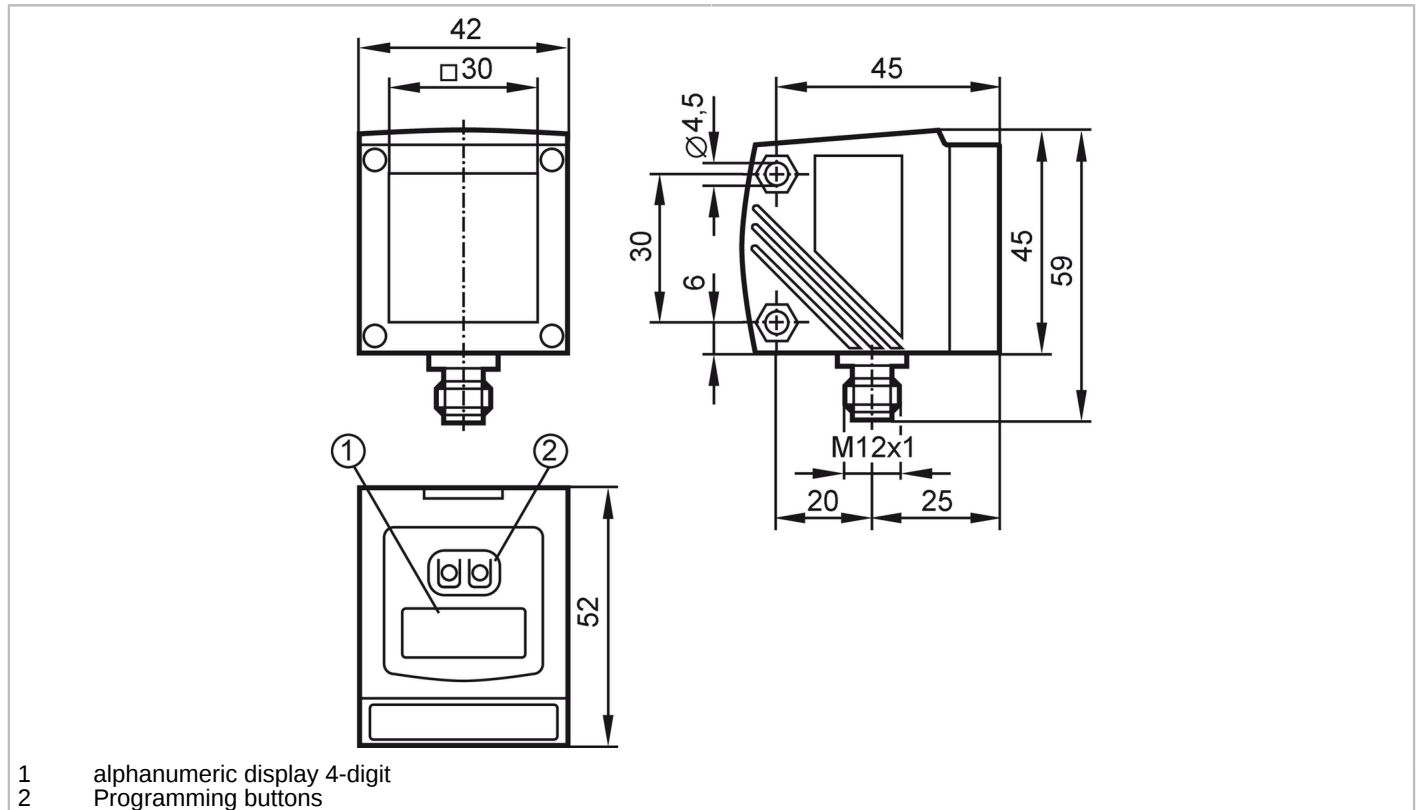


O1D106



Laser distance sensor

O1DLF3KG



Product characteristics	
Laser protection class	2
Housing	rectangular
Application	
Application	Industrial applications
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 analog outputs: 1
Outputs	
Total number of outputs	2
Electrical design	PNP
Number of digital outputs	2
Output function	normally open / closed; (programmable)
Max. current load per output [mA]	200
Number of analog outputs	1
Analog current output [mA]	4...20; (scalable IEC 61131-2)

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Max. load	[Ω]	250
Analog voltage output	[V]	0...10; (scalable IEC 61131-2)
Min. load resistance	[Ω]	5000
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

Monitoring range

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 class	A	
Process data analog	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
Material	housing: diecast zinc; front lens: glass; LED window: PC
Lens alignment	Side sensing

Displays / operating elements

Display	Switching status	2 x LED, yellow
	Power	LED, green
	Distance, programming	alphanumeric display, 4-digit

Accessories

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

Remarks

Remarks	cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

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



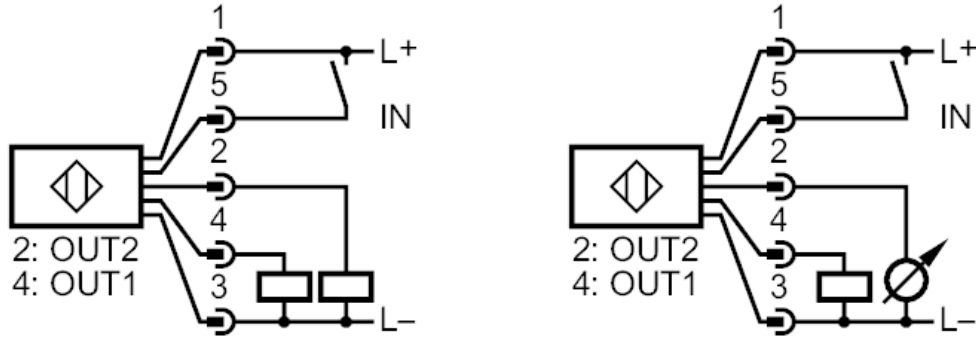
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Connection



- 2: switching output or analog 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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Laser distance sensor

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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	