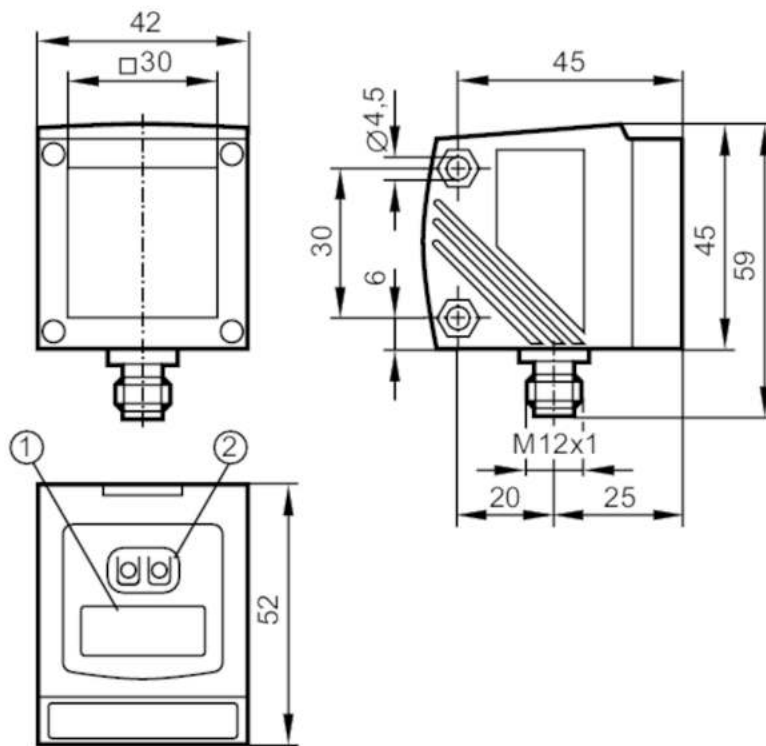


O1D102



Photoelectric distance sensor

O1DLF3KG/IO-LINK



- 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 analogue outputs: 1 |
|------------------------------|---|

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) |

O1D102



Photoelectric distance sensor

O1DLF3KG/IO-LINK

| | | |
|----------------------------------|-----|-----------------------|
| 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] | 6 |
| Max. light spot height | [mm] | 6 |
| Light spot dimensions refer to | | 3,5 m |
| Background suppression | [m] | 0...4 |

Measuring/setting range

| | | |
|-----------------|------|------------------------------------|
| Measuring range | [m] | 0.2...3.5; (black glossy surfaces) |
| Sampling rate | [Hz] | 1...50; (preset: 5) |

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 type | | A |
| Process data analogue | | 2 |
| Process data binary | | 3 |
| Min. process cycle time | [ms] | 6 |
| Supported DeviceIDs | Type of operation | DeviceID |
| | Default | 808 |

Operating conditions

| | | |
|---------------------|------|----------|
| Ambient temperature | [°C] | -10...60 |
| Protection | | IP 67 |

Tests / approvals

| | | |
|------------------------|--------------|---|
| EMC | EN 60947-5-2 | |
| Laser protection class | | 2 |

O1D102



Photoelectric distance sensor

O1DLF3KG/IO-LINK

| | | |
|---------------------------|------------------------------------|---|
| 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] | 173 |

Mechanical data

| | | |
|----------------|------|--|
| Weight | [g] | 303 |
| 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

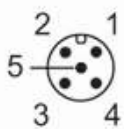
| | |
|------------------------|--------------------------|
| Accessories (optional) | Protective cover, E21133 |
|------------------------|--------------------------|

Remarks

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

Electrical connection

Connector: 1 x M12; coding: A



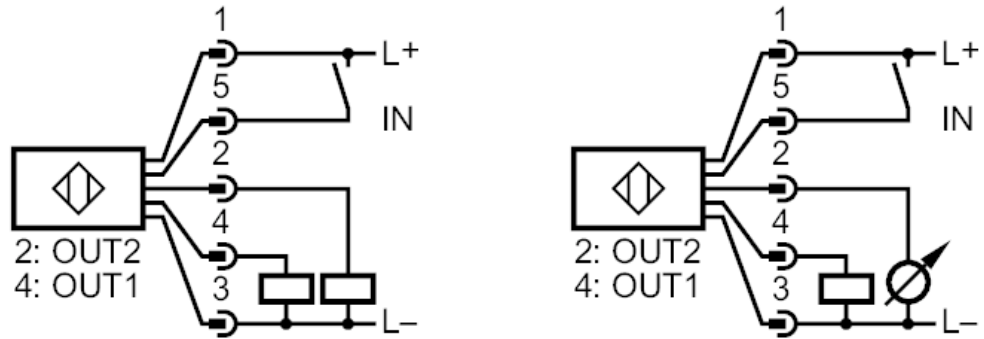
O1D102



Photoelectric distance sensor

O1DLF3KG/IO-LINK

Connection



O1D102



Photoelectric distance sensor

O1DLF3KG/IO-LINK

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

| | repeatability of the measured values | | accuracy | |
|----------------|--------------------------------------|-----------------------|------------------------|-----------------------|
| | 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

minimum power-on time in minutes

10