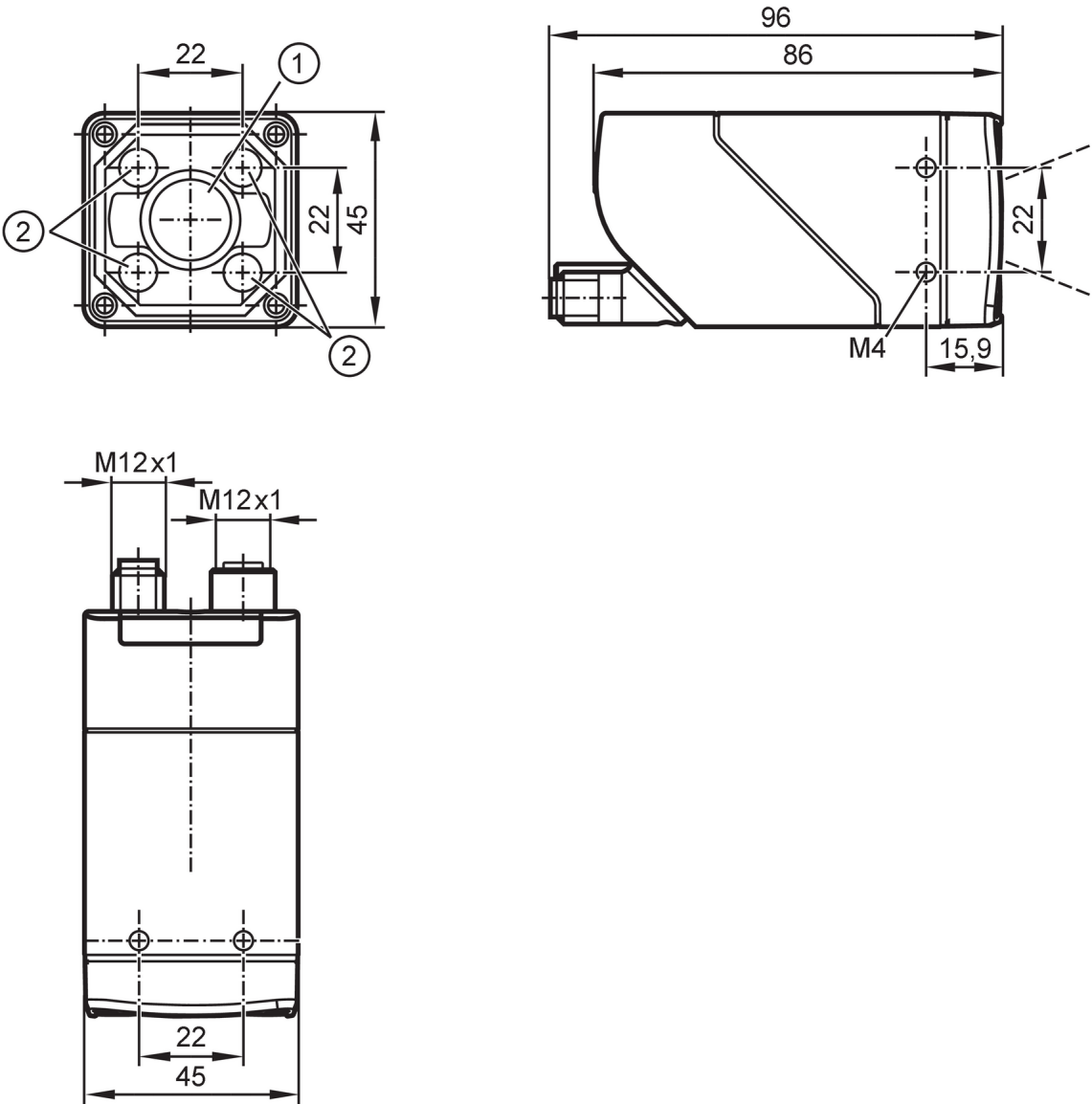


O2D514



Object recognition sensor

O2DCRDKG/E1/E4/EF/GM/TB/T/10



- 1 lens
- 2 Illumination unit



| Product characteristics     |      |                                                           |
|-----------------------------|------|-----------------------------------------------------------|
| Type of light               |      | RGBW                                                      |
| Image resolution            | [px] | 1280 x 960                                                |
| Max. reading rate           | [Hz] | 40                                                        |
| Application                 |      |                                                           |
| Special feature             |      | polarization filter                                       |
| Electrical data             |      |                                                           |
| Operating voltage           | [V]  | 18...30 DC                                                |
| Current consumption         | [mA] | < 320; (24V DC typical)                                   |
| Max. current consumption    | [mA] | 700; (18V DC, with switched outputs, memory stick active) |
| Protection class            |      | III                                                       |
| Reverse polarity protection |      | yes                                                       |



