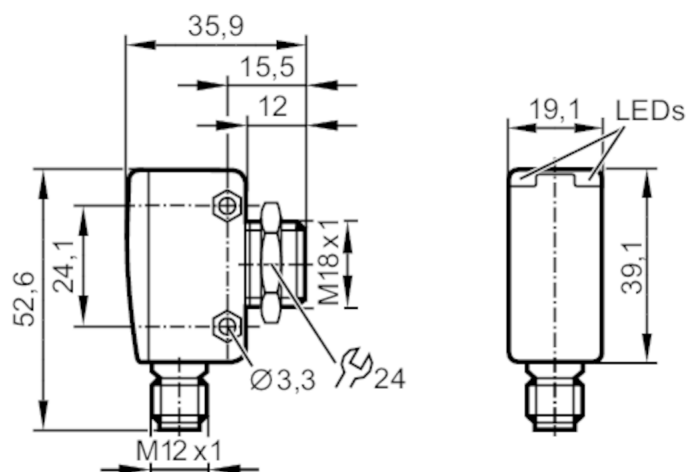


Diffuse reflection sensor with background suppression

OGH-HNKG/US/CUBE/100MM



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]	< 100; (white paper 200 x 200 mm 90% remission)
-------	------	---



Diffuse reflection sensor 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 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	1138
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
	power 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	
Materials	diecast zinc; PEI	
Lens material	PEI	



Diffuse reflection sensor with background suppression

OGH-HNKG/US/CUBE/100MM

Lens alignment	side lens
----------------	-----------

Displays / operating elements

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

Accessories

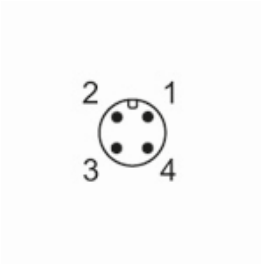
Items supplied	lock nut: 1
----------------	-------------

Remarks

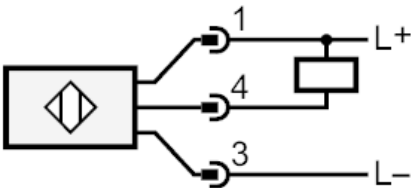
Pack quantity	1 pcs.
---------------	--------

Electrical connection

Connector: 1 x M12; coding: A



Connection



4 OUT / IO-Link



Diffuse reflection sensor 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	