



V2D8512P-1MCXXXAF0SXXXX

Inspector85x

2D MACHINE VISION

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
V2D8512P-1MCXXXAF0SXXXX	1139003

Other models and accessories → [www.sick.com/Inspector85x](http://www.sick.com/Inspector85x)



### 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 Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset.
<b>Expansion options</b>	The SICK Nova Tool plug-in enables customer-specific or new tools to be added. Development and customization of the tools is supported by SICK AppSpace and SICK AppStudio.
<b>License type</b>	The software is provided as a device license. A license is bound to a specific hardware ID.
<b>License period</b>	The license is issued without a time limit.
<b>Toolkit</b>	SICK algorithm API HALCON
<b>Image sensor</b>	CMOS monochrome
<b>Shutter technology</b>	Global-Shutter
<b>Optical focus</b>	Adjustable focus (manually)
<b>Working range</b>	500 mm ... 2,500 mm, depends on lens used <sup>1)</sup>
<b>Illumination</b>	To be ordered separately as accessories
<b>Feedback spot</b>	LED, Visible, green, 525 nm, ± 15 nm
<b>Alignment aid</b>	Laser, Red, 630 nm ... 680 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>Lens</b>	C-mount
<b>Optical format</b>	1"
<b>Note</b>	To be ordered separately as accessories
<b>Task</b>	Detecting - Standard objects

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

	Measuring - Dimension, contour and volume Measuring - Number Identifying - 2D code Identifying - OCR Identifying - Pattern Identifying - Classifying Identifying - Sorting Determining position - 2D position determination
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<sup>1)</sup> For details see field of view diagram.

## Mechanics/electronics

<b>Connection type</b>	1 x M12, 17-pin male connector, A-coded (Power, I/O) 1 x M12, 5-pin female connector (external illumination) 1 x M12, 8-pin female connector, X-coded (Gigabit Ethernet) 2 x M12, 4-pin female connector, D-coded (fieldbus Ethernet)
<b>Supply voltage</b>	24 V DC, $\pm 20\%$ <sup>1)</sup>
<b>Power consumption</b>	Typ. 24 W, $\pm 20\%$ <sup>2)</sup>
<b>Enclosure rating</b>	IP65 (IEC 60529:2013 +C1:2013 +C2:2015 +AMD2 C1:2019, EN 60529:1991 +A1:2010 +A2:2013 +AC:2019-02)
<b>Housing material</b>	Aluminum die cast
<b>Weight</b>	640 g, without lens and connection cables
<b>Dimensions (L x W x H)</b>	143.3 mm x 90 mm x 46 mm <sup>3)</sup>
<b>MTBF</b>	100,000 h <sup>4)</sup>

<sup>1)</sup> Voltage source in accordance with ES1 (EN 62368-1) or SELV (EN 60950-1).

<sup>2)</sup> For digital outputs without load.

<sup>3)</sup> Housing only, without lens and optics protection hood.

<sup>4)</sup> At 25 °C ambient operating temperature.

## Performance

<b>Sensor properties</b>	
Sensor resolution	4,096 px x 3,008 px (12 Mpixel)
Pixel size	2.74 $\mu\text{m}$ x 2.74 $\mu\text{m}$
Sensor size	11.22 mm x 8.22 mm
<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>Ethernet</b>	✓, TCP/IP
Function	FTP
Data transmission rate	10/100/1,000 Mbit/s, MAC address (device-specific), see type label
<b>EtherNet/IP™</b>	✓
Function	EtherNet/IP™ Dual Port
Data transmission rate	10/100 MBit/s
<b>PROFINET</b>	✓
Function	PROFINET Dual 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 x opto-decoupled inputs, physical, switching 4 x configurable input/output, physical, switching (3 on the Power-I/O connection, 1 on the external illumination connection)
<b>Output current</b>	≤ 50 mA
<b>Maximum encoder frequency</b>	Max. 50 kHz
<b>External illumination</b>	Internal voltage supply and trigger via external illumination connection (max. 1 A) or external voltage supply and trigger via digital output
<b>Optical indicators</b>	12 LEDs (10 x status displays, 2 x feedback spot)

### Ambient data

<b>Electromagnetic compatibility (EMC)</b>	
Interference resistance	IEC 61000-6-2:2016 / EN IEC 61000-6-2:2019
Interference emission	IEC 61000-6-4:2018 / EN IEC 61000-6-4:2019
<b>Vibration resistance</b>	EN 60068-2-6:2007, EN 60068-2-64:2019
<b>Shock resistance</b>	EN 60068-2-27:2008
<b>Ambient operating temperature</b>	0 °C ... +50 °C <sup>1)</sup>
<b>Storage temperature</b>	-20 °C ... +70 °C
<b>Relative humidity</b>	≤ 90 %, Non-condensing
<b>Altitude (above sea level)</b>	< 5,000 m

<sup>1)</sup> If the ambient operating temperature will be ≥ 45 °C, ensure adequate heat dissipation when mounting the device.

