SICK.COM



NOVA

DATA SHEET

V2D611P-MMIBI4

InspectorP61x
2D machine vision

SICK Sensor Intelligence



2D MACHINE VISION

V2D611P-MMIBI4

ORDERING INFORMATION

Type	part no.
V2D611P-MMIBI4	1124946

Further device versions and accessories at www.sick.com/InspectorP61x

DETAILED TECHNICAL DATA

FEATURES

Technology	2D snapshot
Programmable	✓
Configurable	✓
Application software	Nova Inspector
License included	Quality Inspection License Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset.
Toolkit	SICK algorithm API HALCON
Image sensor	CMOS monochrome
Shutter technology	Global-Shutter
Optical focus	Adjustable focus (manual)
Working range	50 mm ... 300 mm, with internal illumination, can be extended to longer distances when using external illumination [1]
Illumination	Integrated
Illumination color	Infrared, LED, invisible, 850 nm, ± 15 nm
Feedback spot	LED, Visible, green, 525 nm, ± 15 nm
Alignment aid	LED, Red, 630 nm, ± 15 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)
LED class	Risk group 0
Spectral range	Approx. 400 nm ... 900 nm
Lens	
Focal length	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

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

PERFORMANCE

Sensor properties	
Sensor resolution	1,280 px x 960 px (1.2 MP)
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

Serial	✓, RS-232
Remark	Not yet available in the pre-installed Quality Inspection SensorApp
Data transmission rate	300 Baud ... 115.2 kBaud
Ethernet	✓, TCP/IP
Function	FTP
Data transmission rate	10/100 MBit/s
EtherNet/IP™	✓
Data transmission rate	10/100 MBit/s
PROFINET	✓
Function	PROFINET Single 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 × input, physical, switching 3 x configurable input / output, physical, switching 1 x output, physical, switching
Output current	≤ 50 mA
Maximum encoder frequency	Max. 300 Hz
External illumination	Via digital output (max. 24 V trigger)
Control elements	1 pushbutton
Optical indicators	9 LEDs (6 status displays, 2 LED alignment aids, 1 feedback spot)

AMBIENT DATA

Shock load	EN 60068-2-27:2009-05
Vibration load	EN 60068-2-6:2008-02
Ambient operating temperature	0 °C ... +40 °C [1) 2)]
Storage temperature	–20 °C ... +70 °C [1)]

