

Reflex Sensors

with Background Suppression

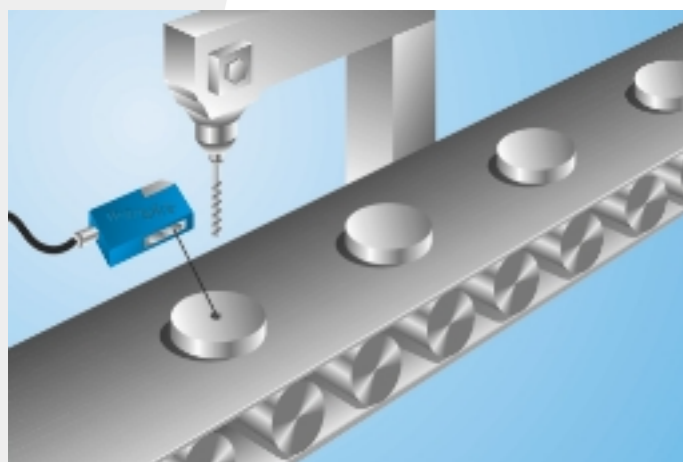
HK12NA7

Part Number



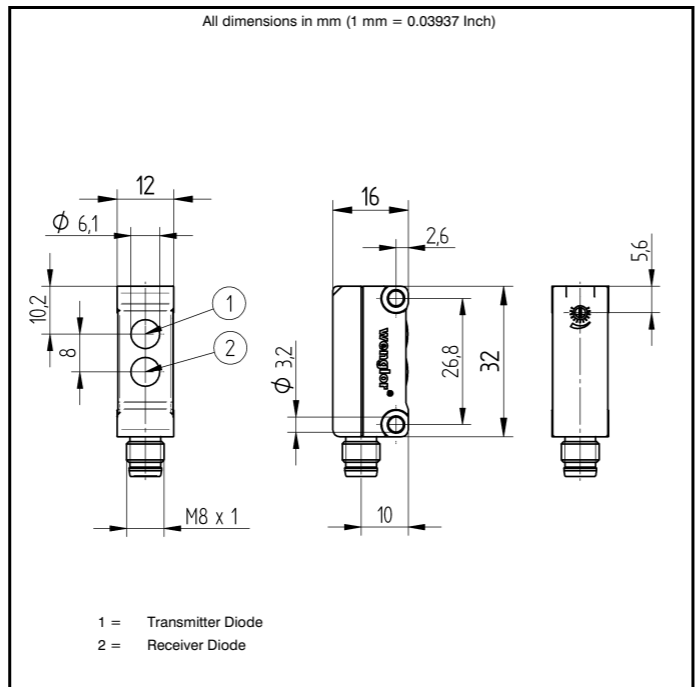
- Electronic Background Suppression
- Miniature Design
- Red Light
- Switching Distance Adjuster

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 _b = 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
NPN 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



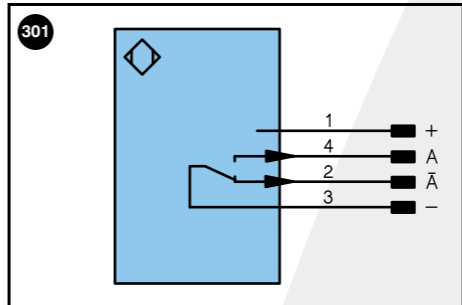
Specifications are subject to change without notice
23/06

Plug Version

Part Number	Plug Version
HK12NA7	
NPN NO/NC antivalent	●
Connection Diagram No.	301
Control Panel No.	K 4
Suitable Plug No.	7

Table 1

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

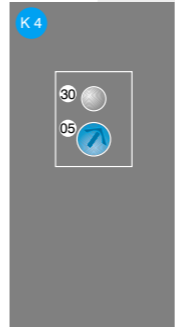


Legend		Wire colors according to DIN IEC 757
+	Power supply "+"	BK black
-	Power supply "0V"	BN brown
-	Power supply (AC Voltage)	RD red
A	Switching output (1,2,3...) / NO	OG orange
A	Switching output (1,2,3...) / NC	YE yellow
V	Contamination / Error output (NC)	GN green
V	Contamination / Error output (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	
E-	Emitter-Line	
⊕	Grounding	
S+R	Switching Distance Reduction	
USB+	USB data +	
USB-	USB data -	
B+	Interfaces-Bus A(+)/B(-)	
La	Emitted light disengageable	

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%

