



CLV6 Series

INTELLIGENT SOLUTIONS FOR LOGISTICS AND AUTOMATION

Bar code scanners

SICK
Sensor Intelligence.

CLV6 series – AT HOME IN MANY INDUSTRIES

OVERVIEW OF INDUSTRIES AND APPLICATION EXAMPLES

Maximum reading performance, more flexibility when changing products, and optimum networking with formats that are becoming increasingly smaller are the key requirements of today's identification solutions. And SICK is able to meet all these quality demands: The powerful bar code scanners in the CLV6 series product families can accommodate virtually any industry or industrial application in the field of automatic identification.

Automotive and part suppliers



The main task of the CLV6xx bar code scanner in the automotive and parts supplier industry consists of identification and batch tracing. These scanners are used in tasks such as identifying coils, installing dashboards, and identifying racks.

Document handling



The CLV6xx bar code scanners are used for identifying documents. They can be useful in tasks such as letter sorting.

Industrial vehicles



The CLV6xx bar code scanners are used on industrial vehicles for identifying totes and pallets.

Clinical analysis



Thanks to features such as its incredible depth of field and its compact design for installation inside analysis instruments, the outstanding flexibility of the CLV6 series makes it a winning choice.

Courier, express post, and cargo (CEP)



In today's logistics systems, omnidirectional reading tasks are performed using omni port systems (OPS). Powerful and flexible thanks to the use of individual scanners.

Storage and conveyor systems



The CLV6xx bar code scanners, from the CLV69x with oscillating mirror for pallet identification to the CLV615 for reading totes, can be used across the whole logistics chain.

Food



The food industry places stringent requirements on hygiene. The IP 69K version, featuring a stainless steel housing and with a plastic disk, is ideally placed to meet these standards.

Packaging



From object identification to checking codes in labeling machines, the CLV6xx bar code scanners are suited to a multitude of tasks. The solutions from the CLV6 series product families are an impressive choice thanks to their excellent reading properties, even when it comes to highly reflective materials.

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Example applications

Forklift trucks: pallet identification



Customer benefits

- Exceptional depth of field thanks to integrated auto-focus
- Full range of accessories adapted perfectly to suit the needs of the scanner and the application concerned: holders featuring vibration and shock absorption
- Reliable code reconstruction thanks to SMART+

Ideal product solution

CLV69x. Page 58



Industrial vehicles: Very narrow aisle trucks



Customer benefits

- High reading rate thanks to integrated auto-focus
- Complete accessories portfolio, including drag chain cables for maximum availability and service life
- Flexible data output format and sorting saves programming work in the control system

Ideal product solution

CLV65x. Page 50



Document handling: letter sorting



Customer benefits

- High triggering and decoding rates enable conveyor speeds of up to 6 m/s
- Excellent reading performance for codes with low contrast, thus increasing the reading rate
- Compact design to save space and allow flexible mounting in the system

Ideal product solution

CLV62x. Page 24



Storage and conveyor systems: pallet identification



Customer benefits

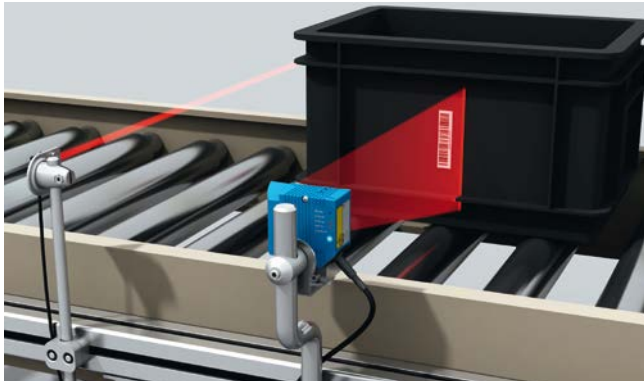
- Reliable decoding for large reading distances and codes with low contrast
- Bar code detection on up to six sides of the object
- Cost-saving integration into existing fieldbus environment thanks to flexible interface concept

Ideal product solution

CLV69x. Page 58



Storage and conveyor systems: tote identification



Customer benefits

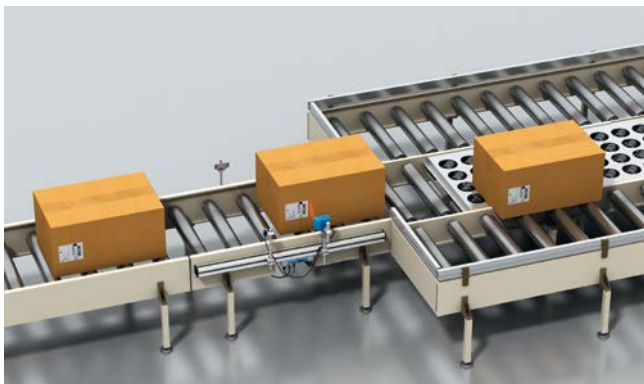
- Simple and fast integration into existing conveyor systems thanks to the optimized reading field
- Flexible fieldbus connection with either CDF600-2 PROFIBUS DP or CDF600-2 PROFINET IO

Ideal product solution

CLV615 Page 18



Storage and conveyor systems: remote control of switching points



Customer benefits

- High reading rate thanks to maximum scan frequency and fixed focus with outstanding depth of field
- Low storage costs as the focus position for the CLV64x can be adjusted to a range of applications
- Integrated logic functions minimize the amount of control work required in the PLC

Ideal product solutions

CLV63x. Page 32

CLV64x. Page 42



Clinical analysis: reading bar codes in samples



Customer benefits

- Reliable reading of damaged codes thanks to the SMART function
- Reliable reading on narrow module widths with maximum reading field height

Ideal product solution

CLV61x. Page 18



CEP: top or omni reading station



Customer benefits

- Flexible connection within a scanner portal via CAN-Bus minimizes the amount of wiring work required
- Excellent depth of field with extremely fast focusing ensures maximum throughput
- Simple commissioning thanks to cross-device SOPAS ET configuration software with integrated project structure

Ideal product solutions

CLV65x. . . . Page 50

CLV69x. . . . Page 58



WIDE RANGE OF MODELS

VERSIONS WITHIN THE CLV6 SERIES

Designs



Front reading window



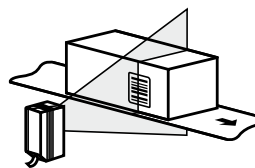
Side reading window, light emission below 105°



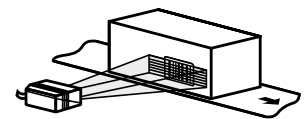
Side reading window with oscillating mirror



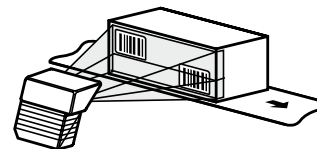
Scanning methods



Line scanner – for reading in tilted positions



Raster scanner – for reading codes redundantly

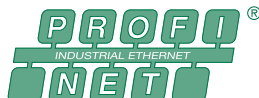


Oscillating mirror – for reading on large surfaces

Please refer to the selection guide on page 16 onwards.

Flexible interface concept

- PROFINET, Ethernet/IP, Ethernet TCP/IP, CANopen, CSN (SICK CAN sensor network), and serial communication on board
- PROFIBUS DP, PROFINET IO Dual Port, EtherCAT, and other interfaces via external gateways with fieldbus proxies



Uniform configuration concept

All CLV6xx products have a user-friendly configuration system based on SOPAS ET. This uniform, cross-sensor operating system from SICK means users can quickly find their way around without the need for time-consuming training. This also provides flexible adjustment options for the output format. The sorting and filtering function incorporated into SOPAS saves PLC programming.

Statistics function

The CLV62x to CLV65x also offer an integrated statistics function, which can be visualized via a user-friendly web server. If required, the SICK visualization platform (SVP) can be accessed. This includes a high-performance information and image management platform for performance control, which is used with SICK data recording systems in sorting tasks.

More information on page 14 onwards.

OUTSTANDING PRODUCT FEATURES

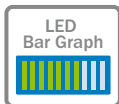
Two function buttons



“Select” and “Start/End” functions, such as

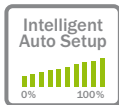
- Starting auto-setup
- Teaching in a match code
- Starting reading diagnostics

LED bar graph



A PC is not required for static checking of the reading rate. The information can be read directly from the LED bar graph.

Intelligent auto-setup



Optimizes the bar code scanner automatically to the bar codes that are to be read.

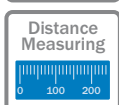
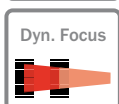
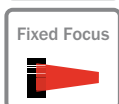
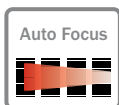
microSD memory card



An integrated microSD memory card slot allows simple and rapid exchange of a bar code scanner in the event of a fault. In addition, the firmware can be updated easily using the microSD memory card. This is done by means of external parameter cloning, without the need for reconfiguring using a PC. In turn, this achieves a very low MTTR value *.

* MTTR = mean time to repair.

Focus



Fixed focus for fixed distances, dynamic focus for reading at dynamic reading distances, and automatic focus position switching in real time with integrated distance measurement (no additional photoelectric sensors required).

SMART620 (code reconstruction)



Reliable reading of even damaged, dirty, and/or partially covered bar codes.

SMART (code reconstruction)



Reliable reading of even damaged, dirty, and/or partially covered bar codes. Reliable reading even in tilted positions. This means that the bar code can be attached in a position that is rotated up to 45 degrees in relation to the scanning beam.

SMART+

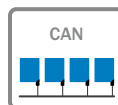


The CLV69x sets new benchmarks in computing power and reading performance. It also offers innovative analysis features, creating additional benefits.



The novel image output concept on the CLV69x can be activated for any conceivable reading situation. The device sends the recorded image data to software, which later displays not only the actual image, but also how the current reading situation is progressing in terms of focus. The data gathered in this way ensures that the decoder is continuously optimized and offers significant advantages for “no-read” analysis.

CAN



The integrated CAN bus supports:

- CANopen® protocol
- SICK CAN sensor network for simple networking of scanners using master/slave or multiplexer/server methods

Cloning plug



Flexible connectors: consisting of a 60-pin Samtec male connector and four different connectors that enable the technology to be adapted perfectly to the application in question.

CLV61x, CLV62x



RELIABLE DECODING, SIMPLE INTEGRATION

Display and status LEDs

For simple visual feedback.

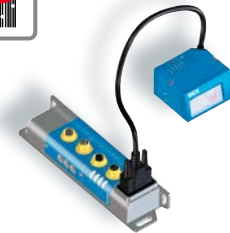
SMART620 (code reconstruction)

Reliable reading of even damaged, dirty, and/or partially covered bar codes.



Flexible mounting

Space-saving solution in storage and conveyor systems.



Cable or male connector

The CLV61x is available as a cable version, while the CLV62x is also available as an Ethernet version with a swivel connector.



Cable version



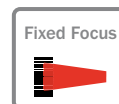
Ethernet version with connector

Dual port connection

Together with the fieldbus module with either CDF600-2 PROFIBUS DP or CDF600-2 PROFINET IO.

Fixed focus

The CLV61x and CLV62x bar code scanners enable simple and fast adjustment and commissioning thanks to their integrated fixed focus feature.



Line scanner and/or raster scanner

Choose from a line scanner with a simple working area and a raster scanner with an extended working area.

Compact design

Maximum flexibility when mounting.

PRODUCT DETAILS

| | |
|--------|---------|
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| CLV62x | Page 24 |

CLV63x to CLV65x



SIMPLE MOUNTING AND FIELDBUS CONNECTION

Integrated function buttons

Commissioning without a PC by simply teaching in directly on the device via the function buttons.

SMART (code reconstruction)

Reliable reading of even damaged, dirty, and/or partially covered bar codes. Reliable reading even in tilted positions. This means that the bar code can be attached in a position that is rotated up to 45 degrees in relation to the scanning beam.



microSD memory card



Cable or male connector

CLV63x to CLV65x are available as cable and male connector versions.

Swivel connector

Exceptionally simple mounting thanks to the swivel connector and the SPEEDCON thread. As a result, the scanner can be integrated easily into your network, even under difficult installation conditions.

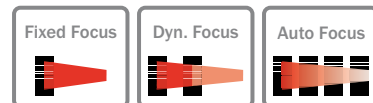


Flexible interface concept

PROFINET IO, Ethernet/IP, Ethernet TCP/IP, CANopen, SICK CAN sensor network, and serial communication on board. PROFIBUS DP and additional fieldbus connection via external CDF600-2 fieldbus modules.

Range of focus types

Fixed focus, dynamic focus, and auto-focus.



Line scanner and/or raster scanner

Choose from a line scanner with a simple working area and a raster scanner with an extended working area.

Oscillating mirror version and designs with side reading windows

Industry-tested IP 65 housing

Integrated event monitor

Analysis tool for commissioning support.

Remote monitoring with integrated web server

For monitoring the reading rate.

Auto-setup

For fast commissioning.

PRODUCT DETAILS

| | |
|--------|---------|
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| CLV64x | Page 42 |
| CLV65x | Page 50 |

CLV69x



FLEXIBLE AND HIGH-PERFORMANCE AT THE HIGHEST LEVEL

Function buttons

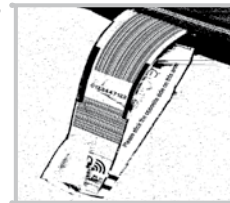
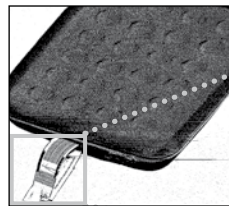
LED bar graph

A PC is not required for statical checking of the reading rate.

Blue status LED for visualizing the CAN termination status

SMART+ (code reconstruction)

Additional image output for analysis purposes.



Flexible mounting

Quick action clamps, shock absorbers, and holders are available.

Cloning plug

The flexible cloning plug concept offers maximum flexibility and safety. In addition to the Ethernet and D-Sub versions, CAN and CAN redundant versions are also available. The CLV4 series can be converted using the D-Sub cloning plug.

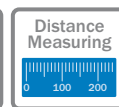
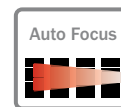


Flexible interface concept

Ethernet/IP, Ethernet TCP/IP, SICK CAN sensor network, and serial communication on board. PROFIBUS DP and additional fieldbus connection via external CDF600-2 fieldbus modules.

Integrated auto-focus

You can rely on excellent reading performance, high-speed processing and maximum levels of reading accuracy. The depth of field and auto-focus function, which is based on an integrated distance measurement concept, enable height-dependent code reading possible within a reading field.



Intelligent application wizard

The integrated application wizard supports commissioning as a master, slave, or stand-alone device. It simplifies commissioning considerably and guides the user through the configuration process.

PRODUCT DETAILS

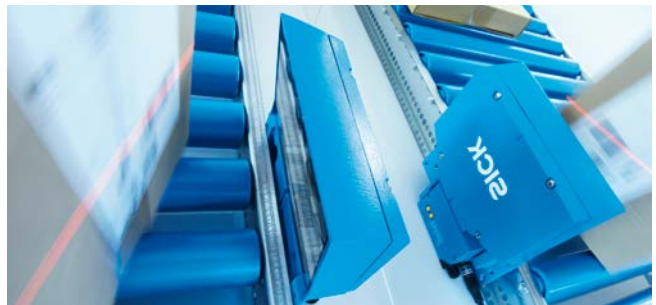
CLV69x Page 58

SPECIAL VERSIONS

FOR SPECIAL CHALLENGES

External mirror hood

For shortening the reading distance and enlarging the reading field width. The external mirror hood is particularly suitable for use between two belts located next to each other in cases where there is very little installation space.



IP 69K housing

The IP 69K housing offers maximum resistance. The integrated plastic disk is ideal for use in the food industry. Offers resistance to the chemical cleaning agents typically used in this application area.



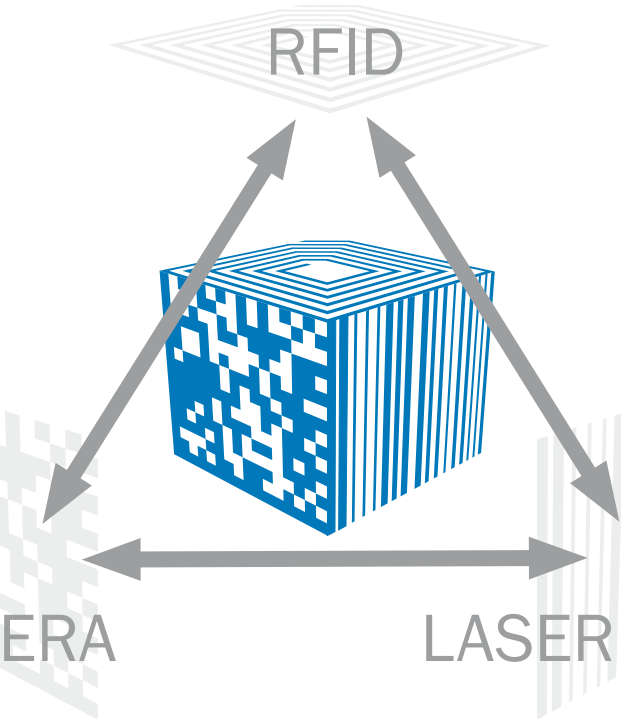
CLV6xx with heating

The CLV6xx heating versions can be used in deep freeze applications that reach temperatures as low as -35°C . There is also a CLV69x version with reading window heating. This means that the bar code scanners are also suitable for applications subject to fluctuating temperatures.



For more information on special versions available in the CLV6 series, ask your regional SICK sales organization.

IDpro CONNECTS



Interchangeable

- identical connection systems
- identical user interfaces
- identical accessories



A single source for all your technology needs

ALL YOU CAN READ

Ensure your investment over the long term

IDpro represents SICK's expertise in all three automatic identification technologies:
laser scanner, camera and RFID.

All IDpro devices are compatible and interchangeable via our standardized IDpro platform. To help you choose the ideal identification technology, we will provide you with comprehensive information to determine the best technology choice.

As the market leader with the largest number of worldwide installations, we have the experience and widest range of solutions that provide maximum uptime and reduced costs.

The benefits of IDpro devices

- **Reduced integration effort**
thanks to standardized IDpro platform
- **Simple commissioning**
even with cross-technology applications
- **Maximum process reliability**
through the use of common industry standards in the connection systems
- **Fast and flexible exchanging**
due to standardized connection systems
- **Low-cost maintenance**
- **Fast training in the three identification technologies**
thanks to the standardized operating concept with a single operation software
- **Investment security**
due to the ability to easily switch between technologies with the same connection systems
- **Low storage effort, low storage costs**
due to fewer components and accessories
- **Information from a single source**
cross-technology and comprehensive

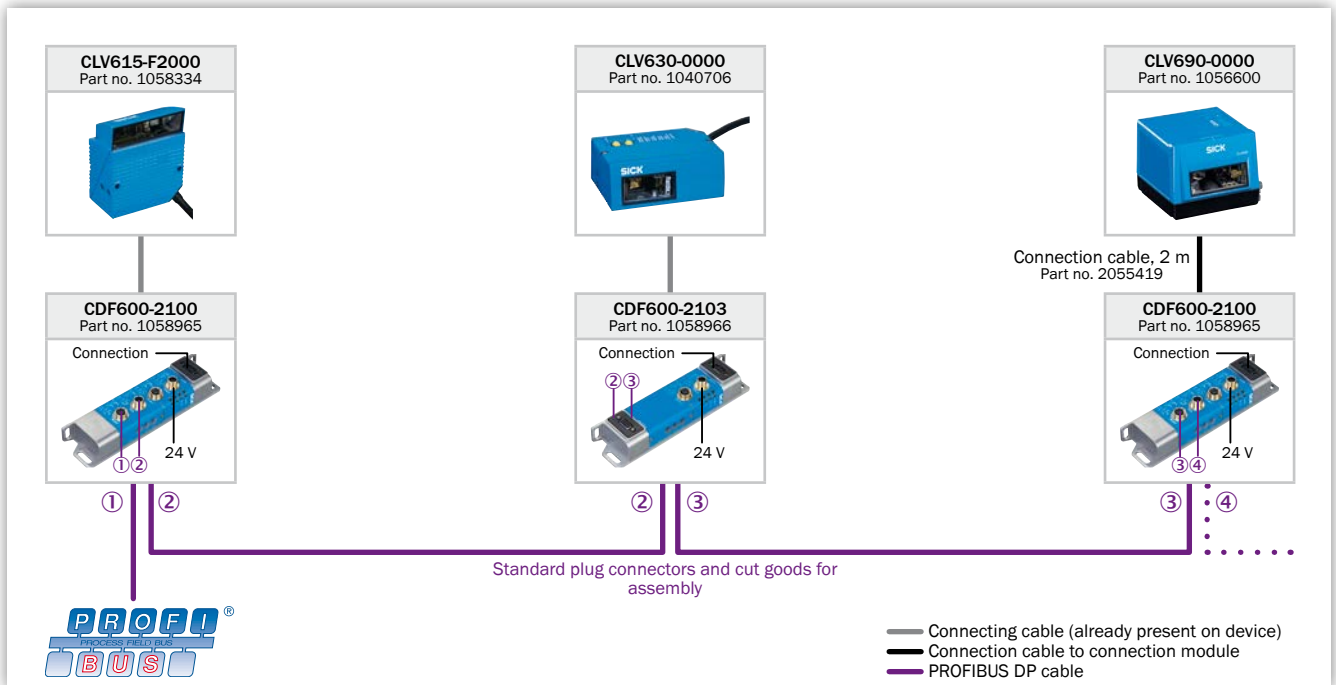


MODULAR CONNECTORS ALL FROM A SINGLE SOURCE

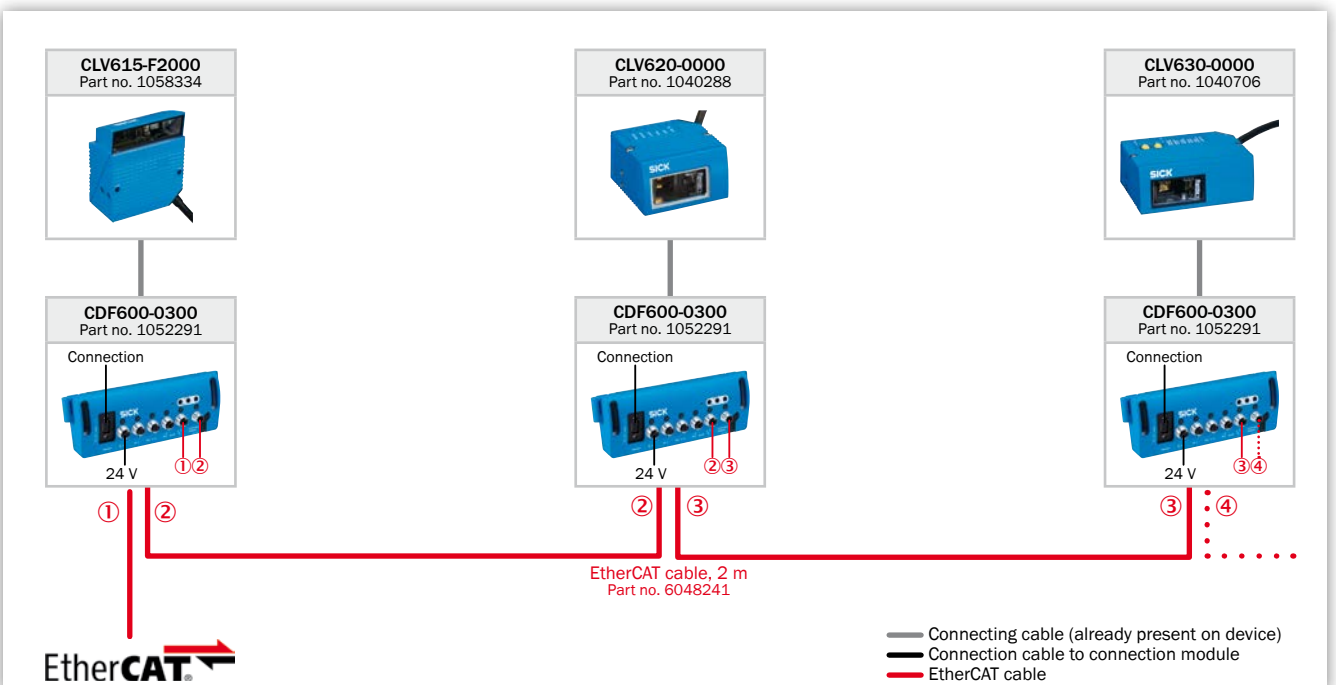
The ability to network auto-ID sensors is becoming particularly important in the light of demands for cost-effective solutions. SICK has the tools to stand up to this challenge: Through the IDpro platform, it offers a product portfolio that is perfect for fieldbus systems.

