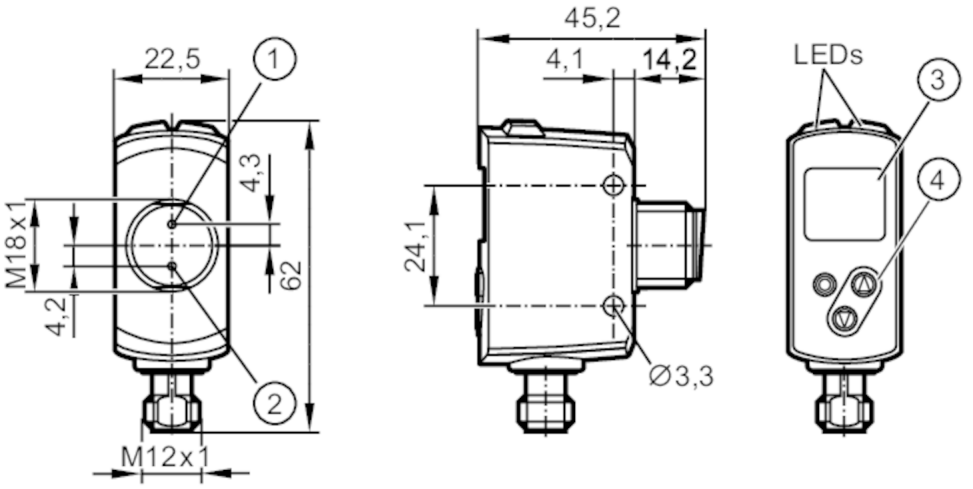
OGD582

Laser 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
Electrical data		
Operating voltage	[V]	10...30 DC; (cULus - Class 2 source required)
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
Inputs		
Inputs		Laser On/ Off
Outputs		
Electrical design		PNP
Output function		2 x normally open / normally closed; (configurable)
Max. current load per output	[mA]	100
Type of short-circuit protection		yes (non-latching)
Overload protection		yes
Monitoring range		
Max. light spot diameter	[mm]	5
Light spot dimensions refer to		at maximum range
Background suppression	[m]	< 20

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Measuring/setting range			
Measuring range	[m]	0.085...1.5	
Setting range object reflectivity	[%]	6...900; (reflectivity; 6 % black paper; 100 % white paper)	
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	
Min. process cycle time	[ms]	5	
IO-Link process data (cyclical)		**Function**	**bit length**
		process value	2 x 16
		device status	4
		binary switching information	2
IO-Link functions (acyclical)		application specific tag; operating hours counter; switching cycles counter	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	926
Note		For further information please see the IODD PDF file at "Downloads"	
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			
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]	217	
UL approval		Ta	-25...60 °C
		Enclosure type	Type 1
		voltage supply	Class 2
		File number UL	E174191
Mechanical data			
Weight	[g]	229.8	
Housing		rectangular with M18 thread	
Dimensions	[mm]	61.7 x 22.5 x 45.2	

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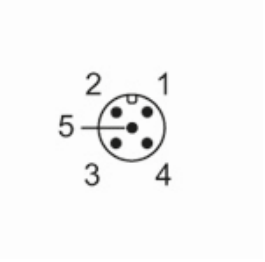
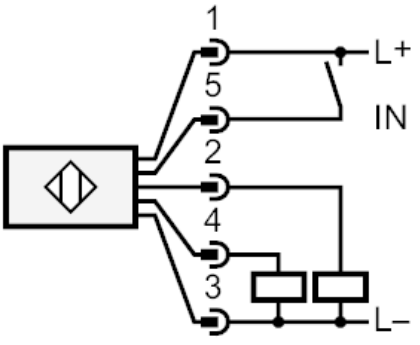
Thread designation	M18 x 1	
Material	housing: stainless steel (1.4404 / 316L); PPSU; ABS; PMMA; PBT / PC; EPDM; front lens: glass	
Lens alignment	Side sensing	
Displays / operating elements		
Display	Switching status	2 x LED, yellow
		1 x alphanumeric display, 3-digit
Operating elements	3	pushbuttons
Accessories		
Items supplied	lock nuts: 2	
Remarks		
Pack quantity	1 pcs.	
Electrical connection		

Connector: 1 x M12; coding: A



Connection



2: OUT2 Switching output (Object reflectivity)
4: OUT1 switching output or IO-Link (distance)
5: IN Laser On/ Off

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Other data		
Parameter	Setting range	Factory setting
Uni	cm	cm
OU1	Hno, Hnc, Fno, Fnc, OFF	Hno
SP1 [cm]	8.5…150	150
nP1 [cm]	8.5…150	20
FP1 [cm]	8.5…150	25
LG1	And,Or,Off	Off
dS1 [s]	0…0.1…5	0
dr1 [s]	0…0.1…5	0
OU2	Hno, Hnc, Fno, Fnc, OFF	Hno
SP2 [%]	6…900	6
bP2 [%]	6…900	60
dP2 [%]	6…900	30
HyL	Lo/Hi	Lo
LG2	And,Or,Off	Off
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)
85 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

