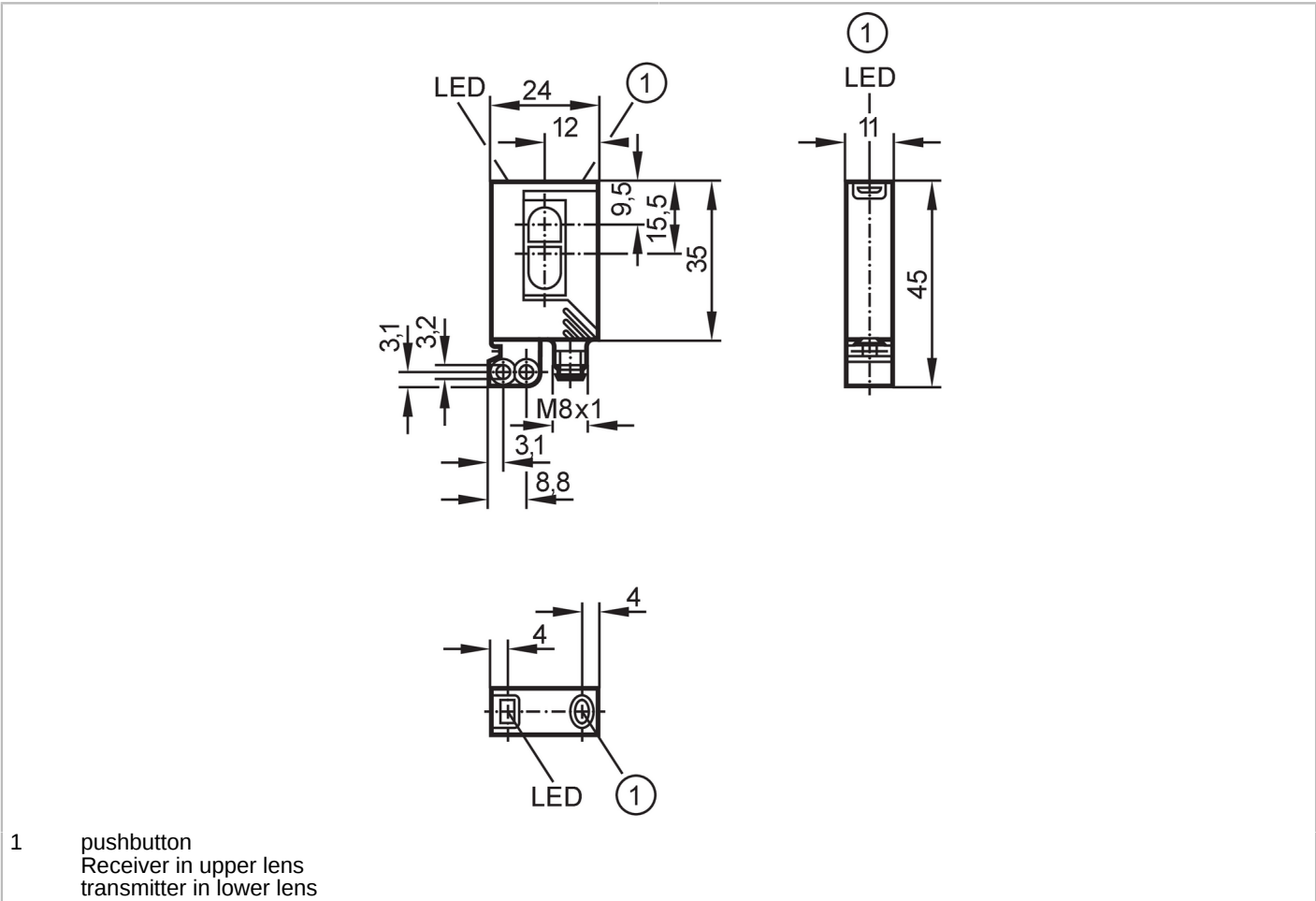




LASER diffuse reflection sensor

OJHLFPKG/FO/AS



Product characteristics		
Type of light		red light
Laser protection class		1
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]	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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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]	7...150; (white paper 200 x 200 mm 90 % remission)	
Range adjustable	yes	
Diameter of the smallest detectable object [mm]	0.8	
Max. light spot diameter [mm]	0.8	
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 1040.10 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.
MTTF [years]	501	
Mechanical data		
Weight [g]	29.9	
Housing	rectangular	
Dimensions [mm]	35 x 24 x 11	
Material	housing: ABS; fixture: diecast zinc; LED window: SEPS; pushbutton: SEPS	
Lens material	front lens:PMMA	
Lens alignment	Front sensing	
Displays / operating elements		
Display	Switching status	1 x LED, yellow
	Power	1 x LED, green
Electronic lock	yes	



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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	

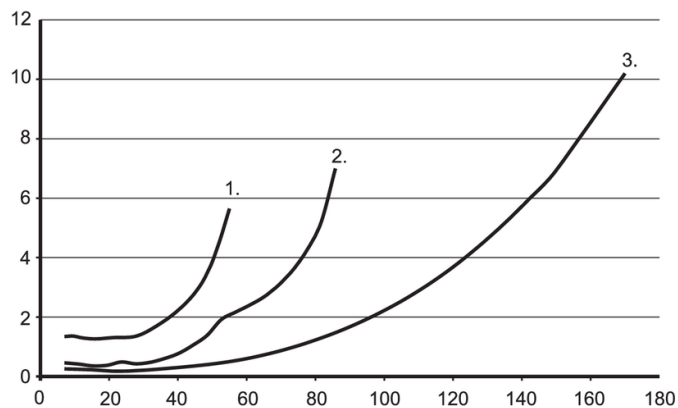
Connection	
2	Teach

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

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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)