### Licenses

<b>License included</b>	Quality Inspection License Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset.
<b>Expansion options</b>	The SICK Nova Tool plug-in enables customer-specific or new tools to be added. Development and customization of the tools is supported by SICK AppSpace and SICK AppStudio.

### Certificates

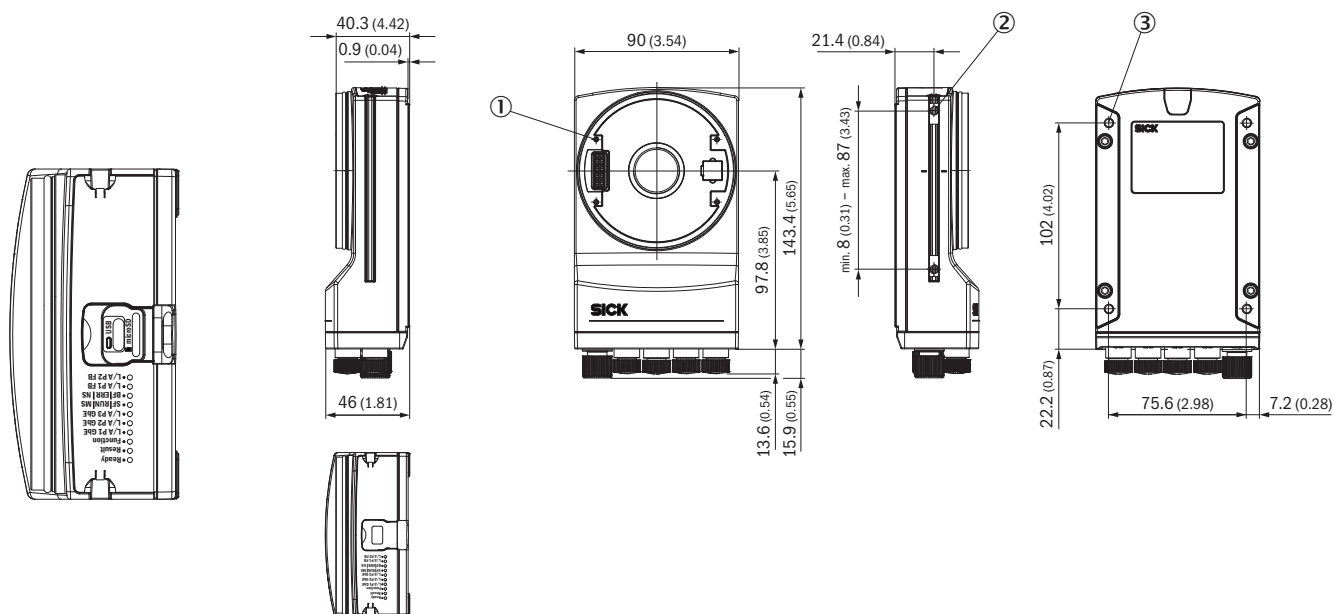
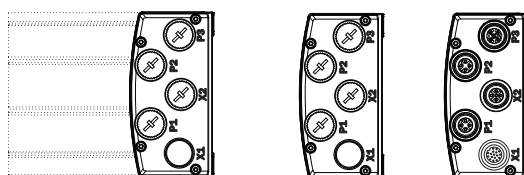
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓
<b>Profinet certificate</b>	✓
<b>Ethernet/IP certificate</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

