



SICK Sensor Intelligence.

BAR CODE SCANNERS

BAR CODE SCANNERS



Ordering information

| Туре | Part no. |
|-------------|----------|
| CLV640-6000 | 1042022 |

Other models and accessories → www.sick.com/CLV64x



Detailed technical data

Features

| Version | Standard Density |
|------------------------------|--|
| Connection type | Cable |
| Reading field | Oscillating mirror |
| Scanner design | Line scanner |
| Focus | Dynamic focus control |
| Light source | Visible red light (655 nm) |
| Light spot | Circular |
| Laser class | 2 (IEC 60825-1:2014, EN 60825-1:2014) |
| Aperture angle | ≤ 50° |
| Scanning frequency | 400 Hz 1,200 Hz |
| Code resolution | 0.2 mm 1 mm |
| Reading distance | 45 mm 755 mm ¹⁾ |
| Oscillating mirror functions | Fixed (adjustable position), oscillating (variable or fixed amplitude), one shot |
| Oscillation frequency | 0.5 Hz 6.25 Hz |
| Angle of deflection | -20° 20° |

 $^{1)}\ensuremath{\mathsf{For}}$ details see reading field diagram.

Mechanics/electronics

| Electrical connection | 1 x 15-pin D-Sub HD male connector (0.9 m) |
|-----------------------|--|
| Supply voltage | 18 V DC 30 V DC |
| Power consumption | 6.5 W |
| Housing | Aluminum die cast |
| Housing color | Light blue (RAL 5012) |
| Front screen | Glass |
| Enclosure rating | IP65 (EN 60529) |
| Protection class | III (EN 61140) |

BAR CODE SCANNERS

| Weight | 420 g, with connecting cable |
|-----------------------------------|---|
| Dimensions (L x W x H) | 95 mm x 107 mm x 41 mm |
| MTBF | 40,000 h |
| Performance | |
| Readable code structures | 1D |
| Bar code types | All current code types, Code 39, Code 128, Code 93, Codabar, GS1-128 / EAN 128, UPC / GTIN / EAN, Interleaved 2 of 5, Pharmacode, GS1 DataBar, Telepen, MSI/Plessey |
| Print ratio | 2:1 3:1 |
| No. of codes per scan | 1 20 (Standard decoder) 1 6 (SMART decoder) |
| No. of codes per reading interval | 1 50 (auto-discriminating) |

500 (for multiplexer function in CAN operation)

