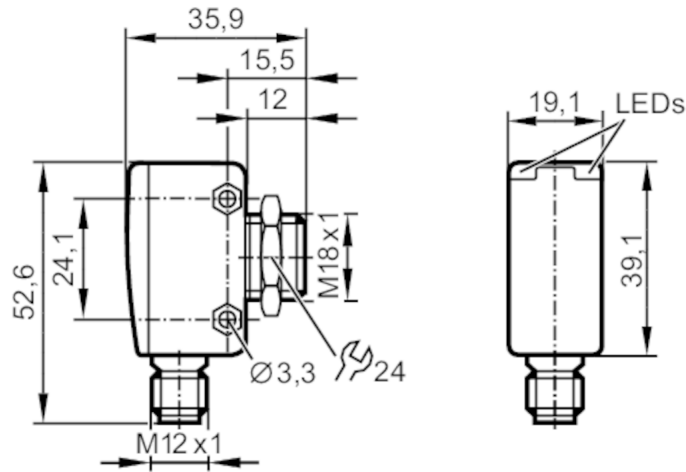


# OGH280



## Diffuse reflection sensors with background suppression

OGH-HPKG/US/CUBE/100MM



transmitter in lower lens  
Receiver in upper lens



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; (cULus - Class 2 source required)
Rated insulation voltage [V]	32
Current consumption [mA]	25
Protection class	III
Reverse polarity protection	yes
Max. power-on delay time [ms]	300
Type of light	red light
Wave length [nm]	645
Outputs	
Electrical design	PNP
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)
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	Measuring Sensor, Identification and Diagnosis, Switching Signal Channel, Teach Channel	
SIO mode	yes	
Required master port class	A	
Min. process cycle time [ms]	10	
IO-Link process data (cyclical)	<b>Function</b>	<b>bit length</b>
	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	<b>Type of operation</b>	<b>DeviceID</b>
	default	1131
Note	For further information please see the IODD PDF file at "Downloads"	

### Operating conditions

Ambient temperature [°C]	-25...60
Storage temperature [°C]	-40...60
Protection	IP 65; IP 67

### Tests / approvals

EMC	EN 60947-5-2	
MTTF [years]	782	
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	voltage supply	Class 2
	File number UL	E174191

### Mechanical data

Weight [g]	59.5
Housing	rectangular with M18 thread
Dimensions [mm]	52.6 x 19.1 x 35.9
Thread designation	M18 x 1
Material	diecast zinc; 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
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### Remarks

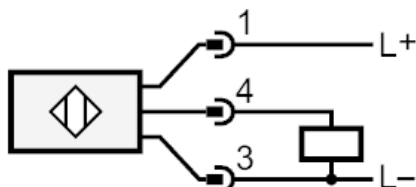
Pack quantity	1 pcs.
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### Electrical connection

Connector: 1 x M12; coding: A



### Connection





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### Other data

#### Repeatability / precision: 6 $\sigma$

	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	$\pm 1.5$ mm	$\pm 1.8$ mm
50 mm	$\pm 3.0$ mm	$\pm 3.5$ mm
100 mm	$\pm 5.0$ mm	$\pm 6.5$ 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