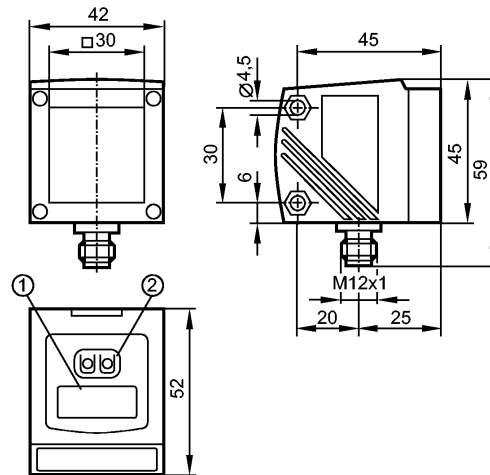


**O1D100**

O1DLF3KG

Photoelectric sensors



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



**Product characteristics**

Photoelectric distance sensor
Quick disconnect
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 analog (4...20 mA / 0...10 V, scalable)
Current rating	[mA]	2 x 200
Short-circuit protection		yes (non-latching)
Overload protection		yes
Analog output		
current output	[mA]	4...20; according to IEC 61131-2
- Max. load	[Ω]	250
voltage output	[V]	0...10; according to IEC 61131-2
- Min. load	[Ω]	5000

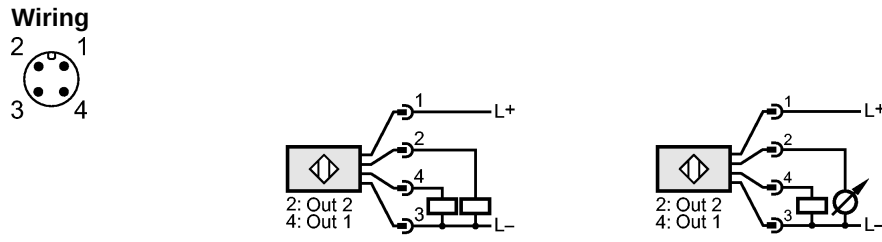
**Monitoring range**

Light spot diameter	[mm]	< 15 x 15 ( Range 10 m )
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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
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]	0.291
Displays / operating elements	
Display	Switching status 2 x LED yellow Power 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
OU2	Hno, Hnc, Fno, Fnc, I, U	I



**O1D100**

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Photoelectric sensors

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
4000...6000 mm	± 22.0 mm	± 25.0 mm	± 32.0 mm	± 35.0 mm



## O1D100

O1DLF3KG

Photoelectric sensors

6000...10000 mm	± 37.0 mm	--	± 47.0 mm	--
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Range on black (6 % remission) <= 4000 mm

The values apply at

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