

## Operation Manual



### Warning

The discrete output must not be connected to outputs from other sensors (i.e. outputs from multiple sensors must not be connected in parallel). Parallel connections may damage sensor output circuitry.

Sensor is not suitable for wash down or hazardous environments; a separate enclosure with the appropriate ratings is recommended for these applications.

#### IMPORTANT:

This product is an accessory or part of a system. Always read and follow the manufacturer's instructions for the equipment before connecting this product. Comply with all applicable codes and safety regulations. Failure to do so may result in damage, injury or death.



The LABL sensor combines small spot size and fast response to achieve high-speed label detection. The LABL is capable of detecting a wide variety of adhesive labels on various backings. The Learn key provides Standard, Thin and Custom Learn. Custom Learn (LABL-2) provides a separate measurement on the gap and on the label to allow for optimal detection of difficult labels.

Status LEDs provide visual indication of teach and error conditions. Key lock mode is available to lock the Learn key. Remote learn input is provided. Light-ON / Dark-ON functionality is provided via the wiring connections (see M8 Connections section).

The sensor provides a discrete output that can be connected for NPN and PNP operation. A PLC can be used to monitor the status of the discrete output signal indicating label or gap presence as required.

### LEARN MODE

The Learn key (or remote Learn input) is used to set the detection level for a specific label during set-up.

#### Standard Learn:

- Place the label gap in the sensor slot using the alignment marks as a reference. For standard paper or foil labels press the Learn key one time.

#### Thin Learn:

- Place the label gap in the sensor slot using the alignment marks as a reference. For thin paper press the Learn key two times.

#### Custom Learn (LABL-2 only):

- Place the label gap in the sensor slot using the alignment marks as a reference. Press the Learn key three times.

- Place the lightest area of the label in the sensor slot using the alignment marks as a reference. Press the Learn key.

Place the label then the gap in the sensor slot to verify that the Yellow LED indicates the presence of the label.

### SPECIFICATIONS

**Light Source:** High intensity IR min.100,000 hours

**Fork Width:** 3 mm

**Min gap/label Size:** 2 mm

**Response Time:**  $\leq 40\mu\text{s}$

**Switching Frequency:** 12.5kHz

**Controls:** Teach-in key

**Light ON/Dark ON Control:** By connections

**Digital Output:** PNP / NPN, 100mA

**Detect Indicator:** Green LED

**2-Press Teach Indicator:** Yellow LED

**Key Lock Indicator:** Red LED

**Fault Indicator:** Flashing Red/Green

**Programming Indicator:** Yellow/green LED

**Data Retention:** EEPROM non-volatile memory

**Dimensions:** 1.5" (38mm) x 3.2" (80mm) x 0.5" (12mm)

**Weight:** 0.21 lbs. (95 g)

**Supply Voltage:** 10 to 30 VDC

**Operating Current:** 40mA, (not including output)

**Short Circuit Protection:** Discrete output

**Overload/Reverse Polarity Protection:** Supply voltage

**Operating Temperature:** -20°C to 55°C

**Storage Temperature:** -20°C to 70°C

**Housing:** Plastic

**Connector:** M8, 4-pin

**Enclosure Protection:** IP65

**Warranty:** 2 year

