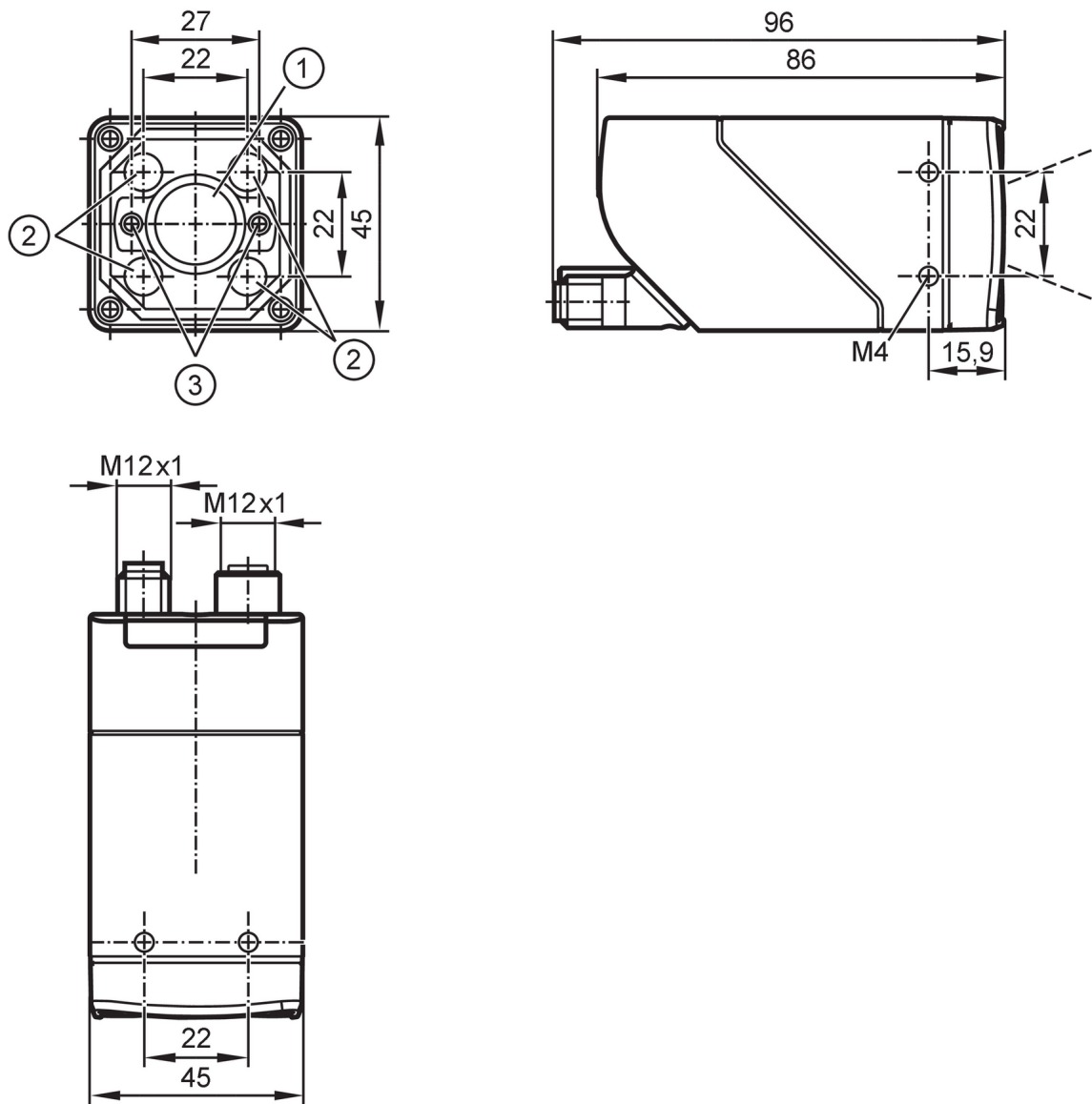


O2I500



1D / 2D code readers

O2IRRDKG/E1/E2/EF/VF/TB/S



- 1 lens
- 2 Illumination unit
- 3 laser spots



| Product characteristics  |      |                                                           |
|--------------------------|------|-----------------------------------------------------------|
| Type of light            |      | red light                                                 |
| 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] | 800; (18V DC, with switched outputs, memory stick active) |
| Protection class         |      | III                                                       |



## 1D / 2D code readers

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|                             |                               |
|-----------------------------|-------------------------------|
| Reverse polarity protection | yes                           |
| Overvoltage category        | II                            |
| Type of light               | red light                     |
| Wave length [nm]            | 617                           |
| Image sensor                | CMOS image sensor black/white |

## Inputs / outputs

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

## Inputs

|         |                                                                           |
|---------|---------------------------------------------------------------------------|
| Trigger | external; 24 V PNP/NPN (IEC 61131-2 Typ 3); TCP/IP; EtherNet/IP; internal |
|---------|---------------------------------------------------------------------------|