It gives you the freedom to select the identification technology you require, and enables flexible connection to numerous fieldbus technologies with very little cabling work. The function blocks, available free of charge, keep the amount of work required for integration and programming in the PLC to a minimum.

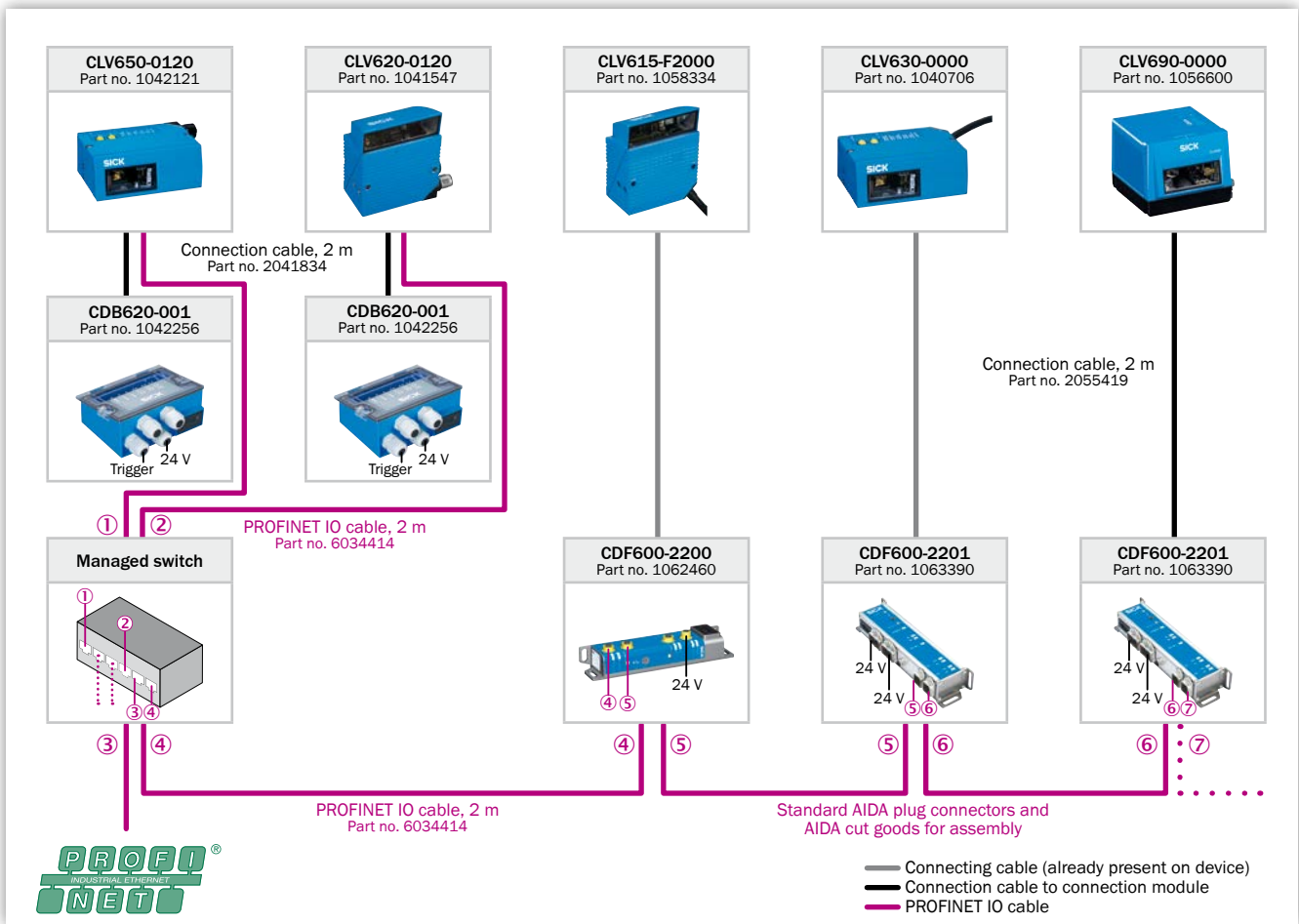
PROFIBUS DP



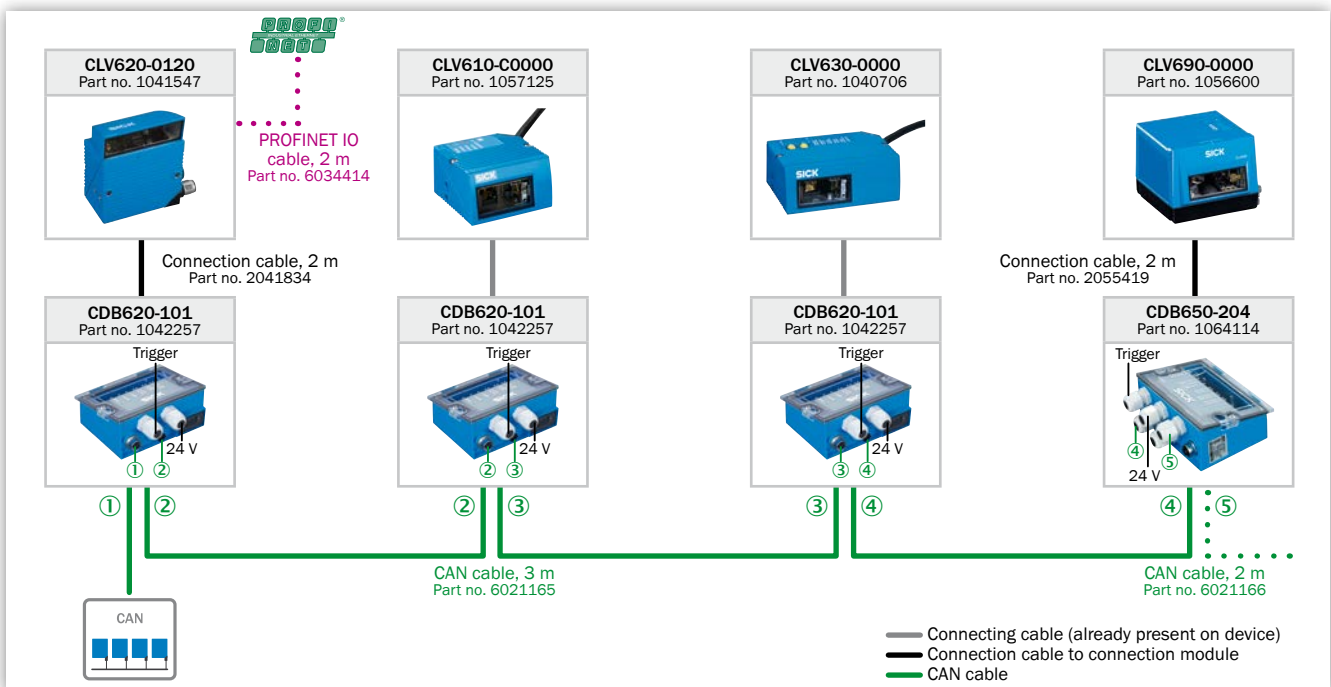
EtherCAT



PROFINET IO



SICK CAN sensor network



SELECTION GUIDE

| | Scanner design | | | | Focus | | | SMART | | |
|-------------------------|----------------|----------------|--------------------|-----------------|-------------|-----------------------|------------|----------|-------|--------|
| | Line scanner | Raster scanner | Oscillating mirror | Heating | Fixed focus | Dynamic focus control | Auto-focus | SMART620 | SMART | SMART+ |
| CLV61x | | | | | | | | | | |
| CLV610 Mid Range | ■ | □ | | | ■ | | | ■ | | |
| CLV612 Short Range | ■ | □ | | | ■ | | | ■ | | |
| CLV615 Long Range | ■ | □ | | | ■ | | | ■ | | |
| CLV62x | | | | | | | | | | |
| CLV620 Mid Range | ■ | ■ | | | ■ | | | ■ | | |
| CLV621 Long Range | ■ | ■ | | | ■ | | | ■ | | |
| CLV622 Short Range | ■ | ■ | | | ■ | | | ■ | | |
| CLV63x | | | | | | | | | | |
| CLV630 Long Range | ■ | ■ | ■ | □ | ■ | | | | ■ | |
| CLV631 Mid Range | ■ | ■ | ■ | □ | ■ | | | | ■ | |
| CLV632 Short Range | ■ | ■ | ■ | □ | ■ | | | | ■ | |
| CLV64x | | | | | | | | | | |
| CLV640 Standard Density | ■ | ■ | ■ | □ | | ■ | | | ■ | |
| CLV642 High Density | ■ | | □ | □ | | ■ | | | ■ | |
| CLV65x | | | | | | | | | | |
| CLV650 Standard Density | ■ | | ■ | □ | | ■ | ■ | | ■ | |
| CLV651 Low Density | ■ | | ■ | □ | | ■ | ■ | | ■ | |
| CLV69x | | | | | | | | | | |
| CLV690 Standard Density | ■ | | ■ | □ ¹⁾ | | ■ | ■ | | | ■ |
| CLV691 Low Density | ■ | | ■ | □ ¹⁾ | | ■ | ■ | | | ■ |
| CLV692 High Density | ■ | | ■ | □ ¹⁾ | | ■ | ■ | | | ■ |

¹⁾ Available upon request.

- = applicable
- = optional

| Product features | | | | | | | | | | Reading distance (at code resolution) | | | | | | Page | | | | |
|-------------------------------|---------------------|--------------|--------------------|---------------|------------------------|--------------------|-----------------------------|--------|--------------------|---------------------------------------|-----|-----|-------|-------|-------|-------|-------|-----|--|----|
| Ethernet as connector version | microSD memory card | Cloning plug | 2 function buttons | LED bar graph | Intelligent auto-setup | Application wizard | Configuration with SOPAS ET | IP 69K | Integrated CAN bus | 250 | 500 | 750 | 1,000 | 1,250 | 1,500 | 1,750 | 2,000 | ... | | |
| | | | | | | | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 60 mm – 365 mm (1 mm) | 18 |
| | | | | | | | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 43 mm – 93 mm (0.2 mm) | 18 |
| | | | | | | | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 25 mm – 330 mm (0.5 mm) | 18 |
| | ■ | | | | ■ | | ■ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 60 mm – 365 mm (1 mm) | 24 |
| | ■ | | | | ■ | | ■ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 60 mm – 730 mm (1 mm) | 24 |
| | ■ | | | | ■ | | ■ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 55 mm – 200 mm (0.5 mm) | 24 |
| | ■ | ■ | | ■ | ■ | ■ | | ■ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 58 mm – 742 mm (1 mm) ²⁾ | 32 |
| | ■ | ■ | | ■ | ■ | ■ | | ■ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 87 mm – 455 mm (0.5 mm) ²⁾ | 32 |
| | ■ | ■ | | ■ | ■ | ■ | | ■ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 58 mm – 288 mm (0.5 mm) ²⁾ | 32 |
| | ■ | ■ | | ■ | ■ | ■ | | ■ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 58 mm – 840 mm (1 mm) ²⁾ | 42 |
| | ■ | ■ | | ■ | ■ | ■ | | ■ | □ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 30 mm – 338 mm (0.2 mm) | 42 |
| | ■ | ■ | | ■ | ■ | ■ | | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 125 mm – 1,625 mm (1 mm) ¹⁾ | 50 |
| | ■ | ■ | | ■ | ■ | ■ | | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 155 mm – 930 mm (0.5 mm) ²⁾ | 50 |
| | | | ■ | ■ | ■ | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 500 mm – 2,100 mm (0.5 mm) | 58 |
| | | | ■ | ■ | ■ | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 500 mm – 2,200 mm (0.5 mm) | 58 |
| | | | ■ | ■ | ■ | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 400 mm – 1,600 mm (0.3 mm) | 58 |

¹⁾ Available upon request.
²⁾ Depending on scanner design.

RELIABLE DECODING, SIMPLE INTEGRATION



Additional information

Detailed technical data 19
 Ordering information 20
 Dimensional drawings 21
 Reading field diagrams 22
 Recommended accessories 23

Product description

The CLV61x product family consists of compact, powerful bar code scanners. In order to offer the best solution for the application, different versions are available (CAN, Fieldbus). The CLV615 Fieldbus version was developed specifically for the requirements of intralogistics. Thanks to the optimized reading field for container identification on the conveyor belt, in combination with the intuitive SOPAS user interface, quick and easy

integration into your conveyor system is possible. The optional connectors, e. g., CDF600-2, enable simple connection to your control system, as well as direct configuration from the control environment. Thanks to the optional configuration cloning module, rapid scanner replacement is also possible in the event of a fault – without having to reconfigure via laptop/PC.

At a glance

- Optimized reading field for intralogistics applications
- Available with SICK CAN sensor network
- Configuration with SOPAS, the configuration tool for all new SICK products
- Available in different versions (CAN, Fieldbus) for use in almost any application
- Adjustable scanning frequency of up to 1000 scans/second
- Compact design

Your benefits

- A suitable scanner version for any CLV61x application
- An optimized reading field for container identification on a conveyor belt, in combination with the intuitive SOPAS user interface, enables quick and easy integration into your conveyor system
- Compact design enables installation even in applications with limited space
- Less programming time required for the control system, since data can be transmitted to the control system in the desired format
- Depending on the version, the CLV61x bar code scanner can be used as a multiplexer in any SICK CAN sensor network, so additional multiplexers are not required
- The optional configuration cloning module in combination with the quick-release mounting bracket enables very fast replacement time in the event of a fault

→ www.mysick.com/en/CLV61x

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

| | CLV610 Mid Range | CLV612 Short Range | CLV615 Long Range |
|---|--|--------------------------|---------------------------|
| Variant | CAN | | Fieldbus |
| Light source | Visible red light (655 nm) | | |
| MTBF | 40,000 h | | |
| Laser class | 2 (EN 60825-1 (2008-05), IEC 60825-1 : 2007-03, Ed. 2.0) | | |
| Field of view | ≤ 50° | | |
| Scanning frequency | 400 Hz ... 1,000 Hz | | |
| Code resolution | 0.2 mm ... 1 mm | 0.1 mm ... 0.2 mm | 0.35 mm ... 0.5 mm |
| Reading distance (at code resolution) | 60 mm ... 365 mm (1 mm) | 43 mm ... 93 mm (0.2 mm) | 25 mm ... 330 mm (0.5 mm) |
| Raster height, number of lines, at distance | 15 mm, 8, 200 mm | | - |

Performance

| | |
|--|---|
| Bar code types | All current code types, Code 39, Code 128, Code 93, Codabar, UPC / GTIN / EAN, Interleaved 2 of 5 |
| Print ratio | 2:1 ... 3:1 |
| No. of codes per scan | 1 ... 10 (Standard decoder) 1 ... 6 (SMART620) |
| No. of codes per reading interval | 1 ... 50 (auto-discriminating) |
| No. of characters per reading interval | 1,500 500 (for multiplexer function in CAN operation) |
| No. of multiple readings | 1 ... 99 |

Interfaces

| | CLV610 Mid Range | CLV612 Short Range | CLV615 Long Range |
|---------------------|---|--|---|
| Serial (RS-232) | ✓ | | |
| | Function | Host, AUX | |
| | Data transmission rate | 2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud | |
| Ethernet | - | | ✓ |
| | Protocol | | PROFINET Dual Port (optional via external connection module CDF600-2) |
| CAN bus | ✓ | | |
| | Function | SICK CAN sensor network (Master/Slave, Multiplexer/Server) | |
| | Data transmission rate | 20 kbit/s ... 1 Mbit/s | |
| | Protocol | CSN (SICK CAN Sensor Network) | |
| PROFIBUS DP | - | | ✓, optional via external connection module (CDF600-2) |
| Switching inputs | 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 in CDB620/CDM420) | | |
| Switching outputs | 4 ("Result 1", "Result 2", 2 outputs via optional CMC600 in CDB620/CDM420) | | |
| Reading pulse | Switching inputs, non-powered, serial interface, auto pulse, CAN | | |
| Optical indicators | 1 RGB LED (multifunctional) | | |
| Acoustic indicators | Beeper/buzzer (can be switched off, can be allocated as a result indication function) | | |

Mechanics/electronics

| | CLV610 Mid Range | CLV612 Short Range | CLV615 Long Range |
|-----------------------|--|--------------------|------------------------------|
| Electrical connection | 1 15-pin D-Sub HD male connector (0.9 m) | | |
| Operating voltage | 10 V DC ... 30 V DC | | |
| Power consumption | 2.8 W | | |
| Housing | Die-cast aluminum | | |
| Housing color | Light blue (RAL 5012) | | |
| Enclosure rating | IP 65 (DIN 40 050) | | |
| Protection class | III (VDE 0106/IEC 1010-1) | | |
| Weight | 265 g, with connecting cable | | 295 g, with connecting cable |
| Dimensions | 61 mm x 66 mm x 38 mm | | 80 mm x 66 mm x 38 mm |

Ambient data

| | |
|-------------------------------------|---|
| Electromagnetic compatibility (EMC) | EN 61000-6-4 (2007-01) + A1 (2011) / EN 61000-6-2 (2005-08) |
| Vibration resistance | EN 60068-2-6 (2008-02) |
| Shock resistance | EN 60068-2-27 (2009-05) |
| Ambient operating temperature | 0 °C ... +40 °C |
| Storage temperature | -20 °C ... +70 °C |
| Permissible relative humidity | 90 %, non-condensing |
| Ambient light safety | 2,000 lx, on bar code |
| Bar code print contrast (PCS) | ≥ 60 % |

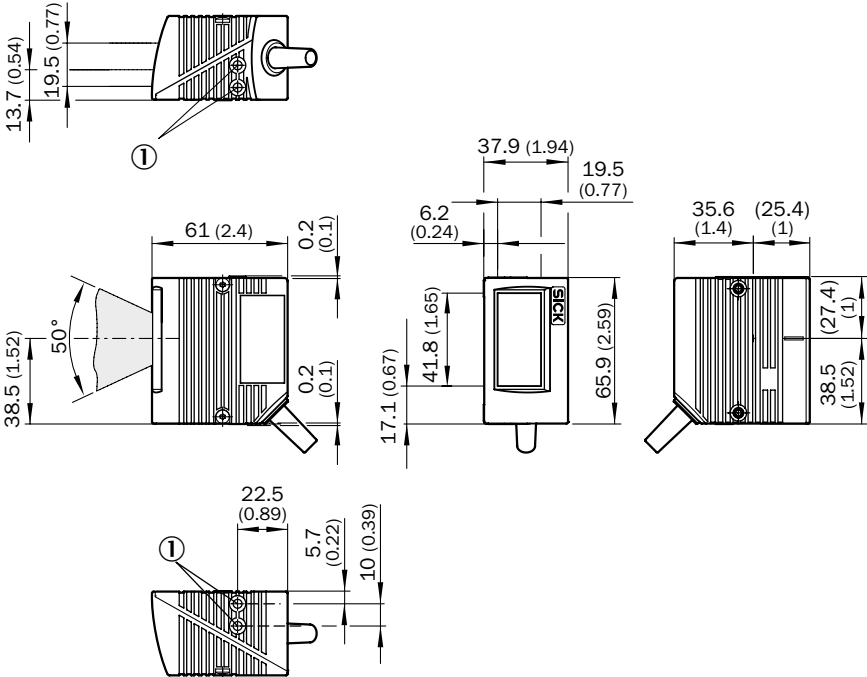
Ordering information

- **Focus:** Fixed focus
- **Connection type:** cable
- **Front screen:** Glass

| Version | Reading field | Scanner design | Items supplied | Model name | Part no. |
|--------------------|---------------|----------------|---|------------------------------|----------|
| CLV610 Mid Range | Front | Line scanner | Single scanner | CLV610-C0000 | 1057125 |
| | | Raster scanner | Single scanner | CLV610-C1000 | 1062846 |
| CLV612 Short Range | Front | Line scanner | Single scanner | CLV612-C0000 | 1066271 |
| | | Raster scanner | Single scanner | CLV612-C1000 | 1062861 |
| | Side | Line scanner | Single scanner | CLV612-C2000 | 1066272 |
| | | Raster scanner | Single scanner | CLV612-C3000 | 1062862 |
| CLV615 Long Range | Side | Line scanner | Single scanner | CLV615-F2000 | 1058334 |
| | | | Kit including single scanner and fieldbus module PROFIBUS DP (interface 1 x D-Sub, female connector, 9-pin) | CLV615-F2000 CDF600-2100 Kit | 1061528 |
| | | | Kit includes single scanner and fieldbus module PROFIBUS DP (interface 2 x M12, male connector/female connector, 5-pin) | CLV615-F2000 CDF600-2103 Kit | 1061529 |

