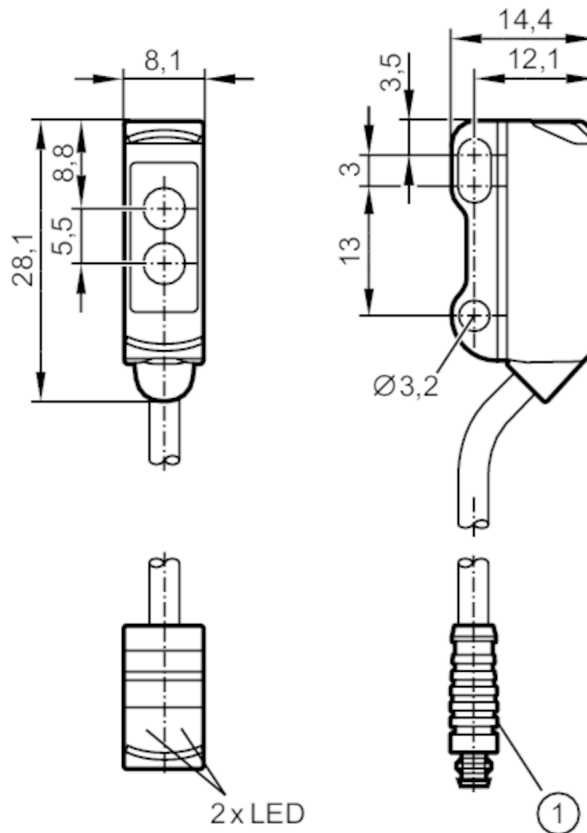


# O8H209



## Diffuse reflection sensors with background suppression

O8H-HNKG/0,30M/AS/3P



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



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Outputs		
Electrical design		NPN
Output function		light-on mode
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...30; (white paper 200 x 200 mm)
Range on white object (90 % remission)	[mm]	1...30
Range on grey object (18 % remission)	[mm]	5...30
Range on black object (6 % remission)	[mm]	5...29
Range adjustable		no
Max. light spot diameter	[mm]	4
Light spot dimensions refer to		at maximum range
Background suppression available		yes
Operating conditions		
Ambient temperature	[°C]	-25...60
Protection		IP 65; IP 67
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	E015
	File number UL	E174191
Mechanical data		
Weight	[g]	20.9
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.



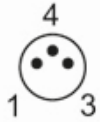
## Diffuse reflection sensors with background suppression

O8H-HNKG/0,30M/AS/3P

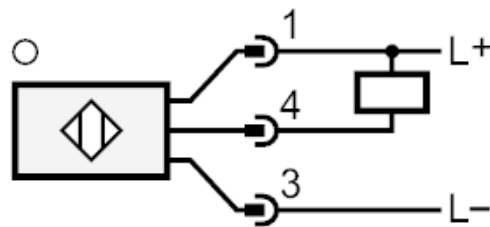
### Electrical connection

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

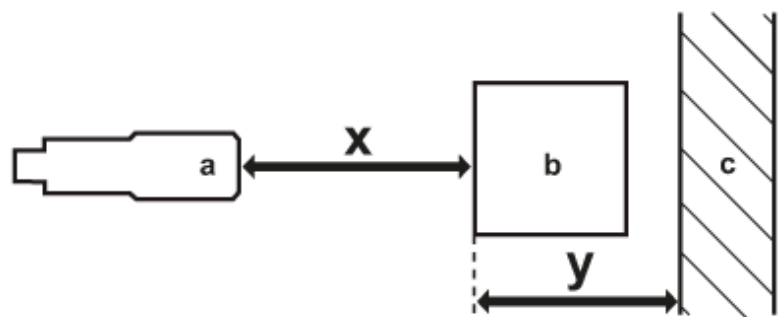
Connector: 1 x M8; coding: A



### Connection



### Diagrams and graphs



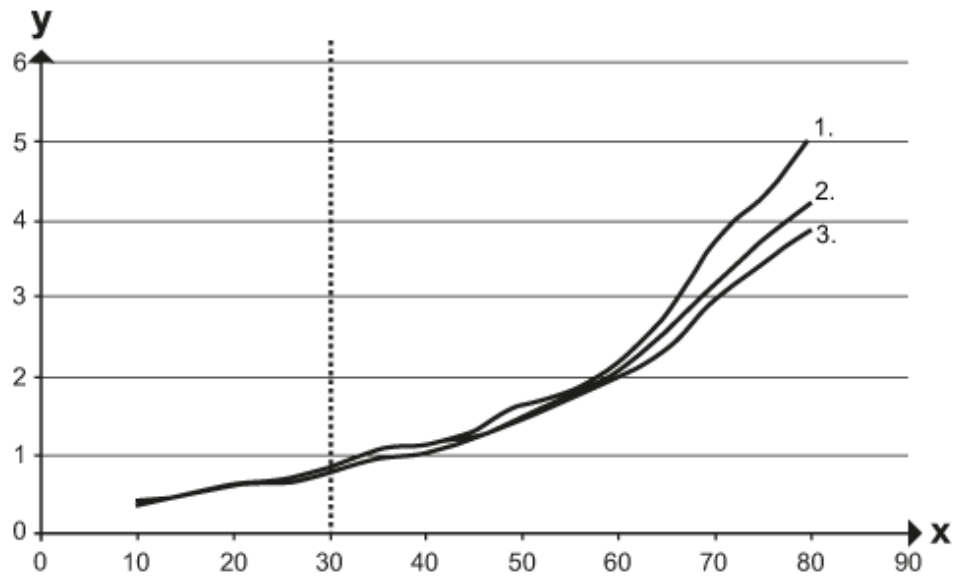
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensors with background suppression

O8H-HNKG/0,30M/AS/3P

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)