5,000

1...99

No. of multiple readings

No. of characters per reading interval

Interfaces

| Type of fieldbus integration Optional over external fieldbus module CDF600-2 EtherCAT# Important ProFinet Dual Port Type of fieldbus integration Optional over external fieldbus module CDF600 Serial Important Profinet Type of fieldbus integration AsS-232, RS-422, RS-485 Type of fieldbus integration Poto-Aux Type of fieldbus integration Aux Type of fieldbus integration SIGK CAN sensor network CSN (master/slave, multiplexer/server) Type of fieldbus integration Obtifis 11 Mbit/s CANopen Important Important Type of fieldbus integration Optional over external fieldbus module CDF600-2 Poto-Aux Important Important Type of fieldbus integration Optional over external fieldbus module CDF600-2 Poto-Aux Important Important Type of fieldbus integration Optional over external fieldbus module CDF600-2 Poto-Aux Important Important Type of fieldbus integration Optional over external fieldbus module CDF + CMF Optional over external fieldbus module CDF + CMF Important Important Optional over external fieldbus module CDF + CMF Important Importantexterna | PROFINET | | ✓ |
|--|---------------------------|------------------------------|---|
| FtherCAT® Type of fieldbus integration Optional over external fieldbus module CDF600 PS-322, RS-422, RS-485 Host, AUX Pata transmission rai CAN CAN Cata transmission rai CICK CAN sensor network CSN (master/slave, multiplexer/server) Data transmission rai CICK CAN sensor network CSN (master/slave, multiplexer/server) Data transmission rai CON para Pata transmission rai CISK CAN sensor network CSN (master/slave, multiplexer/server) Data transmission rai Optional over external fieldbus module CDF600-2 Proper fieldbus integratio Optional over external fieldbus module CDF600-2 Optional over external fieldbus module CDF600-2 Stype of fieldbus integratio Optional, over external fieldbus module CDF600-2 Optional, over external fieldbus module CDF600-2 Consta (ver external fieldbus module CDF600-2 Consta (ver external fieldbus module CDF600-2 Consta (ver external fieldbus module CDF + CMF Optional, over external fieldbus module CDF + CMF Optional, over external fieldbus module CDF + CMF Consta (ver external fieldbus module CDF + CMF<th></th><th>Type of fieldbus integration</th><th>Optional over external fieldbus module CDF600-2</th> | | Type of fieldbus integration | Optional over external fieldbus module CDF600-2 |
| Type of fieldbus integrateOptional over external fieldbus module CDF600Serial-, Rs-232, RS-422, RS-485FunctionHost, AUX2400 Baud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)CAN-FunctionSICK CAN sensor network CSN (master/slave, multiplexer/server)Data transmission rai0 tokit/s 1 Mbit/sCANopen-Type of fieldbus integration0 tokit/s 1 Mbit/sPROFIBUS DP-Type of fieldbus integration0 tokino external fieldbus module CDF600-2Type of fieldbus integration0 tokino external fieldbus module CDF600-2DeviceNet***-Type of fieldbus integration0 tokino external fieldbus module CDF600-2Digital inputs0 tokino external fieldbus module CDF600-2Digital inputs-Optional over external fieldbus module CDF600-2Digital inputs0 tokino external fieldbus module CDF600-2Digital inputs-Optional, over external fieldbus module CDF600-2Digital inputs, on-powered, serial interface, auto publ | | Function | PROFINET Single Port, PROFINET Dual Port |
| SerialFindHox, AUXData transmission tai4,400 Baud 115.2 kBaud, AUX: 57.6 kBaud (RS-232)CANFunctionSICK CAN sensor network CSN (master/slave, multiplexer/server)Data transmission tai0 kbit/sData transmission tai0 kbit/sType of fieldbus integration0 kbit/sType of fieldbus integration0 foltonal over external fieldbus module CDF600-2DeviceNet****Type of fieldbus integration0 foltonal over external fieldbus module CDF600-2Digital inputsStree of fieldbus integration0 foltonal over external fieldbus module CDF600-2Digital inputsStree of fieldbus integration0 foltonal over external connection module CDM + CMFDigital inputsStreesor 1*, "Sensor 2*, 2 inputs via optional parameter storage CMC600 in CDB620/ CDM420)Digital inputsStreesor 1*, "Result 2*, 2 outputs via optional parameter storage CMC600 in CDB620/ CDM420)Reading putseAcoustic indicatorsDigital inputs, non-powered, serial interface, auto pulse, CANAcoustic indicatorsCatar (LEDS)Acoustic indicatorsDigital inputs, non-powered, serial interface, auto pulse, and pulse input enading rate per- cantage (LEDS)A | EtherCAT® | | 1 |
| Function Host, AUX Data transmission tai 2400 Baud115.2 kBaud, AUX: 57.6 kBaud (RS-232) CAN Since and Since a | | Type of fieldbus integration | Optional over external fieldbus module CDF600 |
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| CAN Image: Constraint of the constrain | | Function | Host, AUX |
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| Data transmission rate 20 kbit/s 1 Mbit/s CANopen 20 kbit/s 1 Mbit/s Data transmission rate 20 kbit/s 1 Mbit/s PROFIBUS DP 4 Type of fieldbus integration Topiconal over external fieldbus module CDF600-2 DeviceNet™ 4 Type of fieldbus integration Optional, over external fieldbus module CDM + CMF Digital inputs 0ptional, over external connection module CDM + CMF Digital inputs 4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/ CM420) Digital outputs Inputs, non-powered, serial interface, auto pulse, CAN Optional indicators Seper/buzzer (can be switched off, can be allocated as a result indication function Acoustic indicators Subtons (choose and start/stop functions) Optional software SOPA ET | CAN | | ✓ |
| CANopen Image: Construction of the decision of t | | Function | SICK CAN sensor network CSN (master/slave, multiplexer/server) |
| Data transmission rate 20 kbit/s 1 Mbit/s PROFIBUS DP Image: Comparison of the transmission rate Type of fieldbus integration Optional over external fieldbus module CDF600-2 DeviceNet TM Image: Comparison of the transmission rate Type of fieldbus integration Optional, over external fieldbus module CDM + CMF Digital inputs Optional, over external connection module CDM + CMF Digital outputs 4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/ CDM420) Digital outputs 4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/ CDM420) Reading pulse Digital inputs, non-powered, serial interface, auto pulse, CAN Optical indicators 6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate per- centage (10 LEDs)) Acoustic indicators Beeper/buzzer (can be switched off, can be allocated as a result indication function) Optioal indicators SoNAS ET | | Data transmission rate | 20 kbit/s 1 Mbit/s |
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| Digital inputs4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/ CDM420)Digital outputs4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/ CDM420)Reading pulseDigital inputs, non-powered, serial interface, auto pulse, CANOptical indicators6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate per- centage (10 LEDs))Acoustic indicatorsBeeper/buzzer (can be switched off, can be allocated as a result indication function)Operating elements2 buttons (choose and start/stop functions)SOPAS ET | DeviceNet™ | | 1 |
| CDM420)Digital outputs4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/ CDM420)Reading pulseDigital inputs, non-powered, serial interface, auto pulse, CANOptical indicators6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate per- centage (10 LEDs))Acoustic indicatorsBeeper/buzzer (can be switched off, can be allocated as a result indication function)Operating elements2 buttons (choose and start/stop functions)Configuration softwareSOPAS ET | | Type of fieldbus integration | Optional, over external connection module CDM + CMF |
| CDM420)Reading pulseDigital inputs, non-powered, serial interface, auto pulse, CANOptical indicators6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate per- centage (10 LEDs))Acoustic indicatorsBeeper/buzzer (can be switched off, can be allocated as a result indication function)Operating elements2 buttons (choose and start/stop functions)Configuration softwareSOPAS ET | Digital inputs | | |
| Optical indicators6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate percentage (10 LEDs))Acoustic indicatorsBeeper/buzzer (can be switched off, can be allocated as a result indication function)Operating elements2 buttons (choose and start/stop functions)Configuration softwareSOPAS ET | Digital outputs | | |
| Acoustic indicatorsBeeper/buzzer (can be switched off, can be allocated as a result indication function)Operating elements2 buttons (choose and start/stop functions)Configuration softwareSOPAS ET | Reading pulse | | Digital inputs, non-powered, serial interface, auto pulse, CAN |
| Operating elements 2 buttons (choose and start/stop functions) Configuration software SOPAS ET | Optical indicators | | |
| Configuration software SOPAS ET | Acoustic indicator | S | Beeper/buzzer (can be switched off, can be allocated as a result indication function) |
| | Operating element | ts | 2 buttons (choose and start/stop functions) |
| Memory card MicroSD memory card (flash card), optional | Configuration soft | ware | SOPAS ET |
| | Memory card | | MicroSD memory card (flash card), optional |

