



Photoelectric distance sensor

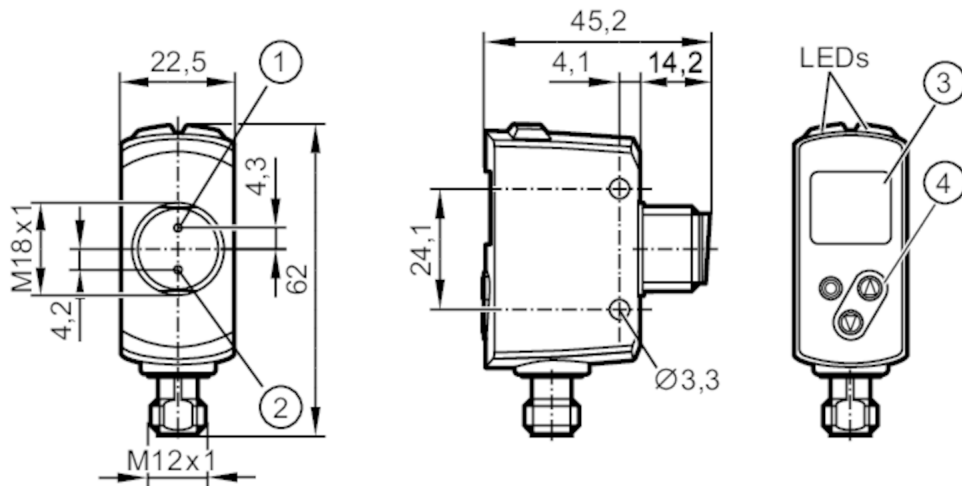
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phase-out article

Discontinuation date: 03/31/2025

Alternative articles: OGD550 or OGD250

When selecting an alternative article and accessories please note that technical data may differ!



- 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...0.3
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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 / normally closed; (parameterisable)
Permanent current rating of switching output DC	[mA]	100; (per output)
Type of short-circuit protection		pulsed



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Overload protection	yes
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Detection zone

Max. light spot width [mm]	3
Max. light spot height [mm]	3
Light spot dimensions refer to	at maximum range
Background suppression [m]	0.03...19.2

Measuring/setting range

Measuring range [m]	0.025...0.3
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	1012

Operating conditions

Ambient temperature [°C]	-25...50
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 1040.10 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.
MTTF [years]	181	

Mechanical data

Weight [g]	205
Housing	rectangular with M18 thread
Dimensions [mm]	61.7 x 22.5 x 45.2

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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

Displays / operating elements

Display	switching status	2 x LED, yellow
		1 x alphanumeric display, 3-digit

Accessories

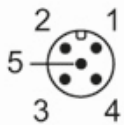
Items supplied	lock nuts: 2
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Remarks

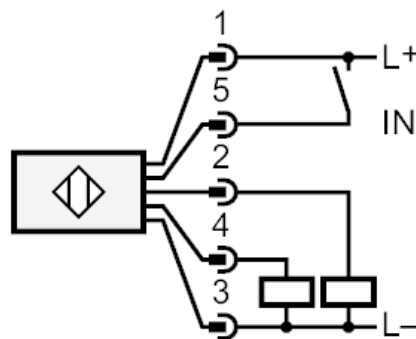
Remarks	operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

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

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Other data		
Parameter	Setting range	Factory setting
Uni	mm, inch	mm
OU1	Hno, Hnc, Fno, Fnc, OFF	Hno
SP1 [mm]	30...300	300
nP1 [mm]	30...300	90
FP1 [mm]	30...300	110
OU2	Hno, Hnc, Fno, Fnc, OFF	Hno
SP2 [mm]	30...300	30
nP2 [mm]	30...300	190
FP2 [mm]	30...300	210
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...300 mm	2.0 mm	5.0 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

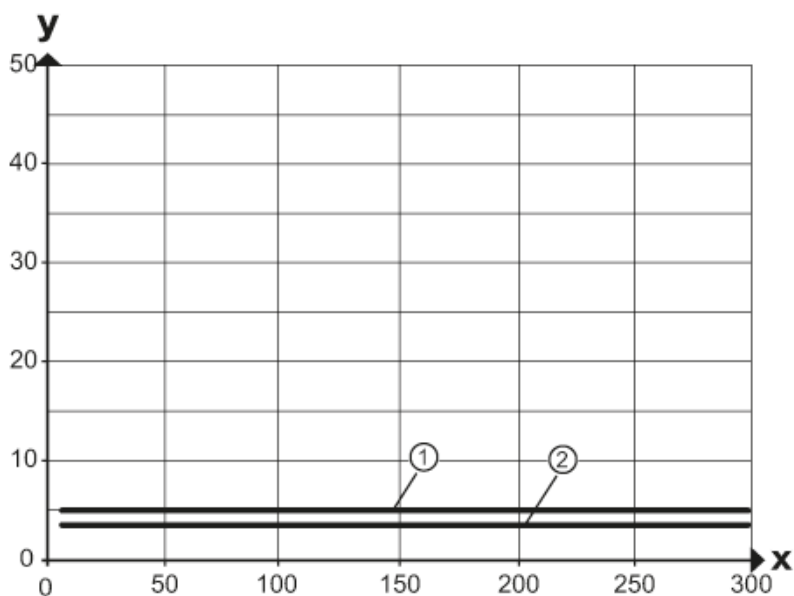


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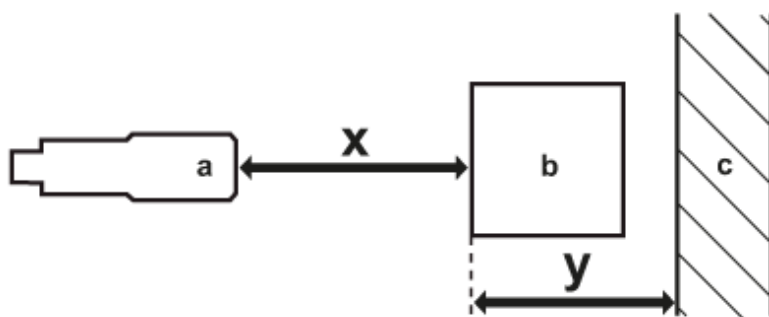
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Diagrams and graphs

hysteresis graph



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



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