



V2D631P-2MXCXB0

InspectorP63x

2D MACHINE VISION

SICK
Sensor Intelligence.



Ordering information

Type	part no.
V2D631P-2MXCXB0	1082298

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



Detailed technical data

Features

Technology	2D snapshot
Programmable	✓
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	HALCON
Image sensor	CMOS monochrome
Shutter technology	Global-Shutter
Optical focus	Adjustable focus
Illumination	To be ordered separately as accessories
Illumination color	White Red Blue Infrared
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	C-mount
Optical format	1/1.8"
Note	To be ordered separately as accessories
Task	Detecting - Standard objects Measuring - Dimension, contour and volume Measuring - Number Identifying - 2D code

	Identifying - OCR Identifying - Pattern Identifying - Classifying Identifying - Sorting Determining position - 2D position determination
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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 socket (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 properties	
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	Max. 1 kHz
External illumination	Via digital output (max. 24 V trigger) or external illumination connection

Control elements	2 buttons
Optical indicators	11 LEDs (5 status displays, 16 LEDs, 5 LED bar graphs, 1 green/red feedback spot)
Acoustic indicators	Beeper

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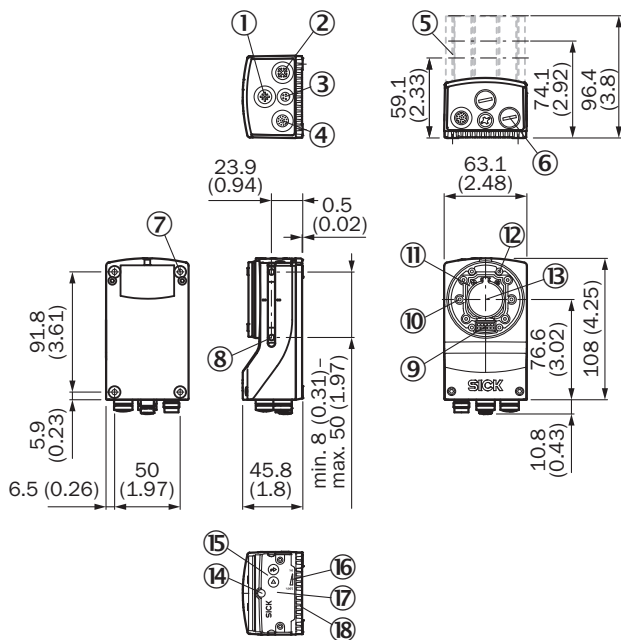
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
KC Mark certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓
4Dpro	✓

