

ODT 3C

**The multi-talented sensor for
detection and measurement**

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Innovation

**Optical distance
sensor
ODT 3T**

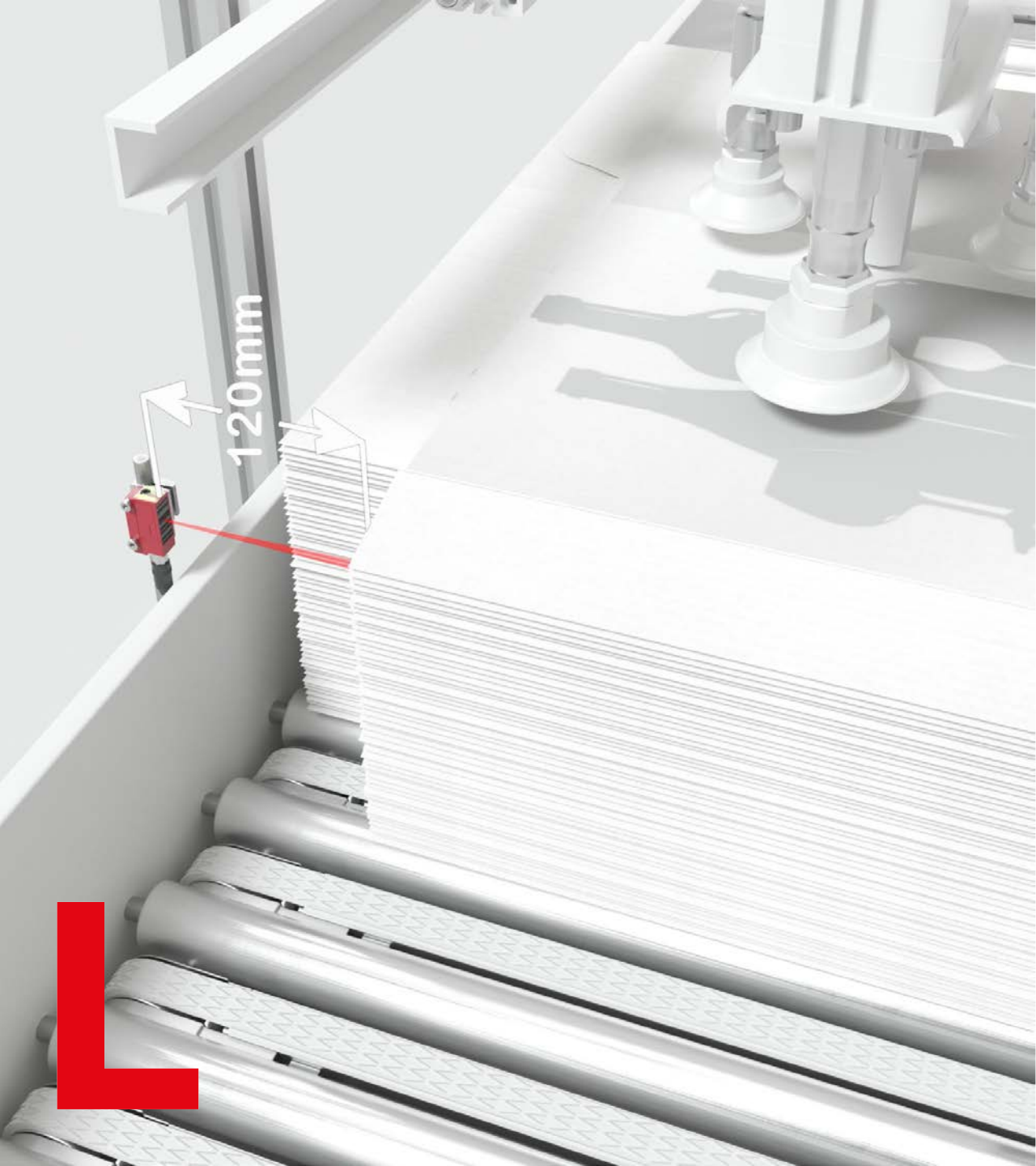


Measurement and detection using just one sensor



The ODT 3C is both a measuring and a switching sensor. This makes it ideal for applications involving measurement or combined measurement and detection.

