CLV640-6000

CLV64x

BAR CODE SCANNERS

SICK
Sensor Intelligence.

CLV640-6000 | CLV64x
BAR CODE SCANNERS

Ordering information

Type	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] 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)

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)
No. of characters per reading interval	5,000 500 (for multiplexer function in CAN operation)
No. of multiple readings	1 ... 99

Interfaces

PROFINET	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
Function	PROFINET Single Port, PROFINET Dual Port
EtherCAT®	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600
Serial	✓, RS-232, RS-422, RS-485
Function	Host, AUX
Data transmission rate	2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)
CAN	✓
Function	SICK CAN sensor network CSN (master/slave, multiplexer/server)
Data transmission rate	20 kbit/s ... 1 Mbit/s
CANopen	✓
Data transmission rate	20 kbit/s ... 1 Mbit/s
PROFIBUS DP	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
DeviceNet™	✓
Type of fieldbus integration	Optional, over external connection module CDM + CMF
Digital inputs	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 percentage (10 LEDs))
Acoustic indicators	Beeper/buzzer (can be switched off, can be allocated as a result indication function)
Operating elements	2 buttons (choose and start/stop functions)
Configuration software	SOPAS ET
Memory card	MicroSD memory card (flash card), optional

Ambient data

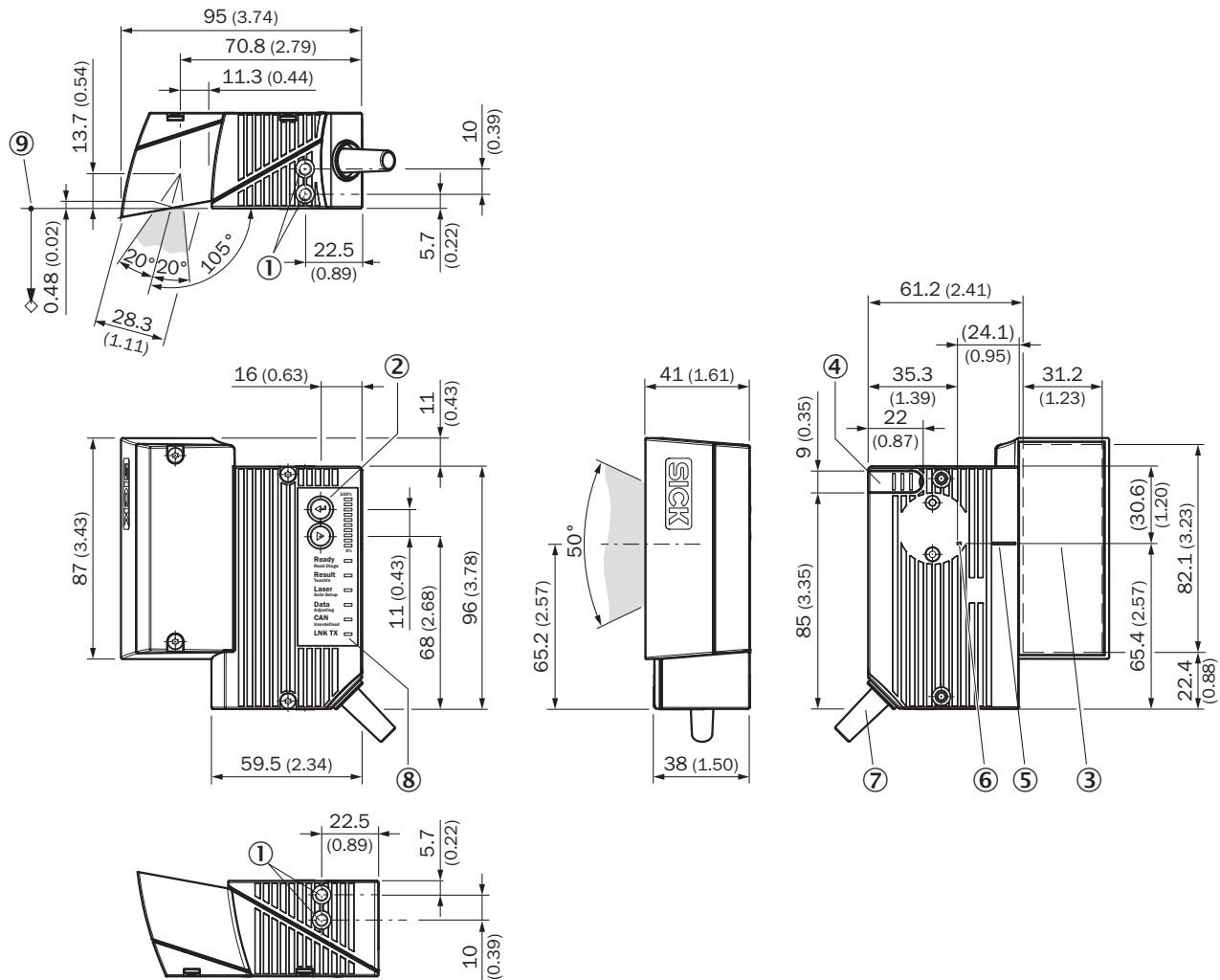|	
Electromagnetic compatibility (EMC)	EN 61000-6-3 (2001-10) / EN 61000-6-2:2005
Vibration resistance	EN 60068-2-6 (1995)
Shock resistance	EN 60068-2-27 (1993)
Ambient operating temperature	0 °C … +40 °C
Storage temperature	–20 °C … +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light 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

