

# O3X110

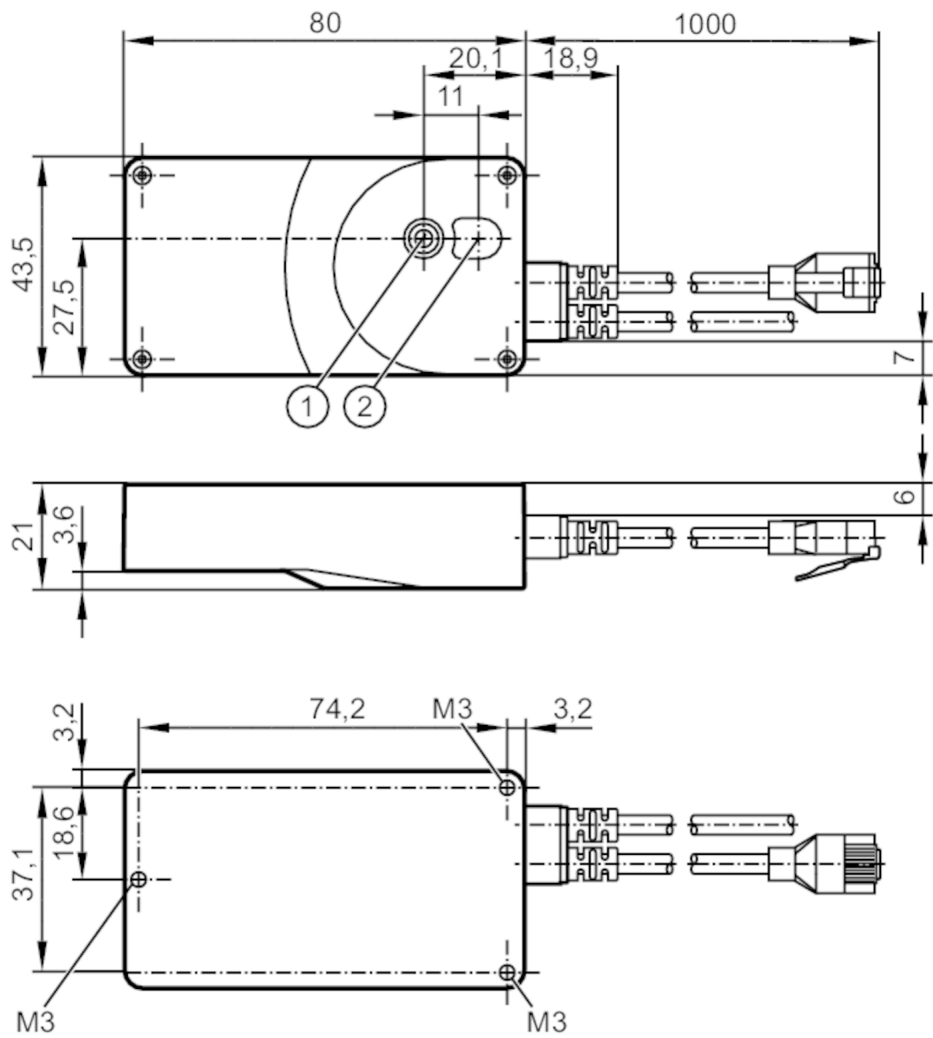


## 3D camera

O3X100KG/E1/GM/S/60/ZS

phase-out article

Alternative articles: O3X130  
When selecting an alternative article and accessories please note that technical data may differ!



- 1 lens
- 2 Illumination unit



| Product characteristics |      |                         |
|-------------------------|------|-------------------------|
| Type of light           |      | infrared light          |
| Image resolution 3D     | [px] | 224 x 172               |
| Angle of aperture 3D    | [°]  | 60 x 45                 |
| Max. reading rate       | [Hz] | 20                      |
| Application             |      |                         |
| Application             |      | output of 3D image data |



