

Reflex Sensor with Background Suppression

P1KH016

PNG//smart



- Data storage
- High-end
- IO-Link 1.1
- Teach-in
- Two independent switching outputs

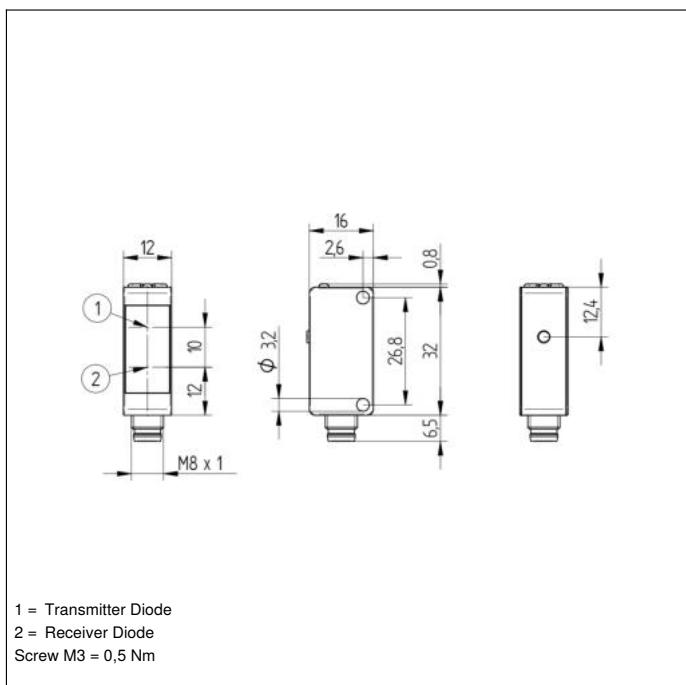
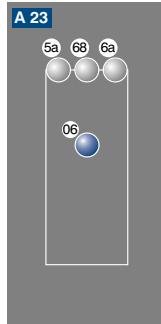
The reflex sensor with background suppression works with red light according to the angle measurement principle. It has a IO-Link interface with a data storage function as well as additional configuration and diagnostic options. The interface can also be used to configure the sensors (PNP/NPN, NC/NO, switching distance, error output), as well as for reading out switching statuses and distance values. The teach-in function also provides another configuration option. Two independent switching outputs can be used, for instance, to monitor minimum and maximum values of distances or fill levels and stack heights.



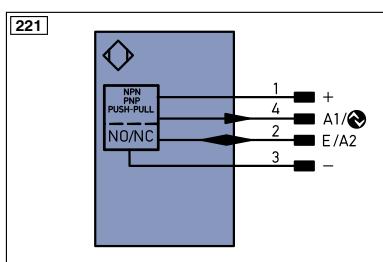
| Optical Data | |
|--|---------------|
| Range | 200 mm |
| Adjustable Range | 30...200 mm |
| Switching Hysteresis | < 10 % |
| Light Source | Red Light |
| Service Life (T = +25 °C) | 100000 h |
| Max. Ambient Light | 10000 Lux |
| Light Spot Diameter | see Table 1 |
| Electrical Data | |
| Supply Voltage | 15...30 V DC |
| Supply Voltage with IO-Link | 18...30 V DC |
| Current Consumption (Ub = 24 V) | < 20 mA |
| Switching Frequency | 100 Hz |
| Switching Frequency (1 Switching Output) | 1000 Hz |
| Response Time | 5 ms |
| Response time (1 switching output) | 0,5 ms |
| Temperature Drift | < 5 % |
| Temperature Range | -40...60 °C |
| Number of Switching Outputs | 2 |
| Switching Output Voltage Drop | < 2 V |
| Switching Output/Switching Current | 100 mA |
| Residual Current Switching Output | < 50 µA |
| Short Circuit and Overload Protection | yes |
| Reverse Polarity Protection | yes |
| Lockable | yes |
| Interface | IO-Link V1.1 |
| Data Storage | yes |
| Protection Class | III |
| Mechanical Data | |
| Setting Method | Teach-In |
| Housing Material | Plastic |
| Degree of Protection | IP67/IP68 |
| Connection | M8 x 1; 4-pin |
| Optic Cover | PMMA |
| Safety-relevant Data | |
| MTTFd (EN ISO 13849-1) | 1511,45 a |
| PNP NO | ● |
| IO-Link | ● |
| Connection Diagram No. | 221 |
| Control Panel No. | A23 |
| Suitable Connection Equipment No. | 7 |
| Suitable Mounting Technology No. | 400 |

Complementary Products

IO-Link Master
Software


Ctrl. Panel


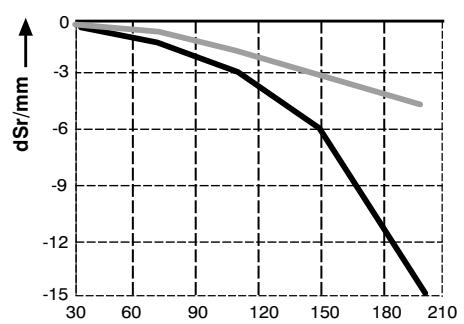
06 = Teach Button
5a = Switching Status Display, O1
68 = Supply Voltage Indicator
6a = Switching Status Display, O2


Table 1

| Detection Range | 30 mm | 120 mm | 200 mm |
|---------------------|-------|--------|--------|
| Light Spot Diameter | 9 mm | 7 mm | 10 mm |

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission

P1KH


Sr = Switching Distance

dSr = Switching Distance Change

black 6 % remission
grey 18 % remission

