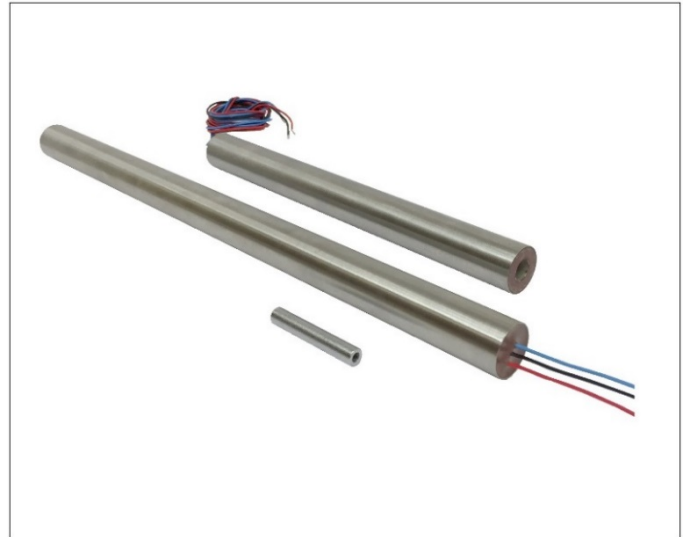


Series 500

All Positive DC-DC LVDTs

The Series 0500 DC-DC LVDTs are designed with an internal 3kHz oscillator and a demodulated output (available in 0-5VDC or 0-10VDC). The transducer has reverse polarity protection, shares a common ground and can be operated with a 13.5-20VDC input voltage. Designed with an offset stroke, the core can travel in an all-positive direction ranging from 0-0.25" to 0-20". As the core is displaced axially, the demodulated output will be directly proportional to the displacement. With an all-positive output, this LVDT is perfect for data acquisition.



KEY FEATURES

Ranges from 0-0.25" to 0-20"	Convenient DC-DC operation
Non-linearity $\leq \pm 0.25\%$	Input VDC Excitation ranges 13.5-20V

