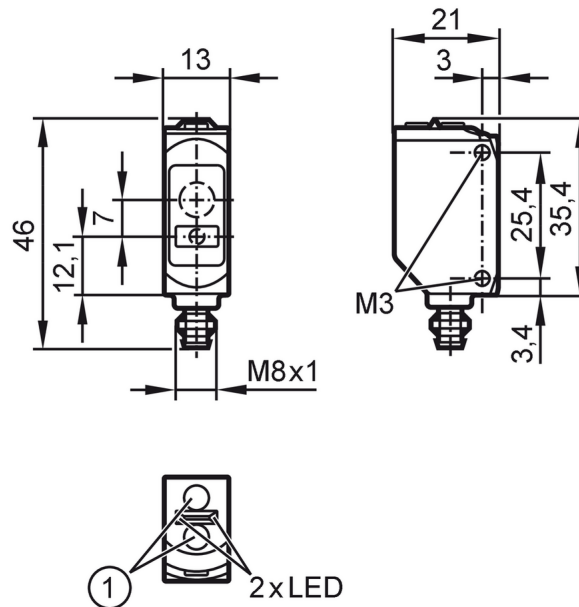


O6H708



Diffuse reflection sensor with background suppression

O6HLFPKG/AS/4P



- 1 Programmieraste
receiver in upper lens
transmitter in lower lens



Product characteristics

| | |
|------------------------|-------------|
| Type of light | red light |
| Laser protection class | 1 |
| Housing | rectangular |

Application

| | |
|--------------------|--|
| Special feature | Background suppression |
| Function principle | Diffuse reflection sensor |
| Application | Industrial applications / factory automation |

Electrical data

| | | |
|-----------------------------|------|--------------|
| Operating voltage | [V] | 10...30 DC |
| Current consumption | [mA] | 16; ((24 V)) |
| Protection class | | III |
| Reverse polarity protection | | yes |
| Type of light | | red light |
| Wave length | [nm] | 650 |

Outputs

| | | |
|---|------|-------------------------------------|
| Electrical design | | PNP |
| Output function | | light-on/dark-on mode; (selectable) |
| Max. voltage drop switching output DC | [V] | 2.5 |
| Permanent current rating of switching output DC | [mA] | 100 |
| Switching frequency DC | [Hz] | 1003 |
| Short-circuit protection | | yes |



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| | | |
|---|--|--|
| Type of short-circuit protection | pulsed | |
| Detection zone | | |
| Range [mm] | 1...200; (white paper 200 x 200 mm) | |
| Range on white object (90 % remission) [mm] | 1...200 | |
| Range on grey object (18 % remission) [mm] | 8...170 | |
| Range on black object (6 % remission) [mm] | 12...100 | |
| Max. light spot diameter [mm] | 2.2 | |
| Light spot dimensions refer to | at maximum range | |
| Background suppression available | yes | |
| Interfaces | | |
| Communication interface | IO-Link | |
| Transmission type | COM2 (38,4 kBaud) | |
| IO-Link revision | 1.1 | |
| SDCI standard | IEC 61131-9 | |
| Profiles | Smart Sensor - SSP 0 | Generic Profiled Sensor |
| | Function | Device identification |
| | Function | Multiple switching signal |
| | Function | Process data variable |
| | Function | Device diagnosis |
| | Function | Teach channel |
| SIO mode | yes | |
| Required master port type | A | |
| Min. process cycle time [ms] | 10 | |
| IO-Link process data (cyclical) | function | bit length |
| | process value | 32 |
| | device status | 4 |
| | binary switching information | 1 |
| IO-Link functions (acyclical) | application specific tag; operating hours counter; switch-on cycle counter | |
| Supported DeviceIDs | Type of operation | DeviceID |
| | default | 1026 |
| Operating conditions | | |
| Ambient temperature [°C] | -10...60 | |
| Protection | IP 65; IP 67 | |
| Tests / approvals | | |
| EMC | EN 60947-5-2 | |
| Laser protection class | 1 | |
| Notes on laser protection | Caution: | laser light |
| | laser class: | 1 |
| | | EN / IEC60825-1:2007 |
| | | EN / IEC60825-1:2014 |
| | | Complies with 21 CFR 1040.10 except for conformance with IEC 60825-1 Ed. 3, as |



