



**IMAGE-BASED CODE READERS** 



IMAGE-BASED CODE READERS



# 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 <sup>1)</sup>
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/			
Instance         Justice (Aul EGN 12)           Window material         Glass           Enclosure rating         IP65 (EN 6052 (1291.10), EN 60529/A2 (2002.02))           Protection class         III           Enclosure rating         Re6 0950-1 (2011.01)           Weight         963 gl           Dimensions (Lx W x H)         142.8 mm x 90 mm x 106.1 mm           MTBF         00.000 h           Performance         Readable code structures           Readable code structures         10 codes, Stacked, 20 codes           Bar code types         651.128 / EM 1128, UPE / GTILY / EM, Interferent 2 of 5, Pharmacote, 651 DataBar, Code 38, 0561/26, 1280 codes 93, 0561 (2014.01)           Code qualification         0 to dodes, Stacked, 20 codes           Bar code types         Data Matrix ECC200, 651 DataBar, Code 93, 0561 (2014.01)           Code qualification         0 to the basis of ISO/IEC 16022, ISO/IEC 1515, ISO/IEC 18004           Internal image storage         J TOP/IP           Code qualification         ID 1001/1000 MbL/s           PROFINET         ID 1001/1000 MbL/s           PROFINET         ID 1001/1000 MbL/s           PROFINET         ID 1001/1000 MbL/s           PROFINET         ID 1001/1000 MbL/s           PROFINET Single Port (Integrated), PROFINET Dual Port (optional vise external inconcection	Output current	≤ 100 mA	
Window material         Gass           Enclosure rating         P65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))           Protection class         II           Electrical safety         EN 60505 1 (2011-01)           Weight         665 g           Dimensions (L x W x H)         142.8 mm x 90 mm x 106.1 mm           NTFF         10.0000 h           Performance         Status 2000 h           Performance         Status 2000 h           Bar code types         Dicodes, Stacked, 2D codes           Bar code types         Dicodes, Stacked, 2D codes           Stacked code types         Dicodes, Stacked, 2D codes           Code qualification         Obstatus ECC200. GS1 Data Matrix, Max/Code, QR code           Stacked code types         PP417           Code qualification         How basis of 150/EC 16022, IS0/EC 15415, IS0/IEC 18004           Internal image storage         Status Interface, FTP (image transmission 2000 Mbi/s           PROFINET         / T0P/IP           Data interface (read result output), Service interface, FTP (image transmission 2000 Mbi/s           PROFINET         / Status Instratus	Housing	Aluminum die cast	
Enclosure rating         P65 (EN 60529 (1991-10), EN 60529/A2 (2002.02))           Protection class         II           Electrical safety         EN 60950-1(20110)           Weight         983 &           Dimensions (L X X H)         142.8 mm x 90 mm x 106.1 mm           MTBF         100,000 h           Performance         Electrical safety           Readable code structures         D codes, Stacked, 2D codes           Bar code types         QD codes, Stacked, 2D codes           Si Los J28 / EAN 128, UPC / GTIN FEAN, Interfaevel 2 of 5, Pharmacode, GS1 DataBar, Code 90, USPS (Postmet, Panet, USPAGEAD, Australian Post, Stacked Code types           2D code types         D codes, Stacked, 2D codes 3, USPS (Postmet, Panet, USPAGEAD, Australian Post, Stacked Code types           2D code types         D Matrix (EC020, GS1 DataMatrix, MaxICode, QR code           Stacked code types         POF417           Code qualification         On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 15004           International image storago         J (109/I)           Data transmission rate divide (read result output), Service interface, FIP (image transmission)           Data transmission rate divide (read result output), Service interface, FIP (image transmission)           Data transmission rate divide (read result output), Service interface           Functicin         Size A22 <td< th=""><th>Housing color</th><th>Light blue (RAL 5012)</th></td<>	Housing color	Light blue (RAL 5012)	
Protection class         II           Electrical safety         Ek 60950-1 (2011-01)           Weight         663 g           Dimensions (L x W x H)         142.8 mm x 90 mm x 106.1 mm           MTBF         100.000 h           Performance         Electrical safety           Performance         0.000 h           Performance         S3.128 / EAN 128, UPC / GTIN / EAN, Interleaved 2 of S, Pharmacode, GSI DataBar, Code Sd, Code 128, Codeshort, Code Sd, USSP (Pottmet, Planet, USPASCB), Australian / Post, Dutch KIX Pest, Royal Mail, Swedish Post           2D code types         Data Matrix ECC200, GSI DataMatrix, MaxICode, QR code           Stacked code types         Port 417           Code qualification         On the basis of ISO/IEC 16022, ISO/IEC 15015, ISO/IEC 18004           Internal image storage         Port 417           Code qualification         Data Interface (read result output), Service Interface, FTP (image transmission)           Interfaces         Interface (read result output), Service Interface, FTP (image transmission)           Protection         Data Interface (read result output), Service Interface, FTP (image transmission)           Interface         / IO/100/1000 Mbit/s           Protection         Port 500 Port 1000 Mbit/s           Protection         Stataward code (Res-323)           Otat transmission rate         IO/100/1000 Mbit/s	Window material	Glass	
