

**LION PRECISION LRD5100 TEAR STRIP DETECTOR
INSTRUCTION SHEET**

M014-4669.06

INTRODUCTION:

The LION PRECISION LRD5100 is an electronic probe used to monitor the presence of a strip material on a web material. The probe will output a signal when strip material is not present.

Mounting the Probe

Mount the probe so the strip being detected lines up with the line on the sensor labeled "STRIP". The web material must ride against the mounting plate.

Connecting Power and Signal Out

- 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.

The probe can be powered by +11-30VDC; +24VDC is recommended. Connect power to the RED wire, and ground to the BLACK wire. It is recommended the shield wire be connected to ground, but not required since the connection is made inside the probe.

The NPN output is made via the GREEN wire. This is an open collector type output and can sink up to 150 mA and can be pulled-up through a resistor to +90 Volts maximum. Damage to the sensor may occur if this output is connected directly to a power supply.

The PNP output is made via the BLUE wire. This output is an open collector type output and can source up to 150 mA. Also, the PNP POWER IN signal will have to be connected to a power source of the desired high logic voltage.

WIRE COLOR	SIGNAL
RED	+VDC POWER IN
BLACK	GND (CASE)
GREEN	NPN OUTPUT
BLUE	PNP OUTPUT
WHITE	PNP POWER IN
BROWN	NOT USED
SHIELD	CABLE SHIELD

Adjusting Gain and Zero

NOTE: The two adjustments are four turn adjustments. Once at the end of adjustment they will continue to turn but have no effect.

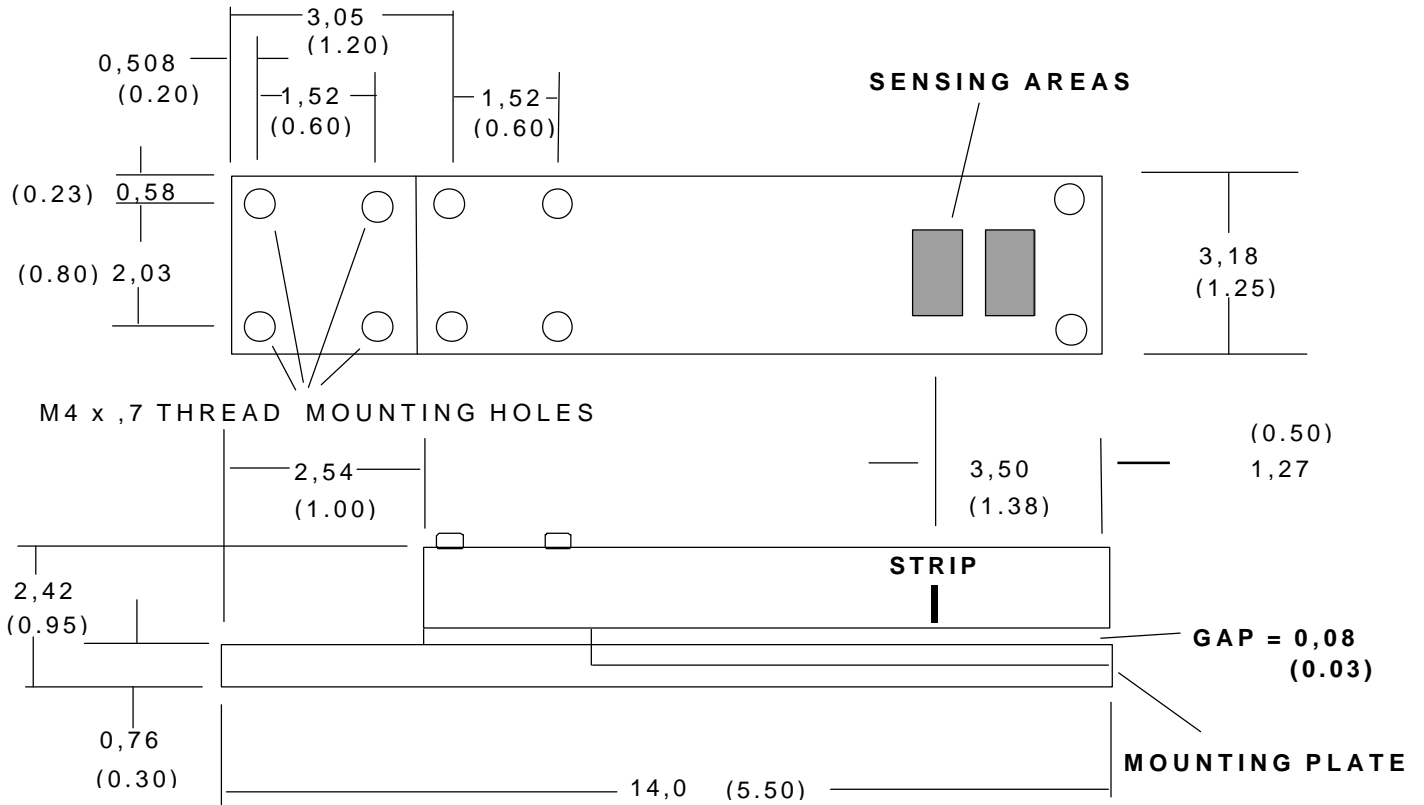
For Non-Metallic Strip Material:

1. With web material placed in the gap of the sensor and the strip properly lined up on the "STRIP" marker, adjust the ZERO control until the ZERO led just comes on or off.
2. With a section of strip material removed, pass the section missing the strip back and forth under the sensor and observe the EDGE led flashing on and off. If this does not occur increase the gain by turning the GAIN control clockwise. Once the EDGE led starts flashing, turn the GAIN control another 1/2 turn.

For Metallic Strip Material:

1. Center the GAIN adjustment by turning it counter-clockwise four turns, then two turns clockwise.
2. With nothing, or web material only (no tear strip) placed in the gap, adjust ZERO until the EDGE led just turns off. Then turn ZERO another 1/2 turn clockwise.
3. Verify proper operation with tear strip present.

LRD DIMENSIONAL DATA -- FIGURE 1



cm (inches)

SIGNAL OUTPUT DIAGRAM -- FIGURE 2

