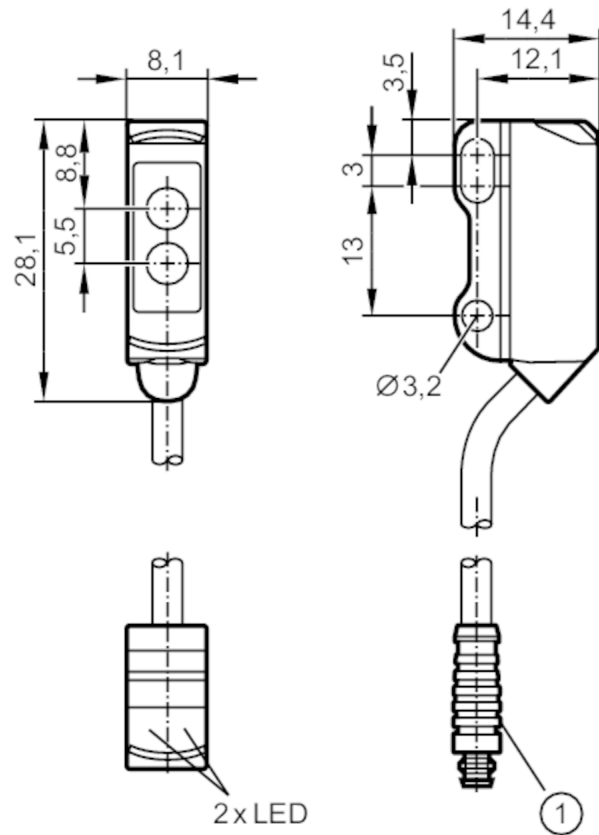




Diffuse reflection sensor with background suppression

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



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



| 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           |      | 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                |      | 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                             |
| Range adjustable                       |      | no                                 |
| Max. light spot diameter               | [mm] | 4                                  |
| Light spot dimensions refer to         |      | at maximum range                   |
| Background suppression available       |      | yes                                |

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

| Tests / approvals |                 |                         |
|-------------------|-----------------|-------------------------|
| EMC               | EN 60947-5-2    |                         |
| MTTF              | [years]         | 757                     |
| UL approval       | Ta              | -25...60 °C             |
|                   | Enclosure type  | Type 1                  |
|                   | power supply    | Limited Voltage/Current |
|                   | UL Approval no. | E015                    |
|                   | File number UL  | E174191                 |

| Mechanical data |      |                                             |
|-----------------|------|---------------------------------------------|
| Weight          | [g]  | 22.7                                        |
| Housing         |      | rectangular                                 |
| Dimensions      | [mm] | 28.1 x 8.1 x 14.4                           |
| Materials       |      | housing: ABS; 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. |

## Diffuse reflection sensor with background suppression

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

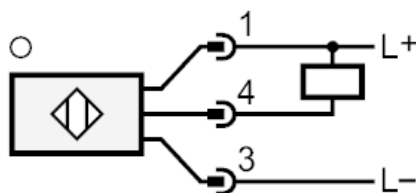
### Electrical connection

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

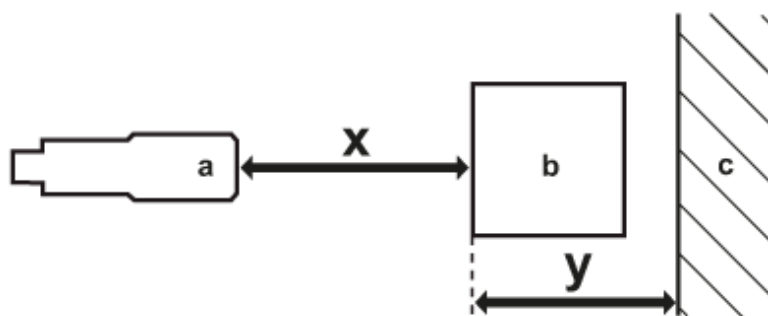
Connector: 1 x M8; coding: A



### Connection



### Diagrams and graphs



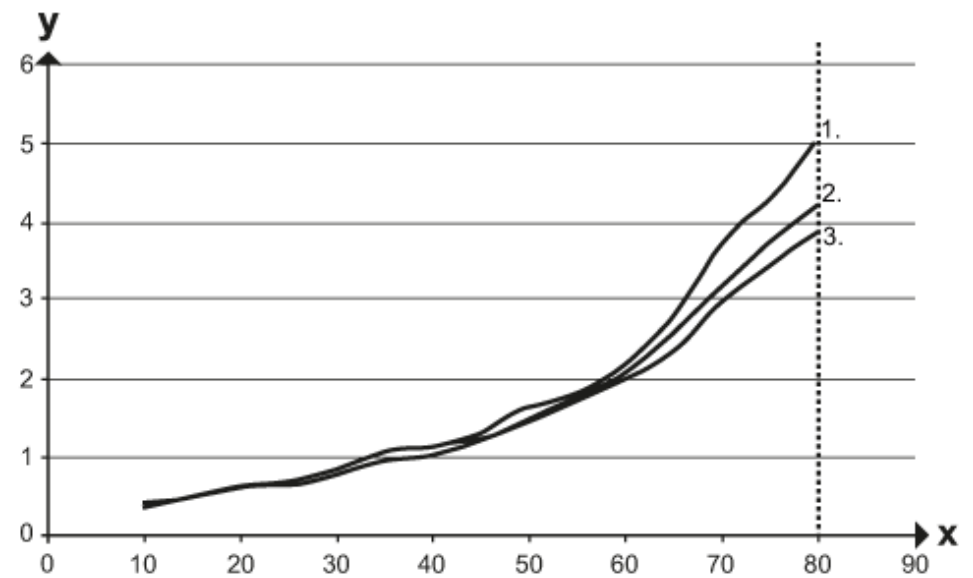
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensor with background suppression

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

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)