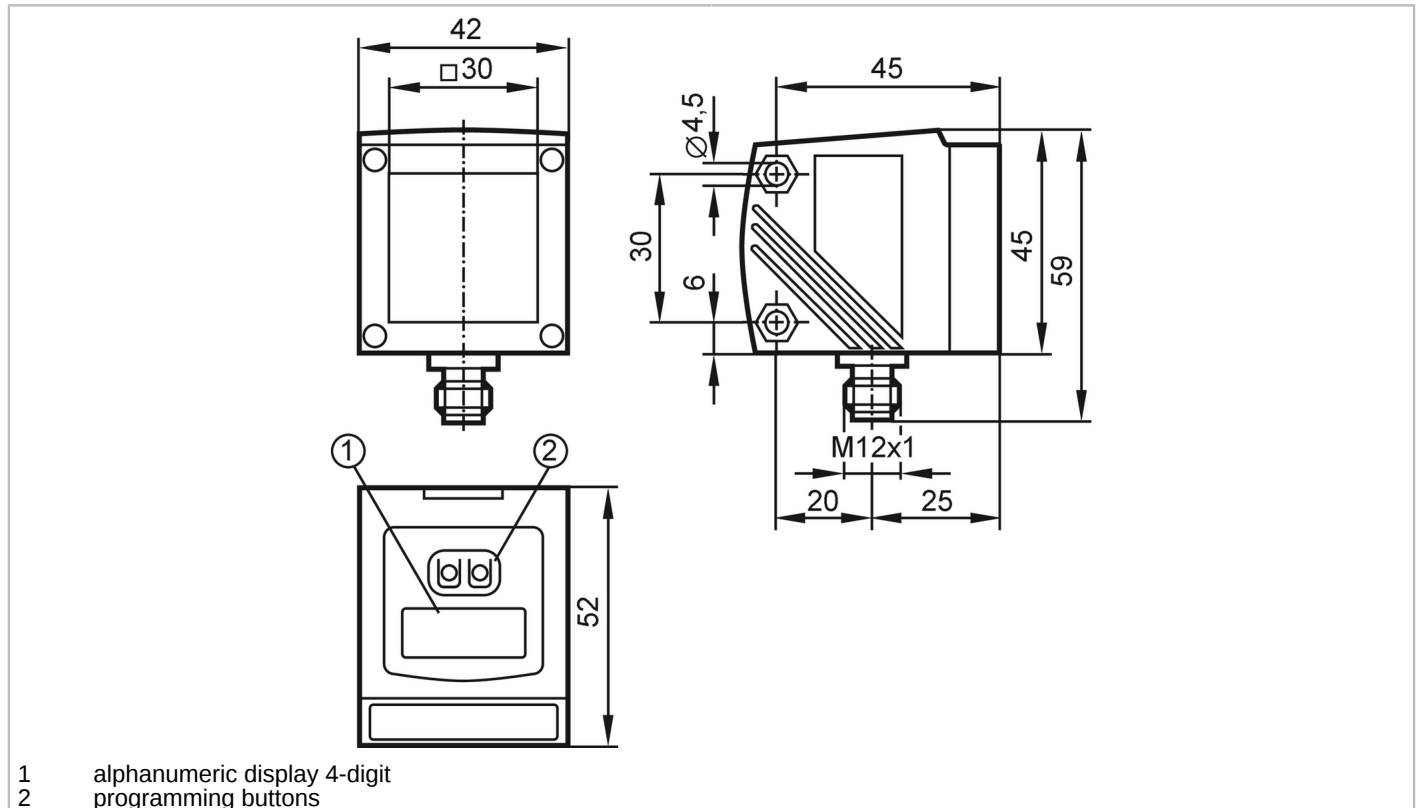


# O1D102



## Photoelectric distance sensor

O1DLF3KG/IO-LINK



- 1 alphanumeric display 4-digit  
2 programming buttons



### Product characteristics

Laser protection class	2
Housing	rectangular

### Application

Application	Industrial applications / factory automation
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### Electrical data

