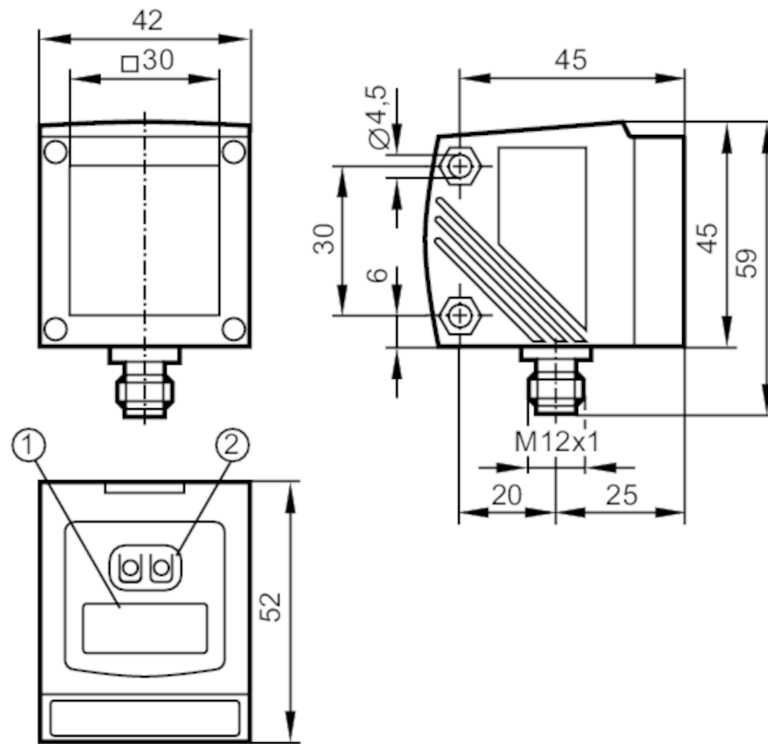


# O1D106



## Photoelectric distance sensor

O1DLF3KG



- 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
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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)

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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]	150
Max. light spot height	[mm]	150
Light spot dimensions refer to		75 m
Background suppression	[m]	75...150

### Measuring/setting range

Measuring range	[m]	1...75; (Reflector E21159)
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: Sensor Identification; Binary Data Channel; Process Value; Sensor Diagnosis
SIO mode		yes
Required master port type		A
Process data analogue		1
Process data binary		2
Min. process cycle time	[ms]	6
Supported DeviceIDs	Type of operation	DeviceID
	Default	810

### Operating conditions

Ambient temperature	[°C]	-10...60
Protection		IP 67

### Tests / approvals

EMC	EN 60947-5-2	
Laser protection class		2

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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]	106	

### Mechanical data

Weight [g]	312
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

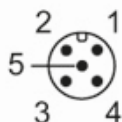
Display	switching status	2 x LED, yellow
	operation	LED, green
	distance value, programming	alphanumeric display, 4-digit

### Remarks

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

### Electrical connection

Connector: 1 x M12; coding: A



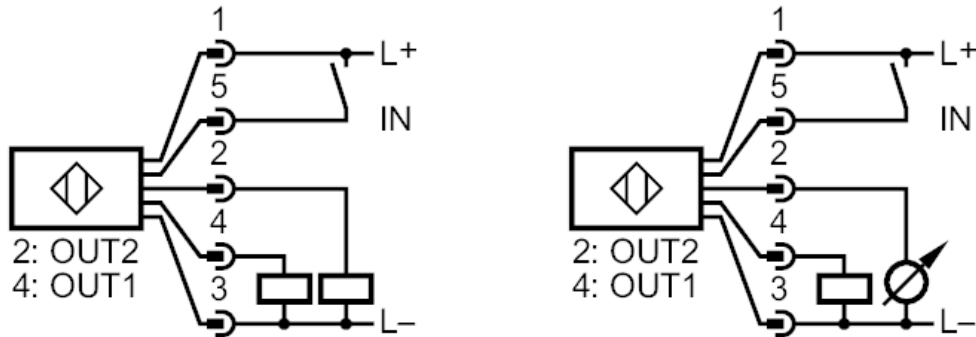
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### Connection



- 2: switching output or analogue output 4...20 mA / 0...10 V
- 4: switching output or IO-Link
- 5: IN1 Laser On/ Off

### Other data

Parameter	Setting range	Factory setting
Uni	m, feet	m
OU1	Hno, Hnc, Fno, Fnc	Hno
SP1	1.00...75.00	10.00
nSP1	1.00...75.00	8.00
FSP1	1.00...75.00	12.00
OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2	1.00...75.00	20.00
nSP2	1.00...75.00	18.00
FSP2	1.00...75.00	22.00
ASP	0...75.00	0
AEP	0...75.00	75.00
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	0.2
dIS	d1...3; rd1...3; OFF	d3

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### repeatability/accuracy

	repeatability of the measured values	accuracy
1...25 m	± 15 mm	± 35 mm
30 m	± 15 mm	± 35 mm
40 m	± 15 mm	± 35 mm
50 m	± 19 mm	± 39 mm
60 m	± 27 mm	± 47 mm
70 m	± 43 mm	± 63 mm

Sampling rate

Reflector 33 Hz

### repeatability/accuracy

	repeatability of the measured values	accuracy
1...75 m	± 15 mm	± 35 mm

Sampling rate

Reflector 1 Hz

The values apply at

Extraneous light on the object < 100 klx

constant ambient conditions 23 °C / 960 hPa

minimum power-on time in minutes 10