

SMARTEYE® **SMARTDot**® LASER SENSOR

Precision Laser Sensor

The **SMARTEYE® SmartDot Laser Sensor** is designed for General Purpose sensing applications, and can also be used for precise, small parts detection at long ranges. The consistently small laser beam is used to detect such things as a tab on a battery, a misaligned or missing bottle cap, or a cross-threaded can lid. The **SmartDot Laser Sensor** is easily aligned, easily set up, and designed for repeatability of performance from sensor to sensor. It is useful in general purpose applications such as a product detector for vision systems, and simple inspection applications. The sensor can also be used in high precision applications for small parts detection, critical identifying feature inspection, and detection of micro electronic packages.

The **SMARTEYE® SmartDot Laser Sensor** has an OLED display providing the kind of visual confirming information which makes setup a breeze, and instills confidence in the user as to the longterm performance of the sensor. Displaying all the necessary information to determine proper setup for maximum up-time was the ultimate deciding factor in including the OLED display in this highly capable sensing device. For any applications, either general purpose, or those requiring small spot precision, the **SmartDot Laser Sensor** from Tri-Tronics should be the first choice.



Features

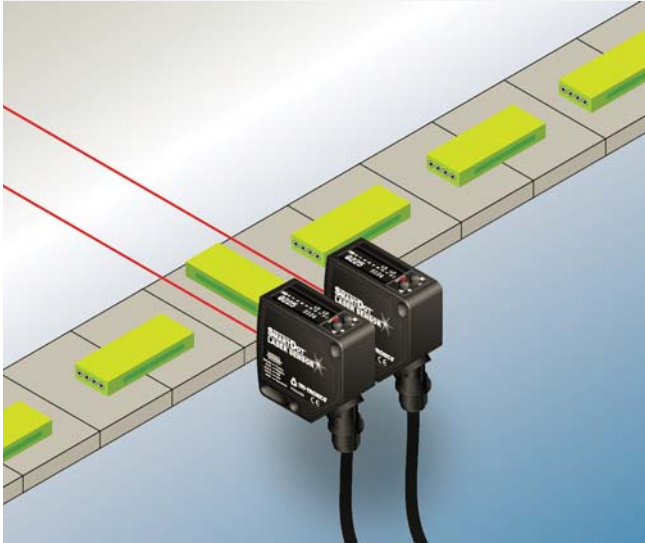
- OLED Graphic Display
- 180° Rotating Connector
- NPN and PNP Outputs
- M12, 5 pin Connector, or Cable
- 240µs Response Time
- Threshold and Set-Point Numeric Graphic
- Timers; On Delay, Off Delay, One Shot
- Sensor Scope Diagnostics
- Built-in Digital Instructions

Benefits

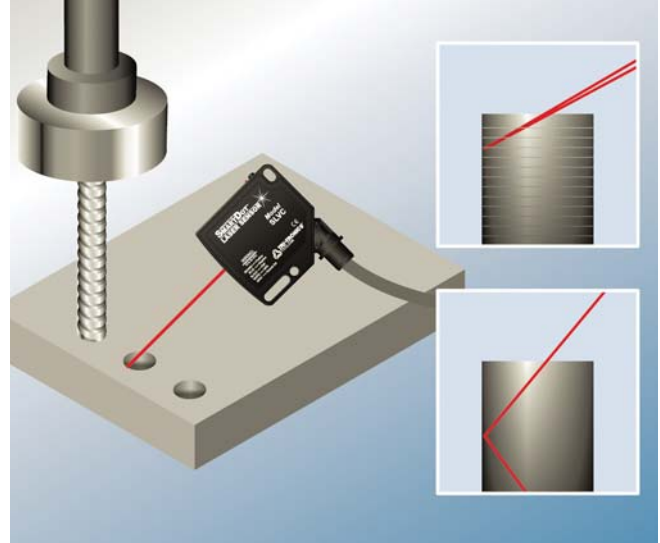
- Easily Align Replacement Sensors
- See Through Tight Spaces at Long Distances
- Easy Setup
- Low Maintenance
- Confident Setup
- Robust and Durable
- High Speed
- Accurate
- Repeatable

Applications

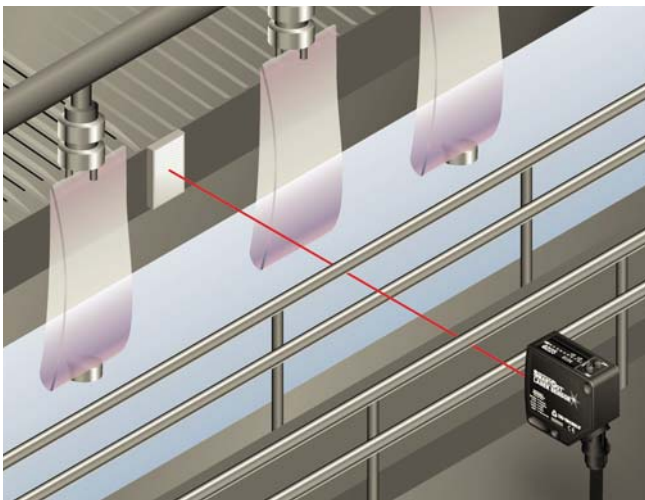
- Edge Detection - Packaging, Wafers, etc.
- Shaft Key Orientation
- Small Parts Detection
- Container Cap Alignment
- Vision System Trigger
- Metal Thread Detection on Machined Parts
- Small Hole Detection at up to 18 Inches