ECl@ss 5.0	27280102
ECl@ss 5.1.4	27280102
ECl@ss 6.0	27280102
ECl@ss 6.2	27280102
ECl@ss 7.0	27280102
ECl@ss 8.0	27280102
ECl@ss 8.1	27280102
ECl@ss 9.0	27280102
ETIM 5.0	EC002550
ETIM 6.0	EC002550
UNSPSC 16.0901	43211701

Dimensional drawing (Dimensions in mm (inch))

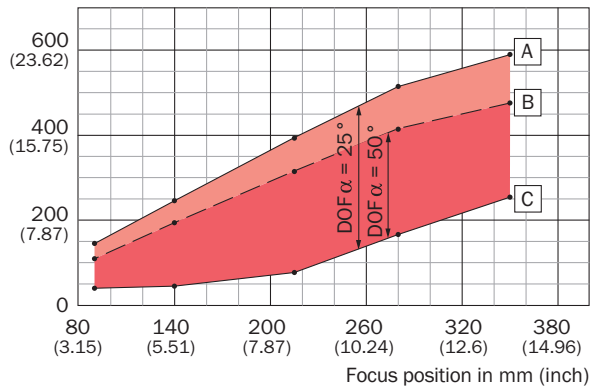CLV63x/64x/65x Standard, oscillating mirror

① Blind hole thread M5, 5 mm deep (2 x), for mounting
② Function button (2 x)
③ Reading field
④ 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
⑧ LED status indicator (6x) and bar graph
⑨ Reference point for reading distance (from housing edge to object)
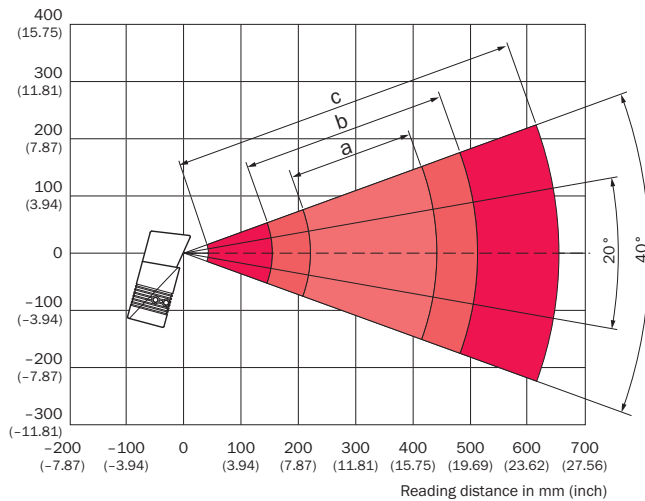
Reading field diagram

