

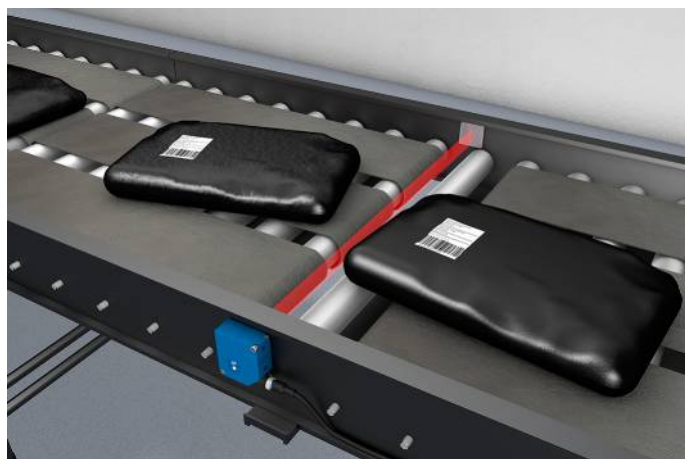
# Retro-Reflex Sensor with Light Band

## P1EL300 LASER



- Compensation of uneven conveyor belt areas with dynamic teach-in
- Dynamic readjustment of the switching threshold
- Flexible mounting options thanks to 180° rotatable plug
- Precise front edge detection with non-uniform objects

The Retro-Reflex Sensor with Light Band scans a significantly larger range than a retro-reflex sensor with a dot-shaped light spot. This makes it ideally suitable for reliably detecting the front edges of objects with irregular shapes or variable sizes. The sensor's collimated laser light band is absolutely homogeneous and can thus be precisely aligned to the conveyor belt's level. The sensor detects objects from as little as just four millimeters over its entire range and light band height. The compact format can be integrated into the smallest of spaces, for example in the side panels of conveyor systems.



### Optical Data

Range	1600 mm
Reference Reflector/Reflector Foil	Z90R009
Smallest Recognizable Part	4 mm
Light Source	Laser (red)
Wavelength	650 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Light Strip Height	54 mm

### Electrical Data

Supply Voltage	12...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 30 mA
Switching Frequency	125 Hz
Response Time	4 ms
Temperature Range	-30...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	100 mA
Residual Current Switching Output	< 50 µA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III

### Mechanical Data

Setting Method	Teach-In
Housing Material	Plastic
Degree of Protection	IP67/IP68
Connection	M12 × 1; 4-pin
Optic Cover	PMMA

PNP NO



Connection Diagram No.

150

Control Panel No.

1E1

Suitable Connection Equipment No.

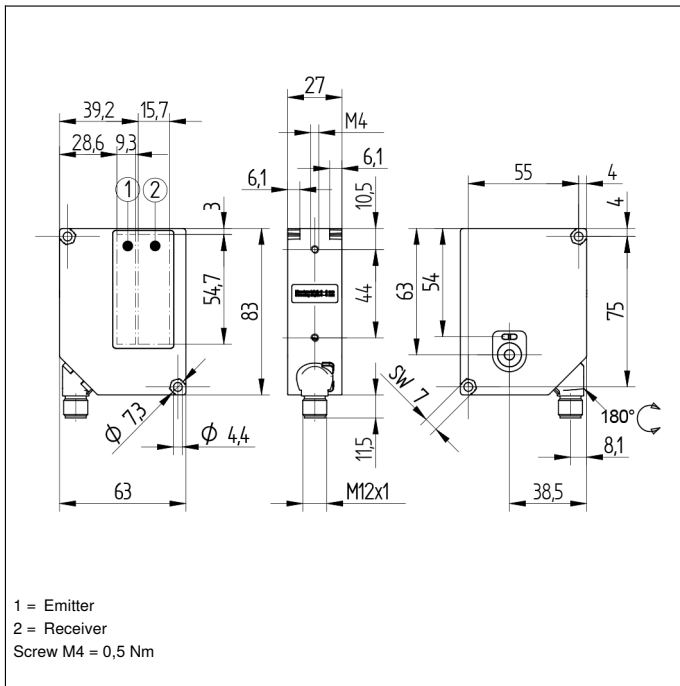
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Suitable Mounting Technology No.

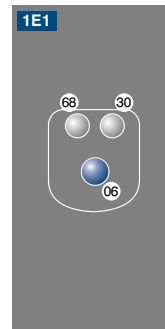
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### Complementary Products

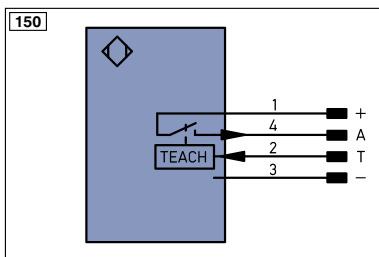
PNP-NPN Converter BG2V1P-N-2M



### Ctrl. Panel



06 = Teach Button  
 30 = Switching Status/Contamination Warning  
 68 = Supply Voltage Indicator



### Feasible reflector distance

Reflector type, mounting distance

Z90R009	0,4...1,6 m	ZRDF10K01	0,4...1,6 m
ZRDF03K01	0,4...1,6 m		

