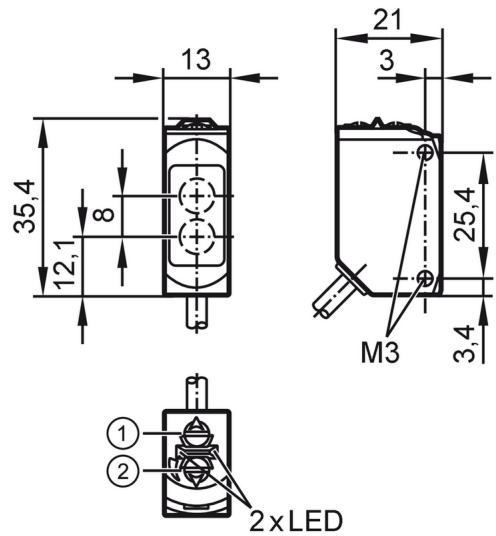




Diffuse reflection sensors with background suppression

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
Application	Industrial applications

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

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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
Tests / approvals		
EMC		EN 60947-5-2
MTTF	[years]	683
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	voltage supply	Class 2
	UL approval number	E008
Mechanical data		
Weight	[g]	60.15
Housing		rectangular
Dimensions	[mm]	35.4 x 13 x 21
Material		housing: ABS orange; upper part of the housing: PPSU black; sealing: EPDM
Lens material		front lens:PMMA
Lens alignment		Side sensing
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.



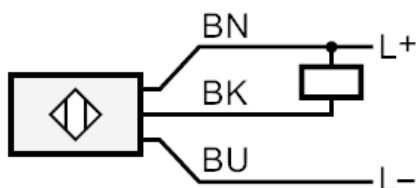
Diffuse reflection sensors with background suppression

O6H-FNKG

Electrical connection

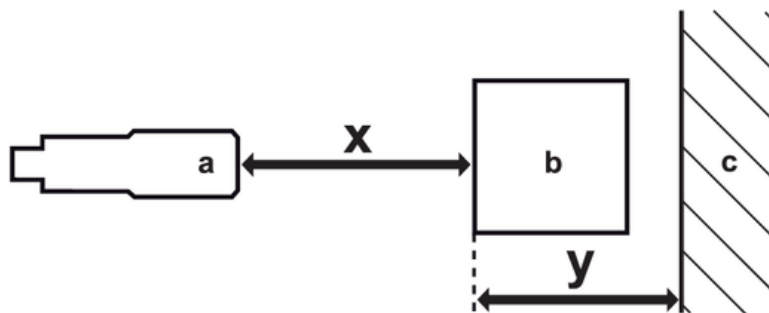
Cable: 2 m, PUR; 3 x 0.25 mm²

Connection



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

Diagrams and graphs



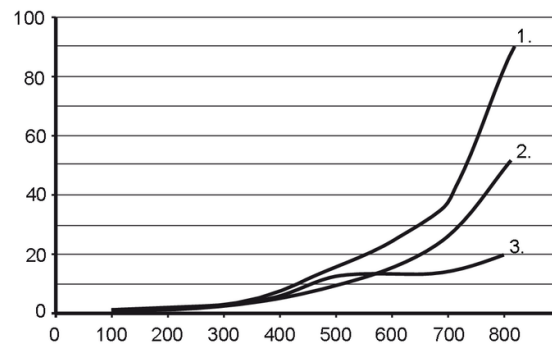
a: sensor
 b: object
 c: background
 x: distance sensor/object [mm]
 y: min. distance object/background [mm]



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)