

AUTHORIZED DISTRIBUTOR



FEATURES

- ٠ Excellent price/performance ratio
- Single ended DC operation
- ٠ High frequency response
- ٠ Shock and vibration resistant
- ٠ AISI 300 Series stainless steel housing
- ٠ Calibration certificate supplied with each unit

APPLICATIONS

- OEM volume, cost sensitive applications
- Dynamic measurements ٠
- ٠ Tool position
- Punch presses / metal stamping ٠
- Valve position
- X-Y table position

LCIT SERIES

OEM Linear Position Transducer

SPECIFICATIONS

- Low cost, DC operated
- Non-contacting technology
- +0.5 to +4.5VDC output
- Stroke ranges from ±0.125 to ±2 inches
- 0.25% linearity
- High 1kHz frequency response
- Low mass spoiler
- Stainless steel housing

The LCIT Series DC operated linear position transducers are based on a patented design that features all of the benefits of current LVDT inductive technology, but at a significantly lower cost. Utilizing a simplified coil design and a low-mass conductive spoiler which replaces the traditional ferromagnetic core, the LCIT bridges the gap between price and performance for volume applications.

Like in an LVDT, there is no physical contact between the movable spoiler and the coil structure, thus making the LCIT a frictionless device while offering excellent resolution and repeatability characteristics. The high frequency response of the electronics and the low mass of the spoiler make the LCIT sensor ideal for dynamic applications.

Operating on a wide range of supply voltages (+7 to +36VDC), the LCIT Series delivers an extremely linear and low noise +0.5 to +4.5VDC output. A rugged stainless steel housing and solid internal construction ensures excellent tolerance to shock and vibration.

SENSOR SOLUTIONS /// LCIT Series Rev 7



Germany/Austria/Switzerland Benelux info@althen.de

France

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07/2017

Sweden

PERFORMANCE SPECIFICATIONS

ELECTRICAL SPECIFICATIONS									
Parameter		LCIT 250	LCIT 500	LCIT 1000	LCIT 2000	LCIT 4000			
Stroke range		0.25 [6.35]	0.5 [12.7]	1 [25.4]	2 [50.8]	4 [101.6]			
Sensitivity, VDC/inch [VDC/mm]		16 [0.63]	8 [0.31]	4 [0.16]	2 [0.08]	1 [0.04]			
Input voltage		+7 to +36VDC							
Line regulation		1mV/VDC maximum; 0.2mV/VDC typical							
Input current		20mA maximum; 15mA typical							
Output voltage		+0.5 to +4.5VDC (Increases when the core is displaced towards the lead-wires)							
Output @ null		+2.5 VDC							
Non-linearity		±0.25% of FR maximum							
Output ripple	le 10mVRMS maximum								
Stability	0.125% of FSO								
Temp. coefficient of sensitivity		0.028%/ºF [0.05%/ºC]							
Output impedance		1 Ohm maximum							
Frequency response		1,000 Hertz @ -3dB							
ENVIRONMENTAL SPECIFICATIONS & MATERIALS									
Operating temperature	-13°F to +185°F [-25°C to +85°C]								
Survival temperature	-67°F to +257°F [-55°C to +125°C]								
Shock survival	250 g (11ms half-sine)								
Vibration tolerance	10 g up to 2kHz								
Housing material	AISI 300 Series stainless steel								
Spoiler (core) material	Aluminum Important: Only connect non-conductive extension rods to the spoiler;								
	materials such as plastics or fiberglass are acceptable.								
Electrical connection	3 lead	wires, 28AWG, stra	inded copper, 12 i	nches [0.3 meter]	long				
IEC 60529 rating	IP61								

Notes:

All values are nominal unless otherwise noted

Dimensions are in inch [mm] unless otherwise noted

FR: Full Range is the stroke range, end to end; FR=S for 0 to S stroke range

FSO (Full Scale Output): Largest absolute value of the outputs measured at the ends of the range

WIRING INFORMATION



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MECHANICAL SPECIFICATIONS

Parameter	LCIT 250	LCIT 500	LCIT 1000	LCIT 2000	LCIT 4000
Main body length "A"	2.60 [66.0]	2.60 [66.0]	3.54 [89.9]	5.54 [140.7]	10.37 [263.4]
Spoiler length "B"	0.85 [21.6]	1.30 [33.0]	1.50 [38.1]	2.70 [68.6]	5.00 [127.0]
Center of spoiler position at null "P"	1.30 [33.0]	1.30 [33.0]	1.77 [45.0]	2.77 [70.4]	5.19 [131.8]
Body weight, oz [gram]	1.4 [40]	1.4 [40]	1.8 [50]	2.5 [70]	4.6 [130]
Core weight, oz [gram]	0.04 [1]	0.05 [1.5]	0.07 [2]	0.07 [2]	0.14 [4]



Dimensions are in inch [mm]

ORDERING INFORMATION

Description	Model	Part Number		Description	Model	Part Number
0.25 inch LVDT	LCIT 250	02520000-000		2 inch LVDT	LCIT 2000	02520003-000
0.5 inch LVDT	LCIT 500	02520001-000		4 inch LVDT	LCIT 4000	02520004-000
1 inch LVDT	LCIT 1000	02520002-000				
	DC power supply $(15)/DC$		PSD 40-15	02201330-000		
ACCESSORIES					1 3D 40-13	02231003-000
		Mounting Block				04560950-000

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