SICK.COM



NOVA

DATA SHEET

V2D621P-2MDFCB5

InspectorP62x
2D machine vision

SICK Sensor Intelligence



NOVA

2D MACHINE VISION

V2D621P-2MDFCB5

ORDERING INFORMATION

Type	part no.
V2D621P-2MDFCB5	1130942

Further device versions and accessories at www.sick.com/InspectorP62x

DETAILED TECHNICAL DATA

FEATURES

Technology	2D snapshot
Programmable	✓
Configurable	✓
Application software	Nova Inspector
License included	Quality 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.
Toolkit	SICK algorithm API HALCON
Image sensor	CMOS monochrome
Shutter technology	Global-Shutter
Optical focus	Adjustable focus (electrical)
Working range	70 mm ... 1,500 mm [1]
Illumination	Integrated
Illumination color	Infrared, LED, invisible, 850 nm, ± 25 nm
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. 50” from June 24, 2007 (IEC 60825-1:2014, EN 60825-1:2014)
LED class	Risk group 1 (IEC 62471 (2006-07) / EN 62471 (2008-09))
Spectral range	Approx. 800 nm ... 900 nm
Lens	
Focal length	9.6 mm
Task	Detecting - Standard objects Measuring - Dimension, contour and volume Measuring - Number Identifying - 2D code Identifying - OCR

[1] For details see field of view diagram.

	Identifying - Pattern Identifying - Classifying Identifying - Sorting Determining position - 2D position determination

[1] For details see field of view diagram.

MECHANICS/ELECTRONICS

Supply voltage	12 V DC ... 24 V DC, ± 10 %
Power consumption	Typ. 4 W
Enclosure rating	IP65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))
Protection class	III
Housing material	Aluminum die cast
Window material	Glass
Weight	170 g
Dimensions (L x W x H)	71 mm x 43 mm x 35.6 mm
MTBF	75,000 h

PERFORMANCE

Sensor properties	
Sensor resolution	1,280 px x 1,024 px (1.3 MP)
Scan/frame rate	50 Hz [1]

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

INTERFACES

Serial	✓, RS-232, RS-422
Data transmission rate	300 Baud ... 115.2 kBaud
Ethernet	✓, TCP/IP, UDP
Function	FTP, HTTP, HTTPS, NTP
Data transmission rate	10/100 MBit/s
CAN	✓
Remark	Not yet available in the pre-installed Quality Inspection SensorApp
Function	SICK CAN sensor network (CAN controller/CAN device)
EtherNet/IP™	✓
Data transmission rate	10/100 MBit/s
EtherCAT®	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600
Remark	Not yet available in the pre-installed Quality Inspection SensorApp
PROFINET	✓
Function	PROFINET Single Port
Data transmission rate	10/100 MBit/s
PROFIBUS DP	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
Remark	Not yet available in the pre-installed Quality Inspection SensorApp
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 microSD memory card and external FTP
Inputs/outputs	2 opto-decoupled inputs, 4 inputs/outputs, configurable
Output current	≤ 100 mA
Maximum encoder frequency	Max. 300 Hz
External illumination	Via digital output (max. 24 V trigger)

[1] Not yet available in the pre-installed Quality Inspection SensorApp.

Control elements	2 buttons [1]
Optical indicators	16 LEDs (5 status displays, 10 LED bar graphs, 1 green/red feedback spot)
Acoustic indicators	Beeper [1]

[1] Not yet available in the pre-installed Quality Inspection SensorApp.

AMBIENT DATA

Shock load	EN 60068-2-27:2009-05
Vibration load	EN 60068-2-6:2008-02
Ambient operating temperature	0 °C ... +50 °C [1]
Storage temperature	–20 °C ... +70 °C [1]

[1] Permissible relative humidity: 0% ... 90% (non-condensing).

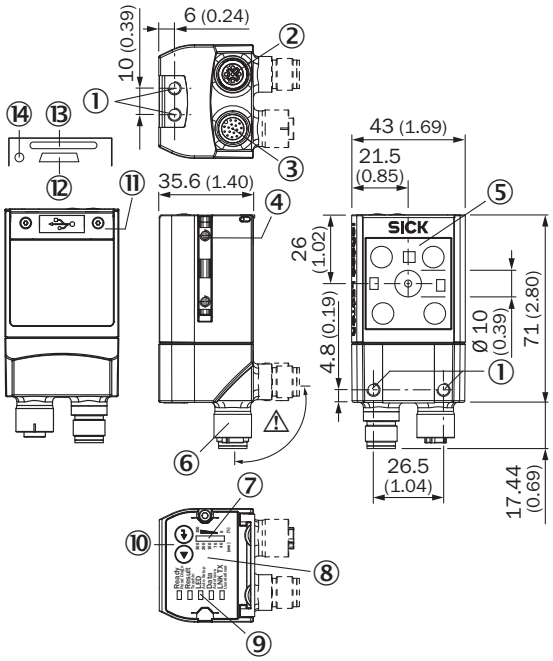
LICENSES

License included	Quality Inspection License
Product type	Software
License type	Device license
License description	The Quality Inspection license enables productive use of a large subset of the tools of a SICK Nova SensorApp. The Quality Inspection toolkit is used to ensure that products comply with exact requirements after production, for instance when it comes to dimensions and angular degrees. 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.
Number of usage units	Full version
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. Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset.

