

## DESCRIPTION

The model LDC is an open-loop Hall-effect current transducer. Hall-effect sensors detect the magnetic flux created by current flowing in a conductor. The LDC is designed to accurately measure low level, dc, currents even after high current transients without degaussing or circuit reset. Signal conditioning provides an output proportional to the amplitude of the measured current.

Ease of installation is provided by the compact, hinged, split-core package which snaps around the measured conductor. An optional mounting bracket allows the unit to be secured in place. A ruggedized option (fully potted) enables the unit to survive in harsh environments.



## SPECIFICATIONS

### INPUT

Current Range ..... See Table .....A dc  
 Over-range..... 10 x rating  
 Over-range..... (w/o damage) .....600A dc

### OUTPUT

Scaling ..... See Table  
 Loading ..... 5V or 10V Output .....  $\geq 2k\Omega$   
 1mA Output ..... 0-10k $\Omega$   
 4-20mA or 4/12/20mA Output..... 0-300 $\Omega$   
 Response Time (10% to 90% of input step).....  $\leq 5ms$

**ACCURACY** (setpoint, linearity @ 25°C).....  $\pm 1.0\%$  F.S  
 Residual offset ..... typical,  $\leq 300\mu A/A$

### TEMPERATURE

Operating Range..... -30 to +70°C  
 Effect.....  $\pm 0.025\%/^{\circ}C$

### DIELECTRIC TEST

Window Conductor/Mounting Bracket to  
 Output/Case/Instrument Power..... 3000Vdc  
 Output to Case/Instrument Power..... 500Vdc

**INSTRUMENT POWER** ..... See Table

### PHYSICAL

Operating Humidity ..... 0-95%, non-condensing  
 Weight.....  $\leq 0.75$  lb  
 Cable termination..... #8 (5/32") spade lugs

### ENCLOSURE

Material ..... Noryl SE1X, Black  
 Mounting Bracket..... Brass

**OPTIONS** ..... See Table

**EXAMPLE ORDERING INFORMATION**  
**(LDC-005X5-12-F)** 0- $\pm 5$ A dc Input, 0- $\pm 5$ V dc Output,  
 12V dc Instrument Power with Mounting Bracket

## MODEL NUMBER

LDC – **XXX AA** – **BB** – **CCC**

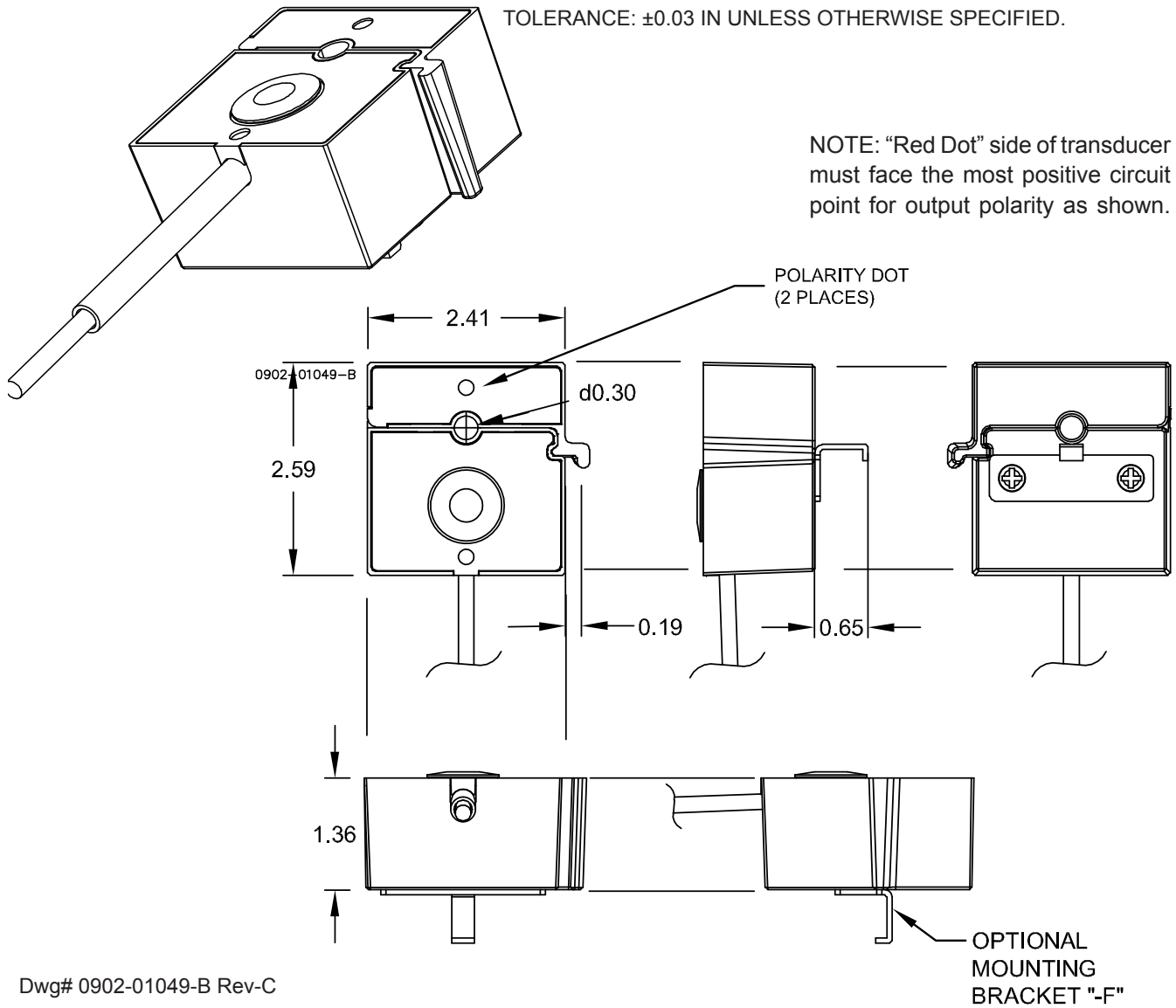
Choose one, two or all three options.