Electrical safety         EN 60950-1 (2011-01)           Weight         963 g           Dimensions (L X W X H)         142.8 mm x 90 mm x 106.1 mm           MTEF         0000 h           Performance         Discole Stacked, 20 codes           Bar code types         Discoles, Stacked, 20 codes           Bar code types         Discoles, Stacked, 20 codes           Bar code types         Dist devise, Stacked, 20 codes           Bar code types         Dist devise, Stacked, 20 codes           Code qualification         Dist devise, Stacked, 20 codes           Code qualification         Dist devise, Royal Mail, Swoole, Neuton           Code qualification         On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004           Internal Image storage         Or (P)PI           Function         Protein           Function         IO/100/1,000 Mbit/s           PROFINET         PROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection mod- in: CDF002)           Etherwet         I/ 102/10.000 Mbit/s           Serial         I/ Stabut ransmission ration ratio, Stacked, RS2 acceed result output, Service Interface.           I/ Stabut ransmission ration ratio, Stacked, RS2 acceed result output, Service Interface.         I/ Stabut ransmission ration ration ratio, Stacked, RS2 acceed result output, Service Interface.	Enclosure rating	IP65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))	
Weight963 gDimensions (Lx Wx H)142.8 mm x 90 mm x 106.1 mmMTFF100.000 hPerformanceReadable code structures100.000 kBar code typesS54.128 / EAN ILS / BLVPC / GTN / EAN Interfaseed 2 of 5. Pharmacode .651.DataBar. Code90.006 128. Codabarr. Code 92. Code 93. USPS (Postnet, Planet, USPS4SCB), Australian Performance20 code typesData Matrix ECC200. GS1 Data-Matrix, MaxICode, QR code20 code typesData Matrix ECC200. GS1 Data-Matrix, MaxICode, QR code31 code qualification Internal image storageOn the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004ThertarJTCP/PCode qualification Data transmission rateJO0000 Mit/sProFINETInterface (read result output), Service interface, FTP (image transmission) 	Protection class	III	
Dimensions (L x W x H)         142.8 mm x 90 mm x 106.1 mm           MTEF         100.000 h           Performance         Eadable code structures         10 codes, Stacked, 20 codes           Bar code types         Codes, Stacked, 20 codes 9, USPS (Postner, Planet, USPS 450CB), Australian Post, Duta National Code 93, USPS (Postner, Planet, USPS 450CB), Australian Post, Duta Nation, KX Post, Royal Mal, Sweden Post           2D code types         Def Adata Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code           Stacked code types         On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004           Code qualification         On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004           Internal image storage         512 MB           Interfaces            Ethernet         \ftcP/IP           Function         Data interface (read result output), Service interface, FTP (image transmission)           10/100/1.000 Mbit/s         PROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection mod- uice Option2)           EtherNet / IP <sup>MD</sup> Serial         10/100/1.000 Mbit/s           Serial         0.43 RBuid. all:5.2 KBaud, ADX: 57.6 KBaud (RS 232)           CAN         Sick CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)           Data transmission rate         30.48 RBuid. all:5.7 KBaud (RS 232)           CAN         Sick CAN sensor netwo	Electrical safety	EN 60950-1 (2011-01)	
MTBF       00.000 h         Performance       ID codes, Stacked, 2D codes         Readable code structures       10 codes, Stacked, 2D codes         Bar code types       CSL 128 / EAN 128, UPC / GTN / EAN, Interleaved 2 of 5, Phane, USPS 4SGB), Australian Post, Dutch KIX Post, Royal Mall, Swedish Post         2D code types       Data Matrix, ECC200, GSL Data Matrix, MaxiCode, QR code         Stacked code types       Data Matrix, ECC200, GSL Data Matrix, MaxiCode, QR code         Stacked code types       Data Matrix, ECC200, GSL Data Matrix, MaxiCode, QR code         Internal image storage       Data Matrix, ECC200, GSL Data Matrix, MaxiCode, QR code         Stacked code types       Data Matrix, ECC200, GSL Data Matrix, MaxiCode, QR code         Internal image storage       Data Matrix, ECC200, GSL Data Matrix, MaxiCode, QR code         Stacked code types       Data transmission ret         Internal image storage       Data Interface (read result output), Service interface, FTP (image transmission)         Data transmission ret       10/100/1,000 Mbit/s         PROFINET       Image for (integrated), PROFINET Dual Port (optional via external connection module CDF600-2)         Serial       Image for any matrix, Serial (RS 232)         CAN       Image for any matrix, Serial (RS 422)         Data transmission ret       Dita Interface (read result output), Service interface         Data transmission re	Weight	963 g	
