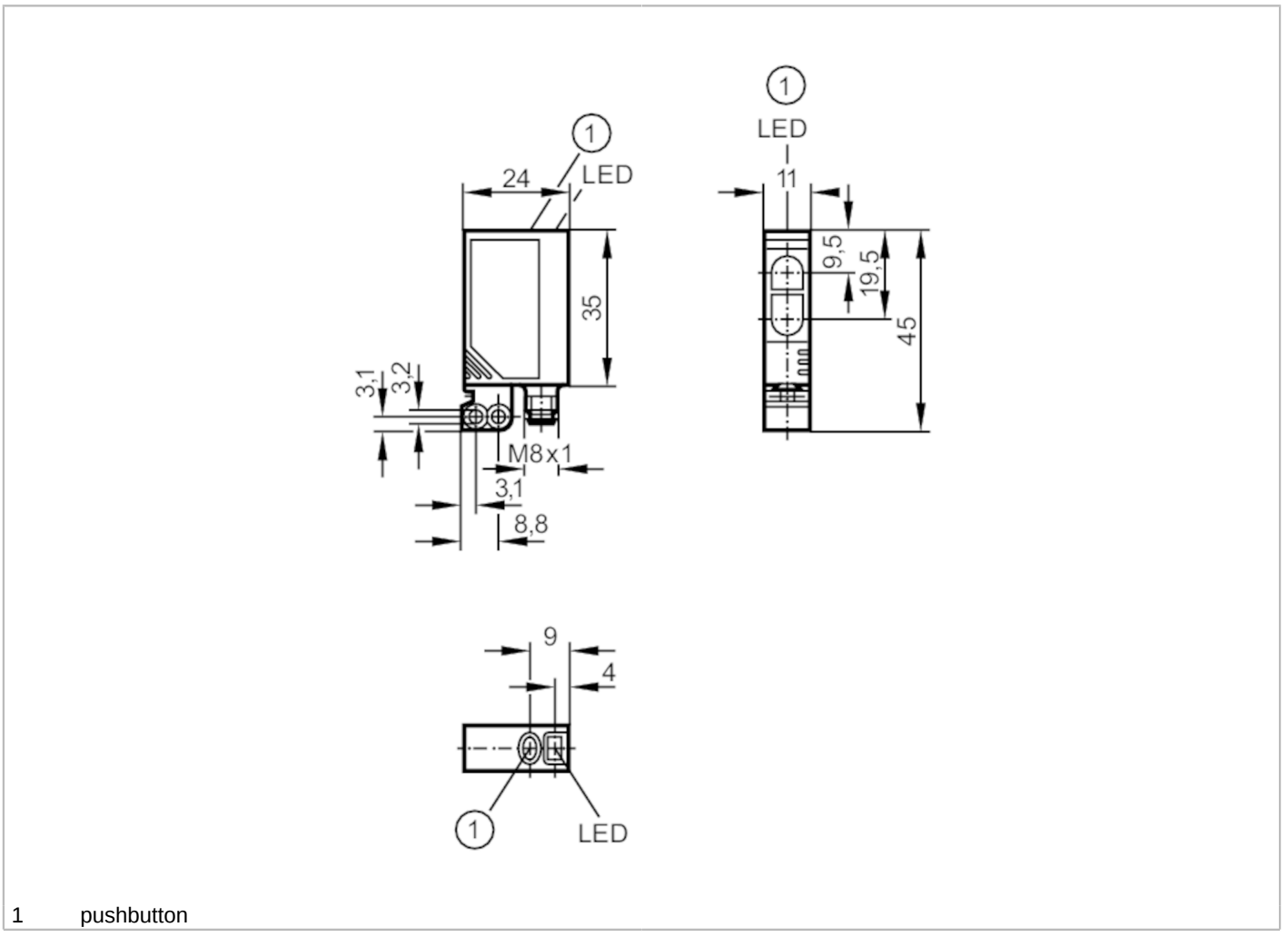
# OJ5048

## Diffuse reflection sensor with background suppression

OJH-FPKG/SO/AS




1 pushbutton

| | | |
|---|---|---|
| **Product characteristics** | | |
| Type of light | | red light |
| Housing | | rectangular |
| **Application** | | |
| Special feature | | Background suppression |
| Function principle | | Diffuse reflection sensor |
| **Electrical data** | | |
| Operating voltage | [V] | 10...30 DC |
| Current consumption | [mA] | 25 |
| Protection class | | III |
| Reverse polarity protection | | yes |
| Type of light | | red light |
| Wave length | [nm] | 660 |
| **Outputs** | | |
| Electrical design | | PNP |
| Output function | | light-on/dark-on mode; (programmable) |