BAR CODE SCANNERS

Ambient data

| Electromagnetic compatibility (EMC) | EN 61000-6-3 (2001-10) / EN 61000-6-2:2005 |
|-------------------------------------|--|
| Vibration resistance | EN 60068-2-6 (1995) |
| Shock resistance | EN 60068-2-27 (1993) |
| Ambient operating temperature | 0 °C +40 °C |
| Storage temperature | -20 °C +70 °C |
| Permissible relative humidity | 90 %, Non-condensing |
| Ambient light immunity | 2,000 lx, on bar code |
| Bar code print contrast (PCS) | ≥ 60 % |

General notes

| Note on use | For Ethernet connection please use an Ethernet version of CLV6xx |
|-----------------|--|
| Classifications | |
| ECI@ss 5.0 | 27280102 |
| ECI@ss 5.1.4 | 27280102 |
| ECI@ss 6.0 | 27280102 |
| ECI@ss 6.2 | 27280102 |
| ECI@ss 7.0 | 27280102 |
| ECI@ss 8.0 | 27280102 |
| ECI@ss 8.1 | 27280102 |
| ECI@ss 9.0 | 27280102 |
| ETIM 5.0 | EC002550 |
| ETIM 6.0 | EC002550 |
| UNSPSC 16.0901 | 43211701 |

61.2 (2.41)

35.3

(1.39) 22

ID M

(0.87)

0

4

9 (0.35)

85 (3.35)

41 (1.61)

SICK

38 (1.50)

(24.1)

(0.95)

6 5

31.2

(1.23)

(30.6)

65.4 (2.57)

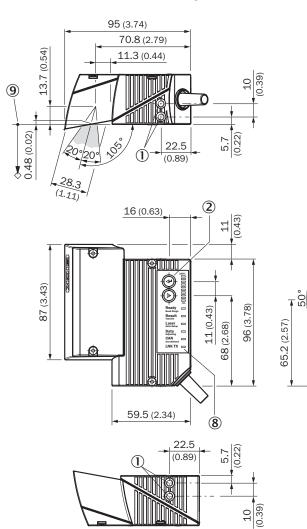
3

82.1 (3.23)

22.4 (0.88)

Dimensional drawing (Dimensions in mm (inch))

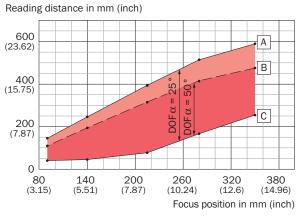
CLV63x/64x/65x Standard, oscillating mirror



- ① Blind hole thread M5, 5 mm deep (2 x), for mounting
- ② Function button (2 x)
- ③ Reading field
- Cover for the microSD memory card
- ⑤ Central position of the deflected laser beam in the V-shaped aperture angle
- (6) Internal impact point: rotation point of the variable direction laser beam
- ⑦ Cable with 15-pin D-sub HD male connector
- (a) LED status indicator (6x) and bar graph
- (9) Reference point for reading distance (from housing edge to object)