Performance Pareadable code structures ID codes, Stacked, 2D codes GS1 128, Codebar, Code 32, Code 93, Code 75, Pharmacode, GS1 DataBar, Code 39, Code 128, Codebar, Code 32, Code 93, USPS (Postnet, Planet, USPS4SCB), Australian Post, Dutch KIX, Beerla Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, GS1 Data Matrix, MaxiCode, QR code Stacked code types Data Matrix ECC200, DS1 Data Matrix, MaxiCode, QR code Stacked code types Data Interface (read result output), Service Interface, FTP (Image transmission) Data Interface (read result output), Service Interface, FTP (Image transmission) is COF600-2 Performace Data Interface (read result output), Service Interface Data Interface, FTP (Image Interf	Dimensions (L x W x H)	142.8 mm x 90 mm x 106.1 mm	
Readable code structures         D codes, Stacked, 2D codes           Bar code types         Code 128, Codebar, Code 32, Code 93, USPS (Postner, Pianet, USPS 4SCB), Australian Post, Duck KN Post, Royal Mail, Swedish Post           2D code types         Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code           Stacked code types         Deata Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code           Stacked code types         Deata Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code           Stacked code types         Deata Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code           Stacked code types         Deata Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code           Stacked code types         Deata Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code           Stacked code types         Deata Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code           Stacked code types         Deata Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code           Stacked code types         Dota Interface (read result output), Service Interface, FTP (image transmission)           Data Interface (read result output), Service Interface, FTP (image transmission)         Diata Interface (read result output), Service Interface           EtherNet/IP <sup>IM</sup> Image transmission read         Di/Do/1,000 Mbit/s           Serial         Image transmission read         Di/Do/1,000 Mbit/s           Serial         Image transmission read         Di/Do/1,000 Mbit/s	MTBF	100,000 h	
Bar code types       S51-128 / EAN 128, UPC / GTIN / EAN, Interfeaved 2 of 5, Pharmacode, GS1 DataBar, Code 39, Code 132, Code 93, USPS (Postnet, Planet, USPS 4SCB), Australian Post, Duch KIN Post, Poul Multi, Neatis, Post         2D code types       Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code         Stacked code types       PDF417         Code qualification       on the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004         Internal Image storage       J. TOP/IP         Potentian Control (Control (Cont	Performance		
Automatical Base Duck HX Post, Royal Mail, Swedish PostUSPS (Postnet, Planet, USPS 4SCB), Australian Post, Duck HX Post, Royal Mail, Swedish Post2D code typesData Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR codeStacked code typesOn the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004Code qualificationOn the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004Internal image storage512 MBInterfaces <ul><li>Therfaces</li></ul> EthernetJ. TCP/IPData transmission rateI/ 100/1,000 Mbit/s <ul><li>PROFINET</li><li>Function</li><li>PROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection module CDF600-2)</li>EthernetJ. Sci 23, RS 422Code transmission rate10/100/1,000 Mbit/sSerialOra Linterface (read result output), Service interfacePROFINETJata transmission rate10/100/1,000 Mbit/s         <ul><li>Serial</li><li>SiCK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)</li><li>Data transmission rate</li><li>Obtional via external fieldbus module CDF600-2</li></ul>PROFIBUS DP <ul><li>(Sensor 11, "Sensor 2", 2 inputs via optional CD600 parameter memory in CDB650/</li><li>CDMEdor Sensor 11, "Result 2", "Result 3", "Result 4", "Result 4", "Result 2", "Result 3", "Result 4", "Result</li></ul></ul>	Readable code structures	1D codes, Stacked, 2D codes	
Stacked ode typesPDF417Code qualificationon the basis of ISO/IEC 16022, ISO/IEC 15004Internal image storage512 MBEnterfacesFitterfacesFunctionData interface (read result output), Service interface, FTP (image transmission) 10/100/1,000 Mbit/sPROFINETFunctionPROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection mod- uic CDF600-20EtherNet/IPMData transmission ration10/100/1,000 Mbit/sPROFINETFunctionPROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection mod- uic CDF600-20EtherNet/IPMData transmission ration10/100/1,000 Mbit/sSerialData transmission ration30 ABaud	Bar code types	39, Code 128, Codabar, Code 32, Code 93, USPS (Postnet, Planet, USPS4SCB), Australian	
