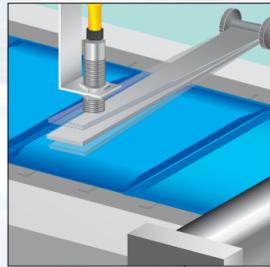


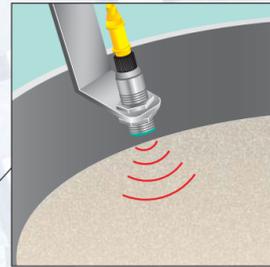
**AS-Interface Safety at Work**

- Monitors status of the safety inputs with one relay
- Network all e-stops, door interlocks, light curtains etc. on one cable
- Significantly simplifies cabling



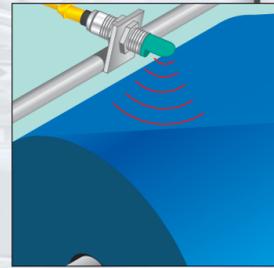
**Empty Pouch Detection**

- Accurately monitors fill levels
- Thousands of housings and outputs available
- Metal-faced inductive sensor withstands impact



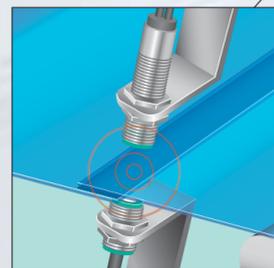
**Level Control**

- Reliably detects granular or liquid substances
- Noncontact, dual-level sensing capability
- Simple pushbutton programming available
- Senses levels over 9 meters



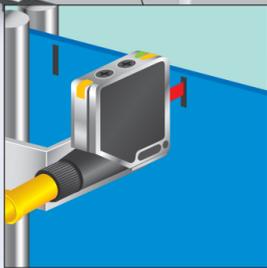
**Low Roll Detection**

- Continually monitors the diameter of web stock
- Sends signal for automatic or manual splicing
- Insensitive to dust & hostile environments
- Color immune
- Continuous & switch outputs



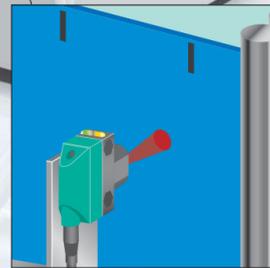
**Splice Detection**

- Reduces waste by identifying web splices
- Accurately detects manufacturer's, automatic and manual splices
- Capable of double layer and label detection
- Operates with printed, colored and glossy surfaces
- Simple, quick alignment and setup



**Web Eye Mark Verification**

- Precise detection of low-contrast eye marks
- Versatile programming allows rapid changeover
- Withstands high vibrations and hostile environments
- Lightning fast response time



**Web Break Monitoring**

- Immediate notification of web absence
- Affordable and compact photoelectric sensors
- Easy setup and diagnostics
- Tamperproof versions available
- Reduces scrap

**FORM/FILL/SEAL**

**Photoelectric Sensors**



**Inductive Sensors**



**Color, Contrast, and Luminescence Sensors**



**Ultrasonic Sensors**



**AS-Interface**



**Capacitive Sensors**



**Cordsets**



**Barcode Imagers**



**Encoders**



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**SENSORS FOR THE PACKAGING INDUSTRY**

**FORM/FILL/SEAL  
CARTONERS  
CASE PACKERS**

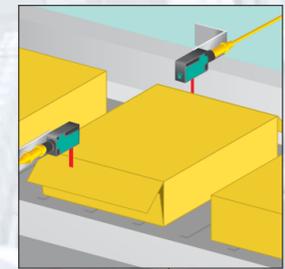


# VERSATILE SENSING SOLUTIONS FOR THE PACKAGING INDUSTRY

Today's market requires innovative and resourceful packaging solutions. At Pepperl+Fuchs, we understand that your sensors must be proficient, agile, and rugged to guarantee maximum equipment performance and uptime. We pride ourselves in assisting our customers by developing solutions that will ensure quick and repeatable changeovers, scrap reduction, and continual process improvements. We have the sensors and accessories that will assist you in achieving your operational goals. In fact, as an industry benchmark, we have the largest and most diverse selection of sensing technologies in the world and a legacy of making things work.

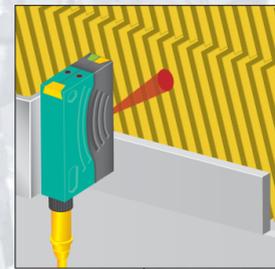
When you need to keep your machines operating at maximum efficiency, choose Pepperl+Fuchs. Our expert application analysis and technical expertise are standard with every one of our products.