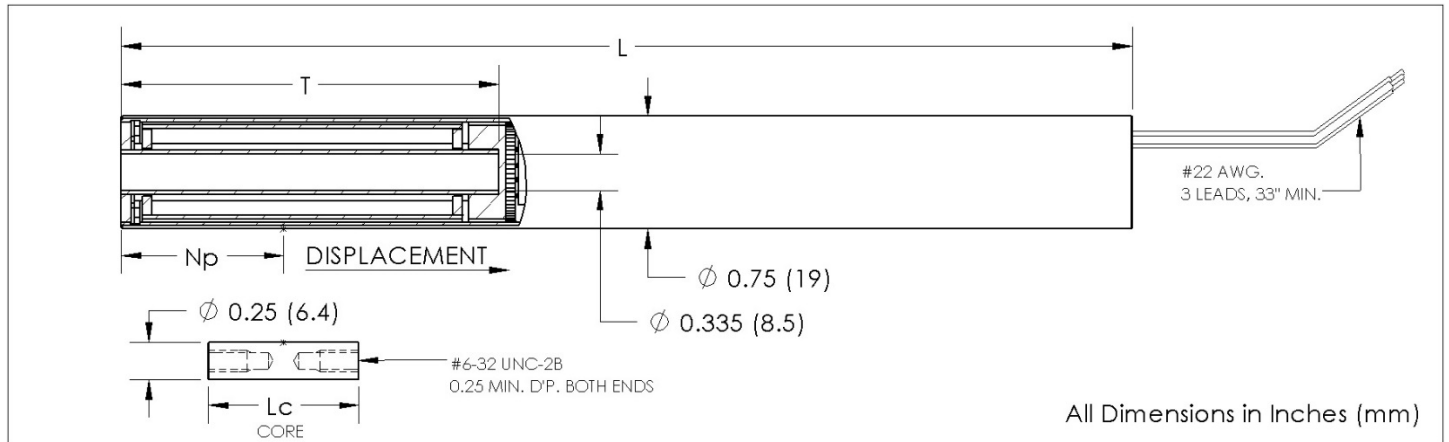
SPECIFICATIONS - MECHANICAL

*MODEL	FULL STROKE Inches (mm)	BODY LENGTH, L, Inches (mm)	NULL POSITION, Np, Inches (mm)	TOTAL DEPTH, T, Inches (mm)	CORE P/N	CORE LENGTH, Lc, Inches (mm)	CORE MASS Grams
0500-0000	0.250 (6.4)	5.90 (149.9)	1.075 (27.31)	2.50 (63.5)	C005-0108	1.000 (25.4)	5.1
0501-0000	0.500 (12.7)	5.90 (149.9)	0.950 (24.13)	2.50 (63.5)	C005-0108	1.000 (25.4)	5.1
0502-0000	1.000 (25.4)	6.65 (168.9)	1.075 (27.31)	3.25 (82.55)	C005-0108	1.000 (25.4)	5.1
0503-0000	2.000 (50.8)	7.90 (200.7)	1.200 (30.48)	4.50 (114.3)	C005-0113	1.250 (31.8)	6.6
0504-0000	4.000 (101.6)	10.90 (276.9)	1.700 (43.18)	7.50 (190.5)	C005-0107	1.500 (38.1)	8.1
0505-0000	6.000 (152.4)	13.40 (340.4)	1.950 (49.53)	10.00 (254)	C005-0106	1.900 (48.3)	10.9
0506-0000	10.000 (254)	18.40 (467.4)	2.450 (62.23)	15.00 (381)	C005-0105	2.500 (63.5)	14.7
0507-0000	15.000 (381)	24.90 (632.5)	3.200 (81.28)	21.50 (546.1)	C005-0104	4.000 (101.6)	24.5
0508-0000	20.000 (508)	31.40 (797.6)	3.95 (100.33)	28.00 (711.2)	C005-0103	5.500 (139.7)	34.4

*All models are fed input VDC and can be configured to output either 0-5VDC or 0-10VDC. The blank "_" digit in the model number will be either:
1 for 0-5VDC output
2 for 0-10VDC output

NOTE: CIRCUITRY WITHIN THE UNIT MAY CAUSE LEAD-END HOUSING TO BE WARM TO THE TOUCH.

