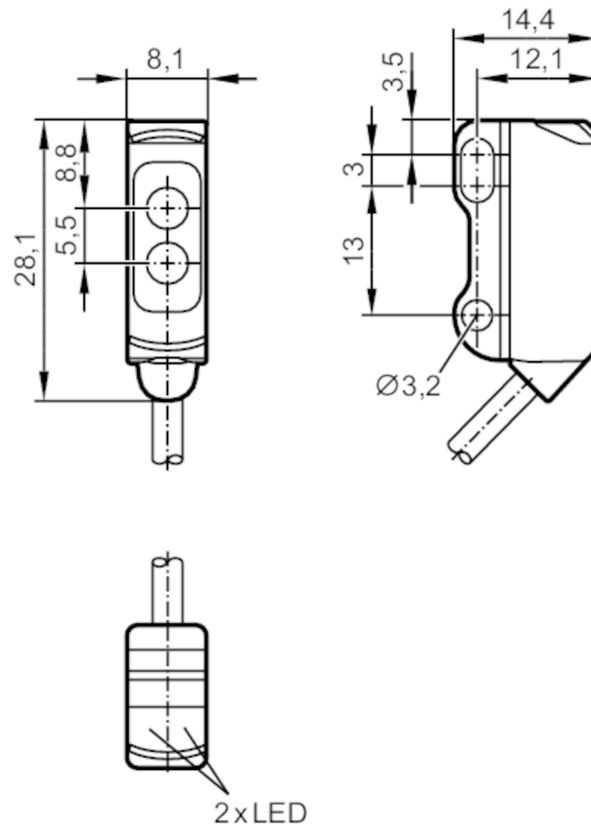


# O8H270



## 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

System	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



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Outputs		
Electrical design	PNP	
Output function	light-on/dark-on mode; (programmable)	
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]	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	
Range adjustable	yes	
Max. light spot diameter [mm]	4	
Light spot dimensions refer to	at maximum range	
Monitoring range final value [mm]	10...80	
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 class	A	
Min. process cycle time [ms]	10	
IO-Link process data (cyclical)	Function	bit length
	process value	32
	device status	4
IO-Link functions (acyclical)	binary switching information	1
	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	

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Tests / approvals		
EMC		EN 60947-5-2
MTTF	[years]	756
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	E016
	File number UL	E174191

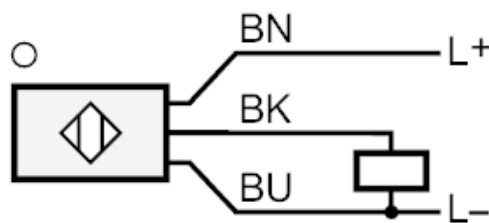
Mechanical data		
Weight	[g]	37.3
Housing		rectangular
Dimensions	[mm]	28.1 x 8.1 x 14.4
Material		housing: ABS; stainless steel (1.4404 / 316L)
Lens material		PMMA
Lens alignment		Side sensing

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 mm<sup>2</sup>

### Connection



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

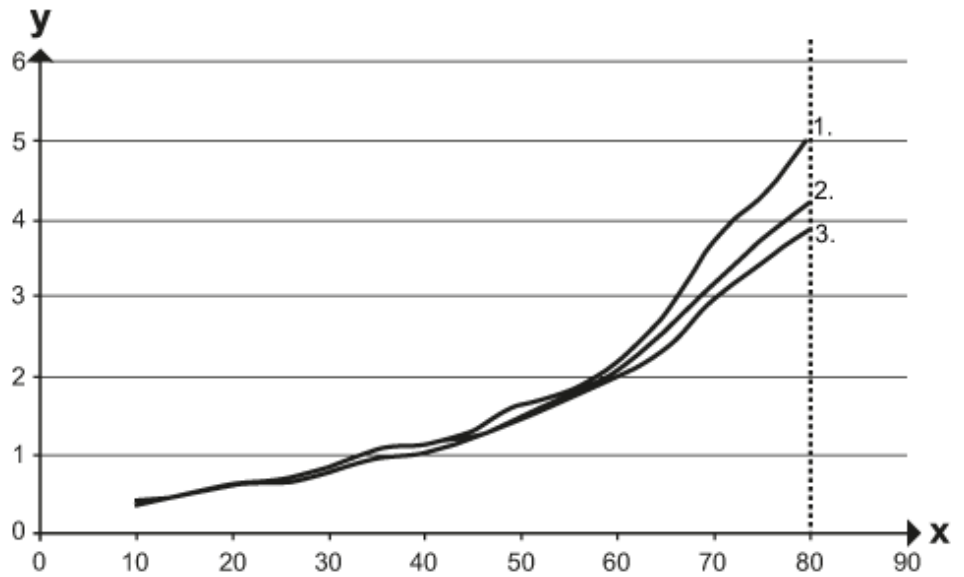


Diffuse reflection sensors with background suppression

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

Diagrams and graphs

Background suppression chart



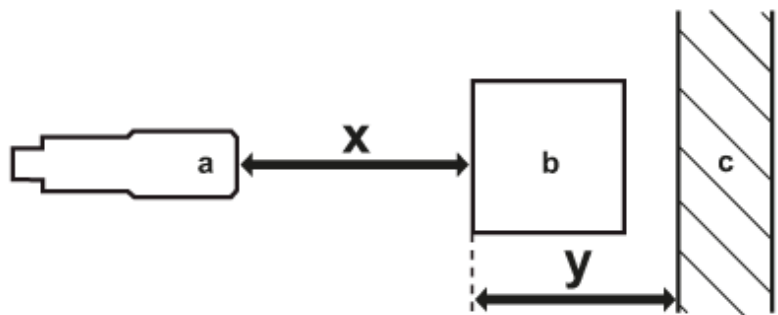
x: distance sensor/object [mm]

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]