PRODUCT INFORMATION

CLV6 series

INTELLIGENT SOLUTIONS FOR LOGISTICS AND AUTOMATION

Bar code scanners

SICK
Sensor Intelligence.

Image-based code readers

Image-based code readers with camera technology are characterized by their flexibility in reading a variety of code types. In addition to reading 1D bar codes, they employ a range of image processing algorithms to identify 2D codes, such as the frequently used Data Matrix, QR, or MaxiCodes, as well as optical character recognition. They make light work of switching from bar codes to 2D codes.

RFID

RFID is particularly well suited to harsh ambient conditions, for example extreme temperatures or identification objects under high physical stresses. Optical technologies require visual contact at all times in order to detect the code and are therefore more susceptible to wear or contamination.

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→ www.sick.com/more-than-a-vision

MORE THAN A VISION

**Intelligent questions have more than one answer.
The best technology depends on the task at hand.**

In the real world, providing an effective solution for automatic identification requires more than just one technology. With SICK you have a choice. Three technologies, one philosophy: Customer needs come first.

For every identification task, the same question is asked: Which technology is best? And as always in life, there is never just one answer for every question. The best possible solution is always tailored to the individual technical and economic conditions of the application.

Three identification technologies have dominated the market for many years: RFID, image-based code readers, and laser-based bar code scanners. As the market leader in automatic identification, SICK has not only mastered all the main technologies, but also poses the right questions to ensure the right products are selected from its technology portfolio.

Bar code scanners

Laser-based bar code scanners have an outstanding depth of field and are thus easily able to identify bar codes on objects of varying heights. Thanks to the wide aperture angles up to 60°, one device is able to cover most belt widths.

- Excellent depth of field and large field of view
- Resistance to ambient light
- No additional illumination required
- Reliable reading even of foil-protected codes and other reflective surfaces
- High reading rate in start-stop situations and when objects are stationary
- Low costs

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 parts suppliers

The main task of the CLV6xx bar code scanner in the automotive and parts suppliers 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, parcel and postal (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.

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Food and beverage

The food industry places high standards in terms of safety to avoid breakage of glass. Therefore, we offer devices with plastic windows as well as with glass windows. If especially stringent requirements on hygiene are mandatory, the IP69K version with a stainless steel housing meets 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 80

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 72

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 44

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 80

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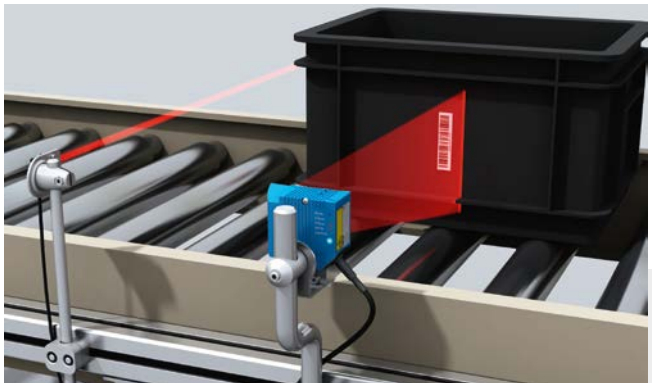
Storage and conveyor systems: tote identification



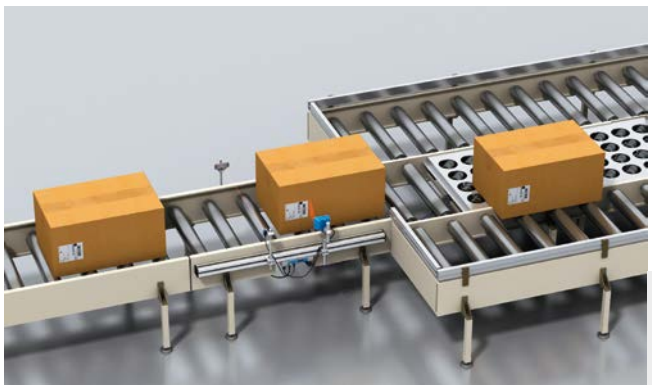
Customer benefits

- Simple and fast integration into existing conveyor systems thanks to the optimized reading field
- Flexible fieldbus connection with optional external CDF600-2 PROFIBUS DP / CDF600-2 PROFINET connection module or with Dual Port PROFINET on board

Ideal product solutions

CLV615 . . . . . Page 32
CLV61x Dual Port . . Page 38

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 52
CLV64x. . . . . Page 64

Laboratory automation: reading bar codes on samples

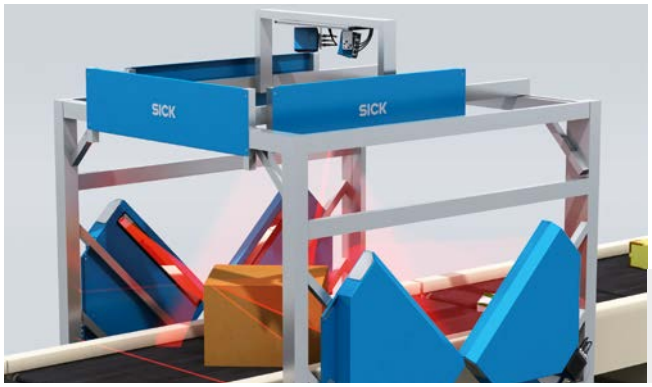
Customer benefits

- Reliable reading on narrow module widths with maximum reading field height
- Minimum required mounting space due to a large reading field height at close reading distance (CLV60x)
- Reliable reading of damaged codes thanks to the SMART function (CLV61x)

Ideal product solution

CLV60x. . . . . Page 28
CLV61x. . . . . Page 32

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 72
CLV69x. . . . Page 80

WIDE RANGE OF VERSIONS

VERSIONS WITHIN THE CLV6 SERIES

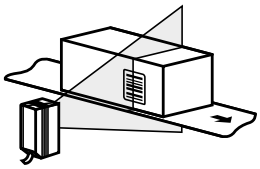
Designs

Front reading window

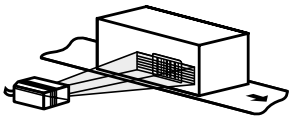
Side reading window, light emission below 105°

Side reading window with oscillating mirror

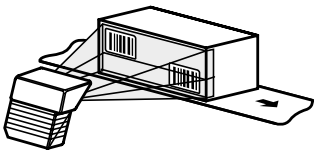
Scanning methods



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 22 onwards.

Flexible interface concept

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

More information on page 20 onwards.

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

CLV62x to CLV65x also offer an integrated statistics function, which can be visualized via a user-friendly web server. If required, the SICK Analytics Solutions (Package Analytics) 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.

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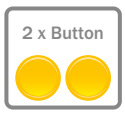
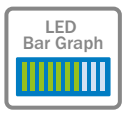
OUTSTANDING PRODUCT FEATURES

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 statical checking of the reading rate. The information can be read directly from the LED bar graph.

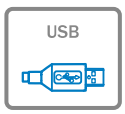
Intelligent auto setup

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

microSD memory card

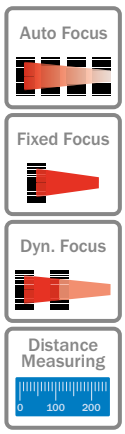
The integrated microSD memory card slot enables easy firmware updating and parameter cloning. If the scanner is being replaced, you simply need to insert the microSD memory card into the new scanner.

