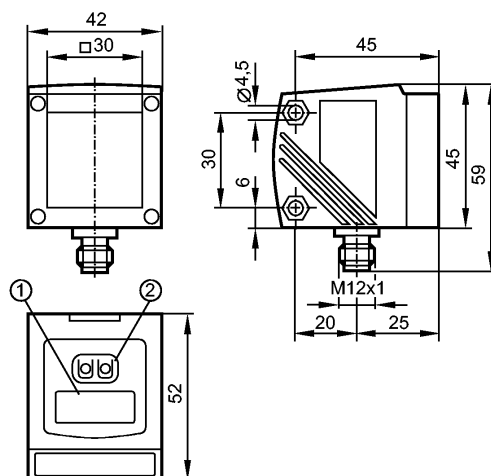


O1D103

O1DLF6KG

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)

Background suppression > 10...19 m

Electrical data

Electrical design	DC NPN
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 [Ω]	250
voltage output [V]	0...10; according to IEC 61131-2
- Min. load [Ω]	5000

Range

Background suppression	> 10...19 m
Light spot diameter [mm]	< 15 x 15 (Range 10 m)

Measuring / setting range

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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]	187

Mechanical data

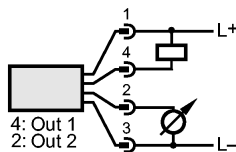
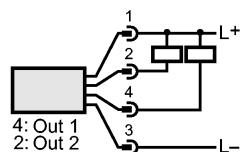
Housing materials		housing: diecast zinc; window: glass; LED window: polycarbonate
Weight	[kg]	0.296

Displays / operating elements

Display	Switching status	2 x LED yellow
	Operation	LED green
	Distance, programming	4-digit alphanumeric display

Electrical connection

Connection		M12 connector
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Wiring

Accessories

Accessories (optional)		Protective cover E21133
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Remarks

Remarks	Caution: Laser Light Power <= 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 cULus - Class 2 source required
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Pack quantity	[piece]	1
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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

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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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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