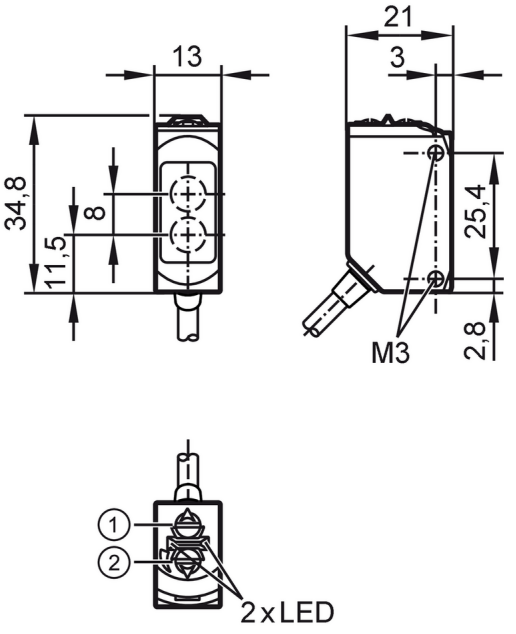
O6H305

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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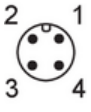
O6H-FNKG/0,30m/US

Type of short-circuit protection		pulsed
Detection zone		
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...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 no.: E006
Mechanical data		
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)
Displays / operating elements		
Display		switching status: 1 x LED, yellow operation: 1 x LED, green
Remarks		
Remarks		operating voltage "supply class 2" according to cULus
Pack quantity		1 pcs.

Electrical connection

Cable: 0.3 m, PVC; 3 x 0.25 mm²

Connector: 1 x M12; coding: A; Contacts: 4

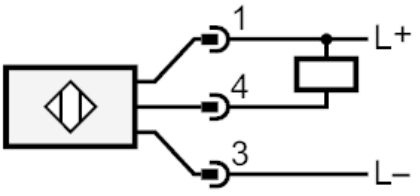


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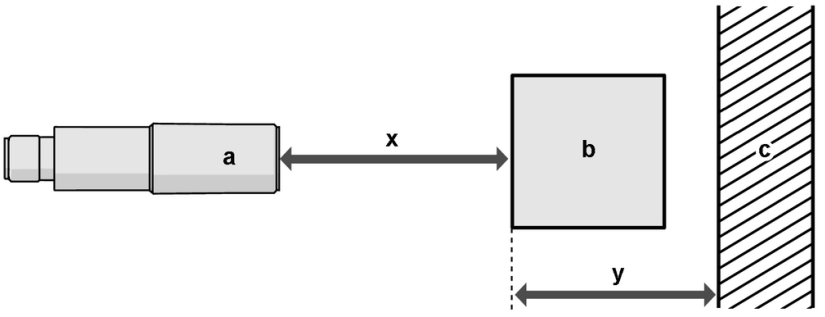
Diffuse reflection sensor with background suppression

O6H-FNKG/0,30m/US

Connection



Diagrams and graphs



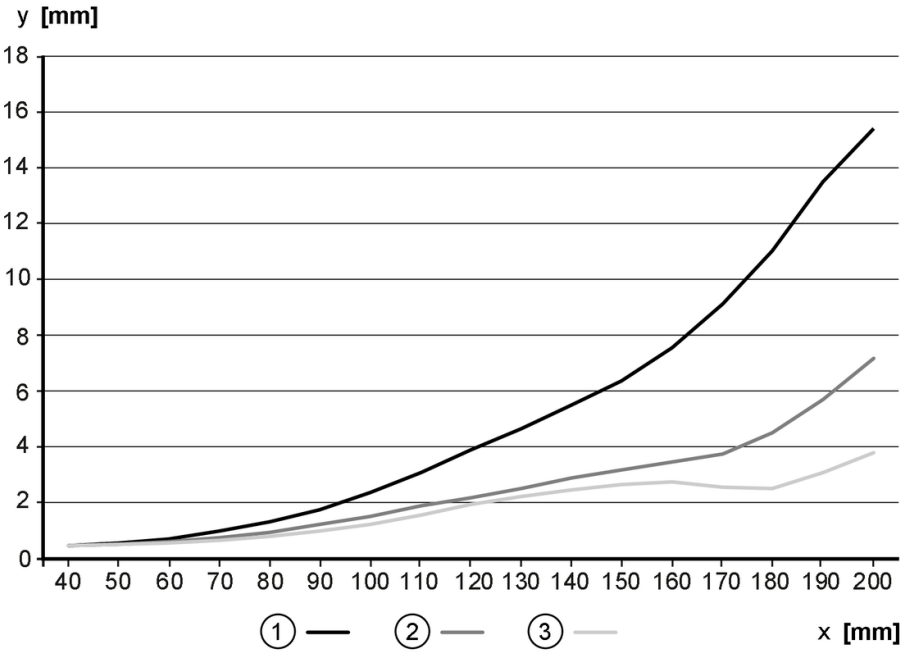
a: sensor
b: object
c: background
x: distance sensor/object [mm]
y: min. distance object/background [mm]

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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)