### 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

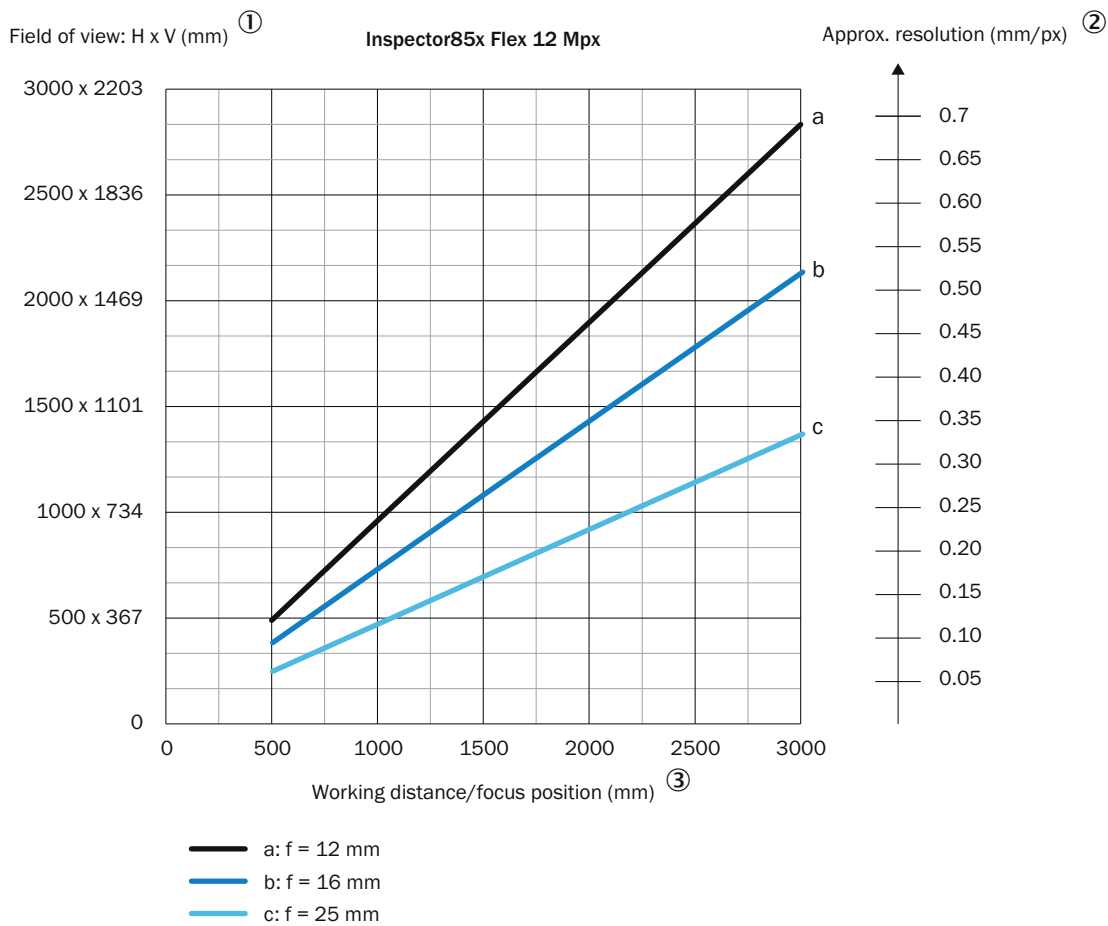
Dimensional drawing



Dimensions in mm (inch)

- ① 4 tapped blind holes, M2.5, 5.5 mm deep, for mounting the spacer
- ② 2 M5 sliding nuts; 5.5 mm deep; pivoting; as an alternative method of mounting the product
- ③ 4 tapped blind holes, M5, 5.5 mm deep for mounting the product

Field of view V2D8512P



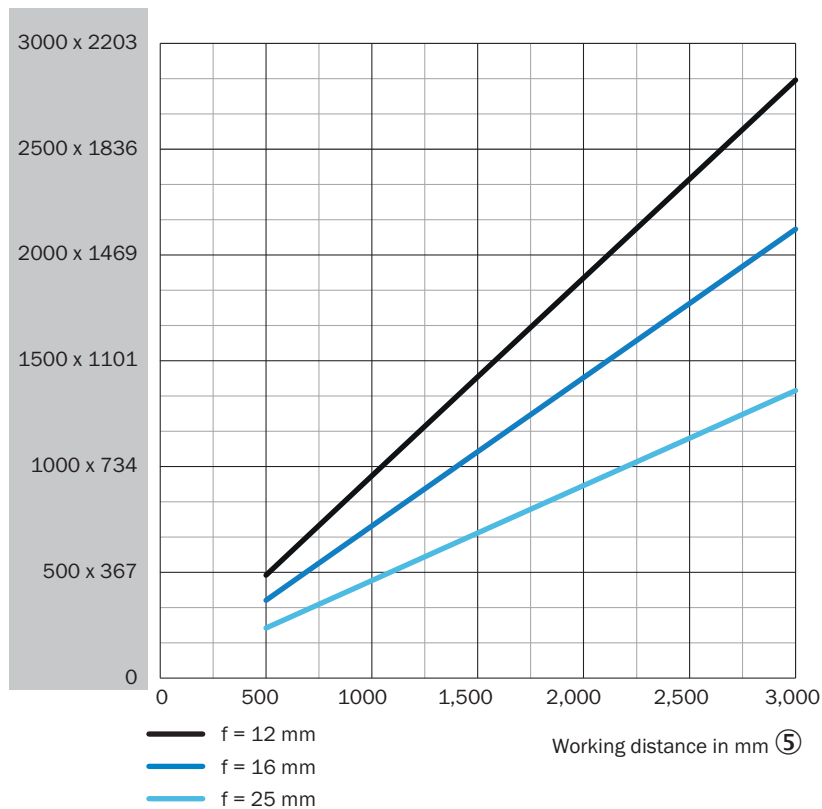
① Field of view: Horizontal x vertical in mm

