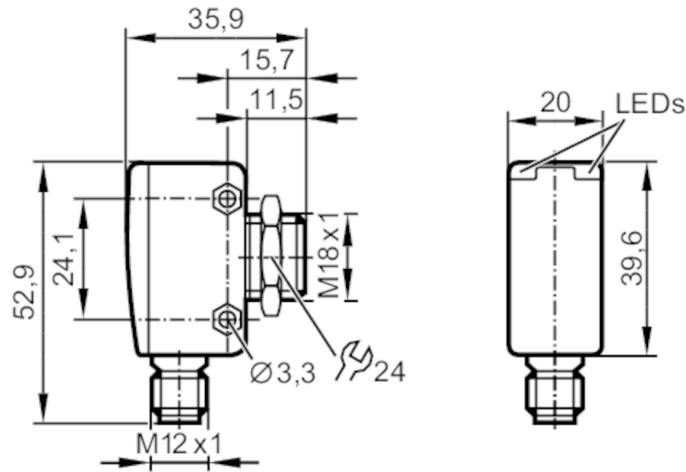


# OGH380



## Diffuse reflection sensors with background suppression

OGH-HPKG/US/V4A/CUBE/100MM



transmitter in lower lens  
Receiver in upper lens



### Product characteristics

|                         |             |
|-------------------------|-------------|
| Type of light           | red light   |
| Communication interface | IO-Link     |
| Housing                 | rectangular |
| Dimensions [mm]         | M18 x 1     |

### Application

|                    |                           |
|--------------------|---------------------------|
| System             | Background suppression    |
| Function principle | Diffuse reflection sensor |

### Electrical data

|                               |            |
|-------------------------------|------------|
| Operating voltage [V]         | 10...30 DC |
| Rated insulation voltage [V]  | 32         |
| Current consumption [mA]      | 25         |
| Protection class              | III        |
| Reverse polarity protection   | yes        |
| Max. power-on delay time [ms] | 300        |
| Type of light                 | red light  |
| Wave length [nm]              | 645        |

### Outputs

|  |                    |
|--|--------------------|
| Electrical design                                    | PNP                |
| Output function                                      | light-on mode      |
| Max. voltage drop switching output DC [V]            | 2.5                |
| Permanent current rating of switching output DC [mA] | 200                |
| Switching frequency DC [Hz]                          | 1000               |
| Short-circuit protection                             | yes                |
| Type of short-circuit protection                     | yes (non-latching) |



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| Monitoring range                       |      |  |
|--|------|--|
| Range                                  | [mm] | < 100; (white paper 200 x 200 mm 90 % remission) |
| Range on white object (90 % remission) | [mm] | < 100  |
| Range on grey object (18 % remission)  | [mm] | < 100  |
| Range on black object (6 % remission)  | [mm] | < 100  |
| Range adjustable                       |      | no   |
| Max. light spot diameter               | [mm] | 7  |
| 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   |
| IO-Link device ID               |                              | 1131 d / 00 04 6B h   |
| Profiles                        |                              | Measuring Sensor, Identification and Diagnosis, Switching Signal Channel, Teach Channel |
| SIO mode                        |                              | yes   |
| Required master port class      |                              | A   |
| Min. process cycle time         | [ms]                         | 10  |
| IO-Link process data (cyclical) | Function                     | bit length  |
|                                 | process value                | 16  |
|                                 | device status                | 4   |
|                                 | binary switching information | 1   |
| IO-Link functions (acyclical)   |                              | application specific tag; operating hours counter; switching cycles counter             |
| Note                            |                              | For further information please see the IODD PDF file at "Downloads"                     |

| Operating conditions |      |                      |
|----------------------|------|----------------------|
| Ambient temperature  | [°C] | -25...80             |
| Storage temperature  | [°C] | -40...80             |
| Protection           |      | IP 67; IP 68; IP 69K |

| Tests / approvals |                |              |
|-------------------|----------------|--------------|
| EMC               |                | EN 60947-5-2 |
| MTTF              | [years]        | 782          |
| UL approval       | Ta             | -25...80 °C  |
|                   | Enclosure type | Type 1       |
|                   | voltage supply | Class 2      |
|                   | File number UL | E174191      |

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### Mechanical data

|                    |                             |
|--------------------|-----------------------------|
| Weight [g]         | 78.5                        |
| Housing            | rectangular                 |
| Dimensions [mm]    | M18 x 1                     |
| Thread designation | M18 x 1                     |
| Material           | 1.4542 (17-4 PH / 630); PEI |
| Lens material      | PEI                         |

### Displays / operating elements

|         |                  |                 |
|---------|------------------|-----------------|
| Display | Switching status | 1 x LED, yellow |
|         | Power            | 1 x LED, green  |

### Accessories

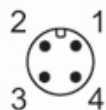
|                        |               |
|------------------------|---------------|
| Accessories (supplied) | lock nut: 1 x |
|------------------------|---------------|

### Remarks

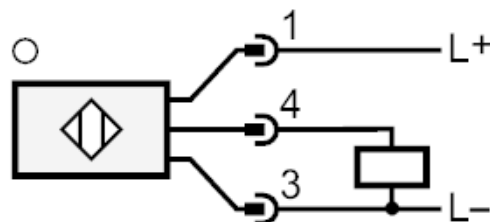
|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection

Connector: 1 x M12



### Connection





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### Other data

#### Repeatability / precision: 6 $\sigma$

|         | Repeatability of the measured values |                              |
|---------|--------------------------------------|------------------------------|
| Abstand | white (90 % remission)               | black (6 %...90 % remission) |
| 20 mm   | 0.5 mm                               | 1.0 mm                       |
| 50 mm   | 0.8 mm                               | 2.0 mm                       |
| 100 mm  | 1.5 mm                               | 4.5 mm                       |

|         | Accuracy               |                              |
|---------|------------------------|------------------------------|
| Abstand | white (90 % remission) | black (6 %...90 % remission) |
| 20 mm   | $\pm 1.5$ mm           | $\pm 1.8$ mm                 |
| 50 mm   | $\pm 3.0$ mm           | $\pm 3.5$ mm                 |
| 100 mm  | $\pm 5.0$ mm           | $\pm 6.5$ mm                 |

The values apply at

|                                  |                 |
|----------------------------------|-----------------|
| Extraneous light on the object   | < 10 klx        |
| constant ambient conditions      | 23 °C / 960 hPa |
| minimum power-on time in minutes | 10              |