USB interface



In addition to the Ethernet interface, the USB interface also enables configuration and observation of the scanner on-site.

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.

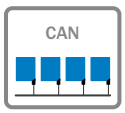
SMART (code reconstruction)

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 (CSN) 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 different connectors that enable the technology to be adapted perfectly to the application in question.

CLV60x

RELIABLE READING PERFORMANCE IN THE SMALLEST OF SPACES

LED status indicator

Multi-colored LED status indicator visible from almost every angle.

Side or front reading window

Choose the best position for your reading application.

Compact design

Maximum flexibility when mounting.

RS-232 or USB interface

Two different host interface designs.

2K pixel CMOS technology

The CLV60x for reliable bar code reading and long-term product availability – a sound investment.

Fixed focus

Enables simple and fast adjustment during commissioning thanks to the integrated fixed focus feature.

Customization as a service (optional)

Customized sensors can help to reduce commissioning time of the sensor; for example, in the case of pre-parameterized sensors.

Minimal space requirements

80 mm reading field height at a reading distance of just 30 mm, resulting in minimal space requirements and thus allowing integration into even the smallest of machines.

PRODUCT DETAILS

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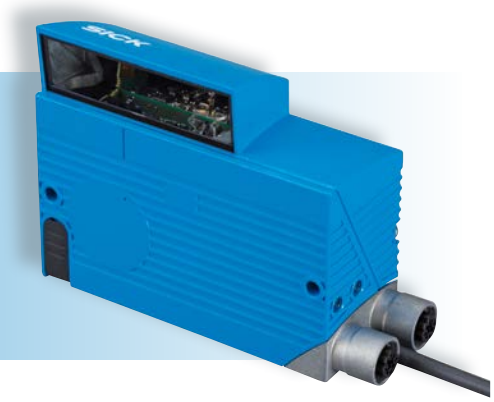
CLV61x, CLV61x DUAL PORT, CLV62x



RELIABLE DECODING, SIMPLE INTEGRATION

SMART620 (code reconstruction)

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

Cable or male connector

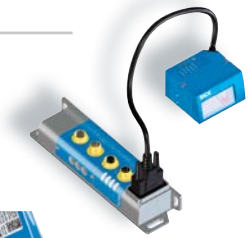
The CLV61x is available as a cable version, while the CLV62x is also available as an Ethernet version with a swivel connector.

Cable version

Ethernet version with a swivel connector

Dual port connection

- CLV61x and CLV62x: together with the fieldbus module with either CDF600-2 PROFIBUS DP or CDF600-2 PROFINET
- With its integrated switch, the CLV61x Dual Port offers easy PROFINET connection without an additional fieldbus module. It is available with a swivel connector and integrated power cable.

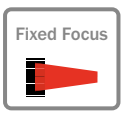


Swivel connector

Exceptionally simple mounting of the CLV61x Dual Port thanks to a swivel system plug and the SPEEDCON thread. As a result, the scanner can be integrated easily into your network, even under difficult installation conditions.

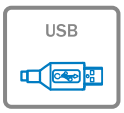
Fixed focus

The integrated fixed focus feature enables simple and fast adjustment during commissioning.



USB interface

The CLV61x Dual Port features a USB auxiliary interface.



microSD memory card

CLV61x Dual Port: local parameter cloning for high plant availability.

Integrated heater (optional)

PRODUCT DETAILS

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

Local parameter cloning for high plant availability.

Cable or male connector

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

Swivel connector

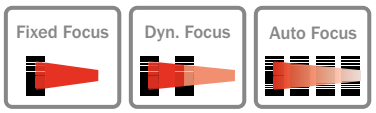
Exceptionally simple mounting thanks to the swivel connector and the SPEEDCON thread. As a result, the scanner can be integrated easily into your network, even under difficult installation conditions.

Flexible interface concept

PROFINET, Ethernet/IP™, Ethernet TCP/IP, CANopen, SICK CAN sensor network (CSN), 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

Integrated event monitor and auto setup

Analysis tool for fast commissioning.

Remote monitoring with integrated web server

For monitoring the reading rate.

PRODUCT DETAILS

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CLV69x

FLEXIBLE AND HIGH-PERFORMANCE AT THE HIGHEST LEVEL

Function buttons

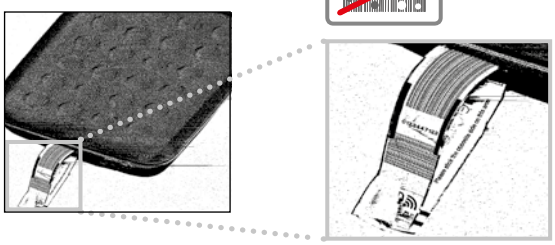
LED bar graph

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

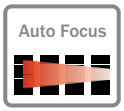
The flexible cloning plug concept offers maximum flexibility and safety. In addition to the Ethernet and D-Sub versions, CAN and CAN redundant versions are also available. The CLV4 series can be converted using the D-Sub cloning plug.

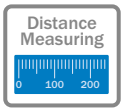
Flexible interface concept

Ethernet/IP™, Ethernet TCP/IP, SICK CAN sensor network (CSN), and serial communication on board. PROFIBUS DP and PROFINET 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 80

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.

IP69K housing

The IP69K 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.

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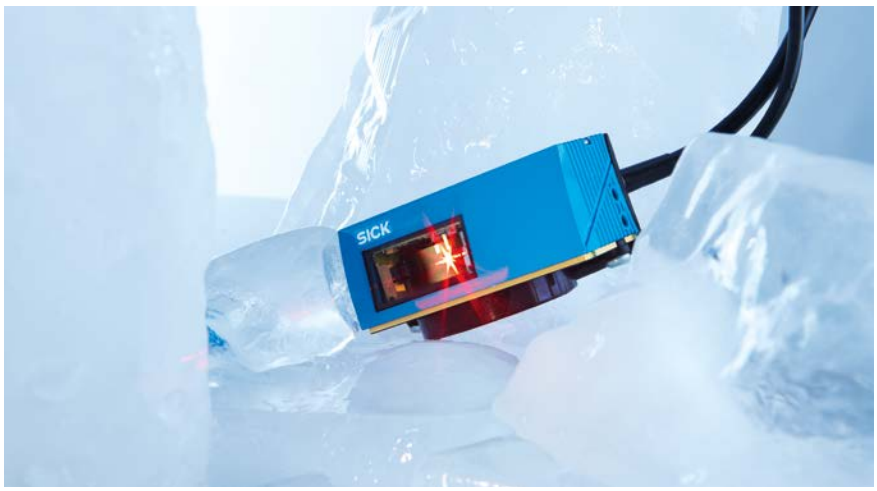
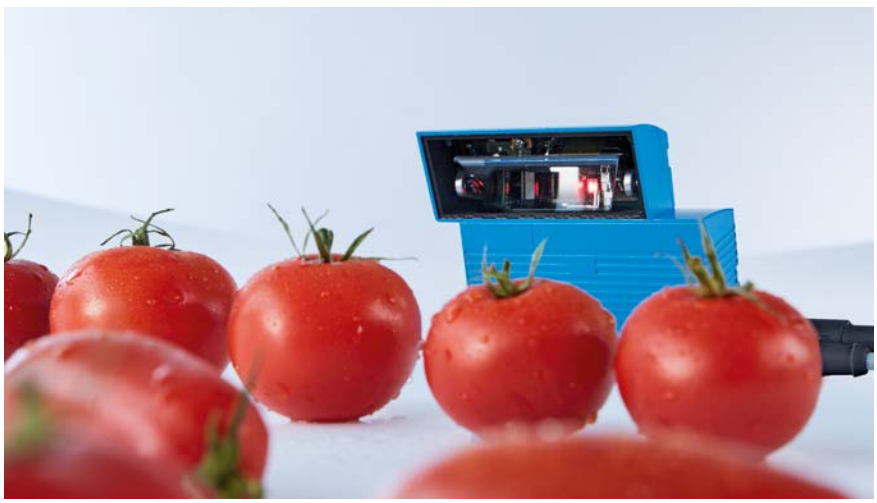
CLV6xx with heating

The CLV6xx versions with heating 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 ambient temperatures.



