

Reflex Sensors

with Background Suppression

HN33PA3

Part Number



- Precision Background Suppression
- Red Light
- Stainless Steel Plug (V2A)



Technical Data

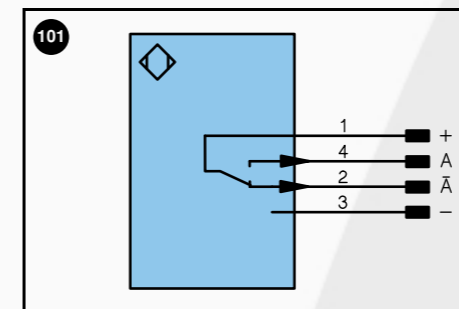
| Optical Data | |
|--|--------------|
| Range | 300 mm |
| Switching Hysteresis | < 5 % |
| Light Source | Red Light |
| Service Life (T = +25°C) | 100000 h |
| max. Ambient Light | 10000 Lux |
| Light Spot Diameter | see Table 1 |
| Electrical Data | |
| Supply Voltage | 10...30 V DC |
| Current Consumption (U _b = 24V) | 30 mA |
| Switching Frequency | 800 Hz |
| Response Time | 2 ms |
| Temperature Drift | < 10 % |
| Temperature Range | -25...60 °C |
| Switching Output Voltage Drop | < 2.5 V |
| PNP Switching Output/Switching Current | 200 mA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Overload Protection | yes |
| Mechanical Data | |
| Housing | Plastic |
| Protection Mode | IP 67 |
| Connection | M 12x1 |
| Protective Insulation, Rated Voltage | 50 V |



Table 1

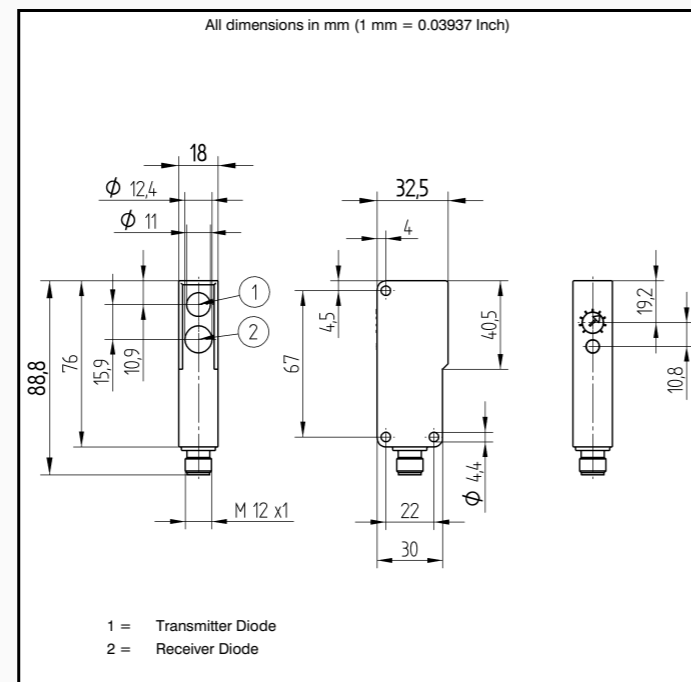
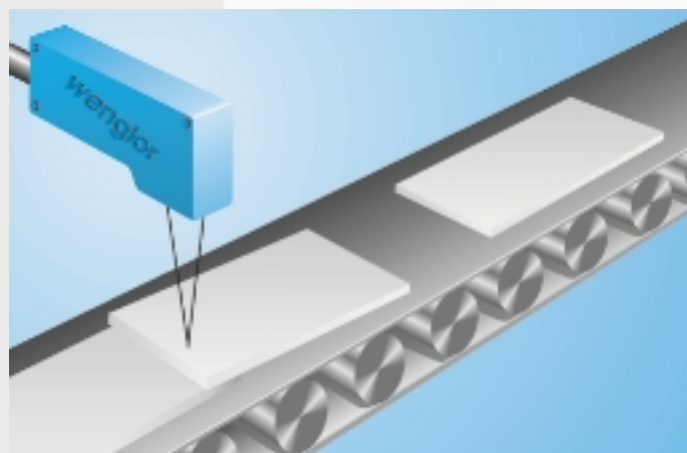
| Range | 60 mm | 150 mm | 300 mm |
|---------------------|-------|--------|--------|
| Light Spot Diameter | 8 mm | 15 mm | 20 mm |

| Plug Version | Part Number |
|------------------------|-------------|
| PNP NO/NC antivalent | ● |
| Connection Diagram No. | 101 |
| Control Panel No. | N 3 |
| Suitable Plug No. | 2 |



| 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-bar | Switching output (1,2,3...)/ NC | YE yellow |
| V | Contamination / Error output (NO) | GN green |
| V-bar | 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 | |
| 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 | |
| S+ | Emitter-Line | |
| ⊕ | Grounding | |

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
17/03

Accessories

Mounting Bracket WN

Ctrl. Panel



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

Switching Distance Deviation

Typical characteristic curve based on Kodak white, 90%