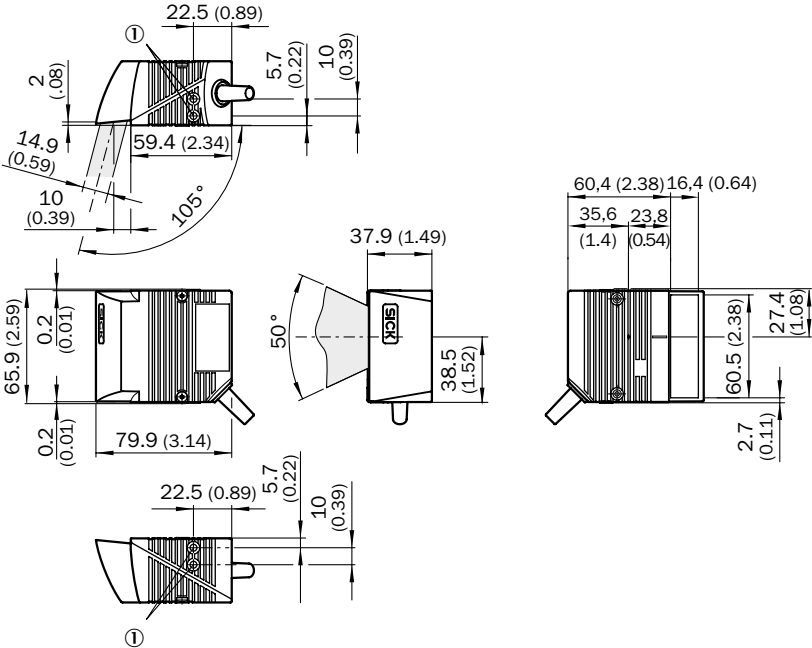
Dimensional drawings (Dimensions in mm (inch))

CLV61x Standard, front



① Blind hole thread M5, 5 mm deep (2 x), for mounting

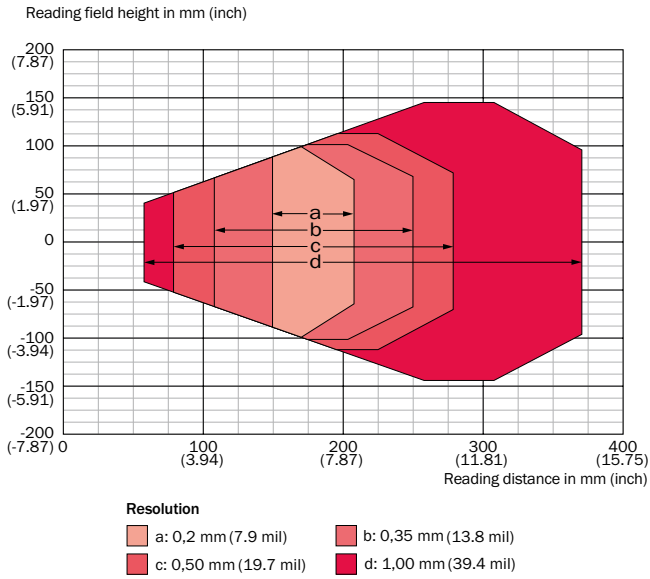
CLV615 cable, side



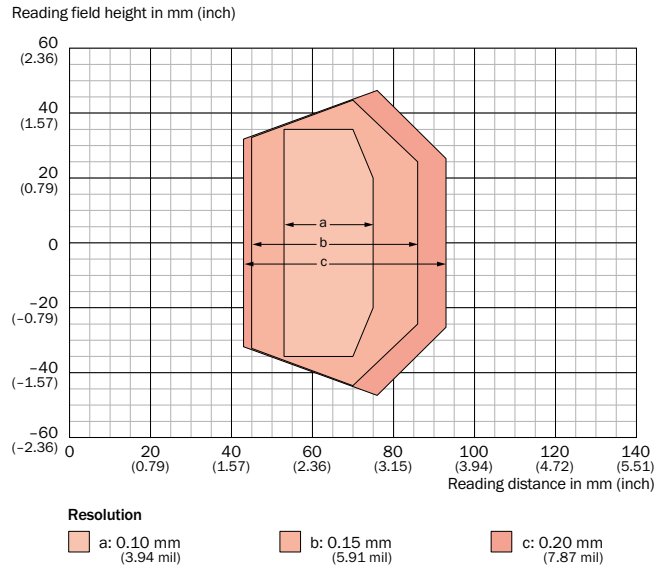
① Blind hole thread M5, 5 mm deep (2 x), for mounting

Reading field diagrams

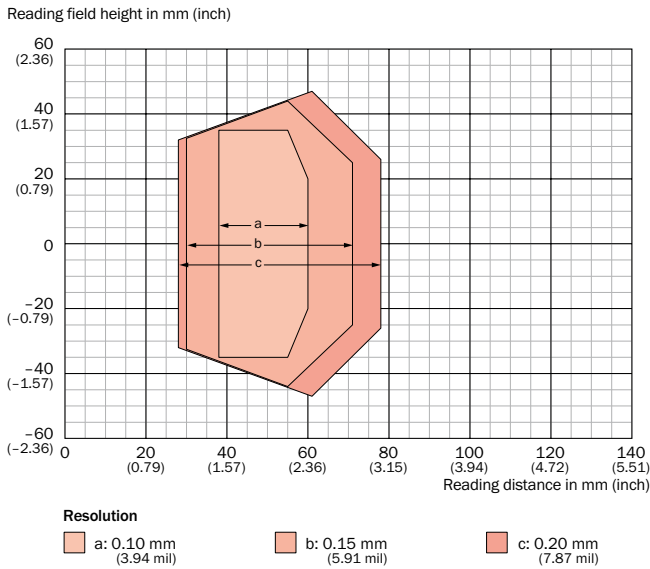
CLV610 Mid Range, front



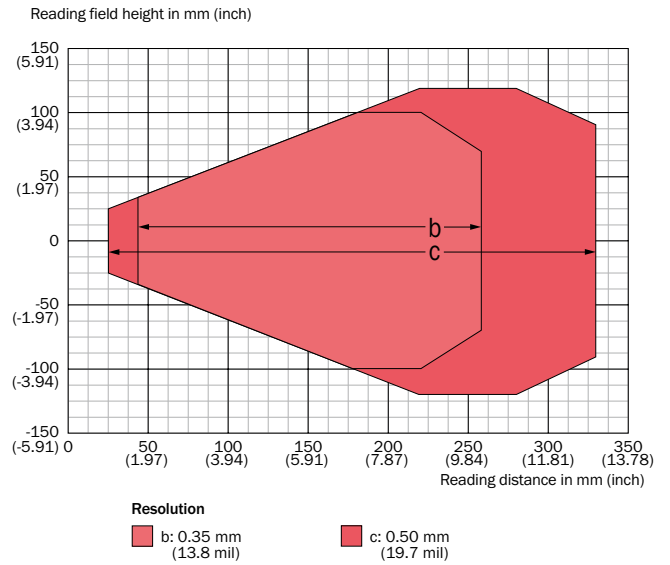
CLV612 Short Range, front



CLV612 Short Range, side







CLV615 Long Range, side




Recommended accessories

Connection systems

Modules


| | Brief description | Type | Part no. |
|---|--|-------------|----------|
|  | Small connection module for one sensor, 4 cable glands, base for CMC600 | CDB620-001 | 1042256 |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin) | CDF600-2100 | 1058965 |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin) | CDF600-2103 | 1058966 |
|  | Modular connection module for one sensor | CDM420-0001 | 1025362 |

Plug connectors and cables

| | Signal type | Connection type head A | Connection type head B | Cable length | Part no. |
|---|-------------|--|--|--------------|----------|
|  | Serial | Female connector, D-Sub, 9-pin, straight | Female connector, D-Sub, 9-pin, straight | 3 m | 2014054 |

Mounting systems


Mounting brackets/plates

| | Brief description | Part no. |
|---|----------------------------|----------|
|  | Bracket with adapter board | 2042902 |


→ For additional accessories, please see page 66

POWERFUL SCANNER – FLEXIBLE USE


Fixed Focus





SMART620






Intelligent Auto Setup







Additional information

Detailed technical data25

Ordering information 26

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Recommended accessories31

Product description

The CLV62x series of bar code scanners are compact, powerful tools for a wide range of logistics applications. Speed, power, flexibility and ease of use are the features that define the CLV62x family. The CLV62x combines high reading performance with the SMART620 code reconstruction system, a reading algorithm that can accurately detect bar codes even if they are damaged or

partially covered. These scanners are available with the standard serial or embedded Ethernet, including EtherNet/IP and PROFINET communications. Other advanced features, like an embedded web server for remote diagnostics and reading performance statistics give the CLV62x family the kind of high-end performance and flexibility usually expected in more costly scanners.

At a glance

- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant)
- SMART620 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
- Small housing
- Advanced remote diagnostics and network monitoring capabilities available over Ethernet
- IP 65 rated

Your benefits

- High read rate on damaged and obscured codes using SMART620 code recognition technology
- Increased scanner intelligence enables sophisticated configuration of logical operations, reducing the control system programming effort. Data is then delivered in the desired format
- No supplementary Ethernet gateway required with Ethernet models – lowers costs
- The CLV62x scanner can be used as a multiplexer in any CAN scanner network from SICK – no supplementary multiplexer necessary
- Real-time decoding at very high speeds
- Small size and simple setup enables fast installation, even in compact machines

→ www.mysick.com/en/CLV62x

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

| | CLV620 Mid Range | CLV621 Long Range | CLV622 Short Range |
|---|---|-------------------------|---------------------------|
| Light source | Visible red light (655 nm) | | |
| MTBF | 40,000 h | | |
| Laser class | 2 (EN 60825-1 (A2:2001-03), IEC 60825-1 : 2007-03, Ed. 2.0) | | |
| Field of view | ≤ 50° | | |
| Scanning frequency | 400 Hz ... 1,200 Hz | | |
| Code resolution | 0.2 mm ... 1 mm | 0.35 mm ... 1 mm | 0.15 mm ... 0.5 mm |
| Reading distance (at code resolution) | 60 mm ... 365 mm (1 mm) | 60 mm ... 730 mm (1 mm) | 55 mm ... 200 mm (0.5 mm) |
| Raster height, number of lines, at distance | 15 mm, 8, 200 mm 15 mm, 8, 185 mm (depending on type) | | |

Performance

| | |
|--|---|
| 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 (SMART620) |
| No. of codes per reading interval | 1 ... 50 (auto-discriminating) |
| No. of characters per reading interval | 1,500 500 (for multiplexer function in CAN operation) |
| No. of multiple readings | 1 ... 99 |

Interfaces

| | | |
|-----------------------------|------------------------|---|
| Serial (RS-232, RS-422/485) | Function | ✓, AUX (only RS-232) Host, AUX |
| | Data transmission rate | 2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud |
| | | |
| Ethernet | Function | - / ✓ (depending on type) Host, AUX |
| | Data transmission rate | 10/100 Mbit |
| | Protocol | TCP/IP, EtherNet/IP, PROFINET, PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600) (depending on type) |
| CAN bus | Function | ✓ SICK CAN sensor network (Master/Slave, Multiplexer/Server) |
| | Data transmission rate | 20 kbit/s ... 1 Mbit/s |
| | Protocol | CANopen, CSN (SICK CAN Sensor Network) |
| PROFIBUS DP | | ✓, optional via external connection module (CDF600-2) |
| DeviceNet | | ✓, optional via external connection module (CDM + CMF) |
| Switching inputs | Cable | 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 in CDB620/CDM420) |
| | Ethernet | 3 ("Sensor 1", 2 inputs via optional CMC600 in CDB620/CDM420) |
| Switching outputs | Cable | 4 ("Result 1", "Result 2", 2 outputs via optional CMC600 in CDB620/CDM420) |
| | Ethernet | 2 (via CMC600 in CDB620/CDM420) |

| | |
|----------------------------|---|
| Reading pulse | Switching inputs, non-powered, serial interface, auto pulse, CAN |
| Optical indicators | 6 LEDs (Ready, Result, laser, Data, CAN, LNK TX) |
| Acoustic indicators | Beeper/buzzer (can be switched off, can be allocated as a result indication function) |

Mechanics/electronics

| | CLV620 Mid Range | CLV621 Long Range | CLV622 Short Range |
|------------------------------|---------------------------|--|--------------------|
| Electrical connection | | | |
| | Cable | 1 15-pin D-Sub HD male connector (0.9 m) | |
| | Ethernet | 2 M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector | |
| Operating voltage | 10 V DC ... 30 V DC | | |
| Power consumption | 4.5 W | | |
| Housing | Die-cast aluminum | | |
| Housing color | Light blue (RAL 5012) | | |
| Enclosure rating | IP 65 (DIN 40 050) | | |
| Protection class | III (VDE 0106/IEC 1010-1) | | |
| Weight | | | |
| | Cable | 225 g ... 250 g, with connecting cable (depending on type) | |
| | Ethernet | 205 g ... 230 g, without connecting cable (depending on type) | |
| Dimensions | | | |
| | Front | 61 mm x 66 mm x 38 mm ¹⁾ | |
| | Side | 80 mm x 66 mm x 38 mm ¹⁾ | |

¹⁾ Swivel connector is 15 mm longer with Ethernet model.

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 safety | 2,000 lx, on bar code |
| Bar code print contrast (PCS) | ≥ 60 % |

Ordering information

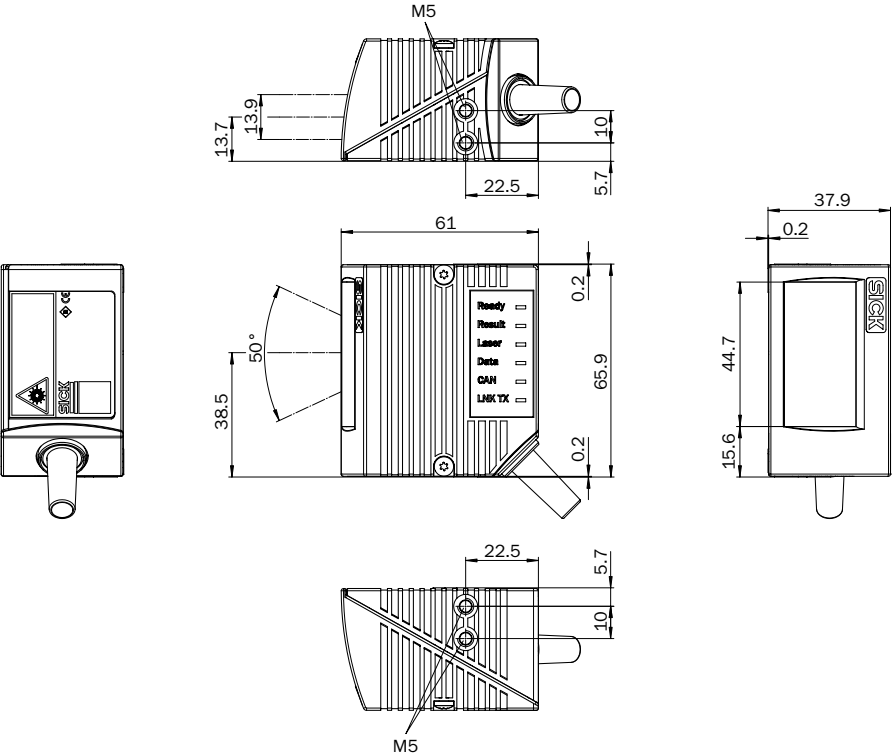
- **Focus:** Fixed focus
- **Front screen:** Glass

| Version | Connection type | Reading field | Scanner design | Model name | Part no. |
|------------------|-----------------|---------------|----------------|-------------|----------|
| CLV620 Mid Range | Cable | Front | Line scanner | CLV620-0000 | 1040288 |
| | | | Raster scanner | CLV620-1000 | 1041548 |
| | | Side (105°) | Line scanner | CLV620-2000 | 1041550 |
| | | | Raster scanner | CLV620-3000 | 1041552 |
| | Ethernet | Front | Line scanner | CLV620-0120 | 1041547 |
| | | | Raster scanner | CLV620-1120 | 1041549 |
| | | Side (105°) | Line scanner | CLV620-2120 | 1041551 |
| | | | Raster scanner | CLV620-3120 | 1041553 |

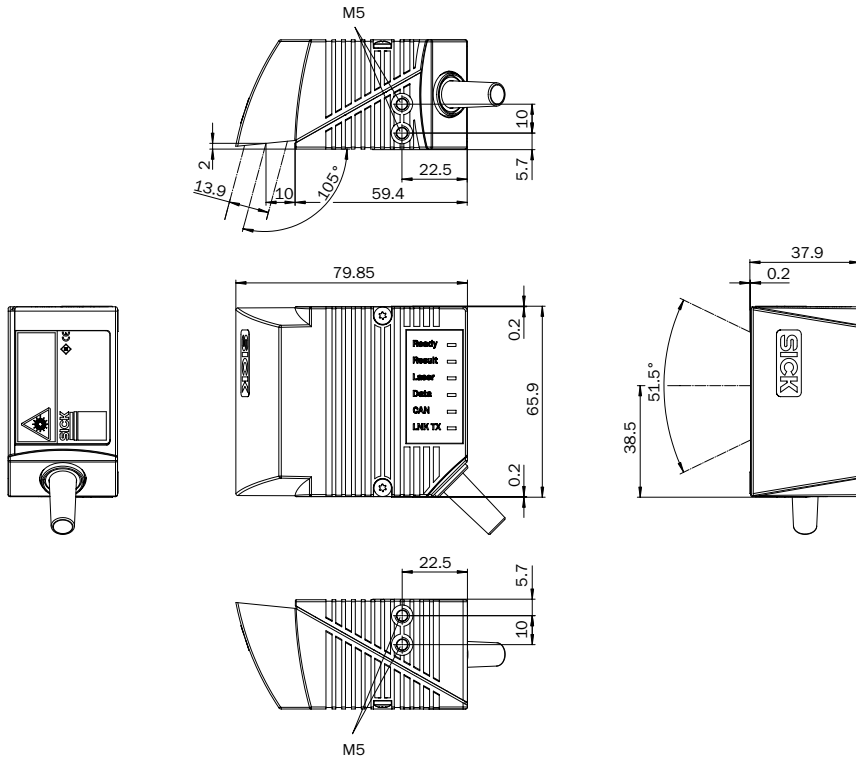
| Version | Connection type | Reading field | Scanner design | Model name | Part no. |
|--------------------|-----------------|---------------|----------------|-------------|----------|
| CLV621 Long Range | Cable | Front | Line scanner | CLV621-0000 | 1041784 |
| | | | Raster scanner | CLV621-1000 | 1041786 |
| | | Side (105°) | Line scanner | CLV621-2000 | 1041788 |
| | | | Raster scanner | CLV621-3000 | 1041790 |
| | Ethernet | Front | Line scanner | CLV621-0120 | 1041785 |
| | | | Raster scanner | CLV621-1120 | 1041787 |
| | | Side (105°) | Line scanner | CLV621-2120 | 1041789 |
| | | | Raster scanner | CLV621-3120 | 1041791 |
| CLV622 Short Range | Cable | Front | Line scanner | CLV622-0000 | 1041792 |
| | | | Raster scanner | CLV622-1000 | 1041794 |
| | | Side (105°) | Line scanner | CLV622-2000 | 1041796 |
| | | | Raster scanner | CLV622-3000 | 1041798 |
| | Ethernet | Front | Line scanner | CLV622-0120 | 1041793 |
| | | | Raster scanner | CLV622-1120 | 1041795 |
| | | Side (105°) | Line scanner | CLV622-2120 | 1041797 |
| | | | Raster scanner | CLV622-3120 | 1041799 |

Dimensional drawings (Dimensions in mm (inch))

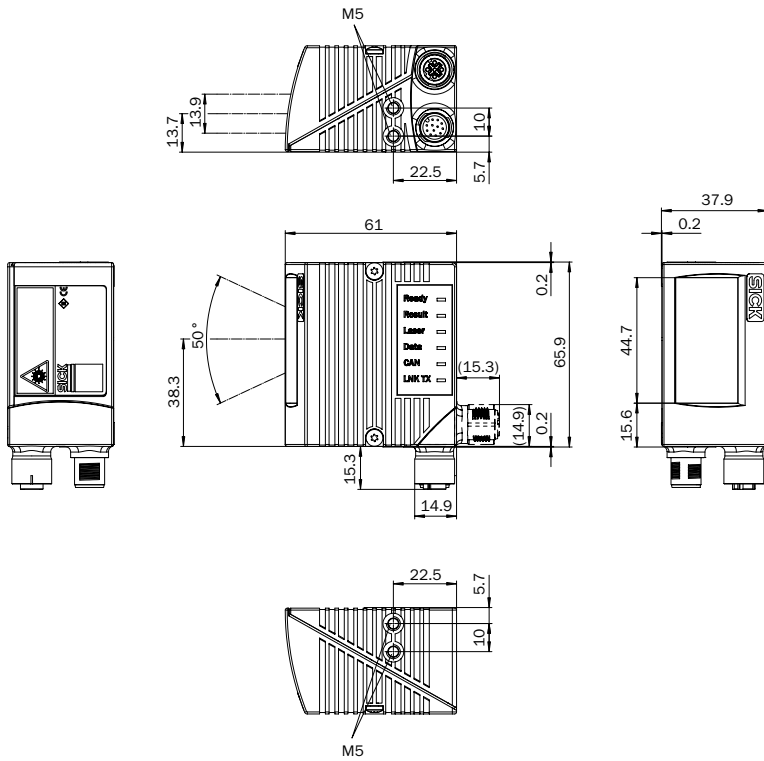
CLV62x Standard, front



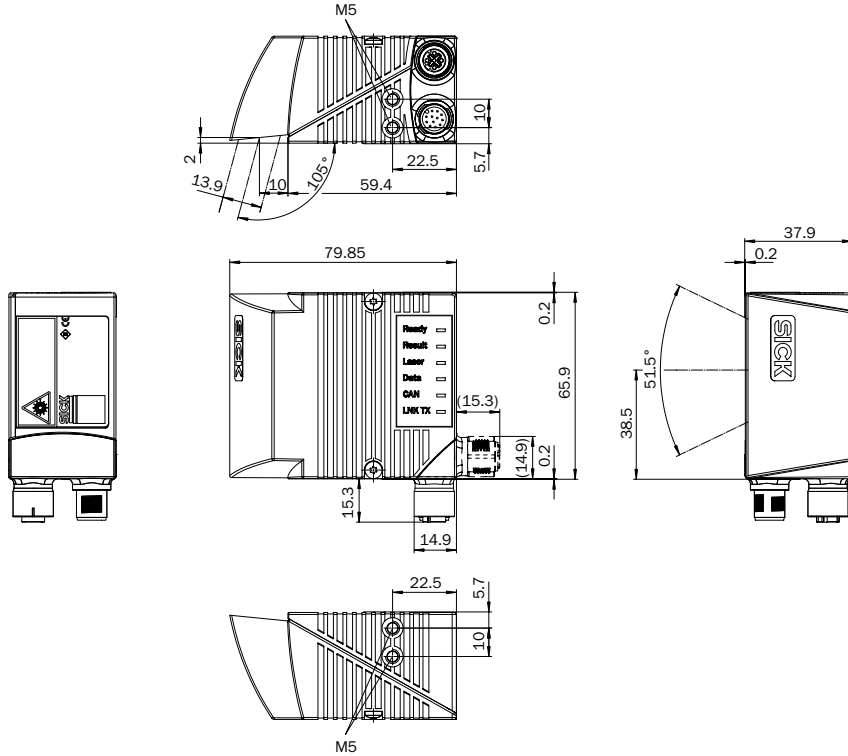
CLV62x Standard, side



CLV62x Ethernet, front



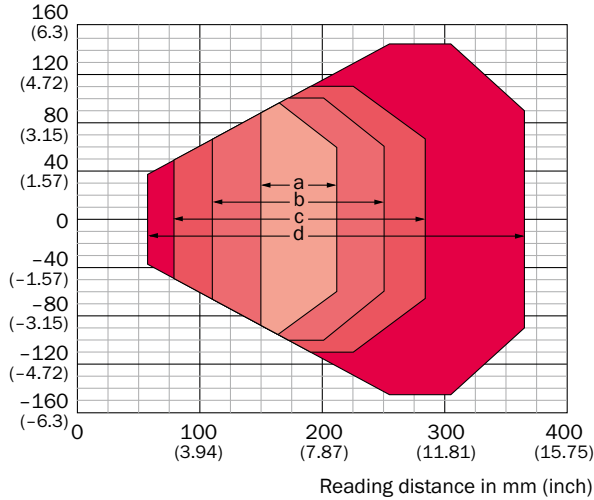
CLV62x Ethernet, side



Reading field diagrams

CLV620 Mid Range, front

Reading field height in mm (inch)

