

O6H305



Diffuse reflection sensor 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		
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



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Type of short-circuit protection	pulsed	
Detection zone		
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	UL Approval no.	E006
Mechanical data		
Weight	[g]	51.3
Housing		rectangular
Materials		housing: stainless steel (316L/1.4404); plastics: PPSU; Sealing: EPDM
Lens material		PMMA
Lens alignment		side lens
Tightening torque	[Nm]	1; (screws)
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.	
Electrical connection		
Cable: 0.3 m, PVC; 3 x 0.25 mm²		
Connector: 1 x M12; coding: A		
		

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Connection



Diagrams and graphs



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



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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)