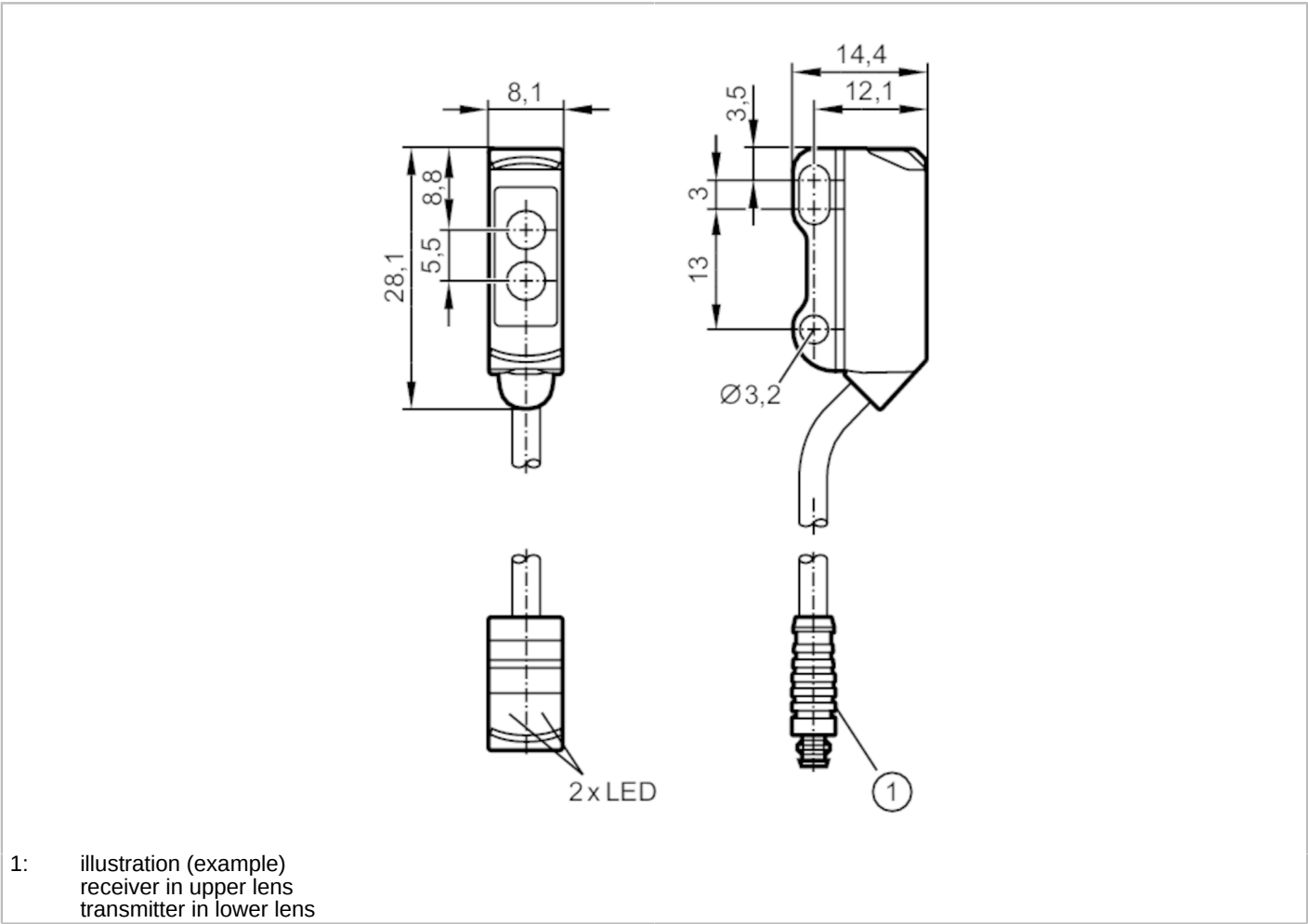




Diffuse reflection sensor with background suppression

O8H-FPKG/IO-Link/0,30M/AS/4P



| 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] | 20; ((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; (programmable) |



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|                                                 |      |        |
|-------------------------------------------------|------|--------|
| 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...80; (white paper 200 x 200 mm) |
| Range on white object (90 % remission) | [mm] | 1...80                             |
| Range on grey object (18 % remission)  | [mm] | 3...76                             |
| Range on black object (6 % remission)  | [mm] | 5...74                             |
| Setting range                          | [mm] | 10...80                            |
| Range adjustable                       |      | yes                                |
| Max. light spot diameter               | [mm] | 4                                  |
| 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 |
|                                 | Function                                                                    | Device diagnosis          |
|                                 | Function                                                                    | Teach channel             |
| SIO mode                        | yes                                                                         |                           |
| Required master port type       | A                                                                           |                           |
| Min. process cycle time         | [ms]                                                                        | 3                         |
| IO-Link process data (cyclical) | <b>function</b>                                                             | <b>bit length</b>         |
|                                 | process value                                                               | 8                         |
|                                 | device status                                                               | 4                         |
|                                 | binary switching information                                                | 1                         |
| IO-Link functions (acyclical)   | application specific tag; operating hours counter; switching cycles counter |                           |
| Supported DeviceIDs             | <b>Type of operation</b>                                                    | <b>DeviceID</b>           |
|                                 | default                                                                     | 535                       |

