

O2U554



Object recognition sensor

O2UIRDKG/E1/E2/E4/IO/EF/GM/T/5A



- 1 lens
- 2 Illumination unit



| 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] | < 380; (18V DC typical)                                   |
| Max. current consumption    | [mA] | < 800 (18V, with switched outputs , memory stick active ) |
| Protection class            |      | III                                                       |
| Reverse polarity protection |      | yes                                                       |
| Type of light               |      | infrared light                                            |

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|                                       |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |
|---------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Wave length                           | [nm] | 850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |
| Image sensor                          |      | CMOS image sensor black/white                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |
| Inputs / outputs                      |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |
| Number of inputs and outputs          |      | Number of digital inputs: 1; Number of digital outputs: 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  |
| Inputs                                |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |
| Trigger                               |      | external; 24 V PNP/NPN (IEC 61131-2 Typ 3); TCP/IP; PROFINET; EtherNet/IP; IO-Link; internal                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |
| Number of digital inputs              |      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
| Outputs                               |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |
| Electrical design                     |      | PNP/NPN; (parameterisable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |
| Number of digital outputs             |      | 2; (configurable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
| Max. voltage drop switching output DC | [V]  | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
| Max. current load per output          | [mA] | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |
| Short-circuit protection              |      | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |
| Type of short-circuit protection      |      | pulsed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |
| Overload protection                   |      | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |
| Detection zone                        |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |
| Field of view size                    | [mm] | distance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | field of view    |
|                                       |      | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -                |
|                                       |      | 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -                |
|                                       |      | 85                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -                |
|                                       |      | 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 38 x 29          |
|                                       |      | 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 96 x 72          |
|                                       |      | 1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 192 x 144        |
|                                       |      | 2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 384 x 288        |
|                                       |      | 5000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 960 x 720        |
| Operating distance                    | [mm] | > 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |
| Image resolution                      | [px] | 1280 x 960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |
| Lens type                             |      | Telephoto lens                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                  |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |
| Omnidirectional reading               |      | yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |
| Max. inclination to the image plane   | [°]  | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |
| Max. reading rate                     | [Hz] | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |



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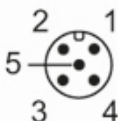
| Software / programming        |                                                                                               |                                          |
|-------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------|
| Parameter setting options     | Multi-function button; via PC with ifm Vision Assistant                                       |                                          |
| Interfaces                    |                                                                                               |                                          |
| Communication interface       | Ethernet; IO-Link                                                                             |                                          |
| Ethernet                      |                                                                                               |                                          |
| Number of Ethernet interfaces | 1                                                                                             |                                          |
| Transmission standard         | 10Base-T; 100Base-TX                                                                          |                                          |
| Transmission rate             | 10 MBit/s; 100 MBit/s                                                                         |                                          |
| Protocol                      | TCP/IP; PROFINET; EtherNet/IP                                                                 |                                          |
| Factory settings              | IP address: 192.168.0.69                                                                      |                                          |
|                               | subnet mask: 255.255.255.0 (Class C)                                                          |                                          |
|                               | gateway IP address: 192.168.0.201                                                             |                                          |
|                               | MAC address: see type label                                                                   |                                          |
| Usage type                    | parameter setting; data transmission                                                          |                                          |
| IO-Link                       |                                                                                               |                                          |
| Transmission type             | COM3 (230,4 kBaud)                                                                            |                                          |
| IO-Link revision              | 1.1                                                                                           |                                          |
| Required master port type     | A                                                                                             |                                          |
| Supported DeviceIDs           | Type of operation                                                                             | DeviceID                                 |
|                               | default                                                                                       | 1699                                     |
| 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 immunity                                                                     | industrial environments                  |
| Shock resistance              | EN 60068-2-27                                                                                 | 50 g 11 ms / not repetitive              |
|                               | EN 60068-2-27                                                                                 | 40 g 6 ms / repetitive                   |
| Vibration resistance          | EN 60068-2-6                                                                                  | 2 g (10 ... 150 Hz)                      |
| Photobiological safety        | exempt group; (EN 62471)                                                                      |                                          |
| Electrical protection         | EN IEC 61010-2-201                                                                            | electrical supply only via PELV circuits |
| Mechanical data               |                                                                                               |                                          |
| Weight                        | [g]                                                                                           | 603.2                                    |
| Type of mounting              | screw mounting; (bore hole M4 x 7mm)                                                          |                                          |
| Dimensions                    | [mm]                                                                                          | 45 x 45 x 86                             |
| Materials                     | housing: diecast zinc powder-coated; front pane: Gorillaglas; LED window: PC; pushbutton: POM |                                          |
| Sealing material              | FKM                                                                                           |                                          |
| Tightening torque             | [Nm]                                                                                          | 2.1                                      |

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| Displays / operating elements                                                       |                                                                                |                       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------|
| Display                                                                             | function                                                                       | 2 x LED, green        |
|                                                                                     | function                                                                       | 2 x LED, yellow       |
|                                                                                     | Multi-function button                                                          | 2 x LED, green/yellow |
| Operating elements                                                                  | 1                                                                              | Multi-function button |
| Accessories                                                                         |                                                                                |                       |
| Accessories (optional)                                                              | Mounting accessories                                                           |                       |
|                                                                                     | Protective panes                                                               |                       |
| Remarks                                                                             |                                                                                |                       |
| Pack quantity                                                                       | 1 pcs.                                                                         |                       |
| 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 / IO-Link                                      |                       |
| 5                                                                                   | switching output 2 configurable /<br>trigger output with external illumination |                       |