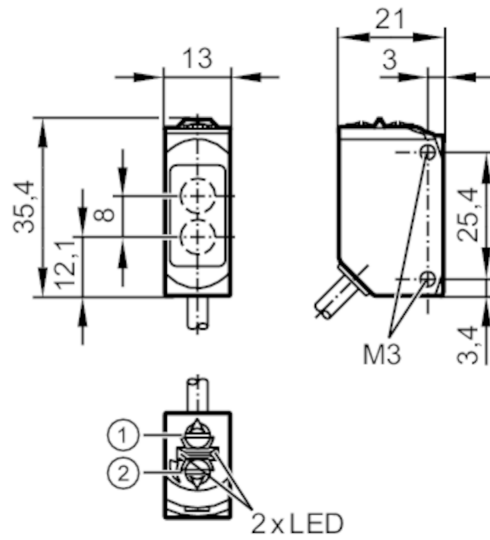


O6H205



Diffuse reflection sensors with background suppression

O6H-FNKG/0,30m/US



- 1: output function switch
 - 2: potentiometer sensitivity
- Receiver in upper lens
transmitter in lower lens



| Product characteristics | |
|--|-------------------------------------|
| Type of light | red light |
| Housing | rectangular |
| Application | |
| System | Background suppression |
| Function principle | Diffuse reflection sensor |
| Electrical data | |
| Operating voltage [V] | 10...30 DC |
| Current consumption [mA] | 22; ((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/dark-on mode; (selectable) |
| 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 | yes (non-latching) |

O6H205



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| Monitoring range | | |
|--|------|-------------------------------------|
| Range | [mm] | 2...200; (white paper 200 x 200 mm) |
| Range on white object (90 % remission) | [mm] | 2...200 |
| Range on grey object (18 % remission) | [mm] | 4...200 |
| Range on black object (6 % remission) | [mm] | 8...200 |
| Range adjustable | | yes |
| Max. light spot diameter | [mm] | 8 |
| 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] | 683 |
| UL approval | | UL approval number E012 |

| Mechanical data | | |
|-------------------|------|-----------------------------------|
| Weight | [g] | 33.2 |
| Housing | | rectangular |
| Dimensions | [mm] | 35.4 x 13 x 21 |
| Material | | housing: ABS; PPSU; sealing: EPDM |
| Lens material | | PMMA |
| Lens alignment | | Side sensing |
| Tightening torque | [Nm] | 0.5 |

| Displays / operating elements | | |
|-------------------------------|------------------|-----------------|
| Display | Switching status | 1 x LED, yellow |
| | Power | 1 x LED, green |

| Remarks | | |
|---------------|--|---------------------------------|
| Remarks | | cULus - Class 2 source required |
| Pack quantity | | 1 pcs. |

Electrical connection

Cable: 0.3 m, PUR; 3 x 0.25 mm²

Connector: 1 x M12; coding: A





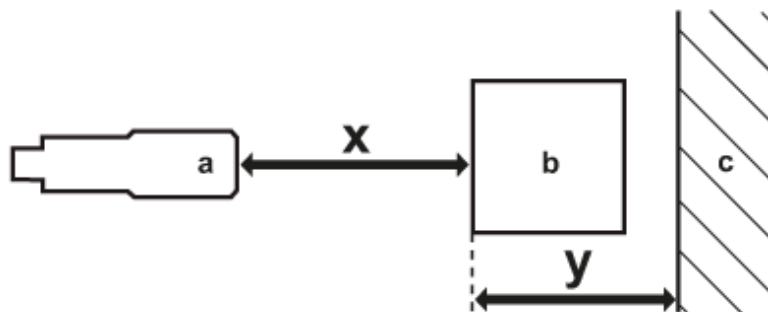
Diffuse reflection sensors with background suppression

O6H-FNKG/0,30m/US

Connection



Diagrams and graphs



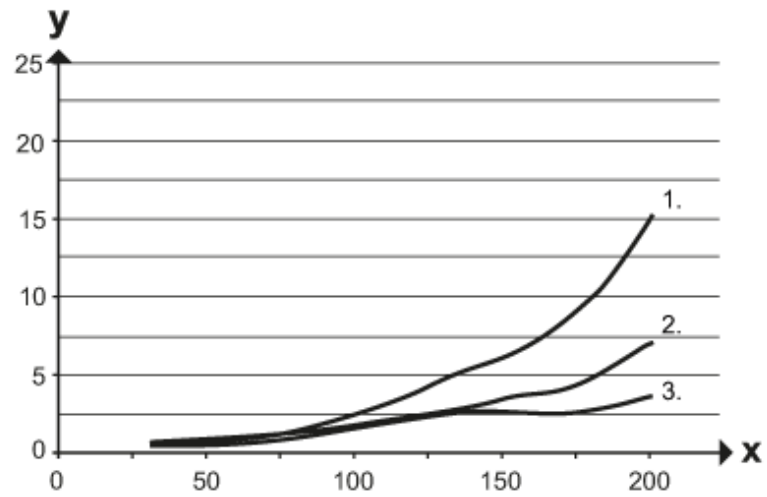
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



Diffuse reflection sensors with background suppression

O6H-FNKG/0,30m/US

Background suppression chart



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)