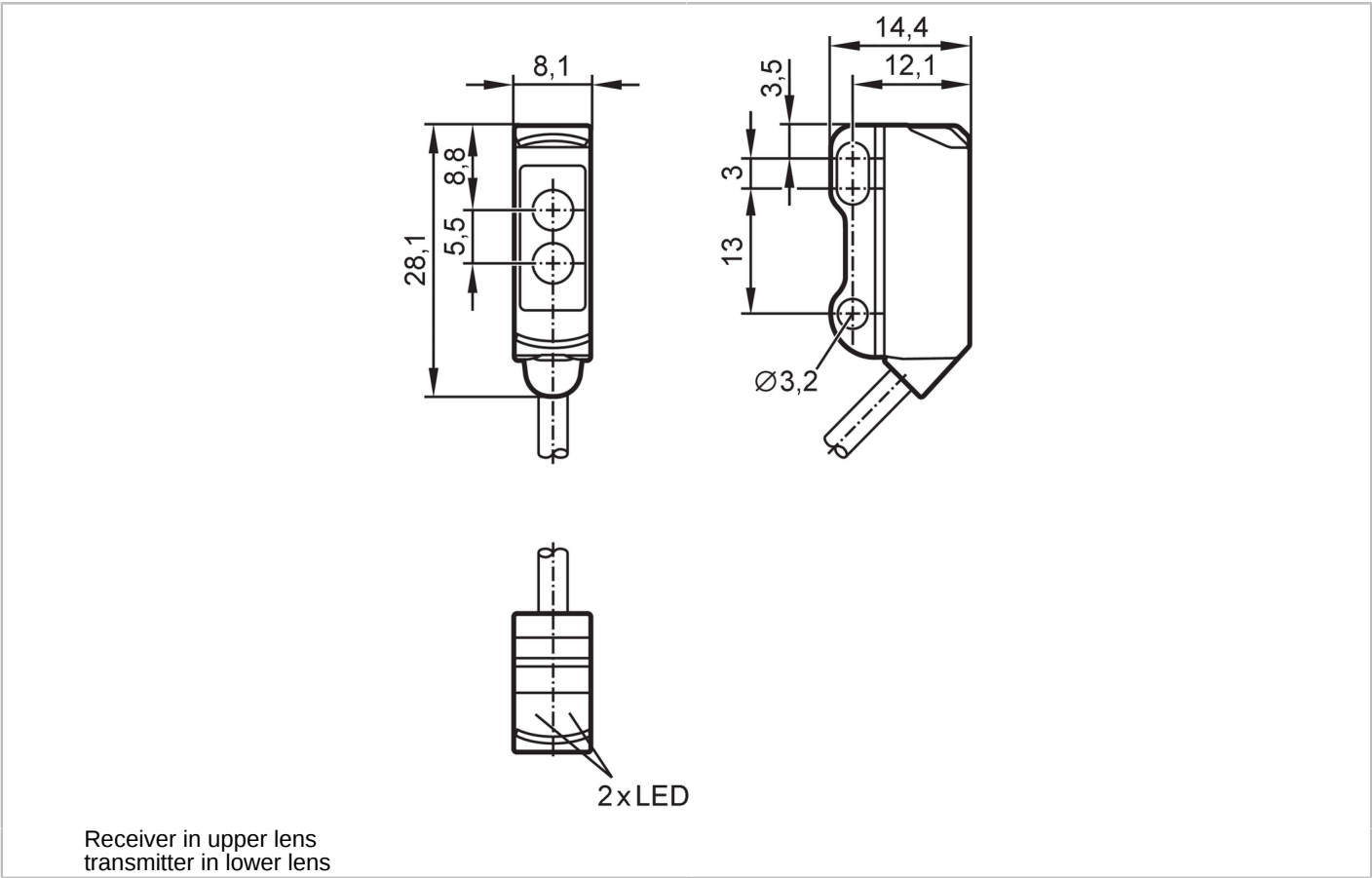




Diffuse reflection sensors with background suppression

O8H-HNKG/2,0M



Product characteristics		
Type of light		red light
Housing		rectangular
Application		
Special feature		Background suppression
Function principle		Diffuse reflection sensor
Application		Industrial applications
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		NPN
Output function		light-on mode
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...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		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	E014
	File number UL	E174191
Mechanical data		
Weight	[g]	38.3
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		front lens: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.



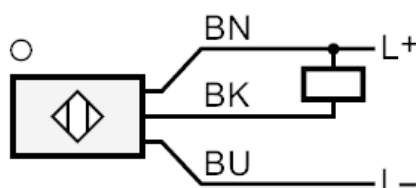
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Electrical connection

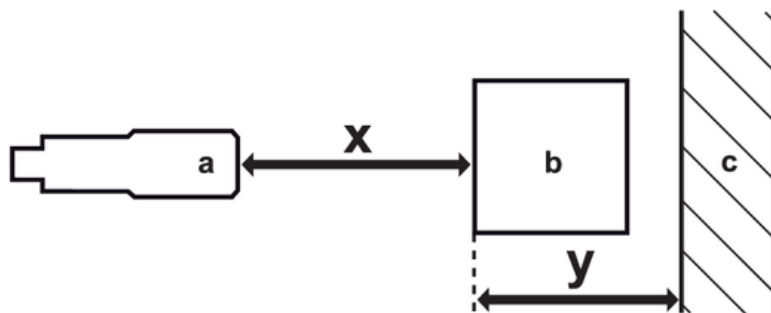
Cable: 2 m, PVC; 3 x 0.08 mm²

Connection



Core colors :
 BN = brown
 BK = black
 BU = blue

Diagrams and graphs



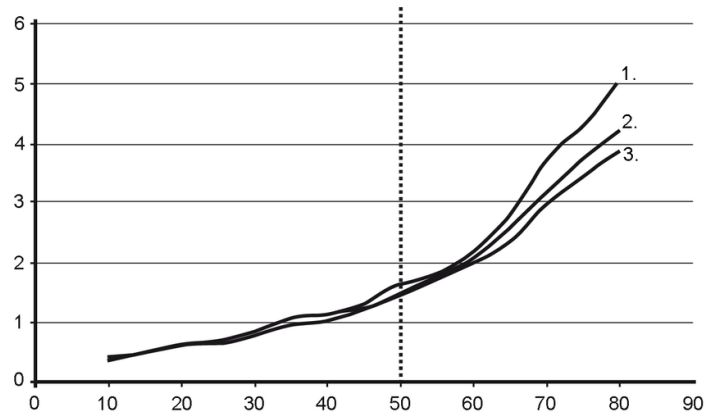
a: sensor
 b: object
 c: background
 x: distance sensor/object [mm]
 y: min. distance object/background [mm]



Diffuse reflection sensors with background suppression

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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)