



Retro-Reflex Sensor

with XXL Detection Range

It's detection range is Xtra large, it's measuring range is Xtra wide and its optics are Xtra precise: The OPT1009 retro-reflex sensor closes the gap when it comes to **detecting small parts over a large area regardless of their position**. In contrast to light curtains, the retro-reflex sensor makes use of a reflector and is distinguished by outstanding cost-effectiveness. A total of 10 light beams detect even the smallest of objects with dimensions of down to 20 mm over an area of 180 mm. Nor does the retro-reflex sensor make any concessions

with transparent materials or clear glass. In addition to its extra-large detection range, the sensor is distinguished by a range of 4000 mm.

The XXL solution for small parts!



- 10-beam sensor with 20 mm resolution
- Large range of up to 4000 mm
- Reliable detection of small and transparent parts
- Compact format: 206 × 40 × 20 mm
- IP67 housing laid out for industrial environments
- Large temperature range from -25 to +60° C

Retro-reflex sensor for clear glass recognition

OPT1009

Order Number



- Stainless steel plug (V2A)
- Single-lens optics
- External teach-in
- Clear glass recognition
- Red light

Retro-reflex sensors only function in combination with a reflector.

Ten sensors are accommodated in a single housing and are OR linked to each other. The output is switched as soon as any of the light beams is interrupted, making it possible to monitor a broader field. Even crystal-clear objects and sheet products are reliably recognized.

Technical Data

Optical Data

Range	4000 mm
Reference reflector / reflector foil	3 × RQ100BA
Clear glass recognition	Yes
Switching hysteresis	< 15%
Light source	Red light
Polarization filter	Yes
Service life (ambient temp. = +25° C)	100,000 h
Maximum permissible ambient light	10,000 lux
Single-lens optics	Yes

Electrical Data

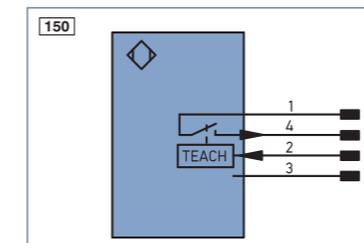
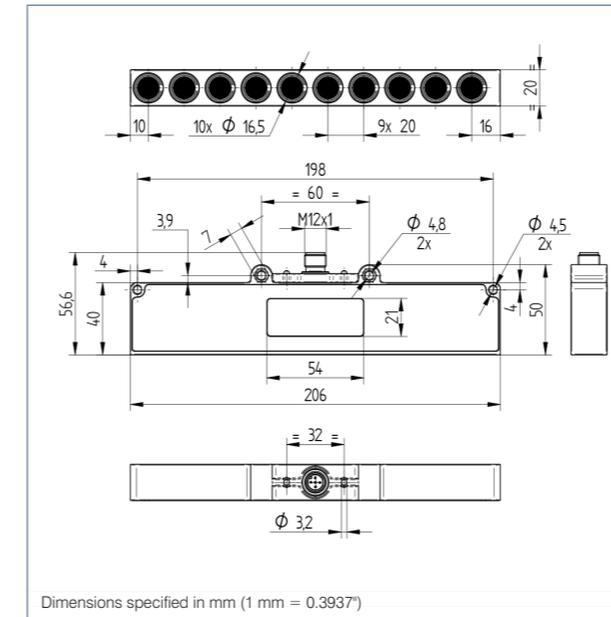
Supply voltage	10 ... 30 V DC
Current consumption (U _o = 24 V)	≤ 70 mA
Switching frequency	400 Hz
Response time	1.25 ms
Temperature drift	< 10%
Temperature range	-25 ... 60° C
Switching output voltage drop	< 2.5 V
Switching current, PNP switching output	200 mA
Switching output residual current	< 50 μA
Short-circuit protection	Yes
Reverse polarity protected	Yes
Overload-proof	Yes
Protection class	III