BAR CODE SCANNERS

Reading field diagram



For devices with plastic reading window, the depth of field is reduced by approx. 10 %

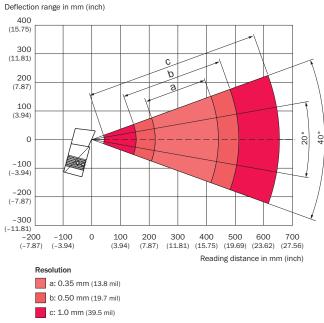
Resolution 0.5 mm (19.7 mil)

A max. reading distance (aperture angle 25°)

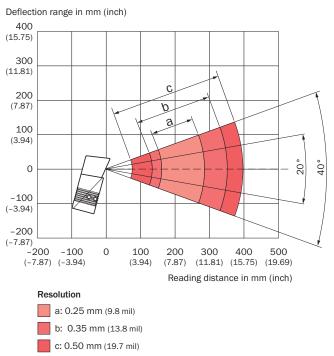
B max. reading distance (aperture angle 50°)

C min. reading distance

Deflection width

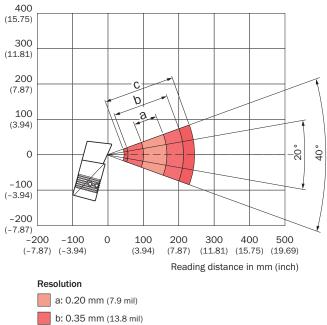


① Diagram applies to focus position of 280 mm



① Diagram applies to focus position of 215 mm

Deflection range in mm (inch)



- c: 0.50 mm (19.7 mil)
- ① Diagram applies to focus position of 140 mm

BAR CODE SCANNERS

Recommended accessories

Other models and accessories -> www.sick.com/CLV64x

| | Brief description | Туре | Part no. |
|---------------|---|------------------------|----------|
| Mounting bra | ckets and plates | | |
| | Hanger-shaped mounting bracket, mounting hardware included | Mounting bracket | 2042800 |
| Modules and | gateways | | |
| | External parameter memory for integration in CDB620/CDB650/CDM42x | CMC600-101 | 1042259 |
| Modules | | | |
| | Small connection module for one sensor, 4 cable glands, base for CMC600 | CDB620-001 | 1042256 |
| Storage media | | | |
| (I) | microSD memory card with 1 GB for industrial use | microSD memory card | 4051366 |

Recommended services

Additional services -> www.sick.com/CLV64x

| | Туре | Part no. |
|---|------------------------------------|----------|
| Warranty extensions | | |
| Product area: Identification solutions, Vision, Distance sensors, Detection and ranging solutions Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase), Long-term protection for calculable lump sum. Duration: Five-year warranty from date of purchase. | Five-year extended warranty | 1680671 |
| Performance check | | |
| Product area: Bar code scanners Range of services: Inspection of defined functions, e.g., reading performance Documentation: Documentation of reading performance, Creation of a performance check log Duration: Additional work will be invoiced separately based on time spent Note: The prices do not include expenses or costs for the travel time | Performance check CLV4xx/CLV6xx | 1682028 |
| Maintenance | | |
| Product area: Bar code scanners Range of services: Inspection, analysis and restoring of defined functions, Inspection and adjustment of reading configuration, code configuration, data processing and network or interfaces Documentation: Documentation of operating hours and archiving of parameters in a SICK database, Documentation of reading performance, Creation of a maintenance log Duration: Additional work will be invoiced separately based on time spent Note: The prices do not include expenses or costs for the travel time | Maintenance CLV4xx/CLV6xx | 1611420 |

BAR CODE SCANNERS

| | Туре | Part no. |
|--|--------------------------------|----------|
| Training | | |
| Product family group: Bar code scanners Range of services: SICK offers training courses for numerous target groups ranging from basic to expert levels, the training format and location can be worked out in collaboration with SICK Note: A minimum and maximum number of participants is determined based on the training format, depending on the training format, content and location, a training course may take place over the course of one or more work days Duration: The fixed price includes the specific training services agreed upon with the customer, the fixed price includes the work time required for the training services, the required work time depends on the range of services, Additional work will be invoiced separately based on time spent Travel expenses: The prices include costs for the travel time and expensestravel costs, such as flight or hotel expenses, are not included | Training for the CLV6 series | 1612231 |
| Commissioning | | |
| Product area: Bar code scanners Range of services: Inspection of connection, fine adjustment, optimization of parameters of SICK product as well as verification tests, Setup of previously defined functions of reading configuration, code configuration, data processing and network, interfaces or inputs and outputs Documentation: Archiving of product parameters in a SICK database, Documentation of reading performance, Creation of a commissioning log Duration: Additional work will be invoiced separately based on time spent Note: The prices do not include expenses or costs for the travel time | Commissioning CLV61x CLV64x | 1681925 |

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

