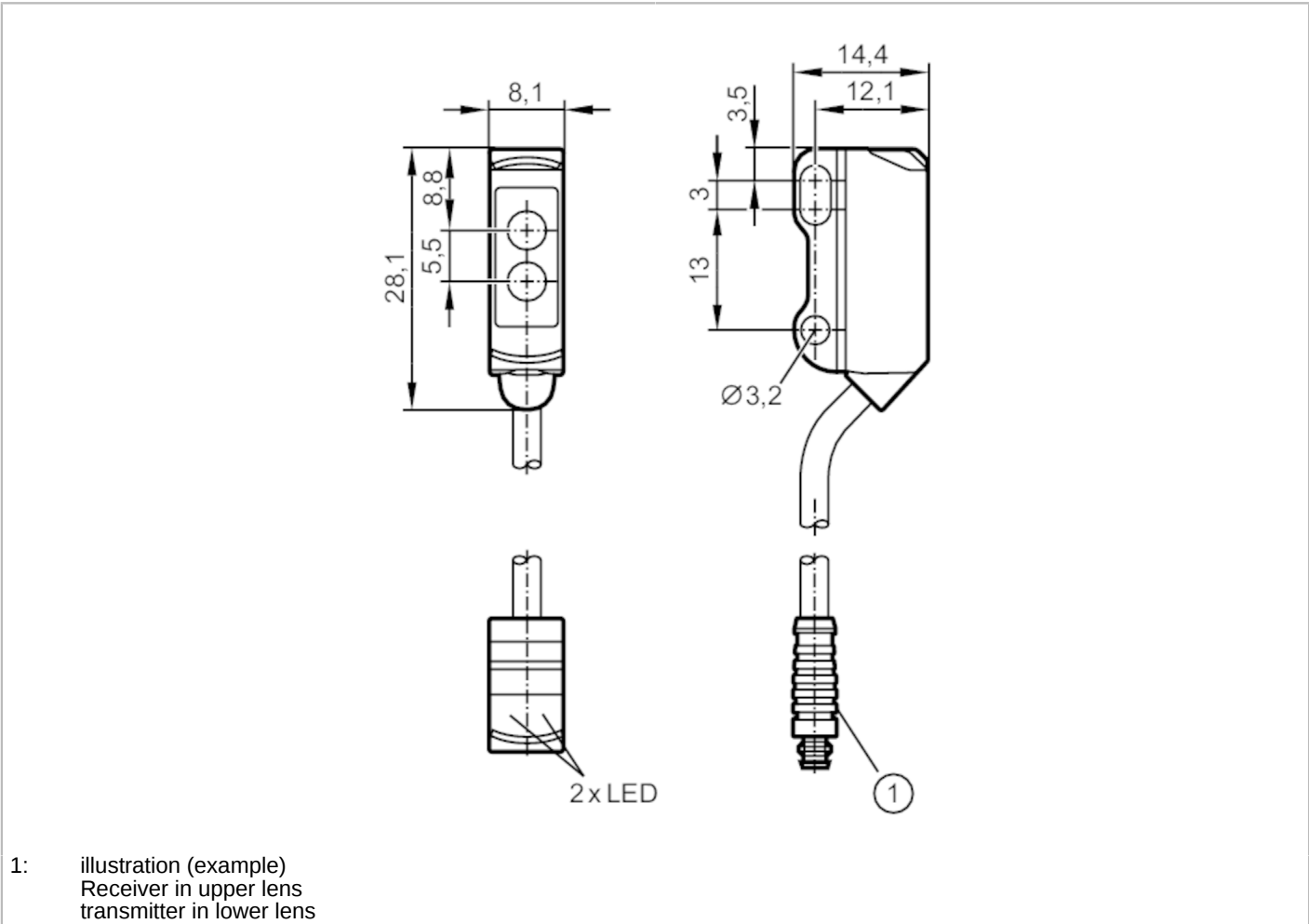




Diffuse reflection sensors with background suppression

O8H-HNKG/0,30M/AS/3P



| 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                       |
| Outputs                     |      |                           |
| Electrical design           |      | NPN                       |
| Output function             |      | light-on mode             |