CLV6xx with plastic lens

In the food and beverage industry, using glass is a critical factor due to the risk of breaking and creating a hazardous source of contamination in food and beverages.
To prevent the need for elaborate preventive measures (in line with Hazard Analysis and Critical Control Points or HACCP) designed to protect against any potential contamination, the bar code scanners of the CLV6xx series are also available with plastic lenses.

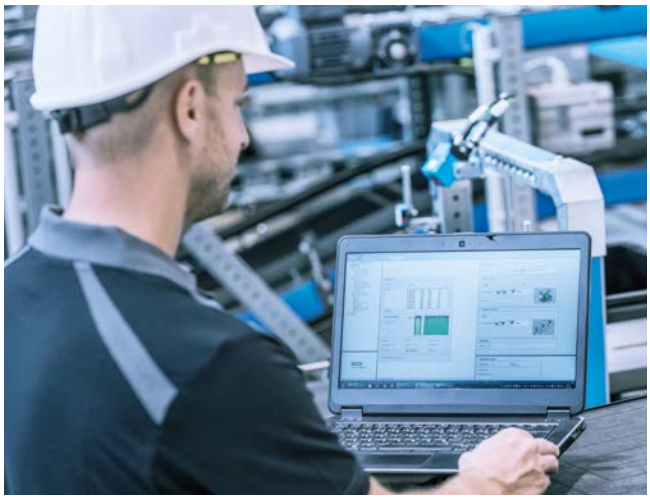


For more information on special versions available in the CLV6 series, please ask your regional SICK sales organization.

SERVICES FOR THE CLV series

SICK stands for high quality and reliability even beyond the purchase of the product. With over 70 years of practical experience, SICK offers a broad service portfolio for the CLV series, which ranges from standardized services at a fixed price to customized services.

Performance check CLV4xx/CLV6xx



Planned regular performance checks reduce unwanted downtimes at a fixed price. The performance check takes place at the customer's site and includes the inspection of defined functions of the SICK product and the interface to the machine or system. This makes it possible to detect performance losses early on and eliminate them if needed.

Performance check CLV4xx/CLV6xx ➜ 1682028

Your benefits

- Prevention of downtimes, malfunctions or consequential damages
- Reaction and planning appropriate to the needs and the situation
- Overview of the current performance

Maintenance CLV4xx/CLV6xx

Planned regular and professional maintenance work on the application ensures uniformly high availability of the SICK product and reduces unwanted downtimes. Maintenance work includes the inspection, maintenance and restoration of defined functions of the SICK product and its interface to the machine or system. This makes it possible to detect performance losses early on and eliminate them. Preventatives measures for preventing errors are also recommended. SICK defines the maintenance intervals together with the customer. At a fixed price so that maintenance costs remain manageable.

Maintenance CLV4xx/CLV6xx ➜ 1611420

Your benefits

- Maximum availability and improved reading performance
- Prevention of downtimes, malfunctions or consequential damages
- Predictable maintenance costs
- Cost savings thanks to consistently high reading performance
- Quick and reliable restoration of parameters if a SICK product is replaced later

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For more information on customer-specific training, options for upgrading from the CLV4 to the CLV6 series, or engineering services, please contact your regional SICK sales organization.

Commissioning CLV61x ... CLV64x and CLV65x ... CLV69x

Professional commissioning by SICK ensures optimal performance of the SICK product. Commissioning includes the set-up of previously defined functions of the SICK product taking into account the interface to the machine or system and the ambient conditions of the customer application.
The SICK product and the respective system part are handed over to the customer during a documented end approval with instructions. With the commissioning, the customer profits from quick processing of the qualified SICK technician and the high level of availability from the first day. At a fixed price so that commissioning costs remain manageable.

Commissioning CLV61x ... CLV64x ➜ 1681925
Commissioning CLV65x ... CLV69x ➜ 1681926

Your benefits

- Maximum availability and productivity due to application-optimized settings of the SICK product such as the code types
- Cost savings thanks to an application-optimized reading performance and fewer downtimes, malfunctions or consequential damages
- Planning security due to a quick shift to normal operation
- Time savings due to archiving of the parameters and commissioning documentation for possible conversion or maintenance work

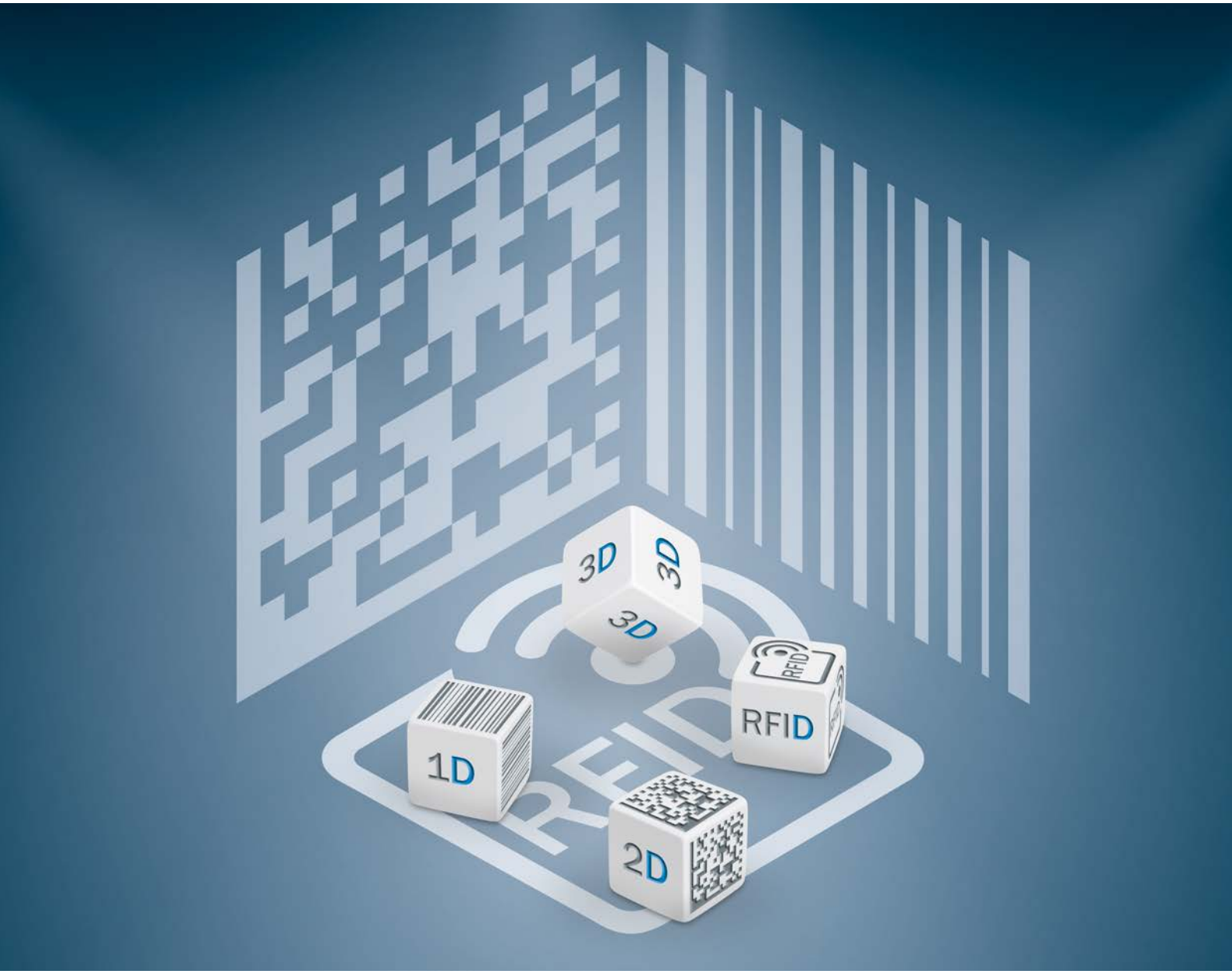
Extended warranty to three or five years

