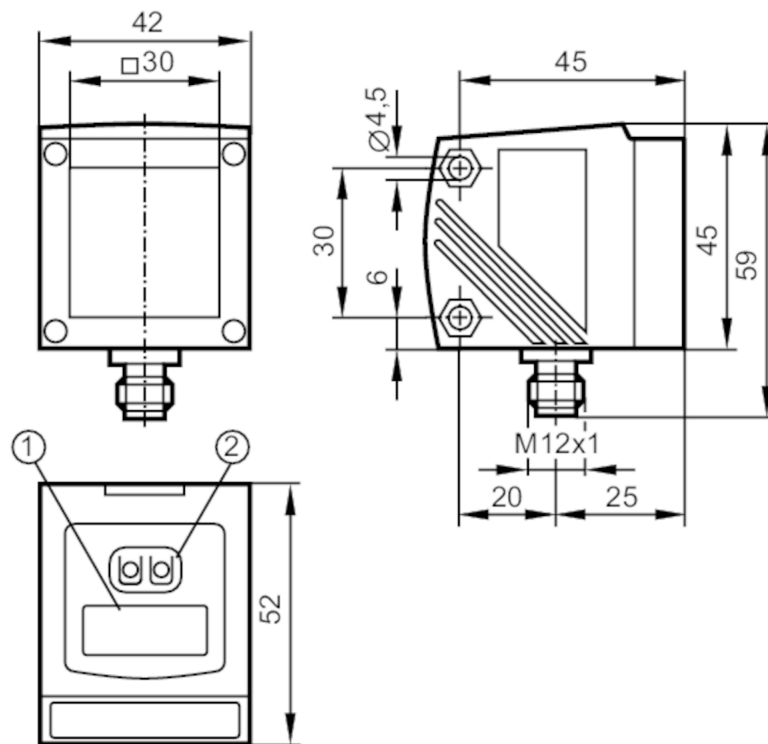


O1D105



Photoelectric distance sensor

O1DLF3KG/IO-LINK



- 1 alphanumeric display 4-digit
2 programming buttons



Product characteristics

Measuring range	[m]	0.2...10; (white paper 200 x 200 mm 90% remission)
Communication interface		IO-Link
Laser protection class		2
Housing		rectangular
Dimensions	[mm]	59 x 42 x 52

Electrical data

Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 150
Protection class		III
Reverse polarity protection		yes
Typ. lifetime	[h]	50000

Inputs / outputs

Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1
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O1D105



Photoelectric distance sensor

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Outputs		
Total number of outputs	2	
Electrical design	PNP	
Number of digital outputs	2	
Output function	normally open / normally closed; (programmable)	
Max. current load per output [mA]	200	
Number of analogue outputs	1	
Analogue current output [mA]	4...20; (scalable IEC 61131-2)	
Max. load [Ω]	250	
Analogue voltage output [V]	0...10; (scalable IEC 61131-2)	
Min. load resistance [Ω]	5000	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Detection zone		
Max. light spot width [mm]	15	
Max. light spot height [mm]	15	
Light spot dimensions refer to	10 m	
Background suppression [m]	10...100	
Measuring/setting range		
Measuring range [m]	0.2...10; (white paper 200 x 200 mm 90% remission)	
Sampling rate [Hz]	1...33	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor: Device Identification; Device Diagnosis; Device Teach Channel; Binary Data Channel; Process Data Variable	
SIO mode	yes	
Required master port type	A	
Process data analogue	2	
Process data binary	2	
Min. process cycle time [ms]	6	
Supported DeviceIDs	Type of operation	DeviceID
	Default	806
Operating conditions		
Ambient temperature [$^{\circ}$ C]	-10...60	
Protection	IP 67	