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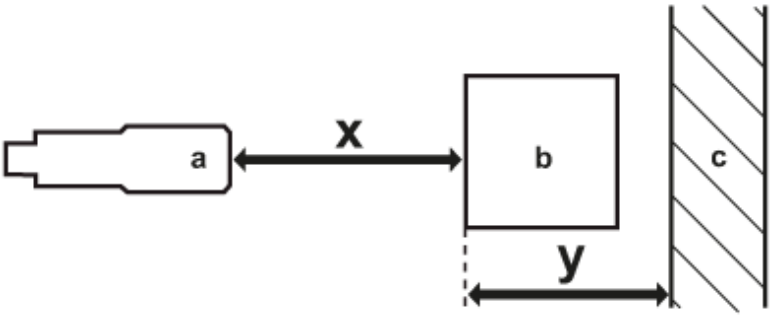
Diagrams and graphs



a: sensor

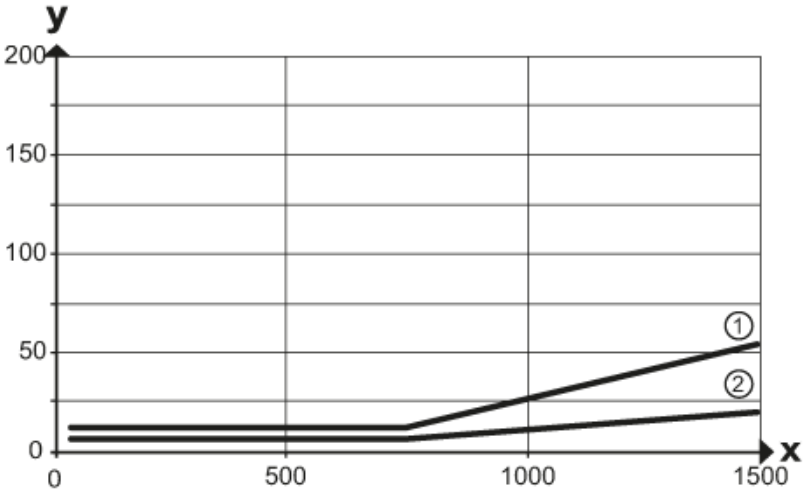
b: object

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)

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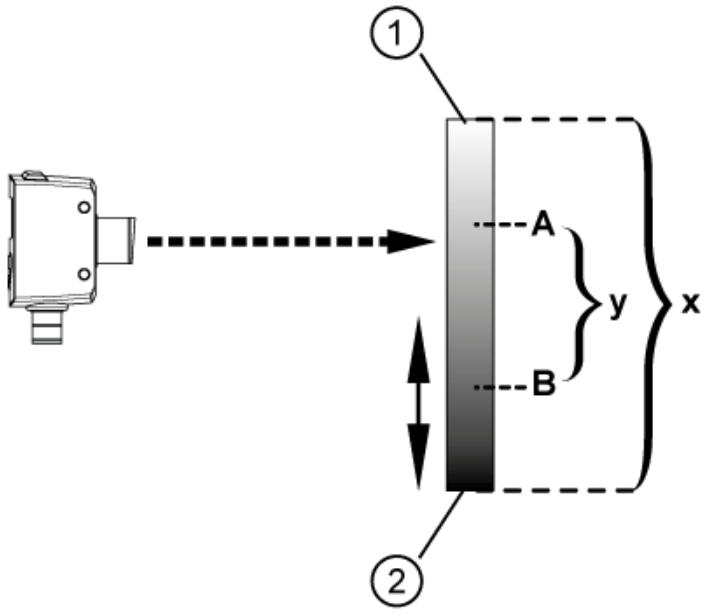


1: bright

2: dark

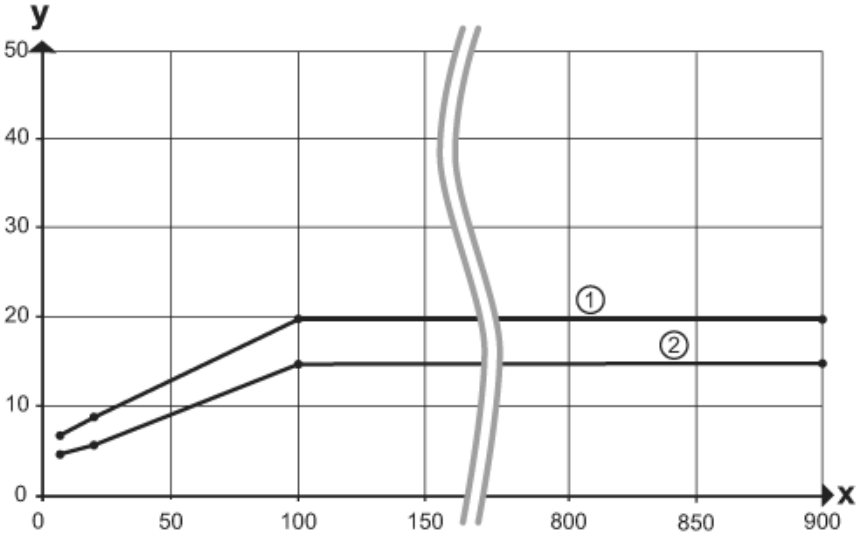
A: Set point

B: Reset point

x: object brightness (Object reflectivity)

y: min. reflectivity difference to be detected safely

Hysteresis curve for object reflectivity



x: Object reflectivity (0..900 %)

y: Hysteresis [%]

1 = Ooptional hysteresis curve (high)

2 = Hysteresis Factory setting (low)