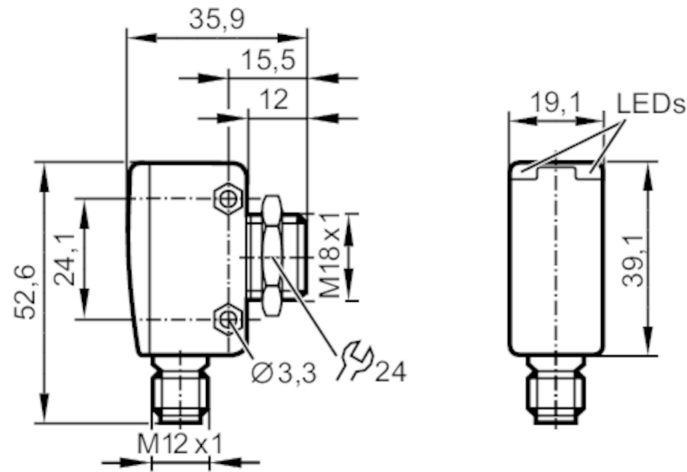




Diffuse reflection sensor with background suppression

OGH-HPKG/US/CUBE/200MM



transmitter in lower lens
receiver in upper lens



Product characteristics

Type of light	red light
Communication interface	IO-Link
Housing	rectangular
Dimensions [mm]	M18 x 1

Application

Special feature	Background suppression
Function principle	Diffuse reflection sensor

Electrical data

Operating voltage [V]	10...30 DC; ("supply class 2" to cULus)
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	pulsed



Diffuse reflection sensor with background suppression

OGH-HPKG/US/CUBE/200MM

Detection zone	
Range	[mm] < 200; (white paper 200 x 200 mm 90% remission)
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	1132
Note	For further information please see the IODD PDF file under "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

OGH281



Diffuse reflection sensor with background suppression

OGH-HPKG/US/CUBE/200MM

Mechanical data

Weight	[g]	58.5
Housing		rectangular
Dimensions	[mm]	M18 x 1
Thread designation		M18 x 1
Materials		diecast zinc; PEI
Lens material		PEI

Displays / operating elements

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

Accessories

Items supplied	lock nut: 1 x
----------------	---------------

Remarks

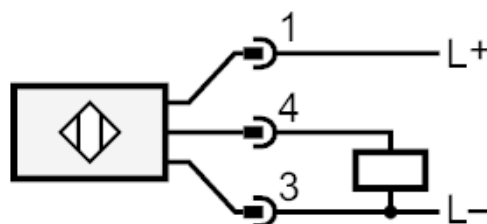
Pack quantity	1 pcs.
---------------	--------

Electrical connection

Connector: 1 x M12



Connection



OGH281



Diffuse reflection sensor with background suppression

OGH-HPKG/US/CUBE/200MM

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