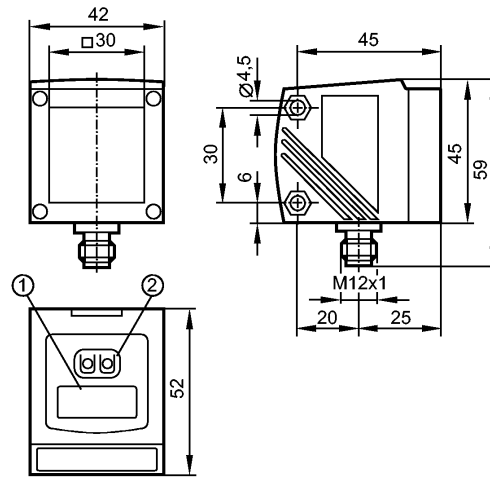


O1D100

O1DLF3KG/IO-LINK

Photoelectric sensors



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



Product characteristics

Photoelectric distance sensor
Connector
Background suppression
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 0...19 m

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

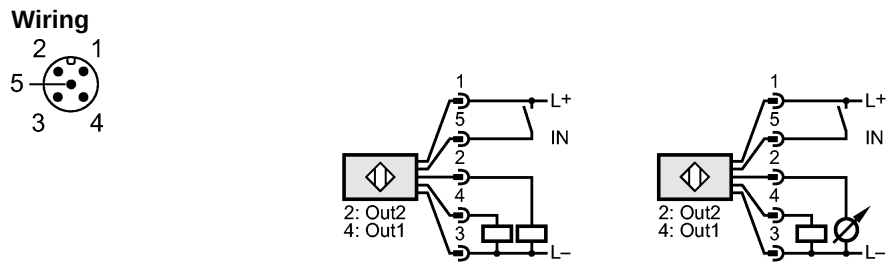
Range

Background suppression	0...19 m
Light spot diameter [mm]	< 15 x 15 (Range 10 m)

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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
Interfaces	
IO-Link device	
Transfer type	COM (38.4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9
IO-Link device ID	806d / 00 03 26h
Profiles	Smart Sensor: Sensor Identification; Binary Data Channel; Process Value; Sensor Diagnosis
SIO mode	yes
Required master port class	A
Process data analogue	2
Process data binary	3
Min. process cycle time [ms]	6.0
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 Operation LED green Distance, programming 4-digit alphanumeric display
Electrical connection	
Connection	M12 connector
Wiring	
Accessories	
Accessories (optional)	Protective cover E21133
Remarks	
Remarks	Achtung: Laserlicht Leistung <= 4.1 mW Wellenlänge 650 nm Puls 1.3 ns Nicht in den Strahl blicken Kontakt mit Laserlicht vermeiden LASER KLASSE 2

O1D100

O1DLF3KG/IO-LINK

Photoelectric sensors

EN 60825-1:2007-10
cULus - Class 2 source required

Pack quantity [piece] 1

Other data

Parameter	Setting range	Factory setting
Uni	mm, m, inch	mm
OU1	Hno, Hnc, Fno, Fnc	Hno
SP1 [mm]	200...9999	1000
nSP1 [mm]	200...9999	800
FSP1 [mm]	200...9999	1200
OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2 [mm]	200...9999	2000
nSP2 [mm]	200...9999	1800
FSP2 [mm]	200...9999	2200
ASP [mm]	0...9999	0
AEP [mm]	0...9999	9999
rATE [Hz]	1...50	50
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

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



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Photoelectric sensors

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
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