

O6H309



Diffuse reflection sensor with background suppression

O6H-FPKG/AS/4P



- 1: output function switch
- 2: potentiometer sensitivity



Product characteristics

| | |
|---------------|-------------|
| Type of light | red light |
| Housing | rectangular |

Application

| | |
|--------------------|----------------------------|
| Special feature | Background suppression |
| Function principle | Diffuse reflection sensor |
| Application | food and beverage industry |

Electrical data

| | | |
|-----------------------------|------|--------------|
| Operating voltage | [V] | 10...30 DC |
| Current consumption | [mA] | 22; ((24 V)) |
| Protection class | | III |
| Reverse polarity protection | | yes |
| Type of light | | red light |
| Wave length | [nm] | 633 |

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] | 1000 |
| Short-circuit protection | | yes |
| Type of short-circuit protection | | pulsed |

Detection zone

| | | |
|-------|------|-------------------------------------|
| Range | [mm] | 2...200; (white paper 200 x 200 mm) |
|-------|------|-------------------------------------|



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| | |
|---|------------------|
| Range on white object (90 % remission) [mm] | 2...200 |
| Range on grey object (18 % remission) [mm] | 4...200 |
| Range on black object (6 % remission) [mm] | 8...200 |
| Range adjustable | yes |
| Max. light spot diameter [mm] | 8 |
| 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 |
| SIO mode | yes | |
| Required master port type | A | |
| Min. process cycle time [ms] | 2.5 | |
| IO-Link process data (cyclical) | function | bit length |
| | process value | 8 |
| | binary switching information | 1 |
| IO-Link functions (acyclical) | application specific tag; operating hours counter; switching cycles counter | |
| Supported DeviceIDs | Type of operation | DeviceID |
| | default | 424 |

Operating conditions

| | |
|--------------------------|-----------------------------|
| Ambient temperature [°C] | -25...80 |
| Protection | IP 65; IP 67; IP 68; IP 69K |

Tests / approvals

| | | |
|--------------|-----------------|-------------|
| EMC | EN 60947-5-2 | |
| MTTF [years] | 534 | |
| UL approval | Ta | -25...40 °C |
| | Enclosure type | Type 1 |
| | power supply | Class 2 |
| | UL approval no. | E010 |

Mechanical data

| | |
|------------------------|---|
| Weight [g] | 34.4 |
| Housing | rectangular |
| Dimensions [mm] | 41.3 x 13 x 21 |
| Materials | housing: stainless steel (316L/1.4404); Sealing: EPDM; plastics: PPSU |
| Lens material | front pane:PMMA |
| Lens alignment | side lens |
| Tightening torque [Nm] | 1; (screws) |



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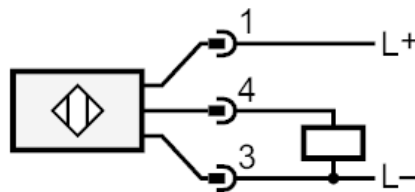
| Displays / operating elements | | |
|-------------------------------|---|-----------------|
| Display | switching status | 1 x LED, yellow |
| | operation | 1 x LED, green |
| Remarks | | |
| Remarks | operating voltage "supply class 2" according to cULus | |
| Pack quantity | 1 pcs. | |

Electrical connection

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

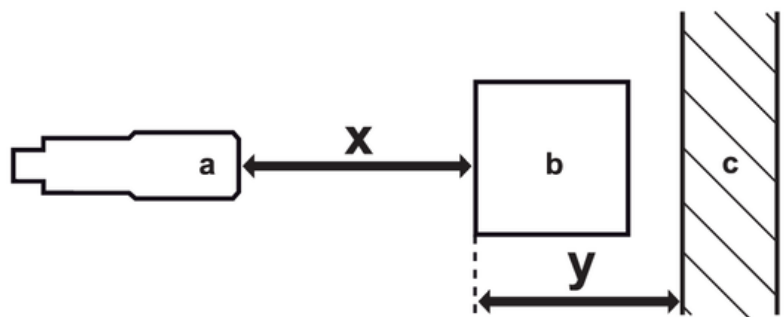


Connection



4 OUT / IO-Link

Diagrams and graphs



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

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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)