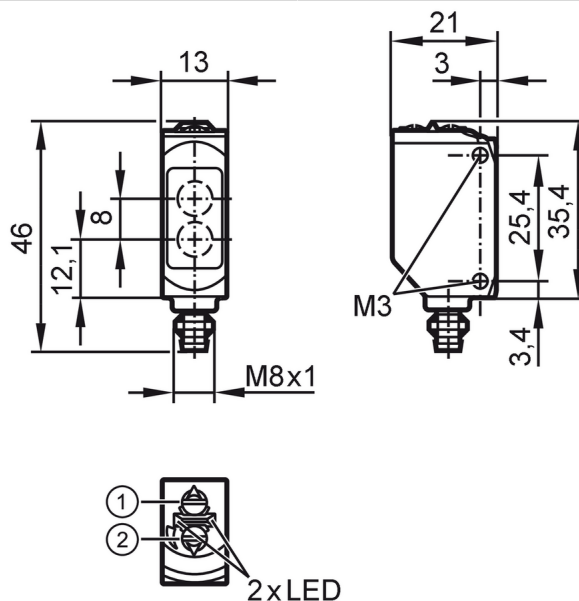




## Diffuse reflection sensors with background suppression

O6H-FNKG/AS/4P



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



Product characteristics	
Type of light	red light
Housing	rectangular
Application	
Special feature	Background suppression
Function principle	Diffuse reflection sensor
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)



## Diffuse reflection sensors with background suppression

O6H-FNKG/AS/4P

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

Tests / approvals		
EMC		EN 60947-5-2
MTTF	[years]	683
UL approval	Ta	-25...40 °C
	Enclosure type	Type 1
	voltage supply	Class 2
	UL approval number	E001

Mechanical data		
Weight	[g]	18.1
Housing		rectangular
Dimensions	[mm]	46 x 13 x 21
Material		housing: ABS orange; Gehäuseoberteil: PPSU black
Lens material		front lens:PMMA
Lens alignment		Side sensing
Sealing material		EPDM
Tightening torque	[Nm]	0.5

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.

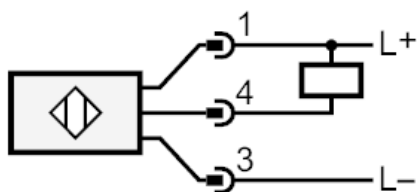
Electrical connection		
Connector: 1 x M8; coding: A; Locking: brass, coated; sealing: EPDM		



## Diffuse reflection sensors with background suppression

O6H-FNKG/AS/4P

## Connection



## Diagrams and graphs



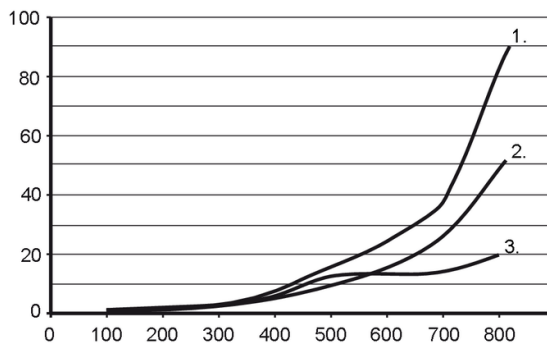
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensors with background suppression

O6H-FNKG/AS/4P

### 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)