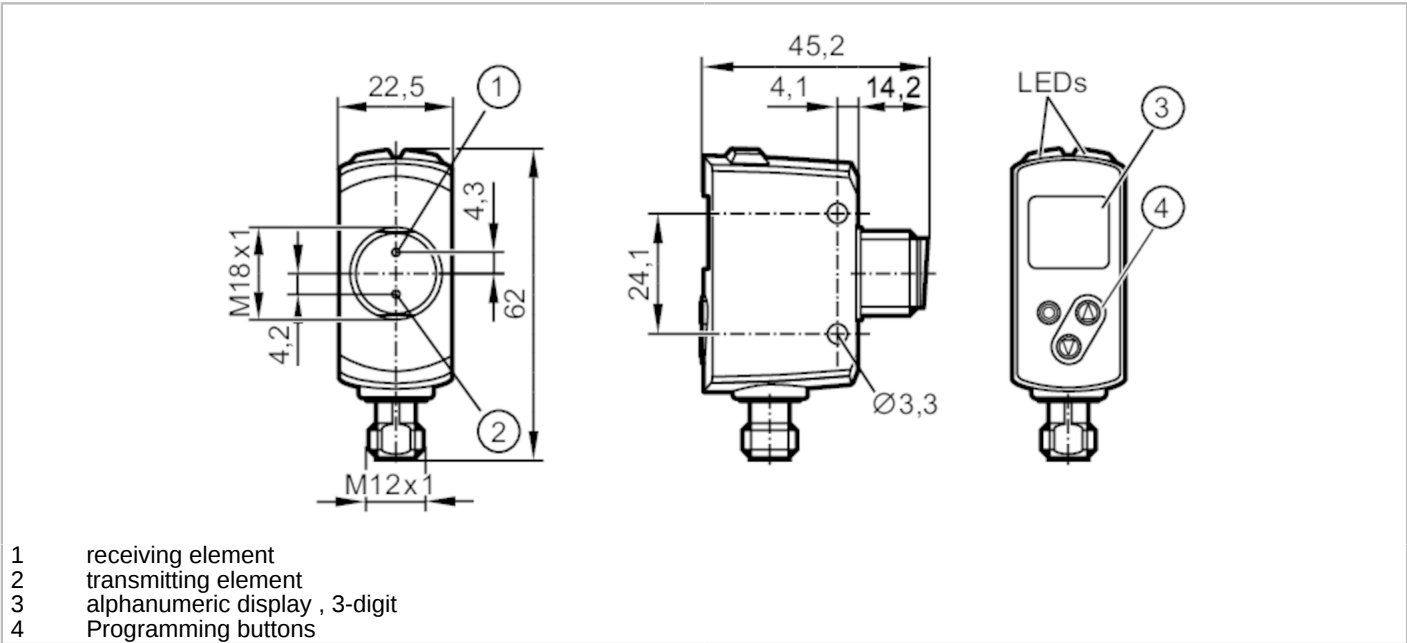




Laser distance sensor

OGDLFPKG/IO-LINK/US



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
Switching frequency DC	[Hz]	11
Type of short-circuit protection		yes (non-latching)
Overload protection		yes
Monitoring range		
Range	[mm]	< 1500
Max. light spot diameter	[mm]	5
Light spot dimensions refer to		at maximum range



Laser distance sensor

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Background suppression	[m]	< 20
Measuring/setting range		
Measuring range	[m]	0.08...1.5
Setting range distance	[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: Process Data Variable; Device Identification, Device 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	-20...60 °C
	Enclosure type	Type 1
	voltage supply	Class 2
	File number UL	E174191
Mechanical data		
Weight	[g]	229.15



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Housing	rectangular with M18 thread
Dimensions [mm]	61.7 x 22.5 x 45.2
Thread designation	M18 x 1
Material	housing: stainless steel (1.4404 / 316L); PPSU; ABS; PMMA; PBT / PC; EPDM; front lens: PMMA
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

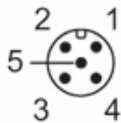
Items supplied	lock nuts: 2
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Remarks

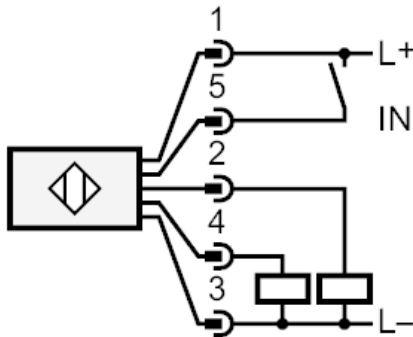
Pack quantity	1 pcs.
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Electrical connection

