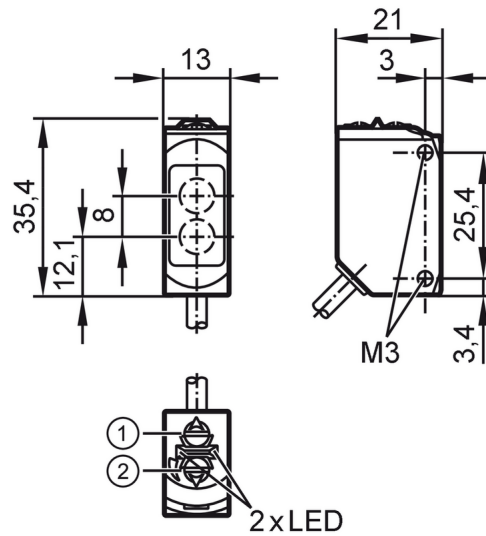




## Diffuse reflection sensor with background suppression

O6H-FNKG



- 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		pulsed

### Detection zone

Range	[mm]	2...200; (white paper 200 x 200 mm)
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# O6H204



## Diffuse reflection sensor with background suppression

O6H-FNKG

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...60 °C
	Enclosure type	Type 1
	power supply	Class 2
	UL approval no.	E008

### Mechanical data

Weight [g]	60.15
Housing	rectangular
Dimensions [mm]	35.4 x 13 x 21
Materials	housing: ABS orange; upper part of the housing: PPSU black; Sealing: EPDM
Lens material	front pane:PMMA
Lens alignment	side lens
Tightening torque [Nm]	0.5

### 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.



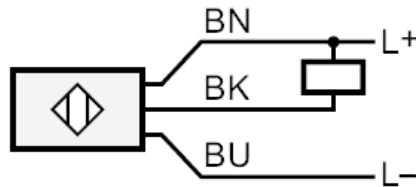
## Diffuse reflection sensor with background suppression

O6H-FNKG

### Electrical connection

Cable: 2 m, PUR; 3 x 0.25 mm<sup>2</sup>

### Connection



Core colours :  
BN = brown  
BK = black  
BU = blue

### 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

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)