② approximate resolution in mm/px

③ Working distance/Focus position in mm

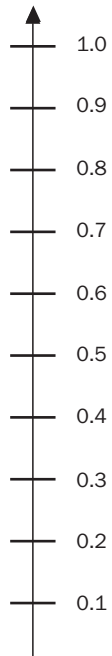
Field of view

Perceived area of field of view: H x V (mm) ①

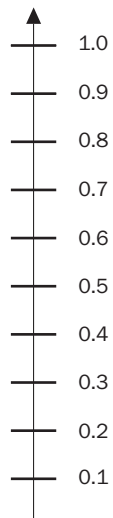


Min. resolution in mm ②

1D code ③

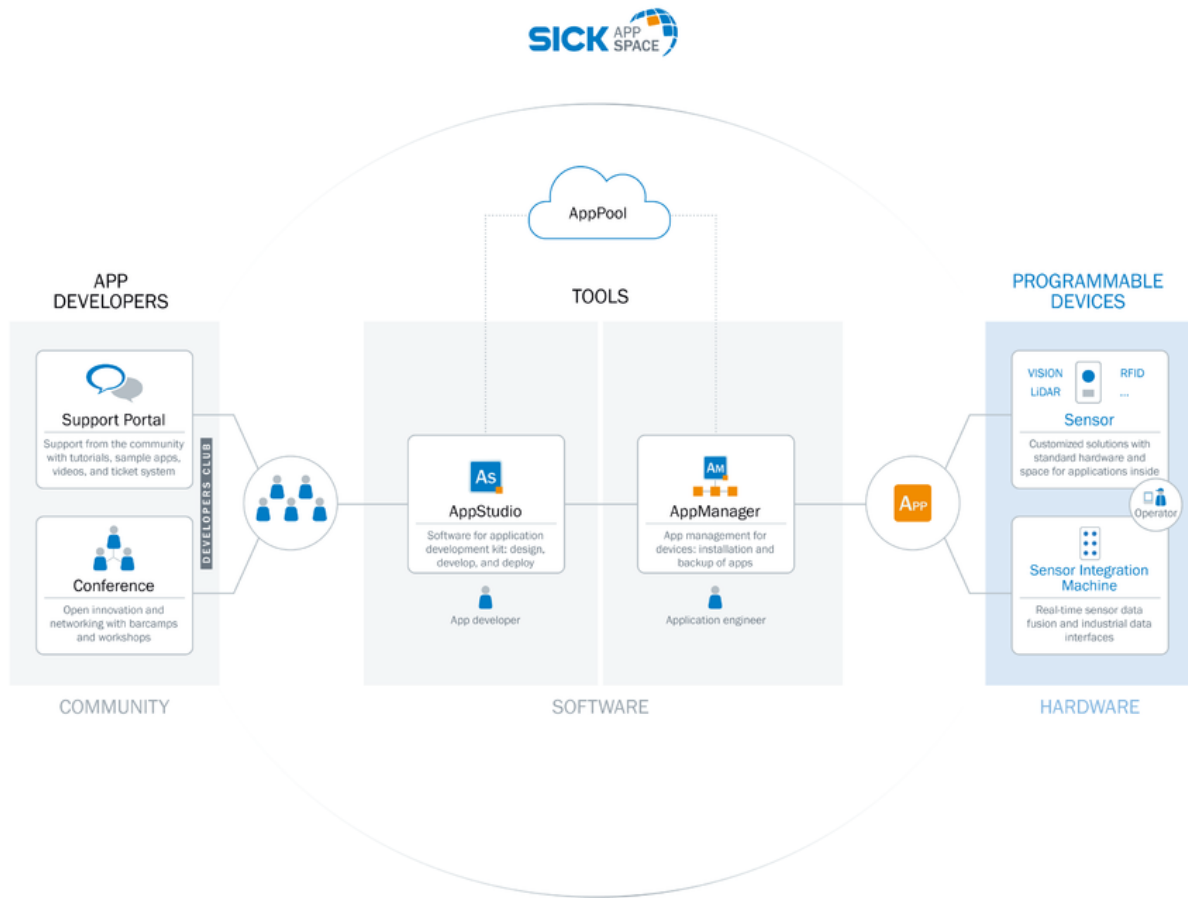


2D code ④




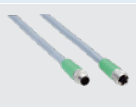
- ① perceived field of view area: horizontal x vertical (mm)
- ② Minimum resolution in mm
- ③ 1D code
- ④ 2D code
- ⑤ Working distance in mm

### Overview SICK AppSpace



### Recommended accessories

Other models and accessories → [www.sick.com/Inspector85x](http://www.sick.com/Inspector85x)

	Brief description	Type	part no.
<b>Junction boxes</b>			
		CDB650-204	1064114
<b>connectors and cables</b>			
	<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

## 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)