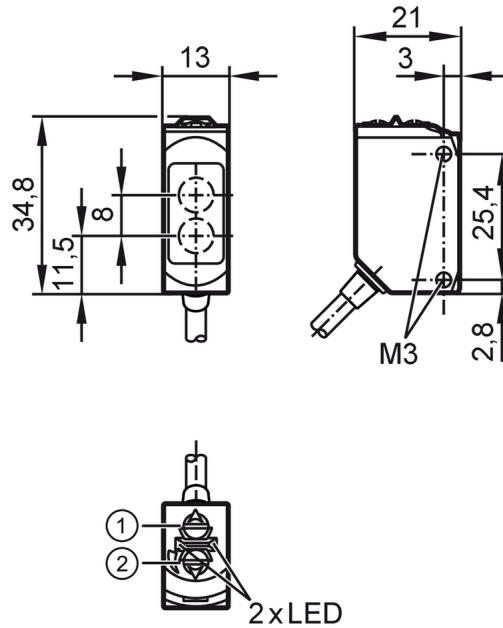


# O6H305



## Diffuse reflection sensor with background suppression

O6H-FNKG/0,30m/US



- 1 output function switch
- 1 potentiometer sensitivity receiver in upper lens
- transmitter in lower lens



### Product characteristics

Type of light	red light
Housing	rectangular

### Application

Special feature	Background suppression
Function principle	Diffuse reflection sensor
Application	food and beverage industry

### 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

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## Diffuse reflection sensor with background suppression

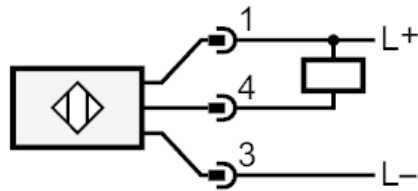
O6H-FNKG/0,30m/US

Type of short-circuit protection		pulsed
<b>Detection zone</b>		
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
<b>Operating conditions</b>		
Ambient temperature [°C]		-25...80
Protection		IP 65; IP 67; IP 68; IP 69K
<b>Tests / approvals</b>		
EMC	EN 60947-5-2	
MTTF [years]		708
UL approval	Ta	-25...40 °C
	Enclosure type	Type 1
	voltage supply	Class 2
	UL approval no.	E006
<b>Mechanical data</b>		
Weight [g]		51.3
Housing		rectangular
Dimensions [mm]		34.8 x 13 x 21
Materials		housing: stainless steel (316L/1.4404); Sealing: EPDM; plastics: PPSU
Lens material		front pane:PMMA
Lens alignment		side lens
Tightening torque [Nm]		1; (screws)
<b>Displays / operating elements</b>		
Display	switching status	1 x LED, yellow
	operation	1 x LED, green
<b>Remarks</b>		
Remarks		operating voltage "supply class 2" according to cULus
Pack quantity		1 pcs.
<b>Electrical connection</b>		
Cable: 0.3 m, PVC; 3 x 0.25 mm <sup>2</sup>		
Connector: 1 x M12; coding: A; Contacts: 4		

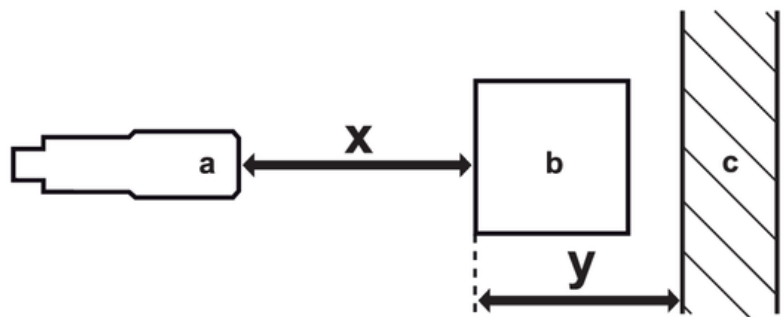
## Diffuse reflection sensor with background suppression

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]

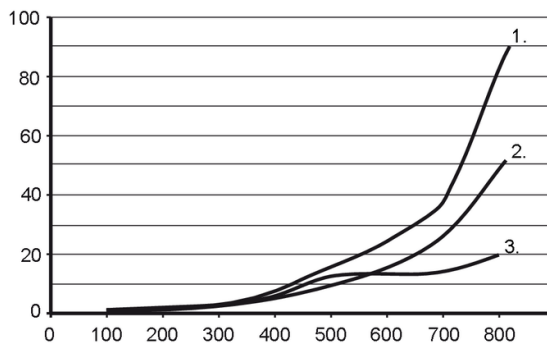
# O6H305



## Diffuse reflection sensor with background suppression

O6H-FNKG/0,30m/US

accuracy graph



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)