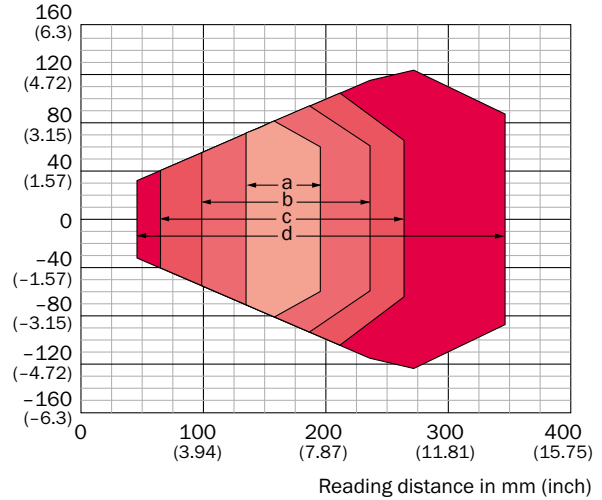


Resolution

- a: 0.2 mm (7.9 mil)
- b: 0.35 mm (13.8 mil)
- c: 0.50 mm (19.7 mil)
- d: 1.00 mm (39.4 mil)

CLV620 Mid Range, side

Reading field height in mm (inch)

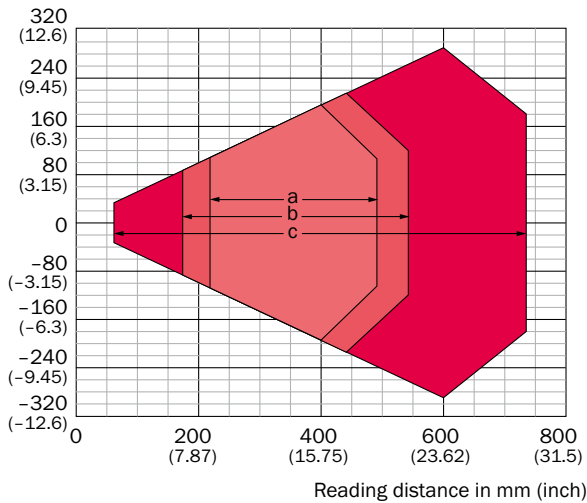


Resolution

- a: 0.2 mm (7.9 mil)
- b: 0.35 mm (13.8 mil)
- c: 0.50 mm (19.7 mil)
- d: 1.00 mm (39.4 mil)

CLV621 Long Range, front

Reading field height in mm (inch)

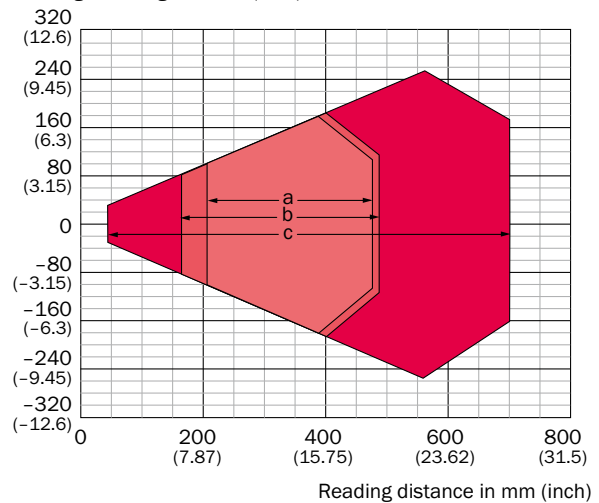


Resolution

- a: 0.35 mm (13.8 mil)
- b: 0.50 mm (19.7 mil)
- c: 1.00 mm (39.4 mil)

CLV621 Long Range, side

Reading field height in mm (inch)

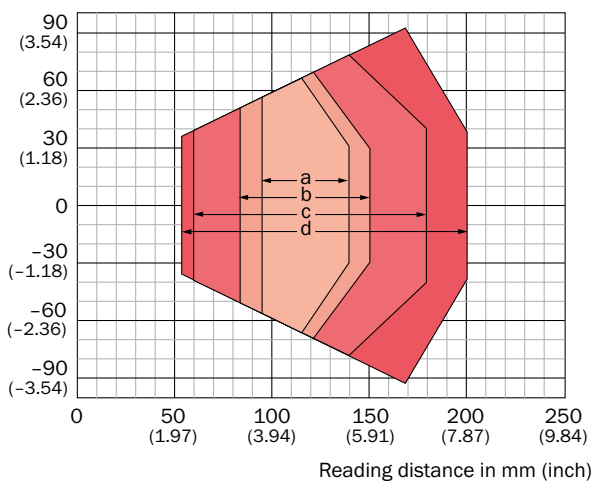


Resolution

- a: 0.35 mm (13.8 mil)
- b: 0.50 mm (19.7 mil)
- c: 1.00 mm (39.4 mil)

CLV622 Short Range, front

Reading field height in mm (inch)

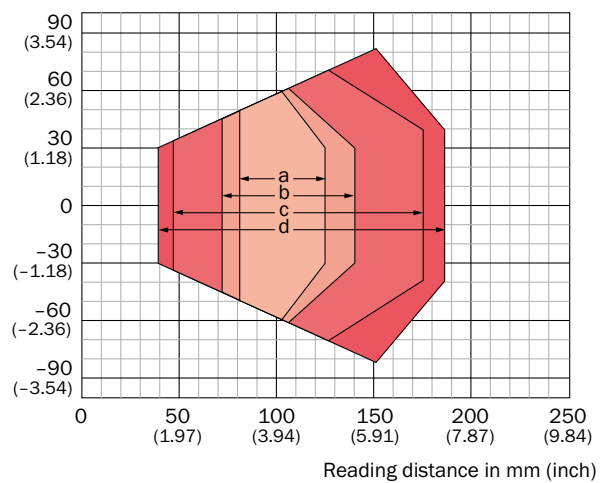


Resolution

- a: 0.15 mm (5.9 mil)
- b: 0.2 mm (7.9 mil)
- c: 0.35 mm (13.8 mil)
- d: 0.50 mm (19.7 mil)

CLV622 Short Range, side

Reading field height in mm (inch)



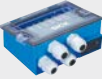



Resolution

- a: 0.15 mm (5.9 mil)
- b: 0.2 mm (7.9 mil)
- c: 0.35 mm (13.8 mil)
- d: 0.50 mm (19.7 mil)

Recommended accessories



Connection systems

Modules

| | Brief description | Type | Part no. | CLV62x Cable | CLV62x Ethernet |
|---|--|-------------|----------|--------------|-----------------|
|  | Small connection module for one sensor, 4 cable glands, base for CMC600 | CDB620-001 | 1042256 | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin) | CDF600-2100 | 1058965 | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin) | CDF600-2103 | 1058966 | ● | ● |
|  | Modular connection module for one sensor | CDM420-0001 | 1025362 | ● | ● |


Plug connectors and cables

- **Cable length:** 2 m

| | Signal type | Connection type head A | Connection type head B | Cable | Part no. | CLV62x Cable | CLV62x Ethernet |
|---|----------------------------------|---|--|--|----------|--------------|-----------------|
|  | Ethernet | Male connector, M12, 4-pin, straight, D-coded | Male connector, RJ45, 8-pin, straight | - | 6034414 | - | ● |
|  | Power, serial, CAN, digital I/Os | Female connector, M12, 12-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | To connection module CDx (except CDB650) | 2041834 | - | ● |


Mounting systems


Mounting brackets/plates


| | Brief description | Part no. | CLV62x Cable | CLV62x Ethernet |
|---|----------------------------|----------|--------------|-----------------|
|  | Bracket with adapter board | 2042902 | ● | ● |


→ For additional accessories, please see page 66


INTELLIGENT SCANNING SOLUTION FOR LOGISTICS AND AUTOMATION


Fixed Focus



SMART



MicroSD Card





Intelligent Auto Setup


2 x Button


LED Bar Graph






Additional information

Detailed technical data 33

Ordering information 35

Dimensional drawings 36

Reading field diagrams 37

Recommended accessories 40

Product description

The CLV63x series of bar code scanners are compact, powerful tools satisfying the needs of a wide range of applications and industries. Newly improved SMART algorithms in the CLV63x are superior when reading damaged and tilted codes. In addition, pushbuttons on the CLV63x and above allow for quick bar code setup without using a computer. Match code teach-in and diagnostic

triggering are also possible. In addition to the LED bar graph, the CLV63x has other LED indicators on its body that show communication and scanner performance. The microSD memory card slot allows users to easily clone scanner parameters. Variants include line, raster, side reading window and oscillating mirror versions; available with Ethernet.

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

→ www.mysick.com/en/CLV63x

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

| | CLV630 Long Range | CLV631 Mid Range | CLV632 Short Range |
|--|--|---------------------------|---------------------------|
| Light source | Visible red light (655 nm) | | |
| MTBF | 40,000 h | | |
| Laser class | 2 (EN 60825-1 (A2:2001-03), IEC 60825-1 : 2007-03, Ed. 2.0) | | |
| Field of view | ≤ 50° | | |
| Scanning frequency | 400 Hz ... 1,200 Hz | | |
| Code resolution | 0.35 mm ... 1 mm | 0.25 mm ... 0.5 mm | 0.2 mm ... 0.5 mm |
| Reading distance (at code resolution) | | | |
| Front | 60 mm ... 735 mm (1 mm) | 90 mm ... 450 mm (0.5 mm) | 60 mm ... 285 mm (0.5 mm) |
| Side | 44 mm ... 683 mm (1 mm) | 74 mm ... 412 mm (0.5 mm) | 44 mm ... 256 mm (0.5 mm) |
| Oscillating mirror | 45 mm ... 659 mm (1 mm) | 78 mm ... 397 mm (0.5 mm) | 45 mm ... 245 mm (0.5 mm) |
| Raster height, number of lines, at distance | 15 mm, 8, 200 mm 15 mm, 8, 185 mm (depending on type) | | |
| 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° | | |

Performance

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

| | CLV630 Long Range | CLV631 Mid Range | CLV632 Short Range |
|------------------------------------|---|------------------|--------------------|
| Serial (RS-232, RS-422/485) | ✓, AUX (only RS-232) | | |
| Function | Host, AUX | | |
| Data transmission rate | 2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud | | |
| Ethernet | - / ✓ (depending on type) | | |
| Function | Host, AUX | | |
| Data transmission rate | 10/100 Mbit | | |
| Protocol | TCP/IP, EtherNet/IP, PROFINET, PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600) (depending on type) | | |
| CAN bus | ✓ | | |
| Function | SICK CAN sensor network (Master/Slave, Multiplexer/Server) | | |
| Data transmission rate | 20 kbit/s ... 1 Mbit/s | | |
| Protocol | CANopen, CSN (SICK CAN Sensor Network) | | |
| PROFIBUS DP | ✓, optional via external connection module (CDF600-2) | | |
| DeviceNet | ✓, optional via external connection module (CDM + CMF) | | |

| | CLV630 Long Range | CLV631 Mid Range | CLV632 Short Range |
|----------------------------|--|--|--------------------|
| Switching inputs | Cable | 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 in CDB620/CDM420) | |
| | Ethernet | 3 ("Sensor 1", 2 inputs via optional CMC600 in CDB620/CDM420) | |
| Switching outputs | Cable | 4 ("Result 1", "Result 2", 2 outputs via optional CMC600 in CDB620/CDM420) | |
| | Ethernet | 2 (via CMC600 in CDB620/CDM420) | |
| Reading pulse | "Sensor 1" switching input, 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) | | |
| Control elements | 2 buttons (choose and start/stop functions) | | |
| Memory card | MicroSD memory card (flash card) 512 MB, optional | | |

Mechanics/electronics

| | CLV630 Long Range | CLV631 Mid Range | CLV632 Short Range |
|------------------------------|-------------------------------|--|--------------------|
| Electrical connection | Cable | 1 15-pin D-Sub HD male connector (0.9 m) | |
| | Ethernet | 2 M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector | |
| Operating voltage | 18 V DC ... 30 V DC | | |
| Power consumption | 5 W / 6 W (depending on type) | | |
| Housing | Die-cast aluminum | | |
| Housing color | Light blue (RAL 5012) | | |
| Enclosure rating | IP 65 (EN 60529) | | |
| Protection class | III (EN 61140) | | |
| Weight | Cable | 320 g ... 420 g, with connecting cable (depending on type) | |
| | Ethernet | 250 g ... 350, without connecting cable (depending on type) | |
| Dimensions | Front | 61 mm x 96 mm x 38 mm ¹⁾ | |
| | Side | 80 mm x 96 mm x 38 mm ¹⁾ | |
| | Oscillating mirror | 95 mm x 96 mm x 41 mm ¹⁾ | |

¹⁾ Swivel connector is 15 mm longer with Ethernet model.

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 safety | 2,000 lx, on bar code |
| Bar code print contrast (PCS) | ≥ 60 % |

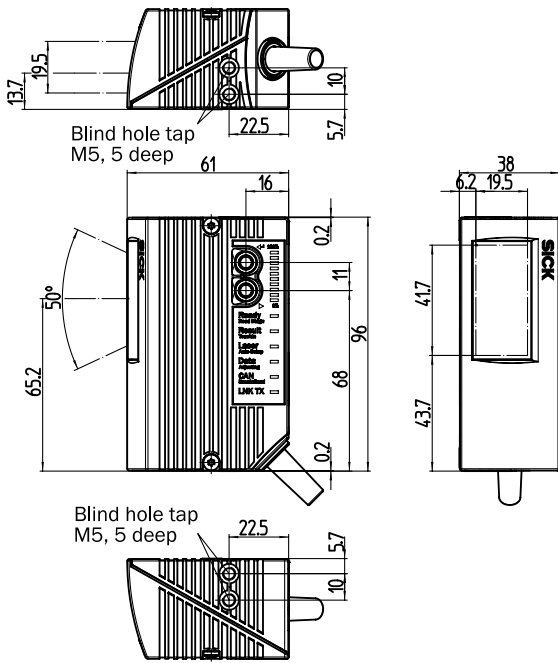
Ordering information

- **Focus:** Fixed focus
- **Heating:** optional
- **Front screen:** Glass

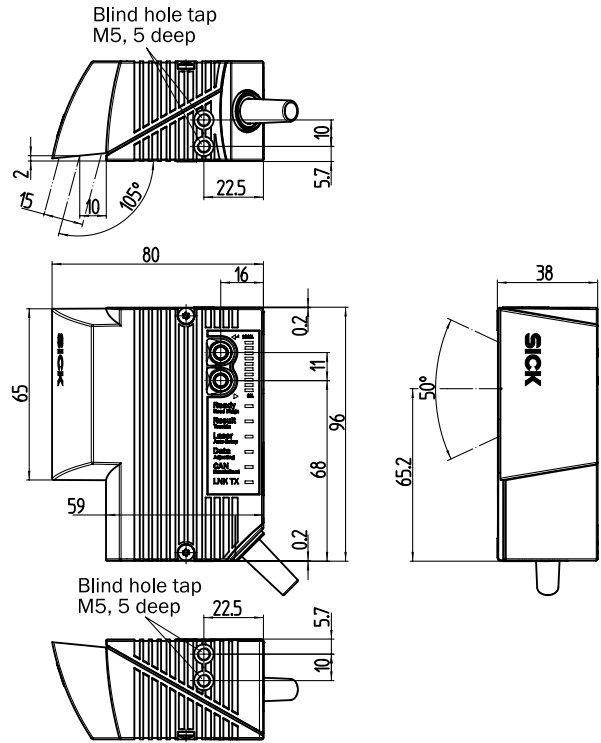
| Version | Connection type | Reading field | Scanner design | Model name | Part no. | |
|--------------------|--------------------|--------------------|----------------|--------------|--------------|-------------|
| CLV630 Long Range | Cable | Front | Line scanner | CLV630-0000 | 1040706 | |
| | | | Raster scanner | CLV630-1000 | 1041970 | |
| | | Side (105°) | Line scanner | CLV630-2000 | 1041972 | |
| | | | Raster scanner | CLV630-3000 | 1041974 | |
| | | Oscillating mirror | Line scanner | CLV630-6000 | 1041976 | |
| | | Ethernet | Front | Line scanner | CLV630-0120 | 1041969 |
| | Raster scanner | | | CLV630-1120 | 1041971 | |
| | Side (105°) | | Line scanner | CLV630-2120 | 1041973 | |
| | | | Raster scanner | CLV630-3120 | 1041975 | |
| | Oscillating mirror | | Line scanner | CLV630-6120 | 1041977 | |
| | CLV631 Mid Range | | Cable | Front | Line scanner | CLV631-0000 |
| | | Raster scanner | | | CLV631-1000 | 1041980 |
| Side (105°) | | Line scanner | | CLV631-2000 | 1041982 | |
| | | Raster scanner | | CLV631-3000 | 1041984 | |
| Oscillating mirror | | Line scanner | | CLV631-6000 | 1041986 | |
| Ethernet | | Front | | Line scanner | CLV631-0120 | 1041979 |
| | | | Raster scanner | CLV631-1120 | 1041981 | |
| | | Side (105°) | Line scanner | CLV631-2120 | 1041983 | |
| | | | Raster scanner | CLV631-3120 | 1041985 | |
| | | Oscillating mirror | Line scanner | CLV631-6120 | 1041987 | |
| | | CLV632 Short Range | Cable | Front | Line scanner | CLV632-0000 |
| Raster scanner | | | | | CLV632-1000 | 1041990 |
| Side (105°) | Line scanner | | | CLV632-2000 | 1041992 | |
| | Raster scanner | | | CLV632-3000 | 1041994 | |
| Oscillating mirror | Line scanner | | | CLV632-6000 | 1041996 | |
| Ethernet | Front | | | Line scanner | CLV632-0120 | 1041989 |
| | | | Raster scanner | CLV632-1120 | 1041991 | |
| | Side (105°) | | Line scanner | CLV632-2120 | 1041993 | |
| | | | Raster scanner | CLV632-3120 | 1041995 | |
| | Oscillating mirror | | Line scanner | CLV632-6120 | 1041997 | |

Dimensional drawings (Dimensions in mm (inch))

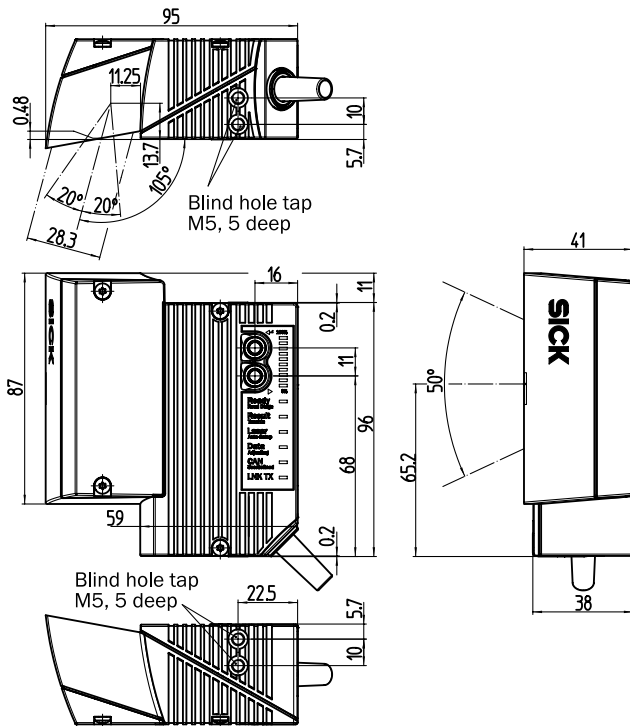
CLV63x/64x/65x Standard, front



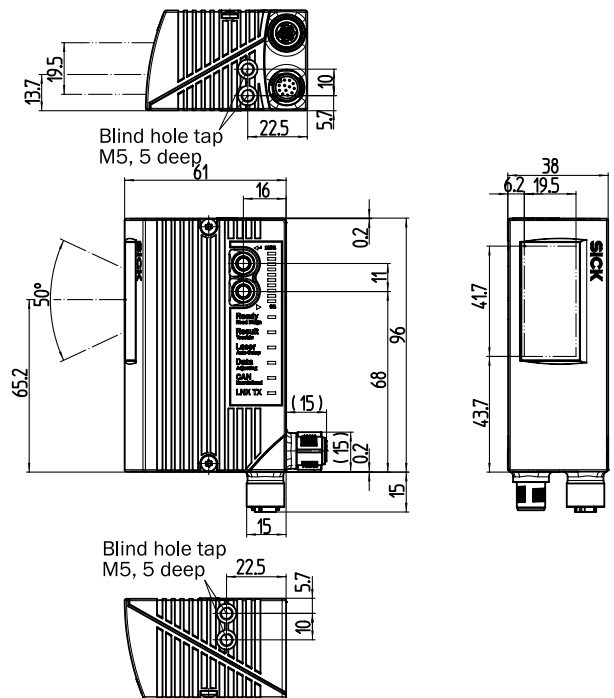
CLV63x/64x Standard, side



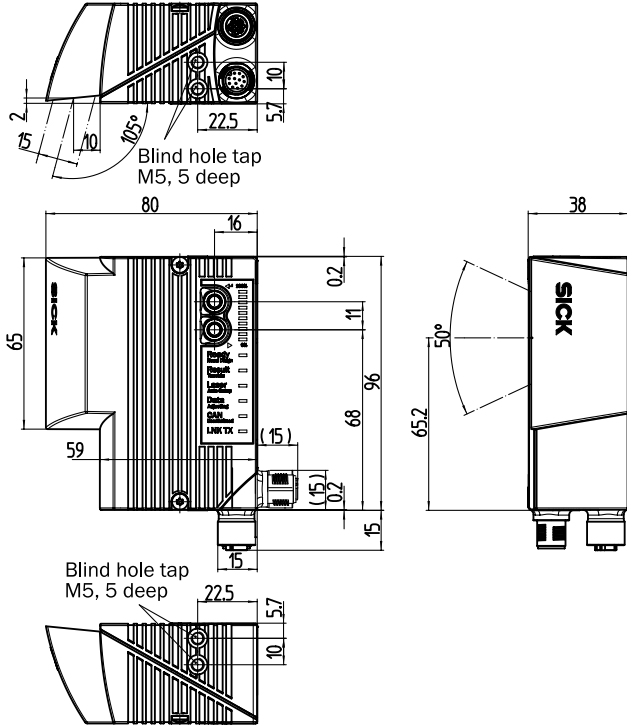
CLV63x/64x/65x Standard, oscillating mirror