Our customers now have a solution that offers the possibility of performing measurement tasks or a combination of both measurement and detection tasks conveniently using just one sensor. With the new ODT 3C.



Application



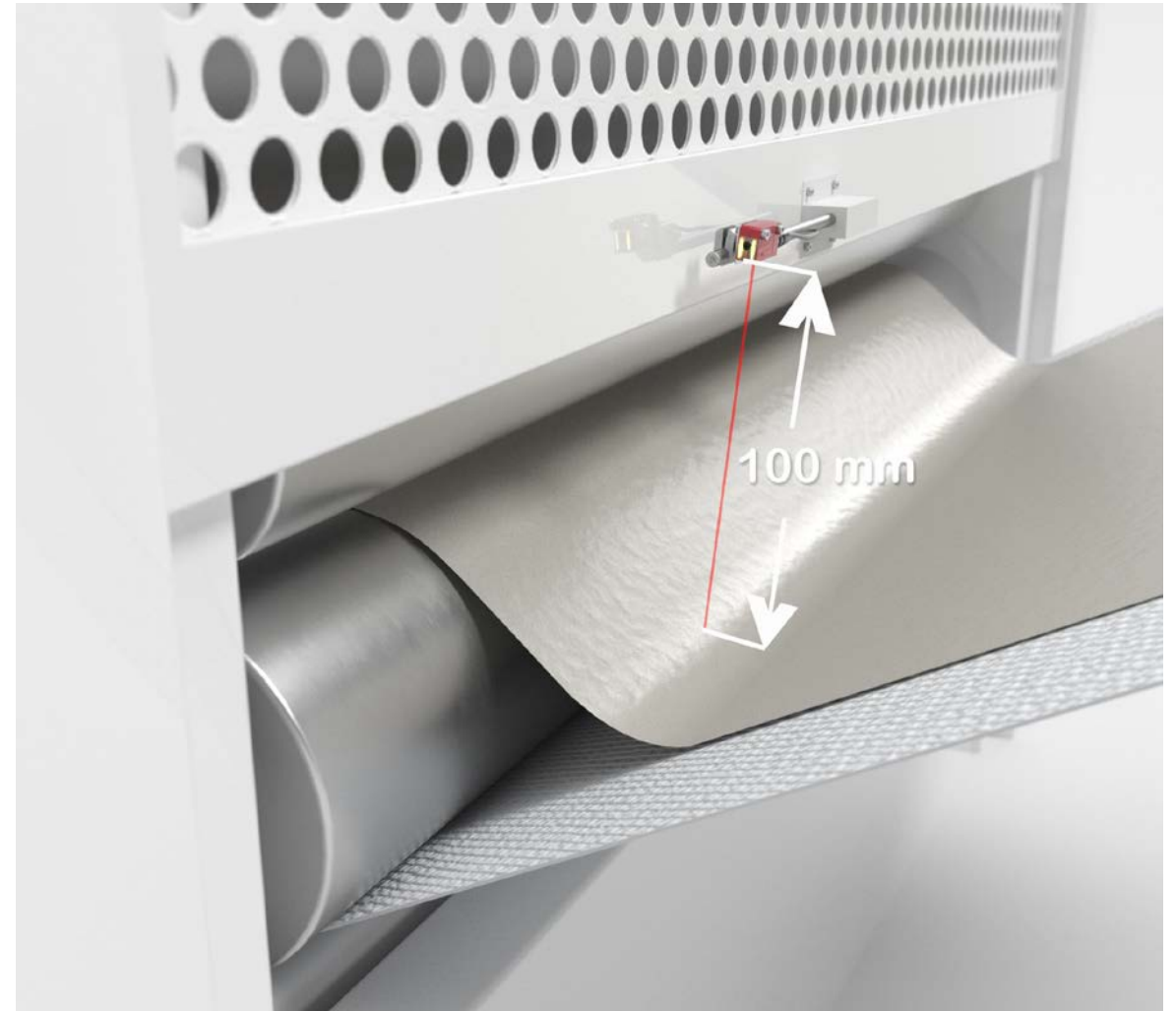
Dough loop control in the baking industry

Requirement

On a machine, dough is rolled out to a defined thickness. While being transferred to the conveyor belt, the dough must retain its shape. Sensors are needed to monitor this. The measured variable is the distance between the dough and the sensor, which must always be between 100 and 120 mm.

