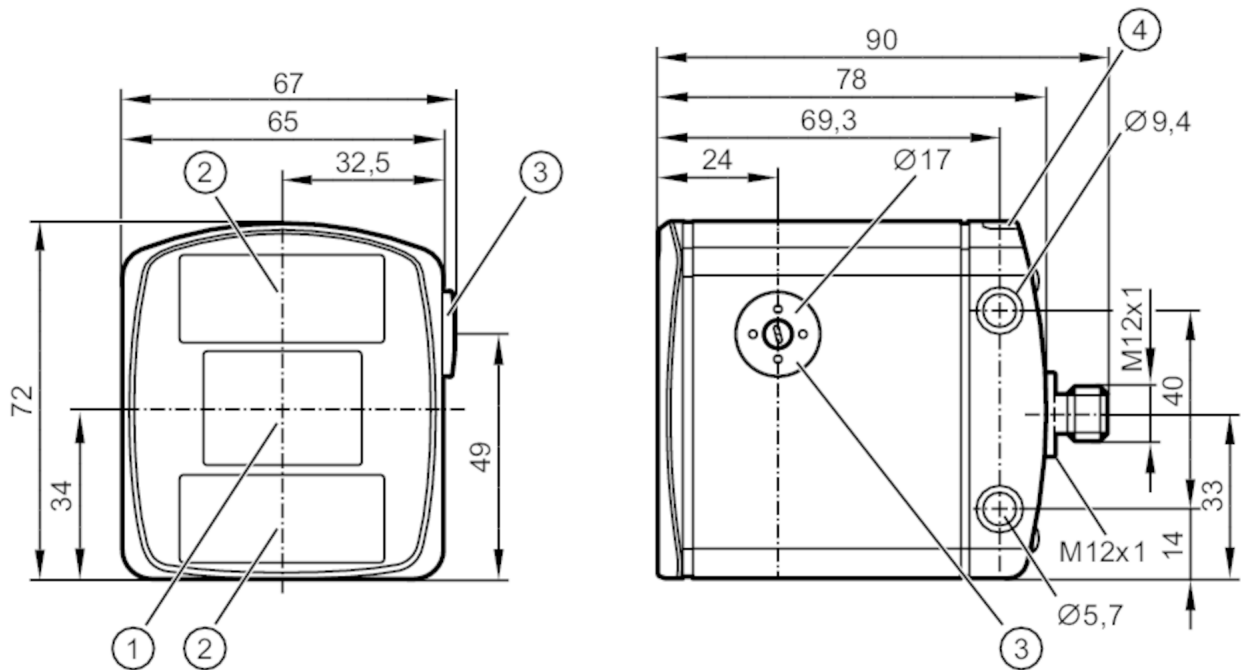


# O3D311



### 3D camera

O3DIRDKG/E1/GM/T/40



- 1 lens
- 2 Illumination unit
- 3 focus adjustment screw
- 4 LED 2-colour yellow/green



## Product characteristics

|                      |      |                                                             |
|----------------------|------|-------------------------------------------------------------|
| Image resolution 3D  | [px] | 352 x 264                                                   |
| Angle of aperture 3D | [°]  | 40 x 30; (nominal value without lens distortion correction) |
| Max. reading rate    | [Hz] | 25                                                          |

## Application

|             |                         |
|-------------|-------------------------|
| Application | output of 3D image data |
|-------------|-------------------------|

## Electrical data

|                     |      |                                                                        |
|---------------------|------|------------------------------------------------------------------------|
| Operating voltage   | [V]  | 20.4...28.8 DC; (EN 61131-2)                                           |
| Current consumption | [mA] | < 2400; (peak current pulsed; typical value: 420; maximum value: 1600) |
| Power consumption   | [W]  | 10; (typical value)                                                    |
| Protection class    |      | III                                                                    |
| Image sensor        |      | PMD 3D ToF-Chip                                                        |
| Internal lighting   |      | yes; (infrared: 850 nm invisible radiation LED)                        |

## Inputs / outputs

|                              |                              |
|------------------------------|------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2 |
|------------------------------|------------------------------|

## Inputs

|         |                                  |
|---------|----------------------------------|
| Trigger | 24 V PNP/NPN (IEC 61131-2 Typ 3) |
|---------|----------------------------------|

## Outputs

|                           |                   |
|---------------------------|-------------------|
| Total number of outputs   | 2                 |
| Number of digital outputs | 2; (configurable) |