## Operating conditions

|                     |      |              |
|---------------------|------|--------------|
| Ambient temperature | [°C] | -25...60     |
| Protection          |      | IP 65; IP 67 |

## Tests / approvals

|     |              |  |
|-----|--------------|--|
| EMC | EN 60947-5-2 |  |
|-----|--------------|--|



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|             |                 |                         |
|-------------|-----------------|-------------------------|
| MTTF        | [years]         | 757                     |
| UL approval | Ta              | -25...60 °C             |
|             | Enclosure type  | Type 1                  |
|             | power supply    | Limited Voltage/Current |
|             | UL approval no. | E017                    |
|             | File number UL  | E174191                 |

| Mechanical data |      |                                                                  |
|-----------------|------|------------------------------------------------------------------|
| Weight          | [g]  | 21.1                                                             |
| Housing         |      | rectangular                                                      |
| Dimensions      | [mm] | 28.1 x 8.1 x 14.4                                                |
| Materials       |      | housing: ABS; rear of the housing: stainless steel (316L/1.4404) |
| Lens material   |      | PMMA                                                             |
| Lens alignment  |      | side lens                                                        |

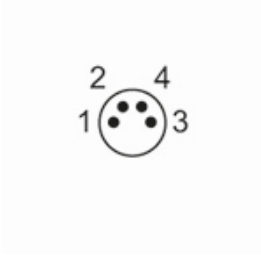
| Displays / operating elements |                  |                 |
|-------------------------------|------------------|-----------------|
| Display                       | switching status | 1 x LED, yellow |
|                               | operation        | 1 x LED, green  |

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

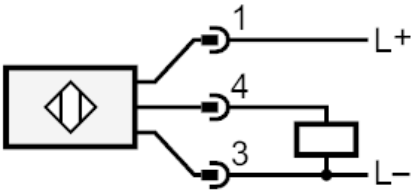
Electrical connection

Cable: 0.3 m, PVC; 3 x 0.08 mm²

Connector: 1 x M8; coding: A



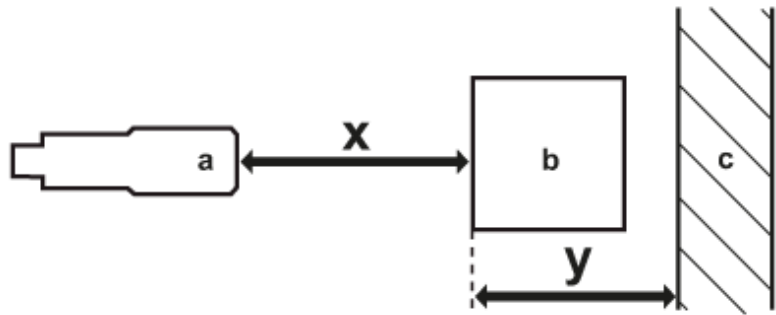
Connection



## Diffuse reflection sensor with background suppression

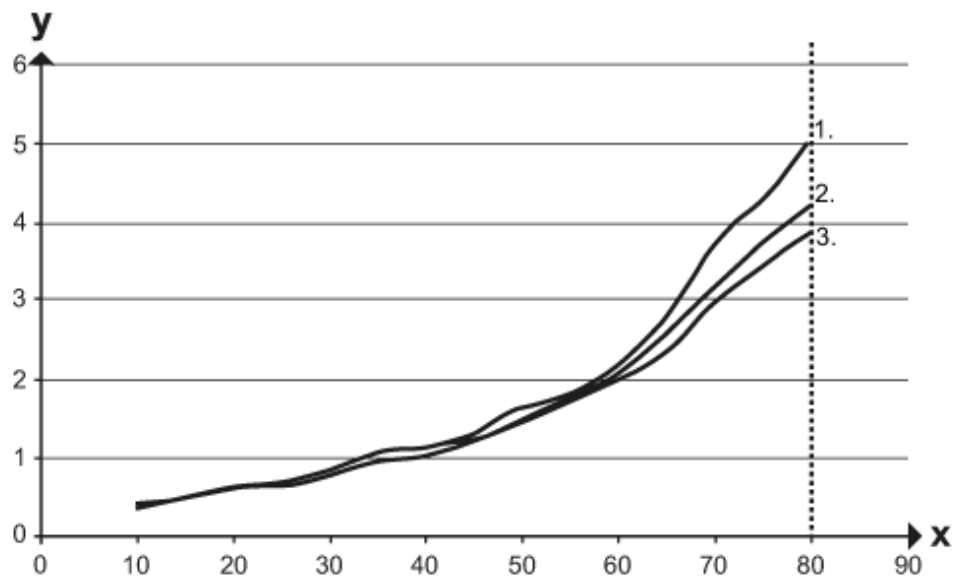
O8H-FPKG/IO-Link/0,30M/AS/4P

## 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)