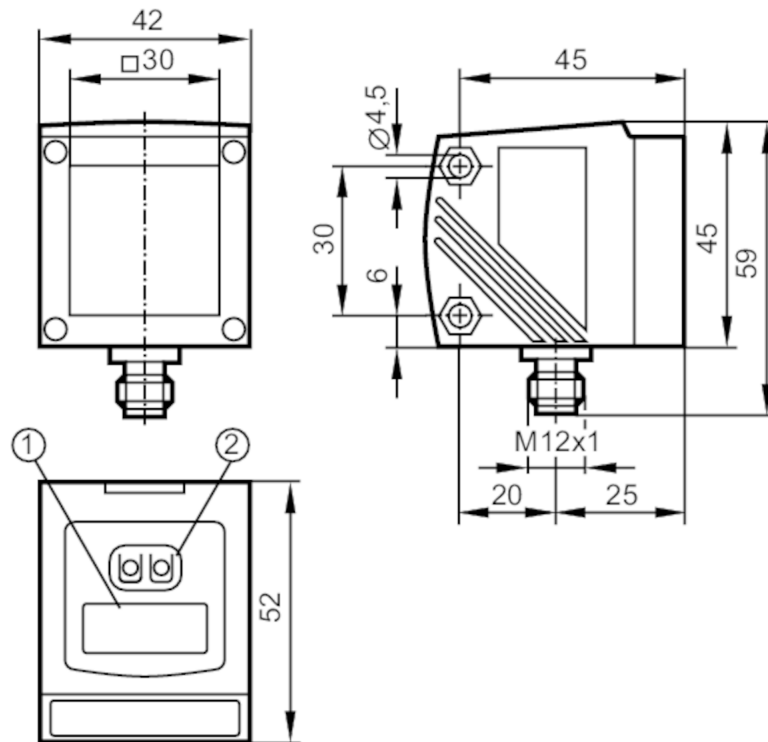


O1D100



Photoelectric distance sensor

O1DLF3KG/IO-LINK



- 1 alphanumeric display 4-digit
- 2 programming buttons



Product characteristics	
Measuring range	[m] 0.2...10; (white paper 200 x 200 mm 90% remission)
Communication interface	IO-Link
Laser protection class	2
Housing	rectangular
Dimensions	[mm] 59 x 42 x 52
Electrical data	
Operating voltage	[V] 18...30 DC; (operating voltage "supply class 2" according to cULus)
Current consumption	[mA] < 150
Protection class	III
Reverse polarity protection	yes
Typ. lifetime	[h] 50000
Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1

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Outputs		
Total number of outputs	2	
Electrical design	PNP	
Number of digital outputs	2	
Output function	normally open / normally closed; (parameterisable)	
Max. current load per output [mA]	200	
Number of analogue outputs	1	
Analogue current output [mA]	4...20; (IEC 61131-2)	
Max. load [Ω]	250	
Analogue voltage output [V]	0...10; (IEC 61131-2)	
Min. load resistance [Ω]	5000	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Detection zone		
Max. light spot width [mm]	15	
Max. light spot height [mm]	15	
Light spot dimensions refer to	10 m	
Background suppression [m]	0...19	
Measuring/setting range		
Measuring range [m]	0.2...10; (white paper 200 x 200 mm 90% remission)	
Sampling rate [Hz]	1...50	
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	3	
Min. process cycle time [ms]	6	
Supported DeviceIDs	Type of operation	DeviceID
	Default	806
Operating conditions		
Ambient temperature [$^{\circ}$ C]	-10...60	
Protection	IP 67	

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Tests / approvals		
EMC	EN 60947-5-2	
Laser protection class		2
Notes on laser protection	Caution:	laser light
	Power:	≤ 4 mW
	Wave length:	650 nm
	pulse:	1,3 ns
	Do not stare into beam.	
	Avoid exposure to the laser light.	
	laser class:	2
		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]		182

Mechanical data		
Weight [g]		303
Housing		rectangular
Dimensions [mm]		59 x 42 x 52
Materials		housing: diecast zinc; front lens: glass; LED window: PC
Lens alignment		side lens

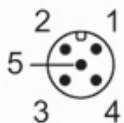
Displays / operating elements		
Display	switching status	2 x LED, yellow
	operation	LED, green
	distance value, programming	alphanumeric display, 4-digit

Accessories	
Accessories (optional)	Protective cover, E21133

Remarks	
Remarks	For more information about the measuring range / application please refer to the operating instructions.
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12



