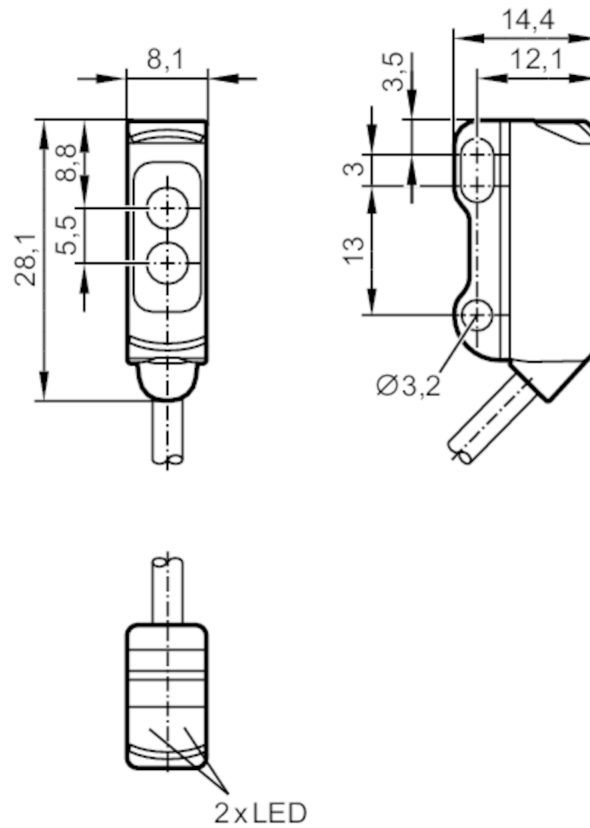


# O8H207



## Diffuse reflection sensor with background suppression

O8H-HNKG/2,0M



receiver in upper lens  
transmitter in lower lens



### Product characteristics

|                 |                   |
|-----------------|-------------------|
| Type of light   | red light         |
| Housing         | rectangular       |
| Dimensions [mm] | 28.1 x 8.1 x 14.4 |

### 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          |



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| Outputs   |                  |   |
|---|------------------|---|
| Electrical design                               |                  | NPN   |
| 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...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   |
| Operating conditions                            |                  |   |
| Ambient temperature                             | [°C]             | -25...60                                      |
| Protection                                      |                  | IP 65; IP 67                                  |
| Tests / approvals                               |                  |   |
| EMC   |                  | EN 60947-5-2                                  |
| MTTF  | [years]          | 757   |
| Mechanical data                                 |                  |   |
| Weight  | [g]              | 45.4  |
| 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.  |



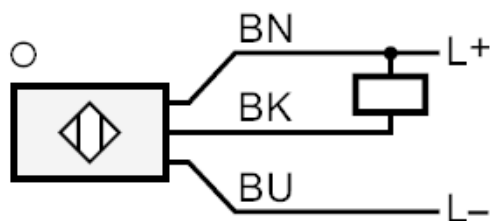
## Diffuse reflection sensor with background suppression

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### Electrical connection

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

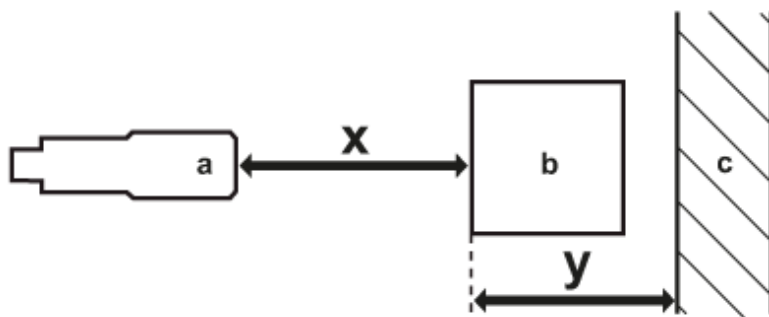
### Connection



Core colours :

- BN = brown
- BK = black
- BU = blue

### Diagrams and graphs



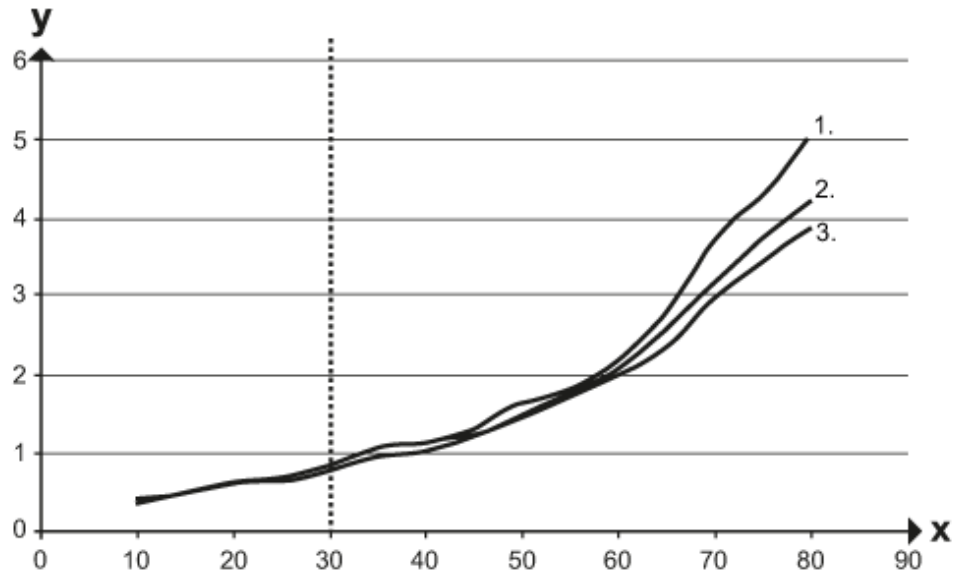
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensor with background suppression

O8H-HNKG/2,0M

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)