



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                                                                     |
| <b>Detection zone</b>                           |                  |                                                                         |
| 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                                                                     |
| <b>Operating conditions</b>                     |                  |                                                                         |
| Ambient temperature                             | [°C]             | -25...60                                                                |
| Protection                                      |                  | IP 67                                                                   |
| <b>Tests / approvals</b>                        |                  |                                                                         |
| EMC                                             |                  | EN 60947-5-2                                                            |
| MTTF                                            | [years]          | 556                                                                     |
| <b>Mechanical data</b>                          |                  |                                                                         |
| 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                                                               |
| <b>Displays / operating elements</b>            |                  |                                                                         |
| Display                                         | switching status | 1 x LED, yellow                                                         |
|                                                 | operation        | 1 x LED, green                                                          |
| Electronic lock                                 |                  | yes                                                                     |
| <b>Accessories</b>                              |                  |                                                                         |
| Items supplied                                  |                  | Basic clip: 1, E20964                                                   |
|                                                 |                  | screws: 2 x (M3 x 16 mm)                                                |
|                                                 |                  | spring washers: 2                                                       |
|                                                 |                  | Nuts: 2                                                                 |
| <b>Remarks</b>                                  |                  |                                                                         |
| Remarks                                         |                  | operating voltage "supply class 2" according to cULus                   |
| Pack quantity                                   |                  | 1 pcs.                                                                  |

## Diffuse reflection sensor with background suppression

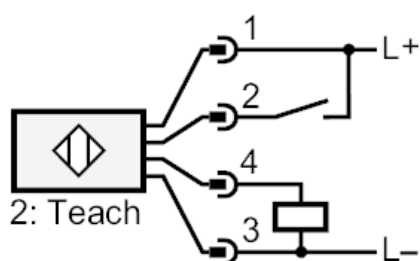
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### Electrical connection

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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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)