



V2D631P-2MXSXB0

InspectorP63x

2D MACHINE VISION

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
V2D631P-2MXSB0	1082299

Other models and accessories → www.sick.com/InspectorP63x



Detailed technical data

Features

Task	Classification Identifying Position determination 1D code 2D code Presence inspection Quality check Measuring, 2D OCR
Technology	2D snapshot
Product category	Programmable
SensorApp	Nova InspectorP
License included	Quality Inspection License Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset.
Toolkit	HALCON
Sensor	CMOS matrix sensor, grayscale values
Shutter technology	Global-Shutter
Optical focus	Adjustable focus
Illumination	To be ordered separately as accessories
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)
Spectral range	Approx. 400 nm ... 900 nm
Lens	S-mount

Optical format	1/1.8"
Note	To be ordered separately as accessories

Mechanics/electronics

Connection type	1 x M12, 17-pin male connector (serial, I/Os, voltage supply) 1 x M8, 4-pin female connector (USB, not used) 1 x M12, 8-pin female connector (gigabit Ethernet) 1 x M8, 4-pin female connector (external illumination)
Supply voltage	12 V DC ... 24 V DC, $\pm 20\%$
Power consumption	Typ. 10 W, $\pm 20\%$
Enclosure rating	IP67 (EN 60529 (1991-10), EN 60529/A2 (2002-02))
Protection class	III (EN 60950-1 (2014-08))
Housing material	Aluminum die cast
Window material	PMMA
Weight	430 g
Dimensions (L x W x H)	108 mm x 63 mm x 46 mm ¹⁾

¹⁾ Housing only, without lens and optics protection hood.

Performance

Sensor resolution	1,280 px x 1,024 px (1.3 Mpixel)
Scan/frame rate	50 Hz

Interfaces

Serial	✓, RS-232, RS-422
Data transmission rate	300 Baud ... 115.2 kBaud
Ethernet	✓, TCP/IP
Function	FTP, HTTP
Data transmission rate	10/100/1,000 Mbit/s
CAN	✓
Function	SICK CAN sensor network (CAN controller/CAN device)
EtherNet/IP™	✓
Data transmission rate	10/100/1,000 Mbit/s
PROFINET	✓
Function	PROFINET Single Port, PROFINET Dual Port (optional via external connection module CDF600-2)
Data transmission rate	10/100 Mbit/s
Operator interfaces	Web server
Configuration software	SICK AppStudio
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	1 kHz
External illumination	Via digital output (max. 24 V trigger) or external illumination connection
Control elements	2 buttons
Optical indicators	11 LEDs (5 x status display, 5 x LED bar graph, 1 green/red feedback spot)

Acoustic indicators	Beeper
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Ambient data

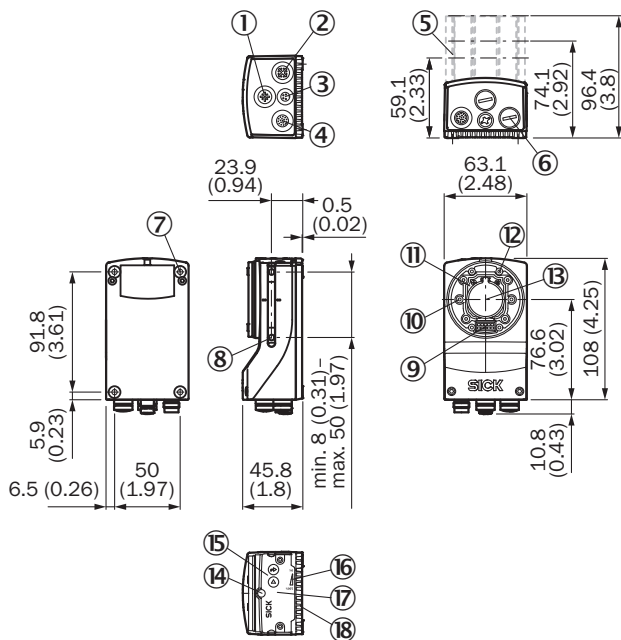
Shock load	EN 60068-2-27:2009-05
Vibration load	EN 60068-2-6:2008-02
Ambient operating temperature	0 °C ... +50 °C ¹⁾
Storage temperature	-20 °C ... +70 °C ¹⁾

