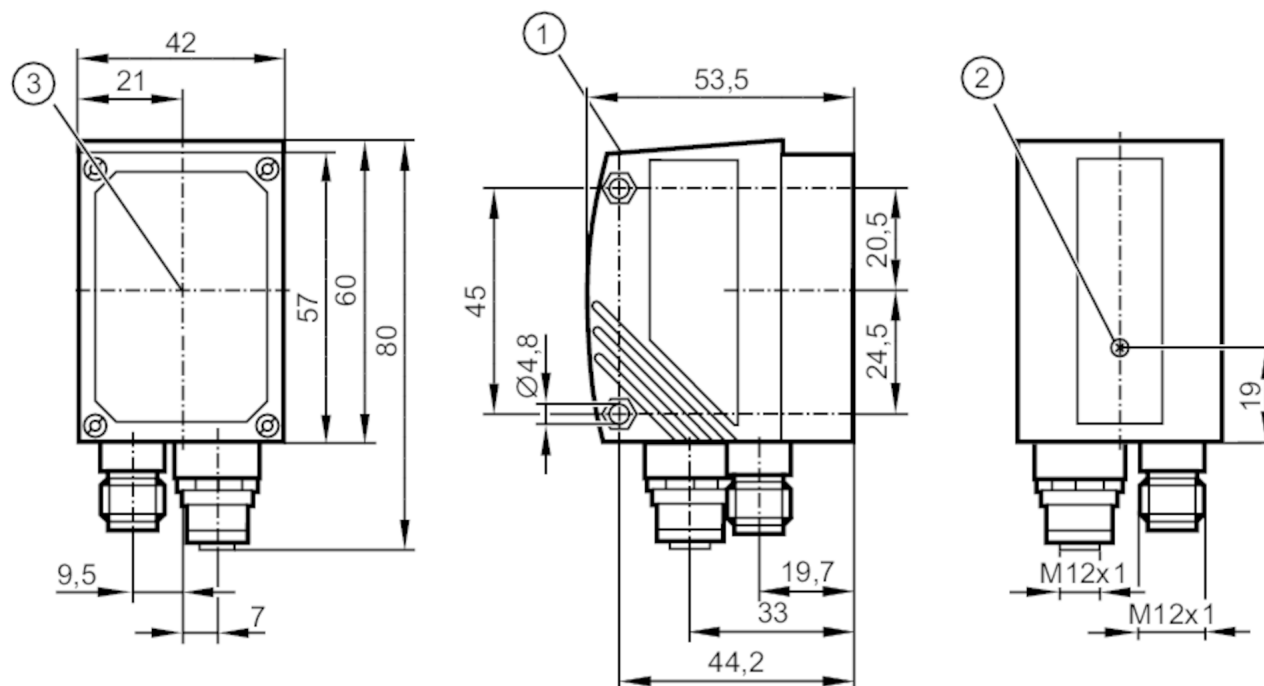




## 1D/2D code readers

O2IROS-G/D/RS232/E1/E2

For 8-pole sockets the core colours are not standardised.  
Please note the wiring of the sensor and the sockets (see data sheet).



- 1 Display
- 2 focus adjustment screw
- 3 centre of the lens axes



### Product characteristics

|                        |           |
|------------------------|-----------|
| Type of light          | red light |
| Image resolution [px]  | 640 x 480 |
| Max. reading rate [Hz] | 20        |

### Electrical data

|                                 |                                                                                          |
|---------------------------------|------------------------------------------------------------------------------------------|
| Operating voltage tolerance [%] | 10                                                                                       |
| Operating voltage [V]           | 24 DC                                                                                    |
| Current consumption [mA]        | < 300                                                                                    |
| Protection class                | III                                                                                      |
| Reverse polarity protection     | yes                                                                                      |
| Type of light                   | red light                                                                                |
| Wave length [nm]                | 625                                                                                      |
| Image sensor                    | CMOS image sensor black/white                                                            |
| Internal lighting               | yes; (red light: 625 nm 4 lighting segments individual control via PC operating program) |
| Laser marking                   | yes; (red; Laser protection class 2 DIN EN 60825-1)                                      |

