



Bar code scanners  
CLV63x / CLV631 / Mid Range

CLV631-6831S01



**Model Name** > [CLV631-6831S01](#)  
**Part No.** > [1062136](#)



**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: | Ethernet                    |
| 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:             | 82 mm ... 377 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 °   |
| Scanning frequency:           | 400 Hz ... 1,200 Hz  |

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

## Performance

|   |   |
|---|---|
| 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:   | ✓   |
| Function (Ethernet):                                  | Host, AUX   |
| Protocol (Ethernet):                                  | TCP/IP, EtherNet/IP, PROFINET, PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600) |
| Data transmission rate (Ethernet):                    | 10/100 Mbit   |
| 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)   |
| Switching inputs:                                     | 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 in CDB650)  |
| Switching outputs:                                    | 4 ("Result 1", "Result 2", 2 via CMC600 in CDB650)  |
| Reading pulse:  | Auto pulse, CAN, Non-powered, Switching inputs, Serial interface  |
| Configuration software:                               | SOPAS ET  |

## Mechanics/electronics

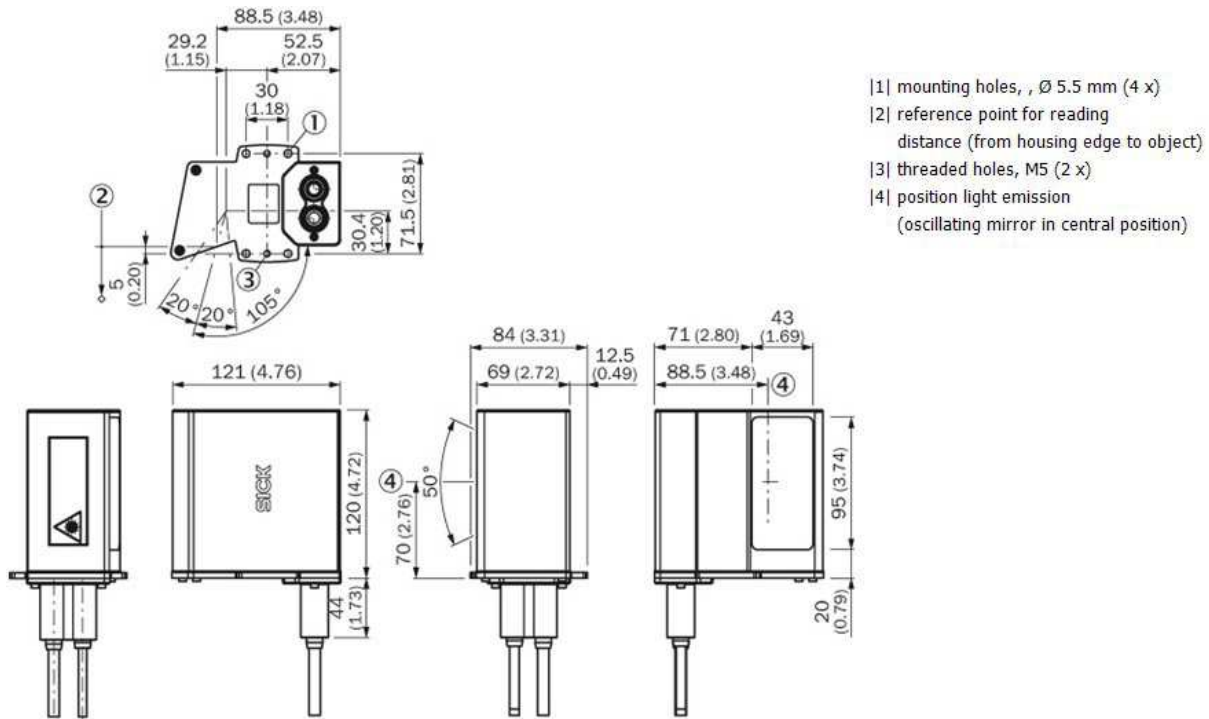
|                        |  |
|------------------------|--|
| Electrical connection: | 2 x M12 cylindrical connectors (1 x 17-pin male connector, 4-pin female connector) |
| Operating voltage:     | 18 V DC ... 30 V DC  |
| Power consumption:     | 6 W  |
| Housing:               | Stainless steel  |
| Housing color:         | Stainless steel (unpainted)  |
| Front screen:          | Plastic  |
| Enclosure rating:      | IP 69K (DIN 40 050, part 9)  |

Protection class: III (EN 61140)  
 Weight: 1,230 g, without connecting cable  
 Dimensions: 121 mm x 164 mm x 84 mm

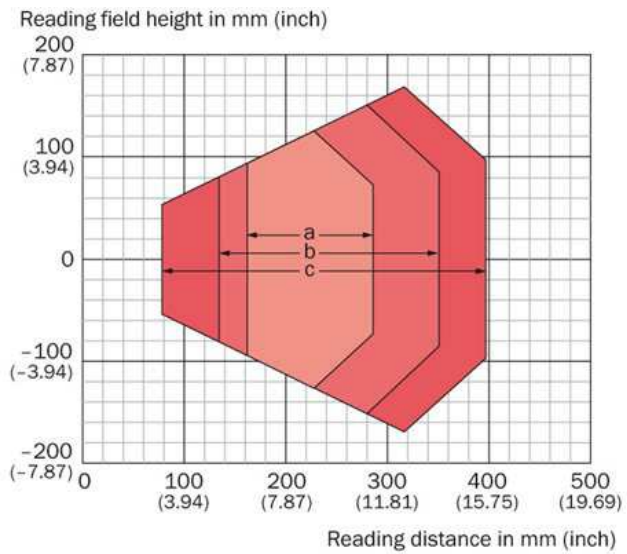
**Ambient data**

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

**Dimensional drawing**



## 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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