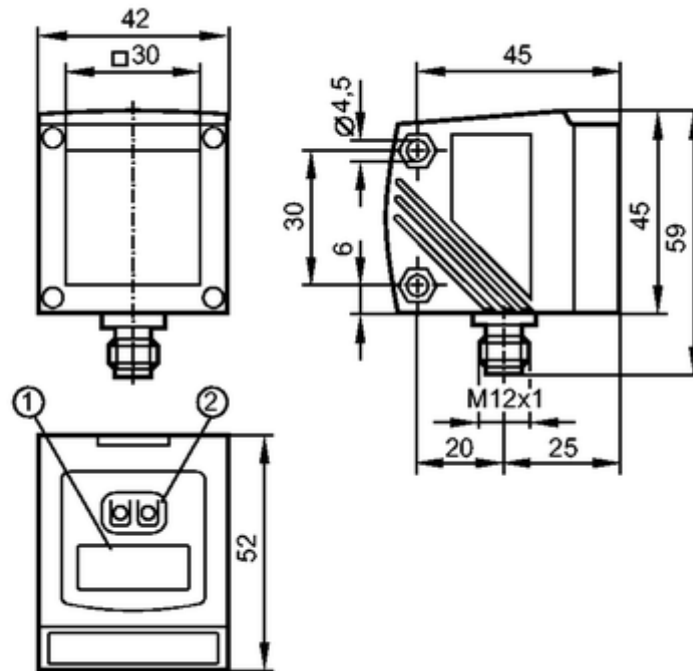


**O1D100**

O1DLF3KG

Photoelectric sensors



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

**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

**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	
<b>Range</b>		
Light spot diameter [mm]	< 15 x 15 ( Range 10 m )	
<b>Measuring / setting range</b>		
Measuring range [m]	0.2...10 (Range referred to white paper 200 x 200 mm, 90 % remission)	
Sampling rate [Hz]	1...50	
<b>Environment</b>		
Ambient temperature [°C]	-10...60	
Protection	IP 67	
<b>Tests / approvals</b>		
EMC	EN 60947-5-2	
MTTF [Years]	186	
<b>Mechanical data</b>		
Housing materials	housing: diecast zinc; window: glass; LED window: polycarbonate	
Weight [kg]	0.291	
<b>Displays / operating elements</b>		
Display	Switching status	2 x LED yellow
	Operation	LED green
	Distance, programming	4-digit alphanumeric display
<b>Electrical connection</b>		
Connection	M12 connector	
<b>Wiring</b>		
<b>Accessories</b>		
Accessories (optional)	Protective cover E21133	
<b>Remarks</b>		
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
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
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	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	--	± 47.0 mm	--

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

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