

# Reflex Sensors

with Background Suppression **LASER**

## YP05PA3

Part Number



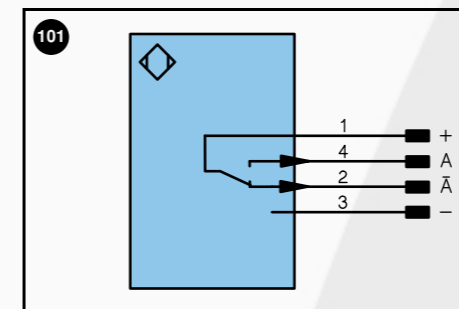
- **Smallest Recognizable Distance Difference: 50 μm**
- **Spot Diameter: 0.5 mm**



### Technical Data

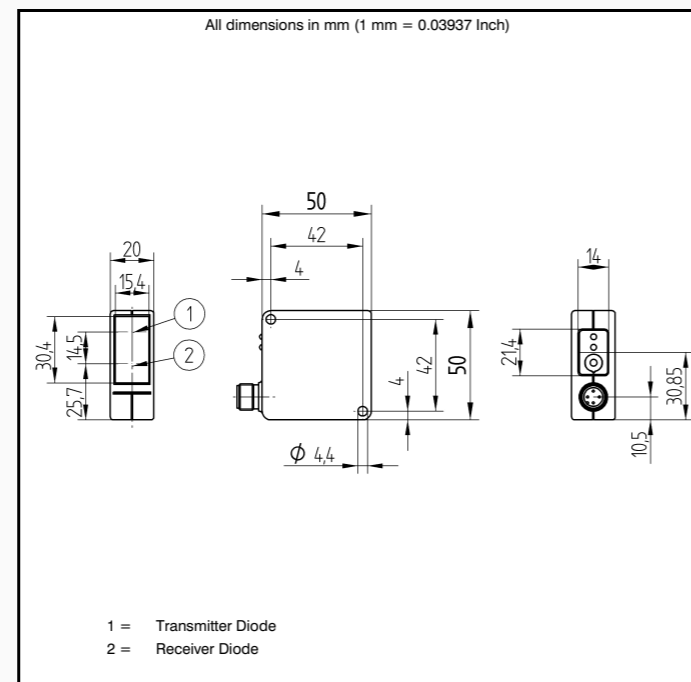
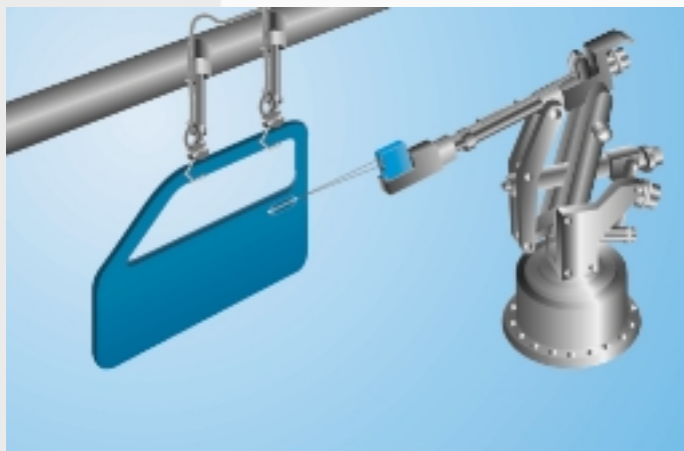
Optical Data	
Range	55 mm
Adjustable Range	45...55 mm
Switching Hysteresis	< 50 μm
Light Source	Laser (red)
Wave Length	660 nm
Service Life (T = +25°C)	100000 h
Laser Protection Class (EN 60825-1)	2
max. Ambient Light	10000 Lux
Light Spot Diameter	0.5 mm
Focus Distance	75 mm
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24V)	< 30 mA
Switching Frequency	800 Hz
Response Time	650 μs
Temperature Drift	< 5 μm/°C
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2.5 V
PNP Switching Output/Switching Current	200 mA
PNP Contamination Output/Switching Current	50 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Mechanical Data	
Housing	Plastic
Full Encapsulation	yes
Protection Mode	IP 67
Connection	M 12x1
Protective Insulation, Rated Voltage	50 V

Plug Version	Part Number
PNP NO/NC antivalent	●
Connection Diagram No.	101
Control Panel No.	P 2
Suitable Plug No.	1



Legend		Wire colors according to DIN IEC 757
+	Power supply "+"	BK black
-	Power supply "0V"	BN brown
~	Power supply (AC Voltage)	RD red
A	Switching output (1,2,3...)/ NO	OG orange
Ā	Switching output (1,2,3...)/ NC	YE yellow
V	Contamination / Error output (NO)	GN green
V̄	Contamination / Error output (NC)	BU blue
E	Input (analog or digital)	VT violet
T	Teach input	GY grey
Z	Time delay (activation)	WH white
S	Shielding	PK pink
RxD	RS-232 receive path	GNYE green yellow
TxD	RS-232 send path	
U	Test input	
W	Trigger input	
o	Analog output (1,2,3,...)	
O-	Ground for the analog output	
BZ	Block discharge	
Aw	Valve output	
a	Valve control output "+"	
b	Valve control output "0V"	
SY	Synchronization	
E+	Receiver-Line	
S+	Emitter-Line	
⊕	Grounding	

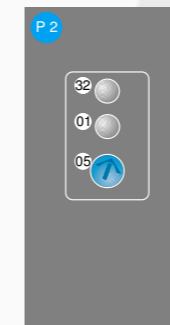
These sensors are particularly well suited for recognizing objects in front of any type of background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.



### Accessories

Mounting Bracket WP

### Ctrl. Panel



- 01 = Switching Status Indicator
- 05 = Switching Distance Adjuster
- 32 = Contamination Warning/ Error Warning



### Switching Distance Deviation

Typical characteristic curve based on Kodak white, 90%