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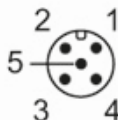
|                                         |  |                                                               |                                                     |
|-----------------------------------------|--|---------------------------------------------------------------|-----------------------------------------------------|
| Output function                         |  | 24 V PNP/NPN; (EN 61131-2)                                    |                                                     |
| Max. current load per output [mA]       |  | 100                                                           |                                                     |
| Short-circuit protection                |  | yes                                                           |                                                     |
| Type of short-circuit protection        |  | pulsed                                                        |                                                     |
| Overload protection                     |  | yes                                                           |                                                     |
| Detection zone                          |  |                                                               |                                                     |
| Operating distance [mm]                 |  | 300...10000                                                   |                                                     |
| Note on operating distance              |  | object size: 200 x 200 mm                                     |                                                     |
|                                         |  | reflectivity: 18 %                                            |                                                     |
| Image resolution 3D [px]                |  | 352 x 264                                                     |                                                     |
| Angle of aperture 3D [°]                |  | 40 x 30; (nominal value without lens distortion correction)   |                                                     |
| Max. reading rate [Hz]                  |  | 25                                                            |                                                     |
| Measuring/setting range                 |  |                                                               |                                                     |
| Measuring range [m]                     |  | < 30                                                          |                                                     |
| Software / programming                  |  |                                                               |                                                     |
| Parameter setting options               |  | via PC with ifm Vision Assistant or XML-RPC                   |                                                     |
| Interfaces                              |  |                                                               |                                                     |
| Communication interface                 |  | Ethernet                                                      |                                                     |
| 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...50                                                      |                                                     |
| Storage temperature [°C]                |  | -40...85                                                      |                                                     |
| Protection                              |  | IP 65; IP 67; IP 69K                                          |                                                     |
| Max. immunity to extraneous light [klx] |  | 8; (with reduced measuring accuracy and repeatability: < 100) |                                                     |
| Tests / approvals                       |  |                                                               |                                                     |
| EMC                                     |  | DIN EN 61000-6-4                                              | radiation of interference / industrial environments |
|                                         |  | DIN EN 61000-6-2                                              | immunity / industrial environments                  |
| 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)                           |
| Photobiological safety                  |  | exempt group; (DIN EN 62471)                                  |                                                     |
| Electrical protection                   |  | DIN EN 61010-2-201                                            | electrical supply only via PELV circuits            |
| MTTF [years]                            |  | 45.02                                                         |                                                     |

# O3D311



## 3D camera

O3DIRDKG/E1/GM/T/40

| Mechanical data                                                                     |                                                                                |                                   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------|
| Weight                                                                              | [g]                                                                            | 1139.2                            |
| Dimensions                                                                          | [mm]                                                                           | 72 x 67.1 x 82.6                  |
| Materials                                                                           | housing: stainless steel (316L/1.4404); front pane: PMMA; function display: PA |                                   |
| Displays / operating elements                                                       |                                                                                |                                   |
| Display                                                                             | function                                                                       | 2 x LED, green Ethernet operation |
|                                                                                     | switching status                                                               | 2 x LED, yellow OUT 1 OUT 2       |
| Accessories                                                                         |                                                                                |                                   |
| Items supplied                                                                      | USB memory stick with software and documentation                               |                                   |
|                                                                                     | Protective covers                                                              |                                   |
| Remarks                                                                             |                                                                                |                                   |
| Pack quantity                                                                       | 1 pcs.                                                                         |                                   |
| Electrical connection - Ethernet                                                    |                                                                                |                                   |
| Connector: 1 x M12; coding: D                                                       |                                                                                |                                   |
|   |                                                                                |                                   |
| 1                                                                                   | TD +                                                                           |                                   |
| 2                                                                                   | RD +                                                                           |                                   |
| 3                                                                                   | TD -                                                                           |                                   |
| 4                                                                                   | RD -                                                                           |                                   |
| Electrical connection - Process connection                                          |                                                                                |                                   |
| Connector: 1 x M12; coding: A                                                       |                                                                                |                                   |
|  |                                                                                |                                   |
| 1                                                                                   | U+                                                                             |                                   |
| 2                                                                                   | trigger input                                                                  |                                   |
| 3                                                                                   | GND                                                                            |                                   |
| 4                                                                                   | switching output 1 Ready                                                       |                                   |
| 5                                                                                   | switching output 2 cascading                                                   |                                   |

# O3D311



## 3D camera

O3DIRDKG/E1/GM/T/40

### Other data

#### Field of view size

|                                   | without lens distortion<br>correction |           | with lens distortion<br>correction |           |
|-----------------------------------|---------------------------------------|-----------|------------------------------------|-----------|
| measuring range /<br>distance [m] | Length [m]                            | Width [m] | Length [m]                         | Width [m] |
| 0.50                              | 0.27                                  | 0.36      | 0.26                               | 0.35      |
| 1.00                              | 0.53                                  | 0.73      | 0.52                               | 0.69      |
| 2.00                              | 1.07                                  | 1.46      | 1.04                               | 1.39      |
| 3.00                              | 1.60                                  | 2.19      | 1.56                               | 2.08      |
| 4.00                              | 2.13                                  | 2.92      | 2.08                               | 2.78      |
| 5.00                              | 2.67                                  | 3.65      | 2.61                               | 3.47      |