

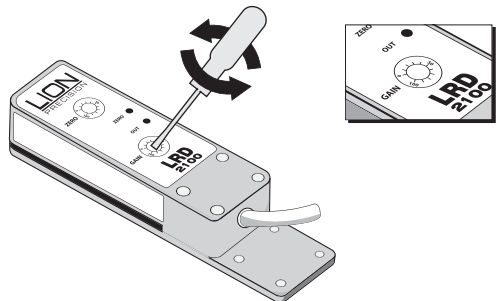
Adjustments when Label Stock Is Changed

Usually None. The basic setting on the previous page (Gain at Midpoint) will work for most labels. Very small labels may require an increase in Gain. If, and ONLY IF, the new labels aren't being detected correctly, use this procedure.

Step 1

Set GAIN to minimum (0)

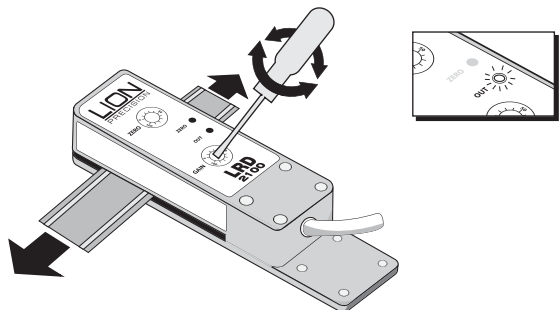
Turn the GAIN button counterclockwise until it points to 0.



Step 2

Adjust GAIN

Move labels through the sensor and increase GAIN until the OUT light just begins to flash as the gap moves through the sensor. Then, turn the dial one additional tick mark. Create some slack in the web and move one gap back and forth through the sensor while adjusting.



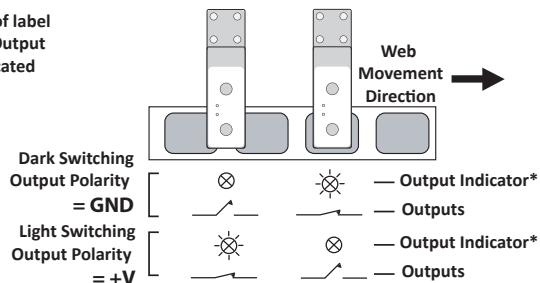
Step 3

No label detected

If the sensor does not detect labels reliably, you may have label materials that require an LRD6300 or LRD8200. Contact your Lion Precision sales representative for more information.

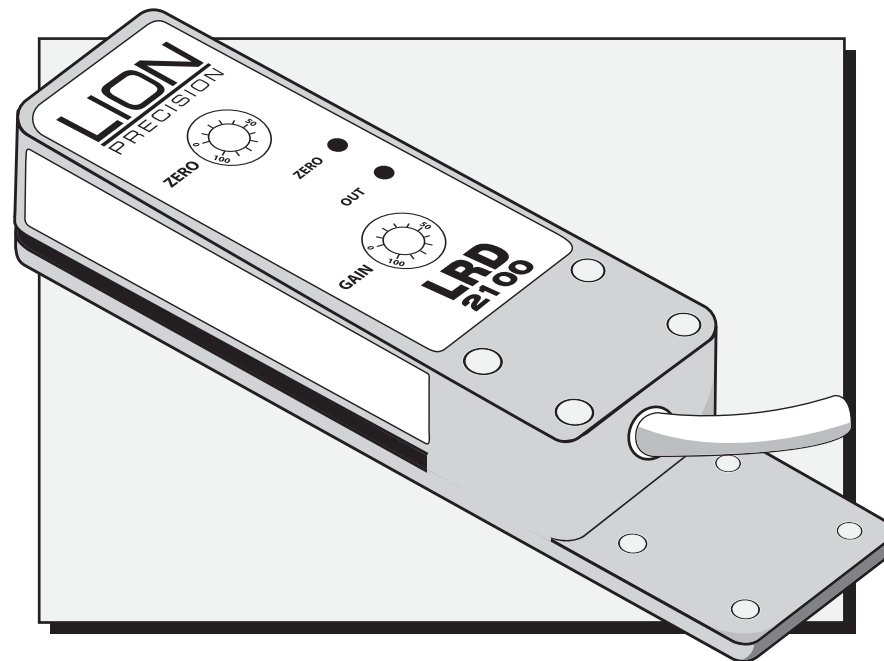
Output and Mechanical Detail

Light/Dark switching is affected by the direction of label movement and the Output Polarity connection. Output descriptions seen here are for web direction indicated in the illustration and are reversed for web movement in the other direction.



