



IMAGE-BASED CODE READERS



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Ordering information

Туре	Part no.
V2D632R-MKSEB8	1074300

Included in delivery: Optics protection hood (PMMA) (1), S-mount lens (1), VI55I-WH1441M0 (1), V2D632R-MXSXB0 (1) Other models and accessories → www.sick.com/Lector63x

Illustration may differ



Detailed technical data

Features	
Variant	Complete device
Optical focus	Adjustable focus (manually)
Sensor	CMOS matrix sensor, grayscale values
Sensor resolution	1,600 px x 1,200 px
Illumination	Integrated
Illumination color	White, LED, Visible,
Feedback spot	LED, Visible, green, 525 nm, ± 15 nm LED, Visible, Red, 630 nm, ± 20 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+A11:2021)
Lens	S-mount
Optical format	1/1.8"
Focal length	17.5 mm
Aperture	8
Reading distance	50 mm 2,200 mm ¹⁾
Scanning frequency	\leq 50 Hz, at 1.9 megapixels resolution
Code resolution	≥ 0.1 mm ¹⁾

 $^{1)}\ensuremath{\,\text{Depends}}$ on lens used, for details see field of view diagram.

Mechanics/electronics

Connection type	1 x M12, 17-pin plug (serial, CAN, I/Os, power supply)
	1 x M12, 8-pin socket (Ethernet, 1 GBit/s)
	1 x M8, 4-pin socket (USB)
	1 x M12, 4-pin socket (external illumination control)

IMAGE-BASED CODE READERS

Readable code structures1D codes, Stacked, 2D codesBar code typesGS1-128 / EAN 128, UPC / GTIN / EAN, Interleaved 2 of 5, Pharmacode, GS1 DataBar, Code 39, Code 128, Codabar, Code 32, Code 93, USPS (Postnet, Planet, USPS4SCB), Australian Post, Dutch KIX Post, Royal Mail, Swedish Post2D code typesData Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR codeStacked code typesPDF417Code qualificationOn the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004		
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ule CDF600-2Data transmission rate10/100 MBit/sEtherNet/IPM✓Data transmission rate10/100/1,000 Mbit/sSerial✓, RS-232, RS-422FunctionData interface (read result output), Service interfaceData transmission rate0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)CAN✓FunctionSICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)Data transmission rate250 kbit/s 500 kbit/sPROFIBUS DP✓Type of fieldbus integrationOptional over external fieldbus module CDF600-2Digital inputsEncoder input, external triggerDigital outputs6 (CDB650: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or CDM420: "Result 1", "Result 2", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result	PROFINET	✓
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PROFIBUS DP / Type of fieldbus integration Optional over external fieldbus module CDF600-2 Digital inputs 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 parameter memory in CDB650/ CDM420) Configurable inputs Encoder input, external trigger Digital outputs 6 (CDB650: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or CDM420: "Result 1", "Result 2", "Result 4") Configurable outputs Good read, External illumination control, free configurable outputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode		
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CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4")Configurable outputsGood read, External illumination control, free configurable output condition, "device ready"Reading pulseDigital inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode	Configurable inputs	Encoder input, external trigger
Reading pulse Digital inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode	Digital outputs	CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or cable with open end: "Re-
	Configurable outputs	Good read, External illumination control, free configurable output condition, "device ready"
Optical indicators 11 LEDs (5 x status display, 5 x LED bar graph, 1 green/red feedback spot)	Reading pulse	Digital inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode
	Optical indicators	11 LEDs (5 x status display, 5 x LED bar graph, 1 green/red feedback spot)

IMAGE-BASED CODE READERS

Acoustic indicators	Beeper (configurable)
Control elements	2 buttons (choose and start/stop functions)
Operator interfaces	Web server
Configuration software	SOPAS ET
Memory card	Micro SD memory card (flash card) max. 32 GB, optional
Data storage and retrieval	Image and data storage via microSD memory card and external FTP
Maximum encoder frequency	1 kHz
External illumination control	Via digital output (max. 24 V trigger) or external illumination connection

