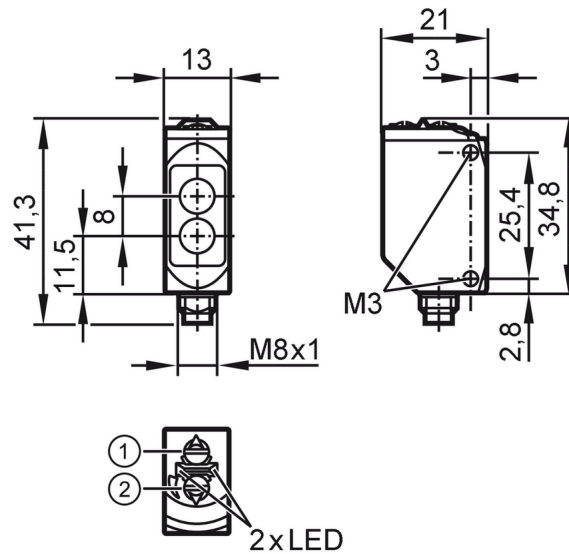


# O6H307



## Diffuse reflection sensors with background suppression

O6H-FNKG/AS/4P



- 1: output function switch
- 2: potentiometer sensitivity



### Product characteristics

Type of light	red light
Housing	rectangular

### Application

Special feature	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)

### Monitoring range

Range	[mm]	2...200; (white paper 200 x 200 mm)
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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...80
Protection	IP 65; IP 67; IP 68; IP 69K

### Tests / approvals

EMC	EN 60947-5-2
MTTF [years]	708
UL approval	Ta -25...40 °C
	Enclosure type Type 1
	voltage supply Class 2
	UL approval number E001

### Mechanical data

Weight [g]	35.8
Housing	rectangular
Dimensions [mm]	41.3 x 13 x 21
Material	housing: stainless steel (1.4404 / 316L); sealing: EPDM; plastics: PPSU
Lens material	front lens:PMMA
Lens alignment	Side sensing
Tightening torque [Nm]	1; (screws)

### 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

Connector: 1 x M8; coding: A; Contacts: 4



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## Connection



## Diagrams and graphs



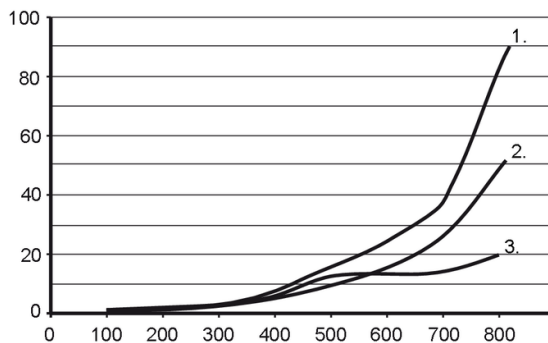
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensors with background suppression

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### 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)