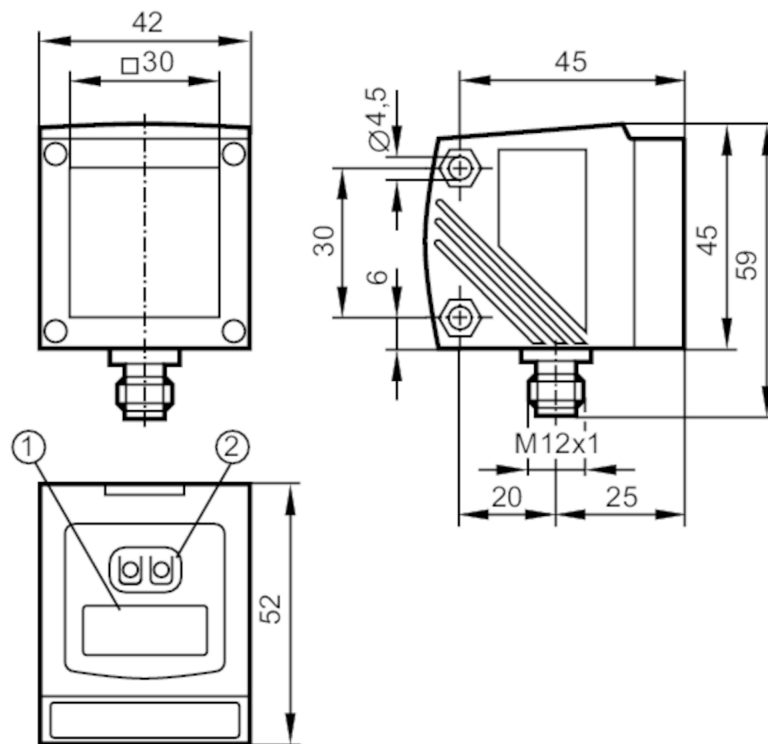


O1D108



Photoelectric distance sensor

O1DLF3KG/IO-LINK



- 1 alphanumeric display 4-digit
- 2 programming buttons



Product characteristics

| | |
|-------------------------|--------------|
| Communication interface | IO-Link |
| Laser protection class | 2 |
| Housing | rectangular |
| Dimensions [mm] | 59 x 42 x 52 |

Application

| | |
|-----------------|-----------|
| Application [m] | 0.2...100 |
|-----------------|-----------|

Electrical data

| | |
|-----------------------------|---|
| Operating voltage [V] | 18...30 DC; ("supply class 2" to cULus) |
| Current consumption [mA] | < 150 |
| Protection class | III |
| Reverse polarity protection | yes |
| Laser marking | yes |
| Typ. lifetime [h] | 50000 |

Inputs / outputs

| | |
|------------------------------|---|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analogue outputs: 1 |
|------------------------------|---|

O1D108



Photoelectric distance sensor

O1DLF3KG/IO-LINK

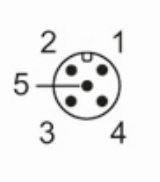
| Outputs | |
|-------------------------------------|---|
| Total number of outputs | 2 |
| Electrical design | PNP |
| Number of digital outputs | 2 |
| Output function | normally open / normally closed; (programmable) |
| Max. current load per output [mA] | 200 |
| Number of analogue outputs | 1 |
| Analogue current output [mA] | 4...20; (IEC 61131-2) |
| Max. load [Ω] | 250 |
| Analogue voltage output [V] | 0...10; (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] | 25 |
| Max. light spot height [mm] | 25 |
| Light spot dimensions refer to | 18 m |
| Background suppression [m] | < 100 |
| Measuring/setting range | |
| Measuring range [m] | 0.2...18; (white paper 200 x 200 mm 90% remission) |
| 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 |
| IO-Link device ID | 811 d / 00 03 2B h |
| Profiles | Smart Sensor: Sensor Identification; Binary Data Channel; Process Value; Sensor Diagnosis |
| SIO mode | yes |
| Required master port type | A |
| Process data analogue | 2 |
| Process data binary | 2 |
| Min. process cycle time [ms] | 6 |
| Operating conditions | |
| Ambient temperature [$^{\circ}$ C] | -10...60 |
| Protection | IP 67 |

O1D108



Photoelectric distance sensor

O1DLF3KG/IO-LINK

| Tests / approvals | | |
|---|------------------------------------|---|
| EMC | EN 60947-5-2 | |
| Laser protection class | | 2 |
| 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] | | 300.2 |
| Housing | | rectangular |
| Dimensions [mm] | | 59 x 42 x 52 |
| Materials | | housing: diecast zinc; front lens: 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 | | |
| Accessories (optional) | | Protective cover, E21133 |
| Remarks | | |
| Pack quantity | | 1 pcs. |
| Electrical connection | | |
| Connector: 1 x M12 | | |
|  | | |