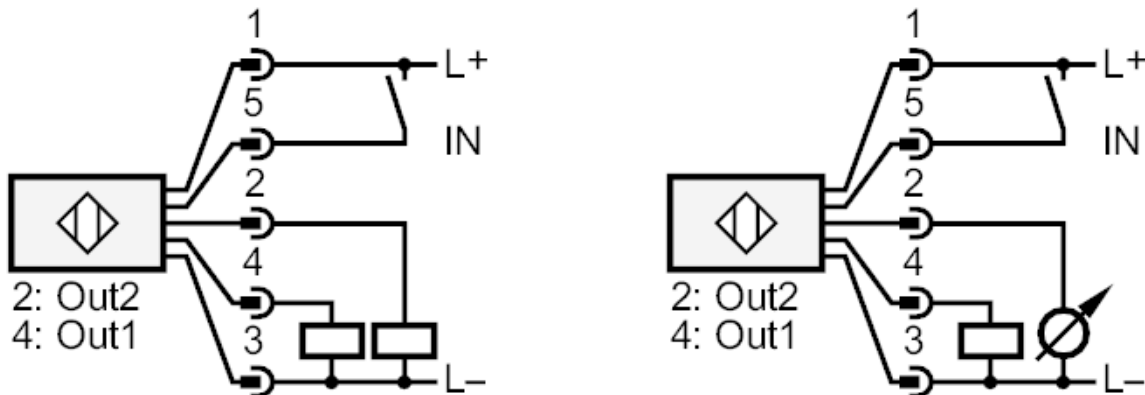
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Photoelectric distance sensor

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Connection



- 2: OUT2 switching output or 4...20 mA / 0...10 V
- 4: OUT1 switching output or IO-Link
- 5: IN Laser On/ Off Ein / Aus

Other data

Parameter	Setting range	Factory setting
Uni	mm, m, inch	mm
OU1	Hno, Hnc, Fno, Fnc	Hno
SP1 [mm]	200...9999	1000
nSP1 [mm]	200...9999	800
FSP1 [mm]	200...9999	1200
OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2 [mm]	200...9999	2000
nSP2 [mm]	200...9999	1800
FSP2 [mm]	200...9999	2200
ASP [mm]	0...9999	0
AEP [mm]	0...9999	9999
rATE [Hz]	1...50	50
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
dIS	d1...3 ; rd1...3; OFF	d3

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repeatability/accuracy

read/write distance (mm)	repeatability of the measured values		Accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 5.0 mm	±7.5 mm	± 15.0 mm	± 18.0 mm
1000...2000 mm	± 5.5 mm	±10.0 mm	± 15.0 mm	± 20.0 mm
2000...4000 mm	± 17.5 mm	±22.5 mm	± 25.0 mm	± 32.0 mm
4000...6000 mm	± 27.5 mm	±40.0 mm	± 35.0 mm	± 50.0 mm
6000...10000 mm	± 60.0 mm		± 70.0mm	
Sampling rate	50 Hz			
Extraneous light on the object	< 40 klx			

repeatability/accuracy

read/write distance (mm)	repeatability of the measured values		Accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 16.5 mm	±16.5 mm	± 26.5 mm	± 26.5 mm
1000...2000 mm	± 16.5 mm	±16.5 mm	± 26.5 mm	± 26.5 mm
2000...4000 mm	± 30.0 mm	±37.0 mm	± 40.0 mm	± 47.0 mm
4000...6000 mm	± 37.0 mm	±57.0 mm	± 47.0 mm	± 67.0 mm
6000...10000 mm	± 75.0 mm	—	± 85.0mm	—
Sampling rate	50 Hz			
Extraneous light on the object	40...100 klx			

repeatability/accuracy

read/write distance (mm)	repeatability of the measured values		Accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 4.0 mm	±4.5 mm	± 14.0 mm	± 15.0 mm
1000...2000 mm	± 4.5 mm	±6.0 mm	± 14.5 mm	± 16.0 mm
2000...4000 mm	± 13.5 mm	±14.5 mm	± 23.5 mm	± 24.0 mm
4000...6000 mm	± 19.0 mm	±21.0 mm	± 29.0 mm	± 31.0 mm
6000...10000 mm	± 37.0 mm	—	± 47.0mm	—
Sampling rate	1 Hz			
Extraneous light on the object	< 40 klx			

O1D100



Photoelectric distance sensor

O1DLF3KG/IO-LINK

repeatability/accuracy

read/write distance (mm)	repeatability of the measured values		Accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 10.0 mm	± 10.0 mm	± 20.0 mm	± 20.0 mm
1000...2000 mm	± 10.0 mm	± 10.0 mm	± 20.0 mm	± 20.0 mm
2000...4000 mm	± 17.0 mm	± 18.0 mm	± 27.0 mm	± 28.0 mm
4000...6000 mm	± 22.0 mm	± 25.0 mm	± 32.0 mm	± 35.0 mm
6000...10000 mm	± 37.0 mm	—	± 47.0mm	—

Sampling rate	1 Hz
Extraneous light on the object	< 40...100 klx
Range on black object (6 % remission)	<= 4000 mm
The values apply at	
Extraneous light on the object	< 100 klx
constant ambient conditions	23 °C / 960 hPa
minimum power-on time in minutes	10