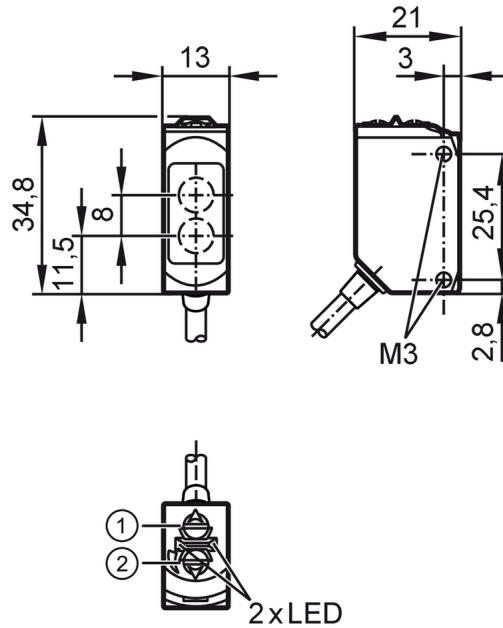


# O6H304



## Diffuse reflection sensors with background suppression

O6H-FNKG



- 1 output function switch
- 1 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
Application	food and beverage 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

# O6H304



## Diffuse reflection sensors with background suppression

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Type of short-circuit protection	yes (non-latching)	
<b>Monitoring range</b>		
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	
<b>Operating conditions</b>		
Ambient temperature [°C]	-25...80	
Protection	IP 65; IP 67; IP 68; IP 69K	
<b>Tests / approvals</b>		
EMC	EN 60947-5-2	
MTTF [years]	708	
UL approval	Ta	-25...80 °C
	Enclosure type	Type 1
	voltage supply	Class 2
	UL approval number	E003
<b>Mechanical data</b>		
Weight [g]	81.3	
Housing	rectangular	
Dimensions [mm]	34.8 x 13 x 21	
Material	housing: stainless steel (1.4404 / 316L); sealing: EPDM; plastics: PPSU	
Lens material	front lens:PMMA	
Lens alignment	Side sensing	
Tightening torque [Nm]	1; (screws)	
<b>Displays / operating elements</b>		
Display	Switching status	1 x LED, yellow
	Power	1 x LED, green
<b>Remarks</b>		
Remarks	cULus - Class 2 source required	
Pack quantity	1 pcs.	



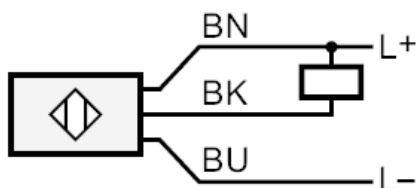
## Diffuse reflection sensors with background suppression

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### Electrical connection

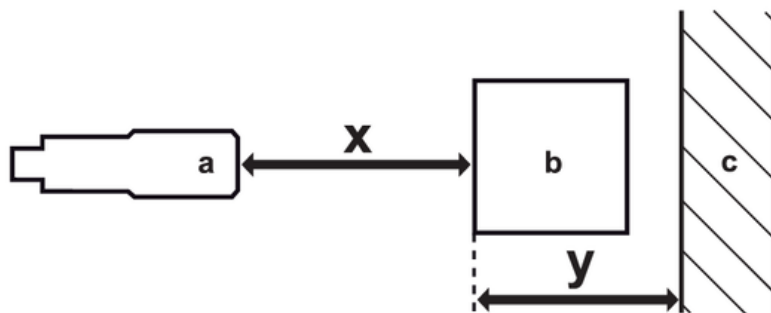
Cable: 2 m, PVC; 3 x 0.25 mm<sup>2</sup>

### Connection



Core colors :  
 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 sensors with background suppression

O6H-FNKG

### 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)