

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



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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: 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
	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

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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; 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

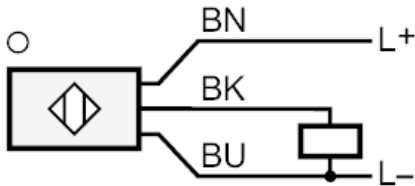
Remarks

Pack quantity	1 pcs.
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Electrical connection

Cable: 2 m, PVC; 3 x 0.08 mm²

Connection



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

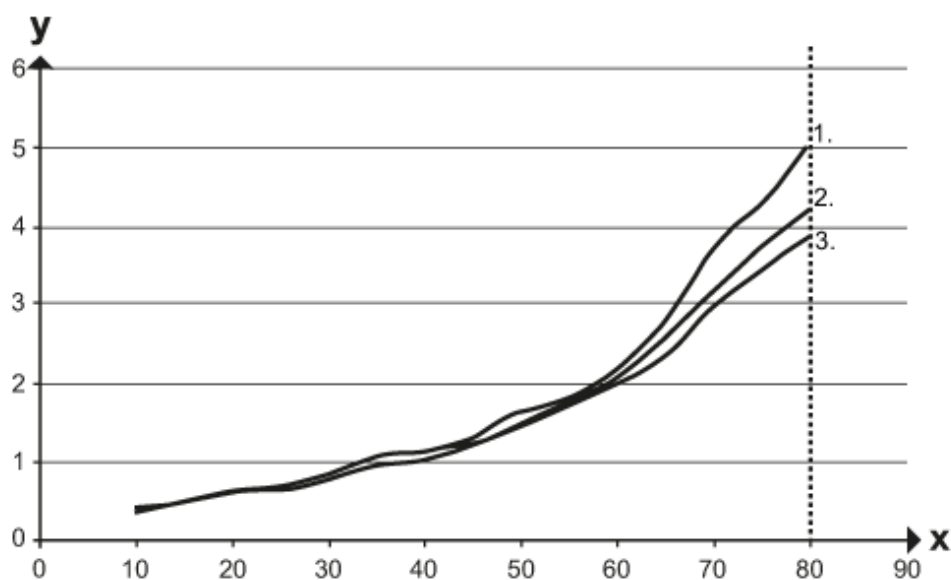


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Diagrams and graphs

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]