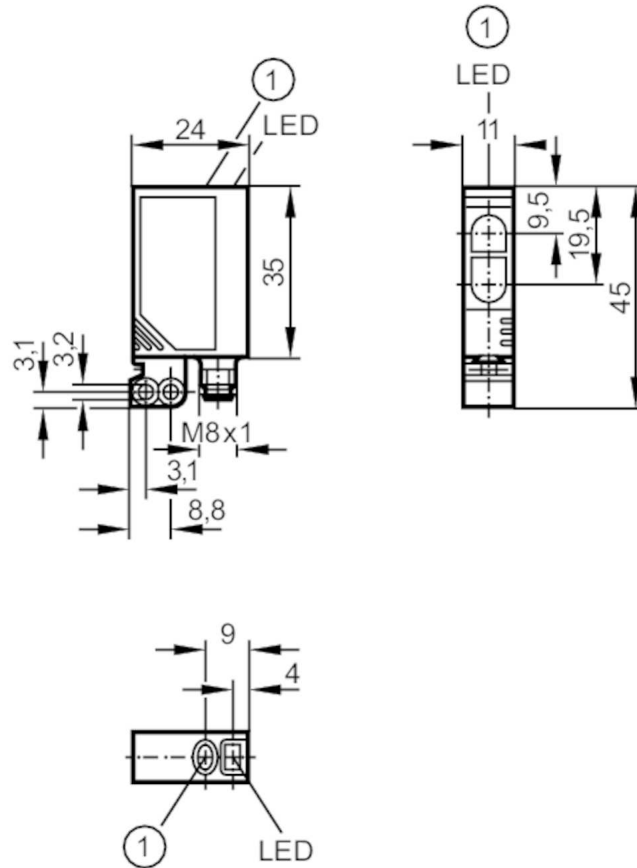


OJ5054



LASER diffuse reflection sensor

OJHLFPKG/SO/AS



1 pushbutton



Product characteristics

Type of light	red light
Laser protection class	1
Housing	rectangular

Application

System	Background suppression
Function principle	Diffuse reflection sensor

Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	13
Protection class		III
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	650
Typ. lifetime	[h]	50000



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Outputs		
Electrical design	PNP	
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	yes (non-latching)	
Overload protection	yes	
Monitoring range		
Range [mm]	15...200; (white paper 200 x 200 mm 90 % remission)	
Range on white object (90 % remission) [mm]	15...200	
Range on grey object (18 % remission) [mm]	15...70	
Range on black object (6 % remission) [mm]	15...45	
Range adjustable	yes	
Diameter of the smallest detectable object [mm]	2	
Max. light spot width [mm]	2	
Max. light spot height [mm]	1	
Background suppression available	yes	
Operating conditions		
Ambient temperature [°C]	-10...60	
Protection	IP 67	
Tests / approvals		
EMC	EN 60947-5-2	
Laser protection class	1	
Notes on laser protection	Caution:	Laser light
	laser class:	1
		EN / IEC60825-1:2007
		EN / IEC60825-1:2014
		Complies with 21 CFR 1040 except for deviations pursuant to Laser Notice No. 50, dated June 2007.
MTTF [years]	501	
Mechanical data		
Weight [g]	27.75	
Housing	rectangular	
Dimensions [mm]	35 x 11 x 24	
Material	housing: ABS; fixture: diecast zinc; LED window: SEPS; pushbutton: SEPS	
Lens material	PMMA	
Lens alignment	Side sensing	

OJ5054



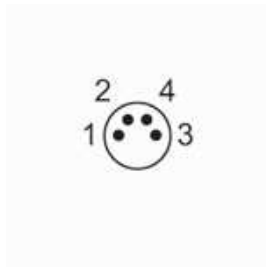
LASER diffuse reflection sensor

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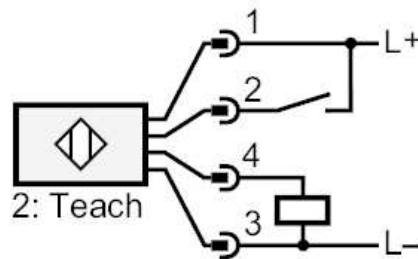
Displays / operating elements		
Display	Switching status	1 x LED, yellow
	Power	1 x LED, green
Electronic lock		yes
Accessories		
Items supplied		Basic clip: 1, E20964
		screws: 2 x M3 x 16
		spring washers: 2
		Nuts: 2
Remarks		
Remarks		cULus - Class 2 source required
Pack quantity		1 pcs.

Electrical connection

Connector: 1 x M8; coding: A



Connection



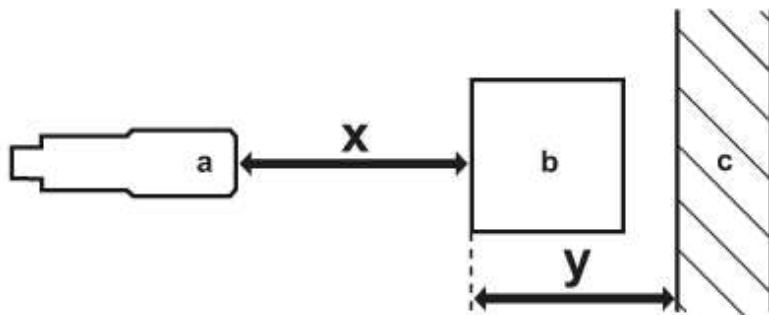
2 Teach



LASER diffuse reflection sensor

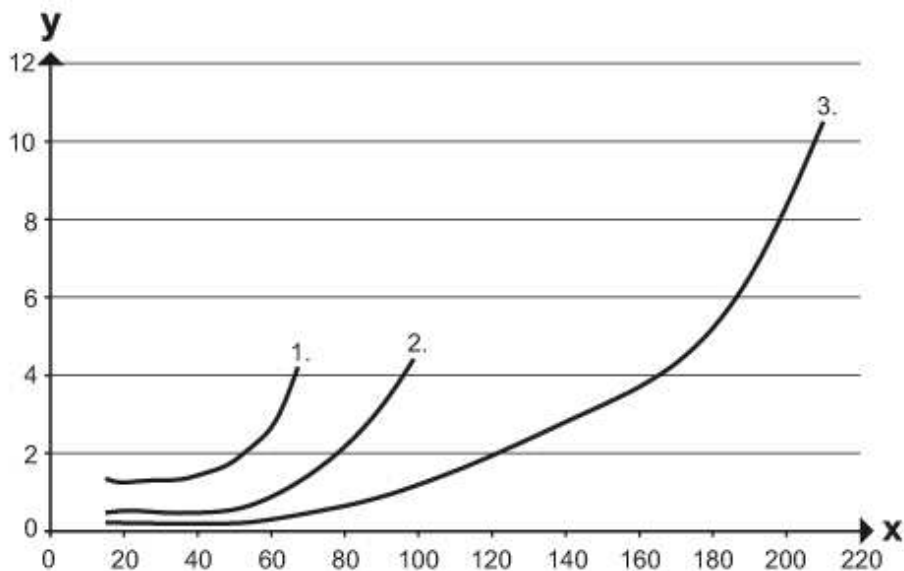
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Diagrams and graphs



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

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)