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

Classifications

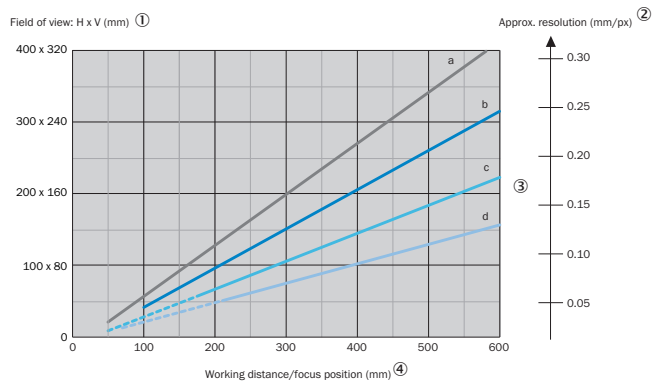
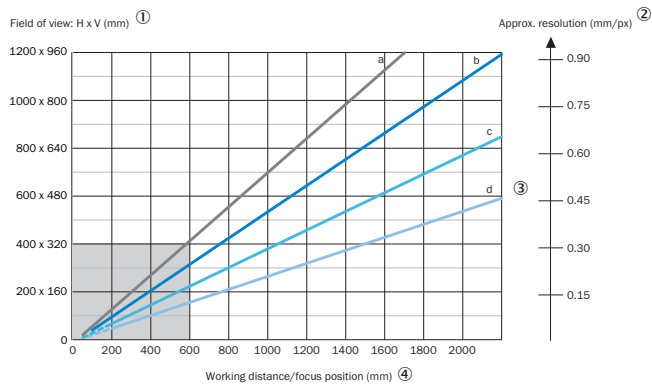
ECLASS 5.0	27310205
ECLASS 5.1.4	27310205
ECLASS 6.0	27310205
ECLASS 6.2	27310205
ECLASS 7.0	27310205
ECLASS 8.0	27310205
ECLASS 8.1	27310205
ECLASS 9.0	27310205
ECLASS 10.0	27310205
ECLASS 11.0	27310205
ECLASS 12.0	27310205
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC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

Dimensional drawing (Dimensions in mm (inch))



- ① “External light” connection (external illumination unit, female connector, M12, 4-pin, A-coded)
- ② “Ethernet” connection (Gigabit Ethernet, female connector, M12, 8-pin, X-coded)
- ③ “USB” connection (female connector, type M8, 4-pin), for temporary use as a service interface only
- ④ “Power/Serial Data/CAN/I/O” connection (male connector, M12, 17-pin, A-coded)
- ⑤ Optics protection hood (length: 22.7 mm, 37.7 mm or 60 mm)
- ⑥ 4 protective caps for sealing off the electrical connections as required for enclosure rating IP67 (delivery condition)
- ⑦ 4 tapped blind holes, M5, 5.5 mm deep for mounting the device
- ⑧ 2 sliding nuts, M5, 5.5 mm deep, as an alternative method of mounting the device
- ⑨ Connection for an integrable illumination unit (VI55I ring illumination unit)
- ⑩ 2 laser alignment aids
- ⑪ S-mount or C-mount optics module
- ⑫ 4 blind tapped holes, 2.5 mm for mounting the spacers for the integrable illumination (VI55I ring illumination unit)
- ⑬ Optical axis and center of the image sensor
- ⑭ Basic device: Manual focus screw for an S-mount lens, accessible via the round opening in the housing cover. To secure the focus setting, cover the round opening with a self-adhesive label. Complete device: The opening is already covered by a label.
- ⑮ 2 function keys
- ⑯ 5 bar graph LEDs
- ⑰ Hinged cover on the top side of the device, access to the microSD memory card and the manual focus screw (S-mount)
- ⑱ 5 status LEDs (2 levels)

