

Reflex Sensors

with Background Suppression **LASER**

YP09PA3S542

Part Number



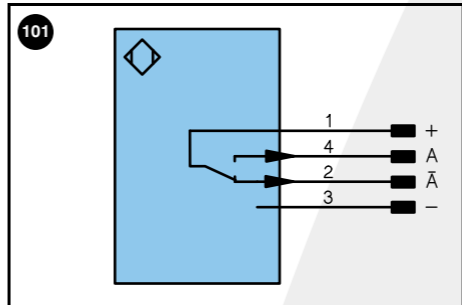
- Smallest Recognizable Distance Difference: 200 μm
- Spot Diameter: 0.8 mm



Technical Data

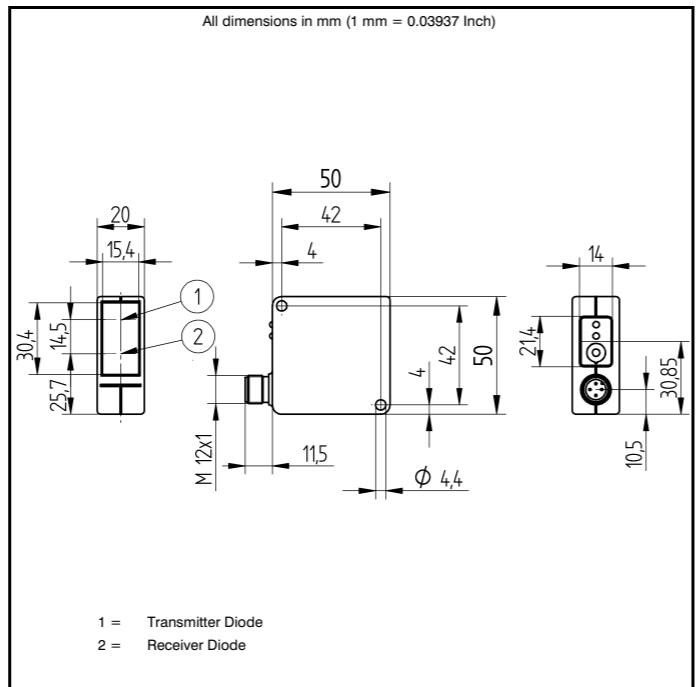
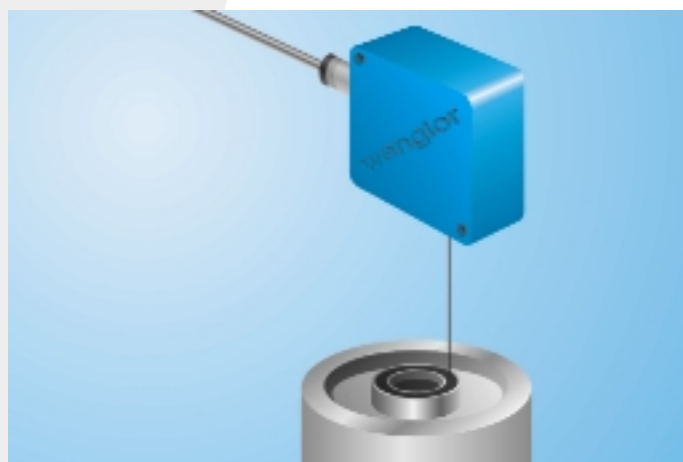
Optical Data	
Range	90 mm
Adjustable Range	60...90 mm
Switching Hysteresis	< 2 mm
Light Source	Laser (red)
Wave Length	660 nm
Service Life (T = +25°C)	100000 h
Laser Protection Class (EN 60825-1)	3R
max. Ambient Light	10000 Lux
Light Spot Diameter	0.8 mm
Focus Distance	110 mm
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24V)	< 30 mA
Switching Frequency	800 Hz
Response Time	650 μs
Temperature Drift	< 15 μm/K
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	M12 x 1
Protective Insulation, Rated Voltage	50 V

Part Number	Plug Version
YP09PA3S542	
PNP NO/NC antivalent	●
Connection Diagram No.	101
Control Panel No.	P 2
Suitable Plug No.	2



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
A	Switching output (1,2,3...) / NC	YE yellow
V	Contamination / Error output (NC)	GN green
V	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	GNVE green yellow
TxD	RS-232 send path	
RDY	Ready	
GND	Ground	
CL	Clock	
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	
⊖	Switching Distance Reduction	
USB+	USB data +	
USB-	USB data -	
B+	Interfaces-Bus A(+)/B(-)	
La	Emitted light disengageable	

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.



Specifications are subject to change without notice
13/05

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%