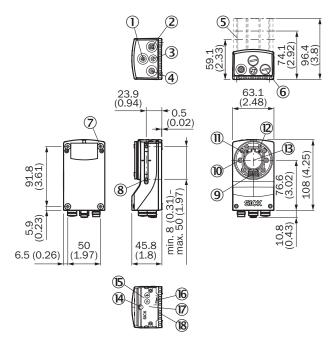
Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-2:2005-08 / EN 61000-6-4 (2007-01) + A1 (2011)
Vibration resistance	EN 60068-2-6:2008-02
Shock resistance	EN 60068-2-27:2009-05
Ambient operating temperature	0 °C +50 °C
Storage temperature	-20 °C +70 °C
Permissible relative humidity	90 %, Non-condensing

Classifications

ECLASS 5.0	27280103
ECLASS 5.1.4	27280103
ECLASS 6.0	27280103
ECLASS 6.2	27280103
ECLASS 7.0	27280103
ECLASS 8.0	27280103
ECLASS 8.1	27280103
ECLASS 9.0	27280103
ECLASS 10.0	27280103
ECLASS 11.0	27280103
ECLASS 12.0	27280103
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002999
ETIM 8.0	EC002999
UNSPSC 16.0901	43211701

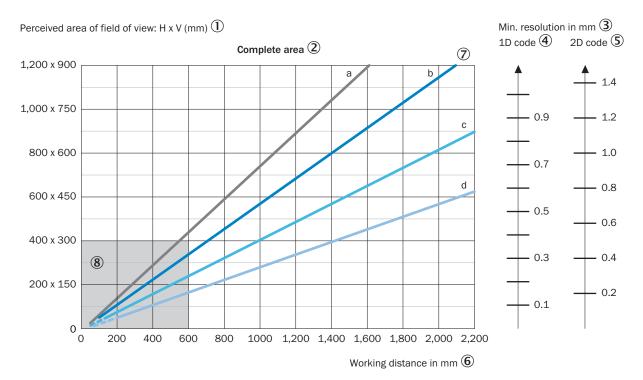
Dimensional drawing (Dimensions in mm (inch))

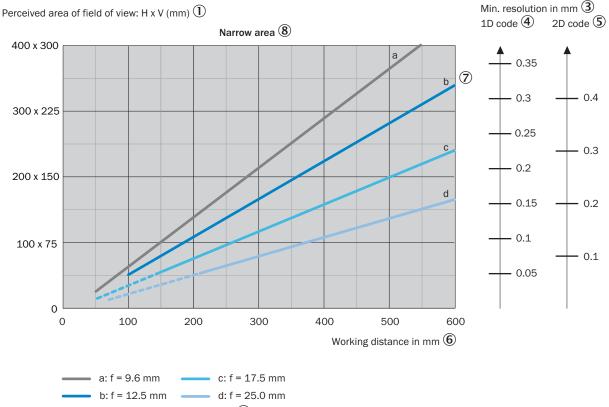


- ① "External light" connection (external illumination unit, female connector, M12, 4-pin, A-coded)
- ② "Ethernet" connection (Gigabit Ethernet, female connector, M12, 8-pin, X-coded)
- ③ "USB" connection (female connector, type M8, 4-pin), for temporary use as a service interface only
- (4) "Power/Serial 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)
- (i) 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
- (a) 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)
- 1 2 laser alignment aids
- ① S-mount or C-mount optics module
- 2 4 blind tapped holes, 2.5 mm for mounting the spacers for the integrable illumination (VI55I ring illumination unit)
- (1) Optical axis and center of the image sensor
- (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.
- 1 2 function keys
- 16 5 bar graph LEDs
- 1 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)

IMAGE-BASED CODE READERS

Field of view





---- Optional spacer rings required $oldsymbol{9}$

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 Perceived field of view area: horizontal x vertical (mm)

