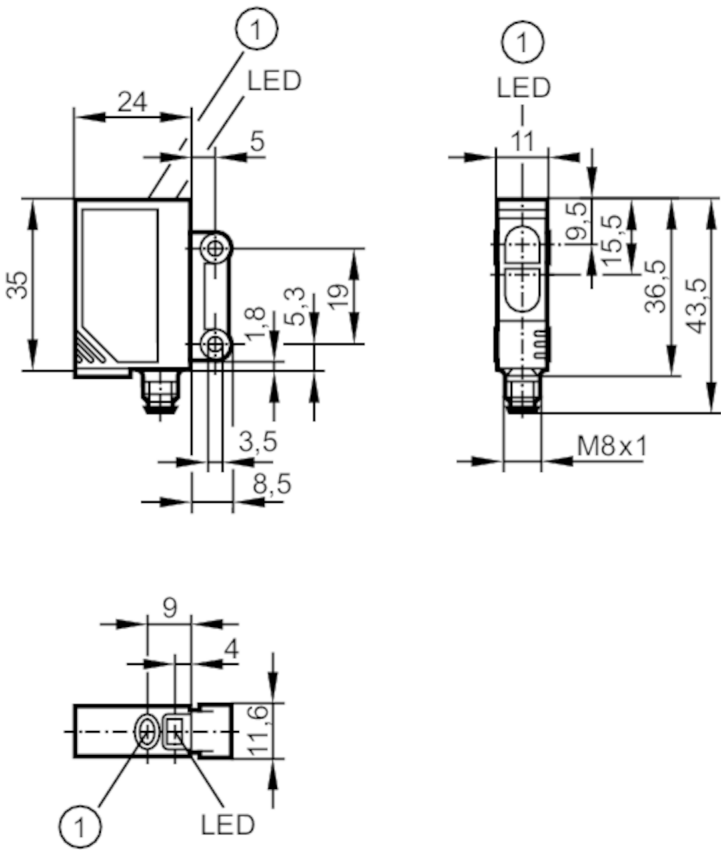




Diffuse reflection sensor with background suppression

OJH-FNKG/SO/AS



- 1 pushbutton
receiver in upper lens
transmitter in lower lens



Application

Function principle Diffuse reflection sensor

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



Diffuse reflection sensor with background suppression

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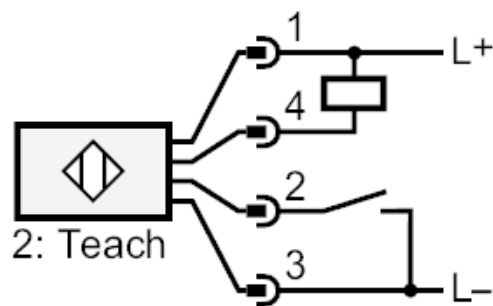
Outputs		
Electrical design	NPN	
Output function	light-on/dark-on mode; (programmable)	
Max. voltage drop switching output DC [V]	2.5	
Permanent current rating of switching output DC [mA]	200	
Switching frequency DC [Hz]	1000	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload 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]	37	
Housing	rectangular	
Dimensions [mm]	35 x 11 x 24	
Materials	housing: ABS; LED window: SEPS; pushbutton: SEPS	
Lens material	PMMA	
Lens alignment	side lens	
Displays / operating elements		
Display	switching status	1 x LED, yellow
	operation	1 x LED, green
Electronic lock	yes	
Accessories		
Accessories (supplied)	screws: 2 x	
	spring washers: 2 x	
	Nuts: 2 x	
Remarks		
Remarks	operating voltage "supply class 2" according to cULus	
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M8		

Diffuse reflection sensor with background suppression

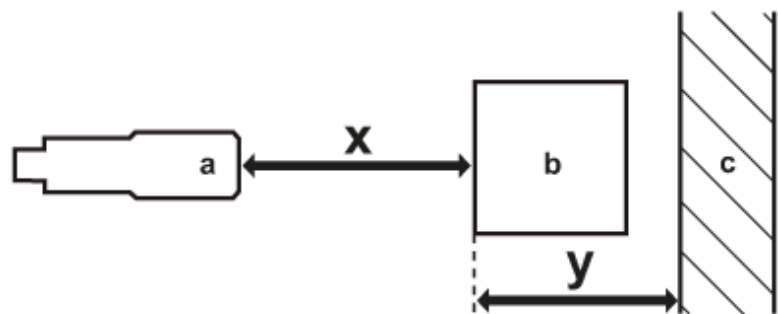
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Connection



Diagrams and graphs



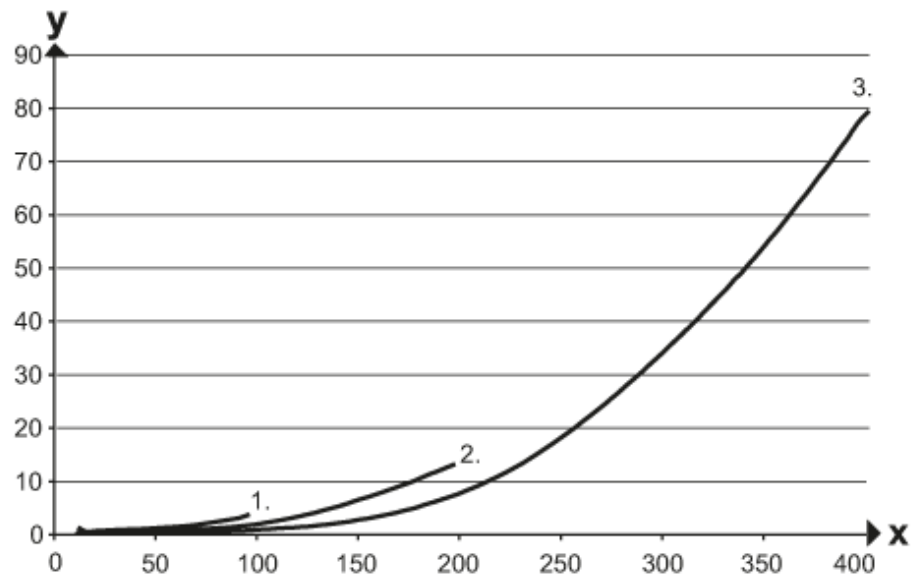
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



Diffuse reflection sensor with background suppression

OJH-FNKG/SO/AS

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)