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

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

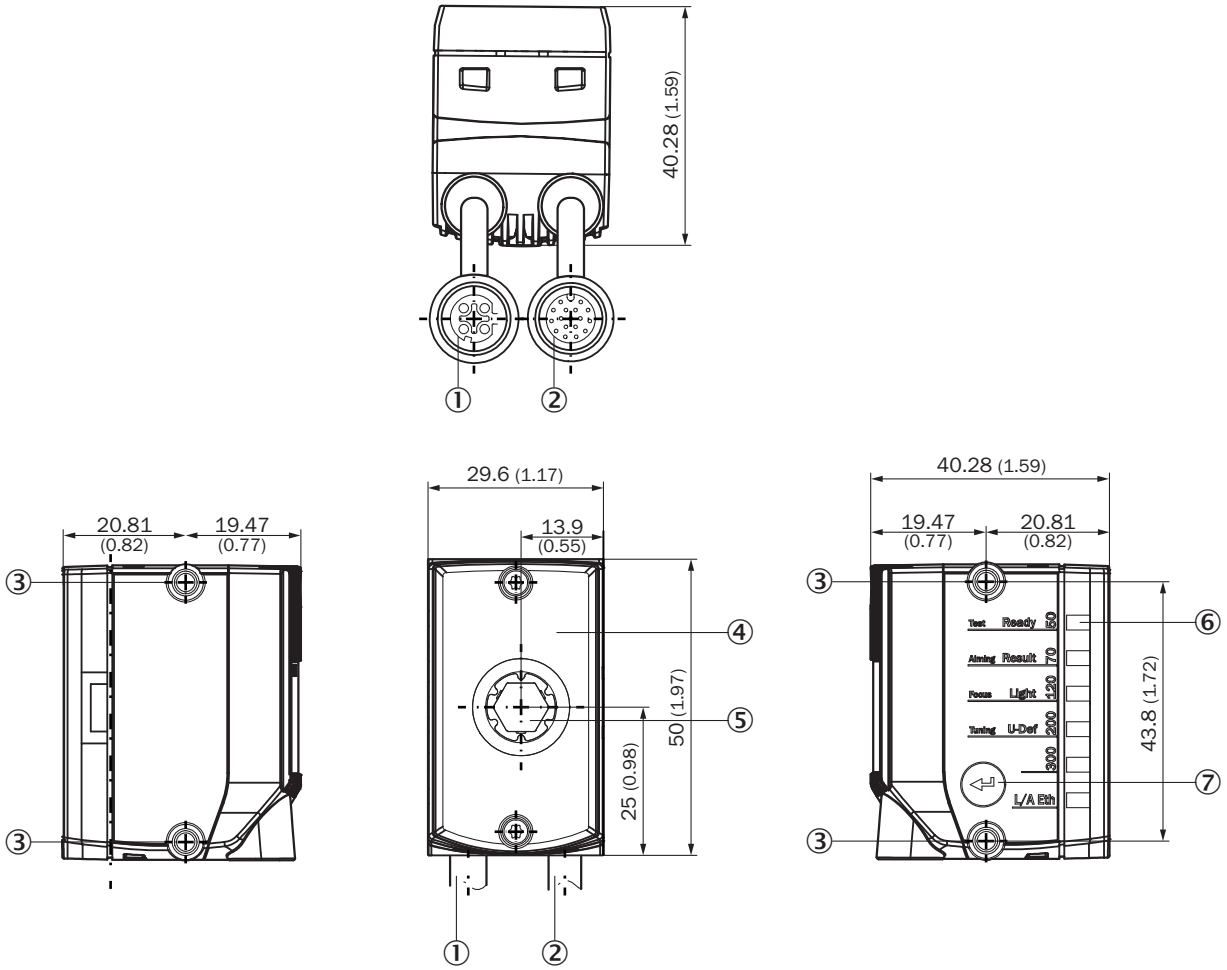
LICENSES

License included	Quality Inspection License Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset.

CERTIFICATES

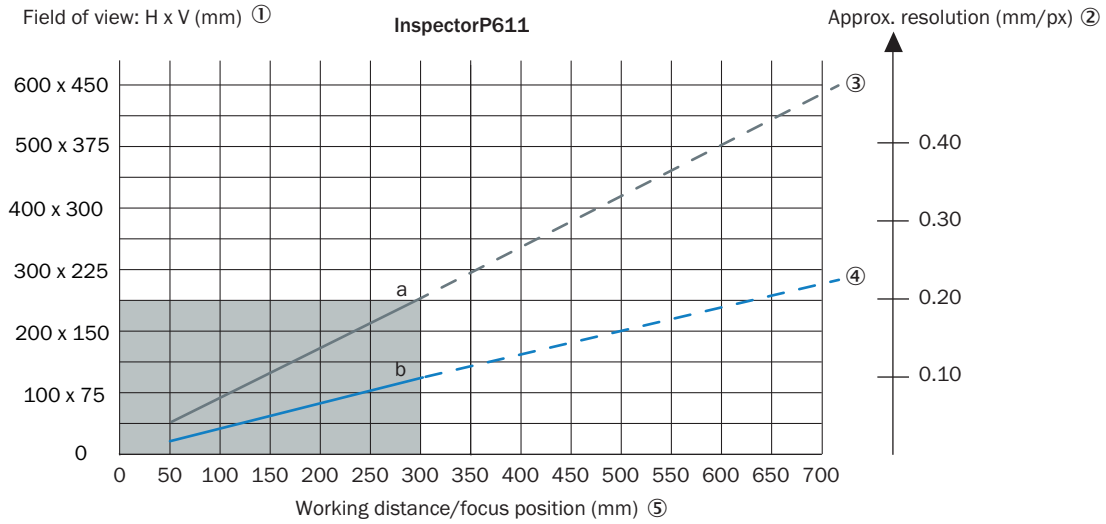
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Profinet certificate	✓
ESD conformity	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

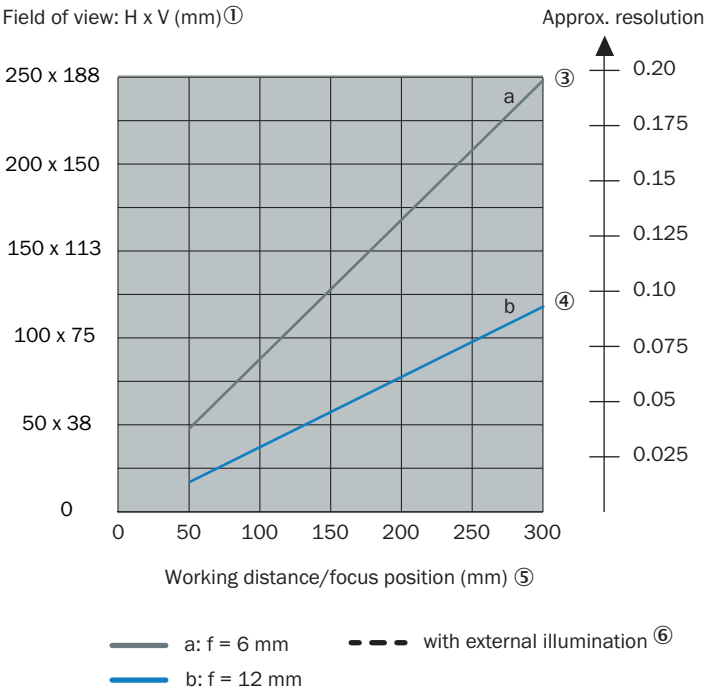
DIMENSIONAL DRAWING



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





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

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/1124946

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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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