



## Description

The LION PRECISION LRD6110 LABEL REGISTRATION AND DETECTION SYSTEM is an electronic capacitive sensor used to monitor label registration and/or count labels. The sensor will output a signal indicating the leading or trailing edge of the label as it passes through the sensor.

## Connecting to the Sensor

### Warnings:

Sensor body is connected to Ground.

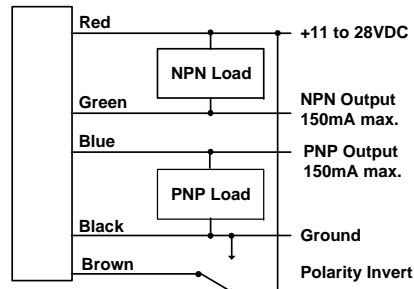
Unused wires must be insulated from contact with other objects.

All power must be off when installing the sensor.

Brown wire (Output Polarity) must be connected to +V or Ground for reliable operation.

Wire Color	Connection	Notes
Red	+Vin (11-28VDC)	50mA max.
Black	Ground	Connected to sensor body
Green	NPN Output	150mA max.
Blue	PNP Output	150mA max.
Brown	Output Polarity (light/dark switching)	+V – Dark Switching (NC) Ground – Light Switching (NO)

Warning: Brown wire must be connected to +V or Ground for reliable operation.



## Specifications

<b>Power supply</b>	Voltage	11-28 VDC (reverse polarity protected)
	Current	50mA
<b>Response time</b>	on or off	20µs max
	Switching Frequency	10kHz max
<b>Output</b>	Output Current (sinking or sourcing)	150mA max (overload protected)
	Switching output	PNP or NPN, dark or light switching
<b>Temperature</b>	Operating Range	40°F to 140°F (4°C to 60°C)
<b>Protections</b>	Supply	Inverse Polarity Protection
	Switching output	Short Circuit and Overload Protection

## Setup Procedure

1. Web must remain in contact with the mounting plate.
2. Label must pass under the [-SENSOR-] indicator.
3. Small labels should be centered under the [-SENSOR-] indicator.
4. When properly setup, the lights will move between WEB and LABEL. The lights in the "X" region should only light briefly during the transition between WEB and LABEL regions.

## Sensor Setup

1. Turn Span at least four turns counter-clockwise, then two turns clockwise (this is the mid-point of the adjustment range)
2. Place web (liner) only in sensor
3. Adjust Shift until LED #2 is on, then adjust Shift just to the point where LED #1 is on.
4. Slowly move a label gap through the sensor and verify that the indicator lights LED#1 as the gap passes through the sensor. If it does not, adjust Shift as necessary until it does.
5. Setup complete

If the setup does not give reliable results (usually for labels less than 1"), turn Span four turns clockwise (maximum gain) and repeat steps 2-5. It is important that the indicator only cross the "X" region during transition from web to label.

See the LRD6110 setup video at [www.labelsensors.com](http://www.labelsensors.com)

### Notes:

- 1) The LRD6110 may not work reliably with solid foil labels. Some inks, usually black, have a high carbon content. If the label is flood coated (100% coverage) with the ink it may behave like a solid foil label.
- 2) For solid foil labels, use the UltraLRD V2

