

Reflex Sensor

with Background Suppression

YK12PA7 LASER

Part Number



- Detection Range of up to 120 mm
- High Switching Frequency
- Low Current Consumption < 15 mA
- Miniature Design

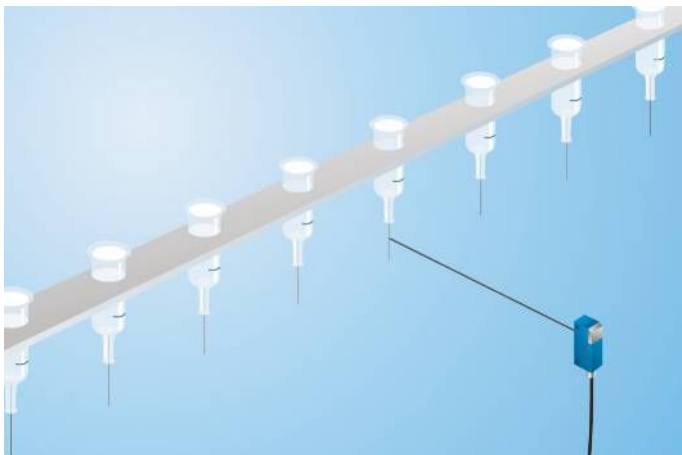
Technical Data

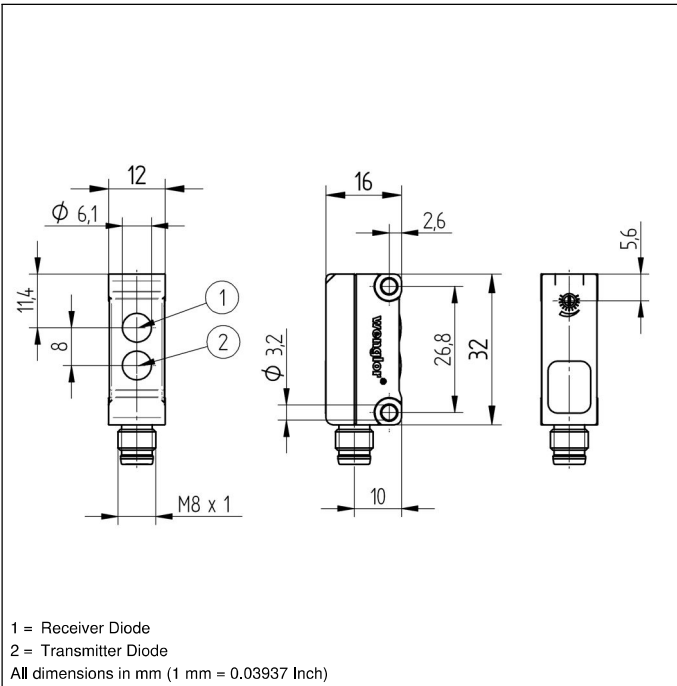
Optical Data	
Range	120 mm
Adjustable Range	18...120 mm
Switching Hysteresis	< 10 %
Light Source	Laser (red)
Wave Length	655 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1

Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 15 mA
Switching Frequency	1900 Hz
Response Time	263 μs
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III

Mechanical Data	
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M8 × 1; 4-pin
PNP NO/NC antivalent	●
Connection Diagram No.	101
Control Panel No.	K4
Suiting Connection Technology No.	7
Suiting Mounting Technology No.	400

These sensors detect distance by measuring angles. They are particularly good at recognizing objects in front of any background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.





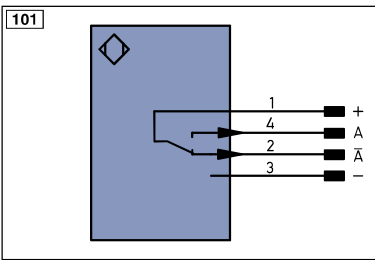
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Legend		
+	Supply Voltage +	nc not connected
-	Supply Voltage 0 V	U Test Input
~	Supply Voltage (AC Voltage)	U Test Input inverted
A	Switching Output (NO)	W Trigger Input
A̅	Switching Output (NC)	Q Analog Output
V	Contamination/Error Output (NO)	O- Ground for the Analog Output
V̅	Contamination/Error Output (NC)	BZ Block Discharge
E	Input (analog or digital)	AWV Valve Output
T	Teach Input	a Valve Control Output +
Z	Time Delay (activation)	b Valve Control Output 0 V
S	Shielding	SY Synchronization
RxD	Interface Receive Path	E+ Receiver-Line
TxD	Interface Send Path	S+ Emitter-Line
RDY	Ready	± Grounding
GND	Ground	SnR Switching Distance Reduction
CL	Clock	Rx+/- Ethernet Receive Path
E/A	Output/Input programmable	Tx+/- Ethernet Send Path
	IO-Link	Ba Interfaces-Bus A(+)/B(-)
PoE	Power over Ethernet	La Emitted Light disengageable
IN	Safety Input	Mag Magnet activation
OSSD	Safety Output	RES Input confirmation
Signal	Signal Output	EDM Contactor Monitoring

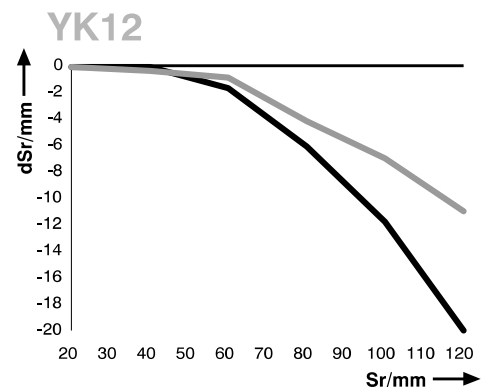
Wire Colors according to DIN IEC 757	
BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green Yellow

Table 1

Detection Range	40 mm	80 mm	120 mm
Light Spot Diameter	1,5 mm	1 mm	2 mm

Switching Distance Deviation

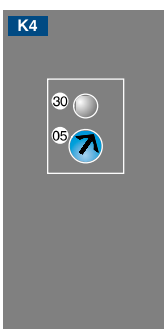
Typical characteristic curve based on Kodak white (90 % remission)



Sr = Switching Distance
 dSr = Switching Distance Change
 — black 6 % remission
 — grey 18 % remission

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Ctrl.Panel



05 = Switching Distance Adjuster
 30 = Switching Status/Contamination Warning

联系方式

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