



CLV631-6831S01

CLV63x

FIXED MOUNT BARCODE SCANNERS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|----------------|----------|
| CLV631-6831S01 | 1062136 |

Other models and accessories → www.sick.com/CLV63x



Detailed technical data

Features

| | |
|-------------------------------------|---|
| Version | Mid Range |
| Connection type | Ethernet |
| Reading field | Oscillating mirror |
| Sensor type | Line scanner |
| Optical focus | Fixed focus |
| Light source | Light spot, laser, Visible, Red, 655 nm |
| Light spot | Circular |
| Laser class | 2, complies with 21 CFR 1040.10 except for the conformance according to "Laser Notice No. 56" from May 8, 2019 (EN 60825-1:2014+A11:2021, IEC 60825-1:2014) |
| Aperture angle | ≤ 50° |
| Reading distance | 82 mm ... 377 mm ¹⁾ |
| Scanning frequency | 400 Hz ... 1,200 Hz |
| Code resolution | 0.25 mm ... 0.5 mm |
| 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

| | |
|------------------------|--|
| Connection type | 2 x M12 cylindrical connectors (1 x 17-pin male connector, 4-pin female connector) |
| Supply voltage | 18 V DC ... 30 V DC |

¹⁾ At 25 °C.

| | |
|-------------------------------|--------------------------------------|
| Power consumption | 6 W |
| Housing material | Stainless steel |
| Housing color | Stainless steel (unpainted) |
| Window material | Plastic |
| Enclosure rating | IP69K (DIN 40 050, part 9) |
| Protection class | III (EN 61140) |
| Weight | + 1,230 g, without connecting cable |
| Dimensions (L x W x H) | 121 mm x 164 mm x 84 mm |
| MTBF | 100,000 h |
| MTTF | 40,000 h (Laser diode) ¹⁾ |

¹⁾ At 25 °C.

Performance

| | |
|---|---|
| Readable code structures | 1D codes |
| 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 |
| Code printing process | Label (printed codes) |
| 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

| | | |
|---------------------|------------------------------|---|
| Ethernet | | ✓, TCP/IP |
| | Function | Data interface (read result output), Service interface |
| | Data transmission rate | 10/100 MBit/s |
| PROFINET | | ✓ |
| | Function | PROFINET Single Port, PROFINET Dual Port (optional via external connection module CDF600-2) |
| | Data transmission rate | 10/100 MBit/s |
| EtherNet/IP™ | | ✓ |
| | Data transmission rate | 10/100 MBit/s |
| EtherCAT® | | ✓ |
| | Type of fieldbus integration | Optional over external fieldbus module CDF600 |
| Serial | | ✓, RS-232, RS-422, RS-485 |
| | Function | Data interface (read result output), Service interface |
| | Data transmission rate | 2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232) |
| CAN | | ✓ |
| | Function | SICK CAN sensor network CSN (CAN controller/CAN device, 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 |
| Digital inputs | 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 in CDB650) |
| Digital outputs | 4 ("Result 1", "Result 2", 2 via optional CMC600 parameter memory in CDB650) |
| Reading pulse | Digital inputs, serial interface, auto pulse, CAN, non-powered |
| Configuration software | SOPAS ET |

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 barcode |
| Bar code print contrast (PCS) | ≥ 60 % |

Certificates

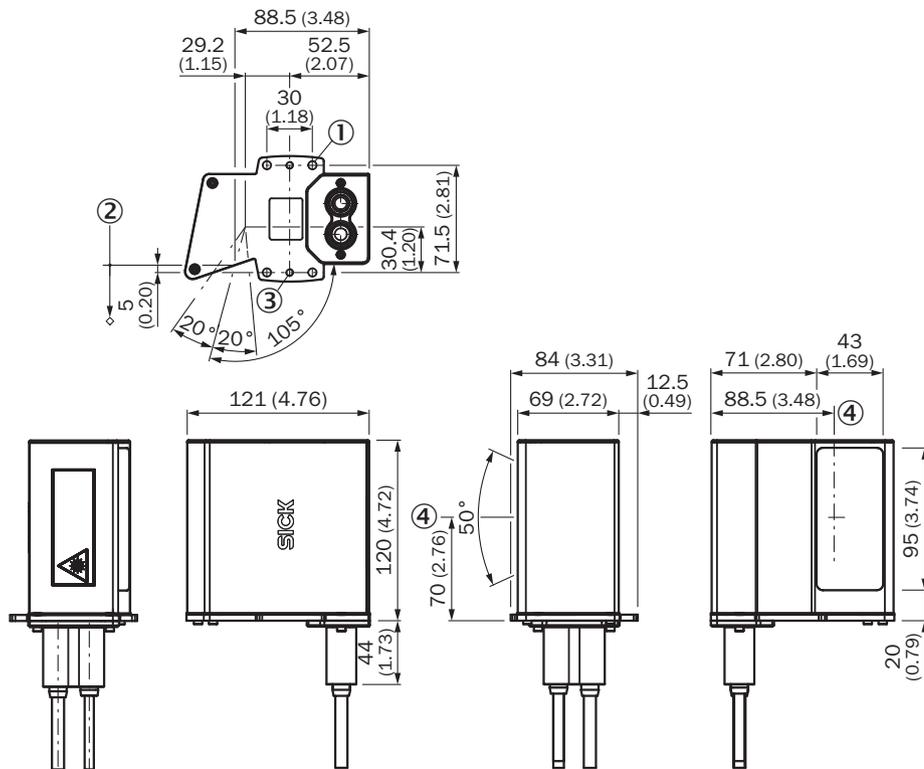
| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| China-RoHS | ✓ |
| Ethercat certificate | ✓ |
| Profinet certificate | ✓ |
| Laser safety (IEC 60825-1) declaration of manufacturer | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |
| 4Dpro | ✓ |

Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27280102 |
| ECLASS 5.1.4 | 27280102 |
| ECLASS 6.0 | 27280102 |
| ECLASS 6.2 | 27280102 |
| ECLASS 7.0 | 27280102 |
| ECLASS 8.0 | 27280102 |
| ECLASS 8.1 | 27280102 |
| ECLASS 9.0 | 27280102 |
| ECLASS 10.0 | 27280102 |
| ECLASS 11.0 | 27280102 |
| ECLASS 12.0 | 27280102 |
| ETIM 5.0 | EC002550 |

| | |
|-----------------------|----------|
| ETIM 6.0 | EC002550 |
| ETIM 7.0 | EC002550 |
| ETIM 8.0 | EC002550 |
| UNSPSC 16.0901 | 43211701 |

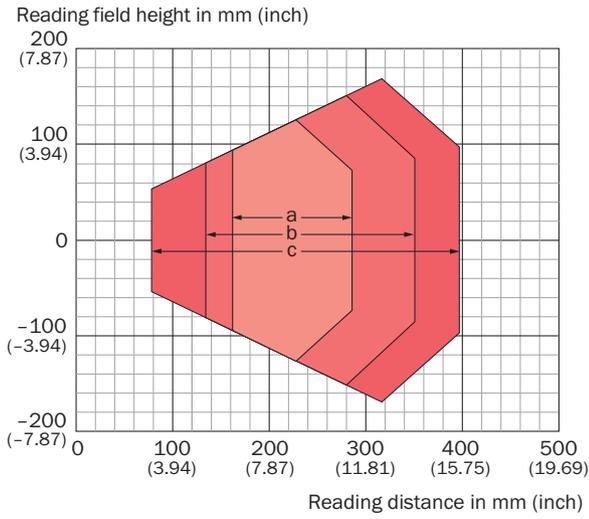
Dimensional drawing



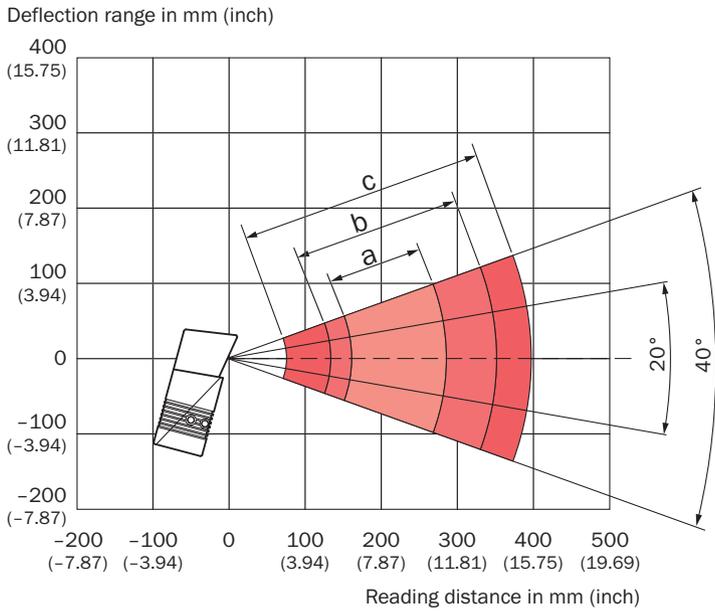
Dimensions in mm (inch)

- ① mounting holes, , Ø 5.5 mm (4 x)
- ② reference point for reading distance (from housing edge to object)
- ③ threaded holes, M5 (2 x)
- ④ position light emission (oscillating mirror in central position)

Reading field diagram



Deflection width



Recommended accessories

Other models and accessories → www.sick.com/CLV63x

| | Brief description | Type | part no. |
|---|--|---------------------|----------|
| integration modules and adapters | | | |
|  | <ul style="list-style-type: none"> Description: External parameter memory for integration in CDB620/CDB650/CDM42x | CMC600-101 | 1042259 |
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> Description: Bracket | Mounting bracket | 2068600 |
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 17-pin, straight, A-coded Connection type head B: Male connector, M12, 17-pin, straight, A-coded Signal type: Power, serial, CAN, digital I/Os Cable: 3 m, 17-wire Description: Power, suitable for 2 A, shielded, Serial, CAN, Digital I/Os Application: Drag chain operation | YM2A8D-030XXXF2A8D | 6051194 |
|  | <ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, RJ45, 8-pin, straight Signal type: Ethernet, PROFINET Cable: 2 m, 4-wire, AWG26, PVC Description: Ethernet, shielded, PROFINET | YM2D24-020E-B2MRJA4 | 6050198 |
| Junction boxes | | | |
|  | | CDB650-204 | 1064114 |

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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