Solution

The new sensor ODT 3C is positioned above the dough loop and points from above at the surface of the dough, which has been pressed by the machine, to supply a distance value to the superior PLC. If the sensor detects a measurement value outside the target range, the conveyor belt motors adjust the speed of the conveyor accordingly.



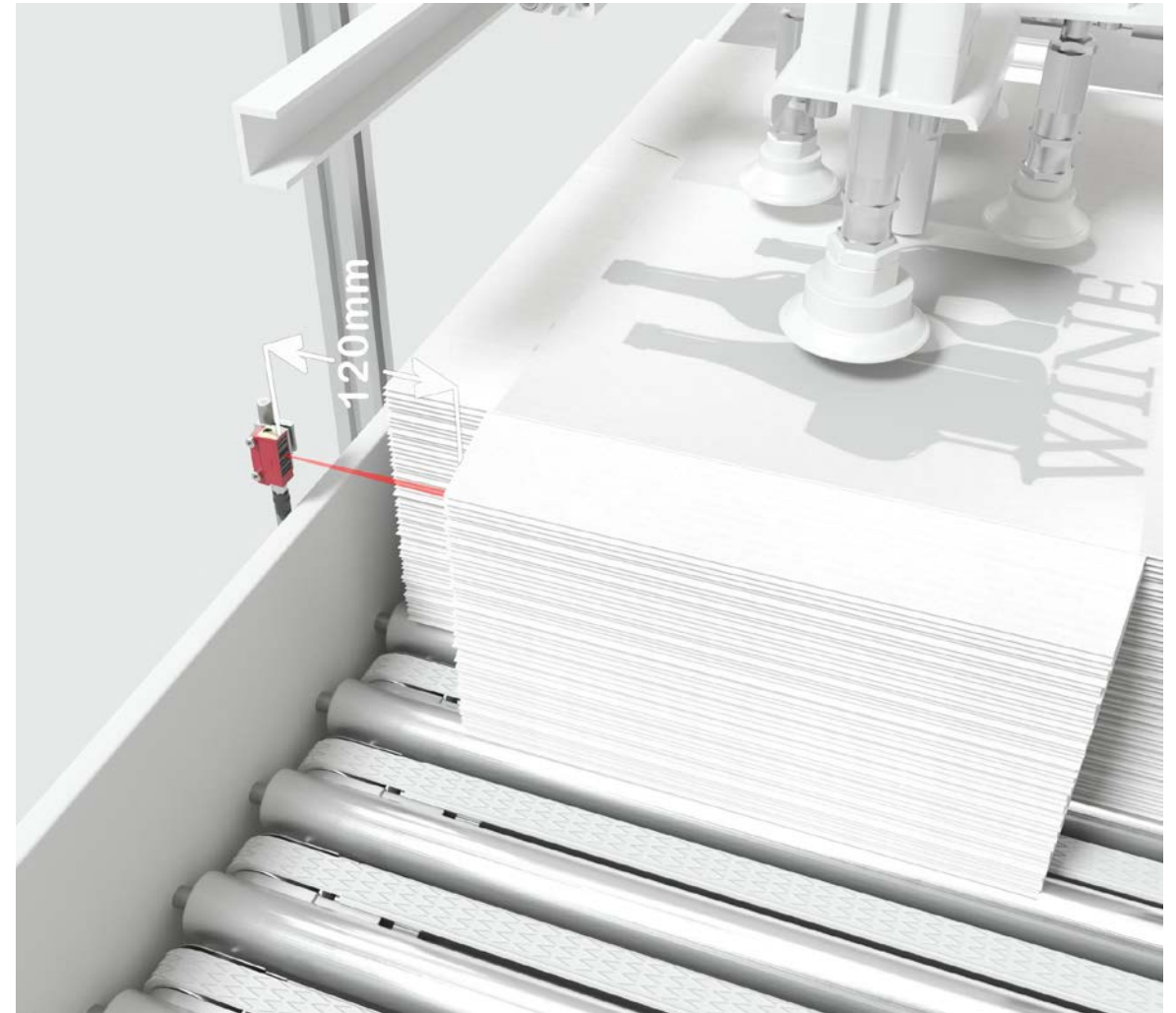
Requirement

In the beverage industry, stacked pre-cut cartons are to be automatically removed from the stack, separated and then fed to the gluing and folding process.