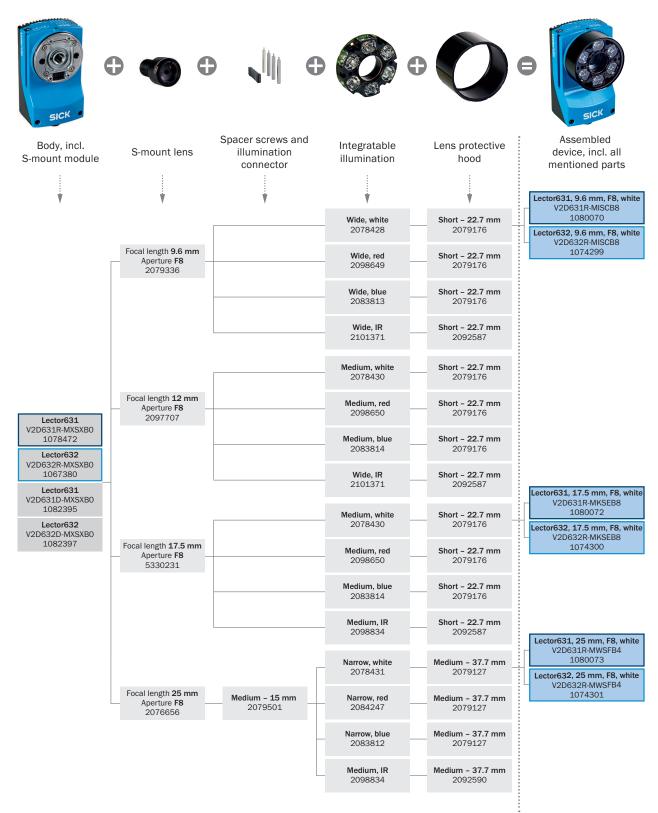
IMAGE-BASED CODE READERS

- ② Complete area
- ③ Minimum resolution in mm
- ④ 1D code
- ⑤ 2D code
- 6 Working distance in mm
- \bigcirc Focal length of lens, here example for f = 12.5 mm
- ⑧ Close range
- Optional spacer ring required

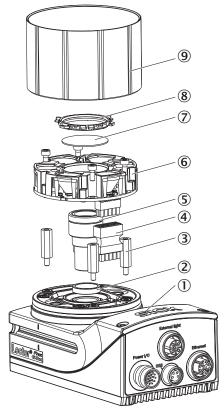
IMAGE-BASED CODE READERS

Selection Guide

Lector63x S-mount



Exploded view



- Camera housing
 Spacer for built-in illumination
- ③ Spacer ring (optional)
- ④ Plug connector for illumination
- ⑤ S-mount lens
- Built-in illumination
- ⑦ Optical filter (optional)
- ⑧ Filter holder
- ③ Optics protection hood

Recommended accessories

Other models and accessories -> www.sick.com/Lector63x

	Brief description	Туре	Part no.	
Mounting brac	Mounting brackets and plates			
	Mounting bracket with screws, L-shaped for mounting with sliding nuts, includes angle indicator for adjusting the tilt angle	Mounting bracket	2078970	
Plug connectors and cables				
N	 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: 2 m, suitable for refrigeration Description: Power, serial, CAN, digital I/Os, suitable for 2 A, shielded 	YM2A8D- 020XXXF2A8D	6053230	

IMAGE-BASED CODE READERS

	Brief description	Туре	Part no.
\$ \$	 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
Modules			
	 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/Lector63x

	Туре	Part no.
Performance check		
 Product area: Image-based code readers Range of services: Inspection of defined functions, e.g., reading performance Travel expenses: The prices do not include travel costs such as hotel, flight, travel time and expenses. Duration: Additional work will be invoiced separately 	Performance check Lector	1608207
Maintenance		
 Product area: Image-based code readers Range of services: Inspection, analysis and restoring of defined functions, Inspection and adaptation of previously defined functions of possible Lector6xx illumination, code configuration, trigger and digital inputs, interfaces and digital outputs as well as data processing Duration: Additional work will be invoiced separately Travel expenses: The prices do not include travel costs such as hotel, flight, travel time and expenses. 	Maintenance Lector	1611421
Commissioning		
 Product area: Image-based code readers Range of services: Inspection of connection, fine adjustment, optimization of parameters of SICK product as well as tests, Set-up of previously defined functions of possible illumination, code configuration, trigger and digital inputs, interfaces and digital outputs as well as data processing Travel expenses: The prices do not include travel costs such as hotel, flight, travel time and expenses. Duration: Additional work will be invoiced separately 	Commissioning Lector	1608206
Extended warranty		
 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



Online data sheet

