

Photoelectric distance sensor

OGDLFNKG/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...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		NPN
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
Overload protection		yes

Detection zone

Max. light spot width	[mm]	1
Max. light spot height	[mm]	1
Light spot dimensions refer to		at maximum range



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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 except for deviations pursuant to Laser Notice No. 50, dated June 2007.	
MTTF	[years]	181	
Mechanical data			
Weight	[g]	135.2	
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		



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Displays / operating elements

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

Accessories

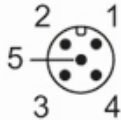
Items supplied	lock nuts: 2
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Remarks

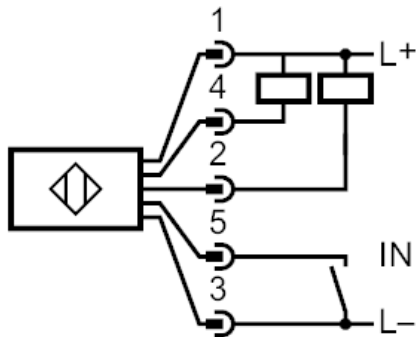
Remarks	operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

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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Diagrams and graphs

hysteresis graph

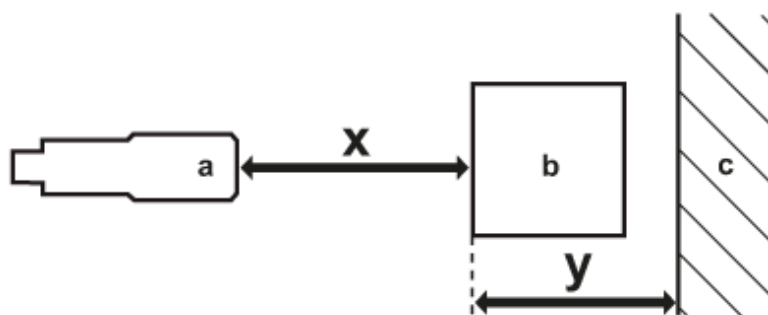


x: distance sensor/object [mm]

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]