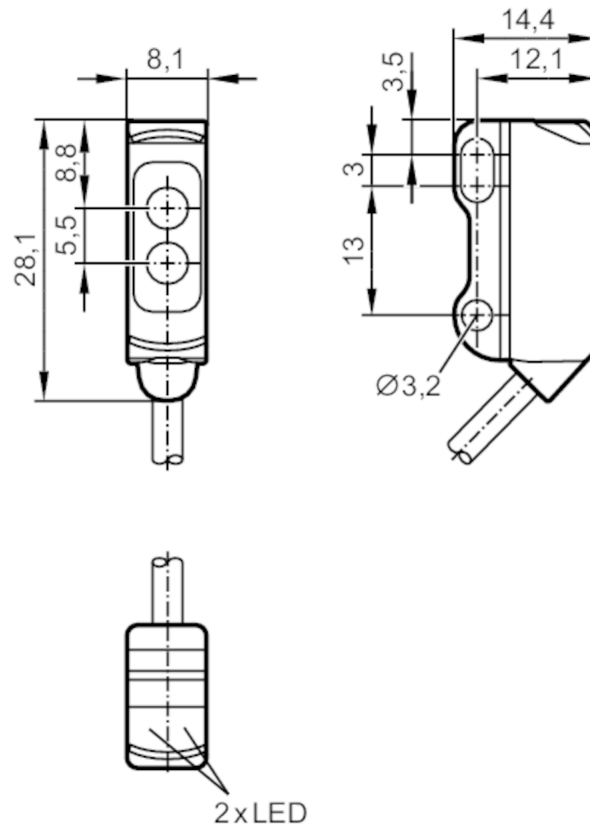


# O8H206



## Diffuse reflection sensors with background suppression

O8H-FPKG/IO-Link/2,0M



Receiver in upper lens  
transmitter in lower lens



### Product characteristics

|               |             |
|---------------|-------------|
| Type of light | red light   |
| Housing       | rectangular |

### Application

|                    |                           |
|--------------------|---------------------------|
| System             | 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          |



## Diffuse reflection sensors with background suppression

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| 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] | 100   |            |
| Switching frequency DC [Hz]                          | 1000  |            |
| Short-circuit protection                             | yes   |            |
| Type of short-circuit protection                     | yes (non-latching)  |            |
| Monitoring range                                     |   |            |
| Range [mm]   | 1...30; (white paper 200 x 200 mm)  |            |
| Range on white object (90 % remission) [mm]          | 1...30  |            |
| Range on grey object (18 % remission) [mm]           | 5...30  |            |
| Range on black object (6 % remission) [mm]           | 5...29  |            |
| 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   |            |
| Profiles   | Smart Sensor: Device Identification; Device Diagnosis; Teach Channel; Switching Channel |            |
| SIO mode   | yes   |            |
| Required master port class                           | A   |            |
| Min. process cycle time [ms]                         | 3   |            |
| IO-Link process data (cyclical)                      | Function  | bit length |
|  | process value   | 8          |
|  | device status   | 4          |
| IO-Link functions (acyclical)                        | binary switching information  | 1          |
|  | application specific tag; operating hours counter; switching cycles counter             |            |
| Supported DeviceIDs                                  | Type of operation   | DeviceID   |
|  | default   | 535        |
| Operating conditions                                 |   |            |
| Ambient temperature [°C]                             | -25...60  |            |
| Protection   | IP 65; IP 67  |            |



## Diffuse reflection sensors with background suppression

O8H-FPKG/IO-Link/2,0M

| Tests / approvals |                    |                         |
|-------------------|--------------------|-------------------------|
| EMC               |                    | EN 60947-5-2            |
| MTTF              | [years]            | 757                     |
| UL approval       | Ta                 | -25...60 °C             |
|                   | Enclosure type     | Type 1                  |
|                   | voltage supply     | Limited Voltage/Current |
|                   | UL approval number | E016                    |
|                   | File number UL     | E174191                 |

