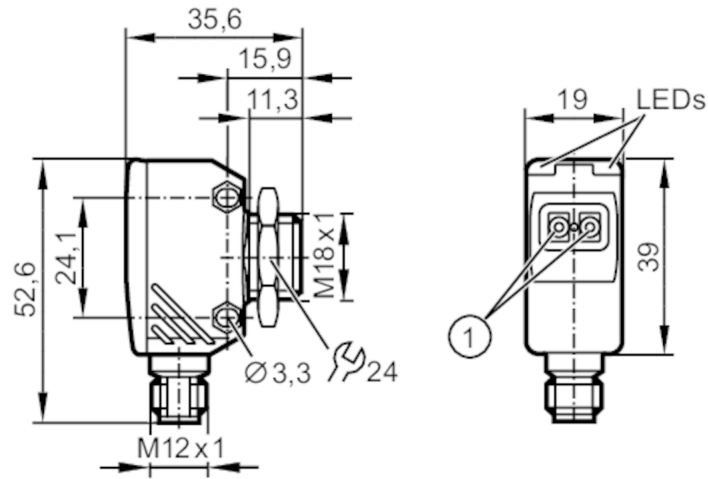


OGH580



Diffuse reflection sensor with background suppression

OGH-FPKG/US/CUBE



- 1 programming buttons
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; ("supply class 2" to cULus) |
| 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/dark-on mode; (programmable) |
| 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 |



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| Detection zone | | |
|---|---|-------------|
| Range [mm] | 15...200; (white paper 200 x 200 mm 90% remission) | |
| Range on white object (90 % remission) [mm] | 15...200 | |
| Range on grey object (18 % remission) [mm] | 15...200 | |
| Range on black object (6 % remission) [mm] | 15...200 | |
| Range adjustable | yes | |
| 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 | 1132 |
| Note | For further information please see the IODD PDF file under "Downloads" | |
| Operating conditions | | |
| Ambient temperature [°C] | -25...60 | |
| Storage temperature [°C] | -40...60 | |
| Protection | IP 65; IP 67 | |
| Tests / approvals | | |
| EMC | EN 60947-5-2 | |
| MTTF [years] | 782 | |
| UL approval | Ta | -25...60 °C |
| | Enclosure type | Type 1 |
| | power supply | Class 2 |
| | File number UL | E174191 |
| Mechanical data | | |
| Weight [g] | 60.5 | |
| Housing | rectangular with M18 thread | |
| Dimensions [mm] | 52.6 x 19 x 35.6 | |
| Thread designation | M18 x 1 | |

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| | |
|----------------|-------------------|
| Materials | diecast zinc; PEI |
| Lens material | PEI |
| Lens alignment | side lens |

Displays / operating elements

| | | |
|--------------------|------------------|-----------------|
| Display | switching status | 1 x LED, yellow |
| | operation | 1 x LED, green |
| Operating elements | switch point | pushbutton |
| | Output function | pushbutton |

Accessories

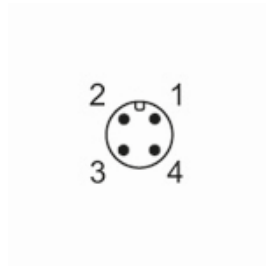
| | |
|----------------|---------------|
| Items supplied | lock nut: 1 x |
|----------------|---------------|

Remarks

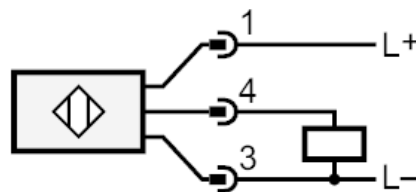
| | |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

Electrical connection

Connector: 1 x M12; coding: A



Connection





Diffuse reflection sensor with background suppression

OGH-FPKG/US/CUBE

Other data

Repeatability / precision: 6σ

| | 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

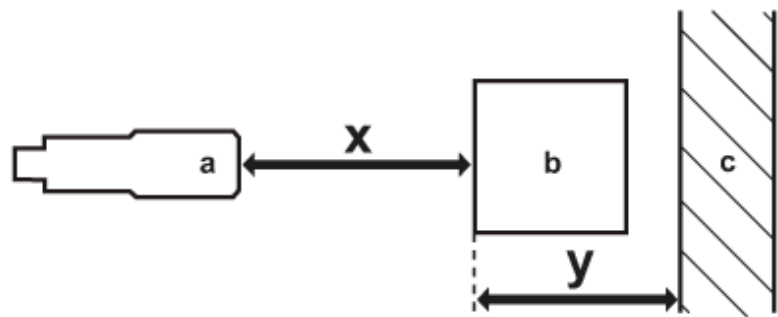
constant ambient conditions

23 °C / 960 hPa

minimum power-on time in minutes

10

Diagrams and graphs



a: sensor

b: object

c: background

x: distance sensor/object [mm]

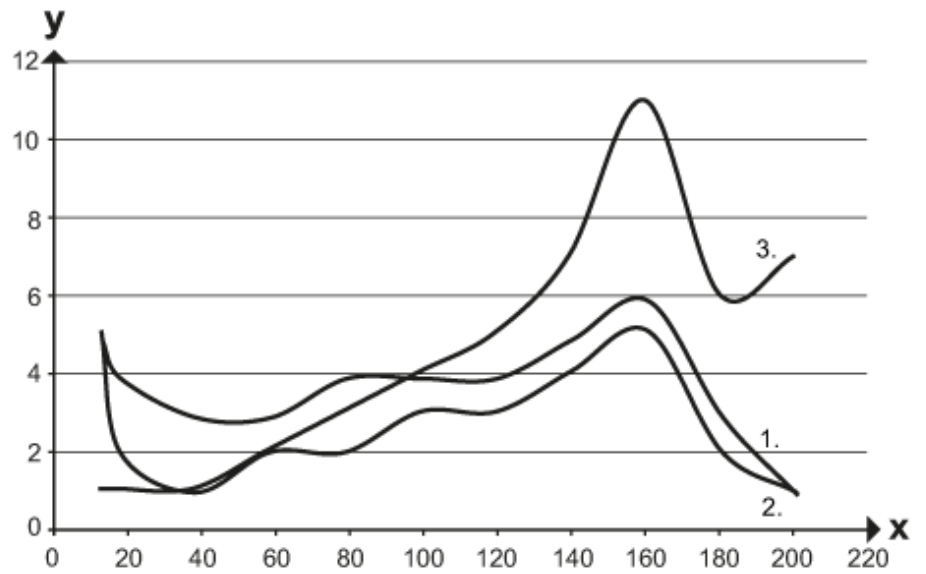
y: min. distance object/background [mm]



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accuracy graph



x: distance sensor/object [mm]

y: min. distance object/background [mm]

1 = object black (6 % remission) , \$Hintergrund_weiss_90_Remission

2 = object grey (18 % remission) , \$Hintergrund_weiss_90_Remission

3 = object white (90 % remission) , \$Hintergrund_weiss_90_Remission