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business with Lion Precision.*



USER'S GUIDE

for the

LRD 2100 & LRD 2100C

**Label Sensors
with Single-Turn Adjustments**

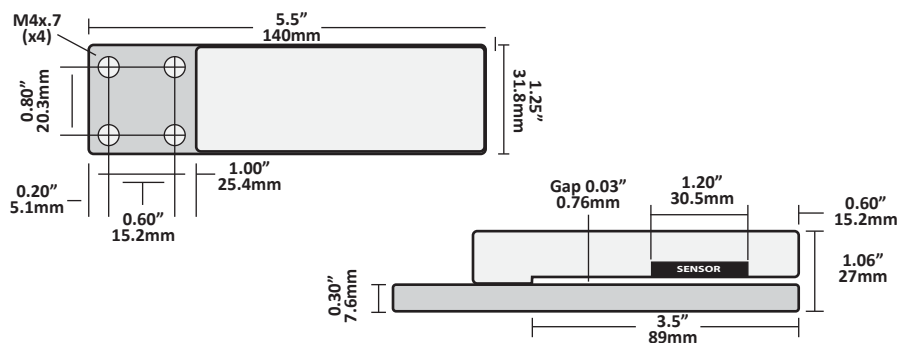
Warnings

Sensor body is connected to Ground. Sensors must not be attached to voltages in excess of 30VRMS or 60VDC. Use of the equipment in any other manner may impair the safety and EMI protections of the equipment. All power must be off when installing the sensor.

Specifications

Power Supply	Voltage	11-28 V $\overline{=}$ (reverse polarity protected)
	Current	50mA
Response time	on or off	20 μ s Max
	Switching Frequency	10kHz Max
Output	Output Current (sinking or sourcing)	150mA Max (overload protected)
	Switching Output	PNP (sourcing) or NPN (sinking) w/ Dark or light switching
Temperature	Operating Range	40° F -140° F (4° C - 60° C)
	Supply	Inverse polarity protection
Protections	Switching Output	Short circuit and overload protection

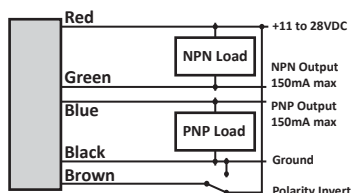
Dimensions



LRD 2100 Wiring

Wire Color	Connection	Notes
Red	Vin (11-28V $\overline{=}$)	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 or Ground See detail on back

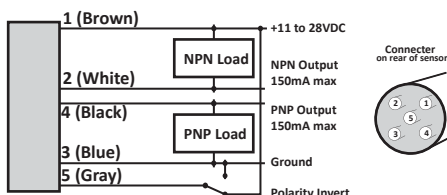
Warning: Brown wire must be connected to +V or Ground for reliable operation



LRD 2100C Wiring

Wire Color	Connection	Notes
1 (Brown)	Vin (11-28V $\overline{=}$)	50mA max
2 (White)	NPN Output	150mA max
3 (Blue)	Ground	Connected to sensor body
4 (Black)	PNP Output	150mA max
5 (Gray)	Output Polarity (light/dark switching)	+V or Ground see detail on back

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

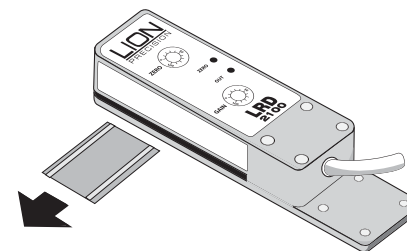


Adjusting the LRD 2100

The adjustments on the LRD 2100 are marked maximum as '100' and the minimum is marked as '0'. Turning the adjustments past the maximum and or minimum will result in damage to the sensor. Adjustments when first installed on a machine are seen below.

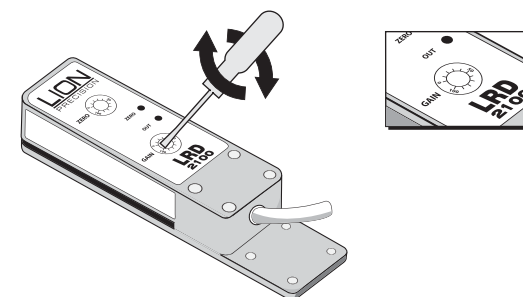
Step 1

Remove all material from sensor



Step 2

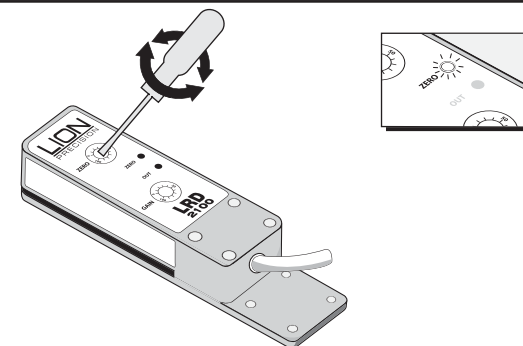
Set GAIN to middle (50)



Step 3

Set ZERO

Turn the ZERO adjustment to where the ZERO light changes between on and off. It is not important whether it is on or off when complete, as long as it is close to where it changes



Step 4

Add label material to sensor

