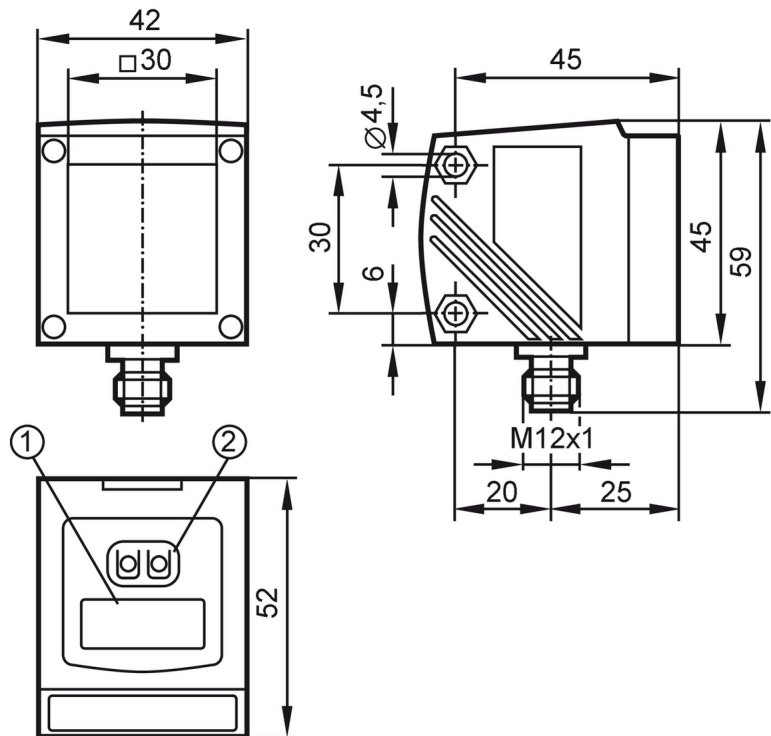


O1D106



Photoelectric distance sensor

O1DLF3KG



- 1 alphanumeric display 4-digit
2 programming buttons



Product characteristics

Laser protection class	2
Housing	rectangular

Application

Application	Industrial applications / factory automation
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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 diameter	[mm]	251
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 - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Process data variable
	Function	Device diagnosis
	Function	Teach channel
SIO mode		yes
Required master port type		A
Process data analogue		1
Process data binary		2
Min. process cycle time	[ms]	5
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 1040.10 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.
MTTF	[years]	106

Mechanical data		
Weight	[g]	242.6
Housing		rectangular
Dimensions	[mm]	59 x 42 x 52
Materials		housing: diecast zinc; front pane: glass; LED window: PC
Lens alignment		side lens

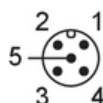
Displays / operating elements		
Display	switching status	2 x LED, yellow
	operation	LED, green
	distance value, programming	alphanumeric display, 4-digit

Accessories		
Accessory required		Prismatic reflector:, E21159
		Prismatic reflector:, E20454

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

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 5



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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

distance	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	33 Hz	

repeatability/accuracy

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