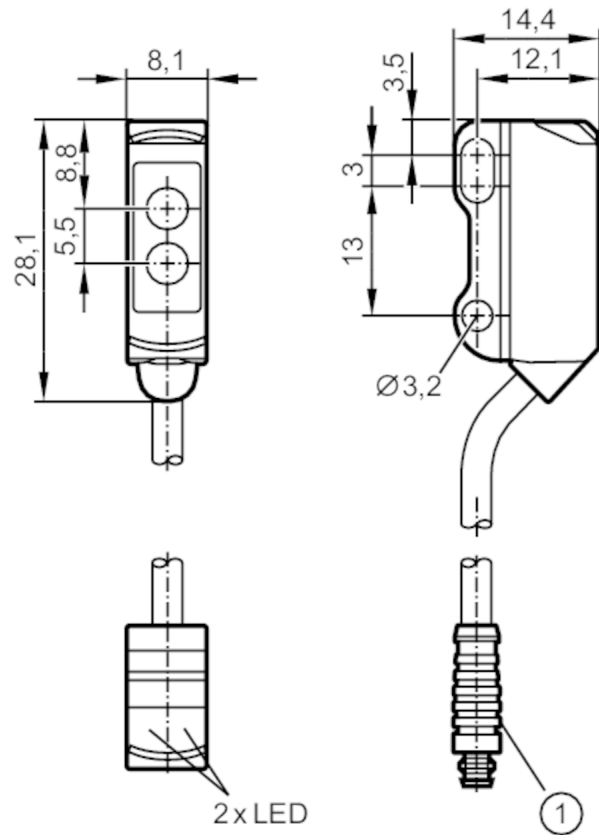


# O8H214



## Diffuse reflection sensor with background suppression

O8H-HPKG/IO-Link/0,30M/AS/3P



1 receiver in upper lens  
transmitter in lower lens  
illustration (example)



### Application

|                    |                           |
|--------------------|---------------------------|
| Function principle | Diffuse reflection sensor |
|--------------------|---------------------------|

### Electrical data

|                             |      |              |
|-----------------------------|------|--------------|
| Operating voltage           | [V]  | 10...30 DC   |
| Current consumption         | [mA] | 20; ((24 V)) |
| Protection class            |      | III          |
| Reverse polarity protection |      | yes          |
| Type of light               |      | red light    |
| Wave length                 | [nm] | 633          |



## Diffuse reflection sensor with background suppression

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| Outputs                                              |              |                                                                                           |
|------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------|
| Electrical design                                    |              | PNP                                                                                       |
| Output function                                      |              | light-on mode                                                                             |
| 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]                                           |              | 1...50; (white paper 200 x 200 mm)                                                        |
| Range on white object (90 % remission) [mm]          |              | 1...50                                                                                    |
| Range on grey object (18 % remission) [mm]           |              | 3...50                                                                                    |
| Range on black object (6 % remission) [mm]           |              | 5...50                                                                                    |
| Range adjustable                                     |              | yes                                                                                       |
| Max. light spot diameter [mm]                        |              | 4                                                                                         |
| Light spot dimensions refer to                       |              | at maximum range                                                                          |
| Monitoring range final value [mm]                    |              | 10...80                                                                                   |
| 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                                                                               |
| IO-Link device ID                                    |              | 535 d / 00 02 17 h                                                                        |
| Profiles                                             |              | Smart Sensor: Device Identification; Device Diagnosis; Teach Channel; Binary Data Channel |
| SIO mode                                             |              | yes                                                                                       |
| Required master port type                            |              | A                                                                                         |
| Operating conditions                                 |              |                                                                                           |
| Ambient temperature [°C]                             |              | -25...60                                                                                  |
| Protection                                           |              | IP 65; IP 67                                                                              |
| Tests / approvals                                    |              |                                                                                           |
| EMC                                                  | EN 60947-5-2 |                                                                                           |
| MTTF [years]                                         |              | 757                                                                                       |



