

# Reflex Sensors

with Background Suppression

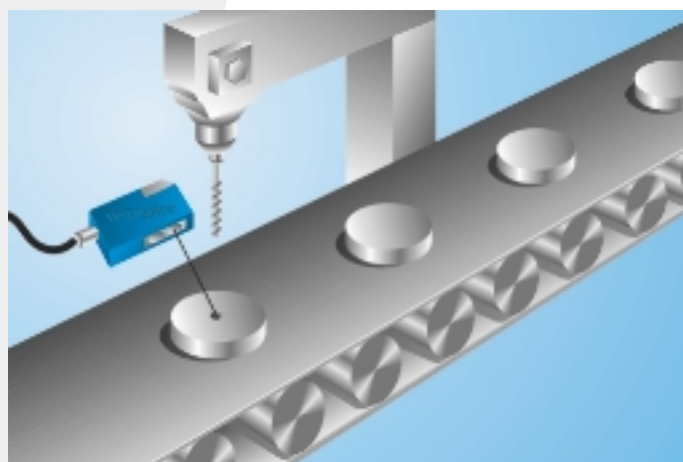
## HK12PB8

Part Number



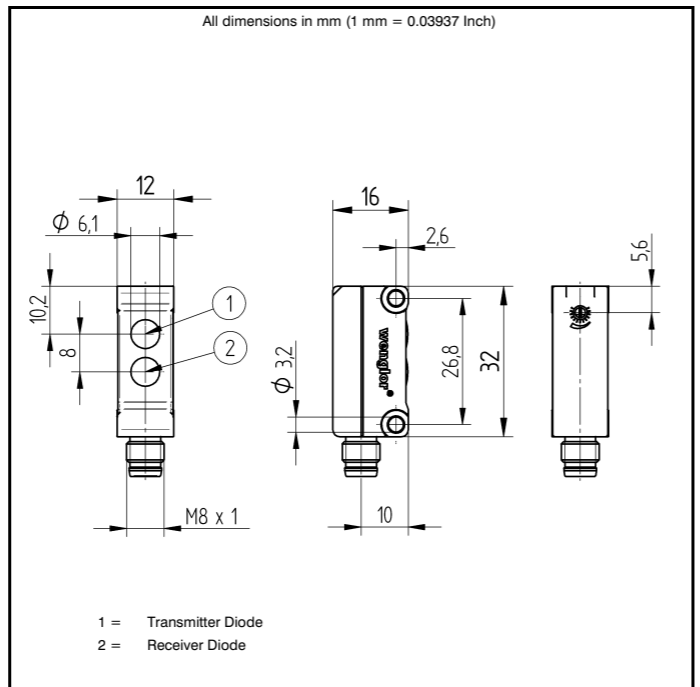
- Electronic Background Suppression
- Miniature Design
- Red Light
- Switching Distance Adjuster

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.



### Technical Data

Optical Data	
Range	120 mm
Adjustable Range	18...120 mm
Switching Hysteresis	< 15 %
Light Source	Red Light
Service Life (T = +25°C)	100000 h
max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24V)	< 30 mA
Switching Frequency	700 Hz
Response Time	714 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
Mechanical Data	
Adjustment	Potentiometer
Housing	Plastic
Full Encapsulation	yes
Protection Mode	IP 67
Connection	M8 x 1
Protective Insulation, Rated Voltage	50 V



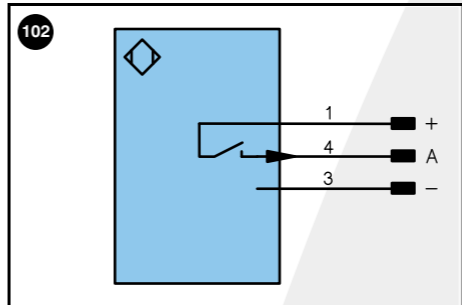
Specifications are subject to change without notice  
23/06

Part Number	Plug Version
HK12PB8	
PNP NO	●
Connection Diagram No.	102
Control Panel No.	K 4
Suitable Plug No.	8



Table 1

Range	30 mm	75 mm	120 mm
Light Spot Diameter	4 mm	6 mm	10 mm

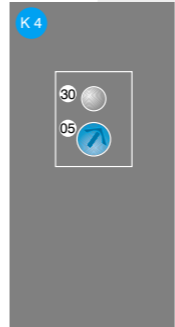


Legend			Wire colors according to DIN IEC 757
+	Power supply "+"	U	Test input
-	Power supply "0V"	W	Trigger input
-	Power supply (AC Voltage)	O	Analog output (1,2,3...)
A	Switching output (1,2,3...)/NO	O-	Ground for the analog output
A	Switching output (1,2,3...)/NC	BZ	Block discharge
V	Contamination / Error output (NC)	AW	Valve output
V	Contamination / Error output (NC)	a	Valve control output "+"
E	Input (analog or digital)	b	Valve control output "0V"
T	Teach input	SY	Synchronization
Z	Time delay (activation)	E+	Receiver-Line
S	Shielding	S+	Emitter-Line
RxD	RS-232 receive path	⊕	Grounding
TxD	RS-232 send path	⊖	Grounding
RDY	Ready	S+R	Switching Distance Reduction
GND	Ground	USB+	USB data +
CL	Clock	USB-	USB data -
		B+	Interfaces-Bus A(+)/B(-)
		La	Emitted light disengageable
		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

### Accessories

Mounting Bracket WK

### Ctrl. Panel



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

### Switching Distance Deviation

Typical characteristic curve based on Kodak white, 90%