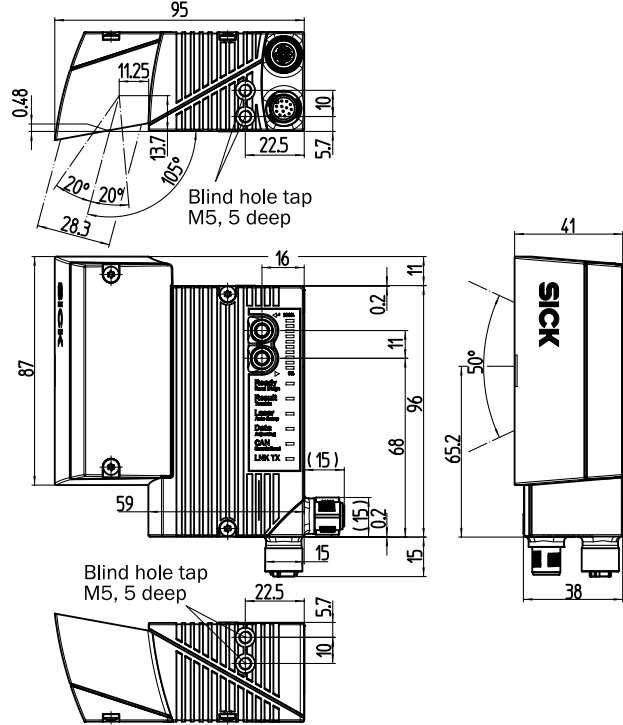
CLV63x/64x/65x, Ethernet, front



CLV63x/64x Ethernet, side



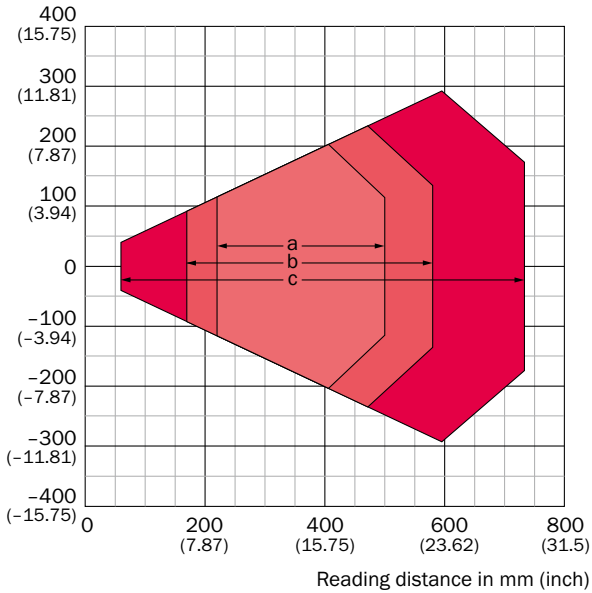
CLV63x/64x/65x, Ethernet, oscillating mirror



Reading field diagrams

CLV630 Long Range, front

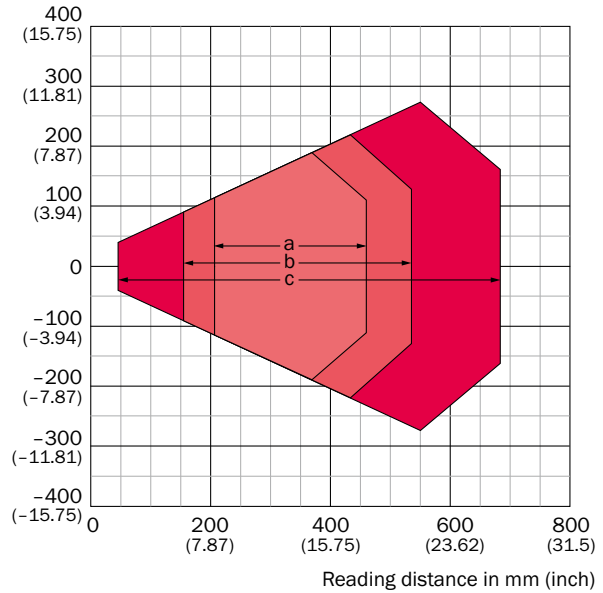
Reading field height in mm (inch)



- Resolution**
- a: 0.35 mm (13.8 mil)
 - b: 0.50 mm (19.7 mil)
 - c: 1.0 mm (39.4 mil)

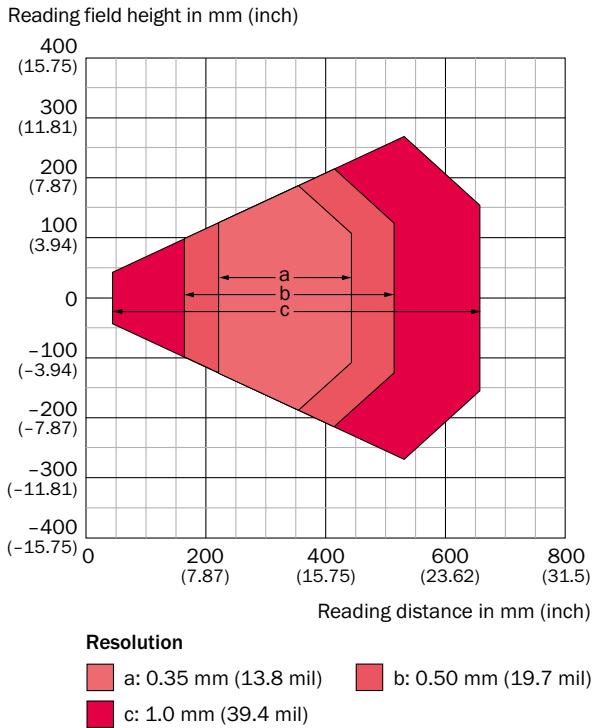
CLV630 Long Range, side

Reading field height in mm (inch)

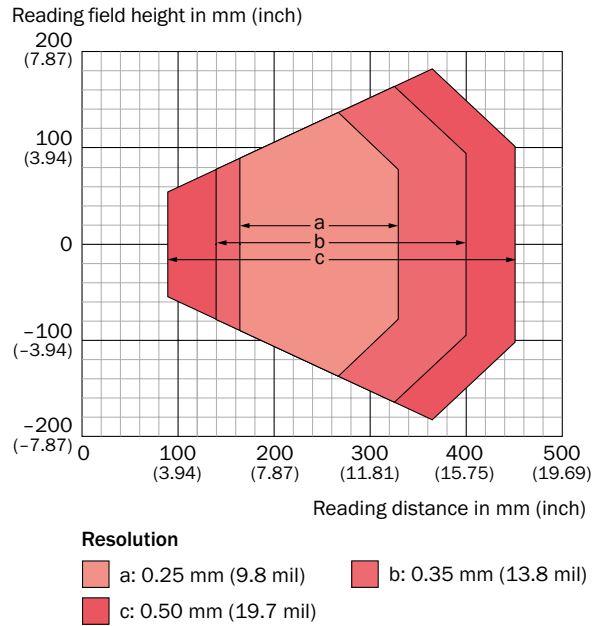


- Resolution**
- a: 0.35 mm (13.8 mil)
 - b: 0.50 mm (19.7 mil)
 - c: 1.0 mm (39.4 mil)

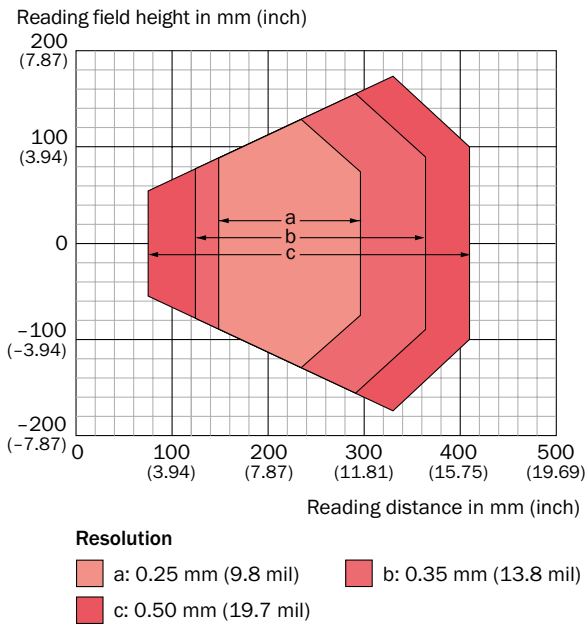
CLV630 Long Range, oscillating mirror



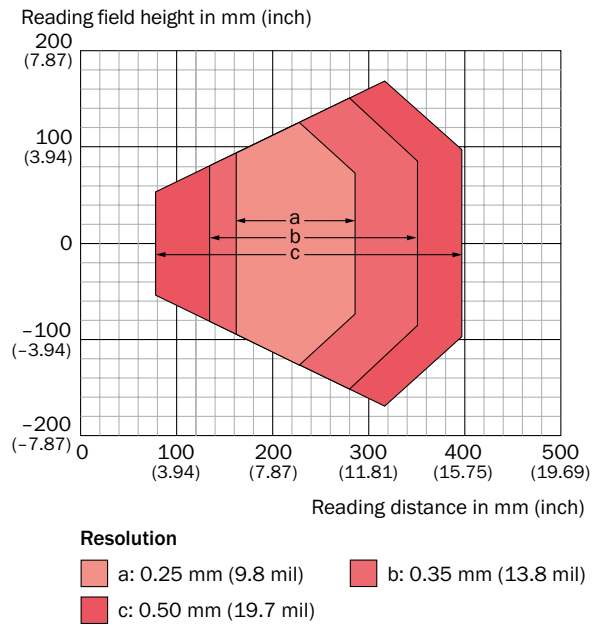
CLV631 Mid Range, front



CLV631 Mid Range, side

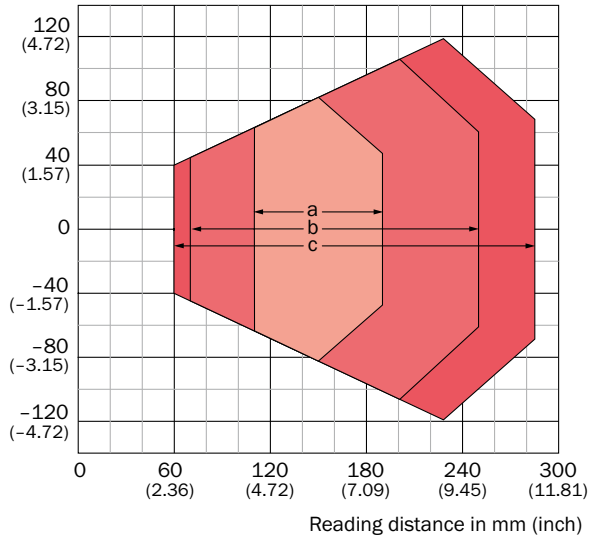


CLV631 Mid Range, oscillating mirror



CLV632 Short Range, front

Reading field height in mm (inch)

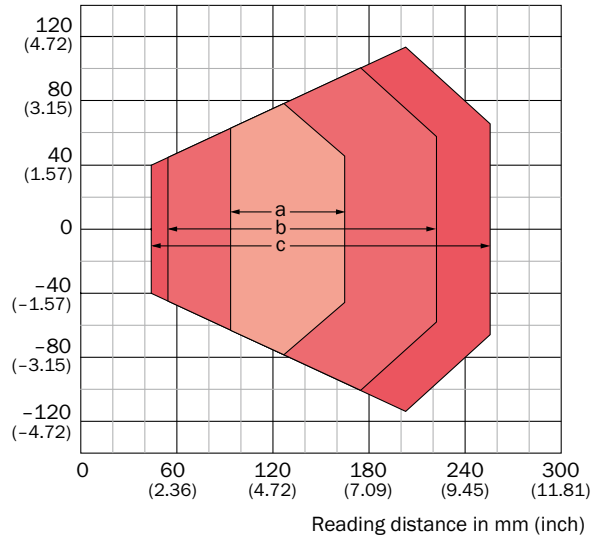


Resolution

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

CLV632 Short Range, side

Reading field height in mm (inch)

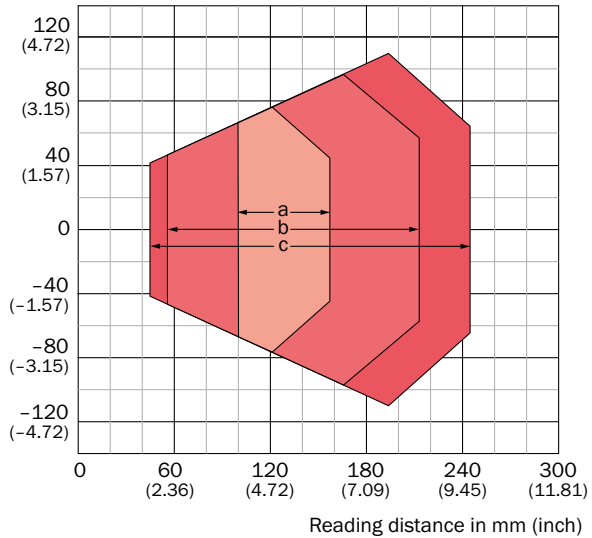


Resolution

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

CLV632 Short Range, oscillating mirror

Reading field height 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)

Recommended accessories



Connection systems

Modules

| | Brief description | Type | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|--|-------------|----------|------------------|---------------------|
|  | Small connection module for one sensor, 4 cable glands, base for CMC600 | CDB620-001 | 1042256 | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin) | CDF600-2100 | 1058965 | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin) | CDF600-2103 | 1058966 | ● | ● |
|  | Modular connection module for one sensor | CDM420-0001 | 1025362 | ● | ● |

Plug connectors and cables

- **Cable length:** 2 m

| | Signal type | Connection type head A | Connection type head B | Cable | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|----------------------------------|---|--|--|----------|------------------|---------------------|
|  | Ethernet | Male connector, M12, 4-pin, straight, D-coded | Male connector, RJ45, 8-pin, straight | - | 6034414 | - | ● |
|  | Power, serial, CAN, digital I/Os | Female connector, M12, 12-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | To connection module CDx (except CDB650) | 2041834 | - | ● |

Mounting systems


Mounting brackets/plates

| | Brief description | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|--------------------------------|----------|------------------|---------------------|
|  | Hanger-shaped mounting bracket | 2042800 | ● | ● |


→ For additional accessories, please see page 66

DYNAMIC, MULTI-FUNCTIONAL


Dyn. Focus




SMART




MicroSD Card




Intelligent Auto Setup





2 x Button






LED Bar Graph







Additional information

Detailed technical data 43

Ordering information 45

Dimensional drawings 45

Reading field diagrams 47

Recommended accessories 48

Product description

The CLV64x bar code scanners offer dynamic focus adjustment extending the range of the scanner for those applications where fixed focus comes up short but autofocus is outside the budget. Newly improved SMART algorithms in the CLV64x are superior when reading damaged and tilted codes. Combine single line, raster, oscillating mirror, high density and low contrast

variants with exceptional reading performance and flexible data handling capabilities, and you have all the ingredients for solving high-performance applications in the material handling and logistics markets. Variants include line, raster, side reading window and oscillating mirror versions; available with Ethernet.

At a glance

- Dynamic focus adjustment enables extended depth of field
- Integrated pushbuttons for auto setup and reading diagnostics
- 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
- Integrated LED bar graph
- Advanced remote diagnostics and network monitoring capabilities available over Ethernet

Your benefits

- Economical, as only one CLV64x is required for all focus positions
- Intelligent auto setup and multi-function pushbuttons save time during commissioning
- Teach-in of match code possible via the pushbuttons
- Easily execute firmware updates using the microSD memory card: no need for a PC
- No supplementary Ethernet gateway required with Ethernet models – lowers costs
- 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

→ www.mysick.com/en/CLV64x

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

| | CLV640 Standard Density | CLV642 High Density |
|--|--|----------------------------|
| Light source | Visible red light (655 nm) | |
| MTBF | 40,000 h | |
| Laser class | 2 (EN 60825-1 (A2:2001-03), IEC 60825-1 : 2007-03, Ed. 2.0) | |
| Field of view | ≤ 50° | |
| Scanning frequency | 400 Hz ... 1,200 Hz | |
| Code resolution | 0.2 mm ... 1 mm | 0.15 mm ... 0.25 mm |
| Reading distance (at code resolution) | | |
| Front | 60 mm ... 840 mm (1 mm) | 30 mm ... 345 mm (0.25 mm) |
| Side | 44 mm ... 738 mm (1 mm) | - |
| Oscillating mirror | 45 mm ... 755 mm (1 mm) | - |
| Raster height, number of lines, at distance | 15 mm, 8, 200 mm 15 mm, 8, 185 mm (depending on type) | - |
| 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° | |

Performance

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

| | |
|------------------------------------|---|
| Serial (RS-232, RS-422/485) | <ul style="list-style-type: none"> ✓, AUX (only RS-232) |
| Function | Host, AUX |
| Data transmission rate | 2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud |
| Ethernet | - / ✓ (depending on type) |
| Function | Host, AUX |
| Data transmission rate | 10/100 Mbit |
| Protocol | TCP/IP, EtherNet/IP, PROFINET, PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600) (depending on type) |
| CAN bus | ✓ |
| Function | SICK CAN sensor network (Master/Slave, Multiplexer/Server) |
| Data transmission rate | 20 kbit/s ... 1 Mbit/s |
| Protocol | CANopen, CSN (SICK CAN Sensor Network) |
| PROFIBUS DP | ✓, optional via external connection module (CDF600-2) |
| DeviceNet | ✓, optional via external connection module (CDM + CMF) |

| | | |
|----------------------------|----------|--|
| Switching inputs | Cable | 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 in CDB620/CDM420) |
| | Ethernet | 3 ("Sensor 1", 2 inputs via optional CMC600 in CDB620/CDM420) |
| Switching outputs | Cable | 4 ("Result 1", "Result 2", 2 outputs via optional CMC600 in CDB620/CDM420) |
| | Ethernet | 2 (via CMC600 in CDB620/CDM420) |
| Reading pulse | | "Sensor 1" switching input, 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) |
| Control elements | | 2 buttons (choose and start/stop functions) |
| Memory card | | MicroSD memory card (flash card) 512 MB, optional |

Mechanics/electronics

| | | |
|------------------------------|--------------------|--|
| Electrical connection | Cable | 1 15-pin D-Sub HD male connector (0.9 m) |
| | Ethernet | 2 M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector |
| Operating voltage | | 18 V DC ... 30 V DC |
| Power consumption | | 5.5 W / 6.5 W (depending on type) |
| Housing | | Die-cast aluminum |
| Housing color | | Light blue (RAL 5012) |
| Enclosure rating | | IP 65 (EN 60529) |
| Protection class | | III (EN 61140) |
| Weight | Cable | 320 g ... 420 g, with connecting cable (depending on type) |
| | Ethernet | 250 g ... 350 g, without connecting cable (depending on type) |
| Dimensions | Front | 61 mm x 96 mm x 38 mm ¹⁾ |
| | Side | 80 mm x 96 mm x 38 mm ¹⁾ |
| | Oscillating mirror | 95 mm x 96 mm x 41 mm ¹⁾ |

¹⁾ Swivel connector is 15 mm longer with Ethernet model.

