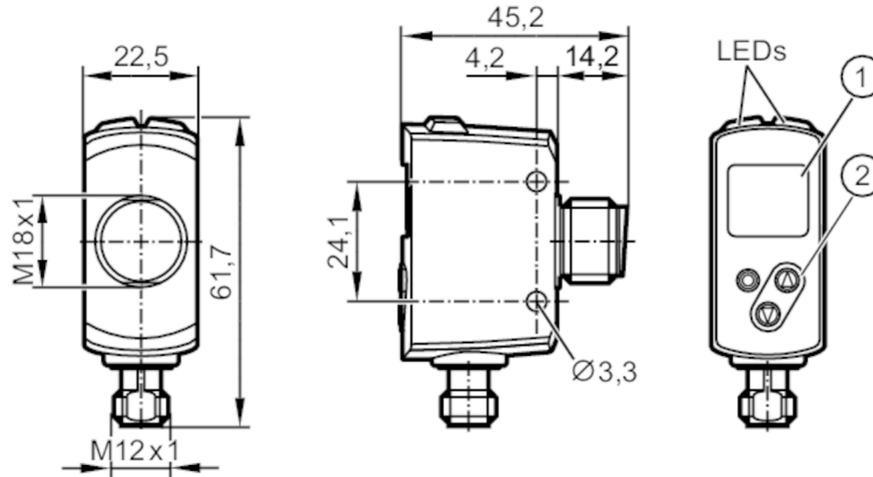


# OGD581



## Photoelectric distance sensor

OGDLFNKG/IO-Link/US



- 1 alphanumeric display , 3-digit
- 2 Programming buttons



### Product characteristics

Type of light		red light
Measuring range	[m]	0.025...1.5
Communication interface		IO-Link
Laser protection class		1
Dimensions	[mm]	61.7 x 22.5 x 45.2

### Application

Application	[m]	0.03...1.5
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### Electrical data

Operating voltage	[V]	10...30 DC; (cULus - Class 2 source required)
Current consumption	[mA]	< 75
Current consumption reference voltage	[V]	24
Protection class		III
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	650
Typ. lifetime	[h]	50000

### Outputs

Electrical design		NPN
Output function		2 x normally open / normally closed; (configurable)
Permanent current rating of switching output DC	[mA]	100; (per output)
Type of short-circuit protection		yes (non-latching)
Overload protection		yes



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Monitoring range		
Max. light spot width	[mm]	5
Max. light spot height	[mm]	5
Light spot dimensions refer to		at maximum range
Background suppression	[m]	0.03...20
Measuring/setting range		
Measuring range	[m]	0.025...1.5
Sampling rate	[Hz]	33
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9
Profiles		Smart Sensor: Sensor Identification; Binary Data Channel; Process Value; Sensor Diagnosis
SIO mode		yes
Required master port class		A
Process data analog		2
Process data binary		2
Min. process cycle time	[ms]	6
Supported DeviceIDs	Type of operation	DeviceID
	default	925
Operating conditions		
Ambient temperature	[°C]	-25...60
Note on ambient temperature		In ambient temperatures < -10 °C a warm-up time is necessary. Laser is off.
Storage temperature	[°C]	-30...80
Protection		IP 65; IP 67
Tests / approvals		
EMC		EN 60947-5-2
Laser protection class		1
Notes on laser protection	Caution:	Laser light
	laser class:	1
		EN / IEC60825-1:2007
		EN / IEC60825-1:2014
		Complies with 21 CFR 1040 except for deviations pursuant to Laser Notice No. 50, dated June 2007.
MTTF	[years]	171
Mechanical data		
Weight	[g]	205
Dimensions	[mm]	61.7 x 22.5 x 45.2
Material		Housing: stainless steel (1.4404 / 316L); PPSU; ABS; PMMA; PBT / PC; EPDM; front lens: glass

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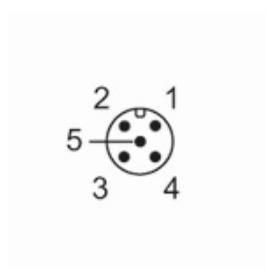
## Photoelectric distance sensor

OGDLFNKG/IO-Link/US

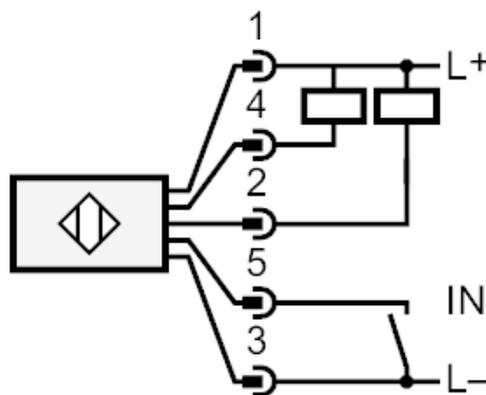
Displays / operating elements		
Display	Switching status	2 x LED, yellow 1 x alphanumeric display, 3-digit
Accessories		
Items supplied	lock nuts: 2	
Remarks		
Remarks	cULus - Class 2 source required	
Pack quantity	1 pcs.	