Code qualification Internal image storage         On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004           Internal image storage         512 MB           Interfaces            Ethernet              • , TCP/IP                   Data interface (read result output), Service interface, FTP (image transmission)                        Data interface (read result output), Service interface, FTP (image transmission)	2D code types	Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code	
Internal image storage       512 MB         Interfaces <ul> <li>FCP/IP</li> <li>Data interface (read result output), Service interface, FTP (image transmission)</li> <li>Data transmission read</li> <li>D0/100/1,000 Mbit/s</li> </ul> PROFINET <ul> <li>PROFINET</li> <li>Function</li> <li>Data transmission read</li> <li>D0/100/1,000 Mbit/s</li> </ul> PROFINET <ul> <li>PROFINET</li> <li>Function</li> <li>Data transmission read</li> <li>D0/100/1,000 Mbit/s</li> </ul> Serial <ul> <li>A. RS-232, RS-422</li> <li>Data transmission read</li> <li>D0/100/1,000 Mbit/s</li> </ul> Serial <ul> <li>CAN</li> <li>Serial</li> <li>Sick CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)</li> <li>Data transmission read</li> <li>Dick CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)</li> <li>Data transmission read</li> <li>Dotal view external fieldbus module CDF600-2</li> </ul> PROFIBUS DP <ul> <li>Configurable inputs</li> <li>Conder input, external fieldbus module CDF600-2</li> <li>CMM20, "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 4", "Result 4",</li> </ul>	Stacked code types	PDF417	
Interfaces Interface Interface Interfaces Interface Inte	Code qualification	On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004	
Ethernet       , TCP/IP         Function       Data interface (read result output), Service interface, FTP (image transmission)         Data transmission rate       10/100/1,000 Mbit/s         PROFINET       -         Function       PROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection module CDF600-2)         EtherNet/IP <sup>TM</sup> -/         Data transmission rate       10/100/1,000 Mbit/s         Serial       -/         Data transmission rate       10/100/1,000 Mbit/s         Serial       -/         Data transmission rate       10/100/1,000 Mbit/s         Data transmission rate       0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)         CAN       -/         EtherNet/IP <sup>TM</sup> -/         Data transmission rate       0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)         CAN       -/         EtherNet/IP <sup>TM</sup> -/         Data transmission rate       0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)         CAN       -/         EtherNet/IP <sup>TM</sup> -/         Data transmission rate       0.2 kbit/s 1 Mbit/s         PROFIBUS DP       -/         Type of fieldbus integration       Cotional over external fieldbus module CDF600-2         Di	Internal image storage	512 MB	
Function Data transmission rateData interface (read result output), Service interface, FTP (image transmission) 10/100/1,000 Mbit/sPROFINETData transmission rate id CDF600-2)PROFINET Dual Port (optional via external connection module CDF600-2)EtherNet/IPTMImage: Image: Ima	Interfaces		
Data transmission rate       10/100/1,000 Mbit/s         PROFINET       I         Function       PROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection module CDF600-2)         EtherNet/IPPM       I         Data transmission rate       10/100/1,000 Mbit/s         Serial       I/100/1,000 Mbit/s         Serial       I/100/1,000 Mbit/s         Serial       I/15.2 kBaud, AUX: 57.6 kBaud (RS-232)         CAN       I         Sub at transmission rate       0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)         CAN       I         Serial       I/1000/1,000 mbit/s         Sub at transmission rate       0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)         CAN       I/1000/1,000 mbit/s         Sub at transmission rate       SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)         Data transmission rate       SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)         Data transmission rate       I/1000/1,000 mbit/s         Type of fieldbus integration       Optional over external fieldbus module CDF600-2         Digital inputs       I/1000/1, "Sensor 2", 2 inputs via optional CMC600 parameter memory in CDB650/CDM4200         Configurable inputs       Gooder input, external trigger         Goud read, External il	Ethernet	✓, TCP/IP	
PROFINETIFROFINETPROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection module CDF600-2)EtherNet/IPPMIData transmission rate10/100/1.000 Mbit/sSerialITotat transmission rateIData transmission rateIData transmission rateIData transmission rateIData transmission rateIData transmission rateIData transmission rateISerialIData transmission rateISick CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)Data transmission rateIData transmission rateIOtholy - In Mbit/sITope of fieldbus integrateIOtional ove external fieldbus module CDF600-2IDista transmissionIOptimal inputsIConfigurable inputsISick CAN sensor 1, "Sensul 2," Result 3," Result 4," 2 external outputs via CMC600 or cable with open end: "Result 1," Result 2," Result 3," Result 4," Result 4	Function	Data interface (read result output), Service interface, FTP (image transmission)	
