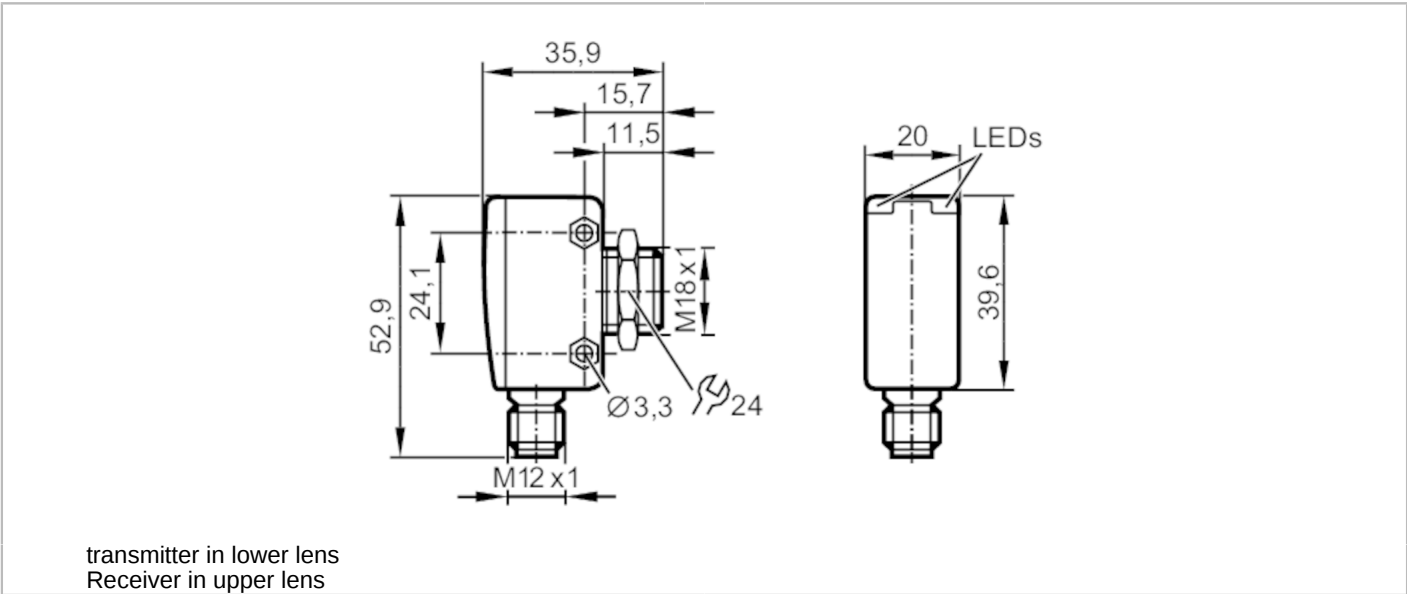




Diffuse reflection sensors with background suppression

OGH-HNKG/US/IV4A/CUBE/100MM



Product characteristics		
Type of light		red light
Housing		rectangular with M18 thread
Application		
System		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		yes (non-latching)
Overload protection		yes
Monitoring range		
Range	[mm]	< 100; (white paper 200 x 200 mm 90 % remission)



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Range on white object (90 % remission) [mm]	< 100
Range on grey object (18 % remission) [mm]	< 100
Range on black object (6 % remission) [mm]	< 100
Range adjustable	no
Max. light spot diameter [mm]	7
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	
SIO mode	yes	
Required master port class	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	1138
Note	For further information please see the IODD PDF file at "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
	voltage supply	Class 2
	File number UL	E174191

Mechanical data		
Weight [g]	74.45	
Housing	rectangular with M18 thread	
Dimensions [mm]	52.9 x 20 x 35.9	
Thread designation	M18 x 1	
Material	stainless steel (630/1.4542/17-4 PH); PEI	
Lens material	PEI	



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Lens alignment	Side sensing
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Displays / operating elements

Display	Switching status	1 x LED, yellow
	Power	1 x LED, green

Accessories

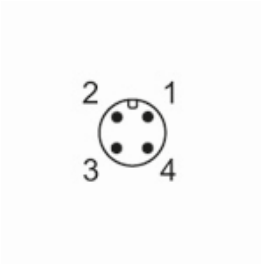
Items supplied	lock nut: 1, stainless steel
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Remarks

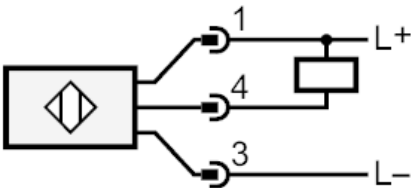
Pack quantity	1 pcs.
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Electrical connection

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
	Accuracy	
Abstand	white (90 % remission)	black (6 %...90 % remission)
20 mm	± 1.5 mm	± 1.8 mm
50 mm	± 3.0 mm	± 3.5 mm
100 mm	± 5.0 mm	± 6.5 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