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|---|---|---|---|
| Max. voltage drop switching output DC | [V] | 2.5 | |
| Permanent current rating of switching output DC | [mA] | 200 | |
| Switching frequency DC | [Hz] | 1000 | |
| Short-circuit protection | | yes | |
| Type of short-circuit protection | | pulsed | |
| Overload protection | | yes | |
| **Detection zone** | | | |
| Range | [mm] | 15...400;  (white paper 200 x 200 mm 90% remission) | |
| Range adjustable | | yes | |
| Max. light spot diameter | [mm] | 18 | |
| Light spot dimensions refer to | | Range | |
| Background suppression available | | yes | |
| **Operating conditions** | | | |
| Ambient temperature | [°C] | -25...60 | |
| Protection | | IP 67 | |
| **Tests / approvals** | | | |
| EMC | | EN 60947-5-2 | |
| MTTF | [years] | 556 | |
| **Mechanical data** | | | |
| Weight | [g] | 35.3 | |
| Housing | | rectangular | |
| Dimensions | [mm] | 35 x 11 x 24 | |
| Materials | | housing: ABS; fixture: diecast zinc; LED window: SEPS; pushbutton: SEPS | |
| Lens material | | PMMA | |
| Lens alignment | | side lens | |
| **Displays / operating elements** | | | |
| Display | | switching status | 1 x LED, yellow |
| | | operation | 1 x LED, green |
| Electronic lock | | yes | |
| **Accessories** | | | |
| Items supplied | | Basic clip: 1, E20964 | |
| | | screws: 2 x M3 x 16 | |
| | | spring washers: 2 | |
| | | Nuts: 2 | |
| **Remarks** | | | |
| Remarks | | operating voltage "supply class 2" according to cULus | |
| Pack quantity | | 1 pcs. | |

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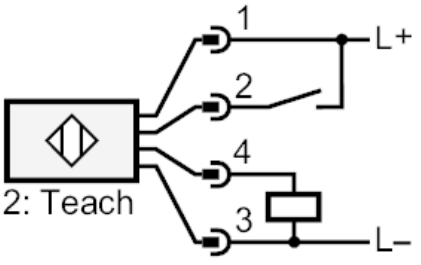
## Electrical connection

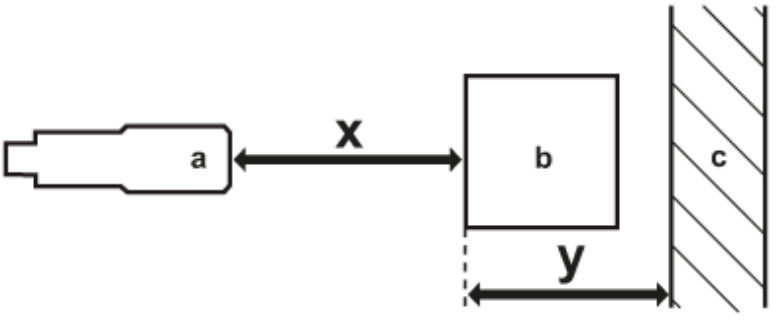
Connector: 1 x M8; coding: A

### Connection




| | |
|---|---|
| 2 | Teach |

## Diagrams and graphs




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

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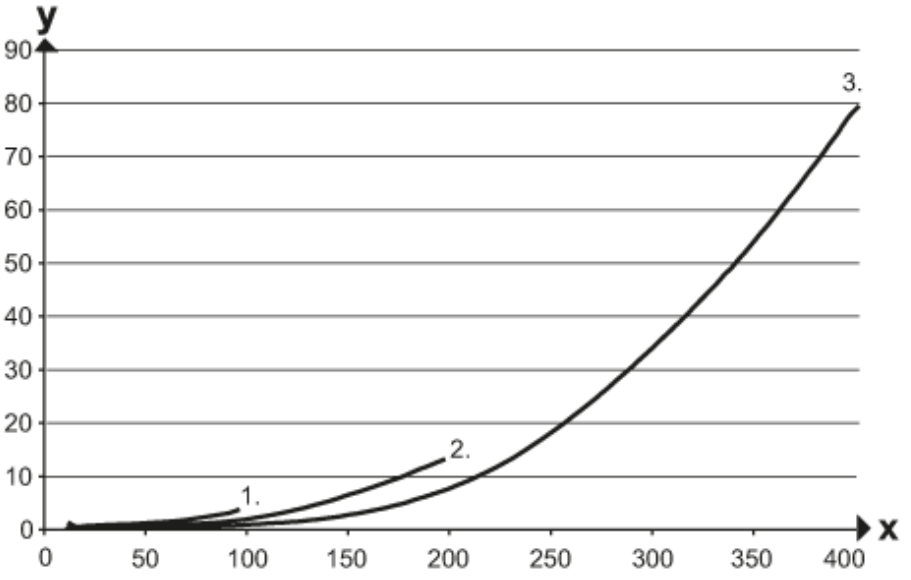
**OJH-FPKG/SO/AS**

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)