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described in Laser Notice No. 56, dated May 8, 2019.

| | |
|--------------|------------------------|
| MTTF [years] | 513 |
| UL approval | Ta -25...40 °C |
| | Enclosure type Type 1 |
| | voltage supply Class 2 |
| | File number UL E174191 |

Mechanical data

| | |
|------------------------|---|
| Weight [g] | 19.1 |
| Housing | rectangular |
| Dimensions [mm] | 46 x 13 x 21 |
| Materials | housing: ABS orange; upper part of the housing: PPSU black; Sealing: EPDM |
| Lens material | front pane:PMMA |
| Tightening torque [Nm] | 0.5; (screws) |

Displays / operating elements

| | | |
|---------|------------------|-----------------|
| Display | switching status | 1 x LED, yellow |
| | operation | 1 x LED, green |

Remarks

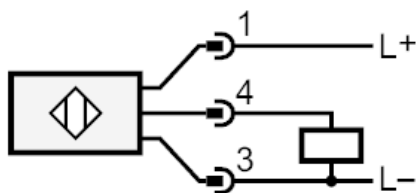
| | |
|---------------|---|
| Remarks | operating voltage "supply class 2" according to cULus |
| Pack quantity | 1 pcs. |

Electrical connection

Connector: 1 x M8; coding: A; Contacts: 4



Connection



4 OUT / IO-Link



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Other data

Repeatability / precision: 6 σ

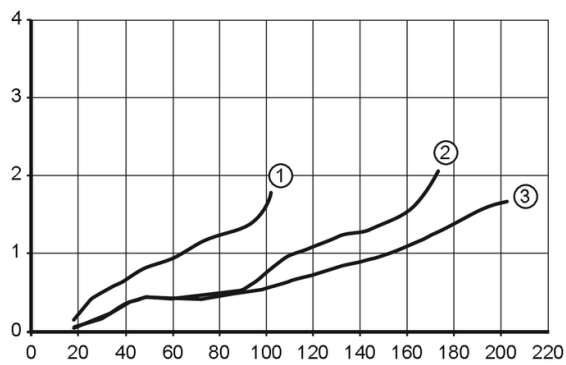
| repeatability of the measured values | | |
|--------------------------------------|------------------------|------------------------------|
| Abstand | white (90 % remission) | black (6 %...90 % remission) |
| 20 mm | 0.1 mm | 0.5 mm |
| 100 mm | 0.5 mm | 2.0 mm |
| 200 mm | 4 mm | OL |
| accuracy | | |
| Abstand | white (90 % remission) | black (6 %...90 % remission) |
| 20 mm | ± 1.0 mm | ± 1.3 mm |
| 100 mm | ± 5.0 mm | ± 6.5 mm |
| 200 mm | ± 20.0 mm | OL |

The values apply at

Extraneous light on the object < 10 klx

Diagrams and graphs

accuracy graph



x: distance sensor/object [mm]

y: min. distance object/background [mm]

1 = object black (6 % remission) , background white (90 % remission)

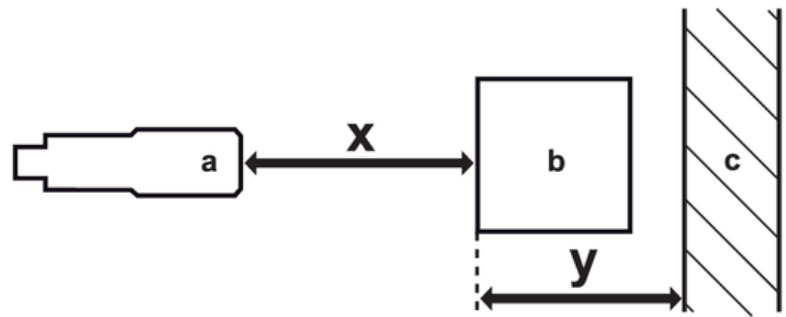
2 = object grey (18 % remission) , background white (90 % remission)

3 = object white (90 % remission) , background white (90 % remission)



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- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]