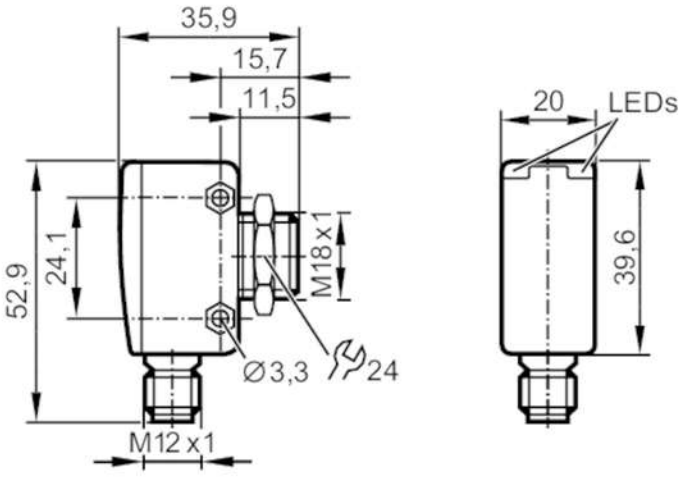
# OGH383

## Diffuse reflection sensor with background suppression

OGH-HNKG/US/V4A/CUBE/200MM




transmitter in lower lens
receiver in upper lens

| | | |
|---|---|---|
| **Product characteristics** | | |
| Type of light | | red light |
| Housing | | rectangular with M18 thread |
| **Application** | | |
| Special feature | | Background suppression |
| Function principle | | Diffuse reflection sensor |
| **Electrical data** | | |
| Operating voltage | [V] | 10...30 DC |
| Current consumption | [mA] | 25 |
| Protection class | | III |
| Reverse polarity protection | | yes |
| Type of light | | red light |
| Wave length | [nm] | 645 |
| **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] | 200 |
| Switching frequency DC | [Hz] | 1000 |
| Short-circuit protection | | yes |
| Type of short-circuit protection | | pulsed |
| Overload protection | | yes |
| **Detection zone** | | |
| Range | [mm] | < 200;  (white paper 200 x 200 mm 90% remission) |

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## Diffuse reflection sensor with background suppression

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| | | |
|---|---|---|
| Range on white object (90 % remission) | [mm] | < 200 |
| Range on grey object (18 % remission) | [mm] | < 200 |
| Range on black object (6 % remission) | [mm] | < 190 |
| Range adjustable | | no |
| Max. light spot diameter | [mm] | 13 |
| 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 | |
| Profiles | | Measuring Sensor, Identification and Diagnosis, Switching Signal Channel, Teach Channel | |
| SIO mode | | yes | |
| Required master port type | | 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 | |
| Supported DeviceIDs | | **Type of operation** | **DeviceID** |
| | | default | 1139 |
| Note | | For further information please see the IODD PDF file under "Downloads" | |

### Operating conditions

| | | |
|---|---|---|
| Ambient temperature | [°C] | -25...80 |
| Storage temperature | [°C] | -40...80 |
| Protection | | IP 65; 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 |
| | | power supply | Class 2 |
| | | File number UL | E174191 |

### Mechanical data

| | | |
|---|---|---|
| Weight | [g] | 74.5 |
| Housing | | rectangular with M18 thread |
| Dimensions | [mm] | 52.9 x 20 x 35.9 |
| Thread designation | | M18 x 1 |
| Materials | | stainless steel (630/1.4542/17-4 PH); PEI |
| Lens material | | PEI |

# OGH383

## Diffuse reflection sensor with background suppression

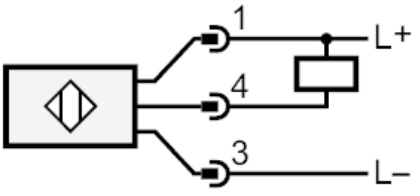
OGH-HNKG/US/V4A/CUBE/200MM

| | | |
|---|---|---|
| Lens alignment | side lens | |
| **Displays / operating elements** | | |
| Display | switching status | 1 x LED, yellow |
| | operation | 1 x LED, green |
| **Accessories** | | |
| Items supplied | lock nut: 1, stainless steel | |
| **Remarks** | | |
| Pack quantity | 1 pcs. | |
| **Electrical connection** | | |

Connector: 1 x M12; coding: A




Connection




| | |
|---|---|
| 4 | OUT / IO-Link |

# OGH383

## Diffuse reflection sensor with background suppression

OGH-HNKG/US/V4A/CUBE/200MM

### Other data

**Repeatability / precision: 6 σ**

| | 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 |
| 150 mm | 3.0 mm | 9.0 mm |
| 200 mm | 6.0 mm | 20.0 mm |

| | accuracy | |
|---|---|---|
| Abstand | white (90 % remission) | black (6 %...90 % remission) |
| 20 mm | ± 2.0 mm | ± 2.5 mm |
| 50 mm | ± 3.5 mm | ± 4.5 mm |
| 100 mm | ± 6.0 mm | ± 7.5 mm |
| 150 mm | ± 7.5 mm | ± 11.0 mm |
| 200 mm | ± 10.0 mm | ± 17.0 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 |