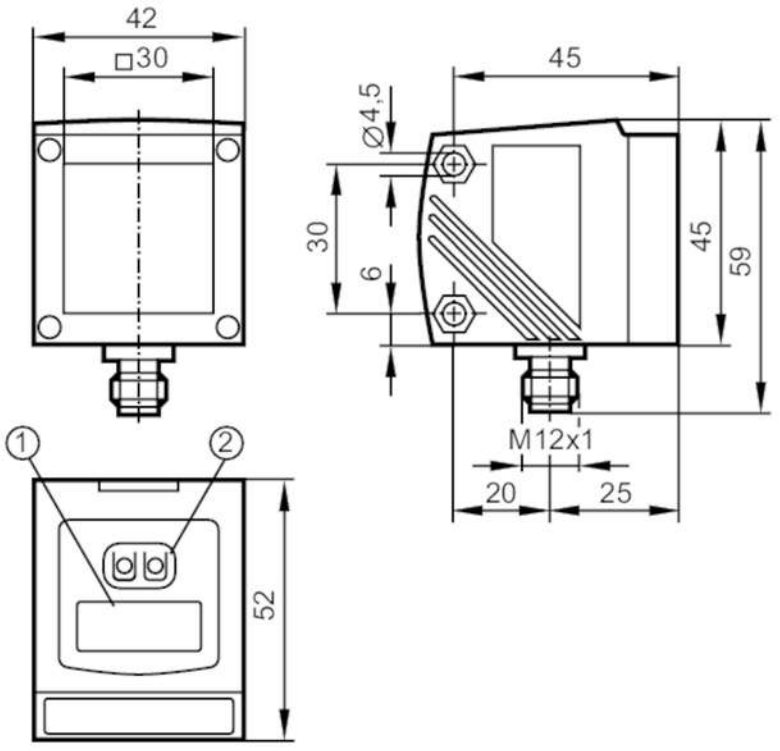
O1D102

Photoelectric distance sensor

O1DLF3KG/IO-LINK



1 alphanumeric display 4-digit
2 programming buttons

Product characteristics		
Laser protection class		2
Housing		rectangular
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
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; (IEC 61131-2)

O1D102

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O1DLF3KG/IO-LINK

Max. load	[Ω]	250	
Analogue voltage output	[V]	0...10; (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]	6	
Max. light spot height	[mm]	6	
Light spot dimensions refer to		3,5 m	
Background suppression	[m]	0...4	
Measuring/setting range			
Measuring range	[m]	0.2...3.5; (black glossy surfaces)	
Sampling rate	[Hz]	1...50; (preset: 5)	
Interfaces			
Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.1	
SDCI standard		IEC 61131-9	
Profiles		Smart Sensor: Sensor Identification; Binary Data Channel; Process Value; Sensor Diagnosis	
SIO mode		yes	
Required master port type		A	
Process data analogue		2	
Process data binary		3	
Min. process cycle time	[ms]	6	
Supported DeviceIDs		Type of operation	DeviceID
		Default	808
Operating conditions			
Ambient temperature	[°C]	-10...60	
Protection		IP 67	
Tests / approvals			
EMC		EN 60947-5-2	
Laser protection class		2	

O1D102

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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]	173	

Mechanical data

Weight	[g]	241.7
Housing		rectangular
Dimensions	[mm]	59 x 42 x 52
Materials		housing: diecast zinc; front pane: 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

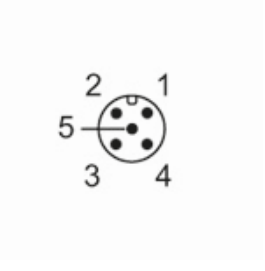
Accessories (optional)	Protective cover, E21133

Remarks

Remarks	operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A

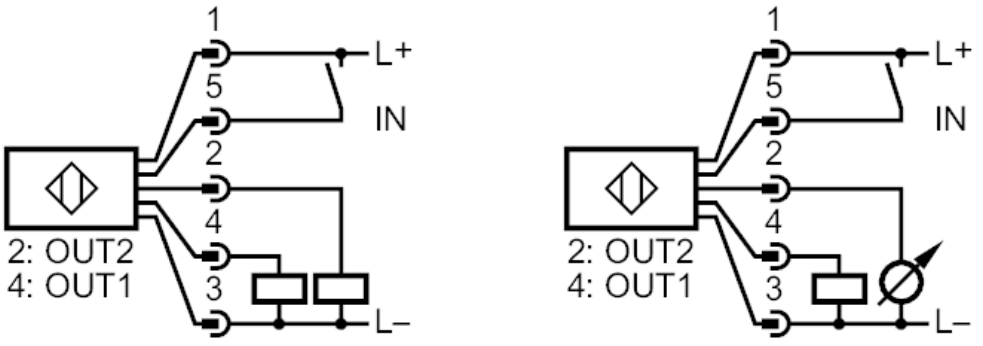


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Connection



O1D102

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 [mm]	200...3500	1000
nSP1 [mm]	200...3500	800
FSP1 [mm]	200...3500	1200
OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2 [mm]	200...3500	2000
nSP2 [mm]	200...3500	1800
FSP2 [mm]	200...3500	2200
ASP [mm]	0...3500	0
AEP [mm]	0...3500	3500
rATE [Hz]	1...50	5
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 of the measured values		accuracy	
	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 6.5 mm	±7.5 mm	± 32 mm	± 40 mm
1000...2000 mm	± 8 mm	±9.5 mm	± 33 mm	± 40 mm
2000...3000 mm	± 17 mm	±19 mm	± 42 mm	± 50 mm
3000...3500 mm	± 23 mm	±25 mm	± 50 mm	± 55 mm

The values apply at	
constant ambient conditions	23 °C / 960 hPa
minimum power-on time in minutes	10