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

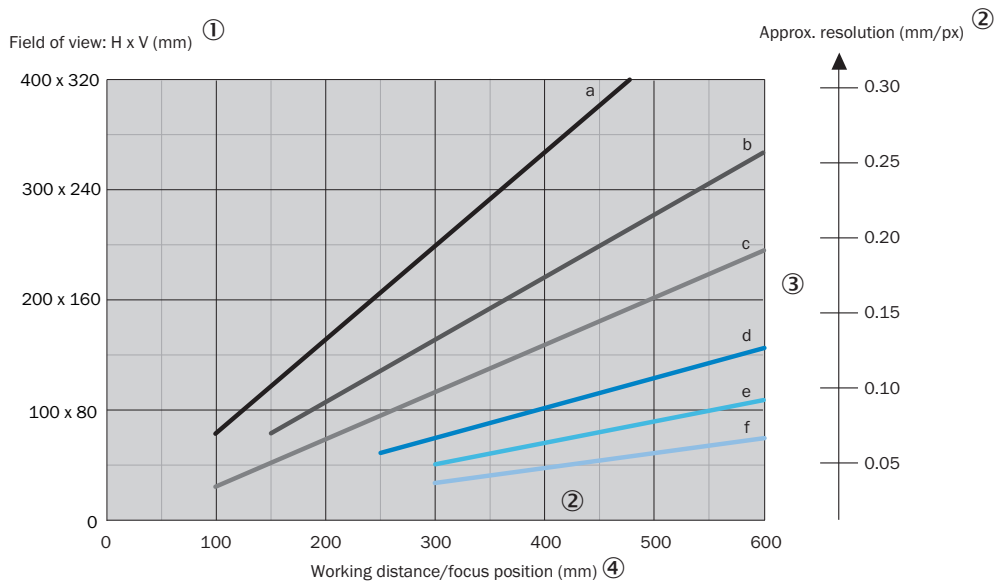
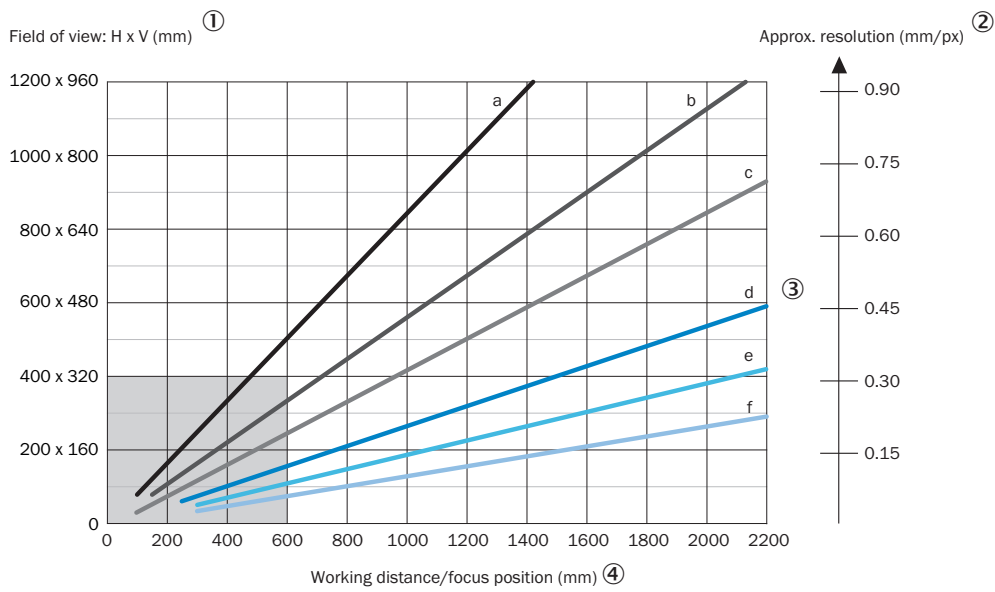
Dimensional drawing



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 product
- ⑧ 2 M5 sliding nuts; 5.5 mm deep; pivoting; as an alternative method of mounting the product
- 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

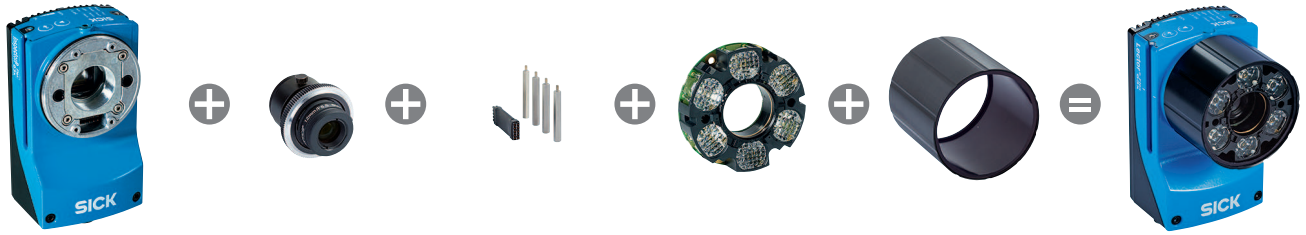


- a: f = 8.0 mm (only C-mount standard)
- b: f = 12.0 mm
- c: f = 16.0 mm
- d: f = 25.0 mm
- e: f = 35.0 mm
- f: f = 50.0 mm