The extended warranty offers long-term protection of SICK products for a calculable lump sum. Customers profit above and beyond the standard warranty and protect their investment from unexpected repair costs in the long run. The warranty can be extended to a total period of five years for newly-purchased Identification & Measuring products. This includes free repairs or free exchange of the product in the event of a warranty case.

Extended warranty to three years ➜ 1680670
Extended warranty to five years ➜ 1680671

Your benefits

- Protection from unexpected repair costs even after the statutory warranty has expired
- Free repairs or exchange of the device in the event of a warranty case
- Value preservation of your plant or system since it is transferable to the next owner and valid all over the world



How you benefit from using 4D*pro* sensors

- **Investment security** due to the ability to switch between technologies
- **Simple commissioning** even with cross-technology applications
- **Fast and flexible exchange** thanks to standardized connectivity
- **Quick and easy integration** into programmable logic controllers (PLCs) as SICK provides the function blocks **free of charge**
- **Low storage effort** and **low storage costs** due to reduced variety of components and accessory parts

You can find more information online at ➜ www.sick-4Dpro.com

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Ensure your investment over the long term

4D*pro* – THE FLEXIBILITY YOU NEED

SICK offers a broad portfolio of identification and vision solutions. Regardless of which technology you choose today, you can be sure to be flexible in the future with the 4D*pro* concept. All 4D*pro* sensors are compatible and interchangeable. Standardized connectivity, a common user interface, and a common set of accessories – we call this unique combination 4D*pro*.

Standardized connectivity

All 4D*pro* sensors feature the same modular connectivity. This provides the basis for a flexible fieldbus connection combined with high process reliability. What's more, you benefit twice over: the purchase order process is less complicated and the integration effort is reduced.

Common user interface

All 4D*pro* sensors use SICK's universal device configuration software. This means that you can quickly familiarize yourself with all technologies. Data is sent to the control in the required format and the inputs and outputs of the 4D*pro* sensors can be analyzed quickly by an event monitor.

Common set of accessories

All 4D*pro* sensors are supported by the same accessory pool. This reduces both component variety and storage effort, smoothing the way for low storage costs.

