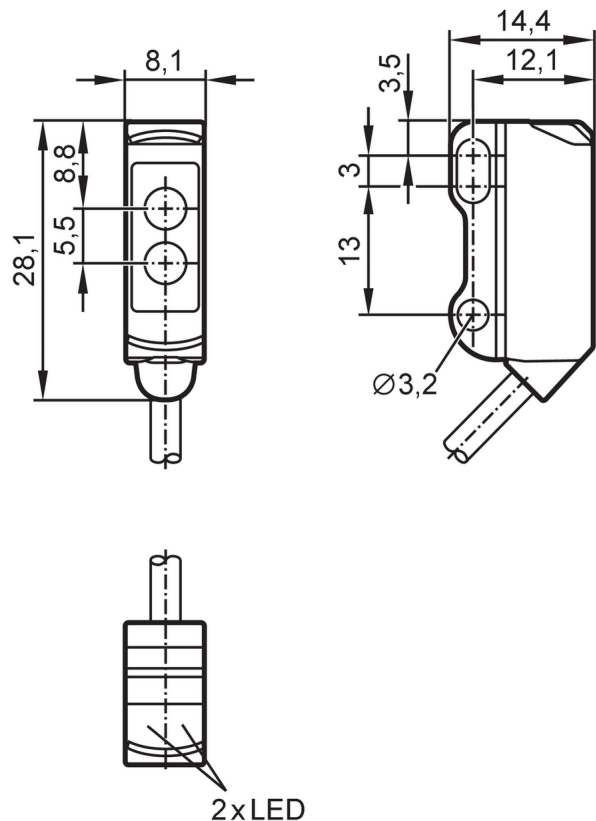


O8H270



Diffuse reflection sensors 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
Application		Industrial applications
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		yes (non-latching)

Monitoring range

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 - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Multiple switching signal
	Function	Process data variable
	Function	Device diagnosis
	Function	Teach channel
SIO mode	yes	
Required master port class	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

O8H270



Diffuse reflection sensors with background suppression

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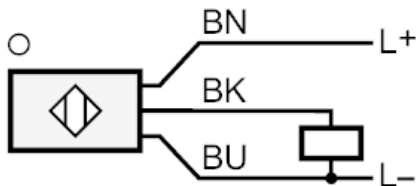
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	E016
	File number UL	E174191

Mechanical data		
Weight	[g]	37.3
Housing		rectangular
Dimensions	[mm]	28.1 x 8.1 x 14.4
Material		housing: ABS; rear of the housing: stainless steel (1.4404 / 316L)
Lens material		front lens:PMMA
Lens alignment		Side sensing

Displays / operating elements		
Display	Switching status	1 x LED, yellow
	Power	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 colors :
BK = black
BN = brown
BU = blue

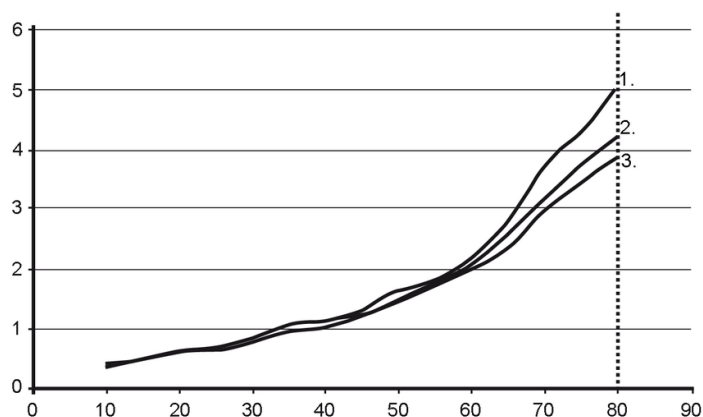


Diffuse reflection sensors with background suppression

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

Diagrams and graphs

Background suppression chart



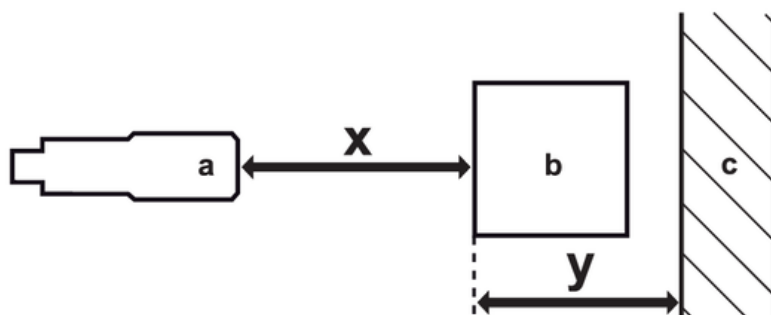
x: distance sensor/object [mm]

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)



a: sensor

b: object

c: background

x: distance sensor/object [mm]

y: min. distance object/background [mm]