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

Selection Guide



Body, incl. C-mount module

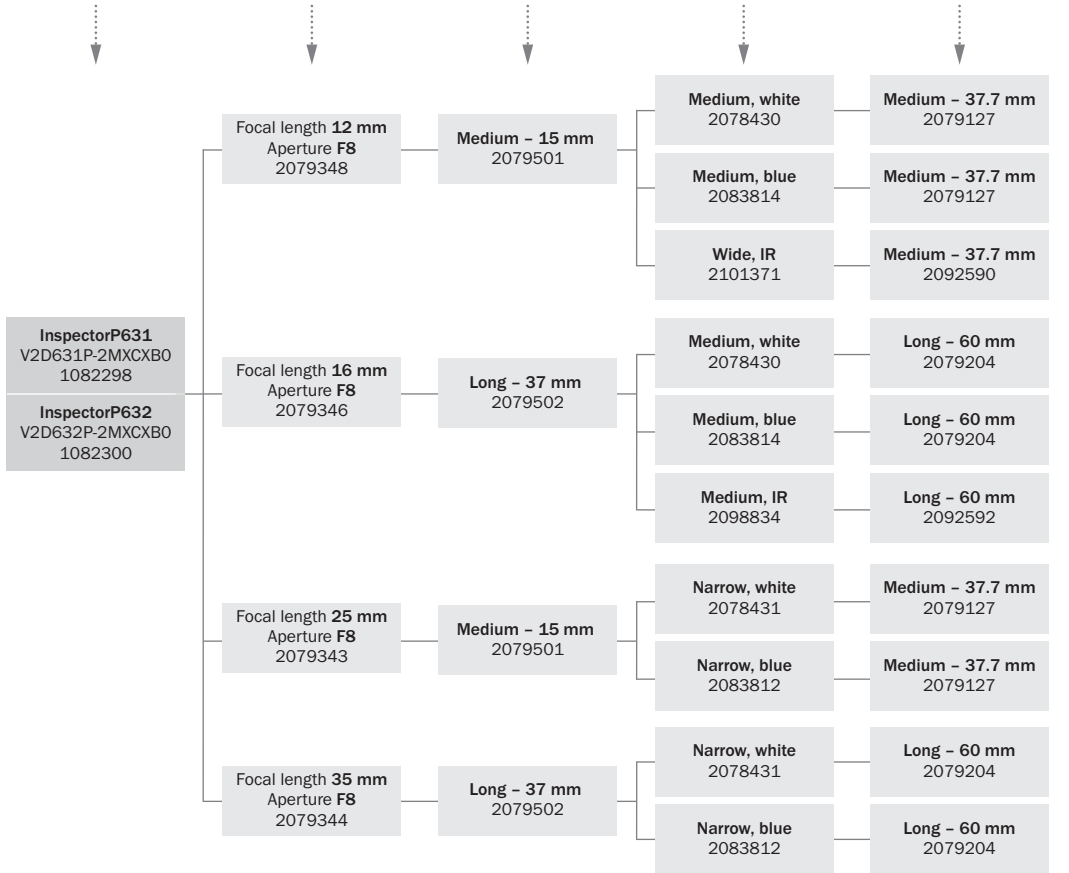
Compact C-mount lens

Spacer screws and illumination connector

Integratable illumination

Lens protective hood

Assembled device, incl. all mentioned parts



Selection Guide



Body, incl.
C-mount module

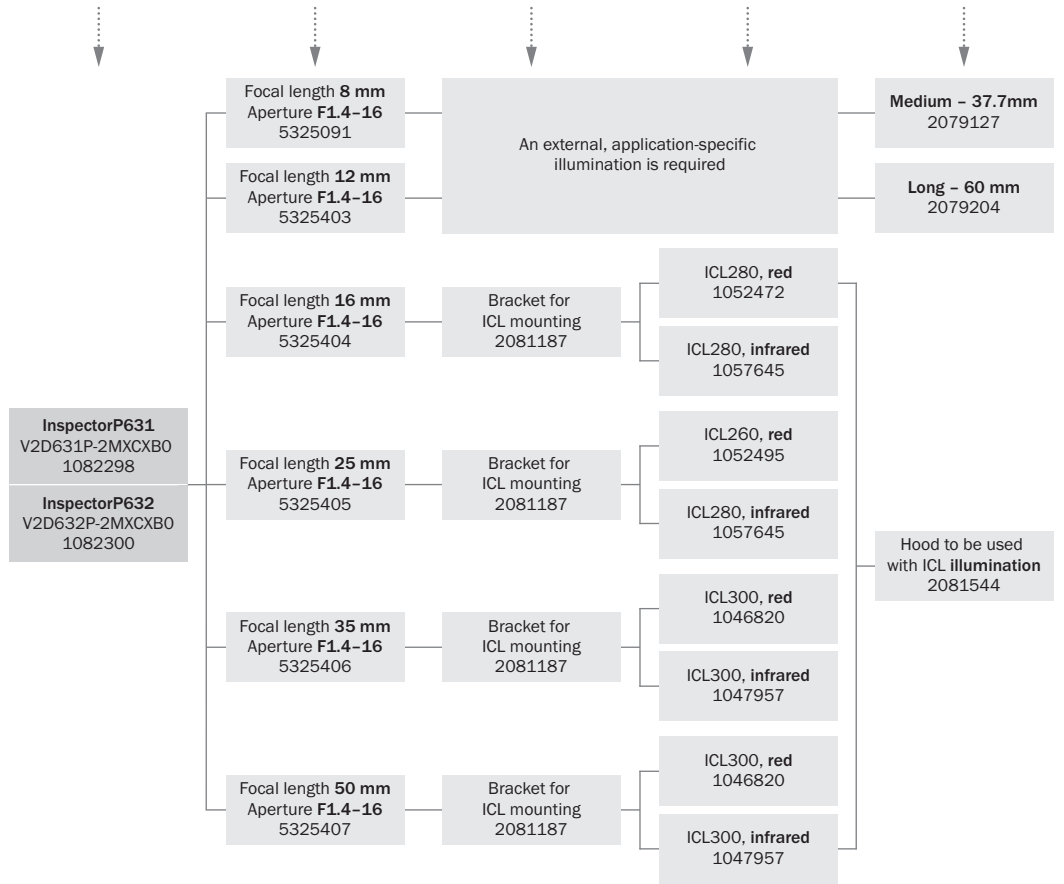
C-mount lens

Mounting bracket

External
illumination

Lens protective
hood

Assembled
device, incl. all
ICL parts



Overview SICK AppSpace



Recommended accessories

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

	Brief description	Type	part no.
reflectors and optics			
	<ul style="list-style-type: none"> Description: Optics protection hood, medium, enclosure rating IP 67, length: 37.7 mm, PMMA, for use with compact C-mount lens with focal length 12 mm or 25 mm and S-mount lens with focal length 25 mm 	Optics protection hood (PMMA)	2079127
	<ul style="list-style-type: none"> Description: Compact C-mount 2/3", focal length 12 mm, aperture 8 	C-mount lens	2079348
	<ul style="list-style-type: none"> Description: Distance bracket and light extension connector (medium) for mounting integratable lighting, length 15 mm, used with compact C-mount lenses with focal length of 12 mm or 25 mm and S-mount lens with focal length 25mm 	Distance bracket	2079501
	<ul style="list-style-type: none"> Description: Integratable lighting, lighting color white, medium, suitable for S-mount and compact C-mount lenses with a focal length of 12 mm, 16 mm and 17.5 mm 	VI55I-WH1441M0	2078430
Junction boxes			
		CDB650-204	1064114
Mounting systems			
	<ul style="list-style-type: none"> Description: Sliding nut, M5, short Usable for: Lector62x, EventCam 	Sliding nut	5324896
	<ul style="list-style-type: none"> Description: Mounting bracket set consisting of mounting bracket, cooling plate, includes angle display for setting the tilt angle Suitable for: Lector63x, Inspector63x, Lector83x – up to 40 °C ambient operating temperature, Insepctor83x – up to 40 °C ambient operating temperature, Lector83x – up to 40 °C ambient operating temperature, Insepctor83x – up to 40 °C ambient operating temperature, Lector63x, Inspector63x 	Mounting bracket set with inclination angle -40° - 40°	2076735
connectors and cables			
	<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, suitable for 2 A, shielded, Serial, CAN, Digital I/Os Application: Drag chain operation 	YM2A8D-030XXXF2A8D	6051194
	<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, shielded, Gigabit Ethernet Application: Zones with oils and lubricants 	YM2X18-020EG1M-RJA8	2106258
	<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: 3 m, 8-wire, PUR, halogen-free Description: Ethernet, shielded, Gigabit Ethernet Application: Zones with oils and lubricants 	YM2X18-030EG1M-RJA8	2145693

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:

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