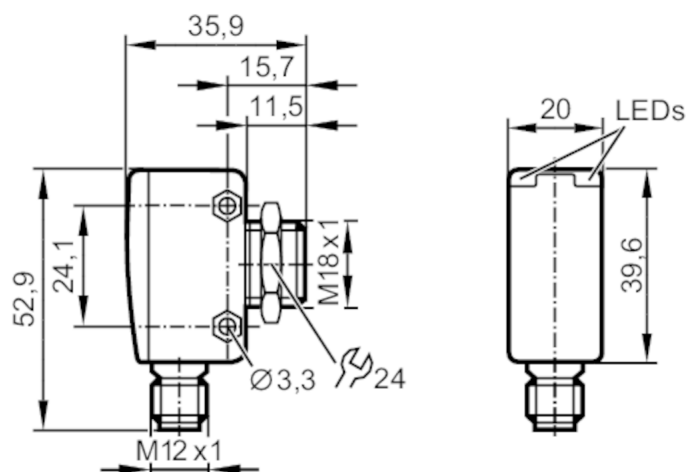




Diffuse reflection sensor with background suppression

OGH-HNKG/US/IV4A/CUBE/200MM



transmitter in lower lens
receiver in upper lens



Product characteristics

Type of light	red light
Housing	rectangular with M18 thread

Application

Special feature	Background suppression
Function principle	Diffuse reflection sensor

Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	25
Protection class		III
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	645

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]	200
Switching frequency DC	[Hz]	1000
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes

Detection zone

Range	[mm]	< 200; (white paper 200 x 200 mm 90% remission)
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Range on white object (90 % remission) [mm]	< 200
Range on grey object (18 % remission) [mm]	< 200
Range on black object (6 % remission) [mm]	< 190
Range adjustable	no
Max. light spot diameter [mm]	13
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	Measuring Sensor, Identification and Diagnosis, Switching Signal Channel, Teach Channel	
SIO mode	yes	
Required master port type	A	
Min. process cycle time [ms]	10	
IO-Link process data (cyclical)	function	bit length
	process value	16
	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	1139
Note	For further information please see the IODD PDF file under "Downloads"	

Operating conditions

Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...80
Protection	IP 65; IP 67; IP 68; IP 69K

Tests / approvals

EMC	EN 60947-5-2	
MTTF [years]	782	
UL approval	Ta	-25...80 °C
	Enclosure type	Type 1
	power supply	Class 2
	File number UL	E174191

Mechanical data

Weight [g]	74.5
Housing	rectangular with M18 thread
Dimensions [mm]	52.9 x 20 x 35.9
Thread designation	M18 x 1
Materials	1.4542 (17-4 PH / 630); PEI
Lens material	PEI



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Lens alignment	side lens
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Displays / operating elements

Display	switching status	1 x LED, yellow
	operation	1 x LED, green

Accessories

Items supplied	lock nut: 1, stainless steel
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Remarks

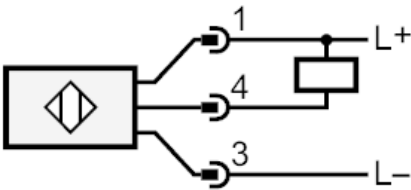
Pack quantity	1 pcs.
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Electrical connection

Connector: 1 x M12; coding: A



Connection



4 OUT / IO-Link



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Other data

Repeatability / precision: 6 σ

	repeatability of the measured values	
Abstand	white (90 % remission)	black (6 %...90 % remission)
20 mm	0.5 mm	1.0 mm
50 mm	0.8 mm	2.0 mm
100 mm	1.5 mm	4.5 mm
150 mm	3.0 mm	9.0 mm
200 mm	6.0 mm	20.0 mm
	accuracy	
Abstand	white (90 % remission)	black (6 %...90 % remission)
20 mm	± 2.0 mm	± 2.5 mm
50 mm	± 3.5 mm	± 4.5 mm
100 mm	± 6.0 mm	± 7.5 mm
150 mm	± 7.5 mm	± 11.0 mm
200 mm	± 10.0 mm	± 17.0 mm

The values apply at

Extraneous light on the object

< 10 klx

constant ambient conditions

23 °C / 960 hPa

minimum power-on time in minutes

10