

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 analog outputs: 1
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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)
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 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 class		A
Process data analog		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

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Tests / approvals		
EMC	EN 60947-5-2	
Laser protection class	2	
Notes on laser protection	Caution:	Laser light
	Power:	$\leq 4,0 \text{ mW}$
	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

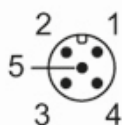
Mechanical data		
Weight	[g]	312
Housing	rectangular	
Dimensions	[mm]	59 x 42 x 52
Material	housing: diecast zinc; front lens: glass; LED window: PC	
Lens alignment	Side sensing	

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

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

Electrical connection

Connector: 1 x M12; coding: A



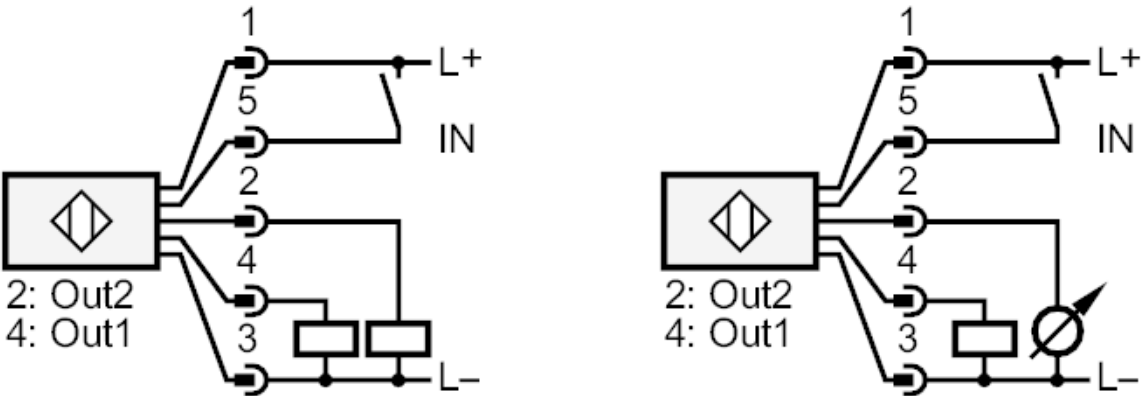
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Connection



- 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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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	33 Hz	
Reflector		

Repeatability / Accuracy

	Repeatability of the measured values	Accuracy
1...75 m	± 15 mm	± 35 mm
Sampling rate	1 Hz	
Reflector		
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	