

O6H309



Diffuse reflection sensor with background suppression

O6H-FPKG/AS/4P



- 1: output function switch
- 2: potentiometer sensitivity



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	PNP
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	pulsed

Detection zone

Range [mm]	2...200; (white paper 200 x 200 mm)
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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

Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Multiple switching signal
SIO mode	yes	
Required master port type	A	
Min. process cycle time [ms]	2.5	
IO-Link process data (cyclical)	function	bit length
	process value	8
	binary switching information	1
IO-Link functions (acyclical)	application specific tag; operating hours counter; switching cycles counter	
Supported DeviceIDs	Type of operation	DeviceID
	default	424

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]	534	
UL approval	Ta	-25...40 °C
	Enclosure type	Type 1
	power supply	Class 2
	UL approval no.	E010

Mechanical data

Weight [g]	34.4
Housing	rectangular
Dimensions [mm]	41.3 x 13 x 21
Materials	housing: stainless steel (316L/1.4404); Sealing: EPDM; plastics: PPSU
Lens material	front pane:PMMA
Lens alignment	side lens
Tightening torque [Nm]	1; (screws)



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Displays / operating elements

Display	switching status	1 x LED, yellow
	operation	1 x LED, green

Remarks

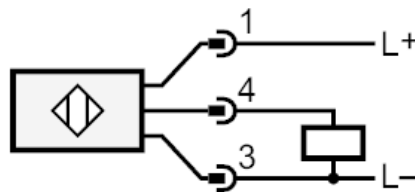
Remarks	operating voltage "supply class 2" according to cULus	
Pack quantity	1 pcs.	

Electrical connection

Connector: 1 x M8; coding: A

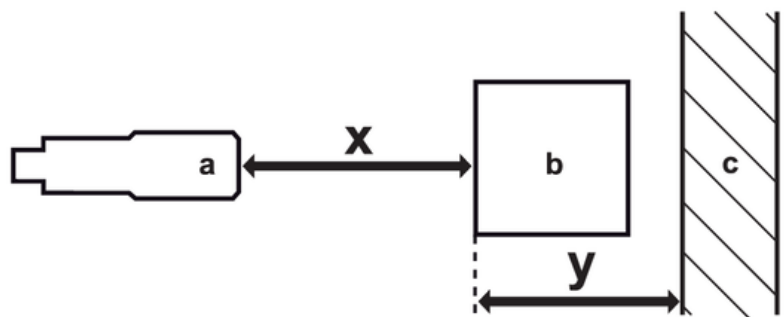


Connection



4 OUT / IO-Link

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)