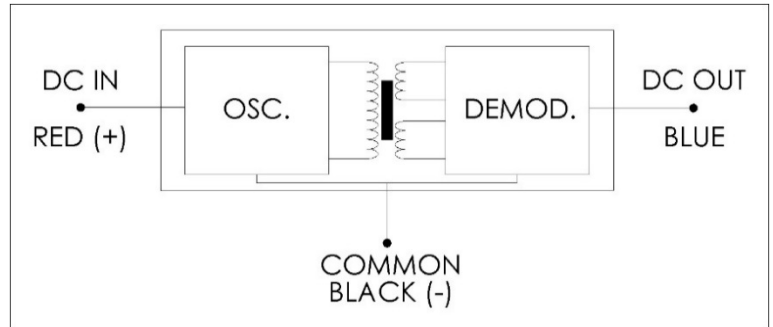
DIMENSIONAL DIAGRAM



SPECIFICATIONS - ELECTRICAL

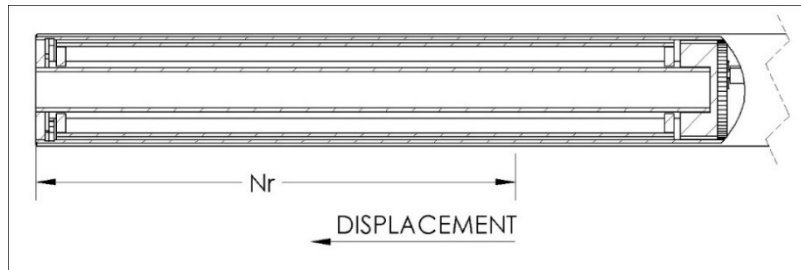
NON-LINEARITY	≤ ± 0.25% FS (Best Fit Straight Line)
INTERNAL CARRIER FREQUENCY	3.0kHz
INPUT VOLTAGE	13.5 VDC Min., 20 VDC Max.
INPUT CURRENT	83 mA Max.
OUTPUT	0 to 5VDC or 0 to 10VDC over 13.5-20VDC Input Range
OPERATING TEMPERATURE	10°F to +175°F (-12°C to +80°C)
STORAGE TEMPERATURE	-40°F to +185°F (-40°C to +85°C)
MAX RIPPLE, RMS/VDC	15mV
OUTPUT IMPEDANCE	2kΩ

BLOCK DIAGRAM



REVERSE DISPLACEMENT

The 0500 Series can be configured for reverse displacement; output starting from the lead-end of the transducer. The 050_-_0010 units are otherwise identical to their standard non lead-end output counterpart both electrically and mechanically.



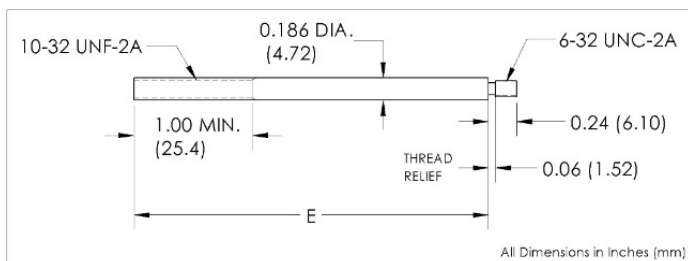
MODEL	FULL STROKE Inches (mm)	NULL POSITION, Nr, Inches (mm)
0500-_0010	0.250 (6.4)	1.325 (33.66)
0501-_0010	0.500 (12.7)	1.450 (36.83)
0502-_0010	1.000 (25.4)	2.075 (52.71)
0503-_0010	2.000 (50.8)	3.200 (81.28)
0504-_0010	4.000 (101.6)	5.700 (144.78)
0505-_0010	6.000 (152.4)	7.950 (201.93)
0506-_0010	10.000 (254)	12.450 (316.23)
0507-_0010	15.000 (381)	18.200 (462.28)
0508-_0010	20.000 (508)	23.95 (608.33)

CORE EXTENSION RODS (Sold Separately)

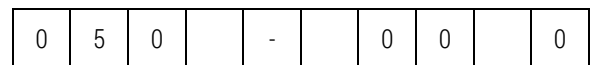
MODEL	EXTENSION ROD, P/N	EXTENSION ROD LENGTH, E, Inches (mm)
0500-_0000	C006-0174	3.00 (76.2)
0501-_0000	C006-0174	3.00 (76.2)
0502-_0000	C006-0175	3.60 (91.4)
0503-_0000	C006-0176	4.70 (119.4)
0504-_0000	C006-0177	7.20 (182.8)
0505-_0000	C006-0178	9.30 (236.2)
0506-_0000	C006-0179	13.70 (348.0)
0507-_0000	C006-0180	19.00 (482.6)
0508-_0000	C006-0181	24.20 (614.7)

The recommended core extension rods are made of nonmagnetic stainless steel and are sized to allow the transducers to operate over their full range. Extension rods from models with longer strokes may be

used to facilitate installation. Using extension rods shorter than recommended may reduce the LVDT's usable measurement range.



ORDERING INFORMATION



STROKE	OUTPUT	DISP. DIRECTION
[0] 0-0.25"	[1] 0-5VDC	[0] Starting at non-lead end
[1] 0-0.50"	[2] 0-10VDC	[1] Starting at lead end
[2] 0-1.00"		
[3] 0-2.00"		
[4] 0-4.00"		
[5] 0-6.00"		
[6] 0-10.00"		
[7] 0-15.00"		
[8] 0-20.00"		