To ensure optimum performance of the downstream process steps, the carton stack must be positioned at a specific point on the conveyor belt and then adjusted to be at a defined distance from the sensor.

Solution

Using the new ODT 3C, the carton pile can be scanned along its long side for purposes of presence monitoring (switching sensor function) and then continuously positioned to a defined distance (e.g. 120 mm) at the edge of the pile flap by means of a measurement value (measuring sensor function).



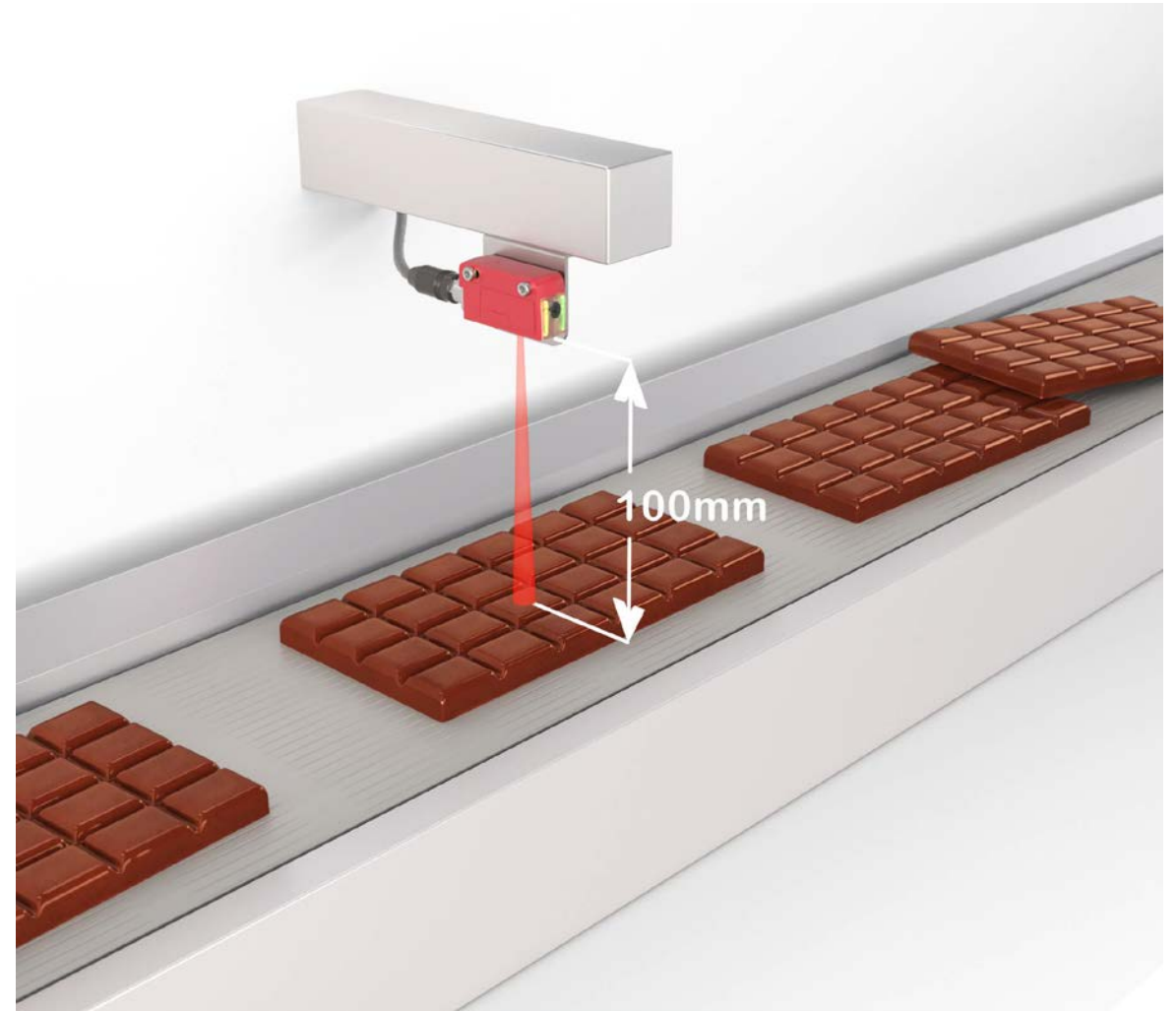
Quality and object height monitoring on the conveyor belt