## Diffuse reflection sensor with background suppression

O8H-HPKG/IO-Link/0,30M/AS/3P

| Mechanical data |      |                                               |
|-----------------|------|-----------------------------------------------|
| Weight          | [g]  | 23.2                                          |
| Housing         |      | rectangular                                   |
| Dimensions      | [mm] | 28.1 x 8.1 x 14.4                             |
| Materials       |      | housing: ABS; stainless steel (1.4404 / 316L) |
| Lens material   |      | PMMA                                          |
| Lens alignment  |      | side lens                                     |

| Displays / operating elements |                  |                 |
|-------------------------------|------------------|-----------------|
| Display                       | switching status | 1 x LED, yellow |
|                               | operation        | 1 x LED, green  |

| Remarks       |        |
|---------------|--------|
| Pack quantity | 1 pcs. |

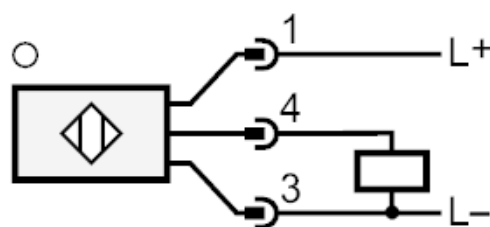
## Electrical connection

Cable: 0.3 m, PVC; 3 x 0.08 mm<sup>2</sup>

Connector: 1 x M8



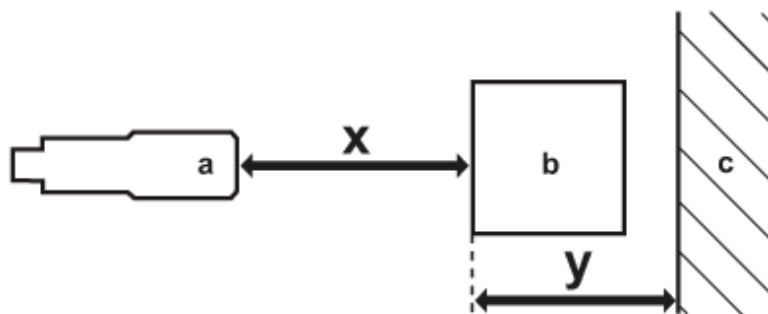
## Connection



## Diffuse reflection sensor with background suppression

O8H-HPKG/IO-Link/0,30M/AS/3P

## Diagrams and graphs



a: sensor

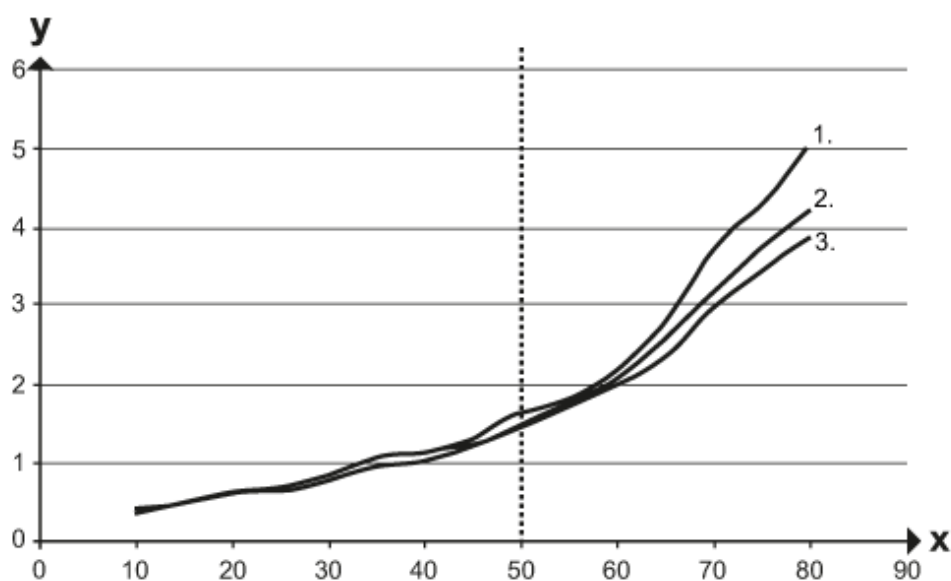
b: object

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)