Mechanical Data

Setting method	Input
Housing material	Plastic
Full encapsulation	Yes
Degree of protection	IP67
Connection	M12×1, 4-pin
PNP NO	●
Connection diagram no.	150
Control panel no.	A37
Suitable connection equipment no.	2

Accessory Products

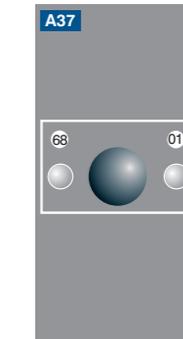
PNP-NPN converter BG2V1P-N-2M
Reflector, reflector foil



- + positive supply voltage
- 0 V supply voltage
- A NO switching output
- T teach-in input



Control Panel

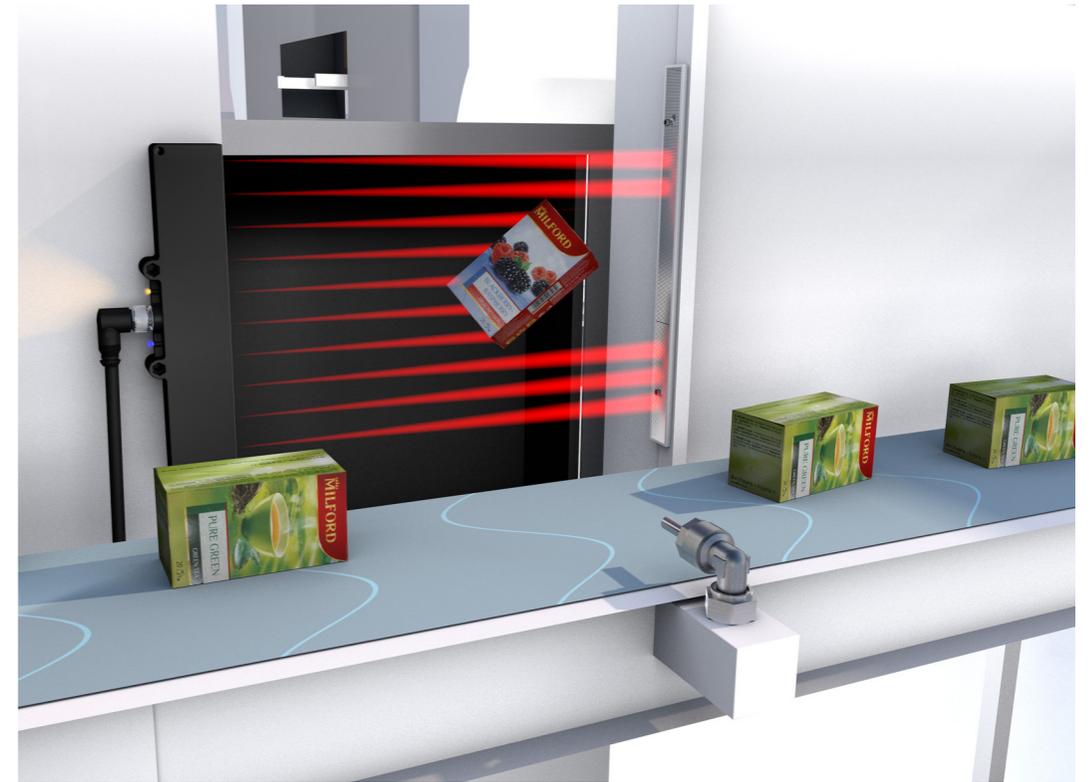
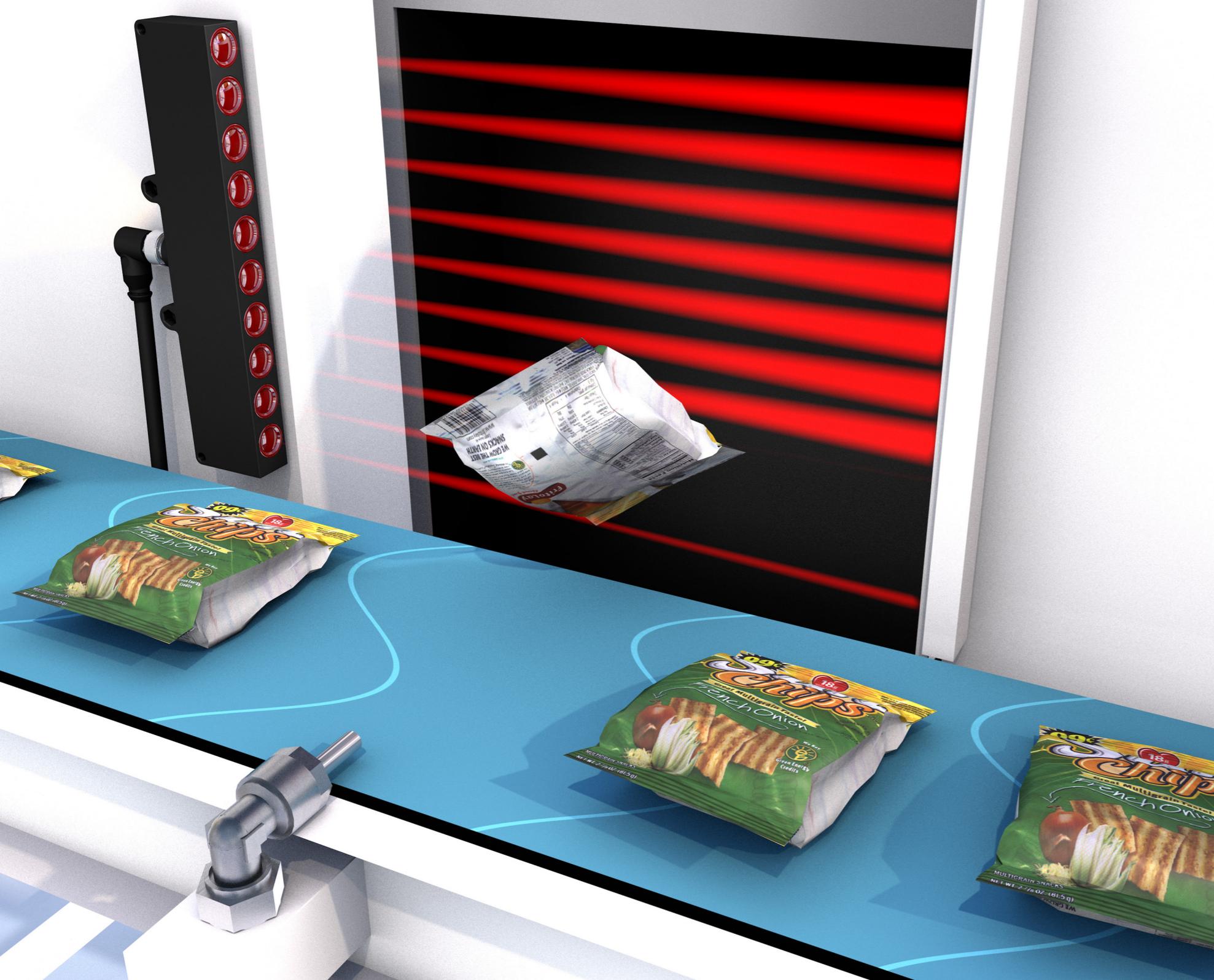


- 01 switching status indicator
- 68 supply voltage indicator

Permissible Distance From the Reflector

Reflector Type, Mounting Clearance

RQ100BA	0...4 m
RE6151BM	0...3 m
RE6040BA	0...3,7 m
Z90R006	0...1,4 m
ZRAE02B01	0...0,5 m
ZRME03B01	0...1 m
RF505	0...0,8 m
ZRAF06K01	0...0,8 m
ZRDF10K01	0...1,5 m



If products or components do not meet the specified quality criteria, they're sorted out and blown into a container by means of a compressed air system. With its large detection range, the OPT1009 retro-reflex sensor reliably determines whether or not the rejected objects actually land in the container – regardless of their orientation and position when they pass through the opening.



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