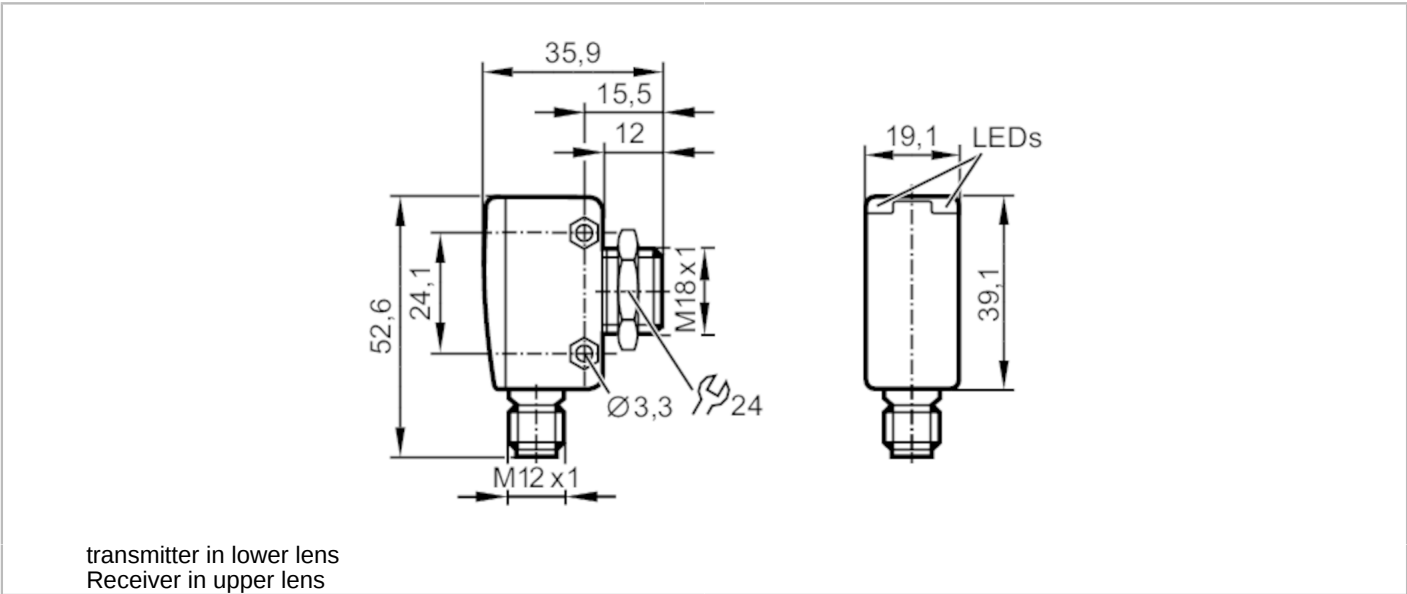




Diffuse reflection sensors with background suppression

OGH-HNKG/US/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)



Diffuse reflection sensors with background suppression

OGH-HNKG/US/CUBE/100MM

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)	<table> <tr> <th>Function</th><th>bit length</th></tr> <tr> <td>process value</td><td>16</td></tr> <tr> <td>device status</td><td>4</td></tr> <tr> <td>binary switching information</td><td>1</td></tr> </table>	Function	bit length	process value	16	device status	4	binary switching information	1
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	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>1138</td></tr> </table>	Type of operation	DeviceID	default	1138				
Type of operation	DeviceID								
default	1138								
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	<table> <tr> <td>Ta</td><td>-25...60 °C</td></tr> <tr> <td>Enclosure type</td><td>Type 1</td></tr> <tr> <td>voltage supply</td><td>Class 2</td></tr> <tr> <td>File number UL</td><td>E174191</td></tr> </table>	Ta	-25...60 °C	Enclosure type	Type 1	voltage supply	Class 2	File number UL	E174191
Ta	-25...60 °C								
Enclosure type	Type 1								
voltage supply	Class 2								
File number UL	E174191								

Mechanical data

Weight [g]	60
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



Diffuse reflection sensors with background suppression

OGH-HNKG/US/CUBE/100MM

Lens alignment	Side sensing
----------------	--------------

Displays / operating elements

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

Accessories

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

Remarks

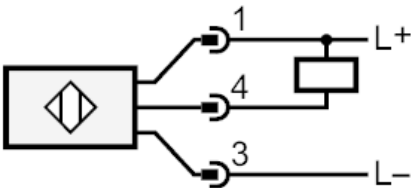
Pack quantity	1 pcs.
---------------	--------

Electrical connection

Connector: 1 x M12; coding: A



Connection



4 OUT / IO-Link



Diffuse reflection sensors with background suppression

OGH-HNKG/US/CUBE/100MM

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