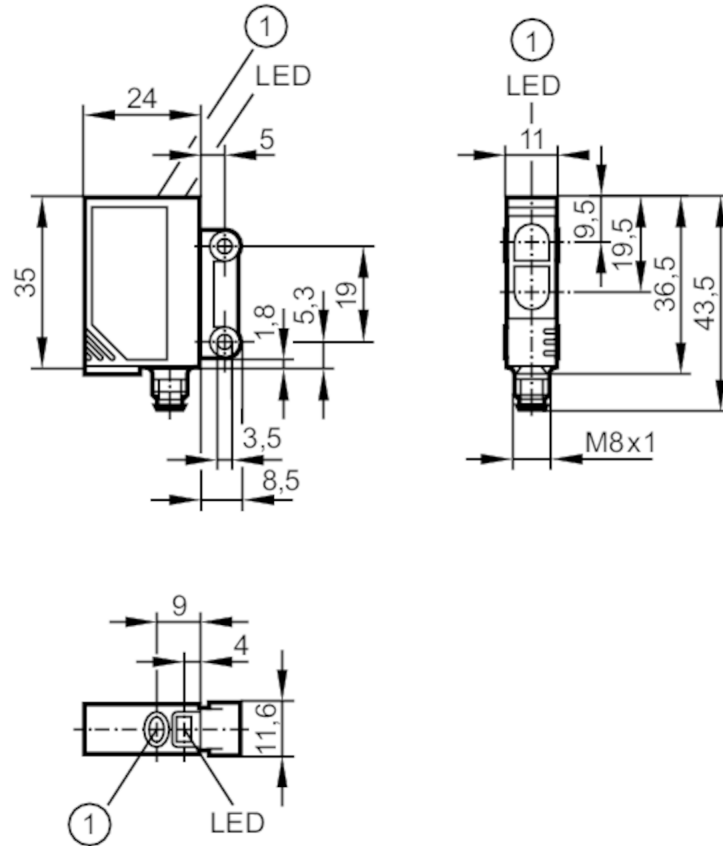


# OJ5154



## LASER diffuse reflection sensor

OJHLFPKG/SO/AS



- 1 pushbutton  
Receiver in upper lens  
transmitter in lower lens



### 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

### Outputs

Electrical design	PNP
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# OJ5154



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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 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]		28.2
Housing		rectangular
Dimensions [mm]		35 x 11 x 24
Material	housing: ABS; LED window: SEPS; pushbutton: SEPS	
Lens material		PMMA
Lens alignment		Side sensing

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



## LASER diffuse reflection sensor

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### Accessories

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

### Remarks

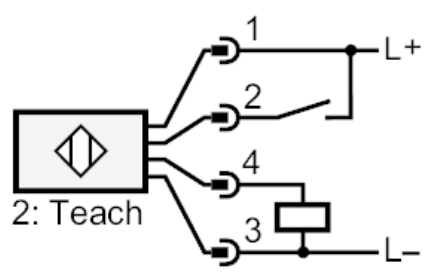
Remarks	cULus - Class 2 source required
Pack quantity	1 pcs.

### Electrical connection

Connector: 1 x M8; coding: A

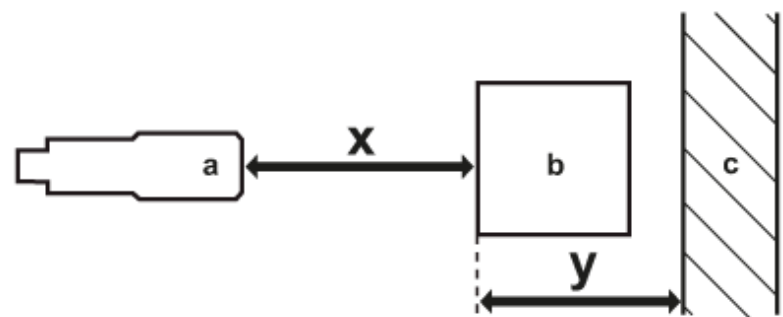


### Connection



2 Teach

### Diagrams and graphs



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

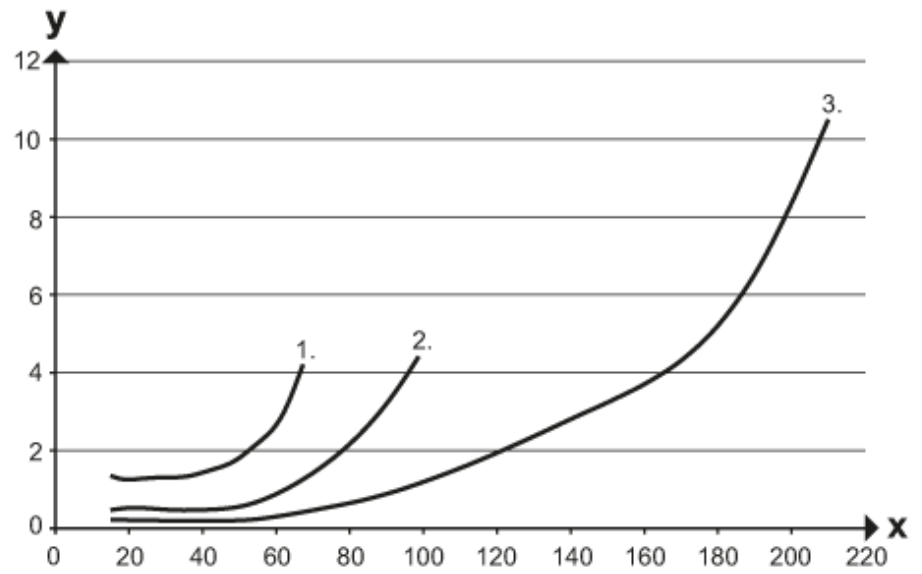
# OJ5154



## LASER diffuse reflection sensor

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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)