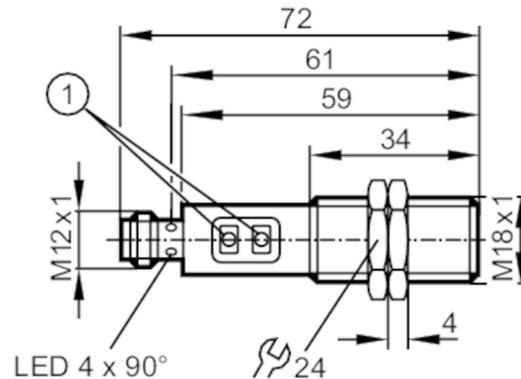# OGH312

Diffuse reflection sensor with background suppression

OGH-FPKG/US100

1 programming buttons

Product characteristics	
Type of light	red light
Housing	threaded type

Application	
Special feature	Background suppression
Function principle	Diffuse reflection sensor

Electrical data		
Operating voltage	[V]	10...36 DC
Current consumption	[mA]	25
Protection class		II
Reverse polarity protection		yes
Type of light		red light

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]	150; (200 (...60 °C))
Switching frequency DC	[Hz]	1000
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes

Detection zone		
Range	[mm]	15...300; (white paper 200 x 200 mm 90% remission)
Range on white object (90 % remission)	[mm]	15...300
Range on grey object (18 % remission)	[mm]	15...290

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Range on black object (6 % remission)	[mm]	15...190
Factory setting		light-on mode
Range adjustable		yes
Max. light spot diameter	[mm]	25
Light spot dimensions refer to		at maximum range
Background suppression available		yes

Operating conditions

Ambient temperature	[°C]	-25...80
Protection		IP 65; IP 67; IP 68; IP 69K

Tests / approvals

EMC		EN 60947-5-2	
MTTF	[years]	362	

Mechanical data

Weight	[g]	50
Housing		threaded type
Dimensions	[mm]	M18 x 1 / L = 72
Thread designation		M18 x 1
Materials		stainless steel (316L/1.4404); PA; LCP; EPDM; TPU
Lens material		PMMA

Displays / operating elements

Display	switching status	1 x LED, yellow

Accessories

Items supplied	lock nuts: 2

Remarks

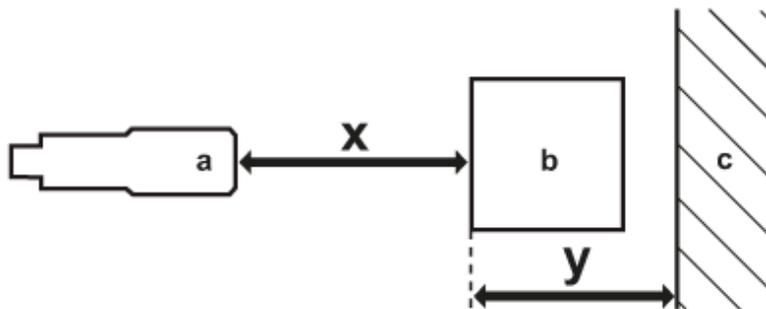|	
Remarks	operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A

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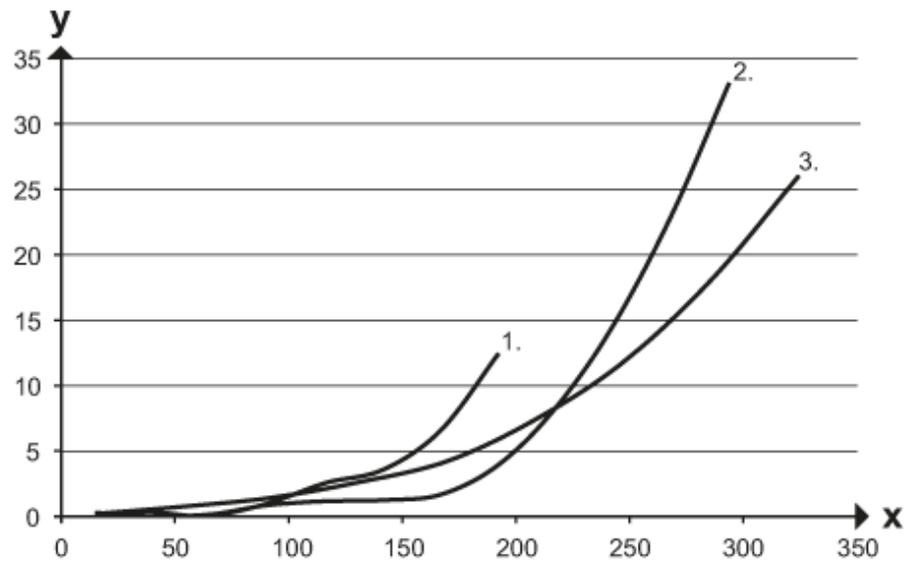| Connection |
| --- |
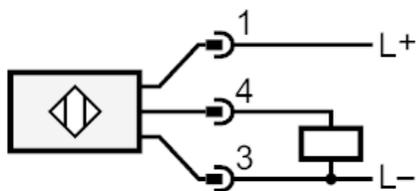
Diagrams and graphs

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)