



IMAGE-BASED CODE READERS



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Ordering information

Туре	Part no.
V2D654R-MEWKA6	1068680

Other models and accessories \rightarrow www.sick.com/Lector64x_Lector65x



Detailed technical data

Features	
Variant	Complete device
Optical focus	Dynamic focus control
Sensor	CMOS matrix sensor, grayscale values
Sensor resolution	2,048 px x 2,048 px
Illumination	Integrated
Illumination color	White, LED, Visible,
Feedback spot	LED, Visible, green, 525 nm, ± 15 nm
Alignment aid	Laser, Red, 630 nm 680 nm
LED class	Risk group 1 (IEC 62471:2006-07, EN 62471:2008-09)
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	C-mount
Optical format	1″
Focal length	40 mm
Aperture	8
Scanning frequency	40 Hz, With resolution of 4 megapixels
Code resolution	≥ 0.12 mm ¹⁾
4)	

 $^{\mbox{1)}}$ Depends on distance.

Mechanics/electronics

Connection type	1 x M12, 17-pin plug (serial, CAN, I/Os, power supply) 2 x M12, 8-pin socket (Ethernet, P1 not yet with function) 1 x M8, 4-pin socket (USB)
Supply voltage	24 V DC, ± 20 %
Power consumption	Typ. 20 W, ± 20 %

V2D654R-MEWKA6 | Lector64x/Lector65x IMAGE-BASED CODE READERS

Output1400 mAHousingAluminum de castHousing colorUpit blue (RAL 5012)Window materialGlassEnclosure ratingH96 (EN 06529 (1991-10), EN 06529,A2 (2002-02))Protection classIIElectrical safetyEN 60950-1 (2011-01)Weight963 gDimensions (L X X H)142.8 mm x 90 mm x 106.1 mmWittig0000 hPerformanceStates 20,000 hPerformanceStates 20,000 hPerformanceStates 20,000 hPerformanceStates 20,000 h20 code typesOba Matrix KC020, 05.20 and States Code 92, USPS (Pasme, Famer, USPS/SECB), Australian Perto USPS20 code typesOba Matrix KC020, 05.20 and Matrix KN08/Kode, 0R code20 code typesOn the basis of IsO/EC 16022, ISO/EC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/EC 16022, ISO/EC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/EC 16022, ISO/EC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/EC 16022, ISO/IEC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004 Internal image storage10 for the basis of IsO/IEC 16022, ISO/IEC 15415, ISO/			
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CANImage: Canal state of the sta	Function	Data interface (read result output), Service interface	
Function SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server) Data transmission rate 20 kbit/s 1 Mbit/s 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 cable with open end: "Re- sult 1", "Result 2", "Result 4") Configurable outputs Good read, External illumination control, free configurable output condition, "device ready"	Data transmission rate		
Data transmission rate 20 kbit/s 1 Mbit/s 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", "Result 4", 2 external outputs via CMC600 or CDM420: "Result 1", "Result 2", "Result 4") Configurable outputs Good read, External illumination control, free configurable output condition, "device ready"	CAN	✓	
PROFIBUS DP Image: Addition of the properties of the pro			
Type of fieldbus integrationOptional over external fieldbus module CDF600-2Digital inputs4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 parameter memory in CDB650/ CDM420)Configurable 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 CDM420: "Result 1", "Result 2", "Result 4")Configurable outputsGood read, External illumination control, free configurable output condition, "device ready"			
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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 cable with open end: "Result 1", "Result 2", "Result 3", "Result 4") Configurable outputs Good read, External illumination control, free configurable output condition, "device ready"			
CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4") Configurable outputs Good read, External illumination control, free configurable output condition, "device ready"			
	Digital outputs	CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or cable with open end: "Re-	
Reading pulse Digital inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode	Configurable outputs	Good read, External illumination control, free configurable output condition, "device ready"	
	Reading pulse	Digital inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode	

IMAGE-BASED CODE READERS

Optical indicators	21 LEDs (10 x status display, 10 x LED bar graph, 1 green feedback spot)
Acoustic indicators	Beeper/buzzer (can be switched off, can be assigned a function to signal a result)
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. 16 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