Requirement

In the food industry, the manufactured products (e.g. chocolate bars) are conveyed separately on the conveyor belt. During this process it is important to monitor whether any objects are lying on top of each other, meaning that they cannot be used for further processing (e.g. packaging).

Solution

The new sensor ODT3C is installed just above the conveyor belt so that it looks down on the products from above. It detects the objects (switching sensor function) and measures their height (measuring sensor function). In this way, the sensor ensures that the products are conveyed separately on the conveyor belt, are not lying on top of each other and can therefore be used for the packaging process.





Benefits & added value



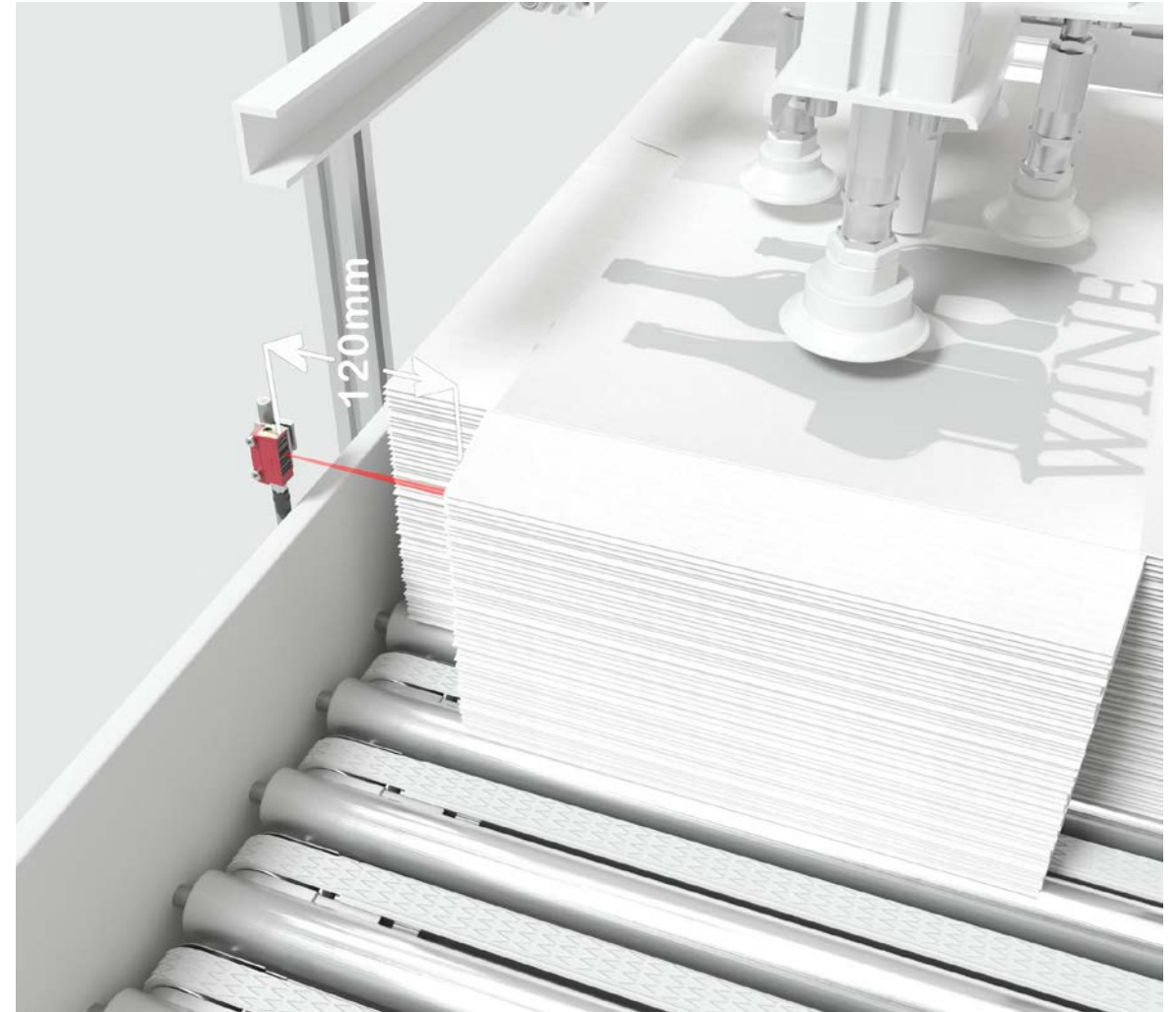
2-in-1 sensor: Solution of detection and measurement tasks

