



V2D8505P-1MCXXXAF0SXXXX

Inspector85x

2D MACHINE VISION

SICK
Sensor Intelligence.



Ordering information

Type	part no.
V2D8505P-1MCXXXAF0SXXXX	1139002

Other models and accessories → www.sick.com/Inspector85x



Detailed technical data

Features

Technology	2D snapshot
Programmable	✓
Configurable	✓
Application software	Nova Inspector
License included	Intelligent Inspection License
Expansion options	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.
License type	The software is provided as a device license. A license is bound to a specific hardware ID.
License period	The license is issued without a time limit.
Toolkit	SICK algorithm API HALCON
Image sensor	CMOS monochrome
Shutter technology	Global-Shutter
Optical focus	Adjustable focus (manually)
Working range	500 mm ... 2,500 mm, depends on lens used ¹⁾
Illumination	To be ordered separately as accessories
Feedback spot	LED, Visible, green, 525 nm, ± 15 nm
Alignment aid	Laser, Red, 630 nm ... 680 nm
Laser class	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)
Lens	C-mount
Optical format	1"
Note	To be ordered separately as accessories
Task	Detecting - Standard objects Measuring - Dimension, contour and volume Measuring - Number

¹⁾ For details see field of view diagram.

	Identifying - 2D code Identifying - OCR Identifying - Pattern Identifying - Classifying Identifying - Sorting Determining position - 2D position determination
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¹⁾ For details see field of view diagram.

Mechanics/electronics

Connection type	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)
Supply voltage	24 V DC, $\pm 20\%$ ¹⁾
Power consumption	Typ. 24 W, $\pm 20\%$ ²⁾
Enclosure rating	IP65 (IEC 60529:2013 +C1:2013 +C2:2015 +AMD2 C1:2019, EN 60529:1991 +A1:2010 +A2:2013 +AC:2019-02)
Housing material	Aluminum die cast
Weight	640 g, without lens and connection cables
Dimensions (L x W x H)	143.3 mm x 90 mm x 46 mm ³⁾
MTBF	100,000 h ⁴⁾

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

²⁾ For digital outputs without load.

³⁾ Housing only, without lens and optics protection hood.

⁴⁾ At 25 °C ambient operating temperature.

Performance

Sensor properties	
Sensor resolution	2,464 px x 2,048 px (5 Mpixel)
Pixel size	2.74 μm x 2.74 μm
Sensor size	6.75 mm x 5.61 mm
Scan/frame rate	40 Hz ¹⁾

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

Interfaces

Ethernet	✓, TCP/IP
Function	FTP
Data transmission rate	10/100/1,000 Mbit/s, MAC address (device-specific), see type label
EtherNet/IP™	✓
Function	EtherNet/IP™ Dual Port
Data transmission rate	10/100 MBit/s
PROFINET	✓
Function	PROFINET Dual Port
Data transmission rate	10/100 MBit/s
Operator interfaces	Web server
Configuration software	Web GUI (SensorApp configuration), SICK AppManager (IP determination and configuration, SensorApp installation), SICK AppStudio (programming)
Data storage and retrieval	Image and data logging via external FTP

Inputs/outputs	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)
Output current	≤ 50 mA
Maximum encoder frequency	Max. 50 kHz
External illumination	Internal voltage supply and trigger via external illumination connection (max. 1 A) or external voltage supply and trigger via digital output
Optical indicators	12 LEDs (10 x status displays, 2 x feedback spot)

Ambient data

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

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

Licenses

License included	Intelligent Inspection License
Expansion options	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