## Outputs

|                                           |                         |
|-------------------------------------------|-------------------------|
| Total number of outputs                   | 2                       |
| Electrical design                         | PNP/NPN; (configurable) |
| Number of digital outputs                 | 2; (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 |                  |  |
|                               |       | 85                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 28 x 21       |                  |  |
|                               |       | 300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 92 x 69       |                  |  |
|                               |       | 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 152 x 114     |                  |  |
|                               |       | 1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 302 x 227     |                  |  |
| Operating distance            | [mm]  | > 85                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                  |  |
| Image resolution              | [px]  | 1280 x 960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                  |  |
| Lens type                     |       | standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                  |  |
| Readable codes                |       | Interleaved 2-of-5; Industrial 2-of-5; Code 39; Code 93; Code 128; Pharmacode; Codabar; EAN8; EAN8 Add-On 2; EAN8 Add-On 5; EAN13; EAN13 Add-On 2; EAN13 Add-On 5; UPC-A; UPC-A Add-On 2; UPC-A Add-On 5; UPC-E; UPC-E Add-On 2; UPC-E Add-On 5; GS1 DataBar Omnidirectional; GS1 DataBar Truncated; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Limited; GS1 DataBar Expanded; GS1 DataBar Expanded Stacked; GS1 - 128; MSI Barcode; ECC200; PDF-417; QR; Micro-QR; Aztec Code; GS1 ECC200; GS1 QR Code; GS1 Aztec Code |               |                  |  |
| Code quality based on         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | ISO / IEC 15415  |  |
|                               |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | ISO / IEC 15416  |  |
|                               |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | AIM DPM          |  |
|                               |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | ISO/IEC TR 29158 |  |
|                               |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | SEMI T10         |  |
| Legible fonts                 |       | Industrial; Document; OCR-A; OCR-B; Pharma; Semi; Universal; Dot Print                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                  |  |
| Text recognition              |       | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                  |  |
| Bewegungsgeschwindigkeit      | [m/s] | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                  |  |
| Polarization filter available |       | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                  |  |
| Omnidirectional reading       |       | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                  |  |

# O2I500



## 1D / 2D code readers

O2IRRDKG/E1/E2/EF/VF/TB/S

|                                     |      |    |
|-------------------------------------|------|----|
| Max. inclination to the image plane | [°]  | 45 |
| Max. reading rate                   | [Hz] | 40 |

### Software / programming

|                           |                                                |
|---------------------------|------------------------------------------------|
| Parameter setting options | teach button; 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; EtherNet/IP                  |
| 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)                                                                                                              |
| Laser protection class    |                                            | 1                                                                                                                                |
| Notes on laser protection | Caution:                                   | Laser light                                                                                                                      |
|                           | laser class:                               | 1                                                                                                                                |
|                           |                                            | EN / IEC60825-1:2007                                                                                                             |
|                           |                                            | EN / IEC60825-1:2014                                                                                                             |
|                           |                                            | Complies with 21 CFR 1040.10 except for compliance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56 dated 8 May 2019. |
| Photobiological safety    |                                            | exempt group; (EN 62471)                                                                                                         |
| Electrical safety         | EN IEC 61010-2-201                         | electrical supply only via PELV circuits                                                                                         |
| MTTF                      | [years]                                    | 58                                                                                                                               |
| UL approval               | Ta                                         | -10...50 °C                                                                                                                      |
|                           | Enclosure type                             | 1                                                                                                                                |
|                           | voltage supply                             | Limited Energy                                                                                                                   |
|                           | File number UL                             | E364788                                                                                                                          |



1D / 2D code readers

O2IRRDKG/E1/E2/EF/VF/TB/S

| Mechanical data   |      |                                                                                                  |
|-------------------|------|--------------------------------------------------------------------------------------------------|
| Weight            | [g]  | 601                                                                                              |
| Type of mounting  |      | screw mounting; (bore hole M4 x 7 mm)                                                            |
| Dimensions        | [mm] | 45 x 45 x 96                                                                                     |
| 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 |
|                               | Teach-Funktion | 1 x LED, green  |
|                               | Teach-Funktion | 1 x LED, yellow |
| Operating elements            | 1 x            | Teach-Taste     |

| Accessories            |                               |
|------------------------|-------------------------------|
| Accessories (optional) | Operating software            |
|                        | Mounting accessories          |
|                        | Adapter cable                 |
|                        | protective and filter windows |

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

Electrical connection

Electrical connection - Ethernet

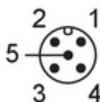
Connector: 1 x M12; coding: D; Contacts: 4; Moulded body: stainless steel; sealing: FKM



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

Electrical connection - supply

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



|   |                                                                                |
|---|--------------------------------------------------------------------------------|
| 1 | U+                                                                             |
| 2 | trigger input                                                                  |
| 3 | 0 V                                                                            |
| 4 | Switching output 1 configurable                                                |
| 5 | Switching output 2 configurable /<br>trigger output with external illumination |