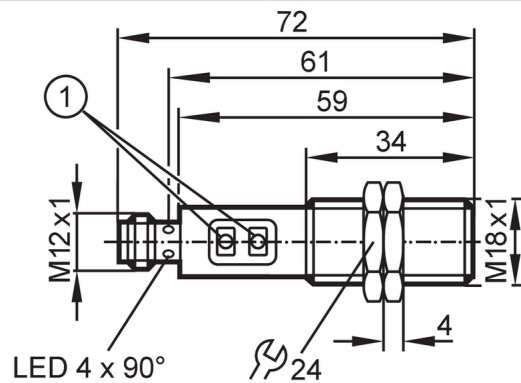


OGH701



LASER diffuse reflection sensor

OGHLFNKG/US100



1 Programming buttons



Product characteristics

Type of light	red light
Laser protection class	1
Housing	Threaded type

Application

Special feature	Background suppression
Function principle	Diffuse reflection sensor
Application	Industrial applications

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		yes (non-latching)
Overload protection		yes

Monitoring range

Range	[mm]	20...200; (white paper 200 x 200 mm 90 % remission)
Range on white object (90 % remission)	[mm]	20...200



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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 1040.10 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.
MTTF	[years]	497

Mechanical data

Weight	[g]	62.3
Housing		Threaded type
Dimensions	[mm]	M18 x 1 / L = 72
Thread designation		M18 x 1
Material		stainless steel (1.4404 / 316L); PA; LCP; EPDM; TPU (urethane)
Lens material		front lens:PMMA

Displays / operating elements

Display	Switching status	1 x LED, yellow
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Accessories

Items supplied	lock nuts: 2
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Remarks

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

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4



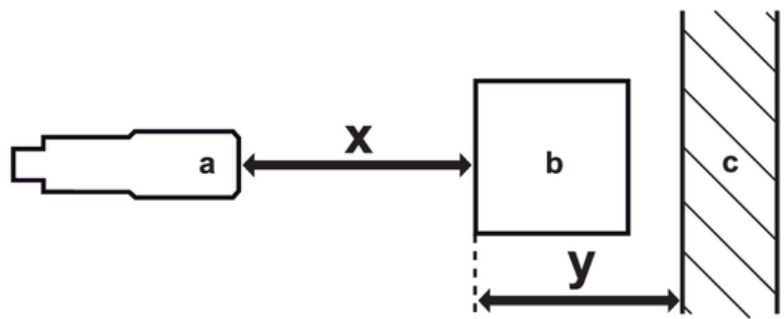
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Connection



Diagrams and graphs



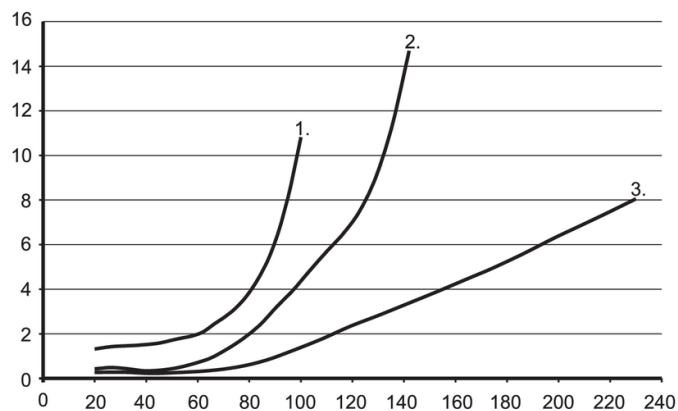
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



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)