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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                |                    | yes (non-latching)                                                 |
| <b>Monitoring range</b>                         |                    |                                                                    |
| 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                                |                    | no                                                                 |
| Max. light spot diameter                        | [mm]               | 4                                                                  |
| Light spot dimensions refer to                  |                    | at maximum range                                                   |
| Background suppression available                |                    | yes                                                                |
| <b>Operating conditions</b>                     |                    |                                                                    |
| Ambient temperature                             | [°C]               | -25...60                                                           |
| Protection                                      |                    | IP 65; IP 67                                                       |
| <b>Tests / approvals</b>                        |                    |                                                                    |
| 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 | E015                                                               |
|                                                 | File number UL     | E174191                                                            |
| <b>Mechanical data</b>                          |                    |                                                                    |
| Weight                                          | [g]                | 20.9                                                               |
| Housing                                         |                    | rectangular                                                        |
| Dimensions                                      | [mm]               | 28.1 x 8.1 x 14.4                                                  |
| Material                                        |                    | housing: ABS; rear of the housing: stainless steel (1.4404 / 316L) |
| Lens material                                   |                    | PMMA                                                               |
| Lens alignment                                  |                    | Side sensing                                                       |
| <b>Displays / operating elements</b>            |                    |                                                                    |
| Display                                         | Switching status   | 1 x LED, yellow                                                    |
|                                                 | Power              | 1 x LED, green                                                     |
| <b>Remarks</b>                                  |                    |                                                                    |
| Pack quantity                                   |                    | 1 pcs.                                                             |

## Diffuse reflection sensors with background suppression

O8H-HNKG/0,30M/AS/3P

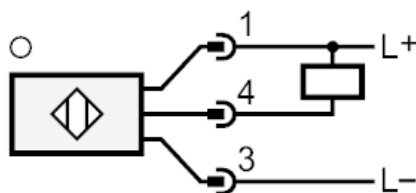
## Electrical connection

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

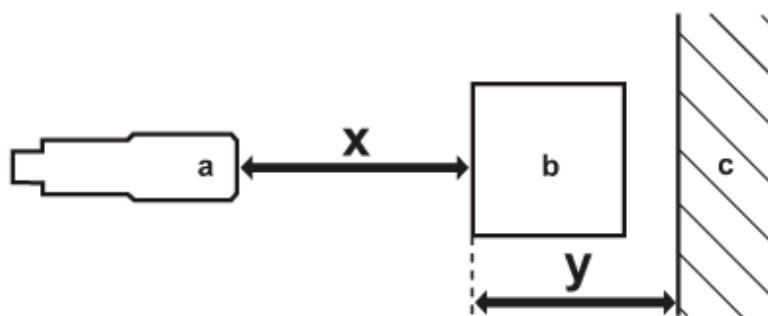
Connector: 1 x M8; coding: A



## Connection



## Diagrams and graphs



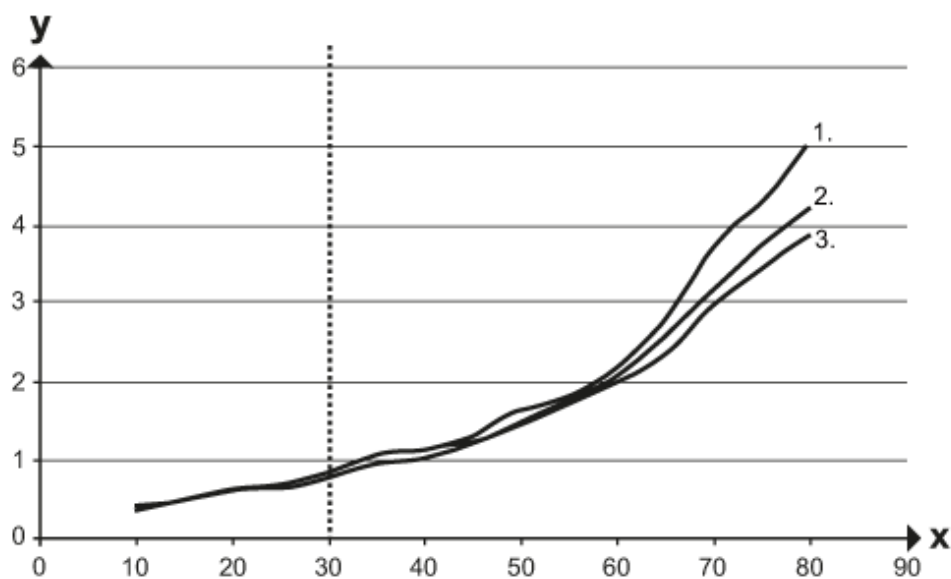
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensors with background suppression

O8H-HNKG/0,30M/AS/3P

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)