

LCIT Series

Hermetically Sealed

DESCRIPTION

The **LCIT series** is based on a patented linear position sensor design that features all of the benefits of current LVDT inductive technology, but at a significantly lower cost.

The proprietary coil and electronics design of the LCIT has allowed Schaevitz to dramatically increase the frequency response without increasing noise, and lower the mass of the core. Making the sensor ideal for dynamic applications, but is also within the price range of a standard potentiometer.

Like an LVDT, the new sensors are also non-contacting, and have no moving parts, thus, reducing the wear while offering excellent resolution and repeatability characteristics.

Available with strokes from 0.25 in. to 6.0 in. and featuring linearity of 0.25%, the LCIT can be offered in a wide range of custom configurations, including a design that allows the moving part itself to be the spoiler.



FEATURES

- ◆ Linearity 0.25% of FS or better
- ◆ CE-TBD
- ◆ Integrated signal conditioning
- ◆ Rugged stainless steel construction

APPLICATIONS

- ◆ General
- ◆ Instrumentation
- ◆ Tool position
- ◆ Valve position

specifications

Input Voltage	7-36vdc, 20 mA
Operating Temperature	
Range	32°F to 160°F (-40°C to 85°C)
Survival Temperature	
Range	-65°F to 200°F (-55°C to 95°C)
Output Voltage	0.5 to 4.5VDC
Ripple	Less than 10 mV rms
Linearity	0.25% full range
Frequency Response	-3db@1kHz
Stability	0.125% full scale
Temperature—Coefficient	
of Scale Factor	±500 PPM/Deg. C
Shock Survival	250 g for 11 milliseconds
Vibration Tolerance	10 g up to 2 kHz
Coil Form Material	High density, glass-filled polymer
Housing Material	AISI 400 series stainless steel
Lead Wire	4 conductor, 28 AWG, stranded copper, 12" long
EMC	TBA
Output Impedance	Less than 1 ohm

The Benefits of LVDT Technology, Without the Cost In the new LVDT line, the conventional ferromagnetic core on an LVDT has been replaced with a low-cost conductive spoiler and cost-effective coil design that requires only a few turns of material.

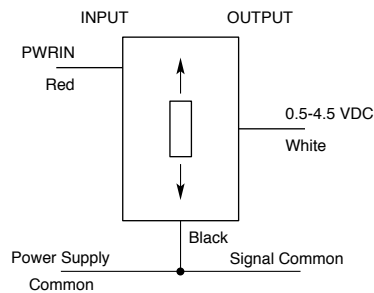
LCIT Series

performance and electrical specifications¹

LCIT Series Model Number	Nominal Linear Range		Scale Factor		Response -3 dB
	inches	mm	V/inch	V/mm	Hz
250 LCIT	±0.125	±3.0	16	1.629	1KHz
500 LCIT	±0.250	±6.0	8	0.315	1KHz
1000 LCIT	±0.500	±12.5	4	0.157	1KHz
2000 LCIT	±1.000	±25	2	0.018	1KHz
4000 LCIT	±2.000	±50	1	0.039	1KHz
6000 LCIT	±3.000	±75	0.66	0.026	1KHz

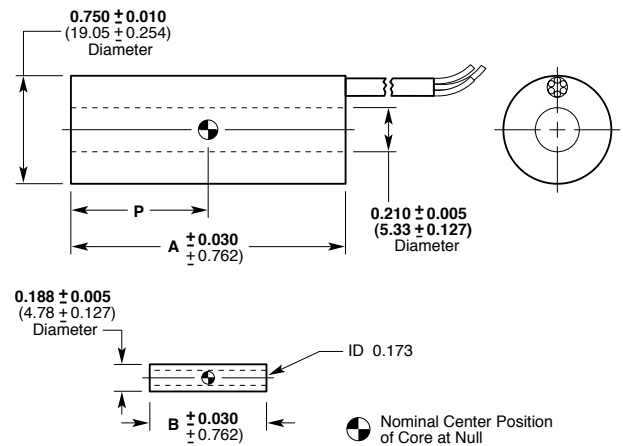
¹All calibration is performed at room ambient temperature.

wiring



dimensions

in (mm)



mechanical specifications

LCIT Series Model Number	Body gm	Weight Core gm	Dimensions					
			A (Body)		B (Spoiler)		P	
			in	mm	in	mm	in	mm
250 LCIT	40	<1	2.6	66	0.85	21.5	1.3	33
500 LCIT	40	<1.5	2.6	66	1.30	30.5	1.3	33
1000 LCIT	50	<2	3.6	91.5	1.50	38	1.8	46
2000 LCIT	70	<2	5.6	142	2.70	68.5	2.8	71
4000 LCIT	TBD	TBD	10.4	244	5.00	119.5	5.2	122
6000 LCIT	TBD	TBD	13.6	345.5	6.70	170	6.8	173