Reading distance in mm (inch)

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

Resolution 0.5 mm (19.7 mil)

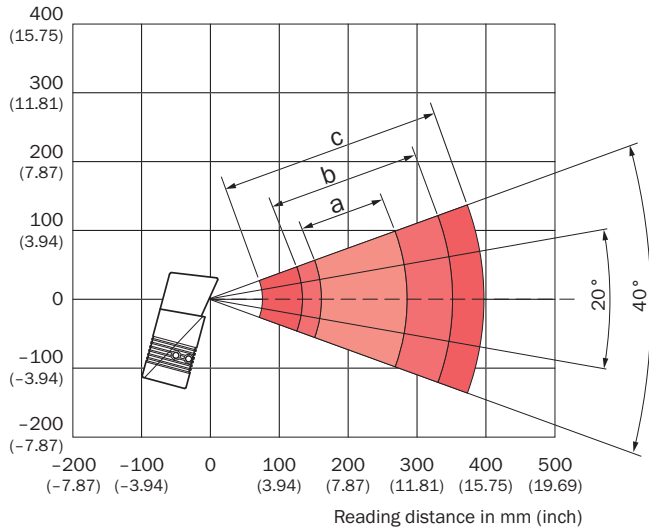| A | max. reading distance (aperture angle 25°) |
| B | max. reading distance (aperture angle 50°) |
| C | min. reading distance |

Deflection width

Deflection range in mm (inch)

Resolution

- a: 0.35 mm (13.8 mil)
- b: 0.50 mm (19.7 mil)
- c: 1.0 mm (39.5 mil)

① Diagram applies to focus position of 280 mm
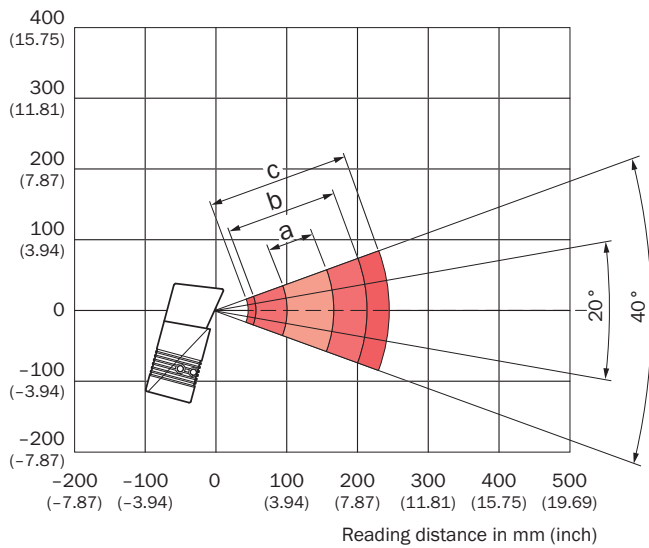
Deflection range in mm (inch)

Resolution

- a: 0.25 mm (9.8 mil)
- b: 0.35 mm (13.8 mil)
- c: 0.50 mm (19.7 mil)

① Diagram applies to focus position of 215 mm

Deflection range in mm (inch)

Resolution

- a: 0.20 mm (7.9 mil)
- b: 0.35 mm (13.8 mil)
- c: 0.50 mm (19.7 mil)

① Diagram applies to focus position of 140 mm

Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets 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			
	microSD memory card with 1 GB for industrial use	microSD memory card	4051366

Recommended services

Additional services ➜ www.sick.com/CLV64x

	Type	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

	Type	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."

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