FunctionPROFINET Single Port (integrated), PROFINET Dual Port (optional via external connection module CDF600-2)EtherNet/IP™Data transmission rateI/U100/1,000 Mbit/sSerialAData transmission rateOata interface (read result output), Service interfaceData transmission rateOata interface (read result output), Service interfaceData transmission rateSerialCANFunctionSICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)Data transmission rateOato interface fieldbus module CDF600-2PROFIBUS DPType of fieldbus integrateType of fieldbus integrateOtional over external fieldbus module CDF600-2Digital inputsEncoder input, sensor 2°, 2 inputs via optional CMC600 parameter memory in CDB650/ CDM420; "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 4",Configurable outputsGood read, External illumination control, free configurable output condition, "device read"	Data transmission rate	10/100/1,000 Mbit/s	
Liteuie CDF600-2)EtherNet/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 rate20 kbit/s 1 Mbit/sPROFIBUS DP✓Type of fieldbus integrationOptional over external fieldbus module CDF600-2Digital inputsEncoder input, external fieldbus module CDF600-2Digital outputs6 (CDB650: "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", "Result 4"	PROFINET	✓	
Data transmission rate10/100/1,000 Mbit/sSerialFunctionData interface (read result output), Service interface Data transmission rateData transmission rateData interface (read result output), Service interface 0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)CANFunctionSICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server) 20 kbit/s 1 Mbit/sPROFIBUS DPType of fieldbus integrationOtional over external fieldbus module CDF600-2Digital inputsConfigurable inputsConfigurable inputsConfigurable inputsConfigurable outputsConfigurable outputs <t< th=""><th>Function</th><td></td></t<>	Function		
Serial✓, RS-232, RS-422FunctionData interface (read result output), Service interface 0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)CAN✓FunctionSICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server) 20 kbit/s 1 Mbit/sPROFIBUS DP✓Type of fieldbus integrationOptional over external fieldbus module CDF600-2Digital inputsConfigurable inputsEncoder input, external fieldbus module CDF600-2Digital outputsGod read, External IngerGod read, External IngerGod read, External Illumination control, free configurable output, and external illumination control, free configurable output condition, "device ready"	EtherNet/IP™	✓	
FunctionData interface (read result output), Service interfaceData transmission rate0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)CANImage: CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)Data transmission rate0.5 KC CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)Data transmission rate0.6 kbit/s 1 Mbit/sPROFIBUS DPImage: Canadian sensor network CSN (CAN controller/CAN device)Type of fieldbus integration0.5 koin output sensor 2.7 2 inputs via optional CMC600 parameter memory in CDB650/ CM4202Digital inputsEncoder input, external triggerDigital outputs6. (CDB650: "Result 1.", "Result 2.", "Result 3.", "Result 4.", 2 external outputs via CMC600 or CM4202: "Result 1.", "Result 2.", "Result 4.")Configurable outputs6. odo read, External illumination control, free configurable output, "device ready"	Data transmission rate	10/100/1,000 Mbit/s	
Data transmission rate0.3 kBaud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)CANImage: CAN Sensor network CSN (CAN controller/CAN device, multiplexer/server)FunctionSICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)Data transmission rate20 kbit/s 1 Mbit/sPROFIBUS DPImage: CAN Sensor 1 mbit/sType of fieldbus integratioOptional over external fieldbus module CDF600-2Digital inputsConfigurable inputsConfigurable inputsEncoder input, external riggerDigital 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", 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", 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", 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", 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", 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", 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", 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", 2 external outputs via CMC	Serial	✓, RS-232, RS-422	
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"			
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", 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"			
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", 2 external outputs via CMC600 or cable with open end: "Re- sult 1", "Result 2", "Result 3", "Result 4")Configurable outputsGood read, External illumination control, free configurable output condition, "device ready"	,, , , , , , , , , , , , , , , , , , ,		
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