- Measurement value transmission in the process data with IO-Link
- Range adjustment via teach button, cable or IO-Link
- Excellent black-and-white behavior ($< \pm 3$ mm at 150 mm)
- The advantage of a sensor with IO-Link: Extensive diagnostic data from the device, e.g. temperature value, signal quality and warning
- Remote setting: Range adjustment with numerical entry via IO-Link (e.g. 100 mm)
- The devices have two independent switching outputs (OUT1 & OUT2)



2-in-1 sensor: Solution of detection and measurement tasks

- Active ambient light suppression: No faulty switching despite direct light from LED hall lighting
- Models available with warning output (as OUT2)
- IO-Link models with Smart Sensor Profile acc. to Ed. 2 V1.1 (2021)
- Protection against tampering thanks to lock for the operational controls
- Status LEDs visible from all sides
- Device-specific IO-Link function modules available for Siemens, Beckhoff, Rockwell, etc.





Highlights



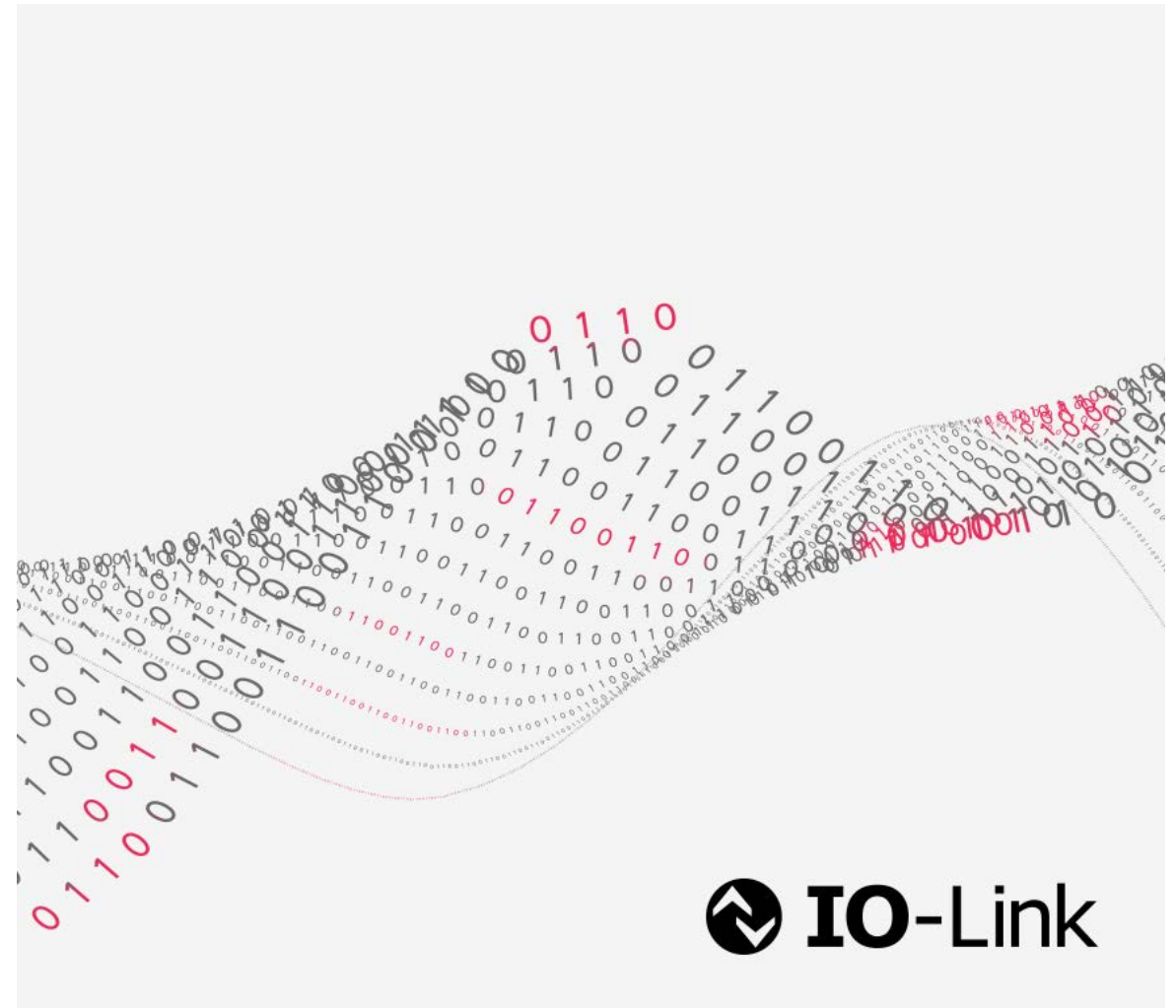
Detection and measurement with a single sensor

