

# O2D542



## Object recognition sensor

O2DCRDKG/E1/E4/EF/GM/WI/30/5A



- 1 lens
- 2 Illumination unit



| Product characteristics     |      |                                                  |
|-----------------------------|------|--------------------------------------------------|
| Type of light               |      | RGBW                                             |
| 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] | < 300; (24V DC; with switched outputs: < 600 mA) |
| Protection class            |      | III                                              |
| Reverse polarity protection |      | yes                                              |



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|                                           |                                                                        |               |  |  |  |
|-------------------------------------------|------------------------------------------------------------------------|---------------|--|--|--|
| Type of light                             | RGBW                                                                   |               |  |  |  |
| Wave length [nm]                          | 625; 525; 453                                                          |               |  |  |  |
| 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; 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] | 1                                                                      |               |  |  |  |
| 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]                   | Operating distance                                                     | field of view |  |  |  |
|                                           | 35                                                                     | 25 x 19       |  |  |  |
|                                           | 300                                                                    | 184 x 138     |  |  |  |
|                                           | 500                                                                    | 304 x 228     |  |  |  |
|                                           | 1000                                                                   | 604 x 453     |  |  |  |
|                                           | 1500                                                                   | 904 x 678     |  |  |  |
|                                           | 2000                                                                   | 1204 x 903    |  |  |  |
|                                           | 2500                                                                   | 1504 x 1128   |  |  |  |
| Operating distance [mm]                   | > 35                                                                   |               |  |  |  |
| Image resolution [px]                     | 1280 x 960                                                             |               |  |  |  |
| Lens type                                 | Wide angle                                                             |               |  |  |  |
| Polarisation filter available             | yes                                                                    |               |  |  |  |
| Max. reading rate [Hz]                    | 40                                                                     |               |  |  |  |
| Software / programming                    |                                                                        |               |  |  |  |
| Parameter setting options                 | 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                                                       |               |  |  |  |



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|                               |                                                                                               |                                          |
|-------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------|
| Factory settings              | IP address: 192.168.0.69                                                                      |                                          |
|                               | subnet mask: 255.255.255.0 (Class C)                                                          |                                          |
|                               | gateway IP address: 192.168.0.201                                                             |                                          |
|                               | MAC address: see type label                                                                   |                                          |
| Usage type                    | parameter setting; data transmission                                                          |                                          |
| Operating conditions          |                                                                                               |                                          |
| Ambient temperature           | [°C]                                                                                          | -10...50                                 |
| Storage temperature           | [°C]                                                                                          | -40...70                                 |
| Max. relative air humidity    | [%]                                                                                           | 90; (non condensing)                     |
| Max. height above sea level   | [m]                                                                                           | 4000                                     |
| Protection                    | IP 65                                                                                         |                                          |
| Pollution degree              | 2                                                                                             |                                          |
| 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        | risk group 1; (EN 62471)                                                                      |                                          |
| Electrical protection         | EN IEC 61010-2-201                                                                            | electrical supply only via PELV circuits |
| Mechanical data               |                                                                                               |                                          |
| Weight                        | [g]                                                                                           | 616.2                                    |
| 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                          |
|                               | 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.                                                                                        |                                          |

# O2D542

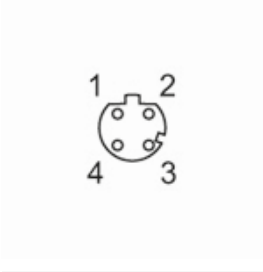


## Object recognition sensor

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### Electrical connection - Ethernet

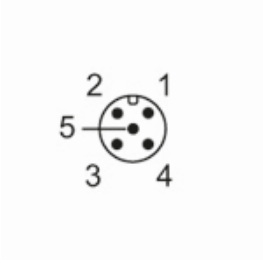
Connector: 1 x M12; coding: D; Moulded body: stainless steel; Sealing: FKM



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