



1D/2D code readers

O2IRRDKG/E1/E4/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         |      | polarisation filter |
| Electrical data         |      |                     |
| Operating voltage       | [V]  | 18...30 DC          |
| Current consumption     | [mA] | < 600; (24V DC)     |
| Protection class        |      | III                 |



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|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reverse polarity protection               | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Type of light                             | red light                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Wave length [nm]                          | 617                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Image sensor                              | CMOS image sensor black/white                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Inputs / outputs</b>                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Number of inputs and outputs              | Number of digital inputs: 1; Number of digital outputs: 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Inputs</b>                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Trigger                                   | external; 24 V PNP/NPN (IEC 61131-2 Typ 3); TCP/IP; PROFINET; internal                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Number of digital inputs                  | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Outputs</b>                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Total number of outputs                   | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Number of digital outputs                 | 2; (configurable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Output function                           | 24 V PNP/NPN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Max. voltage drop switching output DC [V] | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Max. current load per output [mA]         | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Short-circuit protection                  | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Type of short-circuit protection          | pulsed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Overload protection                       | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Detection zone</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Field of view size [mm]                   | Operating distance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                           | field of view                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                           | 85                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                           | 28 x 21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           | 300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operating distance [mm]                   | 92 x 69                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           | 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                           | 152 x 114                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Image resolution [px]                     | 1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Lens type                                 | 302 x 227                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Readable codes                            | > 85                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Code quality based on                     | 1280 x 960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Legible fonts                             | standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Polarisation filter available             | 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 |
| Omnidirectional reading                   | ISO / IEC 15415                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Max. inclination to the image plane [°]   | ISO / IEC 15416                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Max. reading rate [Hz]                    | AIM DPM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                           | ISO/IEC TR 29158                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                           | SEMI T10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           | Industrial; Document; OCR-A; OCR-B; Pharma; Semi; Universal; Dot Print                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



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| 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                                                                                          |
| Protection                    |                                        | IP 65                                                                                             |
| Tests / approvals             |                                        |                                                                                                   |
| EMC                           | EN 61000-6-4 radiation of interference | industrial environments                                                                           |
|                               | EN IEC 61000-6-2 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 except for deviations pursuant to Laser Notice No. 50, dated June 2007. |
| Photobiological safety        |                                        | exempt group; (EN 62471)                                                                          |
| Electrical protection         |                                        | EN 61010-2-201<br>electrical supply only via PELV circuits                                        |
| Mechanical data               |                                        |                                                                                                   |
| Weight                        | [g]                                    | 598.3                                                                                             |
| Dimensions                    | [mm]                                   | 45 x 45 x 86                                                                                      |
| Materials                     |                                        | housing: diecast zinc powder-coated; front pane: Gorillaglas; LED window: PC; pushbutton: POM     |
| Sealing material              |                                        | FKM                                                                                               |
| 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                                                                                   |



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|                    |     |             |
|--------------------|-----|-------------|
| Operating elements | 1 x | Teach-Taste |
|--------------------|-----|-------------|

Аксессуары

|                        |                                   |
|------------------------|-----------------------------------|
| Accessories (optional) | Operating software                |
|                        | монтажне приладдя                 |
|                        | Adapter cable                     |
|                        | protective panes and filter panes |

Remarks

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

Electrical connection

Electrical connection - Ethernet

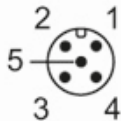
Connector: 1 x M12; coding: D; Moulded body: stainless steel; Sealing: FKM



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

Electrical connection - supply

Connector: 1 x M12; coding: A; 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 |