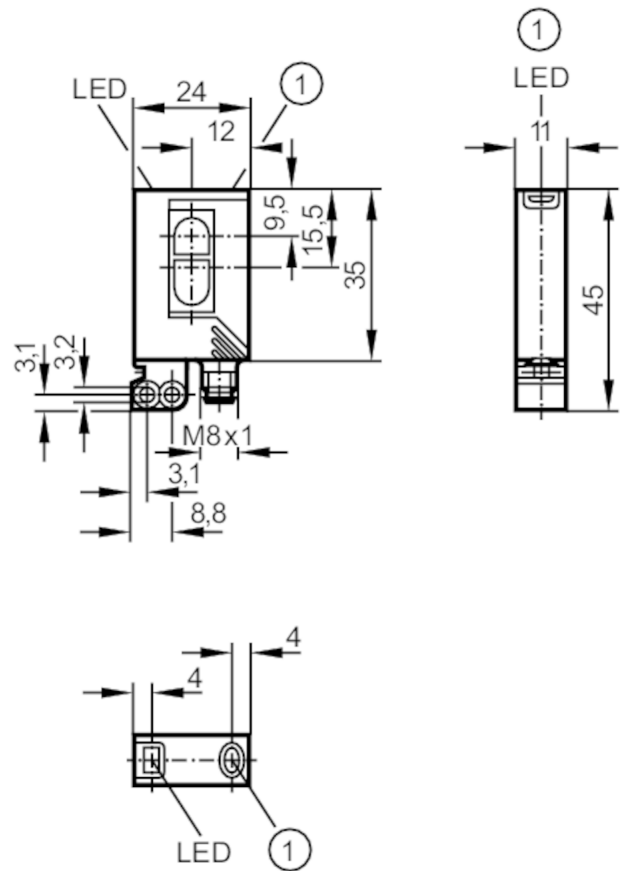




Laser diffuse reflection sensor

OJHLFPKG/FO/AS



- 1 pushbutton  
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 |
| Electrical data             |      |                           |
| Operating voltage           | [V]  | 10...30 DC                |
| Current consumption         | [mA] | 13                        |
| Protection class            |      | III                       |
| Reverse polarity protection |      | yes                       |
| Type of light               |      | red light                 |
| Wave length                 | [nm] | 650                       |
| Typ. lifetime               | [h]  | 50000                     |



## Laser diffuse reflection sensor

OJHLFPKG/FO/AS

| Outputs                                              |                                                                         |                                                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Electrical design                                    | PNP                                                                     |                                                                                                   |
| Output function                                      | light-on/dark-on mode; (programmable)                                   |                                                                                                   |
| 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]                                           | 7...150; (white paper 200 x 200 mm 90% remission)                       |                                                                                                   |
| Range adjustable                                     | yes                                                                     |                                                                                                   |
| Diameter of the smallest detectable object [mm]      | 0.8                                                                     |                                                                                                   |
| Max. light spot diameter [mm]                        | 0.8                                                                     |                                                                                                   |
| Background suppression available                     | yes                                                                     |                                                                                                   |
| Operating conditions                                 |                                                                         |                                                                                                   |
| Ambient temperature [°C]                             | -10...60                                                                |                                                                                                   |
| Protection                                           | 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 except for deviations pursuant to Laser Notice No. 50, dated June 2007. |
| MTTF [years]                                         | 501                                                                     |                                                                                                   |
| Mechanical data                                      |                                                                         |                                                                                                   |
| Weight [g]                                           | 29.9                                                                    |                                                                                                   |
| Housing                                              | rectangular                                                             |                                                                                                   |
| Dimensions [mm]                                      | 35 x 24 x 11                                                            |                                                                                                   |
| Materials                                            | housing: ABS; fixture: diecast zinc; LED window: SEPS; pushbutton: SEPS |                                                                                                   |
| Lens material                                        | PMMA                                                                    |                                                                                                   |
| Lens alignment                                       | front lens                                                              |                                                                                                   |
| Displays / operating elements                        |                                                                         |                                                                                                   |
| Display                                              | switching status                                                        | 1 x LED, yellow                                                                                   |
|                                                      | operation                                                               | 1 x LED, green                                                                                    |
| Electronic lock                                      | yes                                                                     |                                                                                                   |