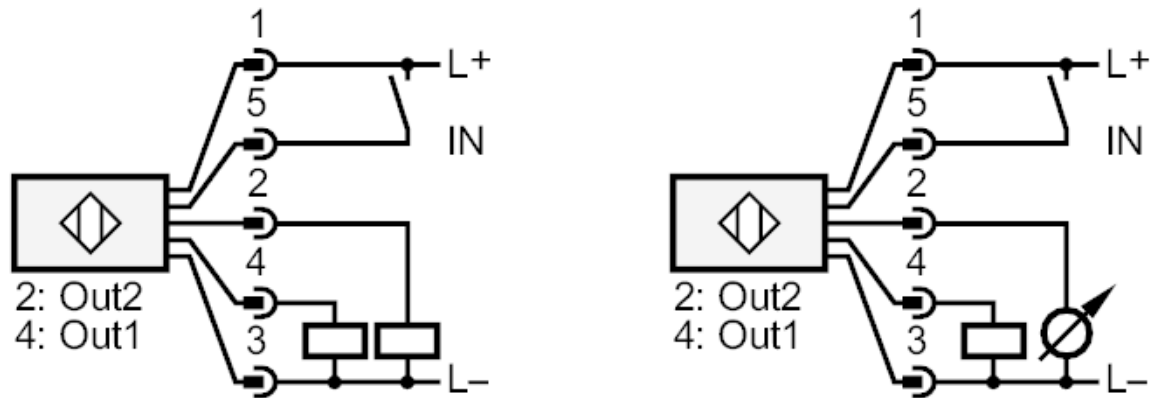
O1D108



Photoelectric distance sensor

O1DLF3KG/IO-LINK

Connection



2: OUT2 switching output or 4...20 mA / 0...10 V

4: OUT1 switching output or IO-Link

5: IN Laser On/ Off Ein / Aus

Core colours

1 brown BN

2 white

3 blue

4 black

5 grey

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Photoelectric distance sensor

O1DLF3KG/IO-LINK

| Other data | | |
|------------|--------------------------|-----------------|
| Parameter | Setting range | Factory setting |
| Uni | m, inch | m |
| OU1 | Hno, Hnc, Fno, Fnc | Hno |
| SP1 | 0.20...18.00 | 1.00 |
| nSP1 | 0.20...18.00 | 0.80 |
| FSP1 | 0.20...18.00 | 1.20 |
| OU2 | Hno, Hnc, Fno, Fnc, I, U | I |
| SP2 | 0.20...18.00 | 2.00 |
| nSP2 | 0.20...18.00 | 1.80 |
| FSP2 | 0.20...18.00 | 2.20 |
| ASP | 0...18.00 | 0 |
| AEP | 0...18.00 | 18.00 |
| 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 |
| dIS | d1...3 ; rd1...3; OFF | d3 |

repeatability/accuracy

| | repeatability of the measured values | | Accuracy | |
|----------------------------------|--------------------------------------|-----------------------|------------------------|-----------------------|
| | white (90 % remission) | grey (18 % remission) | white (90 % remission) | grey (18 % remission) |
| 0.20...1.0 m | ± 0.45 cm | ± 0.6 cm | ± 1.5 cm | ± 1.6 cm |
| 1.00...2.00 m | ± 0.5 cm | ± 0.8 cm | ± 1.5 cm | ± 1.8 cm |
| 2.00...4.00 m | ± 1.25 cm | ± 1.9 cm | ± 2.25 cm | ± 3.0 cm |
| 4.00...6.00 m | ± 2.0 cm | ± 3.0 cm | ± 3.0 cm | ± 4.0 cm |
| 6.00...10.00 m | ± 3.5 cm | ± 5.0 cm | ± 4.5 cm | ± 6.0 cm |
| 10.00...18.00 m | ± 5.0 cm | | ± 6.0 cm | |
| Sampling rate | 15 Hz | | | |
| Extraneous light on the object | < 10 klx | | | |
| The values apply at | | | | |
| constant ambient conditions | 23 °C / 960 hPa | | | |
| minimum power-on time in minutes | 10 | | | |

O1D108



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| 0.20...1.0 m | ± 0.45 cm | ± 0.6 cm | ± 1.5 cm | ± 1.6 cm |
| 1.00...2.00 m | ± 0.5 cm | ± 0.8 cm | ± 1.5 cm | ± 1.8 cm |
| 2.00...4.00 m | ± 1.6 cm | ± 1.9 cm | ± 2.5 cm | ± 3.0 cm |
| 4.00...6.00 m | ± 2.4 cm | ± 3.3 cm | ± 3.5 cm | ± 4.5 cm |
| 6.00...10.00 m | ± 5.0 cm | | ± 6.5 cm | |
| Sampling rate | 15 Hz | | | |
| Extraneous light on the object | < 40 klx | | | |
| The values apply at | | | | |
| constant ambient conditions | 23 °C / 960 hPa | | | |
| minimum power-on time in minutes | 10 | | | |

In case of higher extraneous light on the object (up to 40 klx) the following specifications apply:

| | white (90 % remission) | grey (18 % remission) | black (6 % remission) | |
|-----------------|------------------------|-----------------------|-----------------------|--|
| Measuring range | 0.2...10 m | 0.2...6 m | 0.2...4 m | |