



V2D611P-MMICI4

InspectorP61x

2D MACHINE VISION

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
V2D611P-MMICI4	1124947

Other models and accessories → www.sick.com/InspectorP61x



Detailed technical data

Features

Technology	2D snapshot
Product category	Programmable, configurable
SensorApp	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
Sensor	CMOS matrix sensor, grayscale values
Shutter technology	Global-Shutter
Optical focus	Adjustable focus (manually)
Working distance	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 12 mm
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

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 resolution	1,280 px x 960 px (1.2 Mpixel)
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⁾

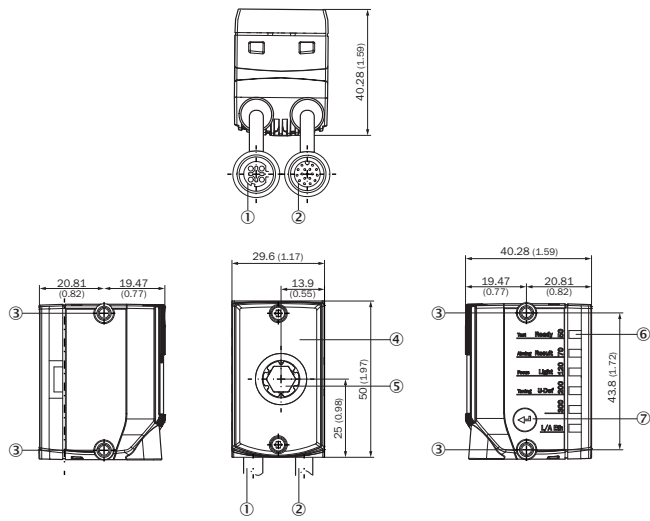
¹⁾ Permissible relative humidity: 0% ... 90% (non-condensing).

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

Classifications

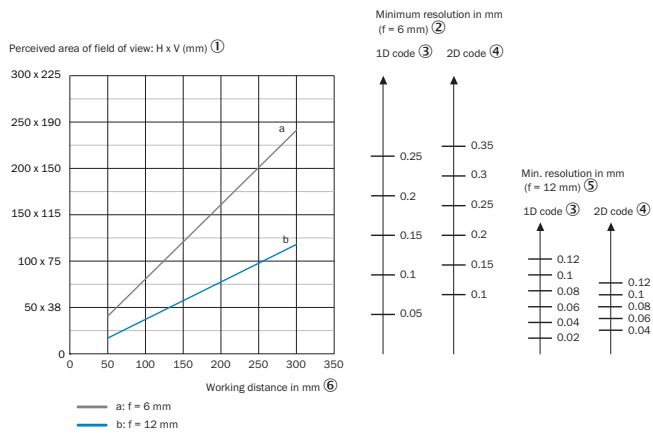
ECLASS 5.0	27310205
ECLASS 5.1.4	27310205
ECLASS 6.0	27310205
ECLASS 6.2	27310205
ECLASS 7.0	27310205
ECLASS 8.0	27310205
ECLASS 8.1	27310205
ECLASS 9.0	27310205
ECLASS 10.0	27310205
ECLASS 11.0	27310205
ECLASS 12.0	27310205
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	43211731

Dimensional drawing (Dimensions in mm (inch))

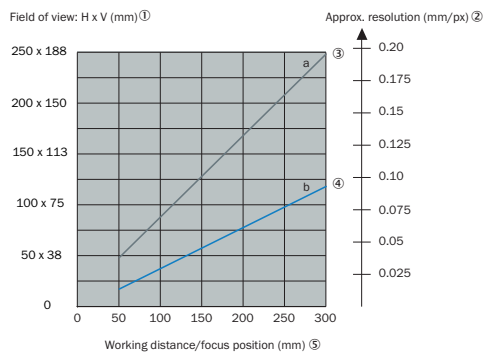
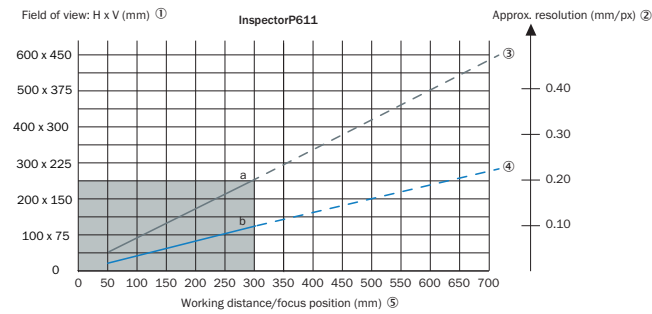


- ① Connecting cable with "Ethernet" connection (female connector, M12, 4-pin, D-coded), length of cable: 0.25 m
- ② Connecting cable with "Power/Serial Data/CAN/I/O" connection (male connector, M12, 17-pin, A-coded), length of cable: 0.35 m
- ③ 4 x M4 blind tapped holes, 6.4 mm deep for mounting the 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



- ① Perceived field of view area: horizontal x vertical (mm)
- ② Minimum resolution in mm (f = 6 mm)
- ③ 1D code
- ④ 2D code
- ⑤ Minimum resolution in mm (f = 12 mm)
- ⑥ Working distance in mm



— 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


Overview




SICK AppSpace



Recommended accessories

Other models and accessories → www.sick.com/InspectorP61x

	Brief description	Type	Part no.
Modules			
	<ul style="list-style-type: none"> Accessory group: 4DproConnectivity Product family: Connection Device Basic Sub product family: CDB650 Supported products: Lector series CLV62x - CLV64x (depending on type) CLV69xRFID read/write device InspectorP series Brief description: Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals. 	CDB650-204	1064114

	Brief description	Type	Part no.
Optical filters			
	Visible block filter for increasing ambient light immunity when using infrared illumination. Cannot be used with feedback spot or alignment aid lights.	NIR fitting filter Lector61x/InspectorP61x	2122304
Others			
	<ul style="list-style-type: none"> • 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, serial, CAN, digital I/Os, suitable for 2 A, shielded, to connection module CDB650 • Application: Drag chain operation 	YM2A8D-030XXF2A8D	6051194
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, D-coded • Connection type head B: Male connector, RJ45, 4-pin, straight • Signal type: Ethernet, PROFINET • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Ethernet, PROFINET, shielded • Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-020PN1MRJA4	2106182

Recommended services

Additional services → www.sick.com/InspectorP61x

	Type	Part no.
Extended warranty		
<ul style="list-style-type: none"> • Product area: Machine vision, LiDAR sensors, safety camera sensors, Safety laser scanners, Safety radar sensors, Radar sensors, Fixed mount barcode scanners, Image-based code readers, RFID, Mobile handheld scanners • Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery). • Duration: Five-year warranty from delivery date. 	Extended warranty for a total of five years from delivery date	1680671

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