4D*pro* sensors are identified by the 4D*pro* mark


Bar code scanners


Image-based code readers


Vision sensors

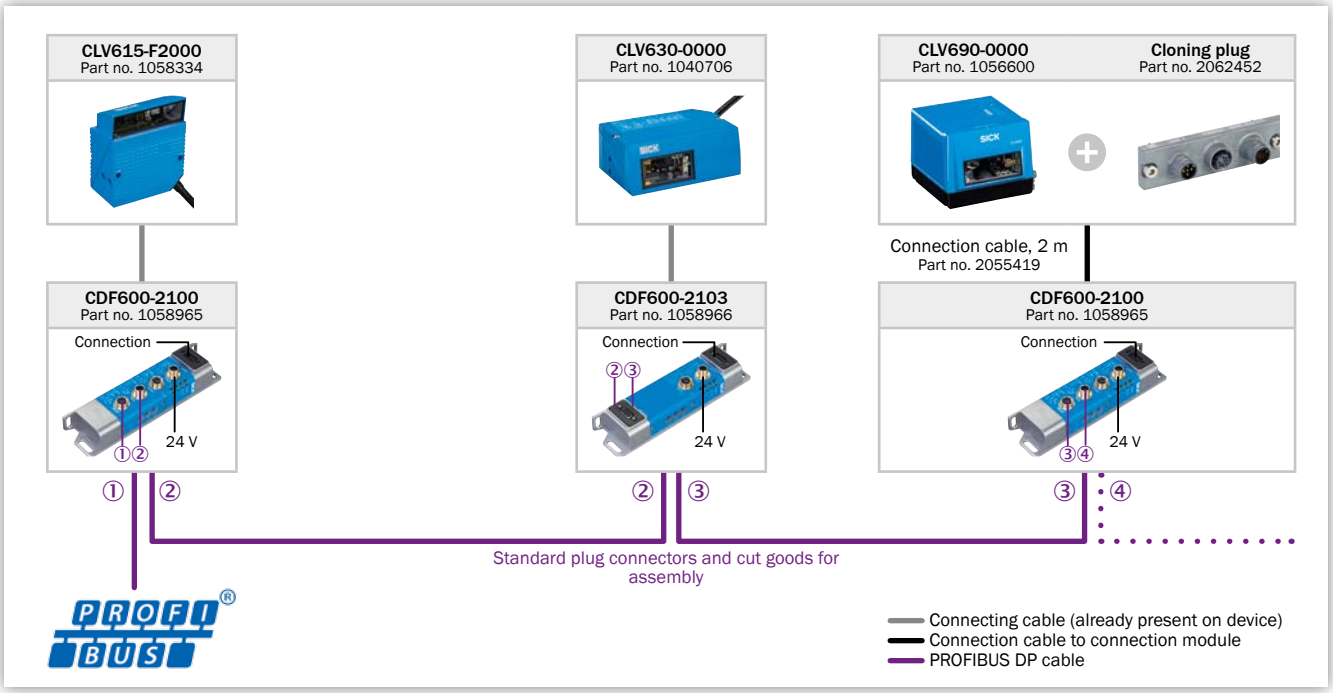

RFID read/write device

MODULAR CONNECTORS ALL FROM A SINGLE SOURCE

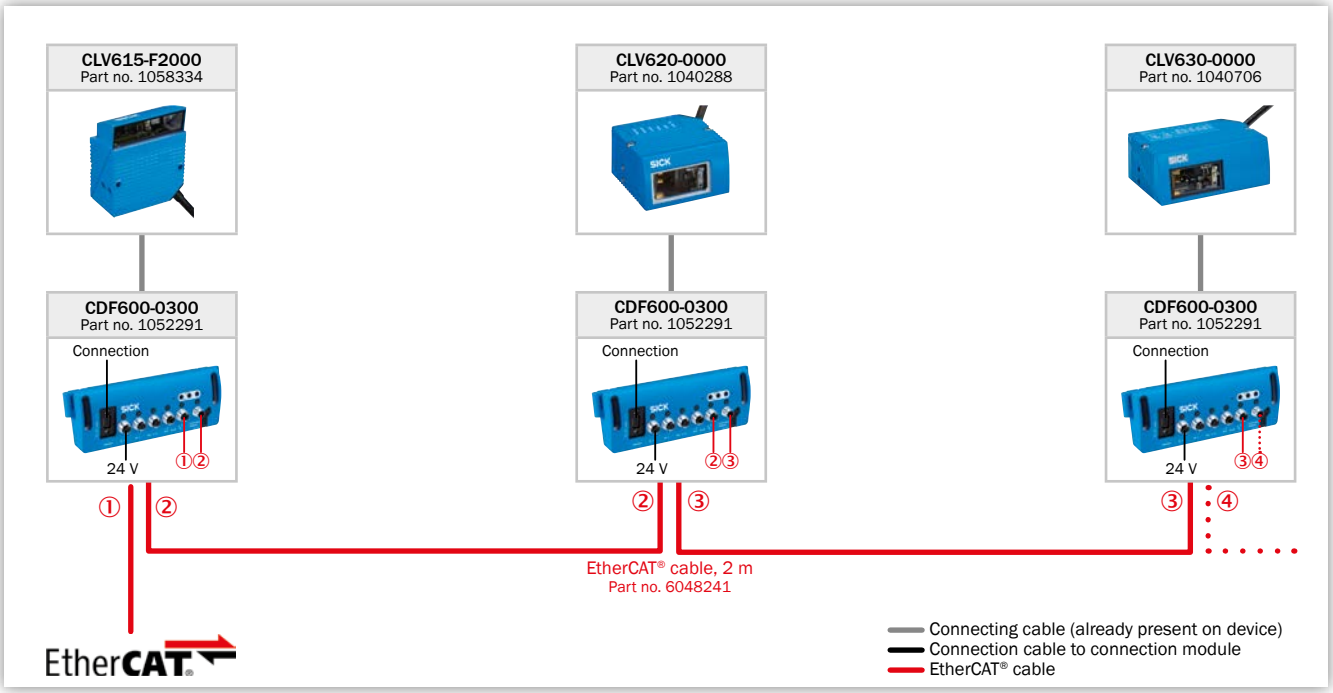
The ability to network sensors is becoming particularly important in the light of demands for cost-effective solutions. SICK has the tools to stand up to this challenge: Through the 4D*pro* platform, it offers a product portfolio that is perfect for fieldbus systems.

It gives you the freedom to select the identification and vision 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®



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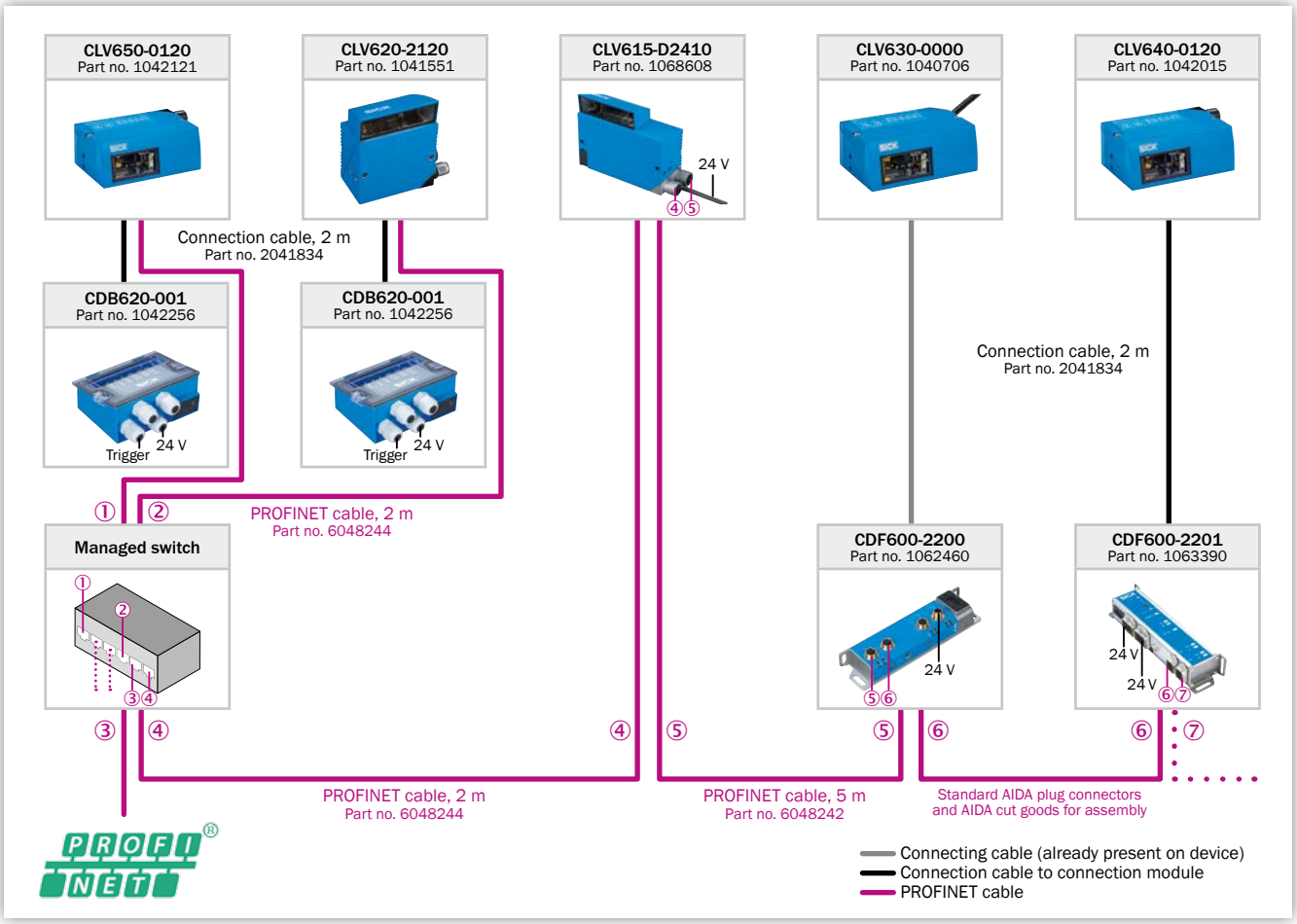
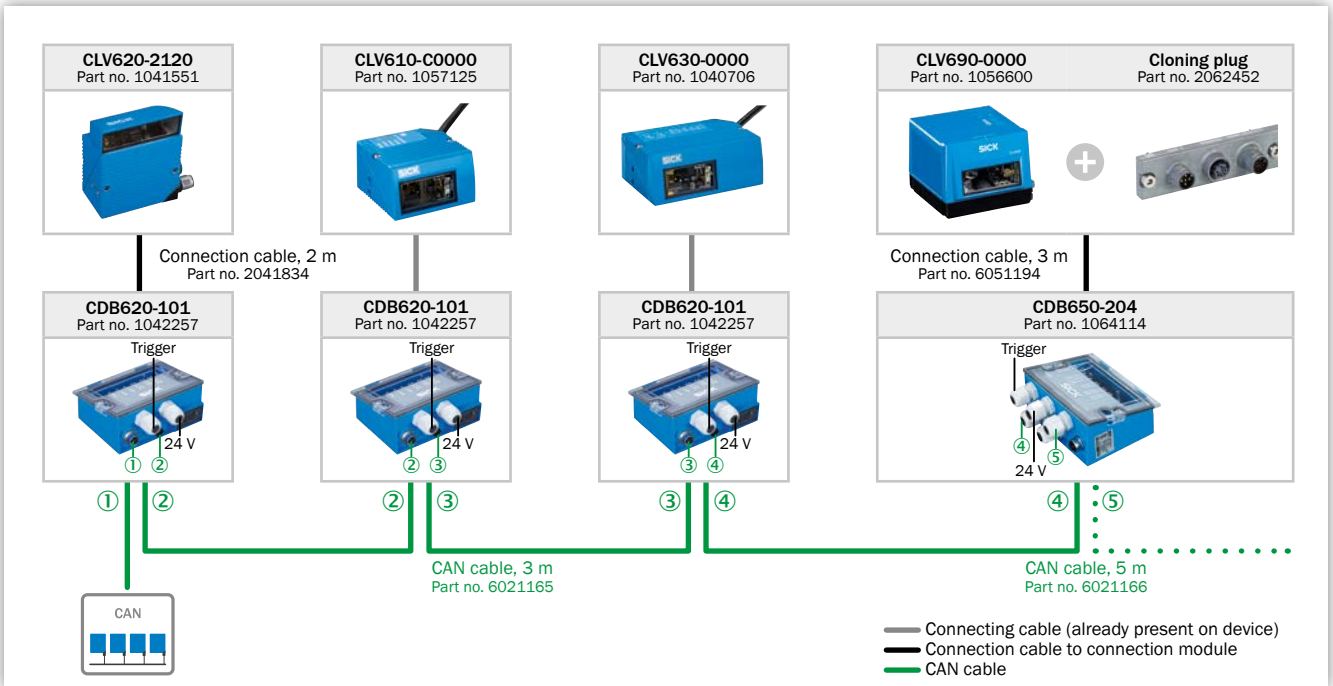
PROFINET