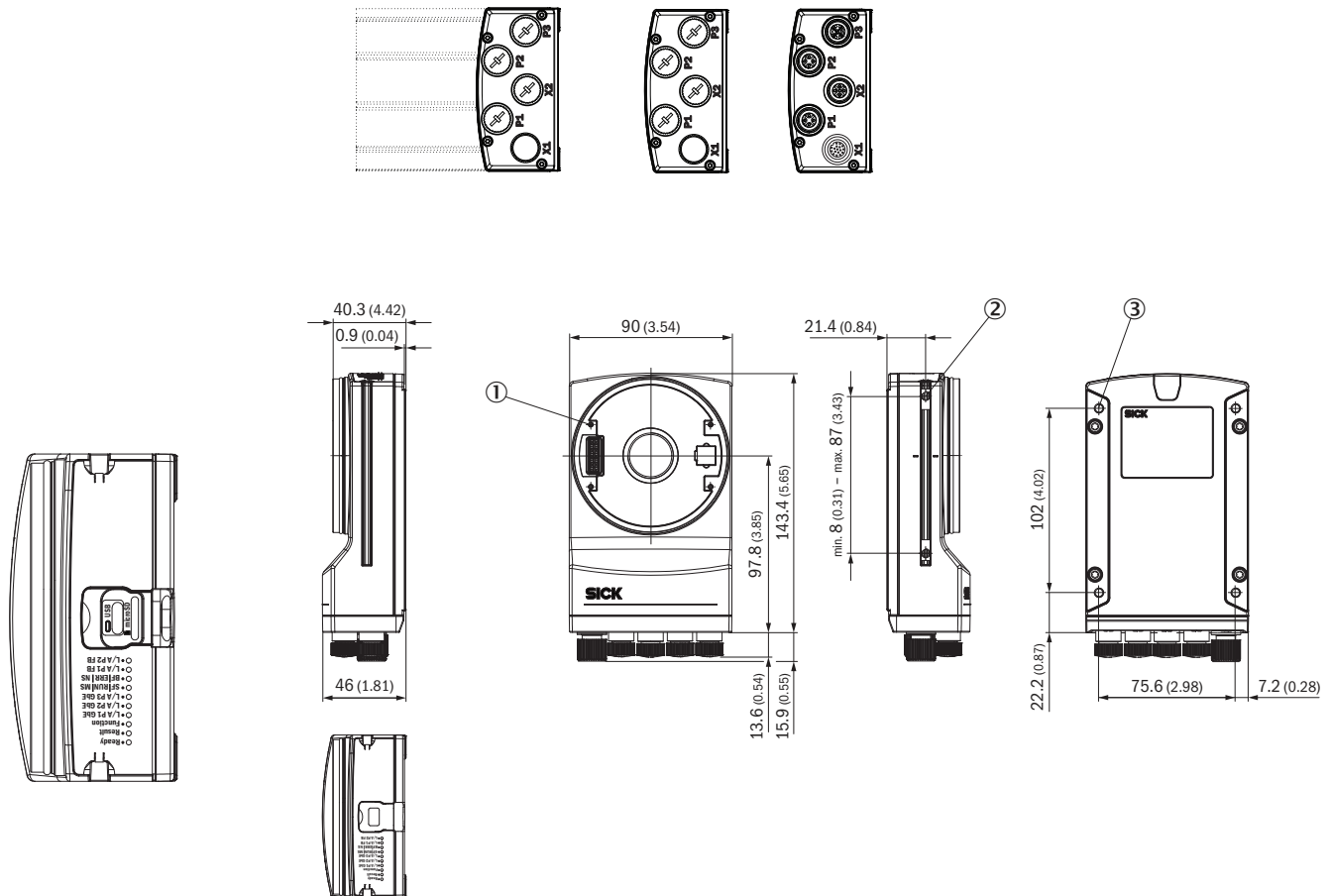
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Profinet certificate	✓
Ethernet/IP certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27310205
ECLASS 5.1.4	27310205
ECLASS 6.0	27310205
ECLASS 6.2	27310205
ECLASS 7.0	27310205
ECLASS 8.0	27310205
ECLASS 8.1	27310205
ECLASS 9.0	27310205