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Tests / approvals		
EMC	EN 60947-5-2	
Laser protection class		2
Notes on laser protection	Caution:	laser light
	Power:	<= 4,0 mW
	Wave length:	650 nm
	pulse:	1,3 ns
	Do not stare into beam.	
	Avoid exposure to the laser light.	
	laser class:	2
		EN / IEC60825-1:2007
		EN / IEC60825-1:2014
		Complies with 21 CFR 1040 except for deviations pursuant to Laser Notice No. 50, dated June 2007.
MTTF [years]		107
Mechanical data		
Weight [g]		312
Housing		rectangular
Dimensions [mm]		59 x 42 x 52
Materials		housing: diecast zinc; front lens: glass; LED window: PC
Lens alignment		side lens
Displays / operating elements		
Display	switching status	2 x LED, yellow
	operation	LED, green
	distance value, programming	alphanumeric display, 4-digit
Accessories		
Accessories (optional)		Protective cover, E21133
Remarks		
Remarks		operating voltage "supply class 2" according to cULus
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M12		

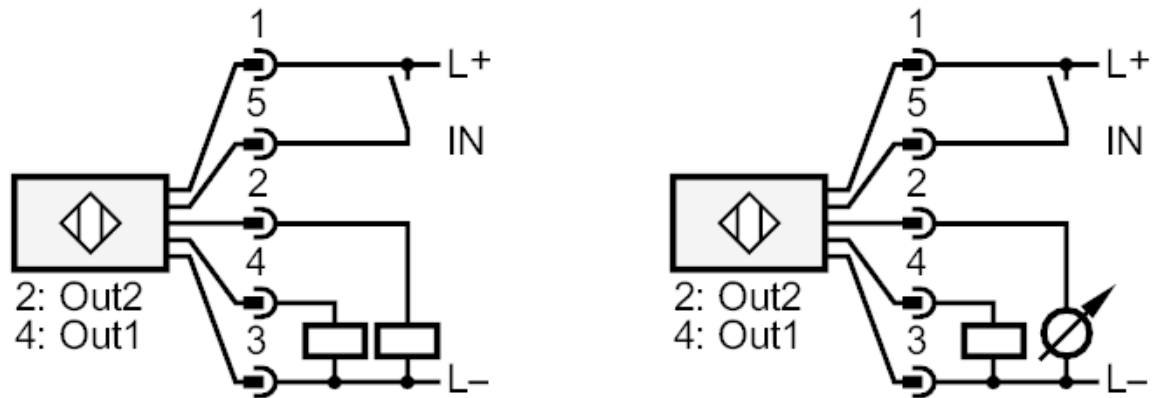
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Photoelectric distance sensor

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Connection



2: switching output or analogue output 4...20 mA / 0...10 V

4: switching output or IO-Link

5: IN1 Laser On/ Off

Core colours

BK black

BN brown

BU blue

GY grey

WH white

O1D105



Photoelectric distance sensor

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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
FSP2	200...9999	2200
ASP	0...9999	0
AEP	0...9999	9999
rATE [Hz]	1...33	15
dS1	0...0.1...5	0
dr1	0...0.1...5	0
dS2	0...0.1...5	0
dr2	0...0.1...5	0
dFo	0...0.1...5	0
dIS	d1...3; rd1...3; OFF	d3

repeatability/accuracy

	repeatability of the measured values		Accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 4.5 mm	± 6.0 mm	± 15.0 mm	± 16.0 mm
1000...2000 mm	± 5.0 mm	± 8.0 mm	± 15.0 mm	± 18.0 mm
2000...4000 mm	± 16.0 mm	± 19.0 mm	± 25.0 mm	± 30.0 mm
4000...6000 mm	± 24.0 mm	± 33.0 mm	± 35.0 mm	± 45.0 mm
6000...10000 mm	± 50.0 mm	-	± 65.0 mm	-
Sampling rate	15 Hz			
Extraneous light on the object	< 40 klx			

O1D105



Photoelectric distance sensor

O1DLF3KG/IO-LINK

repeatability/accuracy

	repeatability of the measured values		Accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...2000 mm	± 14.0 mm	± 14.0 mm	± 24.0 mm	± 24.0 mm
2000...4000 mm	± 25.0 mm	± 30.0 mm	± 35.0 mm	± 40 mm
4000...6000 mm	± 31.0 mm	±45.0 mm	± 41.0 mm	± 55.0 mm
6000...10000 mm	± 60.0 mm	-	± 70.0 mm	-

Sampling rate	15 Hz
Extraneous light on the object	< 40...100 klx
Range on black object (6 % remission)	<= 4000 klx
The values apply at	
constant ambient conditions	23 °C / 960 hPa
minimum power-on time in minutes	10