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 safety | 2,000 lx, on bar code |
| Bar code print contrast (PCS) | ≥ 60 % |

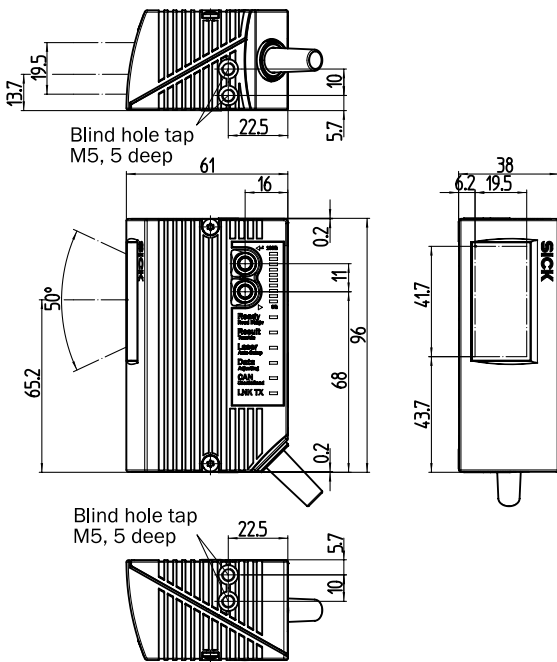
Ordering information

- **Focus:** Dynamic focus control
- **Heating:** optional
- **Front screen:** Glass

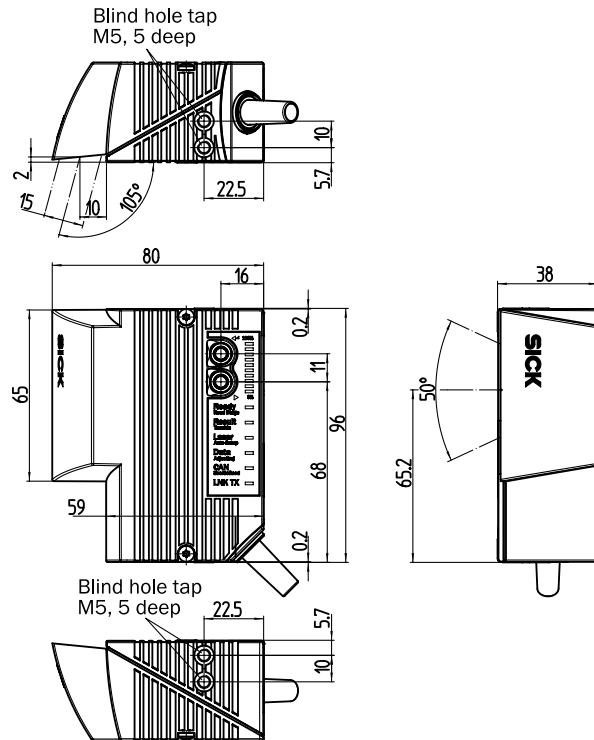
| Version | Connection type | Reading field | Scanner design | Model name | Part no. |
|-------------------------|-----------------|--------------------|----------------|----------------|-------------|
| CLV640 Standard Density | Cable | Front | Line scanner | CLV640-0000 | 1042014 |
| | | | Raster scanner | CLV640-1000 | 1042016 |
| | | Side (105°) | Line scanner | CLV640-2000 | 1042018 |
| | | | Raster scanner | CLV640-3000 | 1042020 |
| | | Oscillating mirror | Line scanner | CLV640-6000 | 1042022 |
| | | Ethernet | Front | Raster scanner | CLV640-1120 |
| | Line scanner | | | CLV640-0120 | 1042015 |
| | Side (105°) | | Line scanner | CLV640-2120 | 1042019 |
| | Raster scanner | CLV640-3120 | 1042021 | | |
| Oscillating mirror | Line scanner | CLV640-6120 | 1042023 | | |
| CLV642 High Density | Cable | Front | Line scanner | CLV642-0000 | 1044873 |
| | | Side (105°) | Line scanner | CLV642-2000 | 1044875 |
| | | Oscillating mirror | Line scanner | CLV642-6000 | 1044877 |
| | Ethernet | Front | Line scanner | CLV642-0120 | 1044874 |
| | | Side (105°) | Line scanner | CLV642-2120 | 1044876 |
| | | Oscillating mirror | Line scanner | CLV642-6120 | 1044879 |

Dimensional drawings (Dimensions in mm (inch))

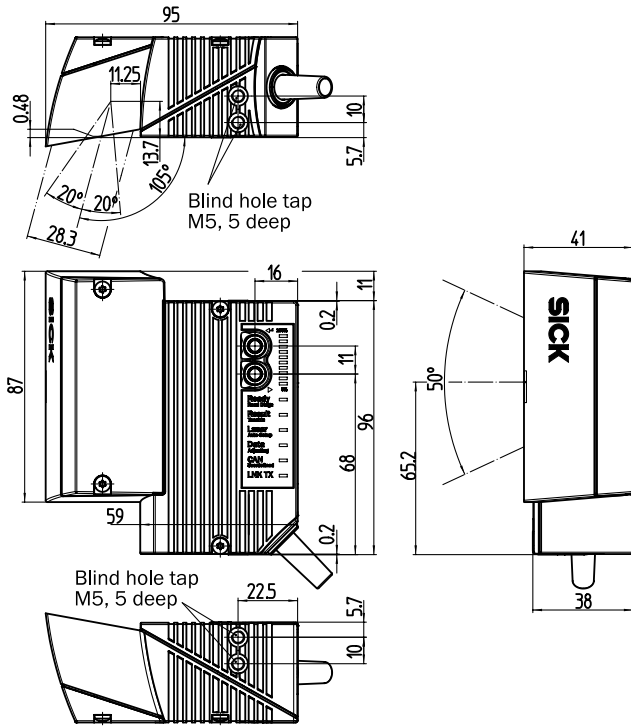
CLV63x/64x/65x Standard, front



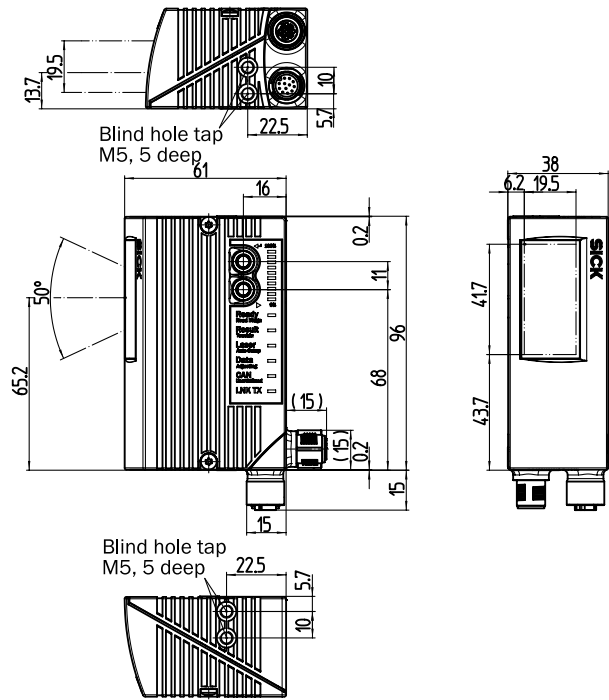
CLV63x/64x Standard, side



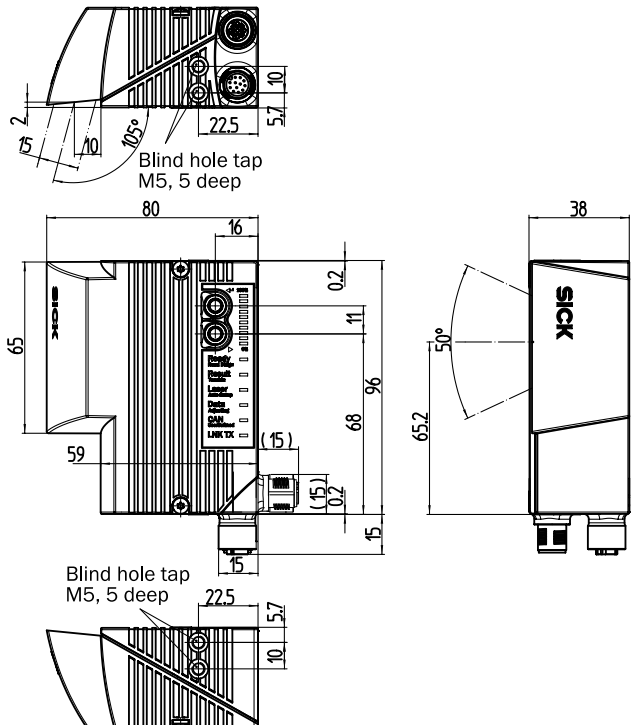
CLV63x/64x/65x Standard, oscillating mirror



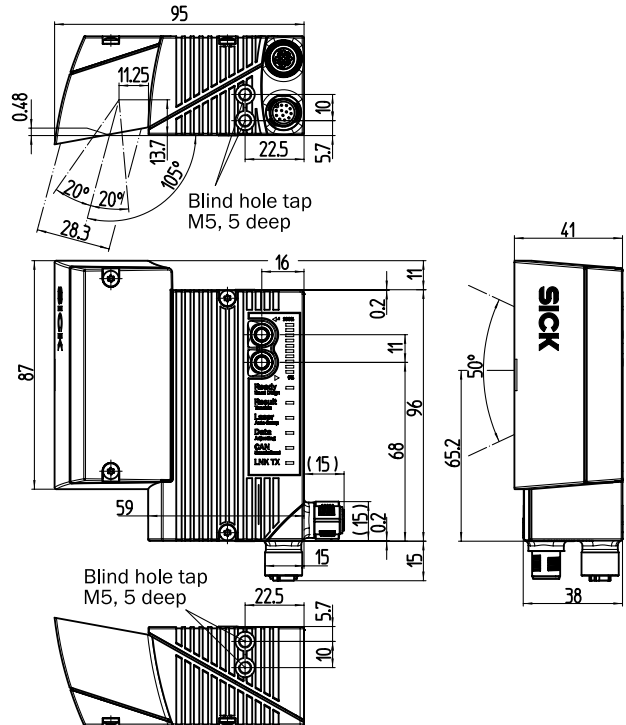
CLV63x/64x/65x, Ethernet, front



CLV63x/64x Ethernet, side



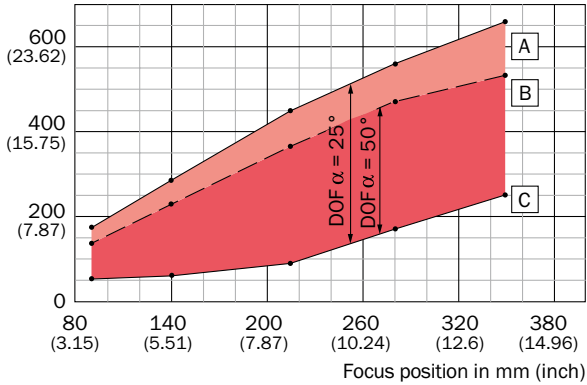
CLV63x/64x/65x, Ethernet, oscillating mirror



Reading field diagrams

CLV640 Standard Density, front

Reading distance in mm (inch)

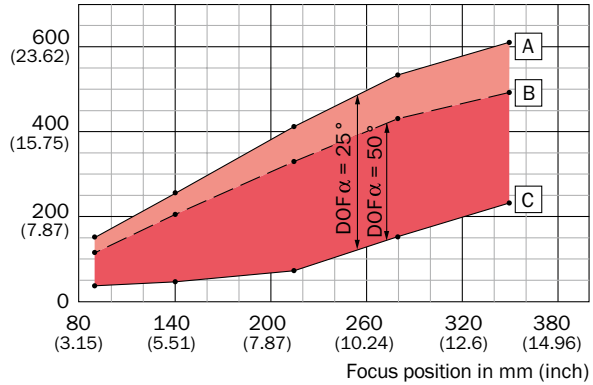


Resolution 0.5 mm (19.7 mil)

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

CLV640 Standard Density, side

Reading distance in mm (inch)

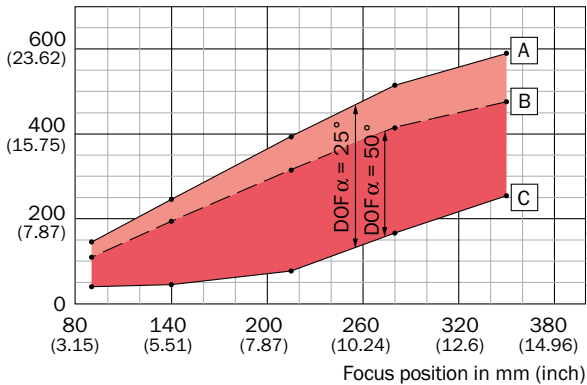


Resolution 0.5 mm (19.7 mil)

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

CLV640 Standard Density, oscillating mirror

Reading distance in mm (inch)

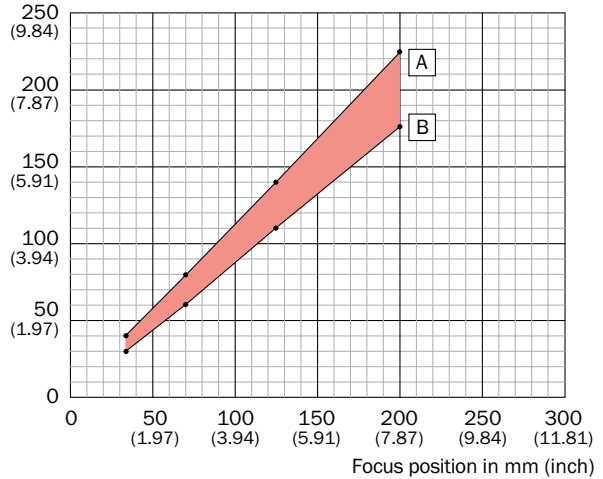


Resolution 0.5 mm (19.7 mil)

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

CLV642 High Density

Reading distance in mm (inch)







Resolution 0.15 mm (5.9 mil)

- A** max. reading distance (aperture angle 25°)
- B** min. reading distance

Recommended accessories



Connection systems

Modules

| | Brief description | Type | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|--|-------------|----------|------------------|---------------------|
|  | Small connection module for one sensor, 4 cable glands, base for CMC600 | CDB620-001 | 1042256 | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin) | CDF600-2100 | 1058965 | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin) | CDF600-2103 | 1058966 | ● | ● |
|  | Modular connection module for one sensor | CDM420-0001 | 1025362 | ● | ● |


Plug connectors and cables

- **Cable length:** 2 m

| | Signal type | Connection type head A | Connection type head B | Cable | Type | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|----------------------------------|---|--|--|-----------------------------------|----------|------------------|---------------------|
|  | Ethernet | Male connector, M12, 4-pin, straight, D-coded | Male connector, RJ45, 8-pin, straight | - | SSL-2J04-G02ME | 6034414 | - | ● |
|  | Power, serial, CAN, digital I/Os | Female connector, M12, 12-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | To connection module CDx (except CDB650) | Verbindungsleitung (Stecker-Dose) | 2041834 | - | ● |

Mounting systems

Mounting brackets/plates

| | Brief description | Type | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|--------------------------------|------------------|----------|------------------|---------------------|
|  | Hanger-shaped mounting bracket | Mounting bracket | 2042800 | ● | ● |

→ For additional accessories, please see page 66

ALWAYS IN AUTO FOCUS

Additional information

Detailed technical data 51

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Recommended accessories 56

Product description

The CLV65x series of bar code scanners use proprietary distance measurement and auto focus technology combined with SMART code reconstruction algorithms and high-performance microprocessor, enabling them to outperform the competition by reading damaged and dirty codes in challenging applications where a large depth of field is required. Reading distances of up to 1,625 mm for a 1 mm module width can be achieved. The CLV65x's auto focus feature, distance measurement technology,

and expertly engineered optics give it a competitive advantage in applications where space is limited and a large depth of field is required. Other advanced features, like an embedded web server for remote diagnostics and reading performance statistics, enhance the performance of the CLV65x family. Variants include line, side reading window and oscillating mirror versions; available with Ethernet.

At a glance

- Huge depth of field due to auto focus
- Integrated pushbuttons for auto setup and reading diagnostics
- 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
- Integrated web server provides remote diagnostics and monitoring
- Advanced, easy-to-use SOPAS configuration software
- Integrated LED bar graph

Your benefits

- Economical, as auto focus means no versions or additional light barriers are required for focus adjustment
- 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
- Integrated web server provides remote diagnostics and monitoring, no additional software required

→ www.mysick.com/en/CLV65x

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

| | CLV650 Standard Density | CLV651 Low Density |
|--|--|----------------------------|
| Light source | Visible red light (658 nm) | |
| MTBF | 40,000 h | |
| Laser class | 2 (EN 60825-1 (A2:2001-03), IEC 60825-1 : 2007-03, Ed. 2.0) | |
| Field of view | ≤ 50° | |
| Scanning frequency | 600 Hz ... 1,000 Hz | |
| Code resolution | 0.25 mm ... 1 mm | 0.5 mm |
| Reading distance (at code resolution) | | |
| Front | 140 mm ... 1,625 mm (1 mm) | 170 mm ... 930 mm (0.5 mm) |
| Oscillating mirror | 125 mm ... 1,570 mm (1 mm) | 155 mm ... 880 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° | |

Performance

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

| | |
|------------------------------------|---|
| Serial (RS-232, RS-422/485) | ✓, AUX (only RS-232) |
| Function | Host, AUX |
| Data transmission rate | 2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud |
| Ethernet | - / ✓ (depending on type) |
| Function | Host, AUX |
| Data transmission rate | 10/100 Mbit |
| Protocol | TCP/IP, EtherNet/IP, PROFINET, PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600) (depending on type) |
| CAN bus | ✓ |
| Function | SICK CAN sensor network (Master/Slave, Multiplexer/Server) |
| Data transmission rate | 20 kbit/s ... 1 Mbit/s |
| Protocol | CANopen, CSN (SICK CAN Sensor Network) |
| PROFIBUS DP | ✓, optional via external connection module (CDF600-2) |
| DeviceNet | ✓, optional via external connection module (CDM + CMF) |
| Switching inputs | |
| Cable | 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 in CDB620/CDM420) |
| Ethernet | 3 ("Sensor 1", 2 inputs via optional CMC600 in CDB620/CDM420) |
| Switching outputs | |
| Cable | 4 ("Result 1", "Result 2", 2 outputs via optional CMC600 in CDB620/CDM420) |
| Ethernet | 2 (via CMC600 in CDB620/CDM420) |

| | |
|----------------------------|--|
| Reading pulse | "Sensor 1" switching input, 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) |
| Control elements | 2 buttons (choose and start/stop functions) |
| Memory card | MicroSD memory card (flash card) 512 MB, optional |

Mechanics/electronics

| | | |
|------------------------------|--------------------|--|
| Electrical connection | Cable | 1 15-pin D-Sub HD male connector (0.9 m) |
| | Ethernet | 2 M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector |
| Operating voltage | | 18 V DC ... 30 V DC |
| Power consumption | | 8.5 W / 9.5 W (depending on type) |
| Housing | | Die-cast aluminum |
| Housing color | | Light blue (RAL 5012) |
| Enclosure rating | | IP 65 (EN 60529) |
| Protection class | | III (EN 61140) |
| Weight | Cable | 320 g, with connecting cable |
| | Ethernet | 250 g, without connecting cable |
| Dimensions | Front | 61 mm x 96 mm x 38 mm ¹⁾ |
| | Oscillating mirror | 95 mm x 96 mm x 41 mm ¹⁾ |

¹⁾ Swivel connector is 15 mm longer with Ethernet model.

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 safety | 2,000 lx, on bar code |
| Bar code print contrast (PCS) | ≥ 60 % |

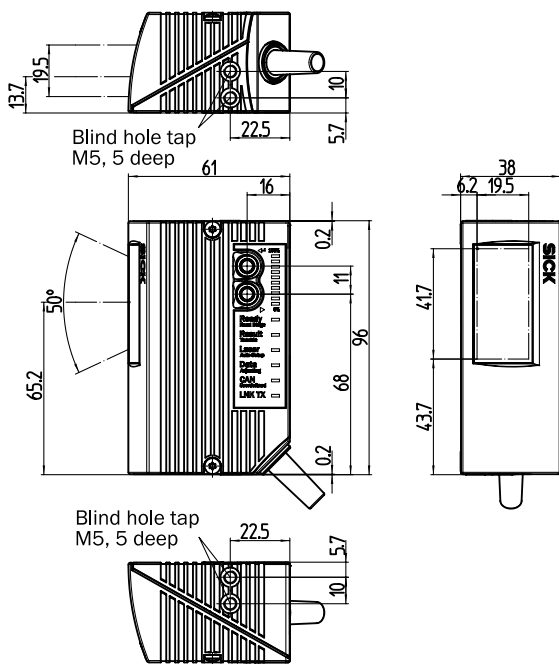
Ordering information

- **Focus:** Auto focus
- **Scanner design:** Line scanner
- **Heating:** optional
- **Front screen:** Glass

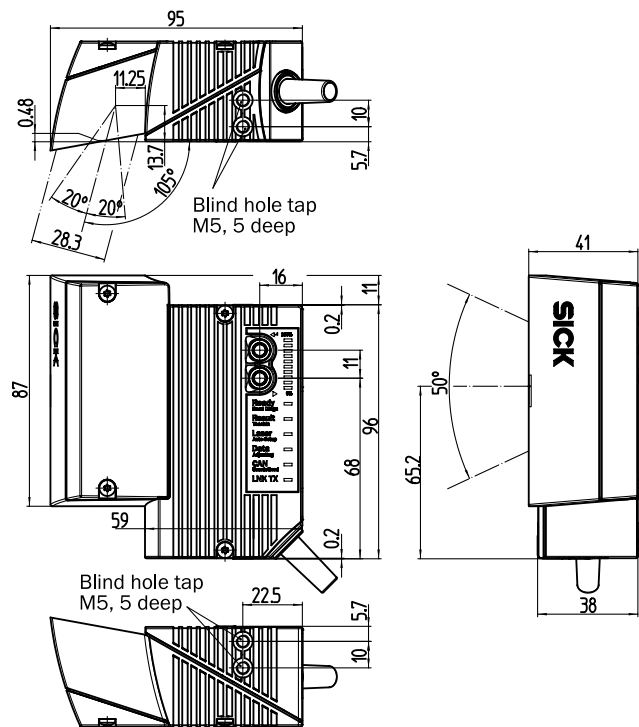
| Version | Connection type | Reading field | Model name | Part no. |
|-------------------------|-----------------|--------------------|-------------|----------|
| CLV650 Standard Density | Cable | Front | CLV650-0000 | 1041290 |
| | | Oscillating mirror | CLV650-6000 | 1042124 |
| | Ethernet | Front | CLV650-0120 | 1042121 |
| | | Oscillating mirror | CLV650-6120 | 1042125 |
| CLV651 Low Density | Cable | Front | CLV651-0000 | 1046557 |
| | | Oscillating mirror | CLV651-6000 | 1046559 |
| | Ethernet | Front | CLV651-0120 | 1046558 |
| | | Oscillating mirror | CLV651-6120 | 1046560 |

Dimensional drawings (Dimensions in mm (inch))

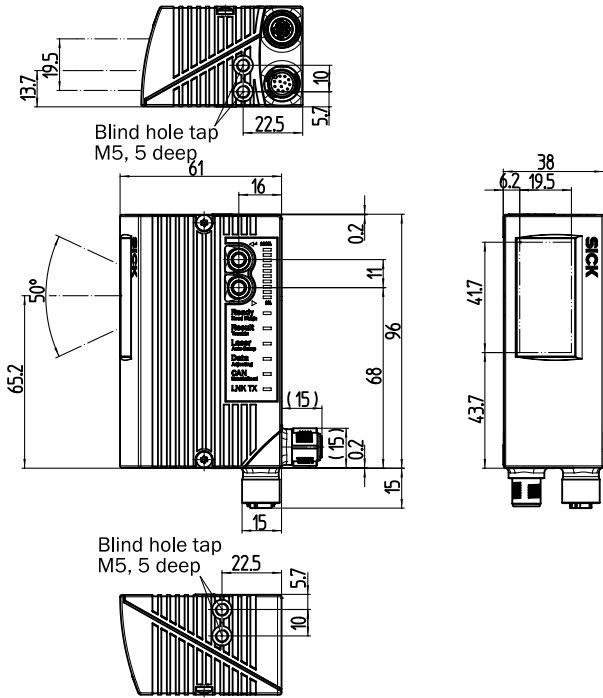
CLV63x/64x/65x Standard, front



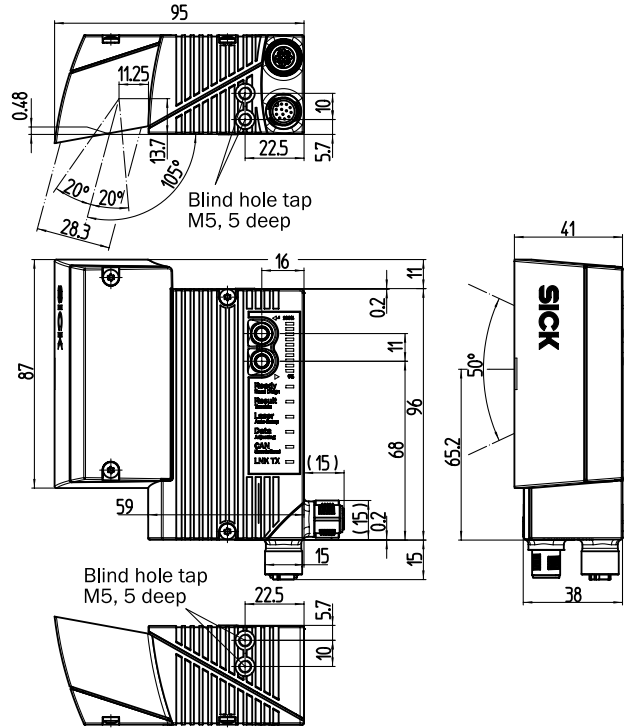
CLV63x/64x/65x Standard, oscillating mirror