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|                                           |                                                                        |               |  |  |  |
|-------------------------------------------|------------------------------------------------------------------------|---------------|--|--|--|
| Overvoltage category                      | II                                                                     |               |  |  |  |
| Type of light                             | RGBW                                                                   |               |  |  |  |
| Wave length [nm]                          | 625; 525; 453                                                          |               |  |  |  |
| Image sensor                              | CMOS image sensor black/white                                          |               |  |  |  |
| Inputs / outputs                          |                                                                        |               |  |  |  |
| Number of inputs and outputs              | Number of digital outputs: 1                                           |               |  |  |  |
| Inputs                                    |                                                                        |               |  |  |  |
| Trigger                                   | external; 24 V PNP/NPN (IEC 61131-2 Typ 3); TCP/IP; PROFINET; internal |               |  |  |  |
| Outputs                                   |                                                                        |               |  |  |  |
| Electrical design                         | PNP/NPN; (configurable)                                                |               |  |  |  |
| Number of digital outputs                 | 1; (configurable)                                                      |               |  |  |  |
| Output function                           | configurable                                                           |               |  |  |  |
| Max. voltage drop switching output DC [V] | 1                                                                      |               |  |  |  |
| Max. current load per output [mA]         | 100                                                                    |               |  |  |  |
| Short-circuit protection                  | yes                                                                    |               |  |  |  |
| Type of short-circuit protection          | yes (non-latching)                                                     |               |  |  |  |
| Overload protection                       | yes                                                                    |               |  |  |  |
| Monitoring range                          |                                                                        |               |  |  |  |
| Field of view size [mm]                   | Operating distance                                                     | Field of view |  |  |  |
|                                           | 200                                                                    | 38 x 29       |  |  |  |
|                                           | 300                                                                    | 58 x 43       |  |  |  |
|                                           | 500                                                                    | 96 x 72       |  |  |  |
|                                           | 1000                                                                   | 192 x 144     |  |  |  |
|                                           | 1500                                                                   | 288 x 216     |  |  |  |
|                                           | 2000                                                                   | 384 x 288     |  |  |  |
|                                           | 5000                                                                   | 960 x 720     |  |  |  |
| Operating distance [mm]                   | > 200                                                                  |               |  |  |  |
| Image resolution [px]                     | 1280 x 960                                                             |               |  |  |  |
| Lens type                                 | Telephoto lens                                                         |               |  |  |  |
| Bewegungsgeschwindigkeit [m/s]            | 7                                                                      |               |  |  |  |
| Polarization filter available             | yes                                                                    |               |  |  |  |
| Max. reading rate [Hz]                    | 40                                                                     |               |  |  |  |
| 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 MBit/s; 100 MBit/s                                                  |               |  |  |  |
| Protocol                                  | TCP/IP; PROFINET                                                       |               |  |  |  |

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|                  |                                      |
|------------------|--------------------------------------|
| Factory settings | IP address: 192.168.0.69             |
|                  | subnet mask: 255.255.255.0 (Class C) |
|                  | gateway IP address: 192.168.0.201    |
|                  | MAC address: see type label          |
| Usage type       | Parameter setting; Data transmission |

| Operating conditions        |      |                      |
|-----------------------------|------|----------------------|
| Ambient temperature         | [°C] | -10...50             |
| Storage temperature         | [°C] | -40...70             |
| Max. relative air humidity  | [%]  | 90; (non condensing) |
| Max. height above sea level | [m]  | 4000                 |
| Protection                  |      | IP 65                |
| Pollution degree            |      | 3                    |

| Tests / approvals      |                                            |                                          |
|------------------------|--------------------------------------------|------------------------------------------|
| EMC                    | EN IEC 61000-6-4 radiation of interference | industrial environments                  |
|                        | EN IEC 61000-6-2 noise immunity            | industrial environments                  |
| Shock resistance       | EN 60068-2-27                              | 50 g 11 ms / not repetitive              |
|                        | EN 60068-2-27                              | 40 g 6 ms / repetitive                   |
| Vibration resistance   | EN 60068-2-6                               | 2 g (10 ... 150 Hz)                      |
| Photobiological safety |                                            | risk group 2; (EN 62471)                 |
| Electrical safety      | EN IEC 61010-2-201                         | electrical supply only via PELV circuits |
| MTTF                   | [years]                                    | 63                                       |
| UL approval            | Ta                                         | -10...50 °C                              |
|                        | Enclosure type                             | 1                                        |
|                        | voltage supply                             | Limited Energy                           |
|                        | File number UL                             | E364788                                  |

| Mechanical data   |      |                                                                                                  |
|-------------------|------|--------------------------------------------------------------------------------------------------|
| Weight            | [g]  | 627.25                                                                                           |
| Type of mounting  |      | screw mounting; (bore hole M4 x 7mm)                                                             |
| Dimensions        | [mm] | 45 x 45 x 86                                                                                     |
| Material          |      | housing: diecast zinc powder-coated; front lens: gorilla glass; LED window: PC; pushbuttons: POM |
| Sealing material  |      | FKM                                                                                              |
| Tightening torque | [Nm] | 2.1                                                                                              |

| Displays / operating elements |                       |                       |
|-------------------------------|-----------------------|-----------------------|
| Display                       | Function              | 2 x LED, green        |
|                               | Function              | 2 x LED, yellow       |
|                               | Multi-function button | 2 x LED, green/yellow |
| Operating elements            | 1                     | Multi-function button |

| Accessories            |  |                      |
|------------------------|--|----------------------|
| Accessories (optional) |  | Mounting accessories |
|                        |  | Protective panes     |

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

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## Object recognition sensor

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### Electrical connection - Ethernet

Connector: 1 x M12; coding: D; Contacts: 4; Moulded body: stainless steel; sealing: FKM



|   |                  |
|---|------------------|
| 1 | TxD+             |
| 2 | RxD+             |
| 3 | TxD-             |
| 4 | RxD-             |
|   | shield connected |

### Electrical connection - supply

Connector: 1 x M12; coding: L; Contacts: 5; Moulded body: stainless steel



|   |                          |
|---|--------------------------|
| 1 | 24 V DC                  |
| 2 | not used / trigger input |
| 3 | GND                      |
| 4 | not used / Ready / OUT1  |
| 5 | not used                 |