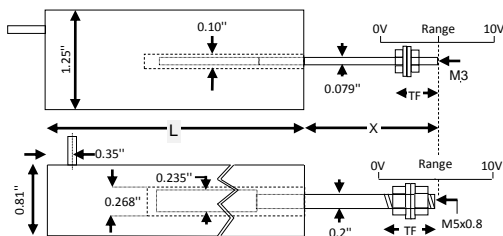
These transducers are for displacement / position measurement. They make an accurate position measurement of the movement of the armature (the sliding part) relative to the body of the displacement transducer.

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 4-20mA LVDT transducer has all of the benefits of the LVDT sensor principle with the added convenience of a 2-wire interface..

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

Unguided version.



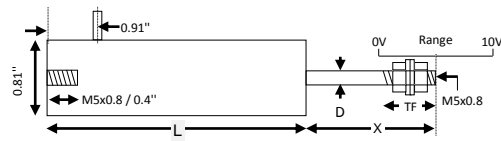
DCTH100/1431 to
DCTH400/1431

DCC025U to DCC0400U

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
DCTH100/1431	5mm (0.2")	<±0.5/±0.25/±0.1	3"	1.3"	7.3oz	0.11oz	0.7"	0.46"
DCTH200/1431	10mm (0.4")	<±0.5/±0.25/±0.1	3.3"	1.3"	7.3oz	0.11oz	0.7"	0.35"
DCTH300/1431	15mm (0.6")	<±0.5/±0.25/±0.1	3.3"	1.3"	7.3oz	0.11oz	0.7"	0.26"
DCTH400/1431	20mm (0.8")	<±0.5/±0.25	3.3"	1.3"	7.3oz	0.11oz	0.7"	0.15"
DCC025U	25mm (1")	<±0.5/±0.25/±0.1	6.9"	1.7"	8oz	0.6oz	0.6"	0.63"
DCC050U	50mm (2")	<±0.5/±0.25/±0.1	8.0"	2.7"	10oz	0.8oz	0.6"	0.87"
DCC100U	100mm (4")	<±0.5/±0.25/±0.1	12.5"	3.2"	13oz	1.3oz	0.6"	0.63"
DCC150U	150mm (6")	<±0.5/±0.25/±0.1	16.9"	4.7"	1.1lb	1.9oz	0.6"	1.14"
DCC200U	200mm (8")	<±0.5/±0.25/±0.1	18.7"	5.2"	1.4lb	2.5oz	0.6"	0.63"
DCC300U	300mm (11.8")	<±0.5/±0.25	26.2"	7.2"	1.9lb	3.5oz	0.6"	0.63"
DCC400U	400mm (15.7")	<±0.5/±0.25	33.7"	10.2"	2.8lb	4.9oz	1.2"	1.06"

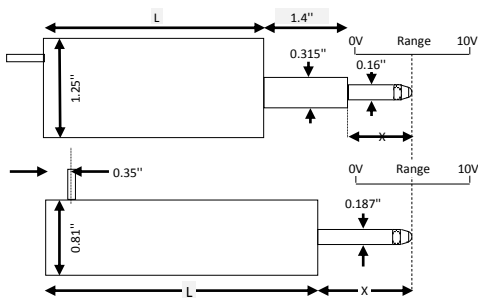
Captive guided version.



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
DCC025C	25mm (1")	<±0.5/±0.25/±0.1	7.6"	1.5"	0.187"	12oz	0.6"	0.39"	0.47"
DCC050C	50mm (2")	<±0.5/±0.25/±0.1	8.7"	2.5"	0.187"	14oz	0.6"	0.51"	0.39"
DCC100C	100mm (4")	<±0.5/±0.25/±0.1	13.2"	3.0"	0.187"	1.1lb	0.6"	0.39"	0.55"
DCC150C	150mm (6")	<±0.5/±0.25/±0.1	17.6"	4.5"	0.187"	1.4lb	0.6"	0.94"	0.6"
DCC200C	200mm (8")	<±0.5/±0.25/±0.1	19.4"	5.0"	0.187"	1.7lb	0.6"	0.31"	0.6"
DCC300C	300mm (11.8")	<±0.5/±0.25	26.9"	7.0"	0.187"	2.3lb	0.6"	0.47"	0.67"
DCC400C	400mm (15.7")	<±0.5/±0.25	34.4"	10.0"	0.187"	3.2lb	1.3"	0.87"	0.98"
DCC500C	500mm (19.7")	<±0.5/±0.25	42.0"	12.0"	0.187"	3.7lb	1.1"	1.34"	1.38"
DCC760C	760mm (29.9")	<±0.5	58.0"	16.0"	0.187"	4.9lb	0.8"	0.51"	0.51"
DCC940C	940mm (37.0")	<±0.5	68.5"	20.0"	0.236"	5.8lb	1.1"	0.20"	1.30"

Spring return version.



DCTH100AG/1431 to
DCTH400AG/1431

DCC025A to DCC150A

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
DCTH100AG/1431	5mm (0.2")	<±0.5/±0.25/±0.1	3.3"	0.5"	7.8oz	4oz.	8.5oz/inch	0.09"	0.05"
DCTH200AG/1431	10mm (0.4")	<±0.5/±0.25/±0.1	3.3"	0.5"	7.8oz	4oz.	7.1oz/inch	0.01"	0.05"
DCTH300AG/1431	15mm (0.6")	<±0.5/±0.25/±0.1	3.3"	0.7"	7.8oz	5oz.	5.8oz/inch	0.06"	0.05"
DCTH400AG/1431	20mm (0.8")	<±0.5/±0.25	3.3"	0.9"	7.8oz	6oz.	7.2oz/inch	0.05"	0.05"
DCC025A	25mm (1")	<±0.5/±0.25/±0.1	7.2"	1.5"	8oz	4.6oz	2.0oz/inch	0.04"	0.51"
DCC050A	50mm (2")	<±0.5/±0.25/±0.1	8.3"	2.5"	10oz	7.2oz	3.0oz/inch	0.12"	0.39"
DCC100A	100mm (4")	<±0.5/±0.25/±0.1	12.8"	3.0"	14oz	6oz	1.8oz/inch	0.31"	0.55"
DCC150A	150mm (6")	<±0.5/±0.25/±0.1	17.2"	4.5"	1.1lb	1lb	3.2oz/inch	0.59"	0.59"

Specification

Excitation/supply (acceptable)	12V to 36V
Output	4-20mA (4mA = inward full scale)
Output load	(Vs-11) x 50 .Ohms
Output ripple	50uA (peak-to-peak)
Electrical output bandwidth	250Hz
Temperature coefficient (span)	±0.017% F.S. /°F (typical)
Operating temperature range	14°F to 158°F
Electrical termination	6.6ft (integral cable) Longer available to order.

Pressure
Position
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Instrumentation
Special Custom Designs



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. All dimensions and specifications are nominal.

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