

# O6H401



## Diffuse reflection sensors with background suppression

O6H-FNKG/AS/4P



- 1: output function switch  
2: potentiometer sensitivity



### Product characteristics

Type of light	red light
Housing	rectangular

### Application

System	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		yes (non-latching)

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Monitoring range	
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]	706
UL approval	UL approval number E001

Mechanical data	
Weight [g]	33.9
Housing	rectangular
Dimensions [mm]	41.3 x 13 x 21
Material	housing: stainless steel (1.4404 / 316L); plastics: PPSU; sealing: FKM
Lens material	PMMA
Lens alignment	Side sensing

Displays / operating elements		
Display	Switching status	1 x LED, yellow
	Power	1 x LED, green

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

### Electrical connection

Connector: 1 x M8; coding: A





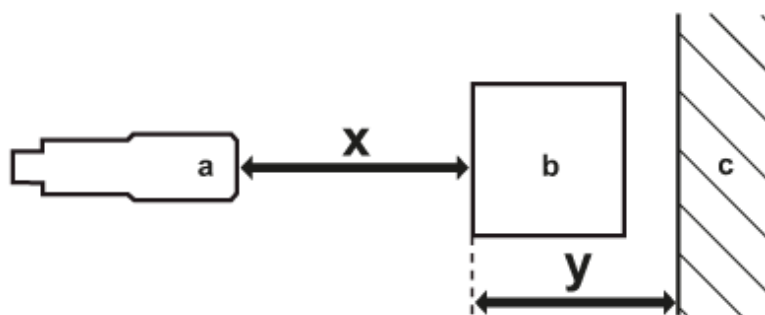
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### Connection



### Diagrams and graphs



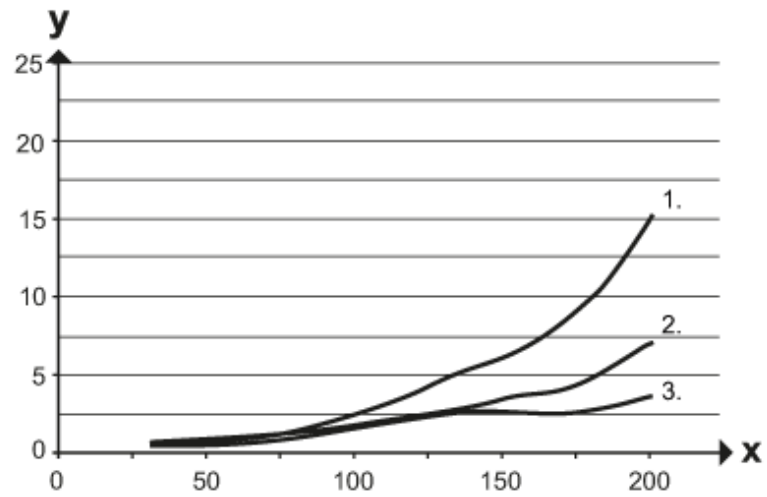
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



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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)