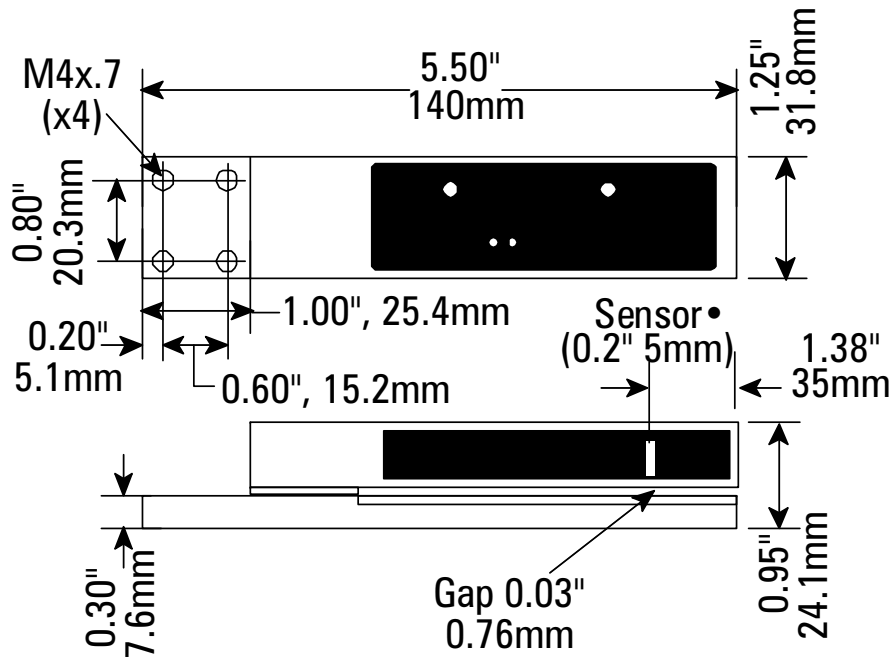
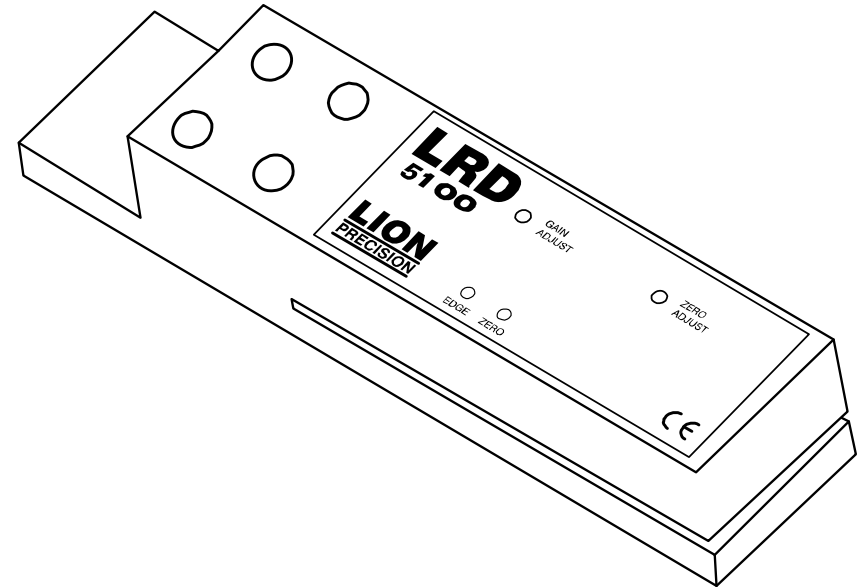


**Mechanical Detail**



**User's Guide**  
for the  
**LRD5100C Tear-Tape Sensor**  
from  
**Lion Precision**



Two-Year Warranty details at: [www.lionprecision.com/warranty.html](http://www.lionprecision.com/warranty.html)

<p><b>Lion Precision</b> 563 Shoreview Park Road St. Paul, MN 55126 651-484-6544 <a href="http://www.lionprecision.com">www.lionprecision.com</a> Document Number: M014-4665.011</p>	<p><b>LION</b> <b>PRECISION</b></p>
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## Description

The LION PRECISION LRD5100C TEAR-TAPE SENSOR is an electronic, capacitive sensor used to monitor the presence on tear-tape on a film base. The sensor's NPN and PNP outputs indicate the presence or absence of the tear-tape.

The sensor works with all types of tear-tape materials on nonmetallic film backing.

## Connecting to the Sensor

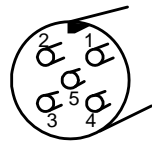
### Warnings:

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.

Wire Color	Connection	Notes
1 (Brown)	+Vin (11-28VDC)	50mA max.
2 (White)	NPN Output	150mA max.
3 (Blue)	Ground	Connected to sensor body
4 (Black)	PNP Output	150mA max.
5 (Gray)	No Connection	



Connector on rear of sensor

## Specifications

<b>Power supply</b>	Voltage	11-28 VDC (reverse polarity protected)
	Current	50mA
<b>Response time</b>	on or off	20 $\mu$ s max
	Switching Frequency	10kHz max
<b>Output</b>	Output Current (sinking or sourcing)	150mA max (overload protected)
	Switching output	PNP or NPN
<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

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

### Setup for nonmetallic tear-tape

1. With web material placed in the gap of the sensor and the tear-tape properly lined up on the "STRIP" marker, adjust the ZERO control until the ZERO light just turns on.
2. Remove a section of tear-tape.
3. Pass the "tear-tape missing" and "tear-tape present" sections back and forth under the sensor. The OUTPUT light (EDGE on some models) should flash at the transitions between missing and present tear-tape. If the EDGE light does not flash at the transitions, turn the GAIN control clockwise until it does.
4. Turn the GAIN control another ½ turn clockwise.

### Setup for metallic tear-tape

1. Center the GAIN control by turning it counter-clockwise four turns, then two turns clockwise.
2. With no material, or web material only (no tear-tape) placed in the gap, adjust ZERO until the EDGE light just turns off.
3. Turn ZERO ½ turn clockwise.
4. Verify proper operation with tear-tape present.

## Output Waveforms