Laser diffuse reflection sensor

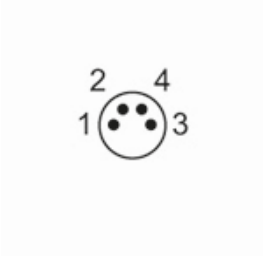
OJHLFPKG/FO/AS

| Accessories    |                       |
|----------------|-----------------------|
| Items supplied | Basic clip: 1, E20964 |
|                | screws: 2 x M3 x 16   |
|                | spring washers: 2     |
|                | Nuts: 2               |

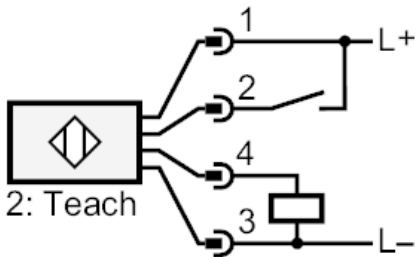
| Remarks       |                                                       |
|---------------|-------------------------------------------------------|
| Remarks       | operating voltage "supply class 2" according to cULus |
| Pack quantity | 1 pcs.                                                |

Electrical connection

Connector: 1 x M8; coding: A



Connection

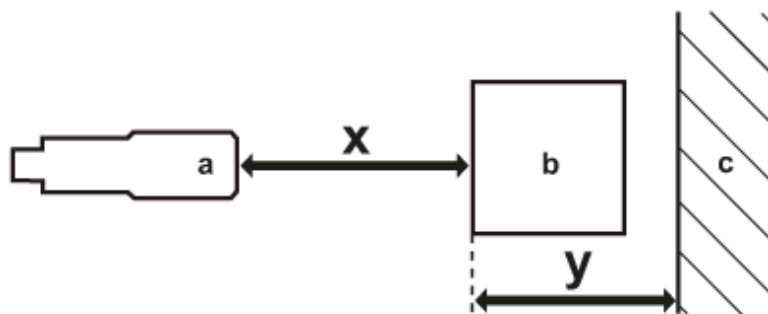


2 Teach

## Laser diffuse reflection sensor

OJHLFPKG/FO/AS

## Diagrams and graphs



a: sensor

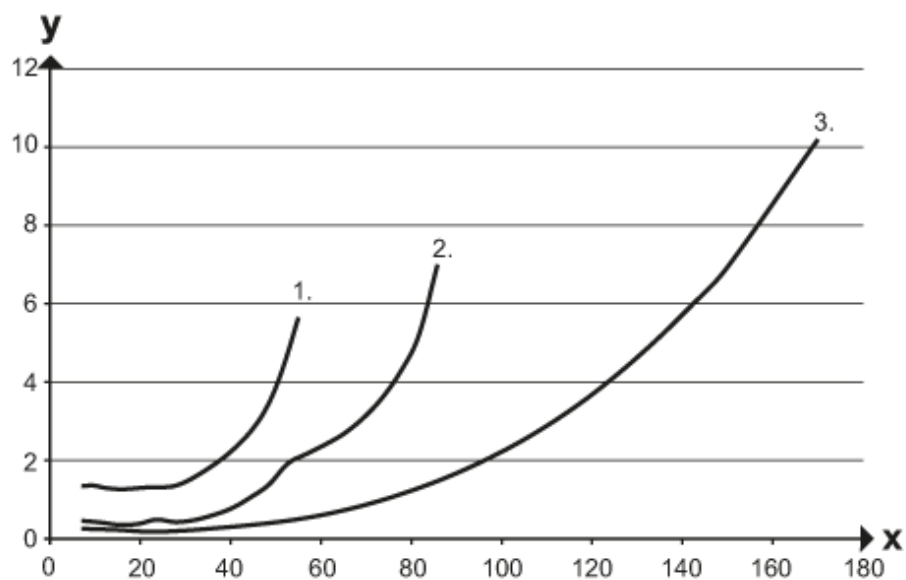
b: object

c: background

x: distance sensor/object [mm]

y: min. distance object/background [mm]

## 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)