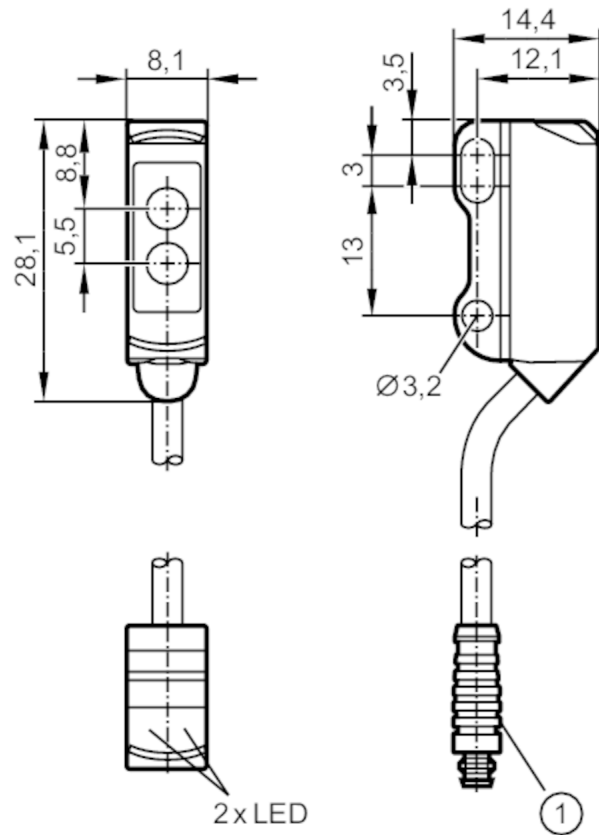




Diffuse reflection sensors with background suppression

O8H-FPKG/IO-Link/0,30M/AS/4P



1: illustration (example)  
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



## Diffuse reflection sensors with background suppression

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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...50; (white paper 200 x 200 mm)	
Range on white object (90 % remission) [mm]	1...50	
Range on grey object (18 % remission) [mm]	3...50	
Range on black object (6 % remission) [mm]	5...50	
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	
SIO mode	yes	
Required master port class	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	



## Diffuse reflection sensors with background suppression

O8H-FPKG/IO-Link/0,30M/AS/4P

Tests / approvals		
EMC	EN 60947-5-2	
MTTF	[years]	757
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	E017
	File number UL	E174191

Mechanical data		
Weight	[g]	21.2
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.

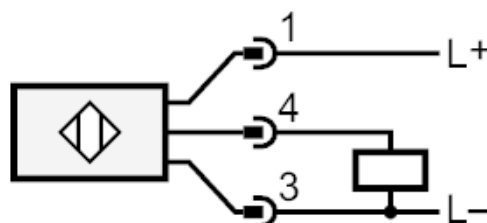
### Electrical connection

Cable: 0.3 m, PVC; 3 x 0.08 mm<sup>2</sup>

Connector: 1 x M8; coding: A



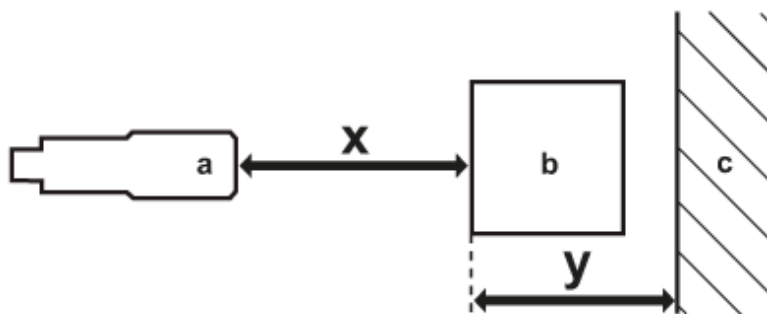
### Connection



## Diffuse reflection sensors with background suppression

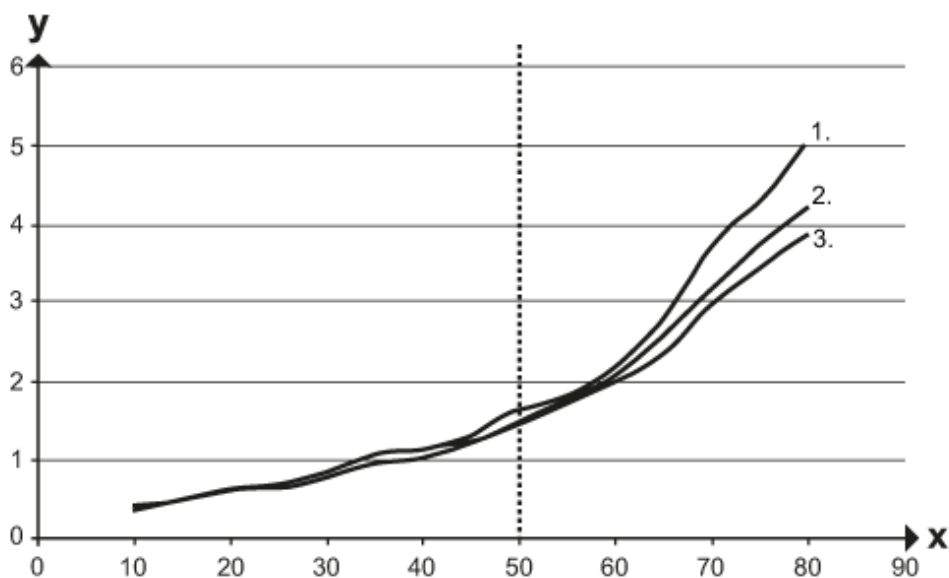
O8H-FPKG/IO-Link/0,30M/AS/4P

### Diagrams and graphs



- a: sensor  
 b: object  
 c: background  
 x: distance sensor/object [mm]  
 y: min. distance object/background [mm]

### 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)