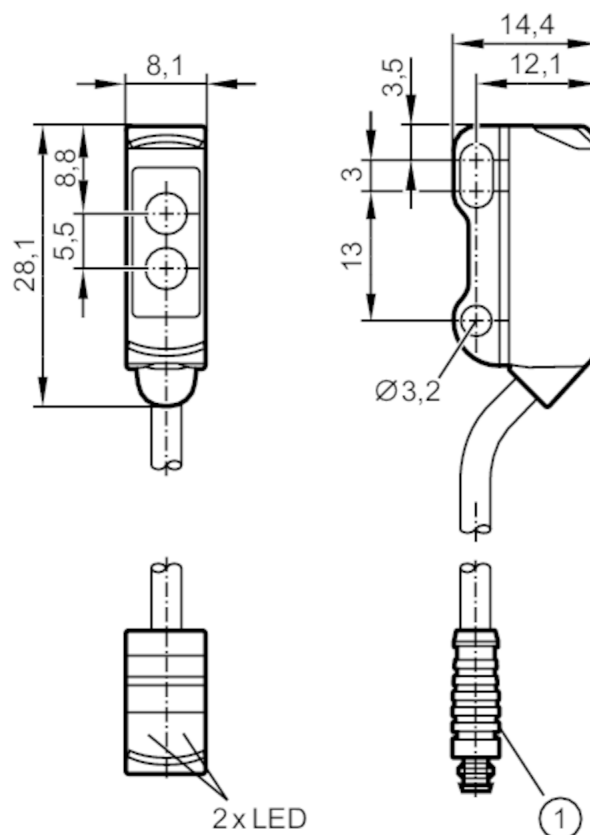




Diffuse reflection sensor with background suppression

O8H-FPKG/IO-Link/0,30M/AS/3P



1: illustration (example)
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]	20; ((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; (programmable)



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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]	1...80; (white paper 200 x 200 mm)
Range on white object (90 % remission)	[mm]	1...80
Range on grey object (18 % remission)	[mm]	3...76
Range on black object (6 % remission)	[mm]	5...74
Setting range	[mm]	10...80
Range adjustable		yes
Max. light spot diameter	[mm]	4
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; Device Diagnosis; Teach Channel; Switching Channel	
SIO mode	yes	
Required master port type	A	
Min. process cycle time	[ms]	3
IO-Link process data (cyclical)	function	bit length
	process value	8
	device status	4
	binary switching information	1
IO-Link functions (acyclical)	application specific tag; operating hours counter; switching cycles counter	
Supported DeviceIDs	Type of operation	DeviceID
	default	535

Operating conditions

Ambient temperature	[°C]	-25...60
Protection		IP 65; IP 67

Tests / approvals

EMC	EN 60947-5-2	
MTTF	[years]	757

O8H220



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UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	power supply	Limited Voltage/Current
	UL Approval no.	E017
	File number UL	E174191

Mechanical data		
Weight	[g]	21.1
Housing		rectangular
Dimensions	[mm]	28.1 x 8.1 x 14.4
Materials		housing: ABS; stainless steel (316L/1.4404)
Lens material		PMMA
Lens alignment		side lens

Displays / operating elements		
Display	switching status	1 x LED, yellow
	operation	1 x LED, green

Remarks		
Pack quantity		1 pcs.

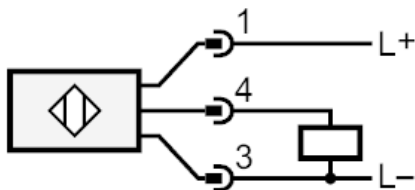
Electrical connection

Cable: 0.3 m, PVC; 3 x 0.08 mm²

Connector: 1 x M8; coding: A



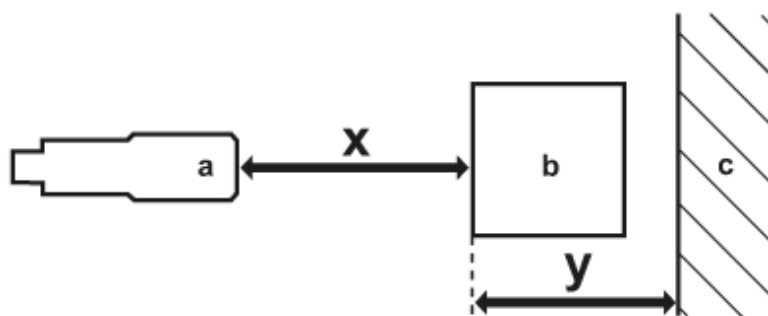
Connection



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Diagrams and graphs



a: sensor

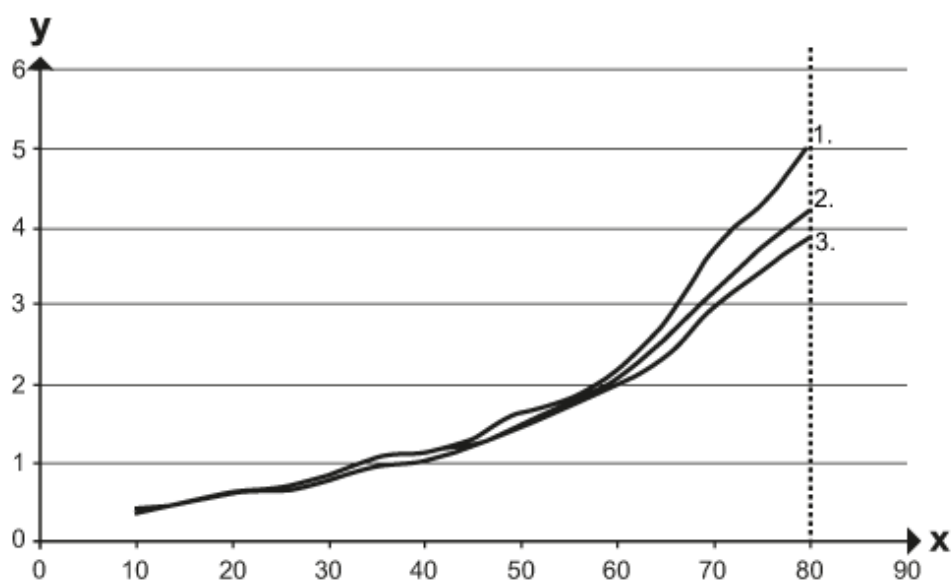
b: object

c: background

x: distance sensor/object [mm]

y: min. distance object/background [mm]

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)