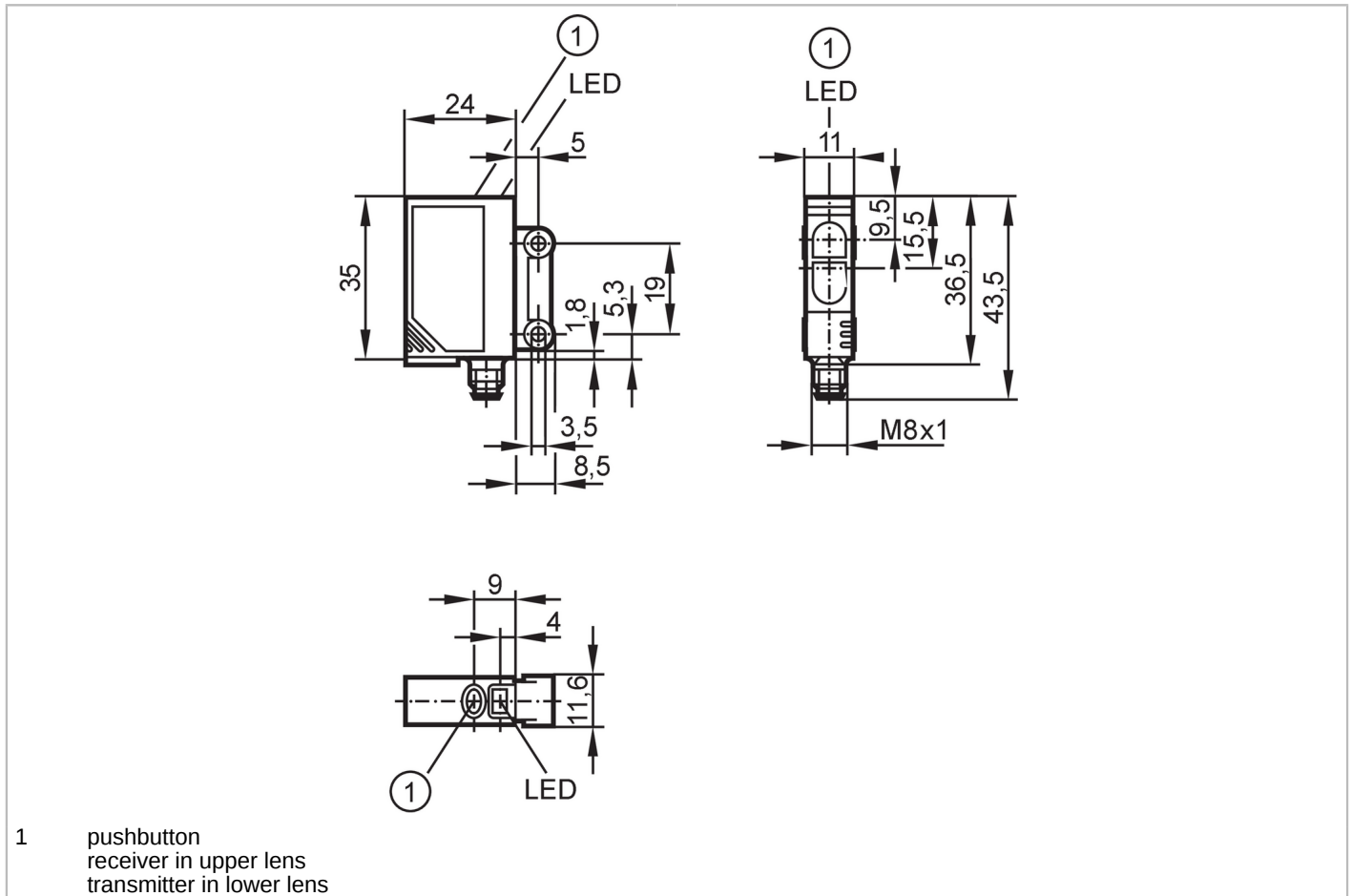




Diffuse reflection sensor with background suppression

OJH-FNKG/SO/AS



Product characteristics	
Type of light	red light
Housing	rectangular
Application	
Special feature	Background suppression
Function principle	Diffuse reflection sensor
Application	Industrial applications / factory automation
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	pulsed
Overload protection	yes

Detection zone	
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]	35.1
Housing	rectangular
Dimensions [mm]	35 x 11 x 24
Materials	housing: ABS; LED window: SEPS; pushbutton: SEPS
Lens material	front pane:PMMA
Lens alignment	side lens

Displays / operating elements		
Display	switching status	1 x LED, yellow
	operation	1 x LED, green
Electronic lock	yes	

Accessories	
Items supplied	screws: 2
	spring washers: 2
	Nuts: 2

Remarks	
Remarks	operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

Electrical connection

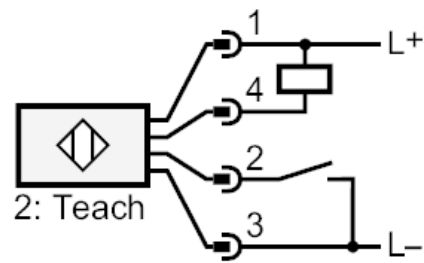
Connector: 1 x M8; coding: A; Contacts: 4



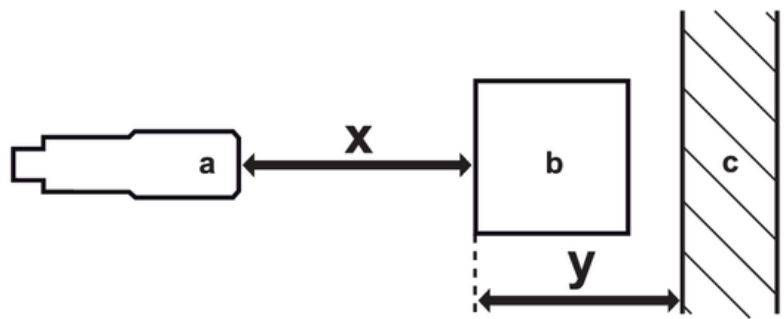
Diffuse reflection sensor with background suppression

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Connection



Diagrams and graphs



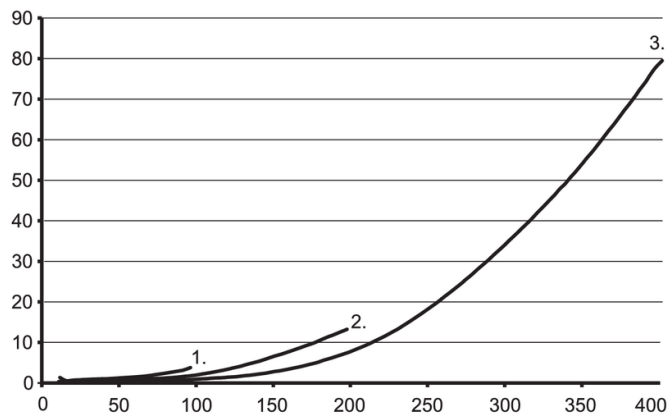
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



Diffuse reflection sensor with background suppression

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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)