

Reflex Sensors

with Background Suppression

HK12NA

Part Number



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



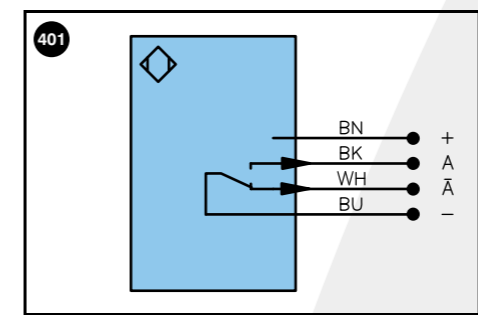
Technical Data

| Optical Data | |
|--|---------------|
| Range | 120 mm |
| Adjustable Range | 18...120 mm |
| Switching Hysteresis | < 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 | Prewired |
| Cabel Length | 2 m |
| Protective Insulation, Rated Voltage | 50 V |

| | Prewired Version |
|------------------------|------------------|
| Part Number | HK12NA |
| NPN NO/NC antivalent | ● |
| Connection Diagram No. | 401 |
| Control Panel No. | K 4 |

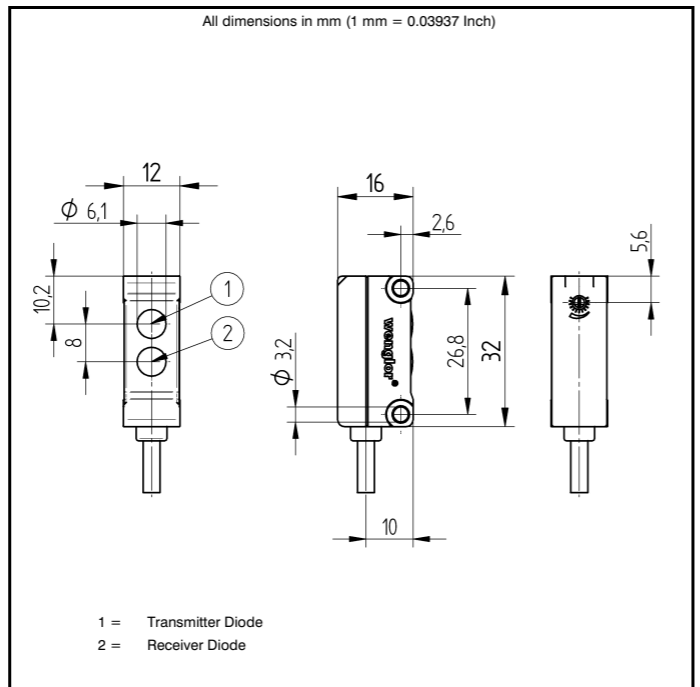
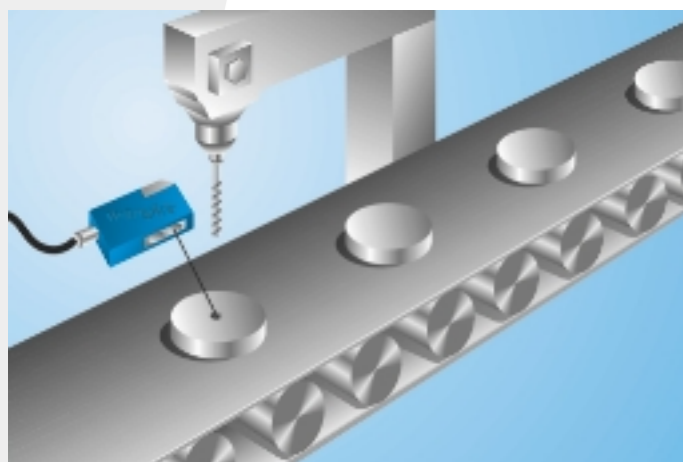
Table 1

| 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 (NO) | 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 | GNYE 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" | |
| S+ | Synchronization | |
| E+ | Receiver-Line | |
| E- | Emitter-Line | |
| + | Grounding | |
| S+R | Switching Distance Reduction | |
| USB+ | USB data + | |
| USB- | USB data - | |
| Ba | 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.

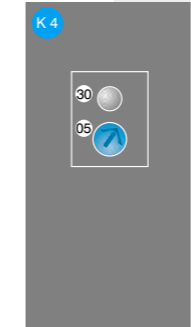


Specifications are subject to change without notice
23/06

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%