Operating voltage [V]	18...30 DC
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; (programmable)
Max. current load per output [mA]	200
Number of analogue outputs	1
Analogue current output [mA]	4...20; (IEC 61131-2)

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## Photoelectric distance sensor

O1DLF3KKG/IO-LINK

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 diameter	[mm]	10
Light spot dimensions refer to		3,5 m
Background suppression	[m]	0...4

### Measuring/setting range

Measuring range	[m]	0.2...3.5; (black glossy surfaces)
Sampling rate	[Hz]	1...50; (preset: 5)

### Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Process data variable
	Function	Device diagnosis
	Function	Teach channel
SIO mode	yes	
Required master port type	A	
Process data analogue	2	
Process data binary	3	
Min. process cycle time	[ms]	5
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	default	808

### Operating conditions

Ambient temperature	[°C]	-10...60
Protection		IP 67

### Tests / approvals

EMC	EN 60947-5-2	
Laser protection class	2	

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Notes on laser protection	Caution:	laser light
	Power:	<= 4,0 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 1040.10 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.
MTTF	[years]	173

### Mechanical data

Weight	[g]	241.7
Housing		rectangular
Dimensions	[mm]	59 x 42 x 52
Materials		housing: diecast zinc; front pane: 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
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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; Contacts: 5

The diagram shows a circular M12 connector with five pins. The pins are numbered 1 through 5. Pin 1 is at the top right, pin 2 is at the top left, pin 3 is at the bottom left, pin 4 is at the bottom right, and pin 5 is on the left side.

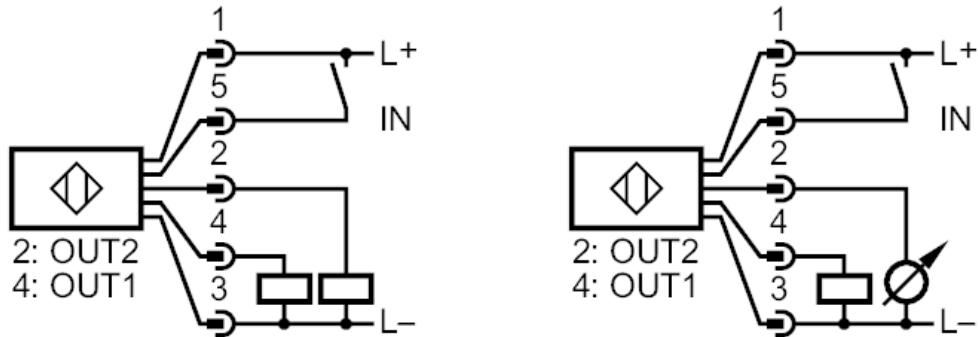
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### Connection



### Other data

Parameter	Setting range	Factory setting
Uni	mm, m, inch	mm
OU1	Hno, Hnc, Fno, Fnc	Hno
SP1 [mm]	200...3500	1000
nSP1 [mm]	200...3500	800
FSP1 [mm]	200...3500	1200
OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2 [mm]	200...3500	2000
nSP2 [mm]	200...3500	1800
FSP2 [mm]	200...3500	2200
ASP [mm]	0...3500	0
AEP [mm]	0...3500	3500
rATE [Hz]	1...50	5
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

distance	repeatability of the measured values		accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 6.5 mm	±7.5 mm	± 32 mm	± 40 mm
1000...2000 mm	± 8 mm	±9.5 mm	± 33 mm	± 40 mm
2000...3000 mm	± 17 mm	±19 mm	± 42 mm	± 50 mm
3000...3500 mm	± 23 mm	±25 mm	± 50 mm	± 55 mm

The values apply at

constant ambient conditions

23 °C / 960 hPa

minimum power-on time in minutes

10