

**LION PRECISION LRD3100 LABEL SENSOR  
INSTRUCTION SHEET**

**M014-5760.10**

**Introduction:**

The LION PRECISION LRD3100 LABEL SENSOR is an electronic sensor used to monitor label registration and/or count labels. The sensor indicates the leading or trailing edge of the label passing through the sensor. Gaps between labels of less than 2.5 mm (0.1") may not work correctly; labels with no gap and metal labels will not be detected at all.

**Mounting the Sensor**

Mount the sensor so the web passes through the gap of the sensor and rides against the mounting plate. The label must be aligned with the sensing area marked [\_\_SENSOR\_\_]. Mount the sensor perpendicular to the web. In the case where small labels (3.8cm/1.5") are used, the label must be centered under the sensing area.

**Electrical Connections**

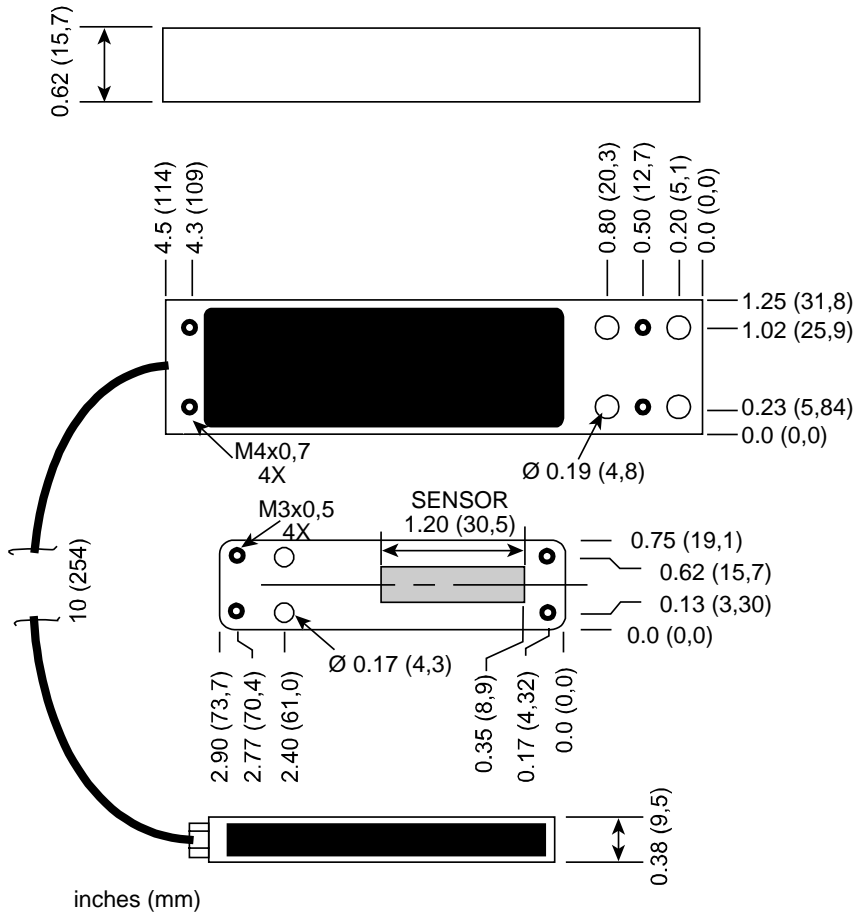
- Be sure all unused wires are insulated from each other and any other conductive object.
- All power **must** be off when installing the sensor.
- **WARNING:** DC Ground is connected to sensor body.
- Brown wire must be connected to +V or Ground for reliable operation.

WIRE COLOR	SIGNAL	Notes
RED	+VDC Power In	+11-30VDC, +24VDC optimum, 50mA
BLACK	GND (Case)	
GREEN	NPN Output	Open Collector, 150mA sinking maximum, +90V maximum
BLUE	PNP Output	Open Collector, 150mA sourcing maximum, source from +Vin
BROWN	Output Polarity	Inverts output polarity. Polarity is also affected by direction of label/web movement (see figure 2). Must be connected to +V or GND.
SHIELD	Cable Shield	Ground connection is recommended but not required

**Adjusting Gain and Zero**

1. Remove all material from sensor.
2. Turn Gain Adjust four (4) turns counter clockwise.
3. Turn Gain Adjust two (2) turns clockwise.
4. Turn Zero Adjust until Zero LED just turns on. ( if LED is on, rotate counter clockwise, if LED is off rotate clockwise)
5. Insert material into sensor. Move material through sensor and observe the edge LED. If the Edge LED flashes between gap and label, setup is complete. If LED fails to flash, turn Gain Adjust clockwise while moving labels through, until the LED flashes and continue turning ½ turn. Sensor is now ready to run.

# LRD DIMENSIONAL DATA -- FIGURE 1



# LRD SIGNAL OUTPUT DIAGRAM -- FIGURE 2