SICK CAN sensor network (CSN)



SELECTION GUIDE

	Scanner design				Focus			SMART			
	Line scanner	Raster scanner	Oscillating mirror	Heating	Fixed focus	Dynamic focus control	Auto focus	SMART620	SMART	SMART+	
CLV60x											
CLV601	■				■						
CLV61x											
CLV610 Mid Range	■	■			■			■			
CLV612 Short Range	■	■			■			■			
CLV615 Long Range	■	■			■			■			
CLV61x Dual Port											
CLV615 Long Range	■	□		□	■			■			
CLV618 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	■		■	□		■	■			■	
CLV691 Low Density	■		■	□		■	■			■	
CLV692 High Density	■		■	□		■	■			■	

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■ = applicable
□ = optional

Product features										Reading distance (at code resolution)	Page
Ethernet as connector version on board	microSD memory card	USB interface	Cloning plug	2 function buttons	LED bar graph	Intelligent auto setup	Application wizard	IP69K	Integrated CAN bus	250 500 750 1,000 1,250 1,500 1,750 2,000 ...	
		□								15 mm ... 70 mm (0.5 mm)	→ 28
									■	60 mm ... 365 mm (1 mm)	→ 32
									■	43 mm ... 93 mm (0.2 mm)	→ 32
									■	25 mm ... 330 mm (0.5 mm)	→ 32
■	□	■								25 mm ... 330 mm (0.5 mm)	→ 38
■	□	■								44 mm ... 683 mm (1 mm)	→ 38
■						■		□	■	60 mm ... 365 mm (1 mm)	→ 44
■						■		□	■	60 mm ... 730 mm (1 mm)	→ 44
■						■		□	■	55 mm ... 200 mm (0.5 mm)	→ 44
■	■			■	■	■		□	■	58 mm ... 742 mm (1 mm) [1]	→ 52
■	■			■	■	■		□	■	87 mm ... 455 mm (0.5 mm) [1]	→ 52
■	■			■	■	■		□	■	58 mm ... 288 mm (0.5 mm) [1]	→ 52
■	■			■	■	■		□	■	58 mm ... 840 mm (1 mm) [1]	→ 64
■	■			■	■	■		□	■	30 mm ... 338 mm (0.2 mm)	→ 64
■	■			■	■	■			■	125 mm ... 1,625 mm (1 mm) [1]	→ 72
■	■			■	■	■			■	155 mm ... 930 mm (0.5 mm) [1]	→ 72
			■	■	■		■		■	500 mm ... 2,100 mm (0.5 mm)	→ 80
			■	■	■		■		■	500 mm ... 2,200 mm (0.5 mm)	→ 80
			■	■	■		■		■	400 mm ... 1,600 mm (0.3 mm)	→ 80

[1] Depending on scanner design.

PRODUCT FAMILY OVERVIEW

	 **CLV60x**	 **CLV61x**	 **CLV61x Dual Port**	
	Reliable reading performance in the smallest of spaces	Reliable Decoding, Simple Integration	The network professional	
Technical data overview				
Focus	Fixed focus	Fixed focus	Fixed focus	
Aperture angle	≤ 71°	≤ 50°	≤ 50°	
Scanning frequency	750 Hz	400 Hz ... 1,000 Hz	400 Hz ... 1,000 Hz	
Code resolution	0.125 mm ... 0.5 mm	0.1 mm ... 1 mm	0.35 mm ... 1 mm	
Reading distance	15 mm ... 70 mm	25 mm ... 365 mm	25 mm ... 705 mm	
USB	– / ✔	–	– / ✔	
Ethernet	–	–	–	
EtherNet/IP™	–	–	–	
Serial	– / ✔	✔	–	
CAN	–	✔	–	
CANopen	–	–	–	
PROFINET	–	– / ✔ , PROFINET Dual Port optional over external fieldbus module CDF600-2	✔, PROFINET Dual Port	
PROFIBUS DP	–	– / ✔ , optional over external fieldbus module CDF600-2	–	
EtherCAT®	–	– / ✔ , optional over external fieldbus module CDF600	–	
DeviceNet™	–	–	–	
Weight	230 g / 170 g	265 g / 295 g	290.5 g ... 345.8 g	
At a glance				
	• High reading field height even at a 30 mm reading distance • 2K pixel CMOS technology • LED status indicator detectable from virtually every direction • Adaptation to customer requirements as an optional service • 750 Hz scanning frequency • Reading window on the front or on the side	• 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 per second • Compact design	• Straightforward PROFINET connection • Minimal cabling complexity thanks to line and ring topologies • PROFINET with integrated switch (Dual Port) • Optimal reading field for intralogistics applications • Compact design • USB interface • Adjustable scanning frequency of up to 1,000 scans per second	
Detailed information	➜ 28	➜ 32	➜ 38	

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	CLV62x	CLV63x	CLV64x	CLV65x
				
