

Reflex Sensor with Background Suppression

HK12PB8

Part Number

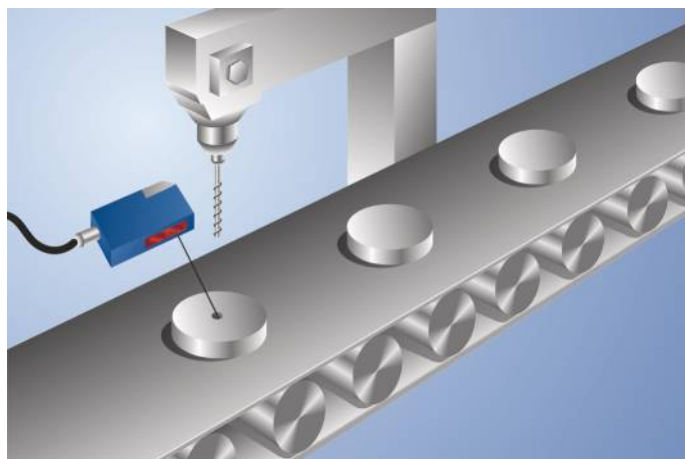


- Electronic background suppression
- Miniature design
- Red light
- Switching distance adjuster

Technical Data

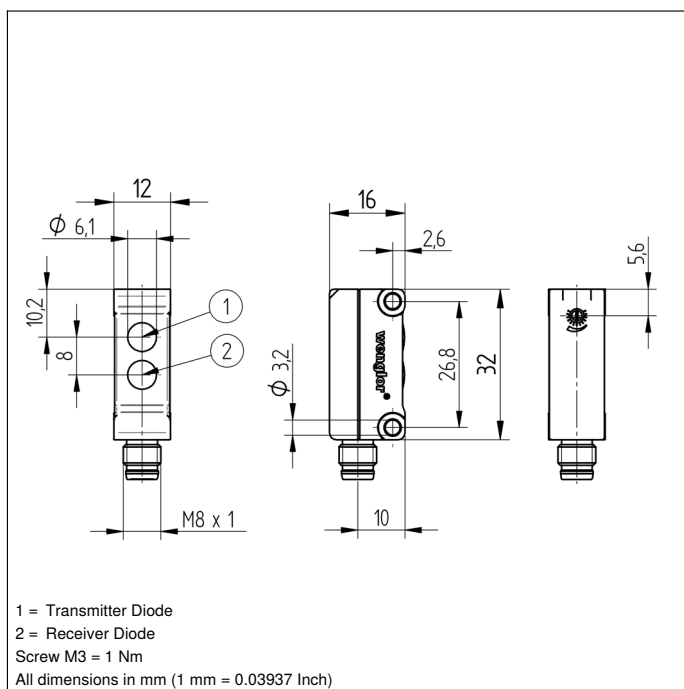
Optical Data	
Range	120 mm
Adjustable Range	18...120 mm
Switching Hysteresis	< 10 %
Light Source	Red Light
Service Life (T = +25 °C)	100000 h
Max. Ambient Light	10000 Lux
Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 25 mA
Switching Frequency	1300 Hz
Response Time	385 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	
Setting Method	Potentiometer
Housing Material	Plastic
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M8 × 1; 3-pin
PNP NO	●
Connection Diagram No.	102
Control Panel No.	K4
Suitable Connection Technology No.	8
Suitable 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.

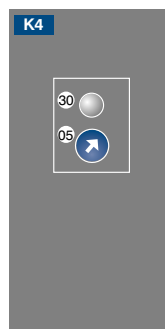


Complementary Products

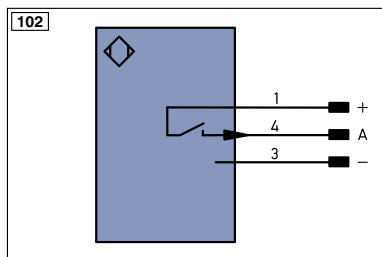
PNP-NPN Converter BG8V1P-N-2M



Ctrl. Panel



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



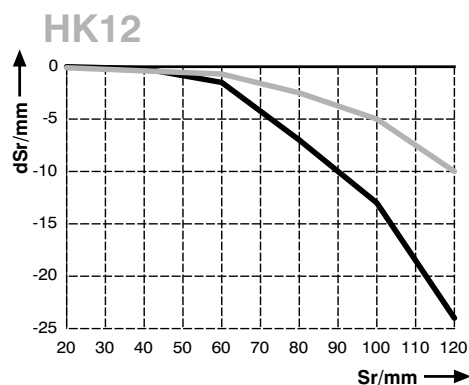
Legend			
+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	U	Test Input inverted
A	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
V	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	AWV	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	E+	Receiver-Line
RDY	Ready	S+	Emitter-Line
GND	Ground	±	Grounding
CL	Clock	SrR	Switching Distance Reduction
E/A	Output/Input programmable	Rx +/-	Ethernet Receive Path
	IO-Link	Tx +/-	Ethernet Send Path
PoE	Power over Ethernet	Ba	Interfaces-Bus A(+)/B(-)
IN	Safety Input	La	Emitted Light disengageable
OSSD	Safety Output	Mag	Magnet activation
Signal	Signal Output	RES	Input confirmation
M	Maintenance	EDM	Contactur Monitoring
		ENa	Encoder A
		ENb	Encoder B
		Am N	Digital output MIN
		Amax	Digital output MAX
		Aok	Digital output OK
		SY In	Synchronization In
		SY OUT	Synchronization OUT
		Out	Brightness output
		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	30 mm	75 mm	120 mm
Spot Diameter	4 mm	6 mm	10 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

