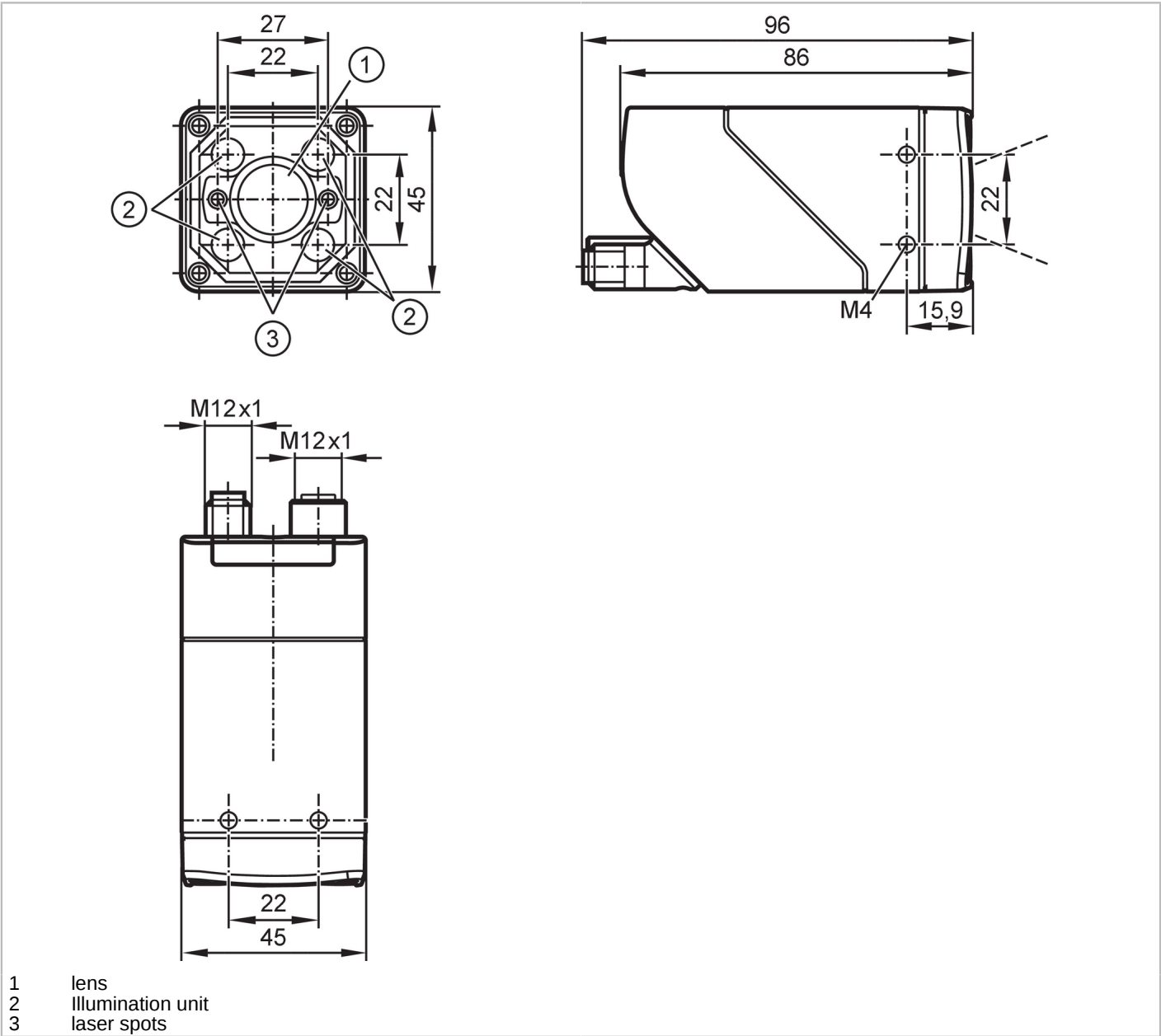




1D / 2D code readers

O2IIRDKG/E1/E4/EF/VF/TB/W



Product characteristics

|                        |                |
|------------------------|----------------|
| Type of light          | Infrared light |
| Image resolution [px]  | 1280 x 960     |
| Max. reading rate [Hz] | 40             |

Electrical data

|                               |                                                           |
|-------------------------------|-----------------------------------------------------------|
| Operating voltage [V]         | 18...30 DC                                                |
| Current consumption [mA]      | < 300; (24V DC typical)                                   |
| Max. current consumption [mA] | 650; (18V DC, with switched outputs, memory stick active) |
| Protection class              | III                                                       |
| Reverse polarity protection   | yes                                                       |
| Overvoltage category          | II                                                        |



## 1D / 2D code readers

O2IIRDKG/E1/E4/EF/VF/TB/W

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                  |  |  |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|--|--|
| Type of light                             | Infrared light                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |                  |  |  |
| Wave length [nm]                          | 850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                  |  |  |
| 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; PROFINET; 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 |                  |  |  |
|                                           | 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 25 x 19       |                  |  |  |
|                                           | 300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 184 x 138     |                  |  |  |
|                                           | 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 304 x 228     |                  |  |  |
|                                           | 1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 604 x 453     |                  |  |  |
| Operating distance [mm]                   | > 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                  |  |  |
| Image resolution [px]                     | 1280 x 960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                  |  |  |
| Lens type                                 | Wide angle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                  |  |  |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                  |  |  |
| Omnidirectional reading                   | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                  |  |  |
| Max. inclination to the image plane [°]   | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |                  |  |  |
| Max. reading rate [Hz]                    | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |                  |  |  |



## 1D / 2D code readers

O2IIRDKG/E1/E4/EF/VF/TB/W

| 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; PROFINET                                                                                                                 |
| 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<br>electrical supply only via PELV circuits                                                                   |
| MTTF                          | [years]                                    | 52                                                                                                                               |
| UL approval                   | Ta                                         | -10...50 °C                                                                                                                      |
|                               | Enclosure type                             | 1                                                                                                                                |
|                               | voltage supply                             | Limited Energy                                                                                                                   |
|                               | File number UL                             | E364788                                                                                                                          |
| Mechanical data               |                                            |                                                                                                                                  |
| Weight                        | [g]                                        | 599.8                                                                                                                            |
| Type of mounting              |                                            | screw mounting; (bore hole M4 x 7 mm)                                                                                            |



1D / 2D code readers

O2IIRDKG/E1/E4/EF/VF/TB/W

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

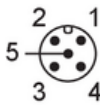
Connector: 1 x M12; coding: D; Contacts: 4; Moulded body: stainless steel; sealing: FKM



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