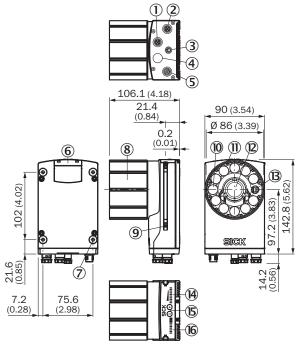
## Ambient data

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

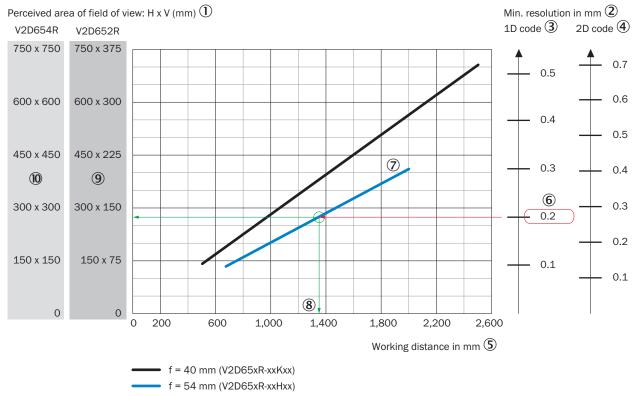
Dimensional drawing (Dimensions in mm (inch))



