



Bar code scanners
CLV63x / CLV631 / Mid Range

CLV631-1000



Model Name > **CLV631-1000**
Part No. > **1041980**



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: | Front |
| Scanner design: | Raster 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: | 90 mm ... 450 mm ¹⁾ |
| Raster height, number of lines, at distance: | 15 mm, 8, 200 mm |
| Heating: | Optional |
| Scanning frequency: | 400 Hz ... 1,200 Hz |

¹⁾ 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

| | |
|---|--|
| 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

| | |
|------------------------|--|
| Electrical connection: | 1 x 15-pin D-Sub HD male connector (0.9 m) |
| Operating voltage: | 18 V DC ... 30 V DC |
| Power consumption: | 5 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: | 320 g, with connecting cable |
| Dimensions: | 61 mm x 96 mm x 38 mm |

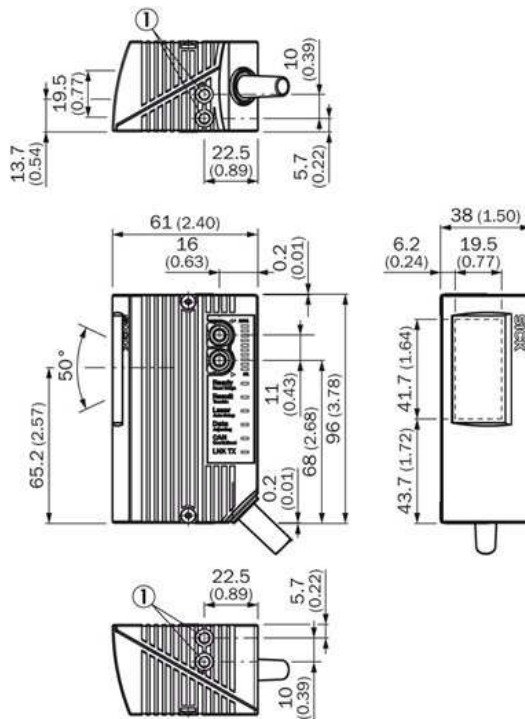
Ambient data

| | |
|--------------------------------------|--|
| 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

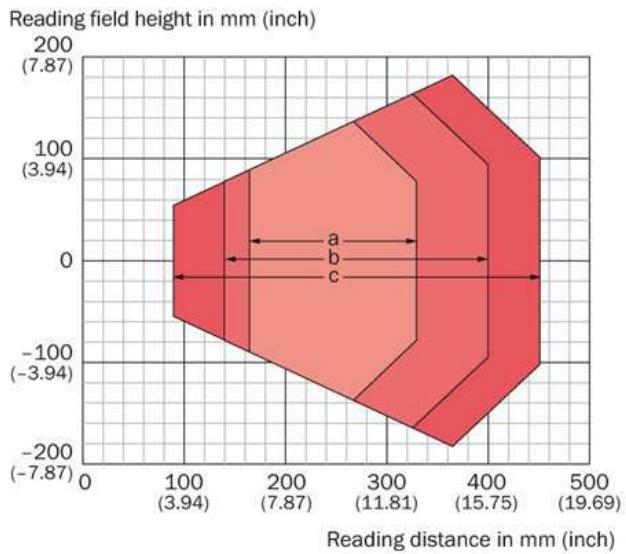
| | |
|--------------|--|
| Note on use: | For Ethernet connection please use an Ethernet version of CLV6xx |
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Dimensional drawing



[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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