



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		
System		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; PPSU
Lens material		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.



Diffuse reflection sensors with background suppression

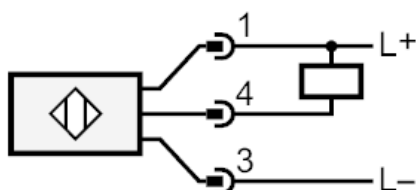
O6H-FNKG/AS/4P

Electrical connection

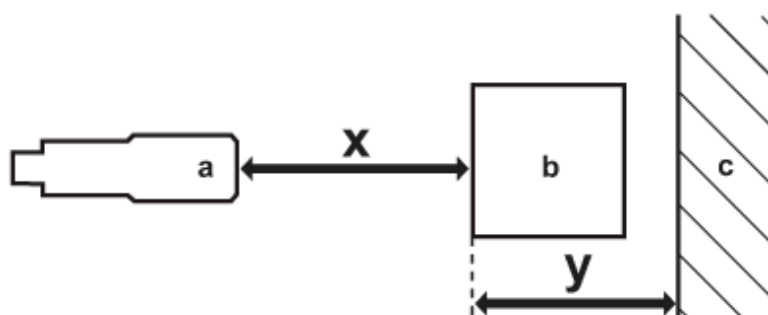
Connector: 1 x M8; coding: A; Locking: brass, coated; sealing: EPDM



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)