



# V2D611P-MMSBE4

InspectorP61x

2D MACHINE VISION

**SICK**  
Sensor Intelligence.



### Ordering information

| Type           | part no. |
|----------------|----------|
| V2D611P-MMSBE4 | 1114809  |

Other models and accessories → [www.sick.com/InspectorP61x](http://www.sick.com/InspectorP61x)



### Detailed technical data

#### Features

|                             |                                                                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Technology</b>           | 2D snapshot                                                                                                                                           |
| <b>Programmable</b>         | ✓                                                                                                                                                     |
| <b>Configurable</b>         | ✓                                                                                                                                                     |
| <b>Application software</b> | Nova Inspector                                                                                                                                        |
| <b>License included</b>     | Quality Inspection License<br>Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset. |
| <b>Toolkit</b>              | SICK algorithm API<br>HALCON                                                                                                                          |
| <b>Image sensor</b>         | CMOS monochrome                                                                                                                                       |
| <b>Shutter technology</b>   | Global-Shutter                                                                                                                                        |
| <b>Optical focus</b>        | Adjustable focus (manually)                                                                                                                           |
| <b>Working range</b>        | 50 mm ... 300 mm, with internal illumination, can be extended to longer distances when using external illumination <sup>1)</sup>                      |
| <b>Illumination</b>         | Integrated                                                                                                                                            |
| <b>Illumination color</b>   | Amber, LED, Visible, 617 nm, ± 50 nm<br>Blue, LED, Visible, 470 nm, ± 15 nm                                                                           |
| <b>Feedback spot</b>        | LED, Visible, green, 525 nm, ± 15 nm                                                                                                                  |
| <b>Alignment aid</b>        | LED, Red, 630 nm, ± 15 nm                                                                                                                             |
| <b>Laser class</b>          | 1, complies with 21 CFR 1040.10 except for the conformance according to "Laser Notice No. 56" from May 8, 2019 (IEC 60825-1:2014, EN 60825-1:2014)    |
| <b>LED class</b>            | Risk group 1 (IEC 62471 (2006-07) / EN 62471 (2008-09))                                                                                               |
| <b>Spectral range</b>       | Approx. 400 nm ... 900 nm                                                                                                                             |
| <b>Lens</b>                 |                                                                                                                                                       |
|                             | Focal length 6 mm                                                                                                                                     |
| <b>Task</b>                 | Detecting - Standard objects<br>Measuring - Dimension, contour and volume<br>Measuring - Number                                                       |

<sup>1)</sup> For details see field of view diagram.

|  |                                                                                                                                                                               |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Identifying - 2D code<br>Identifying - OCR<br>Identifying - Pattern<br>Identifying - Classifying<br>Identifying - Sorting<br>Determining position - 2D position determination |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

<sup>1)</sup> For details see field of view diagram.

## Mechanics/electronics

|                               |                                                                                                             |
|-------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Connection type</b>        | 1 x M12, 17-pin male connector (serial, I/Os, voltage supply)<br>1 x M12, 4-pin female connector (Ethernet) |
| <b>Supply voltage</b>         | 12 V DC ... 24 V DC, $\pm 15\%$                                                                             |
| <b>Power consumption</b>      | Typ. 3.5 W                                                                                                  |
| <b>Enclosure rating</b>       | IP54 (EN 60529, EN 60529/A2)                                                                                |
| <b>Protection class</b>       | III                                                                                                         |
| <b>Housing material</b>       | Zinc diecast                                                                                                |
| <b>Window material</b>        | PMMA                                                                                                        |
| <b>Weight</b>                 | 165 g                                                                                                       |
| <b>Dimensions (L x W x H)</b> | 50 mm x 40.3 mm x 29.6 mm                                                                                   |
| <b>MTBF</b>                   | 75,000 h                                                                                                    |

## Performance

|                          |                            |
|--------------------------|----------------------------|
| <b>Sensor properties</b> |                            |
| Sensor resolution        | 1,280 px x 960 px (1.2 MP) |
| <b>Scan/frame rate</b>   | 40 Hz <sup>1)</sup>        |

<sup>1)</sup> Maximum, lower at long exposure times. Image capture time only, does not include additional required processing time.