CERTIFICATES

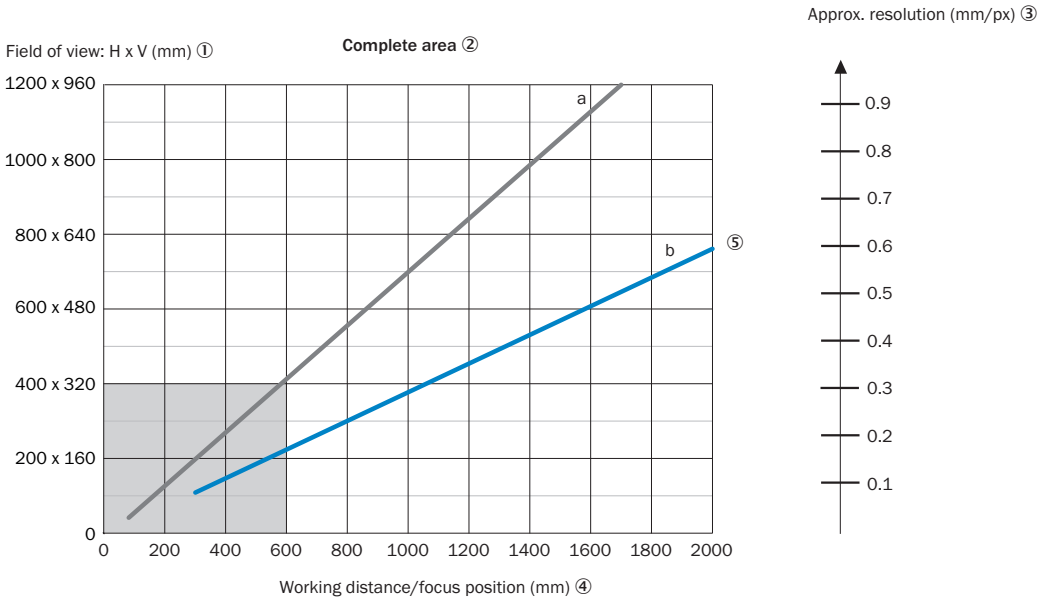
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Profinet certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

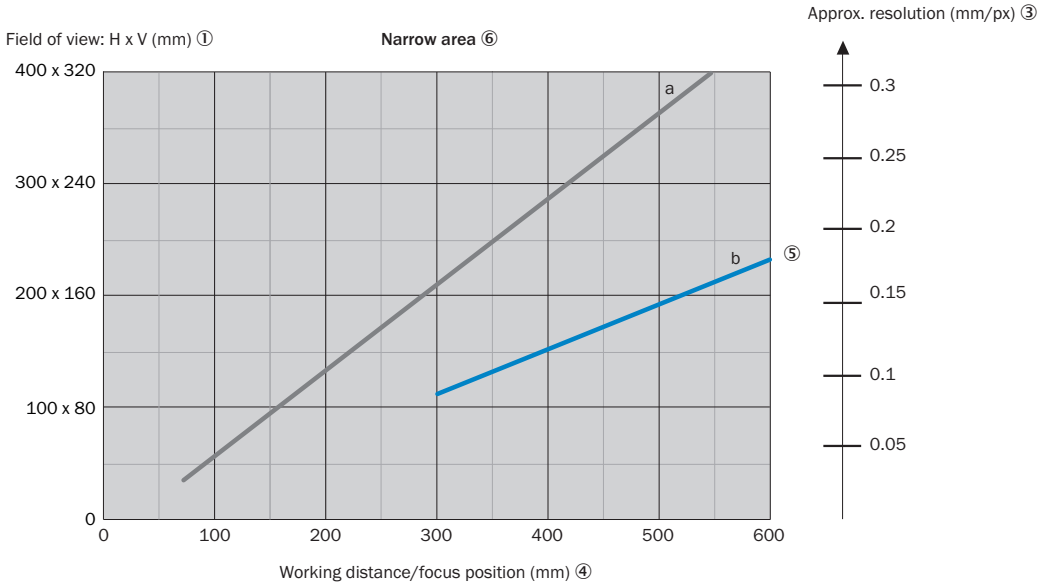
DIMENSIONAL DRAWING



Dimensions in mm (inch)
① M5 blind tapped holes, 5 mm deep (4 x), for mounting the sensor
② “Ethernet” connection, 4-pin M12 female connector, D-coded
③ “Power/Serial Data/CAN/I/O” connection, 17-pin M12 male connector, A-coded
④ sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
⑤ reading window with internal illumination LEDs (4 x)
⑥ swivel connector unit
⑦ Bar graph
⑧ beeper (under housing cover)
⑨ LEDs for status display (2 levels), 5 x
⑩ Function button (2 x)
⑪ Cover (flap)
⑫ “USB” connection (female connector, 5-pin, type Micro-B) interface for temporary use (service)
⑬ Slot for microSD memory card
⑭ LED for microSD memory card

FIELD OF VIEW





a: f = 9.6 mm
b: f = 17.1 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 complete area
③ approximate resolution in mm/px
④ Working distance/Focus position in mm
⑤ Focal length of lens, here example for f = 17.1 mm
⑥ Narrow range

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1130942



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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