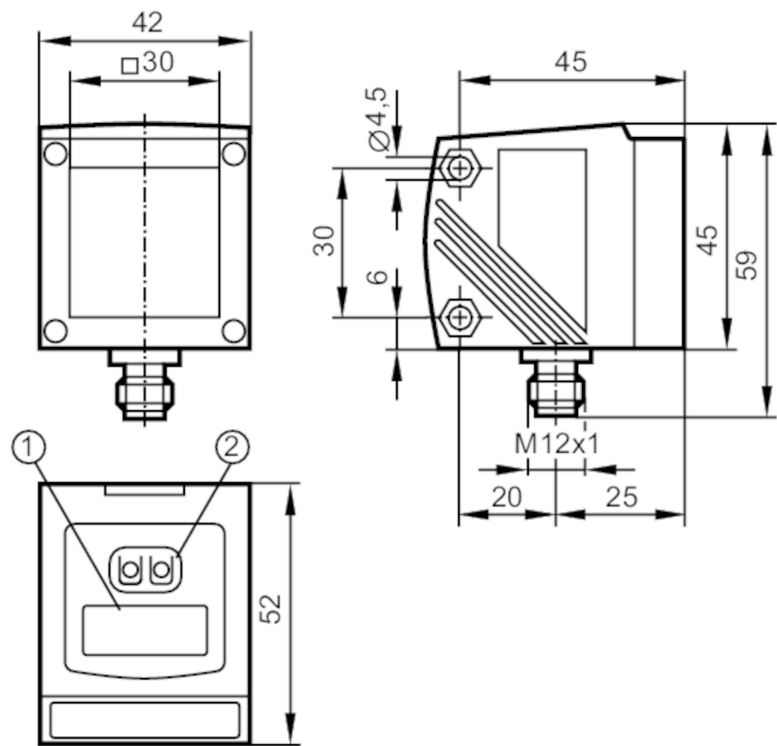




Photoelectric distance sensor

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)                                       |



## Photoelectric distance sensor

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|                                  |                   |                                                                                           |
|----------------------------------|-------------------|-------------------------------------------------------------------------------------------|
| 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                                                                                       |
| <b>Detection zone</b>            |                   |                                                                                           |
| 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                                                                                     |
| <b>Measuring/setting range</b>   |                   |                                                                                           |
| Measuring range                  | [m]               | 0.2...3.5; (black glossy surfaces)                                                        |
| Sampling rate                    | [Hz]              | 1...50; (preset: 5)                                                                       |
| <b>Interfaces</b>                |                   |                                                                                           |
| 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                                                                                       |
| <b>Operating conditions</b>      |                   |                                                                                           |
| Ambient temperature              | [°C]              | -10...60                                                                                  |
| Protection                       |                   | IP 67                                                                                     |
| <b>Tests / approvals</b>         |                   |                                                                                           |
| EMC                              | EN 60947-5-2      |                                                                                           |
| Laser protection class           |                   | 2                                                                                         |



## Photoelectric distance sensor

O1DLF3KG/IO-LINK

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

| Mechanical data |      |                                                          |
|-----------------|------|----------------------------------------------------------|
| Weight          | [g]  | 241.7                                                    |
| Housing         |      | rectangular                                              |
| Dimensions      | [mm] | 59 x 42 x 52                                             |
| Materials       |      | housing: diecast zinc; front pane: glass; LED window: PC |
| Lens alignment  |      | side lens                                                |

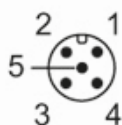
| Displays / operating elements |                             |                               |
|-------------------------------|-----------------------------|-------------------------------|
| Display                       | switching status            | 2 x LED, yellow               |
|                               | 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



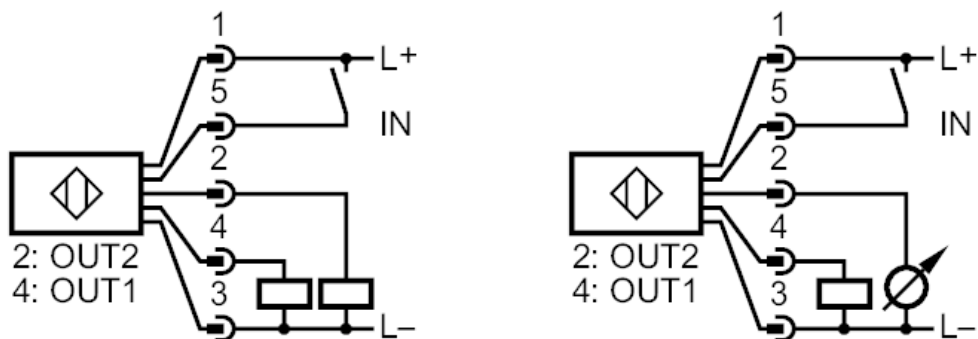
# O1D102



## 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              |