Field of view

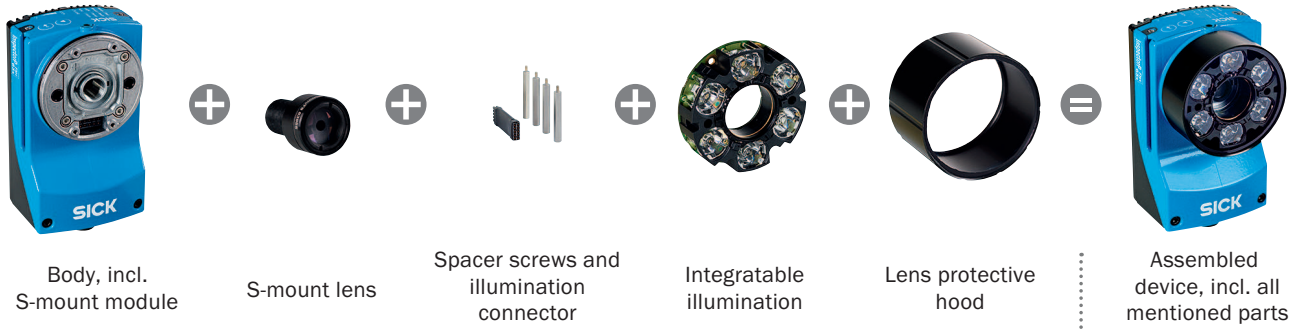


- a: f = 9.6 mm
- b: f = 12.5 mm
- c: f = 17.5 mm
- d: f = 25.0 mm
- - - Optional distance ring required ⑤

For S-mount and standard C-mount lenses, spacer rings are needed for working distances shorter than approximately 10 times the focal length. For compact C-mount lenses, spacer rings are not needed, but the built-in illumination cannot be used for distances shorter than 300 mm.

- ① Field of view: Horizontal x vertical in mm
- ② Approximate resolution in mm/px
- ③ Lens focal length
- ④ Working distance/Focus position in mm
- ⑤ Optional spacer rings required

Selection Guide



InspectorP631 V2D631P-2MXSXBO 1082299	InspectorP632 V2D632P-2MXSXBO 1082301	Focal length	Aperture	Integratable illumination	Lens protective hood	
	Focal length 9,6 mm Aperture F8 2079336	Wide	F8	Wide, white 2078428	Short - 22.7 mm 2079176	
				Wide, blue 2083813	Short - 22.7 mm 2079176	
				Wide, IR 2101371	Short - 22.7 mm 2092587	
		Focal length 12.5 mm Aperture F8 on request	F8	Medium	Medium, white 2078430	Short - 22.7 mm 2079176
					Medium, blue 2083814	Short - 22.7 mm 2079176
					Wide, IR 2101371	Short - 22.7 mm 2092587
		Focal length 17.5 mm Aperture F8 5330231	F8	Medium	Medium, white 2078430	Short - 22.7 mm 2079176
					Medium, blue 2083814	Short - 22.7 mm 2079176
					Medium, IR 2098834	Short - 22.7 mm 2092587
	Focal length 25 mm Aperture F8 2076656	F8	Medium - 15 mm 2079501	Narrow, white 2078431	Medium - 37.7 mm 2079127	
				Narrow, blue 2083812	Medium - 37.7 mm 2079127	
				Medium, IR 2098834	Medium - 37.7 mm 2092590	



Overview







SICK AppSpace



Recommended accessories

Other models and accessories → www.sick.com/InspectorP63x

	Brief description	Type	Part no.
Lenses and accessories			
	Optics protection hood, short, enclosure rating IP 67, length: 22.7 mm, PMMA, for use with S-mount lens with focal length 9.6 mm or 17.5 mm	Optics protection hood (PMMA)	2079176
	S-mount 1/1.8", focal length 9.6 mm, aperture 8	S-mount lens	2079336

	Brief description	Type	Part no.
Illuminations			
	Integratable lighting, white lighting color, wide, suitable for S-mount and compact C-mount lenses with a focal length of 9.6 mm	VI55I-WH0766M0	2078428
Mounting brackets and plates			
	Mounting bracket set consisting of mounting bracket, cooling plate, includes angle display for setting the tilt angle	Mounting bracket	2076735
Other mounting accessories			
	Sliding nut, M5, short	Sliding nut	5324896
Plug connectors and cables			
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 8-pin, straight, X-coded • Connection type head B: Male connector, RJ45, 8-pin, straight • Signal type: Ethernet, Gigabit Ethernet • Cable: 2 m, 8-wire, PUR, halogen-free • Description: Ethernet, Gigabit Ethernet, shielded • Application: Zones with oils and lubricants 	YM2X18-020EG1MRJA8	2106258
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-030XXXF2A8D	6051194
Modules			
	<ul style="list-style-type: none"> • Sub product family: CDB650 • Supported products: Lector® series, CLV62x - CLV64x (depending on type), CLV69x, RFID 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

Recommended services

Additional services → www.sick.com/InspectorP63x

	Type	Part no.
Extended warranty		
<ul style="list-style-type: none"> • Product area: Identification solutions, machine vision, Detection and ranging solutions, safety camera sensors, Safety laser scanners, Safety radar sensors • 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