Detection and measurement tasks solved by a single sensor – this saves time and money during procurement, installation and commissioning, as well as during operation.



Extensive diagnostic data with IO-Link

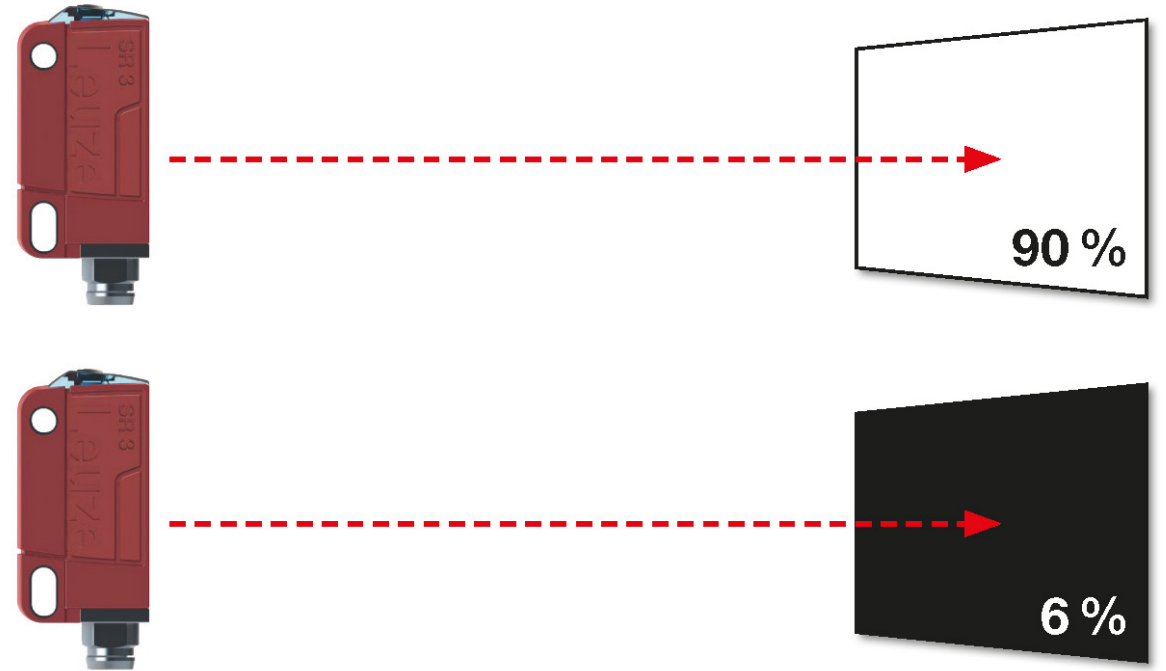
Extensive diagnostic data from the device, e.g. temperature value, signal quality, object counter and warning. Measurement value transmission in IO-Link for monitoring a specific window area.



