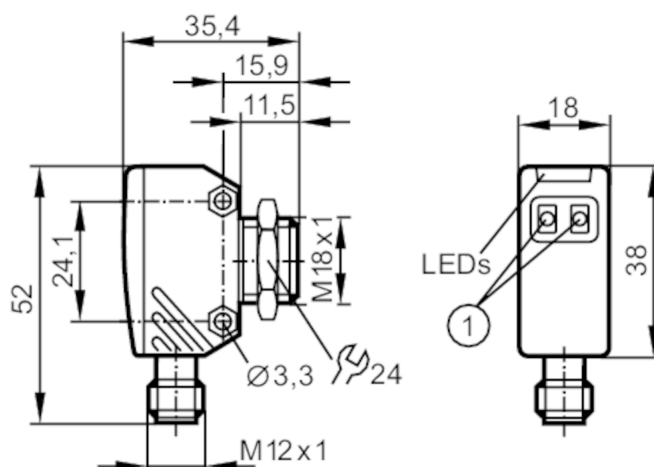




Diffuse reflection sensor with background suppression

OGH-FNKG/US/CUBE



- 1 programming buttons
transmitter in lower lens
receiver in upper lens



Application

Function principle	Diffuse reflection sensor
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Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	30
Protection class		III
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	624

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



Diffuse reflection sensor with background suppression

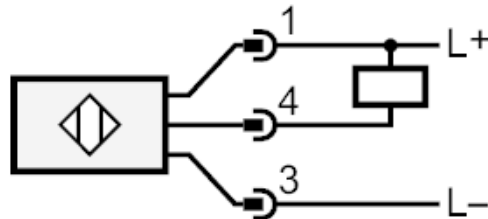
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Detection zone		
Range	[mm]	15...200; (white paper 200 x 200 mm 90 % remission)
Range on white object (90 % remission)	[mm]	15...200
Range on grey object (18 % remission)	[mm]	15...200
Range on black object (6 % remission)	[mm]	15...200
Range adjustable		yes
Max. light spot diameter	[mm]	13
Light spot dimensions refer to		at maximum range
Background suppression available		yes
Operating conditions		
Ambient temperature	[°C]	-25...60
Protection		IP 67
Tests / approvals		
EMC		EN 60947-5-2
MTTF	[years]	366
Mechanical data		
Weight	[g]	61.6
Housing		rectangular
Dimensions	[mm]	M18 x 1
Thread designation		M18 x 1
Materials		diecast zinc; PEI
Lens material		PEI
Lens alignment		side lens
Displays / operating elements		
Display	switching status	1 x LED, yellow
	operation	1 x LED, green
Accessories		
Accessories (supplied)		lock nut: 1 x
Remarks		
Remarks		operating voltage "supply class 2" according to cULus
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M12		
		

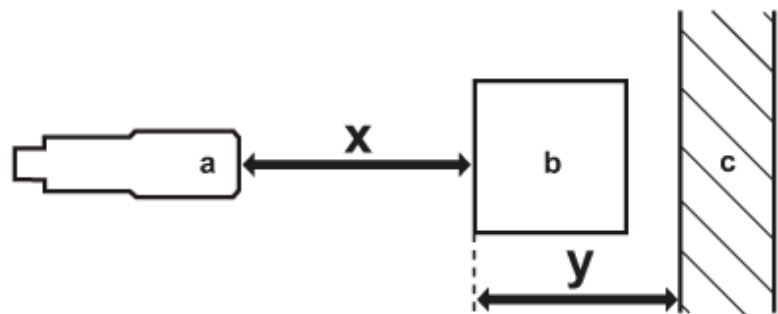
Diffuse reflection sensor with background suppression

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Connection



Diagrams and graphs



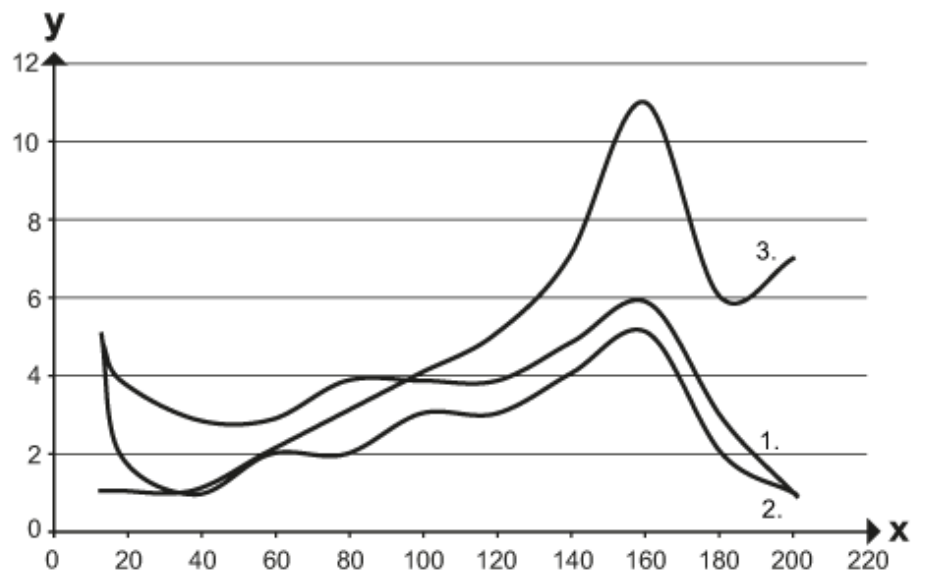
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



Diffuse reflection sensor with background suppression

OGH-FNKG/US/CUBE

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)