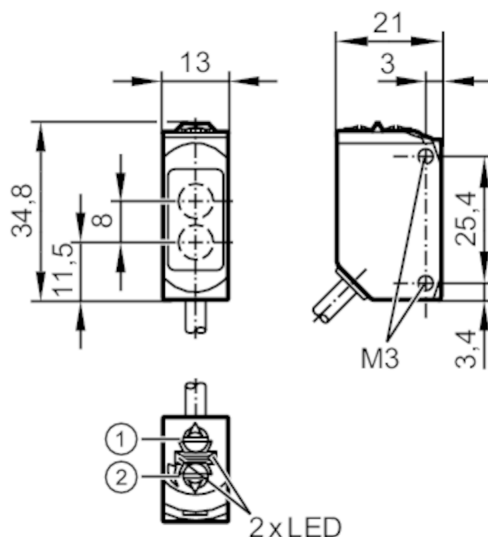


Diffuse reflection sensor with background suppression

O6H-FNKG/0,30m/US



- 1 output function switch
2 potentiometer sensitivity
receiver in upper lens
transmitter in lower lens



Application

Function principle	Diffuse reflection sensor
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Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	22; ((24 V))
Protection class		III
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	633

Outputs

Electrical design	NPN
Output function	light-on/dark-on mode; (selectable)
Max. voltage drop switching output DC	[V] 2.5
Permanent current rating of switching output DC	[mA] 100
Switching frequency DC	[Hz] 1000
Short-circuit protection	yes
Type of short-circuit protection	pulsed

O6H305



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Detection zone		
Range	[mm]	2...200; (white paper 200 x 200 mm)
Range on white object (90 % remission)	[mm]	2...200
Range on grey object (18 % remission)	[mm]	4...200
Range on black object (6 % remission)	[mm]	8...200
Range adjustable		yes
Max. light spot diameter	[mm]	8
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]	708
UL approval		UL Approval no. E006

Mechanical data		
Weight	[g]	53
Housing		rectangular
Dimensions	[mm]	34.8 x 13 x 21
Materials		housing: stainless steel (1.4404 / 316L); plastics: PPSU; Sealing: EPDM
Lens material		PMMA
Lens alignment		side lens

Displays / operating elements		
Display	switching status	1 x LED, yellow
	operation	1 x LED, green

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

Electrical connection		
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Cable: 0.3 m, PVC; 3 x 0.25 mm²

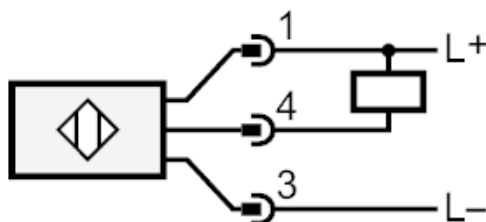
Connector: 1 x M12



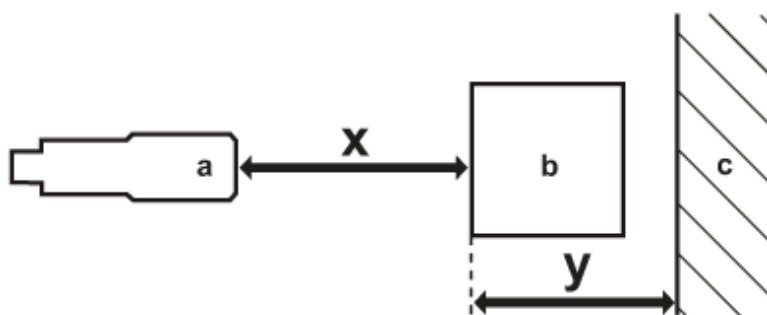
Diffuse reflection sensor with background suppression

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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

O6H-FNKG/0,30m/US

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)