### Electrical connection

Connector: 1 x M12



### Connection



- 2: OUT2: Switching output
- 4: OUT1: switching output or IO-Link
- 5: IN1: Laser On/ Off

# OGD581



## Photoelectric distance sensor

OGDLFNKG/IO-Link/US

Other data		
Parameter	Setting range	Factory setting
Uni	cm, inch	cm
OU1	Hno, Hnc, Fno, Fnc, OFF	Hno
SP1 [cm]	3...150	150
nP1 [cm]	3...150	20
FSP1 [cm]	3...150	25
OU2	Hno, Hnc, Fno, Fnc, OFF	Hno
SP2 [cm]	3...150	3
nP2 [cm]	3...150	30
FP2 [cm]	3...150	35
dS1 [s]	0...0.1...5	0
dr1 [s]	0...0.1...5	0
dS2 [s]	0...0.1...5	0
dr2 [s]	0...0.1...5	0
dFo [s]	0...0.1...5	0.1
dIS	ON / OFF	ON

### Repeatability: 6 $\sigma$

	Repeatability of the measured values	
distance	white (90 % remission)	black (6 %...90 % remission)
25 mm	8.0 mm	15.0 mm
750 mm	8.0 mm	15.0 mm
1500 mm	20.0 mm	60.0 mm

The values apply at

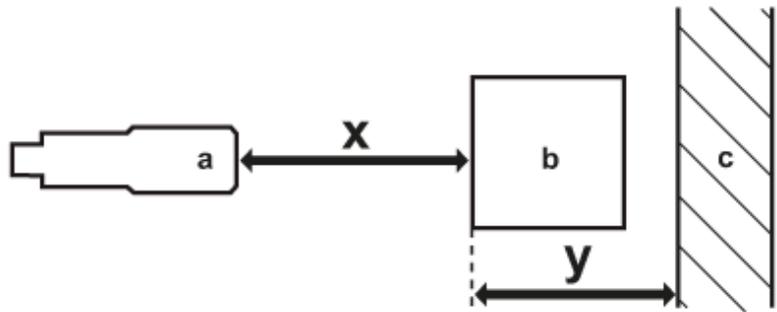
Extraneous light on the object	< 10 klx
constant ambient conditions	23 °C / 960 hPa
minimum power-on time in minutes	10



## Photoelectric distance sensor

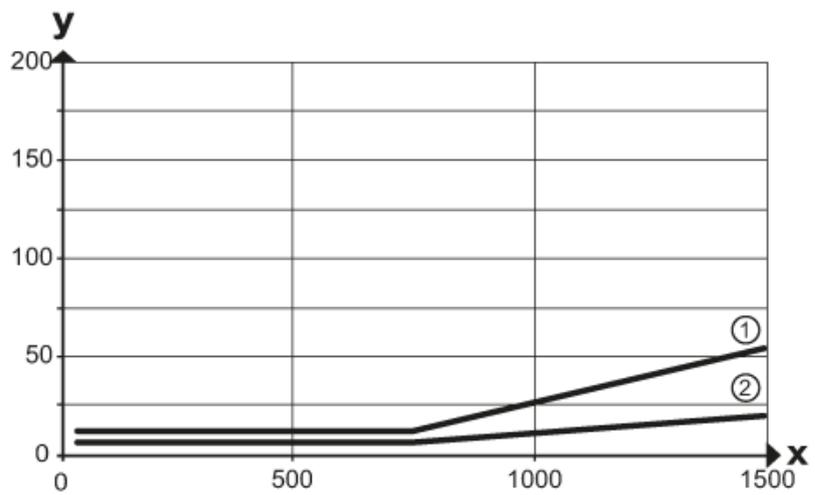
OGDLFNKG/IO-Link/US

### Diagrams and graphs



- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]

### Hysteresis curve for distance measurement



- x: distance sensor/object [mm]
- y: min. distance object/background [mm]
- 1 = background (black 6 % remission)
- 2 = background (white 90 % remission)