CLV63x/64x/65x, Ethernet, front



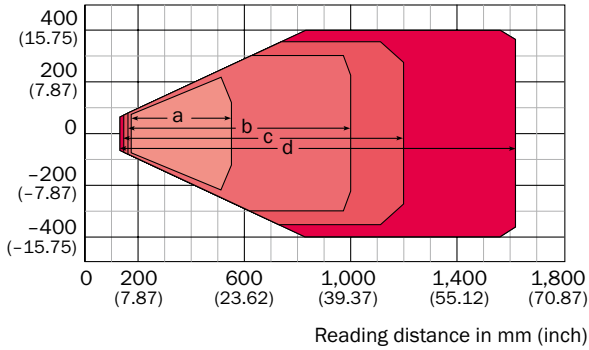
CLV63x/64x/65x, Ethernet, oscillating mirror



Reading field diagrams

CLV650 Standard Density, front

Reading field height in mm (inch)

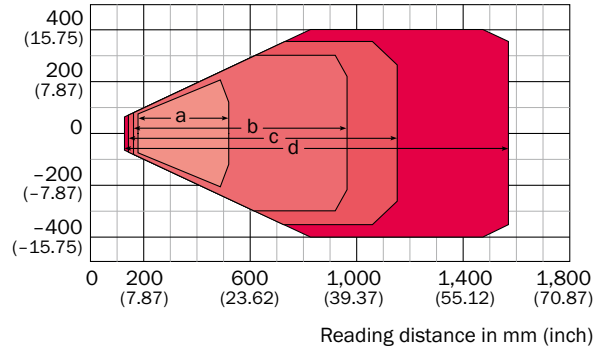


Resolution

- a: 0.25 mm (9.8 mil)
- b: 0.35 mm (13.8 mil)
- c: 0.50 mm (19.7 mil)
- d: 1.00 mm (39.4 mil)

CLV650 Standard Density, oscillating mirror

Reading field height in mm (inch)

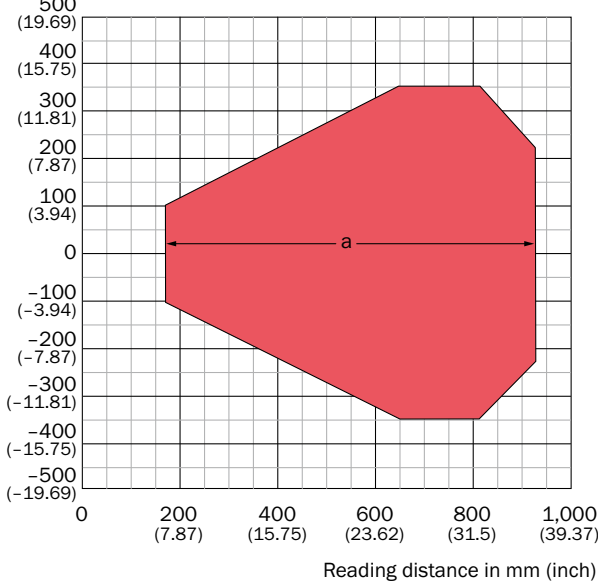


Resolution

- a: 0.25 mm (9.8 mil)
- b: 0.35 mm (13.8 mil)
- c: 0.50 mm (19.7 mil)
- d: 1.00 mm (39.4 mil)

CLV651 Low Density, front

Reading field height in mm (inch)

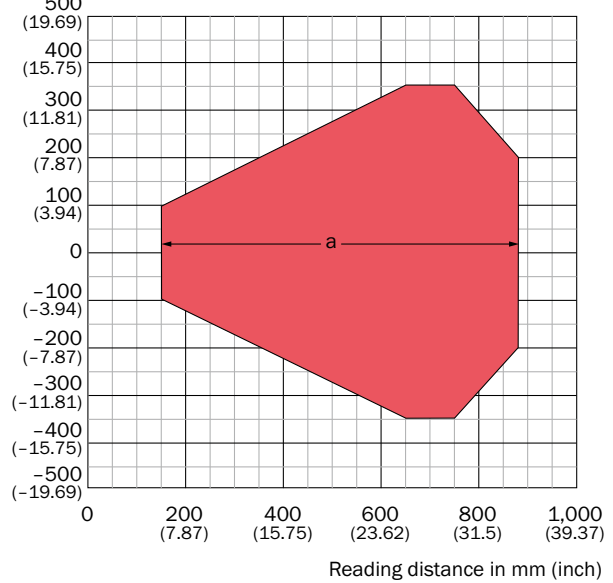


Resolution

- a: 0.50 mm (19.7 mil)

CLV651 Low Density, oscillating mirror

Reading field height in mm (inch)







Resolution

- a: 0.50 mm (19.7 mil)

Recommended accessories



Connection systems

Modules

| | Brief description | Type | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|--|-------------|----------|------------------|---------------------|
|  | Small connection module for one sensor, 4 cable glands, base for CMC600 | CDB620-001 | 1042256 | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin) | CDF600-2100 | 1058965 | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin) | CDF600-2103 | 1058966 | ● | ● |
|  | Modular connection module for one sensor | CDM420-0001 | 1025362 | ● | ● |

Plug connectors and cables

- **Cable length:** 2 m

| | Signal type | Connection type head A | Connection type head B | Cable | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|----------------------------------|---|--|--|----------|------------------|---------------------|
|  | Ethernet | Male connector, M12, 4-pin, straight, D-coded | Male connector, RJ45, 8-pin, straight | - | 6034414 | - | ● |
|  | Power, serial, CAN, digital I/Os | Female connector, M12, 12-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | To connection module CDx (except CDB650) | 2041834 | - | ● |

Mounting systems

Mounting brackets/plates

| | Brief description | Part no. | CLV63x-65x Cable | CLV63x-65x Ethernet |
|---|--------------------------------|----------|------------------|---------------------|
|  | Hanger-shaped mounting bracket | 2042800 | ● | ● |

→ For additional accessories, please see page 66

THE HIGHEST LEVEL OF FLEXIBILITY AND POWER

Auto Focus


SMART+


Cloning Plug


2 x Button


Distance Measuring


LED Bar Graph


Oscillating Mirror









Additional information

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Cloning plugs. 65

Product description

The CLV69x bar code scanner offers excellent reading performance, high-speed processing and a high level of reading accuracy. The auto focus function is based on built-in distance measurement technology and makes it possible to have height-independent code reading within the reading field. Simple and user-friendly configuration is guaranteed using the standard SOPAS ET operating system from SICK. Due to built-in SMART+ code reconstruction technology,

the CLV69x can read heavily contaminated or partially damaged bar codes as well as those with a high angle of tilt. With its built-in tracking, the CLV69x can be used without any additional system controller to handle standard applications. The innovative connectivity with built-in parameter storage not only enables fast, simple scanner replacement, but also easy integration into a variety of applications.

At a glance

- Advanced SMART+ code reconstruction technology
- New and flexible cloning plug technology
- CAN, Ethernet and serial communications available on board (dependent on cloning plug variant)
- Large depth of field due to real-time auto focus
- Consistent, user-friendly “SOPAS ET” software
- Built-in tracking without the use of an additional system controller
- Flexible sorting, filtering, and logical functions
- Integrated LED bar graph with push-buttons

Your benefits

- Higher reading rate on damaged, heavily contaminated and partially damaged bar codes using the SMART+ algorithm
- Increased processing allows for faster and more accurate performance on demanding applications
- Fewer costs since no additional Ethernet gateway is required when using the Ethernet clone plug
- Time savings during commissioning thanks to integrated buttons and bar graph
- Increased scanner intelligence enables sophisticated configuration of logical operations, reducing the control system programming effort. Data is delivered in the desired format
- Cost savings since standard applications can be implemented without an additional system controller due to integrated tracking

→ www.mysick.com/en/CLV69x

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

| | CLV690-0/1 Standard Density | CLV691-0/1 Low Density | CLV692-0/1 High Density |
|---------------------------------------|--|------------------------------|------------------------------|
| No. of distance configurations | ≤ 8 | | |
| Focus adjustment time | ≤ 20 ms | | |
| Focus trigger source | Data interface / switching inputs | | |
| Light source | Visible red light (660 nm) | | |
| MTBF | 100,000 h | | |
| Laser class | 2 (IEC 60825-1 (2007-3), EN 60825-1 (2008-05)) | | |
| Field of view | Front | ≤ 60° | |
| | Oscillating mirror | ≤ 50° | |
| Scanning frequency | 400 Hz ... 1,200 Hz | | |
| Code resolution | 0.25 mm ... 1 mm | 0.35 mm ... 1.2 mm | 0.17 mm ... 0.4 mm |
| Reading distance (at code resolution) | 500 mm ... 2,100 mm (0.5 mm) | 500 mm ... 2,200 mm (0.5 mm) | 400 mm ... 1,600 mm (0.3 mm) |
| Oscillating mirror functions | Fixed (adjustable position), oscillating (variable or fixed amplitude), one shot | | |
| Oscillation frequency | 0.5 Hz ... 4 Hz | | |
| Angle of deflection | -20° ... 20° (can be adjusted via software) | | |

Performance

| | |
|--|--|
| Bar code types | Interleaved 2 of 5, all current code types, Codabar, Code 128, Code 39, Code 93, GS1-128 / EAN 128, UPC / GTIN / EAN, Pharmacode |
| 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 |
| No. of multiple readings | 1 ... 100 |

Interfaces

| | | |
|-------------------|------------------------|---|
| Ethernet | Function | ✓, only with cloning plug I/O Ethernet |
| | Data transmission rate | Host, AUX 10/100 Mbit |
| | Protocol | TCP/IP, EtherNet/IP, PROFINET (optional via external connection module CDF600-2), PROFINET Dual Port (optional via external connection module CDF600-2) |
| CAN bus | Function | ✓ SICK CAN sensor network (Master/Slave, Multiplexer/Server) |
| | Data transmission rate | 20 kbit/s ... 1 Mbit/s |
| | Protocol | CSN (SICK CAN Sensor Network) |
| PROFIBUS DP | | ✓, optional via external connection module (CDF600-2) |
| DeviceNet | | ✓, optional via external connection module (CDM + CMF) |
| Switching inputs | | 6 ("Sensor 1" ... "Sensor 6") |
| Switching outputs | | 4 ("Result 1" ... "Result 4") |

| | |
|--------------------|--|
| Reading pulse | Switching inputs, 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)) |
| Control elements | 2 buttons |
| Parameter storage | Integrated in cloning plug |

Mechanics/electronics

| | CLV690-0/1 Standard Density | CLV691-0/1 Low Density | CLV692-0/1 High Density |
|-----------------------|---------------------------------------|-------------------------|-------------------------|
| Electrical connection | Depending on the cloning plug used | | |
| Operating voltage | 18 V DC ... 30 V DC | | |
| Power consumption | 15 W / 17 W (depending on type) | | |
| Housing | Die-cast aluminum | | |
| Housing color | Light blue (RAL 5012) | | |
| Enclosure rating | IP 65 (IEC 60529 (1989-11)) | | |
| Protection class | III (EN 60950-1 (2011-01)) | | |
| Weight | 1,500 g / 2,200 g (depending on type) | | |
| Dimensions | | | |
| | Front | 117 mm x 117 mm x 94 mm | |
| | Oscillating mirror | 182 mm x 128 mm x 97 mm | |

Ambient data

| | |
|-------------------------------|--|
| Vibration resistance | EN 60068-2-6 (2008-02) |
| Shock resistance | EN 60068-2-27 (2009-05) |
| Electrical safety | EN 60950-1 (2006-01) / EN 60950-1/A11 (2009-03) / EN 60950-1/A1 (2010) |
| Ambient operating temperature | 0 °C ... +40 °C |
| Storage temperature | -20 °C ... +70 °C |
| Permissible relative humidity | 90 %, non-condensing |
| Ambient light safety | 2,000 lx, on bar code |

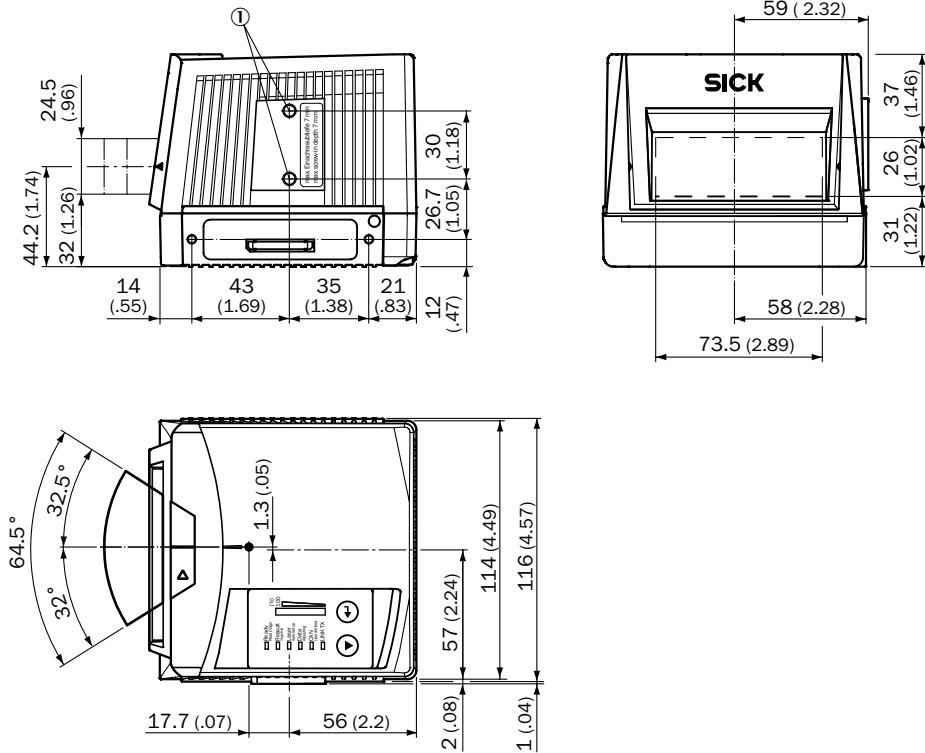
Ordering information

- **Focus:** Auto focus
- **Connection type:** depending on the cloning plug used
- **Scanner design:** Line scanner

| Version | Reading field | Front screen | Model name | Part no. |
|-----------------------------|--------------------|--------------|-------------|----------|
| CLV690-0/1 Standard Density | Front | Glass | CLV690-0000 | 1056600 |
| | | Plastic | CLV690-0010 | 1056614 |
| | Oscillating mirror | Glass | CLV690-1000 | 1056601 |
| CLV691-0/1 Low Density | Front | Glass | CLV691-0000 | 1056604 |
| | Oscillating mirror | Glass | CLV691-1000 | 1056605 |
| CLV692-0/1 High Density | Front | Glass | CLV692-0000 | 1056608 |
| | Oscillating mirror | Glass | CLV692-1000 | 1056609 |

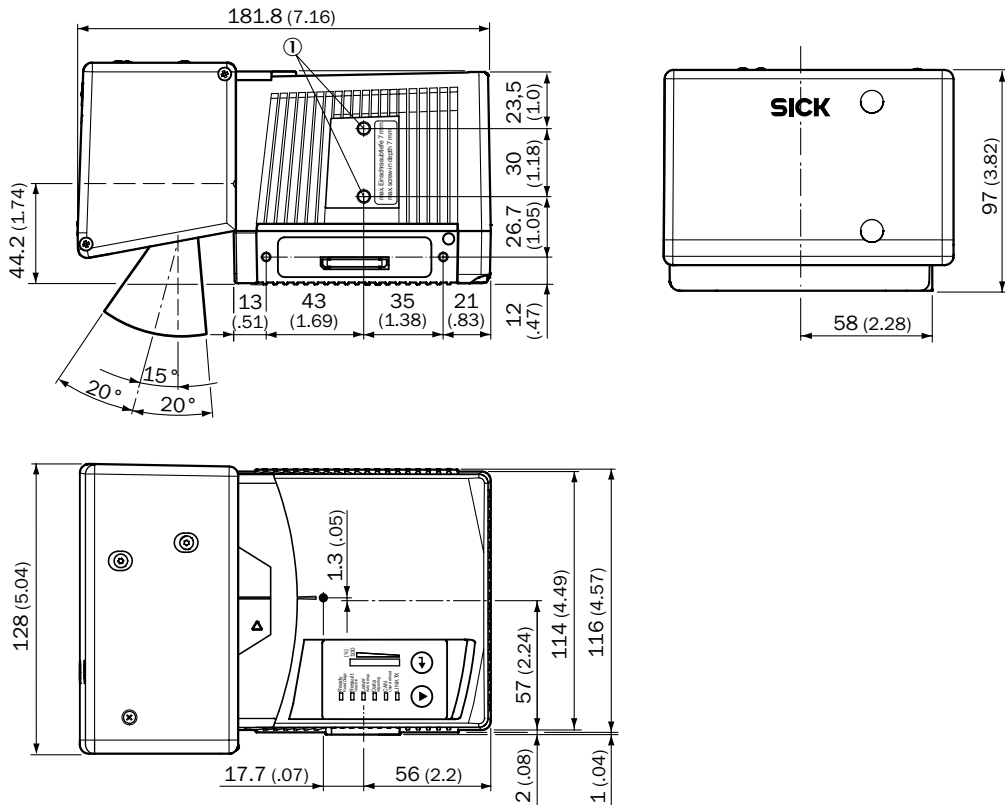
Dimensional drawings (Dimensions in mm (inch))

CLV69x, front



① Blind hole thread M6, 7 mm deep (2 x), for mounting

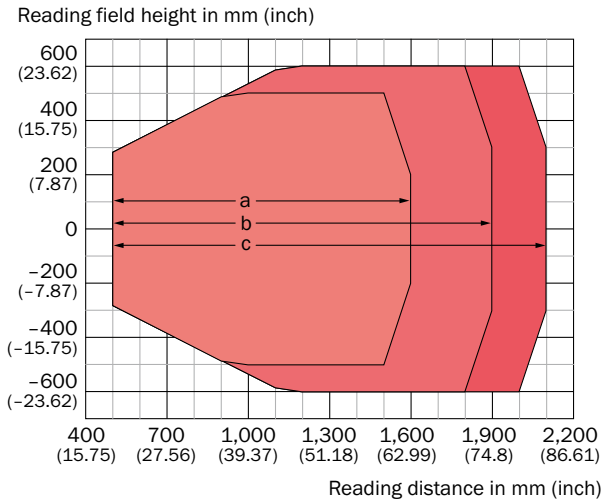
CLV69x, oscillating mirror



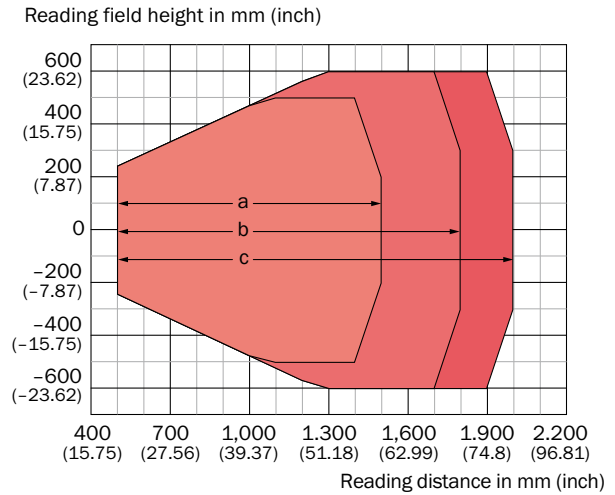
① Blind hole thread M6, 7 mm deep (2 x), for mounting

Reading field diagrams

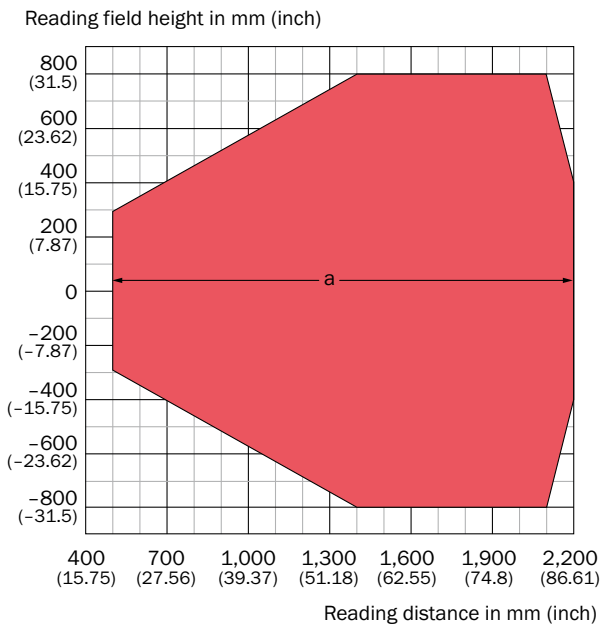
CLV690-0/1 Standard Density, front



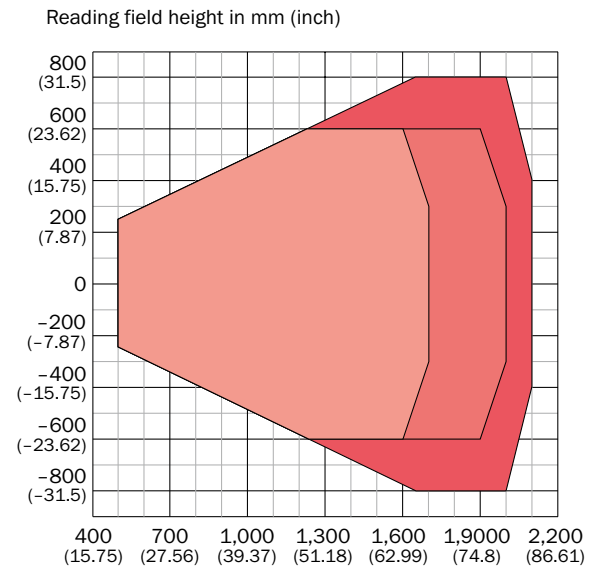
CLV690-0/1 Standard Density, oscillating mirror



CLV691-0/1 Low Density, front

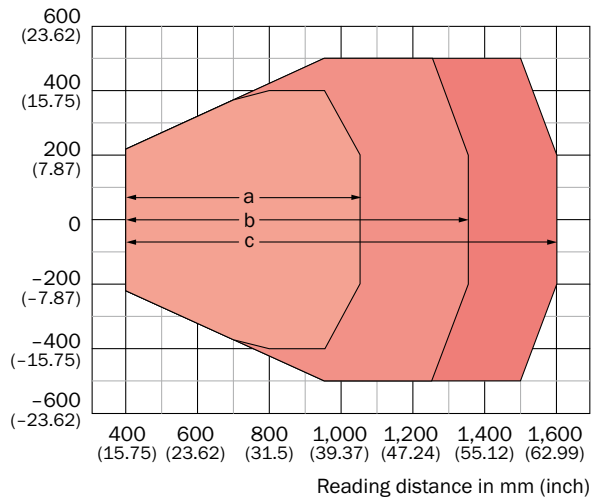


CLV691-0/1 Low Density, oscillating mirror



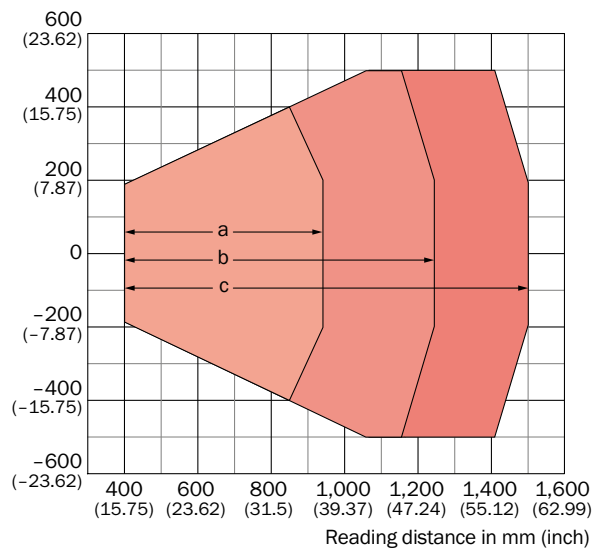
CLV692-0/1 High Density, front

Reading field height in mm (inch)