ECLASS 10.0	27310205
ECLASS 11.0	27310205
ECLASS 12.0	27310205
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	43211731

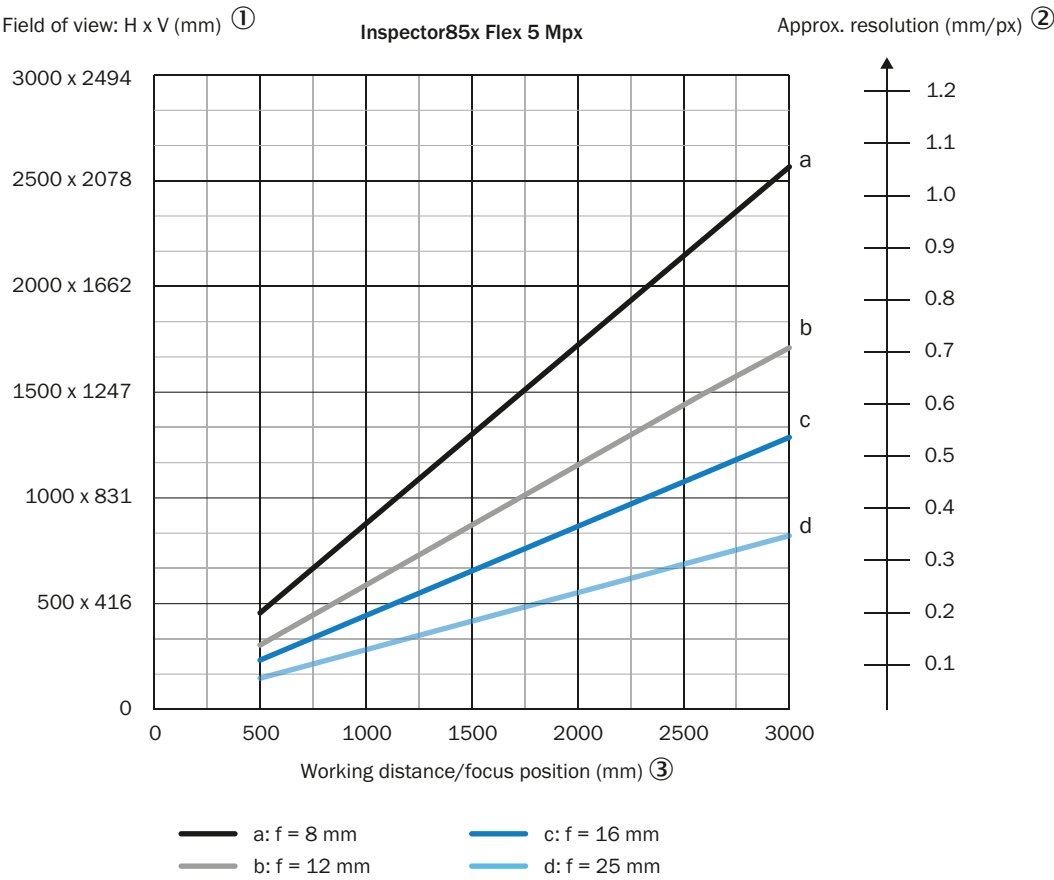
Dimensional drawing



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 V2D8505P



- ① Field of view: Horizontal x vertical in mm
② approximate resolution in mm/px
③ Working distance/Focus position in mm

Overview SICK AppSpace



Recommended accessories

Other models and accessories → www.sick.com/Inspector85x

	Brief description	Type	part no.
Junction boxes			
		CDB650-204	1064114
connectors and cables			
	Connection type head A: Female connector, M12, 17-pin, straight, A-coded Connection type head B: Male connector, M12, 17-pin, straight, A-coded Signal type: Power, serial, CAN, digital I/Os Cable: 3 m, 17-wire Description: Power, suitable for 2 A, shielded, Serial, CAN, Digital I/Os Application: Drag chain operation	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