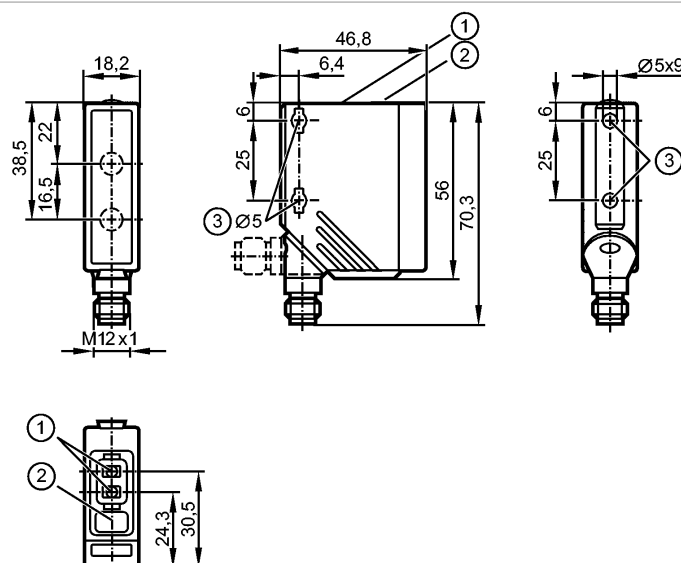


**O5D150**

O5DLCPKG/US

Photoelectric sensors



- 1: setting pushbuttons  
2: 3-digit alphanumeric display  
3: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.


**Product characteristics**

Photoelectric distance sensor

Quick disconnect

Background suppression

Visible laser light, LASER CLASS 1

3-digit alphanumeric display [cm]

adjustable

Measuring range 0.03...2 m

Background suppression ...20 m

**Electrical data**

|                             |   |
|-----------------------------|---|
| Electrical design           | DC PNP                                      |
| Operating voltage [V]       | 10...30 DC; cULus - Class 2 source required |
| Current consumption [mA]    | 75 (24 V)                                   |
| Life expectancy typ. [h]    | 50000                                       |
| Type of light               | red light 650 nm                            |
| Protection class            | III   |
| Reverse polarity protection | yes   |

**Outputs**

|                          |   |
|--------------------------|---|
| Output function          | 2 switching outputs<br>normally open / closed complementary |
| Current rating [mA]      | 2 x 100   |
| Short-circuit protection | yes (non-latching)  |
| Overload protection      | yes   |
| Switching frequency [Hz] | 11  |

**Monitoring range**

|                          |  |
|--------------------------|--|
| Background suppression   | ...20 m                                  |
| Light spot diameter [mm] | < 5 ( Range 2 m )                        |
| Hysteresis [%]           | < 4; black (6 % remission) at max. range |

## O5D150

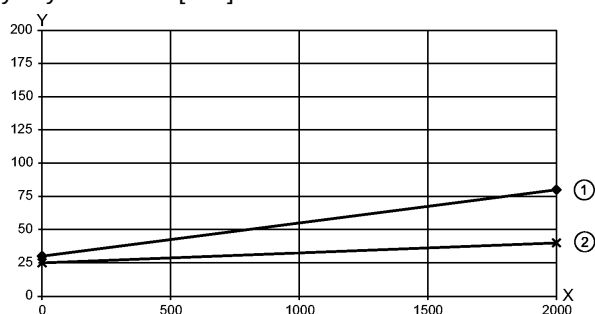
O5DLCPKG/US

Photoelectric sensors

### Hysteresis graph

x: distance in [mm]

y: Hysteresis in [mm]



1 = background black (6 % remission)

2 = background white (90 % remission)

### Measuring / setting range

|                 |      |          |
|-----------------|------|----------|
| Measuring range | [m]  | 0.03...2 |
| Sampling rate   | [Hz] | 33       |

### Interfaces

|                         |   |
|-------------------------|---|
| IO-Link Device          |   |
| Transfer type           | COM2 (38.4 kBaud)   |
| IO-Link revision        | 1.1   |
| SDCI standard           | IEC 61131-9   |
| IO-Link Device ID       | 372d / 00 01 74h  |
| Profiles                | Smart Sensor: Sensor Identification; Binary Data Channel; Process Value; Sensor Diagnosis |
| SIO mode                | yes   |
| Process data analogue   | 1   |
| Process data binary     | 1   |
| Min. process cycle time | [ms] 6.6  |

### Environment

|                              |  |
|------------------------------|--|
| Immunity to extraneous light | [klx] 10; on the object  |
| Ambient temperature          | [°C] -25...60, at ta < -10 °C warm-up is necessary, laser is off |
| Protection                   | IP 65 / IP 67  |

### Tests / approvals

|      |              |
|------|--------------|
| EMC  | EN 60947-5-2 |
| MTTF | [Years] 151  |

### Mechanical data

|                   |  |
|-------------------|--|
| Housing materials | housing: PA; Front framework: high-grade stainless steel; operator interface: TPU (urethane); lens: PMMA |
| Weight            | [kg] 0.078   |

### Displays / operating elements

|              |   |
|--------------|---|
| Display      | Switching status LED yellow switching output pin 4<br>Power LED green<br>Display 3-digit alphanumeric display |
| Display unit | cm  |

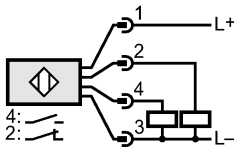
### Electrical connection

|            |               |
|------------|---------------|
| Connection | M12 connector |
|------------|---------------|

### Wiring

O5D150

O5DLCPKG/US



4: OUT / IO-Link

Remarks

|         |  |
|---------|--|
| Remarks | Laser light<br>CLASS 1 LASER PRODUCT<br>IEC 60825-1 : 2007<br>IEC 60825-1 : 2014<br>complies with 21 CFR 1040.10 except for deviations<br>pursuant to Laser Notice No. 50, dated June 2007 |
|---------|--|

|               |         |   |
|---------------|---------|---|
| Pack quantity | [piece] | 1 |
|---------------|---------|---|

Other data

Accuracy

- extraneous light on the object max.: 10 klx

| distance | Accuracy              |                        |
|----------|-----------------------|------------------------|
|          | black (6 % remission) | white (90 % remission) |
| 0 mm     | ± 25 mm               | ± 25 mm                |
| 500 mm   | ± 25 mm               | ± 25 mm                |
| 1000 mm  | ± 25 mm               | ± 25 mm                |
| 1500 mm  | ± 40 mm               | ± 30 mm                |
| 2000 mm  | ± 50 mm               | ± 30 mm                |