	Powerful scanner – flexible use	Intelligent scanning solution for logistics and automation	Dynamic, multi-functional	Always in auto focus
	Fixed focus	Fixed focus	Dynamic focus control	Auto focus
	≤ 50°	≤ 50°	≤ 50°	≤ 50°
	400 Hz ... 1,200 Hz	400 Hz ... 1,200 Hz	400 Hz ... 1,200 Hz	600 Hz ... 1,000 Hz
	0.15 mm ... 1 mm	0.2 mm ... 1 mm	0.15 mm ... 1 mm	0.25 mm ... 1 mm
	45 mm ... 730 mm	44 mm ... 735 mm	30 mm ... 840 mm	125 mm ... 1,625 mm
	–	–	–	–
	✔	– / ✔	– / ✔	– / ✔
	✔	– / ✔	– / ✔	– / ✔
	✔	✔	✔	✔
	✔	✔	✔	✔
	✔	✔	✔	✔
	– / ✔ , PROFINET Single Port, PROFINET Dual Port optional via external connection module CDF600-2	– / ✔ , PROFINET Single Port, PROFINET Dual Port optional via external connection module CDF600-2	– / ✔ , PROFINET Single Port, PROFINET Dual Port optional via external connection module CDF600-2	– / ✔ , PROFINET Single Port, PROFINET Dual Port optional via external connection module CDF600-2
	✔ , optional over external field-bus module CDF600-2	✔ , optional over external field-bus module CDF600-2	✔ , optional over external field-bus module CDF600-2	✔ , optional over external field-bus module CDF600-2
	✔ , optional over external field-bus module CDF600	✔ , optional over external field-bus module CDF600	✔ , optional over external field-bus module CDF600	✔ , optional over external field-bus module CDF600
	✔ , Optional, over external connection module CDM + CMF	✔ , Optional, over external connection module CDM + CMF	✔ , Optional, over external connection module CDM + CMF	✔ , Optional, over external connection module CDM + CMF
	205 g ... 854 g	250 g ... 1,230 g	250 g ... 1,230 g	250 g ... 520 g
	• 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 • • High scanning frequency of up to 1,200 Hz • Small housing • Advanced remote diagnostics and network monitoring capabilities available over Ethernet • IP 65 or IP 69K rated (depending on type)	• Integrated LED bar graph • CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP on board. No additional Ethernet gateway required (for “Ethernet” connection type) • Enhanced SMART code reconstruction technology • Flexible sorting, filtering, and logical functions • High scanning frequency of up to 1,200 Hz • Advanced remote diagnostics and network monitoring capabilities available over Ethernet	• Dynamic focus adjustment enables extended depth of field • CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP on board. No additional Ethernet gateway required (for “Ethernet” connection type) • Enhanced SMART code reconstruction technology • Flexible sorting, filtering, and logical functions • Integrated LED bar graph • Advanced remote diagnostics and network monitoring capabilities available over Ethernet	• Huge depth of field due to auto focus • CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP on board. No additional Ethernet gateway required (for “Ethernet” connection type) • Enhanced SMART code reconstruction technology • Flexible sorting, filtering, and logical functions • Integrated web server for diagnostic data and network monitoring • Integrated LED bar graph
	➜ 44	➜ 52	➜ 64	➜ 72

PRODUCT FAMILY OVERVIEW

	
	CLV69x
	The highest level of flexibility and power

Technical data overview	
Focus	Auto focus, alternative: dynamic focus control
Aperture angle	≤ 60° / ≤ 50°
Scanning frequency	400 Hz ... 1,200 Hz
Code resolution	0.17 mm ... 1.2 mm
Reading distance	400 mm ... 2,200 mm
Ethernet	✔ , only with cloning plug I/O, CAN IN/OUT or CAN Redundant
EtherNet/IP™	✔ , only with cloning plug I/O, CAN IN/OUT or CAN Redundant
Serial	✔ , only with cloning plug D-Sub and Ethernet
CAN	✔
PROFINET	✔ , only with cloning plug I/O, CAN IN/OUT or CAN Redundant
PROFIBUS DP	✔ , optional over external fieldbus module CDF600-2
DeviceNet™	✔ , optional over external connection module CDM + CMF
Weight	1,500 g / 2,200 g

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 pushbuttons
Detailed information	➜ 80

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RELIABLE READING PERFORMANCE IN THE SMALLEST OF SPACES

Product description

Do you need a bar code to be reliably identified by the code reader despite a small reading distance with few distance variations, fixed orientation, and a very small amount of space? Do you also need to stick to a limited budget? As a starter model, the CLV60x bar code scanner with 2K pixel CMOS sensor offers reliable bar code reading at outstanding value for money. It is compact and features excellent reading performance even with short reading distances, so you only need a small amount of space. Thanks to its high scanning frequency of 750 Hz, it is also suitable for fast applications. The CLV60x can be configured quickly and easily using the SOPAS ET software.

At a glance

- High reading field height even at a 30 mm reading distance
- 2K pixel CMOS technology
- LED status indicator detectable from virtually every direction
- Adaptation to customer requirements as an optional service
- 750 Hz scanning frequency
- Reading window on the front or on the side

Your benefits

- Minimal space requirements for integration in even the smallest machines
- High performance at a cost-efficient price
- It's a sound investment thanks to the long-term availability of CMOS technology and proven SICK quality
- The optional adaptation to customer requirements saves time and money during commissioning
- Easy operation and installation with the SOPAS ET user interface and the ingeniously positioned LED status indicator
- RS-232 or USB interface to connect to a control or an industrial computer

CE

Additional information

→ www.sick.com/CLV60x

For more information, simply 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.

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Detailed technical data

Features

Sensor	CMOS line sensor
Sensor resolution	2,048 px
Light source	LED (visible red light, 626 nm)
LED class	Risk group 0 (IEC 62471:2006-07, EN 62471:2008-09)
Aperture angle	≤ 71°
Scanning frequency	750 Hz
Code resolution	0.125 mm ... 0.5 mm
Reading angle	
Tilt α	± 5° (with code resolution ≥ 0.125 mm) ± 10° (with code resolution ≥ 0.15 mm) ± 15° (with code resolution ≥ 0.2 mm) ± 25° (with code resolution ≥ 0.35 mm)
Pitch β	± 6° (with code resolution ≥ 0.2 mm) ± 15° (with code resolution ≥ 0.5 mm)
Skew γ	± 20° (with code resolution ≥ 0.2 mm) ± 30° (with code resolution ≥ 0.5 mm)
Reading distance	15 mm ... 70 mm [1]
MTTF	670,000 h

[1] For details see reading field diagram.

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 ... 1
No. of codes per reading interval	1 ... 15 (auto-discriminating)
No. of characters per reading interval	450
Number of characters per code	≤ 30
No. of multiple readings	1 ... 100

Interfaces

Serial	– / ✔, RS-232 (depending on type)
Function	Host, AUX
Data transmission rate	2,400 Baud ... 250 kBaud, AUX: 57.6 kBaud
USB	– / ✔ (depending on type)
Remark	USB 2.0
Function	Keyboard wedge, COM-Port emulation, connection to SOPAS ET software
Switching inputs	
Serial	1 (“Input 1”, Vin = max. 30 V)
USB	0
Switching outputs	
Serial	2 (“Output 1”, “Output 2”, Iout = max. 50 mA)
USB	Virtual (via SOPAS ET)
Reading pulse	
Serial	Start: switching input, free, command, auto pulse, Stop: switching input, free, command, timer, Good Read
USB	Start: Free, command, auto pulse, Stop: Command, timer, Good Read

Optical indicators	1 RGB LED (multifunctional)
Acoustic indicators	Beeper/buzzer (can be switched off, can be allocated as a result indication function)
Configuration software	SOPAS ET