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



Laser distance sensor

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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	12.0 mm	22.0 mm
750 mm	12.0 mm	22.0 mm
1500 mm	30.0 mm	90.0 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

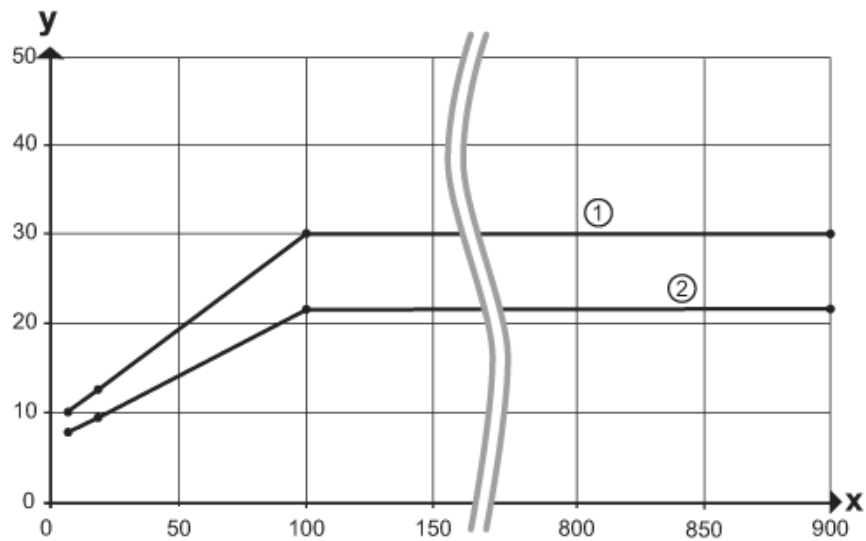


Laser distance sensor

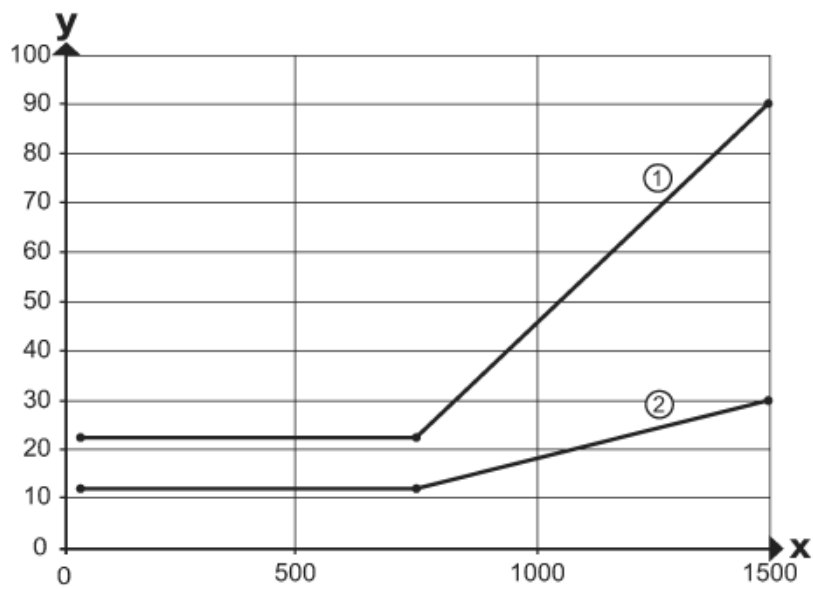
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Diagrams and graphs

Hysteresis curve for object reflectivity



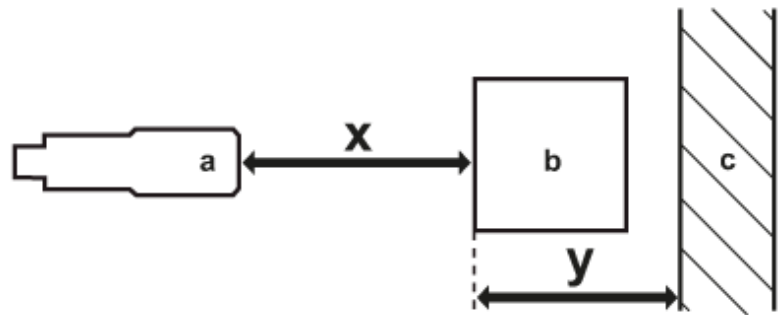
Hysteresis curve for distance measurement





Laser distance sensor

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a: sensor

b: object

c: background

x: distance sensor/object [mm]

y: min. distance object/background [mm]