## Interfaces

|                                   |                                                                                                                                               |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Serial</b>                     | ✓, RS-232                                                                                                                                     |
| Remark                            | Not yet available in the pre-installed Quality Inspection SensorApp                                                                           |
| Data transmission rate            | 300 Baud ... 115.2 kBaud                                                                                                                      |
| <b>Ethernet</b>                   | ✓, TCP/IP                                                                                                                                     |
| Function                          | FTP                                                                                                                                           |
| Data transmission rate            | 10/100 MBit/s                                                                                                                                 |
| <b>EtherNet/IP™</b>               | ✓                                                                                                                                             |
| Data transmission rate            | 10/100 MBit/s                                                                                                                                 |
| <b>PROFINET</b>                   | ✓                                                                                                                                             |
| Function                          | PROFINET Single Port                                                                                                                          |
| Data transmission rate            | 10/100 MBit/s                                                                                                                                 |
| <b>Operator interfaces</b>        | Web server                                                                                                                                    |
| <b>Configuration software</b>     | Web GUI (SensorApp configuration), SICK AppManager (IP determination and configuration, SensorApp installation), SICK AppStudio (programming) |
| <b>Data storage and retrieval</b> | Image and data logging via external FTP                                                                                                       |
| <b>Inputs/outputs</b>             | 2 × input, physical, switching<br>3 x configurable input / output, physical, switching                                                        |
| <b>Output current</b>             | ≤ 50 mA                                                                                                                                       |
| <b>Maximum encoder frequency</b>  | Max. 300 Hz                                                                                                                                   |

|                              |                                                                   |
|------------------------------|-------------------------------------------------------------------|
| <b>External illumination</b> | Via digital output (max. 24 V trigger)                            |
| <b>Control elements</b>      | 1 pushbutton                                                      |
| <b>Optical indicators</b>    | 9 LEDs (6 status displays, 2 LED alignment aids, 1 feedback spot) |

Ambient data

|                                      |                                             |
|--------------------------------------|---------------------------------------------|
| <b>Shock load</b>                    | EN 60068-2-27:2009-05                       |
| <b>Vibration load</b>                | EN 60068-2-6:2008-02                        |
| <b>Ambient operating temperature</b> | 0 °C ... +40 °C <sup>1)</sup> <sup>2)</sup> |
| <b>Storage temperature</b>           | -20 °C ... +70 °C <sup>1)</sup>             |

<sup>1)</sup> Permissible relative humidity: 0% ... 90% (non-condensing).

<sup>2)</sup> To use the product at the maximum ambient operating temperature, mount it with an aluminum mounting bracket (e.g., part number 2113160, 2112790).

Licenses

|                         |                                                                                                                                                       |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>License included</b> | Quality Inspection License<br>Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset. |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|