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| Electrical data                   |                  |                                                                                       |
|-----------------------------------|------------------|---------------------------------------------------------------------------------------|
| Operating voltage                 | [V]              | 20.4...28.8 DC; (EN 61131-2)                                                          |
| Current consumption               | [mA]             | < 500; (peak current pulsed; typical value: 160)                                      |
| Power consumption                 | [W]              | 3.7                                                                                   |
| Protection class                  |                  | III                                                                                   |
| Type of light                     |                  | infrared light                                                                        |
| Wave length                       | [nm]             | 850                                                                                   |
| Image sensor                      |                  | PMD 3D ToF-Chip                                                                       |
| Internal lighting                 |                  | yes; (infrared: 850 nm invisible radiation LED)                                       |
| Detection zone                    |                  |                                                                                       |
| Operating distance                | [mm]             | 50...3000                                                                             |
| Note on operating distance        |                  | object size: 200 x 200 mm<br>reflectivity: 18 %                                       |
| Image resolution 3D               | [px]             | 224 x 172                                                                             |
| Angle of aperture 3D              | [°]              | 60 x 45                                                                               |
| Max. reading rate                 | [Hz]             | 20                                                                                    |
| Measuring/setting range           |                  |                                                                                       |
| Measuring range                   | [m]              | < 30; (depending on settings, object size, and reflectivity)                          |
| Software / programming            |                  |                                                                                       |
| Parameter setting options         |                  | via PC with ifm Vision Assistant or XML-RPC                                           |
| Interfaces                        |                  |                                                                                       |
| Communication interface           |                  | Ethernet                                                                              |
| Usage type                        |                  | parameter setting; data transmission                                                  |
| Ethernet                          |                  |                                                                                       |
| Number of Ethernet interfaces     |                  | 1                                                                                     |
| Transmission standard             |                  | 10Base-T; 100Base-TX                                                                  |
| Transmission rate                 |                  | 10; 100                                                                               |
| Protocol                          |                  | TCP/IP                                                                                |
| Factory settings                  |                  | IP address: 192.168.0.69                                                              |
|                                   |                  | subnet mask: 255.255.255.0                                                            |
|                                   |                  | gateway IP address: 192.168.0.201                                                     |
| Operating conditions              |                  |                                                                                       |
| Ambient temperature               | [°C]             | -10...40                                                                              |
| Note on ambient temperature       |                  | Housing: < 45° C<br>see operating instructions                                        |
| Storage temperature               | [°C]             | -40...85                                                                              |
| Protection                        |                  | IP 50                                                                                 |
| Max. immunity to extraneous light | [klx]            | 8                                                                                     |
| Tests / approvals                 |                  |                                                                                       |
| EMC                               | DIN EN 61000-6-3 | radiation of interference / residential, commercial and light-industrial environments |
|                                   | DIN EN 61000-6-2 | immunity / industrial environments                                                    |

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|                           |                    |                                          |
|---------------------------|--------------------|------------------------------------------|
| Shock resistance          | DIN EN 60068-2-27  | 50 g / (11 ms) not repetitive            |
|                           | DIN EN 60068-2-27  | 40 g / (6 ms) repetitive                 |
| Vibration resistance      | DIN EN 60068-2-6   | 2 g / (10...150 Hz)                      |
|                           | DIN EN 60068-2-64  | 2.3 g RMS / (10...500 Hz)                |
| Laser protection class    |                    | 1                                        |
| Notes on laser protection | Caution:           | laser light                              |
|                           | laser class:       | 1                                        |
|                           | IEC 60825-1:2014   |                                          |
| Electrical protection     | DIN EN 61010-2-201 | electrical supply only via PELV circuits |
| MTTF [years]              |                    | 66                                       |

### Mechanical data

|                 |                                                                                    |
|-----------------|------------------------------------------------------------------------------------|
| Weight [g]      | 265.5                                                                              |
| Dimensions [mm] | 80 x 43.5 x 21                                                                     |
| Materials       | housing: diecast zinc; lens: float glass; Illumination unit: PMMA Protective cover |

### Remarks

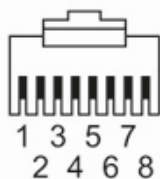
|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection

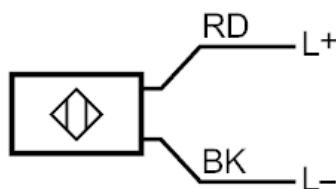
Cable: 1 m, PVC

Connector: 1 x RJ45

### Electrical connection - RJ45



### Connection



|      |          |
|------|----------|
| RJ45 | Ethernet |
| 1    | TD +     |
| 2    | TD -     |
| 3    | RD +     |
| 6    | RD -     |

**3D camera**

O3XI00KG/E1/GM/S/60/ZS

**Other data****Field of view size**

|                                   | without lens distortion<br>correction |           |  |  |
|-----------------------------------|---------------------------------------|-----------|--|--|
| measuring range /<br>distance [m] | Length [m]                            | Width [m] |  |  |
| 0.50                              | 0.60                                  | 0.40      |  |  |
| 1.00                              | 1.10                                  | 0.80      |  |  |
| 1.50                              | 1.70                                  | 1.30      |  |  |
| 2.00                              | 2.30                                  | 1.70      |  |  |
| 2.50                              | 2.80                                  | 2.10      |  |  |
| 3.00                              | 3.40                                  | 2.50      |  |  |

**Repeatability**

| measuring range / distance [m] | Exposure time | Repeatability                                         | accuracy [mm] |
|--------------------------------|---------------|-------------------------------------------------------|---------------|
|                                |               | Measured distance values (1<br>Sigma) on grey objects |               |
|                                |               | reflectivity 18 % [mm]                                |               |
| 0.1...0.25                     | 200           | ± 5                                                   | ± 5           |
| 0.25...0.5                     | 400           | ± 5                                                   | ± 5           |
| 0.5...1                        | 1000          | ± 7                                                   | ± 10          |
| 1...2                          | 2000          | ± 15                                                  | ± 20          |
| 2...3                          | 2000          | ± 60                                                  | ± 40          |

**Repeatability**

referred to

distance measurement of an individual pixel

Measured at

centre of image with median filter

Ambient temperature

20° C

**Temperature drift**

-10...+40° C [mm/K]

0.2

**Relative accuracy**

typical

± 4

Measured at

reflectivity 18...90 %