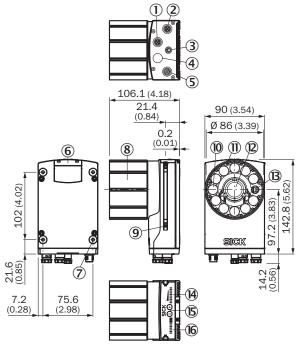
Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-2:2005-08 / EN 61000-6-3 (2007-01)
Vibration resistance	EN 60068-2-6:2008-02
Shock resistance	EN 60068-2-6
Ambient operating temperature	0 °C +50 °C
Storage temperature	-20 °C +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	2,000 lx, on code

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

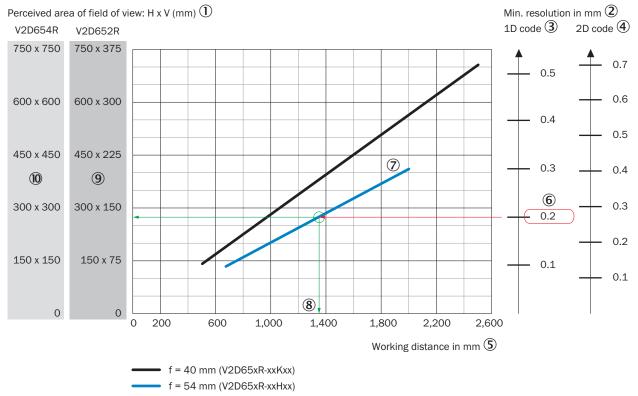
Dimensional drawing (Dimensions in mm (inch))



- ① "Ethernet" P1 connection
- ② P3 connection "Ethernet"
- ③ X2 "USB" connection or "trigger external lighting", depending on type
- ④ P2 connection "CAN OUT", depending on type
- ⑤ X1 "Power/Serial Data/CAN/I/O" connection or "CAN IN", depending on type
- ⑥ Cover for the microSD memory card
 ⑦ M5 blind tapped holes, 5 mm deep (4 x), for mounting the sensor
- Optics protection hood
- Sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
- 1 Green feedback LED
- Ring lighting
- 12 Lens
- (13) Laser alignment aid exit
- (Bar graph display
- (5) Function button (2 x)
- ⁽⁶⁾ LED for status display (2 levels), 10 x

IMAGE-BASED CODE READERS

Field of view

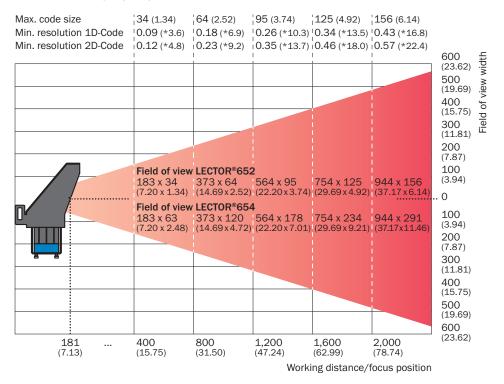


- ① Perceived field of view area: horizontal x vertical (mm)
- ② Minimum resolution in mm
- ③ 1D code
- ④ 2D code
- ⑤ Working distance in mm
- ⑤ Selected code resolution
- ⑦ Focal length of lens, here example for f = 54.0 mm
- (8) Reading off: resultant maximum working distance
- (9) Reading off: Resulting perceived area of the field of view V2D652R (mm x mm)
- Reading off: Resulting perceived area of the field of view V2D654R (mm x mm)

IMAGE-BASED CODE READERS

Field of view, Lector65x Dynamic Focus with Panorama 35 mm/40 mm

Dimensions in mm (inch/*mil)



Recommended accessories

Other models and accessories \rightarrow www.sick.com/Lector64x_Lector65x

	Brief description	Туре	Part no.
Plug connecto	rs and cables		
11	 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

IMAGE-BASED CODE READERS

Recommended services

Additional services -> www.sick.com/Lector64x_Lector65x

	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
Service agreements		
 Product area: Robot guidance systems, Track and trace systems, Driver assistance systems, Object detection systems, Profiling systems, Gateway systems, Quality control systems Range of services: Maintenance, Troubleshooting, extended warranty, 8/5 remote support, 8/5 help desk Duration: Duration is arranged individually with the customer and defined in the contract 	Bronze service agree- ments for Systems	1616164

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

