



Laser diffuse reflection sensor

OGHLFNKG/US100



1 programming buttons



Product characteristics

Type of light	red light
Laser protection class	1
Housing	threaded type
Dimensions [mm]	M18 x 1 / L = 72

Application

Special feature	Background suppression
Function principle	Diffuse reflection sensor

Electrical data

Operating voltage [V]	10...36 DC
Current consumption [mA]	15
Protection class	II
Reverse polarity protection	yes
Type of light	red light
Typ. lifetime [h]	50000

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



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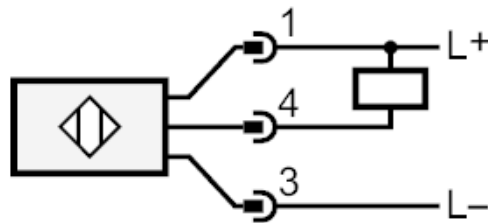
Detection zone		
Range	[mm]	20...200; (white paper 200 x 200 mm 90% remission)
Range on white object (90 % remission)	[mm]	20...200
Range on grey object (18 % remission)	[mm]	20...100
Range on black object (6 % remission)	[mm]	20...70
Range adjustable		yes
Diameter of the smallest detectable object	[mm]	1.5
Max. light spot diameter	[mm]	1.2
Background suppression available		yes
Operating conditions		
Ambient temperature	[°C]	-10...60
Protection		IP 65; 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]	497
Mechanical data		
Weight	[g]	62.3
Housing	threaded type	
Dimensions	[mm]	M18 x 1 / L = 72
Thread designation	M18 x 1	
Materials	stainless steel (1.4404 / 316L); PA; LCP; EPDM; TPU	
Lens material	PMMA	
Displays / operating elements		
Display	switching status	1 x LED, yellow
Accessories		
Accessories (supplied)	lock nuts: 2 x	
Remarks		
Remarks	operating voltage "supply class 2" according to cULus	
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12		

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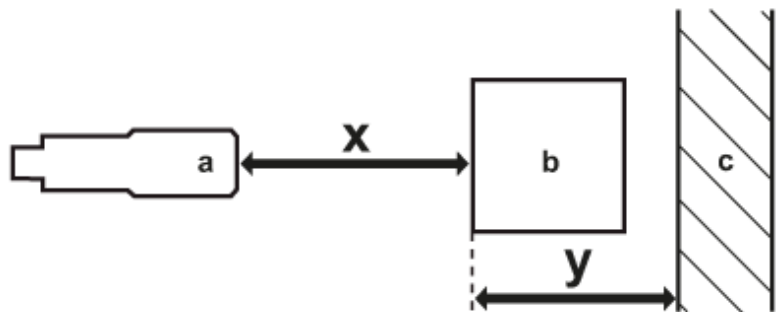
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Connection



Diagrams and graphs



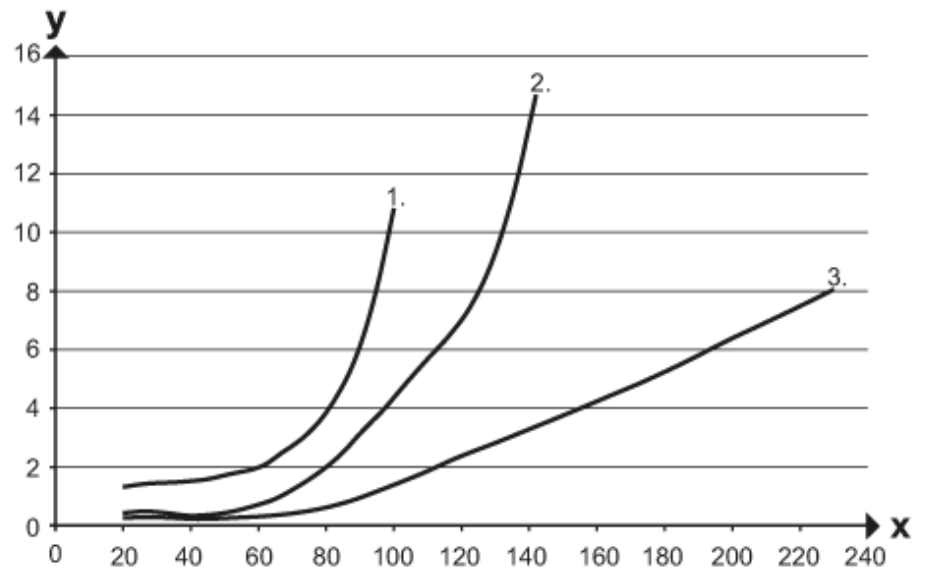
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



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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)