

O1D108



Photoelectric distance sensor

O1DLF3KG/IO-LINK



- 1 alphanumeric display 4-digit
2 programming buttons



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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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)
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]		25
Max. light spot height [mm]		25
Light spot dimensions refer to		18 m
Background suppression [m]		18...100
Measuring/setting range		
Measuring range [m]	0.2...18; (white paper 200 x 200 mm 90 % remission)	
Sampling rate [Hz]	1...33	
Operating conditions		
Ambient temperature [°C]	-10...60	
Protection	IP 67	
Max. immunity to extraneous light [klx]	10; (on the object)	
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 60825-1:2014-05
MTTF [years]	106	

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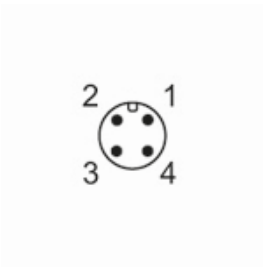
Mechanical data		
Weight	[g]	300.2
Housing		rectangular
Dimensions	[mm]	59 x 42 x 52
Materials		housing: diecast zinc; front lens: glass; LED window: PC
Lens alignment		side lens

Displays / operating elements		
Display	switching status	2 x LED, yellow
	operation	LED, green
	distance value, programming	alphanumeric display, 4-digit

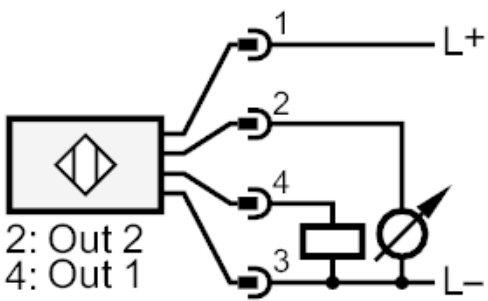
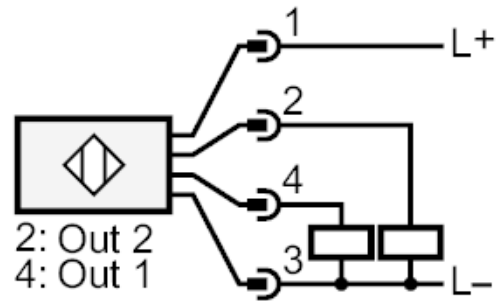
Remarks	
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12



Connection



- 2 switching output or analogue output
- 4 switching output



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Other data		
Parameter	Setting range	Factory setting
Uni	m, inch	m
OU1	Hno, Hnc, Fno, Fnc	Hno
SP1	0.20...18.00	1.00
nSP1	0.20...18.00	0.80
FSP1	0.20...18.00	1.20
OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2	0.20...18.00	2.00
nSP2	0.20...18.00	1.80
FSP2	0.20...18.00	2.20
ASP	0...18.00	0
AEP	0...18.00	18.00
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)
0.20...1.0 m	± 0.45 cm	± 0.6 cm	± 1.5 cm	± 1.6 cm
1.00...2.00 m	± 0.5 cm	± 0.8 cm	± 1.5 cm	± 1.8 cm
2.00...4.00 m	± 1.25 cm	± 1.9 cm	± 2.25 cm	± 3.0 cm
4.00...6.00 m	± 2.0 cm	± 3.0 cm	± 3.0 cm	± 4.0 cm
6.00...10.00 m	± 3.5 cm	± 5.0 cm	± 4.5 cm	± 6.0 cm
10.00...18.00 m	± 5.0 cm		± 6.0 cm	
Sampling rate	15 Hz			
Extraneous light on the object	< 10 klx			
The values apply at				
constant ambient conditions	23 °C / 960 hPa			
minimum power-on time in minutes	10			

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2.00...4.00 m	± 1.6 cm	± 1.9 cm	± 2.5 cm	± 3.0 cm
4.00...6.00 m	± 2.4 cm	± 3.3 cm	± 3.5 cm	± 4.5 cm
6.00...10.00 m	± 5.0 cm		± 6.5 cm	
Sampling rate	15 Hz			
Extraneous light on the object	< 40 klx			
The values apply at				
constant ambient conditions	23 °C / 960 hPa			
minimum power-on time in minutes	10			

In case of higher extraneous light on the object (up to 40 klx) the following specifications apply:

	white (90 % remission)	grey (18 % remission)	black (6 % remission)	
Measuring range	0.2...10 m	0.2...6 m	0.2...4 m	