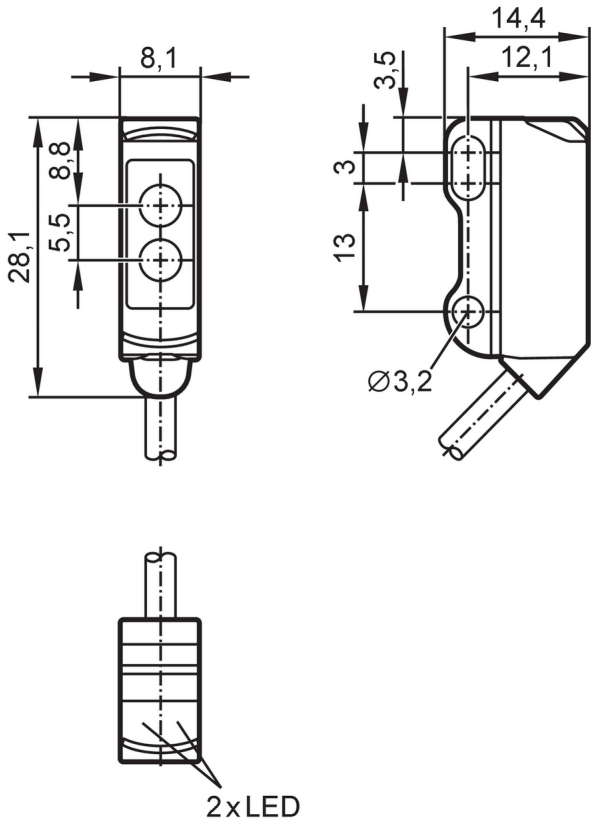
O8H218

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
Application		Industrial applications / factory automation
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 - SSP 0	Generic Profiled Sensor
		Function	Device identification
		Function	Multiple switching signal
		Function	Device diagnosis
		Function	Teach channel
SIO mode		yes	
Required master port type		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	
Tests / approvals			
EMC		EN 60947-5-2	
MTTF	[years]	757	

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

Mechanical data		
Weight	[g]	38
Housing		rectangular
Dimensions	[mm]	28.1 x 8.1 x 14.4
Materials		housing: ABS; rear of the housing: stainless steel (316L/1.4404)
Lens material		front pane:PMMA
Lens alignment		side lens

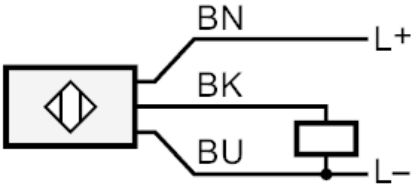
Displays / operating elements		
Display	switching status	1 x LED, yellow
	operation	1 x LED, green

Remarks	
Pack quantity	1 pcs.

Electrical connection

Cable: 2 m, PVC; 3 x 0.08 mm²

Connection



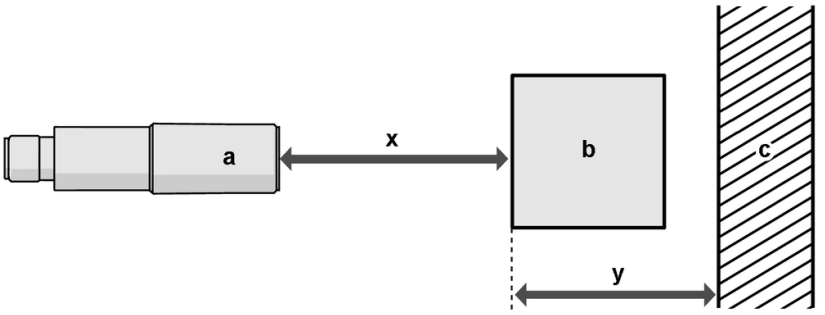
	Core colours :
BN	brown
BK	black
BU	blue

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Diagrams and graphs



a: sensor

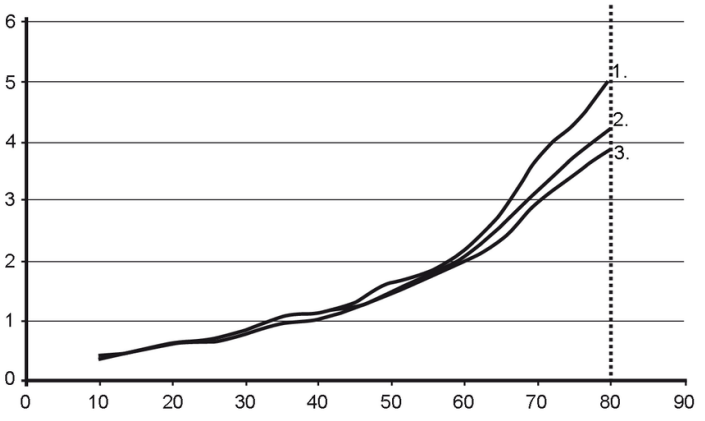
b: object

c: background

x: distance sensor/object [mm]

y: min. distance object/background [mm]

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)