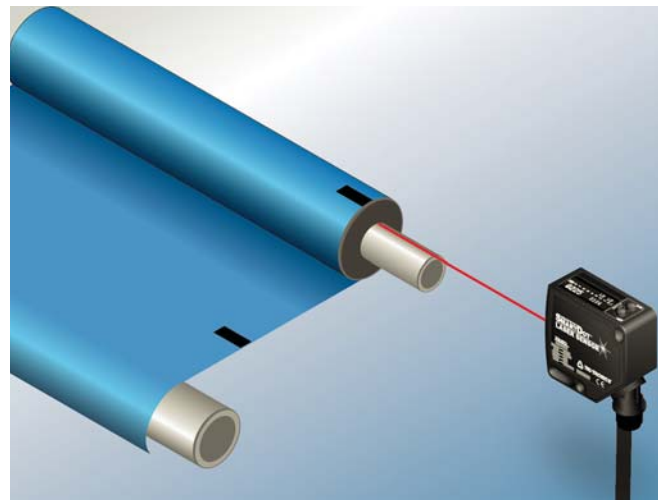
Product Orientation



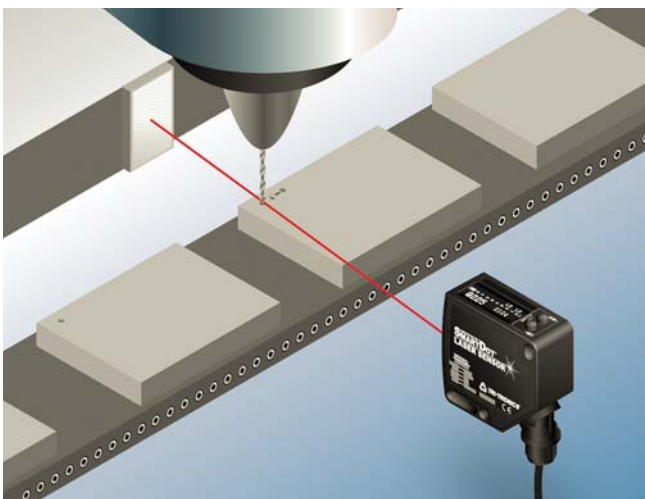
Thread Verification/Inspection



Missing Cap Inspection



End of Roll Sensing



Broken Drill Bit



Small Part Orientation Verification/Inspection

Specifications

SMARTEYE® SMARTDot™
LASER SENSOR

SUPPLY VOLTAGE:

- 10 to 30 VDC
 - Polarity Protected
- Note: For use in Class 2 circuits*

CURRENT REQUIREMENTS:

- 35 milliamps max. at 24VD

OUTPUT TRANSISTORS:

- (1) NPN and (1) PNP sensor output transistors
- Outputs sink or source up to 150 milliamps (current limit)
- All outputs are continuously short circuit protected

REMOTE AUTOSET INPUT:

Selectable: Advanced Options

- NPN Input, Connect to 0VDC
- PNP Input, Connect to 10-30VDC

RESPONSE TIME:

- Light state response = 240 microseconds
- Dark state response = 240 microseconds

LASER LIGHT EXPECTANCY:

- 50,000 hours @ 25°C

LIGHT SOURCE:

- Red Laser: Class 1 or II
- EN 60825-1 (2003)

SPOT SIZE:

- Short Range: .05"X.03" @ 6"(152mm)
- Long Range: .07"X.05" @ 18"(456mm) (Class II Laser)
- Retroreflective: .1"X.1" @ 5'(1.52m) (Polarized)

PUSHBUTTON CONTROL:

- Two push buttons

AMBIENT TEMPERATURE:

- -40°C to 70°C (-40°F to 158°F)

RUGGED CONSTRUCTION:

- Chemical resistant high impact ABS plastic housing
- Waterproof rating: IP68
- Conforms to heavy industry grade CE requirements
- RoHS Compliant

DIMENSIONS:

- Width: 2.037 in (51.73mm)
- Height: 2.005 in (50.9mm)
- Depth: .812 in (20.6mm)



FOCAL DISTANCE:

- Short Range Proximity: 6" (152mm)
- Long Range Proximity: 18" (456mm)
- Retroreflective: 5' (1.520m)

Note: Ranges are determined by optimal beam spot focus. Increased ranges are possible, but are application specific and can not be adequately specified herein.

RoHS Compliant
Product subject to change without notice

Connections and Dimensions

SMARTEYE® SMARTDot®

