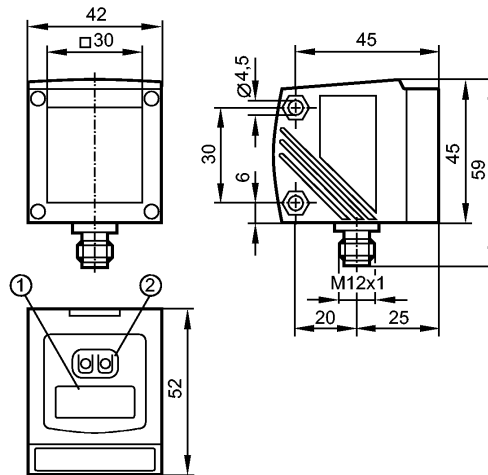


**O1D100**

O1DLF3KG

Photoelectric sensors



- 1: 4-digit alphanumeric display
- 2: Programming buttons

Made in Germany



**Product characteristics**

Photoelectric distance sensor
Connector
Visible laser light, protection class 2 laser
4-digit alphanumeric display
Measuring range 0.2...10 m (Range referred to white paper 200 x 200 mm, 90 % remission)
Application 0...19 m

**Application**

Application	[m]	0...19
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**Electrical data**

Electrical design		DC PNP
Operating voltage	[V]	18...30 DC *)
Current consumption	[mA]	< 150
Life expectancy typ.	[h]	50000
Protection class		III
Reverse polarity protection		yes

**Outputs**

Output function		OUT1: normally open / closed programmable OUT2: normally open / closed programmable or analogue (4...20 mA / 0...10 V, scalable)
Current rating	[mA]	2 x 200
Short-circuit protection		pulsed
Overload protection		yes
Analogue output		
current output	[mA]	4...20; according to IEC 61131-2
- Max. load	[ $\Omega$ ]	250
voltage output	[V]	0...10; according to IEC 61131-2
- Min. load	[ $\Omega$ ]	5000

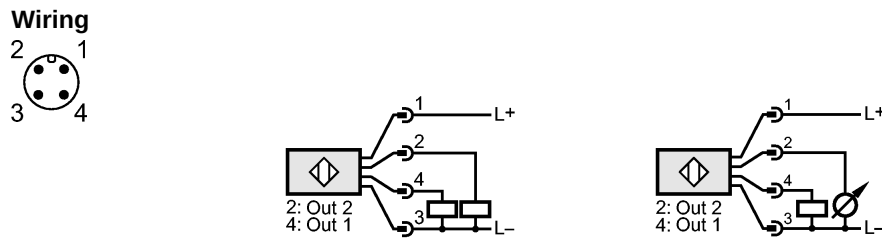
**Range**

Light spot diameter	[mm]	6 ( Range 10 m )
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## O1D100

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Photoelectric sensors

Measuring / setting range	
Measuring range [m]	0.2...10 (Range referred to white paper 200 x 200 mm, 90 % remission)
Sampling rate [Hz]	1...50
Environment	
Ambient temperature [°C]	-10...60
Storage temperature [°C]	-30...80
Protection	IP 67
Tests / approvals	
EMC	EN 60947-5-2
MTTF [Years]	186
Mechanical data	
Housing materials	housing: diecast zinc; window: glass; LED window: polycarbonate
Weight [kg]	0.295
Displays / operating elements	
Display	Switching status 2 x LED yellow Operation LED green Distance, programming 4-digit alphanumeric display
Electrical connection	
Connection	M12 connector
<b>Wiring</b> 	
Accessories	
Accessories (optional)	Protective cover E21133
Remarks	
Remarks	<p>*) cULus - Class 2 source required                      Caution: Laser Light                      Power &lt;= 4.1 mW wavelength = 650 nm                      pulse 1.3 ns                      Do not stare into beam                      Avoid exposure                      Class 2 laser product                      EN 60825-1:2003-10                      For more information about the measuring range / application please refer to the operating instructions.</p>
Pack quantity [piece]	1
Other data	

Parameter	Setting range	Factory setting
Uni	mm, m, inch	mm
OU1	Hno, Hnc, Fno, Fnc	Hno
SP1	200...9999	1000
nSP1	200...9999	800
FSP1	200...9999	1200


**O1D100**

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**Photoelectric sensors**

OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2	200...9999	2000
nSP2	200...9999	1800
FSP2	200...9999	2200
ASP	0...9999	0
AEP	0...9999	9999
rATE [Hz]	1...50	50
dS1	0...0.1...5	0
dr1	0...0.1...5	0
dS2	0...0.1...5	0
dr2	0...0.1...5	0
dAP	0...0.1...5	0
dIS	d1...3; rd1...3; OFF	d3

**Repeatability / Accuracy**
**Sampling rate 50 Hz - extraneous light on the object max.: 40 klx**

	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	--	± 70.0 mm	--

**Repeatability / Accuracy**
**Sampling rate 50 Hz - extraneous light on the object max.: 40...100 klx**

	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	--	± 85.0 mm	--

**Repeatability / Accuracy**
**Sampling rate 1 Hz - extraneous light on the object max.: 40 klx**

	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	--	± 47.0 mm	--

**Repeatability / Accuracy**
**Sampling rate 1 Hz - extraneous light on the object max.: 40...100 klx**

	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

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**Photoelectric sensors**

4000...6000 mm	± 22.0 mm	± 25.0 mm	± 32.0 mm	± 35.0 mm
6000...10000 mm	± 37.0 mm	--	± 47.0 mm	--

Range on black (6 % remission) &lt;= 4000 mm

The values apply at

- constant ambient conditions: 23 °C / 960 hPa
- minimum power-on time in minutes: 10