

1: 4-digit alphanumeric display
2: Programming buttons



Product characteristics

Photoelectric distance sensor

Quick disconnect

Visible laser light, protection class 2 laser

4-digit alphanumeric display

Sampling rate

preset to 5 Hz

Measuring range 0.2...3.5 m (referred to shiny black surfaces)

Background suppression > 3.5...4 m

Electrical data

Electrical design

DC PNP

Operating voltage [V]

18...30 DC

Current consumption [mA]

< 150

Life expectancy typ. [h]

50000

Protection class

III

Reverse polarity protection

yes

Outputs

Output function

OUT1: normally open / closed programmable
OUT2: normally open / closed programmable or analog (4...20 mA / 0...10 V, scalable)

Current rating [mA]

2 x 200

Short-circuit protection

yes (non-latching)

Analog output

current output [mA]

4...20; according to IEC 61131-2

- Max. load [Ω]

250

voltage output [V]

0...10; according to IEC 61131-2

- Min. load [Ω]

5000

Monitoring range

Background suppression

> 3.5...4 m

Light spot diameter [mm]

< 6 x 6 (Range 3.5 m)

Measuring / setting range

Measuring range [m]

0.2...3.5 (referred to shiny black surfaces)

Sampling rate [Hz]

1...50

Environment

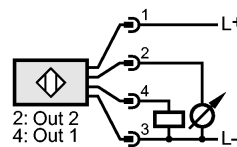
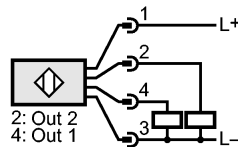
Ambient temperature [°C]

-10...60

O1D102 - Photoelectric distance sensor - eclass: 27270801 / 27-27-08-01

Protection	IP 67
Tests / approvals	
EMC	EN 60947-5-2
MTTF [Years]	173
Mechanical data	
Housing materials	housing: diecast zinc; window: glass; LED window: polycarbonate
Weight [kg]	0.294
Displays / operating elements	
Display	Switching status 2 x LED yellow Power LED green Distance, programming 4-digit alphanumeric display
Electrical connection	
Connection	M12 connector

Wiring



Accessories	
Accessories (optional)	Protective cover E21133
Remarks	
Remarks	Caution: Laser Light Power <= 4.1 mW wavelength = 650 nm pulse 1.3 ns Do not stare into beam Avoid exposure Class 2 laser product EN 60825-1:2003-10 cULus - Class 2 source required
Pack quantity [piece]	1
Other data	

Parameter	Setting range	Factory setting
Uni	mm, m, inch	mm
OU1	Hno, Hnc, Fno, Fnc	Hno
SP1	200...3500	1000
nSP1	200...3500	800
FSP1	200...3500	1200
OU2	Hno, Hnc, Fno, Fnc, I, U	I
SP2	200...3500	2000
nSP2	200...3500	1800
FSP2	200...3500	2200
ASP	0...3500	0
AEP	0...3500	3500
rATE [Hz]	1...50	5
dS1	0...0.1...5	0
dr1	0...0.1...5	0
dS2	0...0.1...5	0
dr2	0...0.1...5	0
dAP	0...0.1...5	0
dIS	d1..3; rd1...3; OFF	d3

Repeatability / Accuracy

Sampling rate 5 Hz

	Repeatability of the measured values	Accuracy
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	white (90 % remission)	grey (18 % remission)	white (90 % remission)	grey (18 % remission)
200...1000 mm	± 6.5 mm	± 7.5 mm	± 32 mm	± 40 mm
1000...2000 mm	± 8 mm	± 9.5 mm	± 33 mm	± 40 mm
2000...3000 mm	± 17 mm	± 19 mm	± 42 mm	± 50 mm
3000...3500 mm	± 23 mm	± 25 mm	± 50 mm	± 55 mm

The values apply at

- constant ambient conditions: 23 °C / 960 hPa
- extraneous light on the object max.: 100 klx
- minimum power-on time in minutes: 10