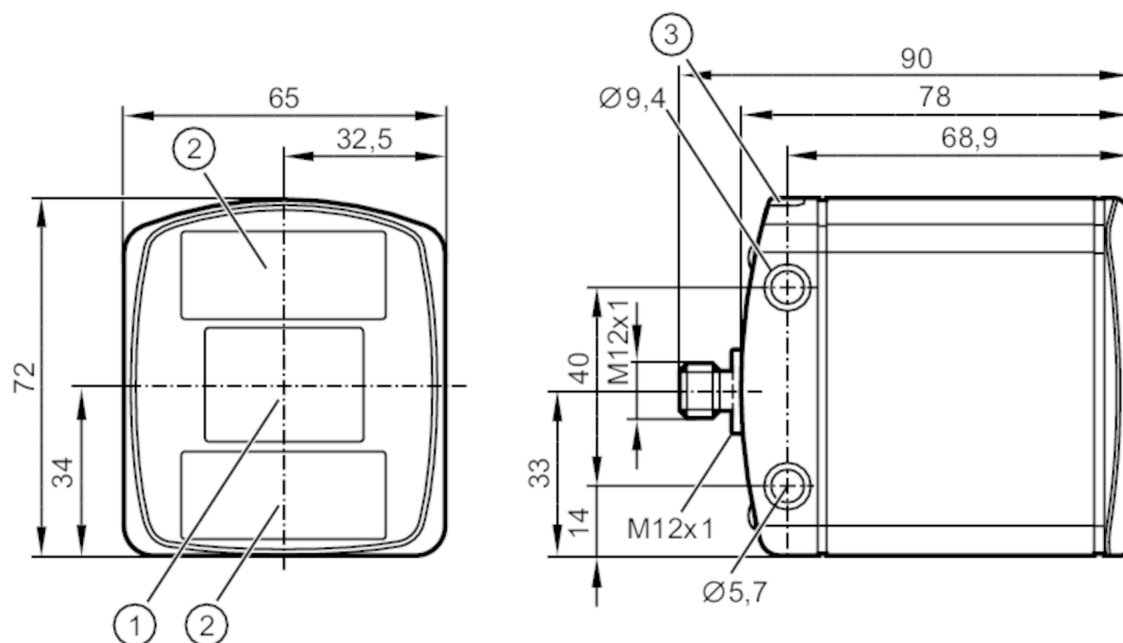


## 3D sensor

O3DIRDKG/E1/GM/W/70



- 1 lens
- 2 illumination unit
- 3 LED 2-colour yellow/green

## Product characteristics

|                      |      |                                                             |
|----------------------|------|-------------------------------------------------------------|
| Image resolution 3D  | [px] | 176 x 132                                                   |
| Angle of aperture 3D | [°]  | 70 x 51; (nominal value without lens distortion correction) |
| Max. reading rate    | [Hz] | 25                                                          |

## Application

|             |                                                                                                                  |
|-------------|------------------------------------------------------------------------------------------------------------------|
| Application | dimensioning of the object; completeness monitoring;<br>Level monitoring; distance monitoring; volume monitoring |
|-------------|------------------------------------------------------------------------------------------------------------------|

## 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; (PELV)                                                            |
| 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 inputs: 2; Number of digital outputs: 3; Number of analogue outputs: 1 |
|------------------------------|------------------------------------------------------------------------------------------|

## Inputs

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Trigger                         | 24 V PNP/NPN (IEC 61131-2 Typ 3)                |
| Number of digital inputs        | 2                                               |
| Input circuit of digital inputs | 24 V PNP/NPN; (configurable; IEC 61131-2 Typ 3) |

## Outputs

|                           |                   |
|---------------------------|-------------------|
| Total number of outputs   | 3                 |
| Number of digital outputs | 3; (configurable) |

**3D sensor**

O3DIRDKG/E1/GM/W/70

|                                           |                                                               |                                                     |
|-------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------|
| Output function                           | 24 V PNP/NPN; (EN 61131-2)                                    |                                                     |
| Max. voltage drop switching output DC [V] | 1                                                             |                                                     |
| Max. current load per output [mA]         | 100                                                           |                                                     |
| Number of analogue outputs                | 1                                                             |                                                     |
| Analogue current output [mA]              | 4...20                                                        |                                                     |
| Max. load [Ω]                             | 500                                                           |                                                     |
| Analogue voltage output [V]               | 0...10                                                        |                                                     |
| Min. load resistance [Ω]                  | 10000                                                         |                                                     |
| Short-circuit protection                  | yes                                                           |                                                     |
| Type of short-circuit protection          | pulsed                                                        |                                                     |
| Overload protection                       | yes                                                           |                                                     |
| Detection zone                            |                                                               |                                                     |
| Operating distance [mm]                   | 300...8000                                                    |                                                     |
| Note on operating distance                | object size: 200 x 200 mm                                     |                                                     |
|                                           | reflectivity: 18 %                                            |                                                     |
| Image resolution 3D [px]                  | 176 x 132                                                     |                                                     |
| Angle of aperture 3D [°]                  | 70 x 51; (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                              |                                                     |
| Interfaces                                |                                                               |                                                     |
| Communication interface                   | Ethernet                                                      |                                                     |
| Ethernet                                  |                                                               |                                                     |
| Number of Ethernet interfaces             | 1                                                             |                                                     |
| Transmission standard                     | 10Base-T; 100Base-TX                                          |                                                     |
| Transmission rate                         | 10; 100                                                       |                                                     |
| Protocol                                  | TCP/IP; PROFINET IO; EtherNet/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                  |

# O3D314



## 3D sensor

O3DIRDKG/E1/GM/W/70

|                        |                              |                                          |
|------------------------|------------------------------|------------------------------------------|
| 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 |

### Mechanical data

|            |                                                                                           |                  |
|------------|-------------------------------------------------------------------------------------------|------------------|
| Weight     | [g]                                                                                       | 1137.5           |
| Dimensions | [mm]                                                                                      | 72 x 67.1 x 82.6 |
| Materials  | housing: stainless steel (1.4404 / 316L); front pane: Gorilla Glass; 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



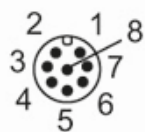
|   |      |
|---|------|
| 1 | TD + |
| 2 | RD + |
| 3 | TD - |
| 4 | RD - |

**3D sensor**

O3DIRDKG/E1/GM/W/70

**Electrical connection - Process connection**

Connector: 1 x M12; coding: A



|   |                                            |
|---|--------------------------------------------|
| 1 | U+                                         |
| 2 | trigger input                              |
| 3 | GND                                        |
| 4 | switching output 1 ( digital or analogue ) |
| 5 | switching output 3 Ready                   |
| 6 | switching output 2 ( digital )             |
| 7 | switching input 1                          |
| 8 | switching input 2                          |

**Other data****field of view size with lens distortion correction**

| measuring range / distance [m] | Length [m] | Width [m] |
|--------------------------------|------------|-----------|
| 0.50                           | 0.40       | 0.55      |
| 1.00                           | 0.80       | 1.10      |
| 2.00                           | 1.60       | 2.20      |
| 3.00                           | 2.40       | 3.30      |
| 4.00                           | 3.20       | 4.40      |
| 5.00                           | 4.00       | 5.50      |