XXX	INPUT RANGE	AA	Output Type	BB	INSTRUMENT POWER	CCC <sup>(2)</sup>	OPTIONS
005	0- $\pm 5$ A dc	B	0- $\pm 1$ mA dc	05	5V dc $\pm 10\%$ , 1W	F	Bracket
010	0- $\pm 10$ A dc	D	0- $\pm 10$ V dc	12	12V dc $\pm 10\%$ , 1W	H	Hight Accuracy <sup>(3)</sup>
020	0- $\pm 20$ A dc	E	4-20mA dc <sup>(1)</sup>	15	15V dc, $\pm 10\%$ , 1W	R	Ruggedized
025	0- $\pm 25$ A dc	EM	4/12/20mA dc	24	24V dc, $\pm 10\%$ , 1W		
050	0- $\pm 50$ A dc	X5	0- $\pm 5$ V dc	48	48V dc, $\pm 10\%$ , 1W		

Note 1. 4-20mA dc outputs measure positive inputs only.  
 Note 2. Model suffixes are in alphanumeric order, e.g. - FHR.  
 Note 3. Setpoint, Linearity, Offset, Temperature Effect  $\pm 1\%$  F.S.

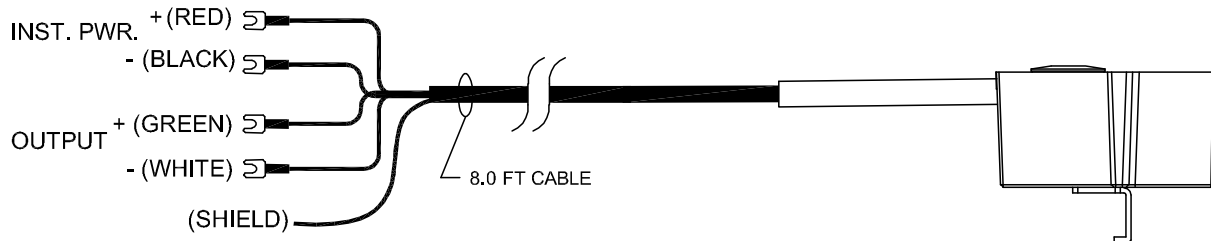
**CASE DIMENSIONS**

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED  
TOLERANCE: ±0.03 IN UNLESS OTHERWISE SPECIFIED.



**CONNECTIONS**

NOTE: RECOMMENDED CABLE TIES (CTT60R)  
TIGHTEN CABLE TIES 40-50LBS (180-220 N) TENSILE.



Cable Termination: #8 (5/32) Spade Lugs.

Dwg# 0902-01049-B Rev-C

**INSTALLATION INSTRUCTIONS**

1. Installation should be performed by qualified electricians only!
2. Make sure electrical service is disconnected before making any electrical connections.
3. Branch circuit protection is required to be provided in accordance with the National and Local codes of the inspection authority.
4. Route wires as required and secure to terminals per connection diagram on this sheet and on the unit.
5. Transducers are suitable for installation on 600Vac lines.
6. To prevent contact with live circuits, when installed on a bare bus bar, the transducer is required to be mounted in an enclosure that requires the use of a tool for access. When installed on an insulated cable this second enclosure is not required.

**OPERATION INSTRUCTIONS**

1. This unit is intended for indoor/outdoor use at altitudes up to 2000 meters.
2. Transient overvoltages according to Installation Category (overvoltage category) II, pollution Degree 2.
3. If cleaning of the exterior surface is necessary, de-energize all services of supply (both measuring and instrument power circuits) and brush with a soft brush or blow off with low-pressure air. Use appropriate eye protection. Not suitable for hose-down cleaning.
4. Maximum relative humidity 95 percent for temperatures up to 31°C decreasing linearly to 50 percent relative humidity at 70°C.
5. Maximum operating temperature range is -30°C to 70°C.



UL approved for USA and Canada



Direct Current

**WARRANTY STATEMENT**

Ohio Semitronics Inc. warrants this unit to be free of defects in material and workmanship for a period of five years from date of shipment. This unit must not be used in any manner other than as specified in this document.