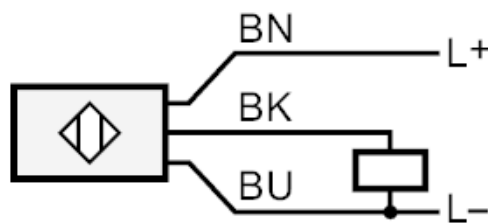
| Mechanical data |      |   |
|-----------------|------|---|
| Weight          | [g]  | 38  |
| Housing         |      | rectangular                                   |
| Dimensions      | [mm] | 28.1 x 8.1 x 14.4                             |
| Material        |      | housing: ABS; stainless steel (1.4404 / 316L) |
| Lens material   |      | PMMA  |
| Lens alignment  |      | Side sensing                                  |

| Displays / operating elements |                  |                 |
|-------------------------------|------------------|-----------------|
| Display                       | Switching status | 1 x LED, yellow |
|                               | Power            | 1 x LED, green  |

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

**Electrical connection**  
 Cable: 2 m, PVC; 3 x 0.08 mm<sup>2</sup>

### Connection



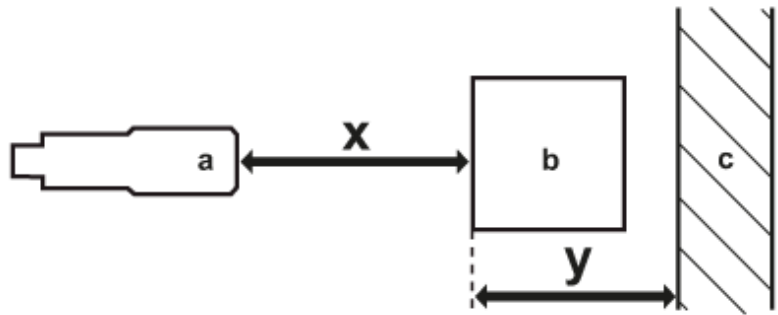
|    |               |
|----|---------------|
|    | Core colors : |
| BN | brown         |
| BK | black         |
| BU | blue          |



Diffuse reflection sensors with background suppression

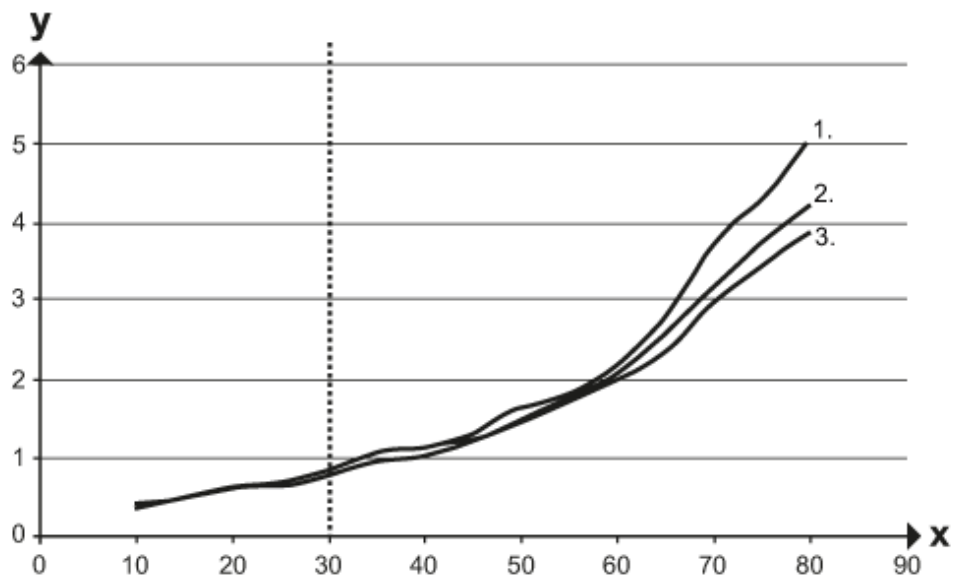
O8H-FPKG/IO-Link/2,0M

Diagrams and graphs



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

Background suppression chart



- 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)