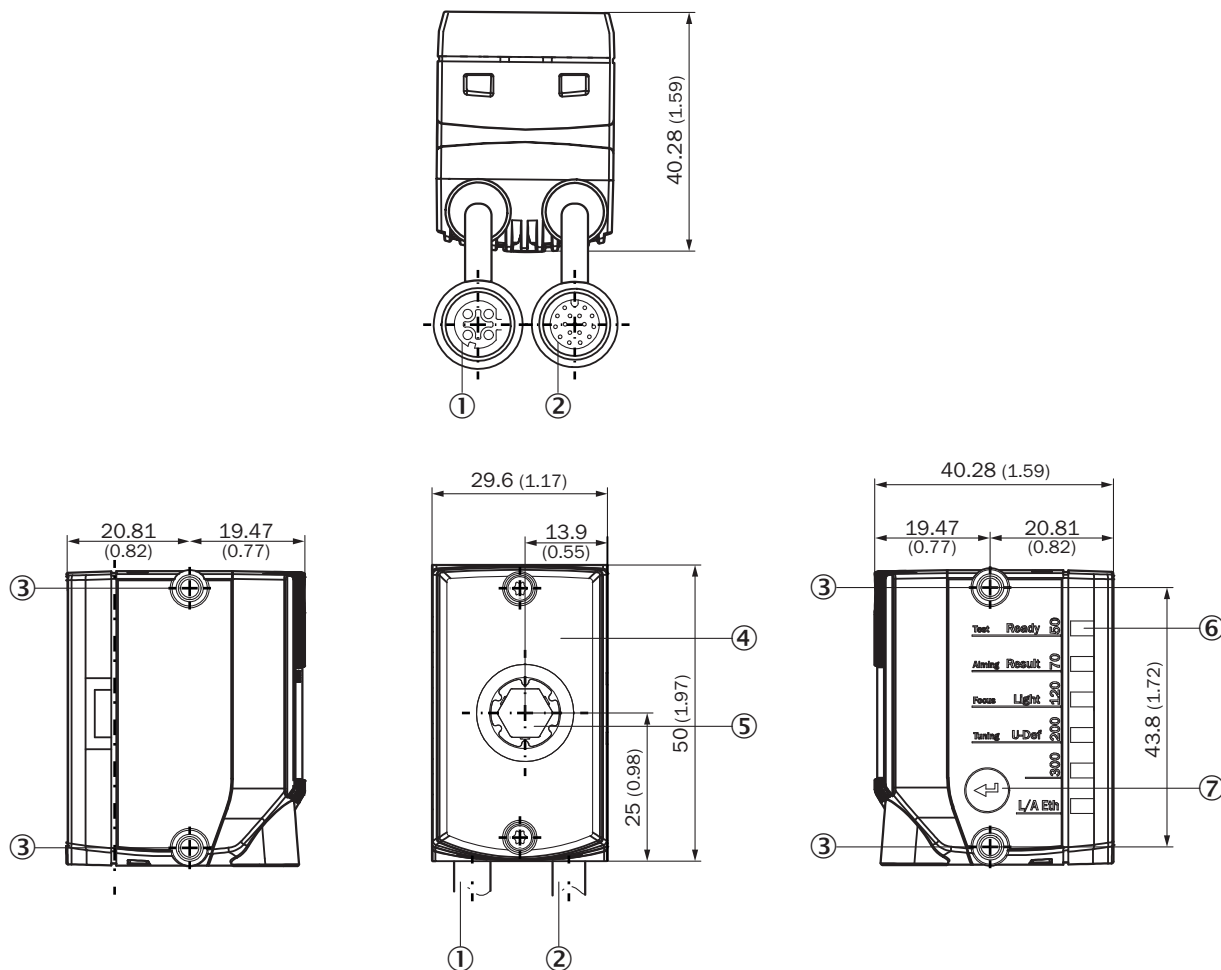
Certificates

|                                                                              |   |
|------------------------------------------------------------------------------|---|
| <b>EU declaration of conformity</b>                                          | ✓ |
| <b>UK declaration of conformity</b>                                          | ✓ |
| <b>ACMA declaration of conformity</b>                                        | ✓ |
| <b>China RoHS</b>                                                            | ✓ |
| <b>EAC certificate / DoC</b>                                                 | ✓ |
| <b>Profinet certificate</b>                                                  | ✓ |
| <b>ESD conformity</b>                                                        | ✓ |
| <b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b> | ✓ |

Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27310205 |
| <b>ECLASS 5.1.4</b>   | 27310205 |
| <b>ECLASS 6.0</b>     | 27310205 |
| <b>ECLASS 6.2</b>     | 27310205 |
| <b>ECLASS 7.0</b>     | 27310205 |
| <b>ECLASS 8.0</b>     | 27310205 |
| <b>ECLASS 8.1</b>     | 27310205 |
| <b>ECLASS 9.0</b>     | 27310205 |
| <b>ECLASS 10.0</b>    | 27310205 |
| <b>ECLASS 11.0</b>    | 27310205 |
| <b>ECLASS 12.0</b>    | 27310205 |
| <b>ETIM 5.0</b>       | EC001820 |
| <b>ETIM 6.0</b>       | EC001820 |
| <b>ETIM 7.0</b>       | EC001820 |
| <b>ETIM 8.0</b>       | EC001820 |
| <b>UNSPSC 16.0901</b> | 43211731 |

