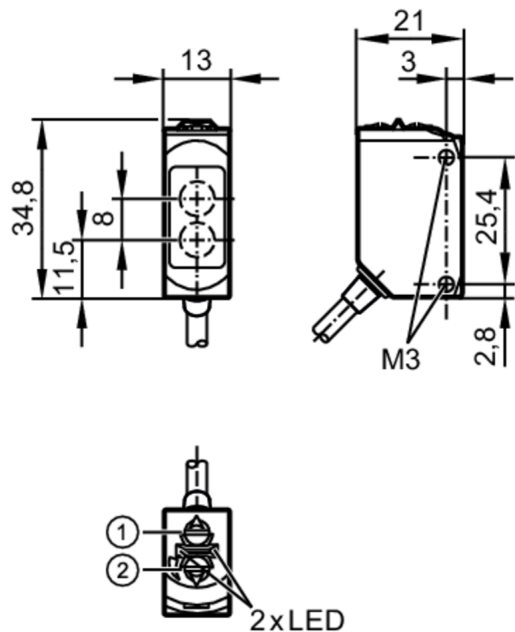


O6H305



Diffuse reflection sensors with background suppression

O6H-FNKG/0,30m/US



- 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		
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



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O6H-FNKG/0,30m/US

Type of short-circuit protection	yes (non-latching)	
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...80	
Protection	IP 65; IP 67; IP 68; IP 69K	
Tests / approvals		
EMC	EN 60947-5-2	
MTTF [years]	708	
UL approval	Ta	-25...40 °C
	Enclosure type	Type 1
	voltage supply	Class 2
	UL approval number	E006
Mechanical data		
Weight [g]	51.3	
Housing	rectangular	
Dimensions [mm]	34.8 x 13 x 21	
Material	housing: stainless steel (1.4404 / 316L); plastics: PPSU; sealing: EPDM	
Lens material	PMMA	
Lens alignment	Side sensing	
Tightening torque [Nm]	1; (screws)	
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/0,30m/US

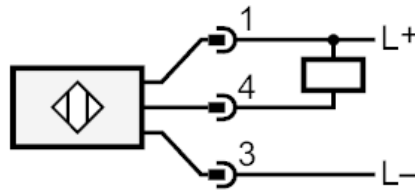
Electrical connection

Cable: 0.3 m, PVC; 3 x 0.25 mm²

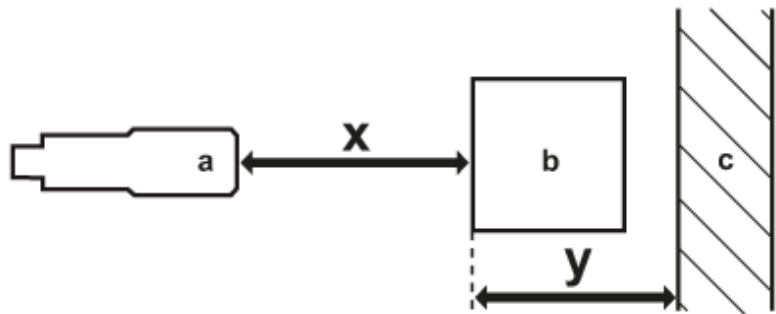
Connector: 1 x M12; coding: A



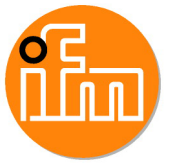
Connection



Diagrams and graphs



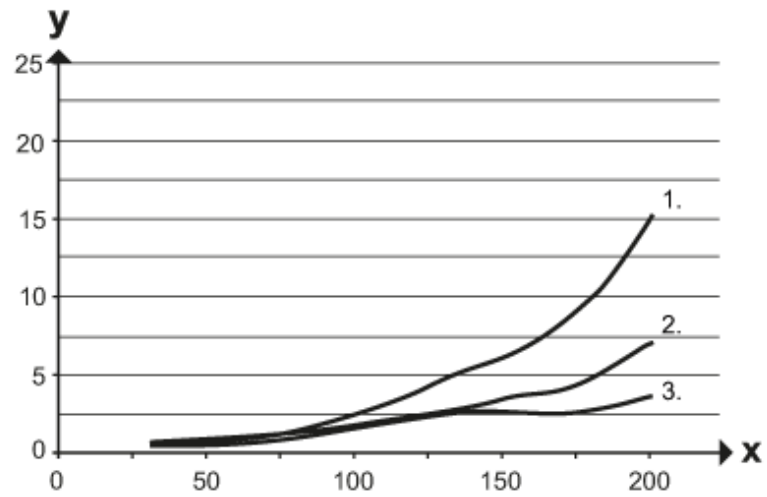
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



Diffuse reflection sensors with background suppression

O6H-FNKG/0,30m/US

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)