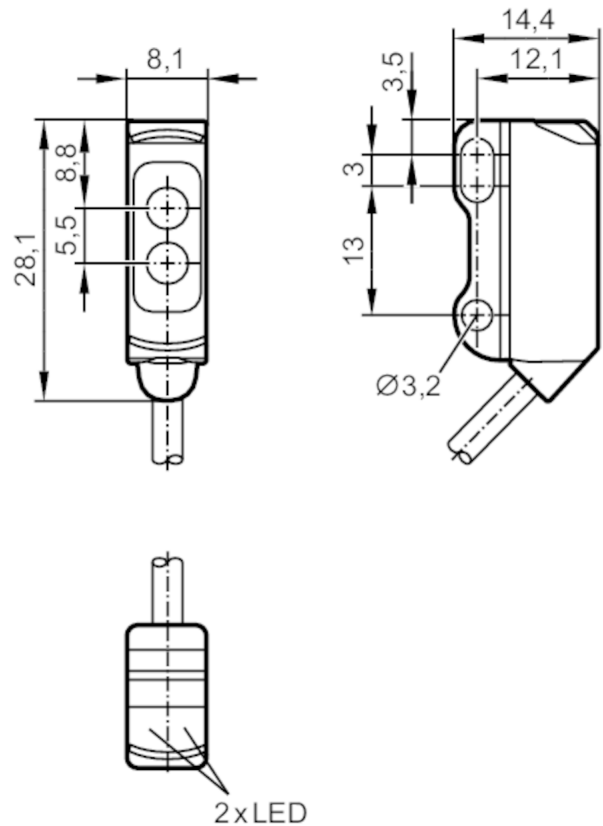


O8H270



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
Outputs		
Electrical design		PNP
Output function		light-on/dark-on mode; (programmable)
Max. voltage drop switching output DC	[V]	2.5



Diffuse reflection sensors with background suppression

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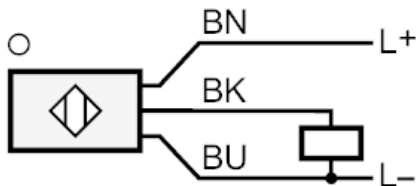
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	E016
	File number UL	E174191

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		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

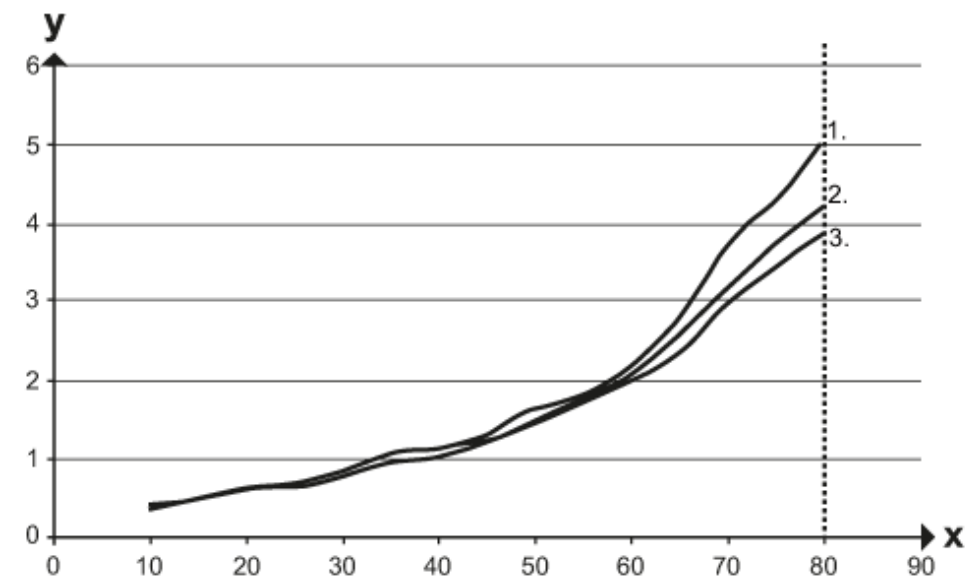


Diffuse reflection sensors with background suppression

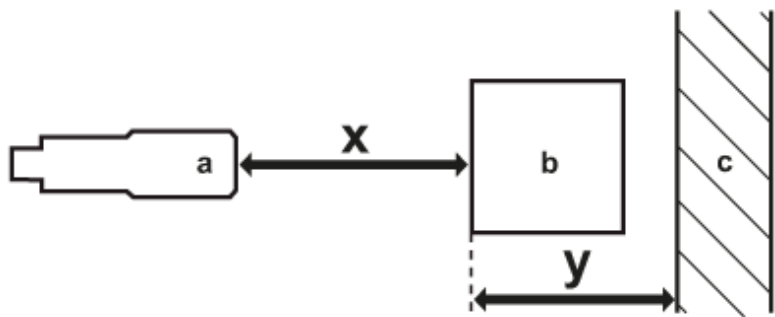
O8H-FPKG/IO-Link/2,0M

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]