- 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)
- <sup>(6)</sup> LED for status display (2 levels), 10 x

IMAGE-BASED CODE READERS

### Field of view

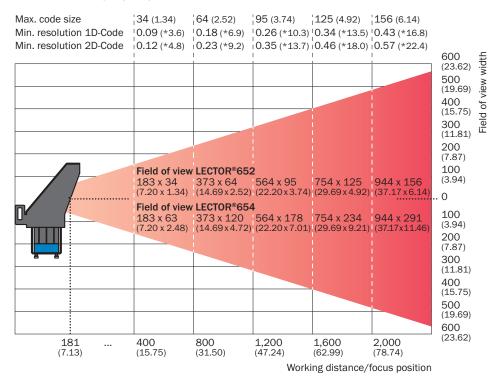


- ① Perceived field of view area: horizontal x vertical (mm)
- ② Minimum resolution in mm
- ③ 1D code
- ④ 2D code
- ⑤ Working distance in mm
- ⑤ Selected code resolution
- ⑦ Focal length of lens, here example for f = 54.0 mm
- (8) Reading off: resultant maximum working distance
- (9) Reading off: Resulting 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	<ul> <li>Connection type head A: Male connector, M12, 8-pin, straight, X-coded</li> <li>Connection type head B: Male connector, RJ45, 8-pin, straight</li> <li>Signal type: Ethernet, Gigabit Ethernet</li> <li>Cable: 2 m, 8-wire, PUR, halogen-free</li> <li>Description: Ethernet, Gigabit Ethernet, shielded</li> <li>Application: Zones with oils and lubricants</li> </ul>	YM2X18- 020EG1MRJA8	2106258

IMAGE-BASED CODE READERS

#### **Recommended services**

Additional services -> www.sick.com/Lector64x\_Lector65x

	Туре	Part no.
Performance check		
<ul> <li>Product area: Image-based code readers</li> <li>Range of services: Inspection of defined functions, e.g., reading performance</li> <li>Travel expenses: The prices do not include travel costs such as hotel, flight, travel time and expenses.</li> <li>Duration: Additional work will be invoiced separately</li> </ul>	Performance check Lector	1608207
Maintenance		
<ul> <li>Product area: Image-based code readers</li> <li>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</li> <li>Duration: Additional work will be invoiced separately</li> <li>Travel expenses: The prices do not include travel costs such as hotel, flight, travel time and expenses.</li> </ul>	Maintenance Lector	1611421
Commissioning		
<ul> <li>Product area: Image-based code readers</li> <li>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</li> <li>Travel expenses: The prices do not include travel costs such as hotel, flight, travel time and expenses.</li> <li>Duration: Additional work will be invoiced separately</li> </ul>	Commissioning Lector	1608206
Extended warranty		
<ul> <li>Product area: Identification solutions, machine vision, Detection and ranging solutions, safety camera sensors, Safety laser scanners, Safety radar sensors</li> <li>Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery).</li> <li>Duration: Five-year warranty from delivery date.</li> </ul>	Extended warranty for a total of five years from delivery date	1680671
Service agreements		
<ul> <li>Product area: Robot guidance systems, Track and trace systems, Driver assistance systems, Object detection systems, Profiling systems, Gateway systems, Quality control systems</li> <li>Range of services: Maintenance, Troubleshooting, extended warranty, 8/5 remote support, 8/5 help desk</li> <li>Duration: Duration is arranged individually with the customer and defined in the contract</li> </ul>	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