CLV692-0/1 High Density, oscillating mirror





Reading field height in mm (inch)









Recommended accessories

Connection systems

Modules


| | Brief description | Type | Part no. |
|---|---|-------------|----------|
|  | Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination of LECTOR®65x | CDB650-204 | 1064114 |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin) | CDF600-2100 | 1058965 |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin) | CDF600-2103 | 1058966 |
|  | Modular connection module for one sensor, 2 A fuse | CDM420-0006 | 1058634 |

Plug connectors and cables


| | Signal type | Connection type head A | Connection type head B | Cable | Cable length | Part no. |
|--|----------------------------------|--|--|---|--------------|----------|
|  | - | Male connector, D-Sub, 15-pin female connector, D-Sub, 15-pin | - | Required for connecting a CLV69x (serial) | - | 2062450 |
|  | - | Male connector, M12, 17-pin male connector, M12, 5-pin female connector, M12, 4-pin | - | Required for connecting a CLV69x (Ethernet/stand-alone) | - | 2062452 |
|  | - | Female connector (AUX), M12, 5-pin female connector, M12, 5-pin male connector, M12, 5-pin | - | Required for connecting a CLV69x (CAN) | - | 2062453 |
| Illustration may differ | - | Male connector, male connector, female connector (AUX), M12, 5-pin | - | Required for connecting a CLV69x (CAN redundant) | - | 2062454 |
|  | Power, serial, CAN, digital I/Os | Female connector, M12, 17-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | To connection module CDx (except CDB650) | 2 m | 2055419 |
|  | | Male connector, M12, 17-pin, straight, A-coded | Female connector, M12, 17-pin, straight, A-coded | To connection module CDB650, suitable for 2 A, Ecolab | 2 m | 6052286 |
|  | Ethernet | Male connector, M12, 4-pin, straight, D-coded | Male connector, RJ45, 8-pin, straight | - | 2 m | 6034414 |

Mounting systems

Mounting brackets/plates

| | Brief description | Part no. |
|---|-------------------------|----------|
|  | Simple mounting bracket | 2013824 |

Terminal and alignment brackets

| | Brief description | Part no. |
|---|--------------------------|----------|
|  | Quick-action lock system | 2016110 |






Cloning plugs

CLV69x cloning plug inputs and outputs

| Brief description | Part no. | Sensor (Sensor 1) | INO (Sensor 2) | IN1 (Sensor 3) | IN2 (Sensor 4) | IN3 (Sensor 5) | IN4 (Sensor 6) | Result1 | Result2 | Result3 | Result4 | AUX | HOST | CAN1 | CAN2 | Eth |
|---|----------|-------------------|----------------|----------------|----------------|----------------|----------------|---------|---------|---------|---------|-----|------|------|------|-----|
| D-Sub clone plug (with CDM490 connection module) | 2062450 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | - |
| I/O clone plug ¹⁾ (with CDM420-0006 connection module) | 2062452 | ● | ● | - | - | - | - | ● | ● | ● | ● | ● | ● | ● | - | ● |
| CAN IN/OUT clone plug | 2062453 | - | - | - | ● | - | - | - | - | - | - | ● | - | ● | - | - |
| CAN redundant clone plug | 2062454 | - | - | - | ● | - | - | - | - | - | - | ● | - | ● | ● | - |

¹⁾ No heating.


Assignment of connection to cloning plug

| | Brief description | Part no. | D-sub clone plug | I/O Ethernet clone plug | CAN IN/OUT clone plug | CAN redundant clone plug |
|---|--|----------|------------------|-------------------------|-----------------------|--------------------------|
|  | CDB650, connection module for a sensor | 1064114 | - | ● | - | - |
|  | CDM490, modular connection module for a sensor | 1025363 | ● | - | - | - |
|  | CDM420-0006, modular connection modules for a CLV69x/RFU63x/LECTOR®65x | 1058634 | - | ● | - | - |
|  | CDM420-0007, modular connection modules for two CLV69x/RFU63x/LECTOR®65x | 1060324 | - | ● | - | - |
|  | CDM420-0108, Kit: modular connection module for one sensor, 2 A fuse, Host and AUX interface available on face plate, power supply CMP490, US power cord | 1064248 | - | ● | - | - |











→ For additional accessories, please see page 66









Connection systems

Adapters/distributors

| | Signal type | Connection type head A | Connection type head B | Cable | Cable length | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|---|-------------|---|--|---------------------------|--------------|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
| | - | Male connector, D-Sub-HD, 15-pin | Female connector, D-Sub-HD, 15-pin | Adapter for CLV41x/CLV62x | - | 2072514 | - | ● | ● | - | - | - |
| | - | Plug, D-Sub-HD, 15-pin | Female connector, D-Sub-HD, 15-pin | Adapter for CLV41x/CLV61x | - | 2068506 | ● | - | - | - | - | - |
|  | CAN, Power | Female connector, M12, 5-pin, straight, A-coded | Female connector, M12, 5-pin, straight, A-coded Male connector, M12, 5-pin, straight, A-coded | Y-CAN cable | 0.5 m | 6027647 | - | - | - | - | - | ● |











Modules







| | Brief description | Type | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|---|---|-------------|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  | Small connection module for one sensor, 4 cable glands, base for CMC600 | CDB620-001 | 1042256 | ● | ● | ● | ● | ● | - |
|  | Small connection module for one sensor, 2 cable glands, 2 x M12 connector/socket for CAN, base for CMC600 | CDB620-101 | 1042257 | ● | ● | ● | ● | ● | - |
|  | Small connection module for a sensor, 5 cable glands, socket for CMC cloning module | CDB620-201 | 1042258 | ● | ● | ● | ● | ● | - |
|  | Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination of LECTOR®65x | CDB650-204 | 1064114 | - | - | - | - | - | ● |
|  | Fieldbus proxy/gateway to connect to a EtherCAT network | CDF600-0300 | 1052291 | ● | ● | ● | ● | ● | - |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, plug/socket, 5-pin) | CDF600-2100 | 1058965 | ● | ● | ● | ● | ● | ● |
|  | Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, socket, 9-pin) | CDF600-2103 | 1058966 | ● | ● | ● | ● | ● | ● |
|  | Fieldbus proxy/gateway for connecting one identification sensor to PROFINET-IO networks (interface 2 x M12, socket/socket, 4-pin) | CDF600-2200 | 1062460 | ● | ● | ● | ● | ● | ● |
|  | Fieldbus proxy/gateway for connecting one identification sensor to PROFINET-IO networks (interface 2 x RJ45 AIDA, female connector/female connector, 4-pin) | CDF600-2201 | 1063390 | ● | ● | ● | ● | ● | ● |
|  | Modular connection module for one sensor | CDM420-0001 | 1025362 | ● | ● | ● | ● | ● | - |

| | Brief description | Type | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|--|---|-------------|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  Illustration may differ | Modular connection module for two sensors | CDM420-0004 | 1028487 | ● | ● | ● | ● | ● | - |
|  | Modular connection module for one sensor, 2 A fuse | CDM420-0006 | 1058634 | - | - | - | - | - | ● |
|  | Modular connection module for two sensors, 2 A fuse | CDM420-0007 | 1060324 | - | - | - | - | - | ● |
|  Illustration may differ | Modular connection module for one sensor, Host and AUX interface available on face plate | CDM420-0101 | 1025364 | ● | ● | ● | ● | ● | - |
|  Illustration may differ | Kit: modular connection module for one sensor, Host and AUX interface available on face plate, power supply CMP400, US power cord | CDM420-0102 | 1026220 | ● | ● | ● | ● | ● | - |
|  | Kit: modular connection module for one sensor, 2 A fuse, Host and AUX interface available on face plate, power supply CMP490, US power cord | CDM420-0108 | 1064248 | - | - | - | - | - | ● |
|  | Modular connection module for one sensor | CDM490-0001 | 1025363 | - | - | - | - | - | ● |
|  | External parameter memory for integration in CDB620/CDM42x | CMC600-101 | 1042259 | ● | ● | ● | ● | ● | ● |

Plug connectors and cables




| | Signal type | Connection type head A | Connection type head B | Cable | Cable length | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|--|----------------------------------|---|--|--|--------------|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
| | Serial | Female connector, D-Sub, 9-pin, straight | Cable | - | 3 m | 2020319 | ● | ● | ● | ● | ● | ● |
| | - | Female connector, D-Sub-HD, 15-pin, straight | Cable | - | 2 m | 2043413 | ● | ● | ● | ● | ● | - |
| | - | Female connector, M12, 12-pin, straight | Cable | - | 5 m | 6034605 | - | - | ● | - | ● | - |
| | Power, serial, CAN, digital I/Os | Female connector, M12, 12-pin, straight | Cable | Drag chain use | 5 m | 6045140 | - | - | ● | - | ● | - |
| | Power, serial, CAN, digital I/Os | Female connector, M12, 17-pin, straight, A-coded | Cable | Suitable for 2 A, adapted color coding of open conductor heads, drag chain use, Ecolab | 3 m | 2070425 | - | - | - | - | - | ● |
| | | | | | 5 m | 2070426 | - | - | - | - | - | ● |
| | | | | | 10 m | 2070427 | - | - | - | - | - | ● |
| | Power, serial, CAN, digital I/Os | Plug, M12, 17-pin, straight, A-coded | Female connector, M12, 17-pin, straight, A-coded | To connection module CDB650, suitable for 2 A, Ecolab | 2 m | 6052286 | - | - | - | - | - | ● |
| | | | | | 3 m | 6051194 | - | - | - | - | - | ● |
| | | | | | 5 m | 6051195 | - | - | - | - | - | ● |
| | Serial | Plug, M12, 5-pin, straight, A-coded | Female connector, D-Sub, 9-pin, straight | - | 5 m | 2027955 | - | - | - | - | - | ● |
| | Power, CAN | Female connector, M12, 5-pin, straight | Male connector, M12, 5-pin, straight | CAN cable | 1 m | 6021164 | - | - | - | - | - | ● |
| | | | | | 3 m | 6021165 | - | - | - | - | - | ● |
| | | | | | 5 m | 6021168 | - | - | - | - | - | ● |
| | Power, serial, CAN, digital I/Os | Female connector, M12, 12-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | To connection module CDx (except CDB650) | 0.9 m | 2042916 | - | - | ● | - | ● | - |
| | | | | | 2 m | 2041834 | - | - | ● | - | ● | - |
| | | | | | 3 m | 2042914 | - | - | ● | - | ● | - |
| | | | | | 5 m | 2042915 | - | - | ● | - | ● | - |
| | Power, serial, CAN, digital I/Os | Female connector, M12, 12-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | To connection module CDx (except CDB650), drag chain use | 2 m | 2061478 | - | - | ● | - | ● | - |
| | | | | | 3 m | 2061604 | - | - | ● | - | ● | - |
| | | | | | 5 m | 2061479 | - | - | ● | - | ● | - |
| | Power, serial, CAN, digital I/Os | Female connector, M12, 17-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | To connection module CDx (except CDB650) | 0.9 m | 2049764 | - | - | - | - | - | ● |
| | | | | | 2 m | 2055419 | - | - | - | - | - | ● |
| | | | | | 3 m | 2055420 | - | - | - | - | - | ● |
| | | | | | 5 m | 2055859 | - | - | - | - | - | ● |
| | Power, serial, CAN, digital I/Os | Female connector, D-Sub-HD, 15-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | Extension cable | 2 m | 6034417 | ● | ● | ● | ● | ● | - |
| | Power, serial, CAN, digital I/Os | Female connector, D-Sub-HD, 15-pin, straight | Male connector, D-Sub-HD, 15-pin, straight | Extension cable | 3 m | 6034418 | ● | ● | ● | ● | ● | - |
| | - | Male connector, D-Sub, 15-pin female connector, D-Sub, 15-pin | - | Required for connecting a CLV69x (serial) | - | 2062450 | - | - | - | - | - | ● |

| | Signal type | Connection type head A | Connection type head B | Cable | Cable length | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|--|----------------------------------|--|---|---|--------------|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  | - | Male connector, M12, 17-pin male connector, M12, 5-pin female connector, M12, 4-pin | - | Required for connecting a CLV69x (Ethernet/stand-alone) | - | 2062452 | - | - | - | - | - | ● |
|  Illustration may differ | - | Female connector (AUX), M12, 5-pin female connector, M12, 5-pin male connector, M12, 5-pin | - | Required for connecting a CLV69x (CAN) | - | 2062453 | - | - | - | - | - | ● |
| | | Male connector, male connector, female connector (AUX), M12, 5-pin | - | Required for connecting a CLV69x (CAN redundant) | - | 2062454 | - | - | - | - | - | - |
|  | Ethernet | Male connector, M12, 4-pin, straight, D-coded | Male connector, RJ45, 8-pin, straight | - | 2 m | 6034414 | - | - | ● | - | ● | ● |
| | | | | | 3 m | 6044400 | - | - | ● | - | ● | ● |
| | | | | | 5 m | 6034415 | - | - | ● | - | ● | ● |
| | | | | | 10 m | 6030928 | - | - | ● | - | ● | ● |
| | | | | | 20 m | 6036158 | - | - | ● | - | ● | ● |
|  Illustration may differ | Ethernet | Male connector, M12, 4-pin, straight, D-coded | Male connector, RJ45, 8-pin, straight | Drag chain use, suitable for refrigeration, Ecolab | 2 m | 6050198 | - | - | ● | - | ● | ● |
| | | | | | 3 m | 6050199 | - | - | ● | - | ● | ● |
| | | | | | 5 m | 6050200 | - | - | ● | - | ● | ● |
| | | | | | 10 m | 6050201 | - | - | ● | - | ● | ● |
| | | | | | 20 m | 6050596 | - | - | ● | - | ● | ● |
|  | Ethernet | Male connector, M12, 4-pin, D-coded | Male connector, M12, 4-pin, D-coded | - | 2 m | 6034420 | - | - | ● | - | ● | ● |
| | | | | | 3 m | 6034421 | - | - | ● | - | ● | ● |
| | | | | | 5 m | 6034422 | - | - | ● | - | ● | ● |
|  | Power, serial, CAN, digital I/Os | Male connector, female connector, D-Sub-HD, 15-pin | Male connector, D-Sub-HD, 15-pin female connector | To connection module CDM490 | 1 m | 2021806 | - | - | - | - | - | ● |
| | | | | | 3 m | 2020307 | - | - | - | - | - | - |
|  | Power, serial, CAN, digital I/Os | Female connector, D-Sub-HD, 15-pin, straight male connector, D-Sub-HD, 15-pin, straight | Male connector, D-Sub-HD, 15-pin female connector, D-Sub-HD, 15-pin | To connection module CDM490 | 5 m | 2022884 | - | - | - | - | - | ● |
|  | | Female connector, male connector, D-Sub-HD, 15-pin | Male connector, D-Sub-HD, 15-pin | To connection module CDM42x | 3 m | 2027046 | - | - | - | - | - | ● |
|  | RS-232, USB | Male connector, D-Sub, 9-pin, straight | Male connector, USB-A, straight | Converter RS-232 to USB (if no RS-232 interface is available with the PC) | - | 6042499 | ● | ● | ● | ● | ● | ● |
|  | Serial | Female connector, D-Sub, 9-pin, straight | Female connector, D-Sub, 9-pin, straight | - | 3 m | 2014054 | ● | ● | ● | ● | ● | ● |











| | Signal type | Connection type head A | Connection type head B | Cable | Cable length | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|--|-------------|--|--------------------------------------|--|--------------|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  | - | Connection inlay (male connector), D-Sub-HD, 15-pin | - | - | - | 6010020 | ● | ● | ● | ● | ● | - |
|  | - | Connection inlay (female connector), D-Sub-HD, 15-pin | - | - | - | 6010019 | ● | ● | ● | ● | ● | - |
|  | - | Connection inlay (male connector), D-Sub-HD, 9-pin, 15-pin | - | - | - | 6009438 | ● | ● | ● | ● | ● | - |
|  | Power | Female connector, M12, 12-pin, straight | Male connector, M12, 4-pin, straight | For connection to black AS-i flat ribbon cable for supplying power to IDpro-Ethernet sensors, drag chain use | 1 m | 6044572 | - | - | ● | - | ● | - |
| | | | | | 2.5 m | 6044573 | - | - | ● | - | ● | - |
|  | - | - | - | Black AS-i flat cable for looping in the power supply to IDpro Ethernet sensors, sold per meter | - | 6022463 | - | - | ● | - | ● | - |
|  | - | - | - | M12 AS-i clip for connection on black AS-i flat cable | - | 6022472 | - | - | ● | - | ● | - |

Mounting systems

Device protection (mechanical)

| | Brief description | Type | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|---|--|-----------------------------|------------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  | All CLV62x, CLV63x and CLV64x bar code scanners have IP 69K versions – with separate part numbers – available upon request. (The housing can't be retrofitted. Special Ecolab cable available as accessory.) | CLV6xx-IP69K-Standard-Front | On request | - | ● | ● | ● | ● | - |
|  | | CLV6xx-IP69K-Standard-OM | On request | - | ● | ● | ● | ● | - |
|  | IP-65 sealing rubber for extension cables with 15-pin D-Sub plug connection (6010075 and 6020092) | IP-65 sealing rubber | 4038847 | ● | ● | ● | ● | ● | - |

Mounting brackets/plates


| | Brief description | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|---|--|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  | Bracket with adapter board | 2042902 | ● | ● | ● | - | - | - |
|  | Mounting bracket (simple bracket) | 2020410 | ● | ● | ● | ● | ● | - |
|  | Hanger-shaped mounting bracket | 2042800 | - | - | - | ● | ● | - |
|  | Mounting bracket with integrated vibration and shock absorber for mounting the scanner e.g., on a forklift | 2042799 | - | - | - | ● | ● | - |
|  | Simple mounting bracket | 2013824 | - | - | - | - | - | ● |
|  | Mounting bracket with integrated vibration/shock absorption for mounting the scanner on a forklift, for example (mounted in the direction of travel, on the right side) | 2039493 | - | - | - | - | - | ● |
|  | Mounting bracket with integrated vibration/shock absorption for mounting the scanner on a forklift, for example (mounted in the direction of travel, on the left side) | 2017628 | - | - | - | - | - | ● |
|  | Articulated mounting bracket, self-locking | 2018435 | - | - | - | - | - | ● |
|  | Mounting bracket with integrated vibration/shock absorption for mounting the scanner on a forklift, for example (mounted in the direction of travel, on the left side; in this case, the scanner's position is rotated by 180 degrees) | 2065639 | - | - | - | - | - | ● |
|  | Universal clamping bracket for rod mounting | 2042802 | ● | ● | ● | - | - | - |

Terminal and alignment brackets

| | Brief description | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|---|--|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
| | Articulated bracket for mounting on mirror hood | 2046822 | ● | ● | ● | ● | ● | - |
| | Rod clamp for mirror hood | 2048633 | ● | ● | ● | ● | ● | - |
|  | Rod clamp for outer diameter of 12 ... 20 mm | 2042801 | - | - | - | ● | ● | - |
|  | Rod clamp with mounting bracket and quick clamp, for a diameter of 12 mm ... 20 mm | 2062830 | - | - | - | - | - | ● |
|  | Ball-and-socket bracket for mounting | 2014726 | - | - | - | - | - | ● |
|  | Quick-action lock system | 2025526 | ● | ● | ● | ● | ● | - |
|  | | 2016110 | - | - | - | - | - | ● |

Other accessories

Heating units



| | Brief description | Type | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|--|---|-------------------------------|------------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  Illustration may differ | All CLV63x, CLV64x, CLV65x and CLV69x bar code scanners have heated versions – with separate part numbers – available upon request. (The heating can't be retrofitted.) | CLV6xx-Heating-Standard-Front | On request | - | - | - | ● | ● | ● |
| | | CLV6xx-Heating-Standard-OM | On request | - | - | - | ● | ● | ● |
| | | CLV6xx-Heating-Standard-Side | On request | - | - | - | ● | ● | - |

Storage mediums

| | Brief description | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|--|--|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  Illustration may differ | MicroSD memory card with 1 GB for industrial use | 4051366 | - | - | - | ● | ● | - |

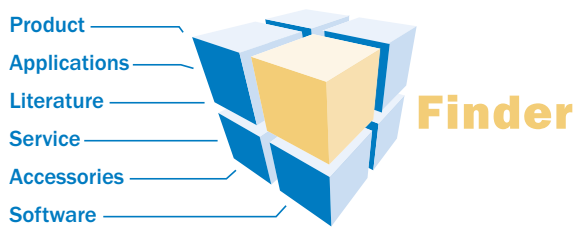
Reflectors/optics

Mirror adapters

| | Brief description | Part no. | CLV61x Cable | CLV62x Cable | CLV62x Ethernet | CLV63x-65x Cable | CLV63x-65x Ethernet | CLV69x |
|---|---|----------|--------------|--------------|-----------------|------------------|---------------------|--------|
|  | External mirror hood (105°) for reducing reading distance between two closely spaced conveyor belts | 2046811 | ● | ● | ● | ● | ● | - |
|  | Standard mirror shield with glass front window (for reducing the mounting area) | 2032070 | - | - | - | - | - | ● |
| | Mirror shield with plastic front window (for reducing the mounting area) | 2055917 | - | - | - | - | - | ● |

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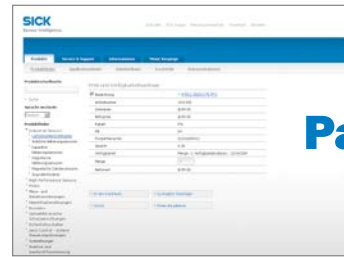


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Comprehensive services round out our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

Worldwide presence:

Australia, Belgium/Luxembourg, Brasil, Česká Republika, Canada, China, Danmark, Deutschland, España, France, Great Britain, India, Israel, Italia, Japan, México, Nederland, Norge, Österreich, Polska, România, Russia, Schweiz, Singapore, Slovenija, South Africa, South Korea, Suomi, Sverige, Taiwan, Türkiye, United Arab Emirates, USA.

Please find detailed addresses and additional representatives and agencies in all major industrial nations at: www.sick.com