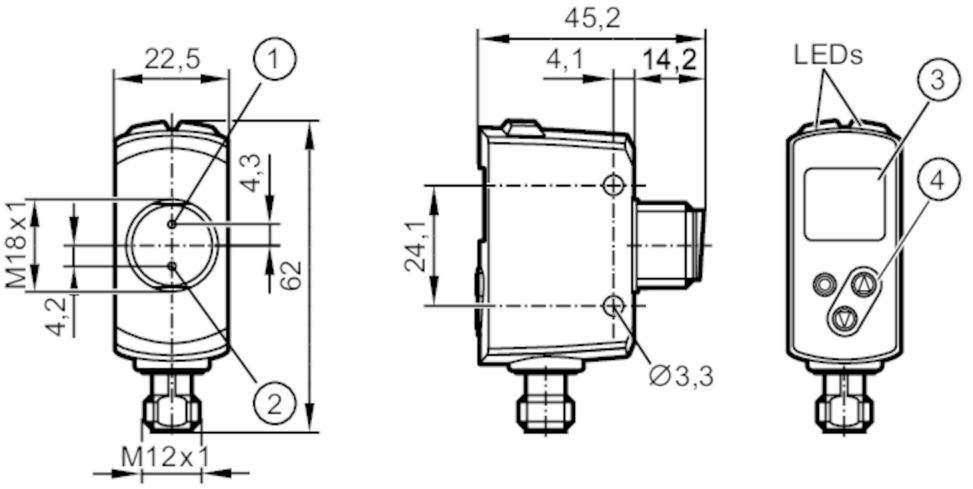
OGD580

Photoelectric distance sensor

OGDLFPKG/IO-LINK/US



1 receiving element
2 transmitting element
3 alphanumeric display , 3-digit
4 programming buttons

Product characteristics		
Type of light		red light
Laser protection class		1
Housing		rectangular with M18 thread
Application		
Application	[m]	0.03...1.5
Electrical data		
Operating voltage	[V]	10...30 DC; ("supply class 2" to cULus)
Current consumption	[mA]	< 75; (24 V)
Protection class		III
Reverse polarity protection		yes
Type of light		red light
Wave length	[nm]	650
Typ. lifetime	[h]	50000
Outputs		
Electrical design		PNP
Output function		2 x normally open, 2 x normally closed; (parameterisable)
Permanent current rating of switching output DC	[mA]	100; (per output)
Type of short-circuit protection		pulsed
Overload protection		yes
Detection zone		
Max. light spot width	[mm]	5
Max. light spot height	[mm]	5
Light spot dimensions refer to		at maximum range

OGD580

Photoelectric distance sensor

OGDLFPKG/IO-LINK/US

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 type		A	
Process data analogue		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]	172	
Mechanical data			
Weight	[g]	205.5	
Housing		rectangular with M18 thread	
Dimensions	[mm]	61.7 x 22.5 x 45.2	
Thread designation		M18 x 1	
Materials		housing: stainless steel (316L/1.4404); PPSU; ABS; PMMA; PBT / PC; EPDM; front pane: glass	
Lens alignment		side lens	

OGD580

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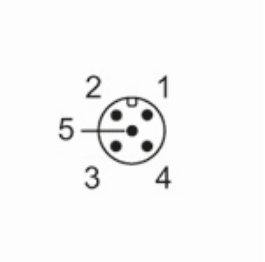
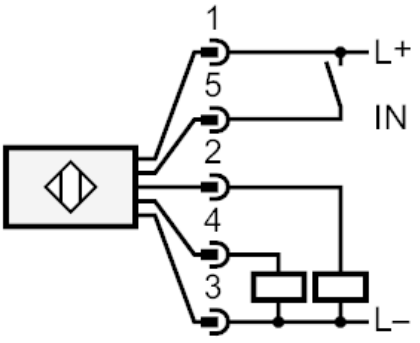
Displays / operating elements		
Display	switching status	2 x LED, yellow
		1 x alphanumeric display, 3-digit
Accessories		
Items supplied	lock nuts: 2	
Remarks		
Pack quantity	1 pcs.	

Electrical connection

Connector: 1 x M12; coding: A



Connection



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

OGD580

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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 σ

	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	15

OGD580

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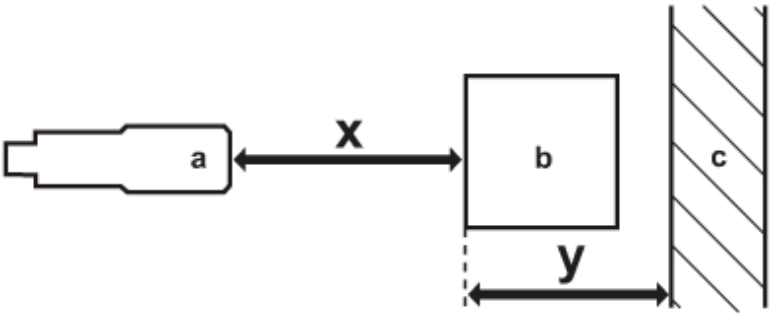
Diagrams and graphs



a: sensor

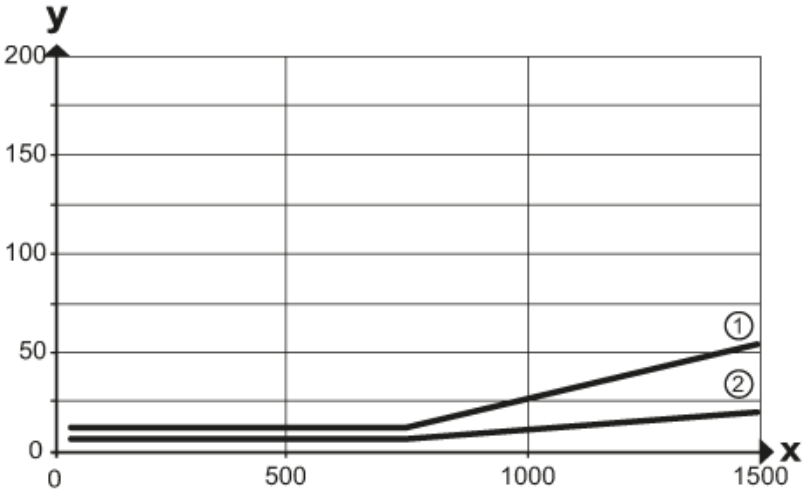
b: object

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)