



Bar code scanners  
CLV63x / CLV631 / Mid Range

CLV631-6000



**Model Name** > [CLV631-6000](#)  
**Part No.** > [1041986](#)



**At a glance**

- Integrated pushbuttons for auto setup and reading diagnostics
- Integrated LED bar graph
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant)
- Enhanced SMART code reconstruction technology
- Flexible sorting, filtering, and logical functions
- Advanced, easy-to-use SOPAS configuration software
- High scanning frequency of up to 1,200 Hz
- Advanced remote diagnostics and network monitoring capabilities available over Ethernet

**Your benefits**

- Intelligent auto setup and multi-function pushbuttons save time during commissioning
- Easily execute firmware updates using the microSD memory card: no need for a PC
- Enhanced SMART technology reads damaged and partially obscured codes, increasing read rates
- Increased scanner intelligence enables sophisticated configuration of logical operations, reducing the control system programming effort. Data is then delivered in the desired format
- Real-time decoding at very high speeds
- Increased reading reliability due to high-performance computing power and a high scanning frequency



**Features**

Version:	Mid Range
Connection type:	Cable
Reading field:	Oscillating mirror
Scanner design:	Line scanner
Focus:	Fixed focus
Light source:	Visible red light (655 nm)
MTBF:	40,000 h
Laser class:	2 (EN 60825-1 (A2:2001-03))
Field of view:	≤ 50 °
Code resolution:	0.25 mm ... 0.5 mm

Reading distance:	78 mm ... 397 mm <sup>1)</sup>
Oscillating mirror functions:	Fixed (adjustable position), One shot, Oscillating (variable or fixed amplitude)
Oscillation frequency:	0.5 Hz ... 6.25 Hz
Angle of deflection:	-20 ° ... 20 °
Heating:	Optional
Scanning frequency:	400 Hz ... 1,200 Hz

<sup>1)</sup> For details see reading field diagram

## Performance

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Bar code types:	Interleaved 2 of 5, All current code types, Codabar, Code 128, Code 39, Code 93, GS1 DataBar, GS1-128/EAN 128, MSI/Plessey, Pharmacode, Telepen, UPC/GTIN/EAN
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

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Serial (RS-232, RS-422/485):	✓
Remark (Serial (RS-232, RS-422/485)):	AUX (only RS-232)
Function (Serial (RS-232, RS-422/485)):	Host, AUX
Data transmission rate (Serial (RS-232, RS-422/485)):	2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud
Ethernet:	-
Protocol (Ethernet):	PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600)
CAN bus:	✓
Function (CAN bus):	SICK CAN sensor network (Master/Slave, Multiplexer/Server)
Protocol (CAN bus):	CANopen, CSN (SICK CAN Sensor Network)
Data transmission rate (CAN bus):	20 kbit/s ... 1 Mbit/s
PROFIBUS DP:	✓
Remark (PROFIBUS DP):	Optional via external connection module (CDF600-2)
DeviceNet:	✓
Remark (DeviceNet):	Optional via external connection module (CDM + CMF)
Control elements:	2 buttons (choose and start/stop functions)
Memory card:	MicroSD memory card (flash card) 512 MB, optional
Switching inputs:	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Switching outputs:	4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)
Reading pulse:	Auto pulse, CAN, Non-powered, "Sensor 1" switching input, Serial interface
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)
Configuration software:	SOPAS ET

## Mechanics/electronics

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Electrical connection:	1 x 15-pin D-Sub HD male connector (0.9 m)
Operating voltage:	18 V DC ... 30 V DC

Power consumption:	6 W
Housing:	Die-cast aluminum
Housing color:	Light blue (RAL 5012)
Front screen:	Glass
Enclosure rating:	IP 65 (EN 60529)
Protection class:	III (EN 61140)
Weight:	420 g, with connecting cable
Dimensions:	95 mm x 96 mm x 41 mm

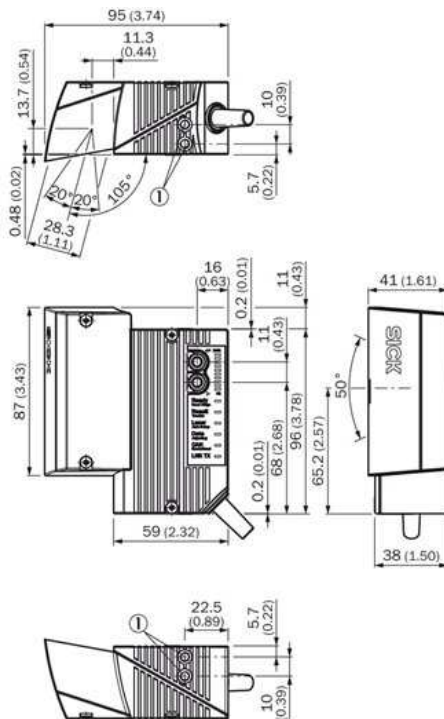
### Ambient data

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
Bar code print contrast (PCS):	≥ 60 %
Ambient light immunity:	2,000 lx, on bar code

### General notes

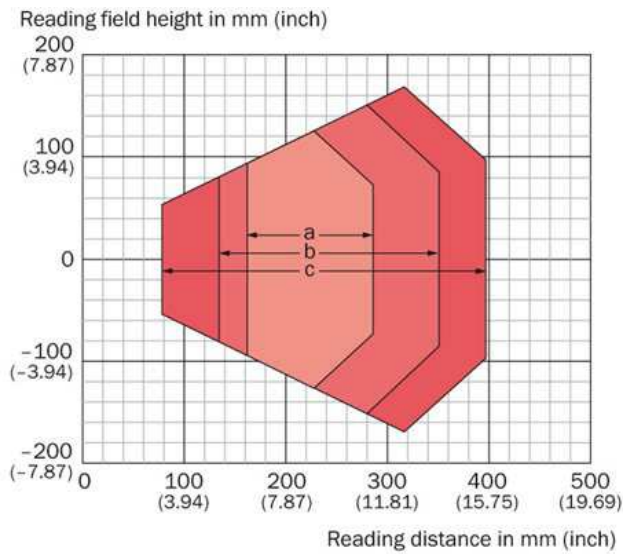
Note on use:	For Ethernet connection please use an Ethernet version of CLV6xx
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### Dimensional drawing



[1] M5 threaded mounting hole, 5.5 mm deep

## Reading field diagram



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

### Resolution

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

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