

Diffuse reflection sensors with background suppression

O6H-FPKG/AS/4P



- 1: output function switch
2: potentiometer sensitivity



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		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		yes (non-latching)

Monitoring range

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: Device Identification; Binary Data Channel	
SIO mode	yes	
Required master port class	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	UL approval number	E010

Mechanical data

Weight [g]	34.4
Housing	rectangular
Dimensions [mm]	41.3 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
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Pack quantity

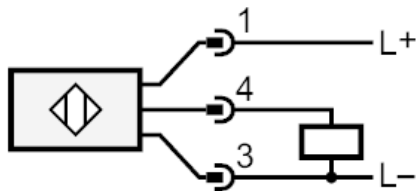
1 pcs.

Electrical connection

Connector: 1 x M8; coding: A

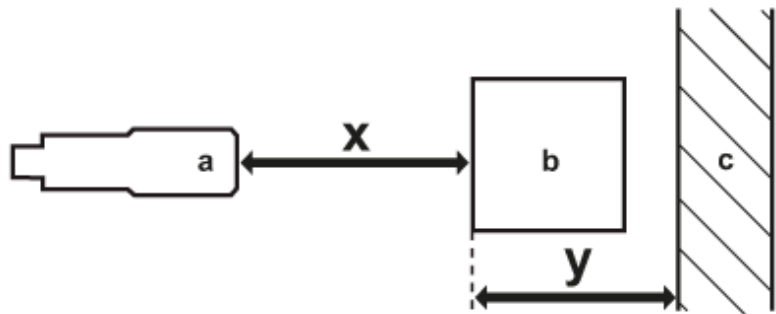


Connection



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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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)