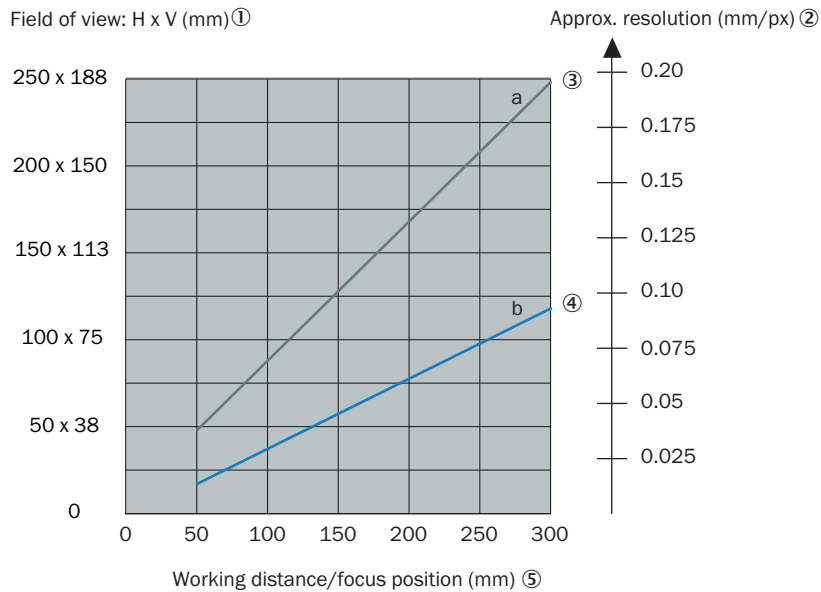
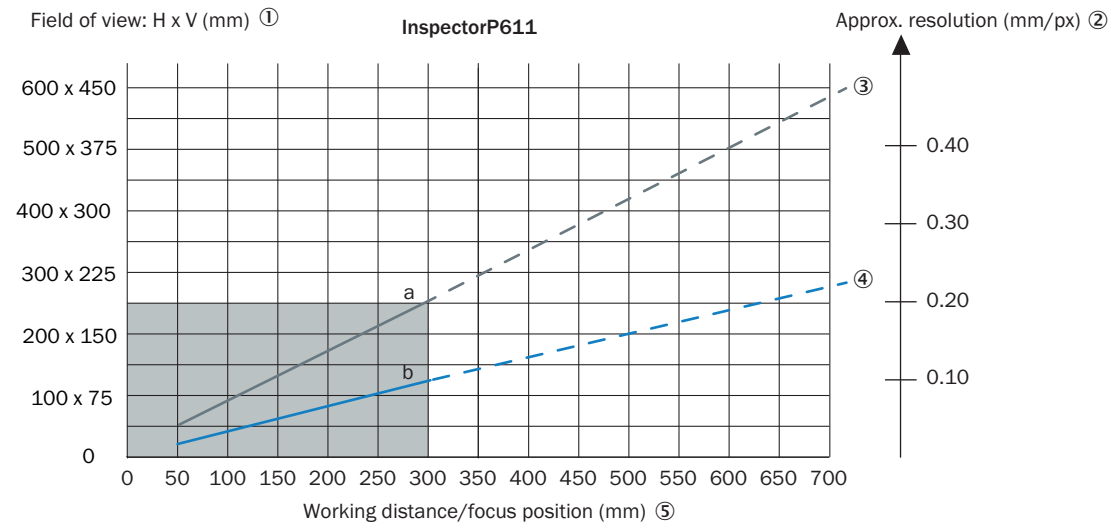
## Dimensional drawing



Dimensions in mm (inch)

- ① Connecting cable with "Ethernet" connection (female connector, M12, 4-pin, D-coded), length of cable: 0.25 m
- ② Connecting cable with "Power/Serial Data/CAN/I/O" connection (male connector, M12, 17-pin, A-coded), length of cable: 0.35 m
- ③ 4 x M4 blind tapped holes, 6.4 mm deep for mounting the device
- ④ Viewing window with 8 integrated illumination LEDs, 2 LED alignment aids, 1 feedback LED, 1 time-of-flight sensor
- ⑤ Optics, manual focus adjustment with the help of a focus adjustment tool
- ⑥ 6 status LEDs to display the focus position and working distance, device status and device function (3 display levels)
- ⑦ Function key

### Field of view



— a: f = 6 mm      - - - with external illumination ⑥  
 — b: f = 12 mm

Take into account the following aspects when designing the application: the field of view geometry of the device, and the position of the field of view in the space in front of the device. Possible angles at which the objects can arise in relation to the device. For the planned working distance: resultant field of view length and width as well as the approximate resolution.

① Field of view: Horizontal x vertical in mm

② approximate resolution in mm/px

③ f = 6 mm. Solid line with internal lighting, and dashed line with appropriate external illumination accessories.

④ f = 12 mm. Solid line with internal lighting, and dashed line with appropriate external illumination accessories.

⑤ Working distance/Focus position in mm

⑥ With external illumination

## Recommended accessories

Other models and accessories → [www.sick.com/InspectorP61x](http://www.sick.com/InspectorP61x)

|                                                                                   | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Type                | part no. |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|
| Junction boxes                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |          |
|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CDB650-204          | 1064114  |
| connectors and cables                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |          |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 17-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 17-pin, straight, A-coded</li> <li><b>Signal type:</b> Power, serial, CAN, digital I/Os</li> <li><b>Cable:</b> 3 m, 17-wire</li> <li><b>Description:</b> Power, suitable for 2 A, shielded, Serial, CAN, Digital I/Os</li> <li><b>Application:</b> Drag chain operation</li> </ul> | YM2A8D-030XXXF2A8D  | 6051194  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, shielded, PROFINET</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>         | YM2D24-020P-N1MRJA4 | 2106182  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)