### Inputs / outputs

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



## 1D/2D code readers

O2IROS-G/D/RS232/E1/E2

| Inputs                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                            |            |  |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------|------------|--|
| Trigger                                   | internal; 24 V PNP (IEC 61131-2 Typ 1); RS-232; TCP/IP; EtherNet/IP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                            |            |  |
| Outputs                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                            |            |  |
| Total number of outputs                   | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                            |            |  |
| Number of digital outputs                 | 2; (configurable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                            |            |  |
| Output function                           | 24 V PNP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                            |            |  |
| Max. voltage drop switching output DC [V] | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                            |            |  |
| Max. current load per output [mA]         | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                            |            |  |
| Short-circuit protection                  | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                            |            |  |
| Overload protection                       | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                            |            |  |
| Detection zone                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                            |            |  |
| Field of view size [mm]                   | Operating distance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | field of view | Smallest detectable object | Resolution |  |
|                                           | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 16 x 12       |                            |            |  |
|                                           | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 32 x 24       |                            |            |  |
|                                           | 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 64 x 48       |                            |            |  |
|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                            |            |  |
| Operating distance [mm]                   | > 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                            |            |  |
| Image resolution [px]                     | 640 x 480                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                            |            |  |
| 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 |               |                            |            |  |
| Legible fonts                             | Industrial; Document                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                            |            |  |
| Text recognition                          | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                            |            |  |
| Omnidirectional reading                   | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                            |            |  |
| Max. inclination to the image plane [°]   | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |                            |            |  |
| Max. reading rate [Hz]                    | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |                            |            |  |
| Software / programming                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                            |            |  |
| Parameter setting options                 | via two pushbuttons and 10-segment display or via PC / notebook with operating software                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |                            |            |  |
| Interfaces                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                            |            |  |
| Communication interface                   | Ethernet; RS232                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                            |            |  |
| Number of R232 interfaces                 | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                            |            |  |
| Ethernet                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                            |            |  |
| Number of Ethernet interfaces             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                            |            |  |
| Transmission standard                     | 10Base-T; 100Base-TX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                            |            |  |
| Transmission rate                         | 10; 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |                            |            |  |
| Protocol                                  | TCP/IP; UDP; EtherNet/IP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                            |            |  |



## 1D/2D code readers

O2IROS-G/D/RS232/E1/E2

|                  |                                   |
|------------------|-----------------------------------|
| Factory settings | IP address: 192.168.0.79          |
|                  | subnet mask: 255.255.255.0        |
|                  | gateway IP address: 192.168.0.201 |
|                  | MAC address: see type label       |

| Operating conditions |      |          |
|----------------------|------|----------|
| Ambient temperature  | [°C] | -10...50 |
| Storage temperature  | [°C] | -40...85 |
| Protection           |      | IP 67    |

| Tests / approvals    |                           |          |
|----------------------|---------------------------|----------|
| EMC                  | radiation of interference | EN 61326 |
|                      | immunity                  | EN 61326 |
| Shock resistance     | IEC 60028-2-27            |          |
| Vibration resistance | IEC 60028-2-6             |          |
| UL approval          | UL Approval no.           | T001     |

| Mechanical data |      |                                                                        |
|-----------------|------|------------------------------------------------------------------------|
| Weight          | [g]  | 416                                                                    |
| Dimensions      | [mm] | 60 x 42 x 53.5                                                         |
| Materials       |      | housing: diecast zinc powder-coated; front pane: glass; LED window: PC |

| Displays / operating elements |                  |                             |
|-------------------------------|------------------|-----------------------------|
| Display                       | function         | 3 x LED, green              |
|                               | switching status | 4 x LED, yellow             |
|                               |                  | 10-segment display, 4-digit |

| Accessories            |                      |  |
|------------------------|----------------------|--|
| Accessories (optional) | Operating software   |  |
|                        | Mounting accessories |  |

| Remarks       |                                                       |  |
|---------------|-------------------------------------------------------|--|
| Remarks       | operating voltage "supply class 2" according to cULus |  |
| Pack quantity | 1 pcs.                                                |  |

## Electrical connection - Ethernet

Connector: 1 x M12; coding: D



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



## 1D/2D code readers

O2IROS-G/D/RS232/E1/E2

### Electrical connection - RS-232

Connector: 1 x M12; coding: A



|   |                                                                                   |
|---|-----------------------------------------------------------------------------------|
| 1 | U+                                                                                |
| 2 | trigger input                                                                     |
| 3 | 0 V                                                                               |
| 4 | switching output 1 code evaluation /<br>trigger output with external illumination |
| 5 | RxD RS-232                                                                        |
| 6 | TxD RS-232                                                                        |
| 7 | switching output 2 Ready                                                          |
| 8 | GND RS-232 electrically isolated < 50 V                                           |