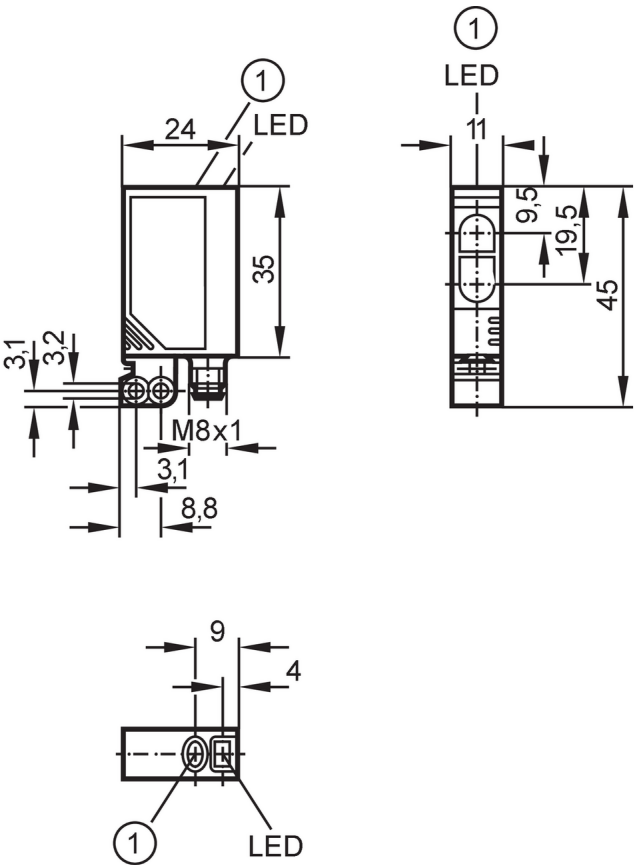




Diffuse reflection sensors with background suppression

OJH-FNKG/SO/AS



1 pushbutton



Product characteristics		
Type of light		red light
Housing		rectangular
Application		
Special feature		Background suppression
Function principle		Diffuse reflection sensor
Application		For applications in robotics, assembly and handling technology
Electrical data		
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	25
Protection class		III
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	660
Outputs		
Electrical design		NPN
Output function		light-on/dark-on mode; (programmable)
Max. voltage drop switching output DC	[V]	2.5



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Permanent current rating of switching output DC [mA]	200
Switching frequency DC [Hz]	1000
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Monitoring range	
Range [mm]	15...400; (white paper 200 x 200 mm 90 % remission)
Range adjustable	yes
Max. light spot diameter [mm]	18
Light spot dimensions refer to	Range
Background suppression available	yes

Operating conditions	
Ambient temperature [°C]	-25...60
Protection	IP 67

Tests / approvals	
EMC	EN 60947-5-2
MTTF [years]	574

Mechanical data	
Weight [g]	35
Housing	rectangular
Dimensions [mm]	35 x 11 x 24
Material	housing: ABS; fixture: diecast zinc; LED window: SEPS; pushbutton: SEPS
Lens material	front lens: PMMA
Lens alignment	Side sensing

Displays / operating elements		
Display	Switching status	1 x LED, yellow
	Power	1 x LED, green
Electronic lock	yes	

Accessories	
Items supplied	Basic clip: 1, E20964
	screws: 2 x (M3 x 16 mm)
	spring washers: 2
	Nuts: 2

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

Electrical connection

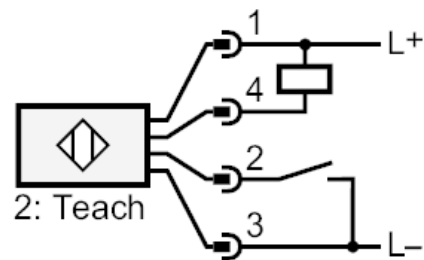
Connector: 1 x M8; coding: A; Contacts: 4



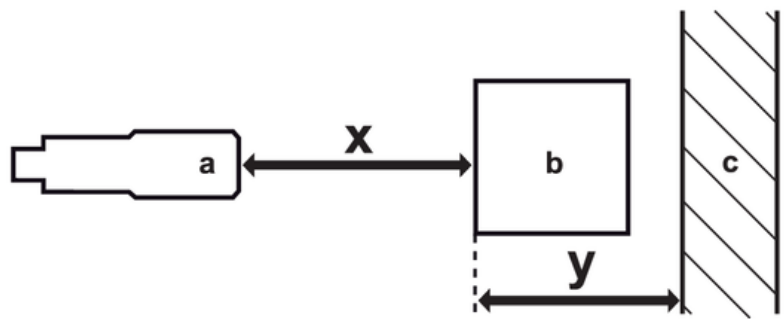
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Connection



Diagrams and graphs



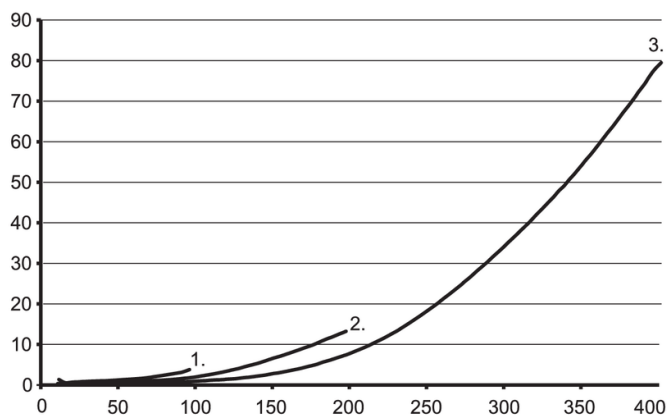
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



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)