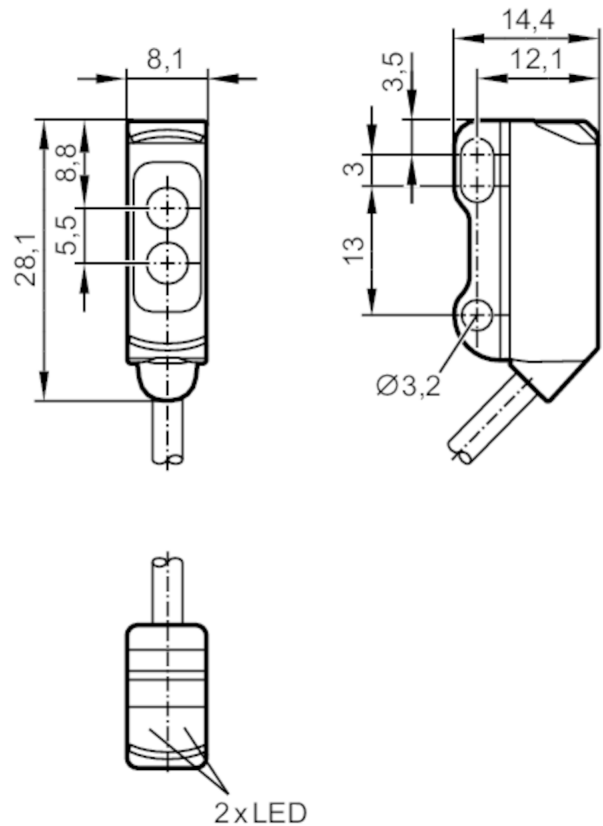


O8H270



Diffuse reflection sensor with background suppression

O8H-FPKG/IO-Link/2,0M



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)
Max. voltage drop switching output DC	[V]	2.5



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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; Process Data Variable	
SIO mode	yes	
Required master port type	A	
Min. process cycle time	[ms]	10
IO-Link process data (cyclical)	function	bit length
	process value	32
	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	1117

Operating conditions

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

Tests / approvals

EMC	EN 60947-5-2	
MTTF	[years]	756

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UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	power supply	Limited Voltage/Current
	UL Approval no.	E016
	File number UL	E174191

Mechanical data		
Weight	[g]	37.3
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

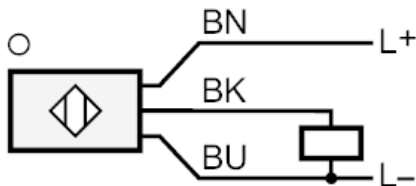
Displays / operating elements		
Display	switching status	1 x LED, yellow
	operation	1 x LED, green

Remarks		
Pack quantity		1 pcs.

Electrical connection

Cable: 2 m, PVC; 3 x 0.08 mm²

Connection



BK = IO-Link
Core colours :
BK = black
BN = brown
BU = blue

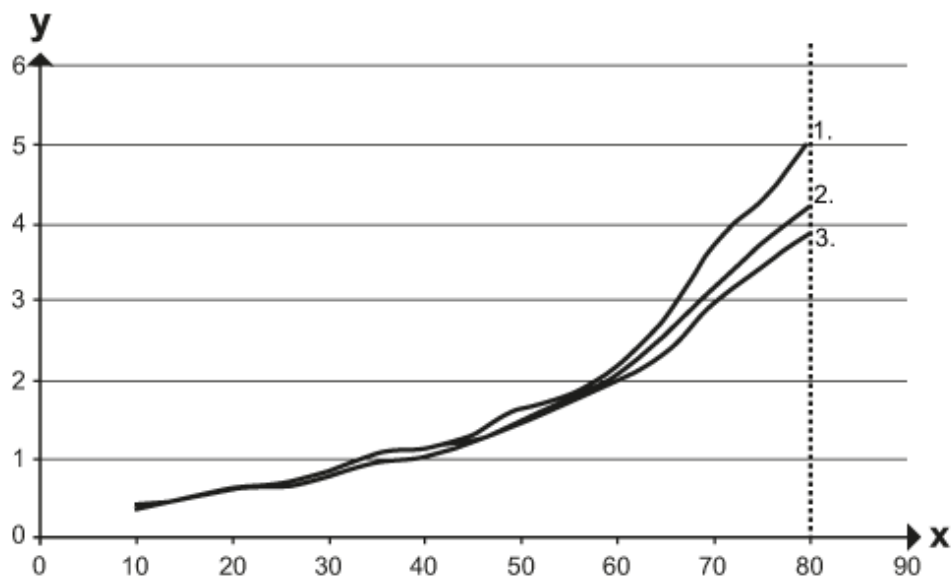


Diffuse reflection sensor with background suppression

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Diagrams and graphs

accuracy graph



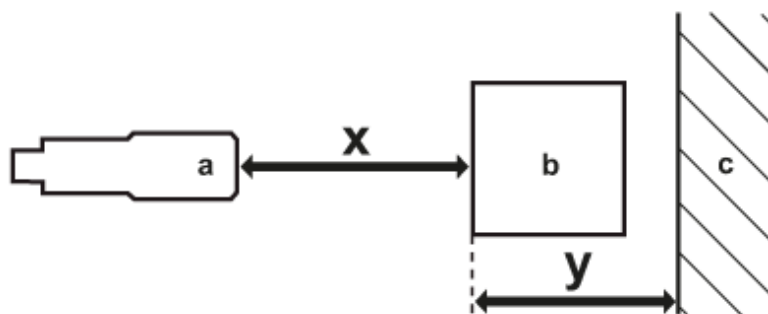
x: distance sensor/object [mm]

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)



a: sensor

b: object

c: background

x: distance sensor/object [mm]

y: min. distance object/background [mm]