Range adjustment via remote

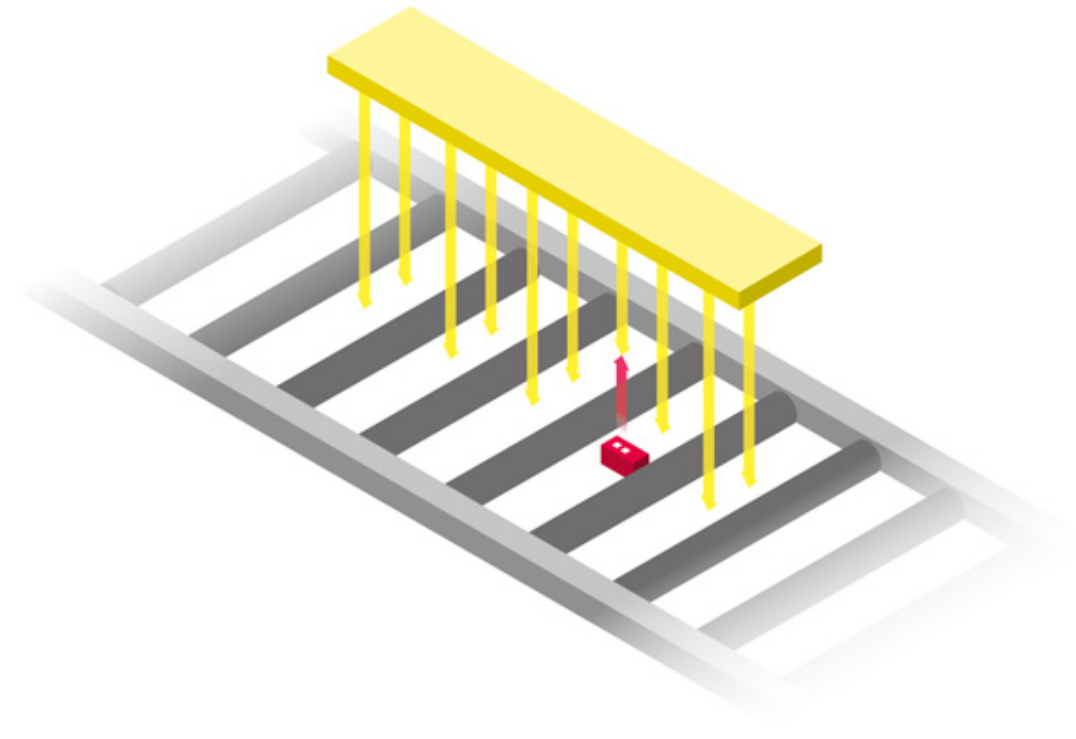
The operating range can be adjusted numerically (e.g. 100 mm) via IO-Link (Remote Set Distance). The device calibration also enables a high level of accuracy when adjusting via remote. As a result, the switching points in the device are adjusted almost entirely independently of reflections when adjustments are made via IO-Link and when the device is exchanged for a replacement part.

The high accuracy and the device calibration are also extremely beneficial when it comes to changing the device, because the presetting can be transferred to the new device loss-free via IO-Link without having to repeat the teach.



Active ambient light suppression

The new sensors in the ODT 3C series have active ambient light suppression (FW1.5). The sensor is not affected by direct light from LED hall lighting, which this does not cause faulty switching. This significantly increases the functional reliability of the sensor.





Technical properties



The new ODT 3C

Parameters	ODT 3C
Dimensions	11 x 34 x 18 mm (W x H x L)
Operating range	10 ... 150 mm
Measurement range	30 ... 150 mm
Resolution	1 mm
Accuracy	< +- 3 mm at 150 mm (6% ... 90% remission)
Protection classes	IP 67, IP 69K
Ambient temperatures	-40°C up to 60°C
Connections	M8/M12 and cable variants
Models	Red light





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