**Pepperl+Fuchs—expanding the limits of sensing technology.**



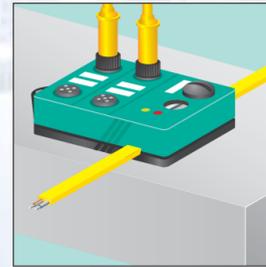
### Open Flap Detection

- Confirms minor and major flaps are secured
- No cross-talk between multiple photoeyes
- Simple, one-touch, automatic programming
- Compact for tight spaces



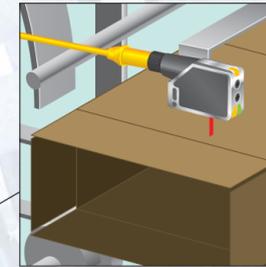
### Magazine Low-Level Recognition

- Single housing photoeye with no reflector required
- Reduces changeover time by detecting all carton styles
- Ignores background machine components



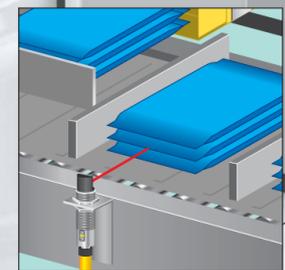
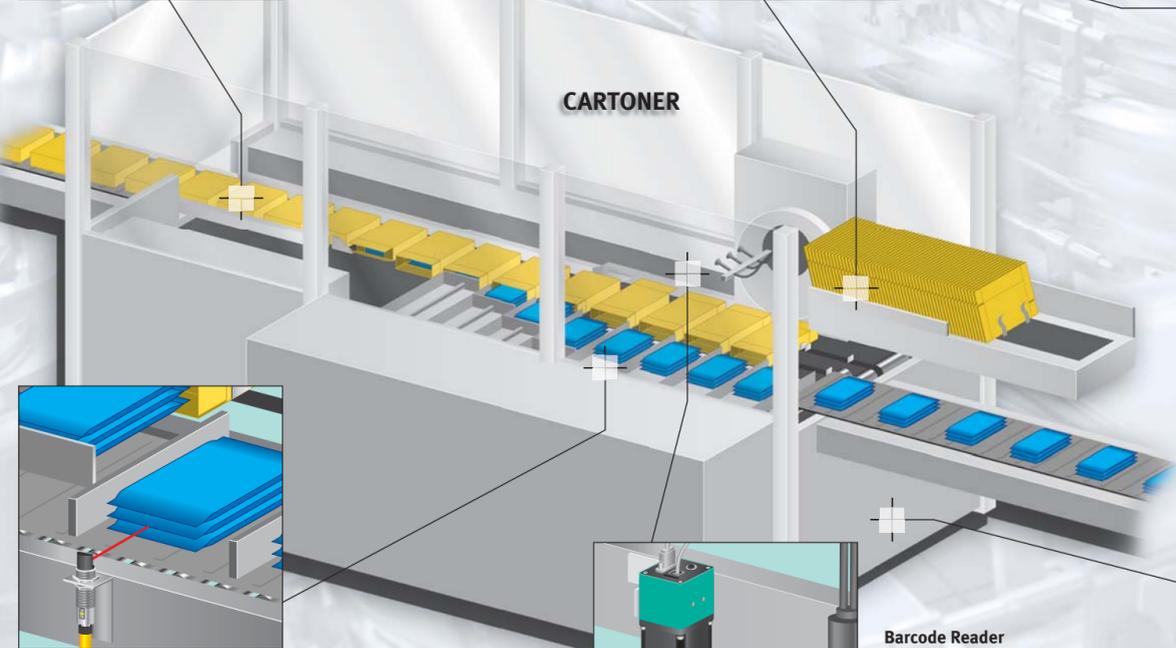
### AS-Interface—Enhanced Wiring System

- Reduces installation cost and time
- Replaces complex cable trees
- Combines hundreds of I/O points



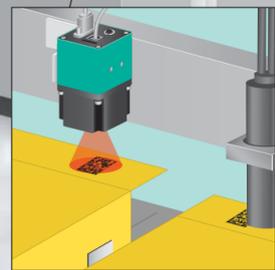
### No Carton/No Load Detection

- Verifies carton presence
- Quick and easy changeover
- Optimizes packaging efficiency
- High visibility, dual position LEDs



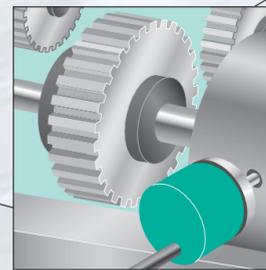
### No Product/No Carton Verification

- Eliminates packaging material waste & maximizes uptime
- Small light spot detects low-profile products
- Versatile straight or right-angled housings
- Universal output eliminates excess inventory



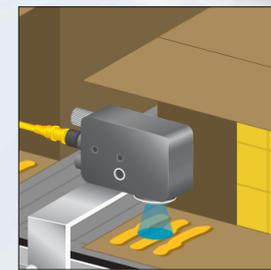
### Barcode Reader

- 2-D codes act as mini data files
- 2300 ASCII characters stored in 13 mm<sup>2</sup> space
- Reads codes up to 6 meters per second
- Reads distorted or partial codes



### Rotary Encoder

- Precise product positioning
- Compact encoder for tight spaces
- Ultrafast response time



### Glue Pattern Verification

- Confirms presence and pattern of adequate adhesive
- Detects low contrast and invisible glues
- Assists with quality assurance

## ADDITIONAL APPLICATIONS



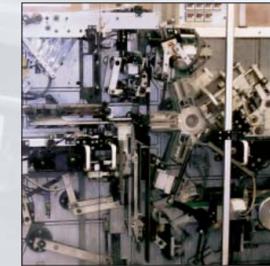
### Bottling

Clear object photoelectric sensors reliably pick up transparent film or PET containers.



### Labeling

Slot sensors count labels on web.



### Product Verification

Sensors detect low-profile objects to be shrink-wrapped regardless of color and reflectivity.



### Web loop control

Sensors can be used for positioning dancer roll to ensure tension control.



### Product Presence in Carton

Capacitive sensors can be used to verify the existence of products in containers.