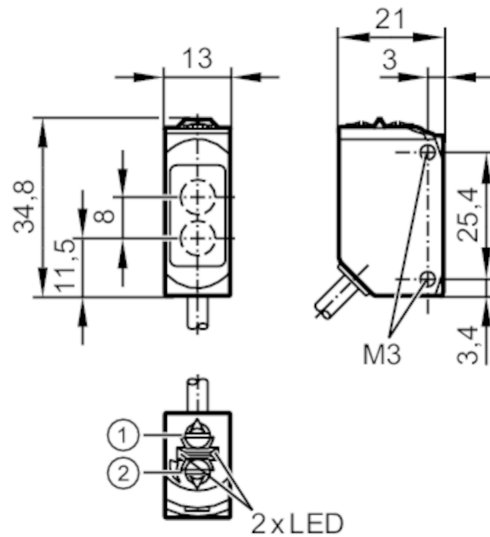


O6H405



Diffuse reflection sensor with background suppression

O6H-FNKG/0,30m/US



- 1: output function switch
2: potentiometer sensitivity



Product characteristics

Type of light	red light
Housing	rectangular
Dimensions [mm]	34.8 x 13 x 21

Application

Special feature	Background suppression
Function principle	Diffuse reflection sensor
Application	suited for use in the machine tool industry

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

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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...60
Protection	IP 65; IP 67; IP 68

Tests / approvals	
EMC	EN 60947-5-2
MTTF [years]	698
UL approval	UL Approval no. E023

Mechanical data	
Weight [g]	52
Housing	rectangular
Dimensions [mm]	34.8 x 13 x 21
Materials	housing: stainless steel (1.4404 / 316L); plastics: PPSU; Sealing: FKM
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

Cable: 0.3 m, PUR; 3 x 0.25 mm²

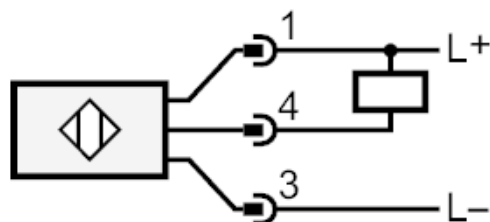
Connector: 1 x M12



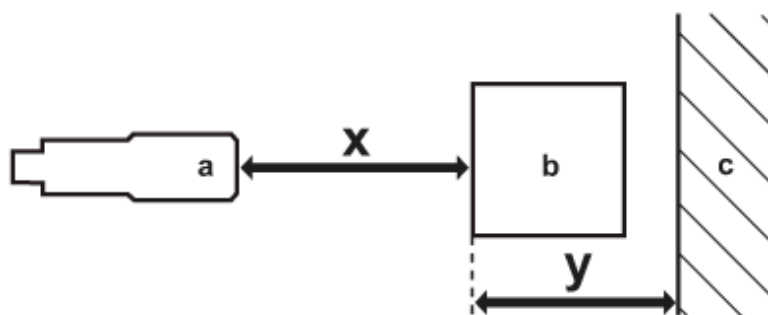
Diffuse reflection sensor with background suppression

O6H-FNKG/0,30m/US

Connection



Diagrams and graphs



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

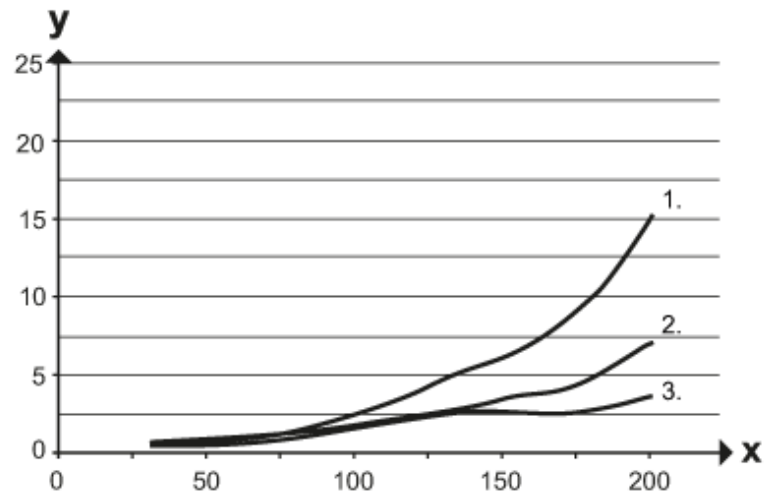
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Diffuse reflection sensor with background suppression

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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)