Mechanics/electronics

Operating voltage	5 V DC, ± 10 %
Power consumption	Typ. 1 W
Housing	Zinc diecast
Housing color	Light blue (RAL 5012), black (RAL 9005)
Protection class	III (VDE 0106/IEC 1010-1)
Weight	230 g, with connecting cable 9-pin D-sub male connector (2 m) 170 g, with connecting cable USB A male connector (1.5 m)
Dimensions (L x W x H)	55 mm x 52 mm x 20 mm

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-3/A1:2011-03 / 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 ... +50 °C
Storage temperature	–20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	5,000 lx, on bar code
Bar code print contrast (PCS)	≥ 60 %

Ordering information

- **Version:** CLV601
- **Focus:** Fixed focus
- **Connection type:** cable
- **Enclosure rating:** IP40
- **Front screen:** PMMA
- **Scanner design:** Line scanner
- **Items supplied:** Single scanner, Safety Notes

Reading field	Electrical connection	Type	Part no.
Front	1 x 9-pin D-sub male connector (2 m)	CLV601-0D200	1079204
	1 x USB A male connector (1.5 m)	CLV601-0U110	1079205
Side	1 x 9-pin D-sub male connector (2 m)	CLV601-1D200	1079206
	1 x USB A male connector (1.5 m)	CLV601-1U110	1079207

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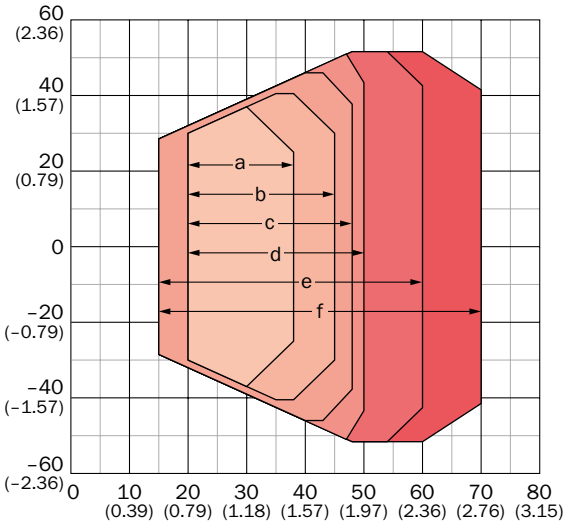
Reading field diagrams

CLV601 front
CLV601 side

Reading field height in mm (inch)



Reading distance in mm (inch)

Resolution

- a: 0.125 mm (4.9 mil)
- b: 0.15 mm (5.9 mil)
- c: 0.2 mm (7.9 mil)
- d: 0.25 mm (9.8 mil)
- e: 0.35 mm (13.8 mil)
- f: 0.5 mm (19.7 mil)

RELIABLE DECODING, SIMPLE INTEGRATION

Product description

The CLV61x product family consists of compact, powerful bar code scanners. In order to offer the best solution for the application, different variants (CAN, fieldbus) are available. The CLV615 fieldbus variant 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 connectivity, e.g., CDF600-2, enables 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 possible even 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 per 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

Additional information

➜ www.sick.com/CLV61x

For more information, simply 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.

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Detailed technical data

Features

	CLV610 Mid Range	CLV612 Short Range	CLV615 Long Range
Light source	Visible red light (655 nm)		
MTBF	40,000 h		
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014)		
Aperture angle	≤ 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			
Front	60 mm ... 365 mm [1]	43 mm ... 93 mm [1]	–
Side	45 mm ... 345 mm [1]	28 mm ... 78 mm [1]	25 mm ... 330 mm [1]
Raster height, number of lines, at distance			
Front	15 mm, 8, 200 mm		–
Side	15 mm, 8, 185 mm		–

[1] For details see reading field diagram.

Performance

Bar code types	All current code types, Code 39, Code 128, Code 93, Codabar, UPC / GTIN / EAN, Interleaved 2 of 5, Pharmacode
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 ... 115.2 kBaud, AUX: 57.6 kBaud		
CAN	✔		
Function	SICK CAN sensor network CSN (master/slave, multiplexer/server)		
Data transmission rate	20 kbit/s ... 1 Mbit/s		
PROFINET			✔
Function	–		PROFINET Dual Port (optional via external connection module CDF600-2)
PROFIBUS DP			✔
Type of fieldbus integration	–		Optional over external fieldbus module CDF600-2
Function	–		PROFIBUS
EtherCAT®			✔
Type of fieldbus integration	–		Optional over external fieldbus module CDF600
Switching inputs	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)		

	CLV610 Mid Range	CLV612 Short Range	CLV615 Long Range
Switching outputs	4 (“Result 1”, “Result 2”, 2 outputs via optional parameter storage 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)		
Configuration software	SOPAS ET		

Mechanics/electronics

	CLV610 Mid Range	CLV612 Short Range	CLV615 Long Range
Electrical connection	1 x 15-pin D-Sub HD male connector (0.9 m)		
Operating voltage	10 V DC ... 30 V DC		
Power consumption	2.8 W		
Housing	Aluminum die cast		
Housing color	Light blue (RAL 5012)		
Protection class	III (VDE 0106/IEC 1010-1)		
Weight			
Front	265 g, with connecting cable		–
Side	295 g, with connecting cable		
Dimensions (L x W x H)			
Front	61 mm x 66 mm x 38 mm		–
Side	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 immunity	2,000 lx, on bar code
Bar code print contrast (PCS)	≥ 60 %

Ordering information

- **Focus:** Fixed focus
- **Connection type:** cable
- **Enclosure rating:** IP65
- **Front screen:** Glass

Version	Reading field	Scanner design	Items supplied	Type	Part no.
CLV610 Mid Range	Front	Line scanner	Single scanner	CLV610-C0000	1057125
		Raster scanner	Single scanner	CLV610-C1000	1062846
	Side (105°)	Raster scanner	Single scanner	CLV610-C3000	1071609
CLV612 Short Range	Front	Line scanner	Single scanner	CLV612-C0000	1066271
		Raster scanner	Single scanner	CLV612-C1000	1062861
	Side (105°)	Line scanner	Single scanner	CLV612-C2000	1066272
		Raster scanner	Single scanner	CLV612-C3000	1062862

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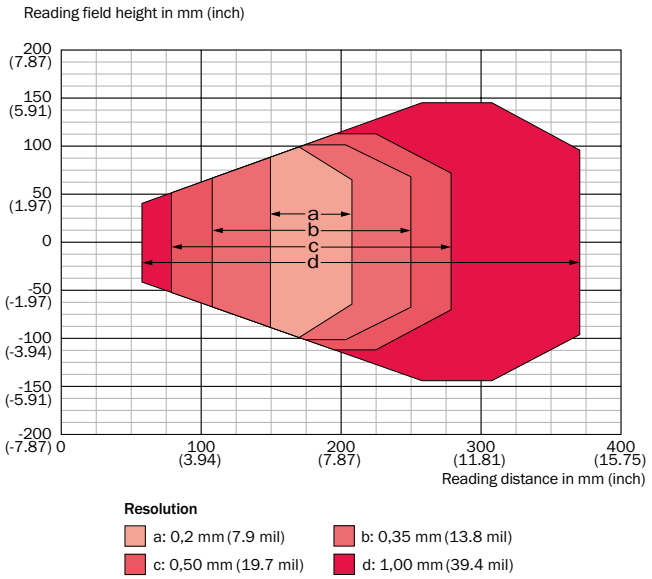
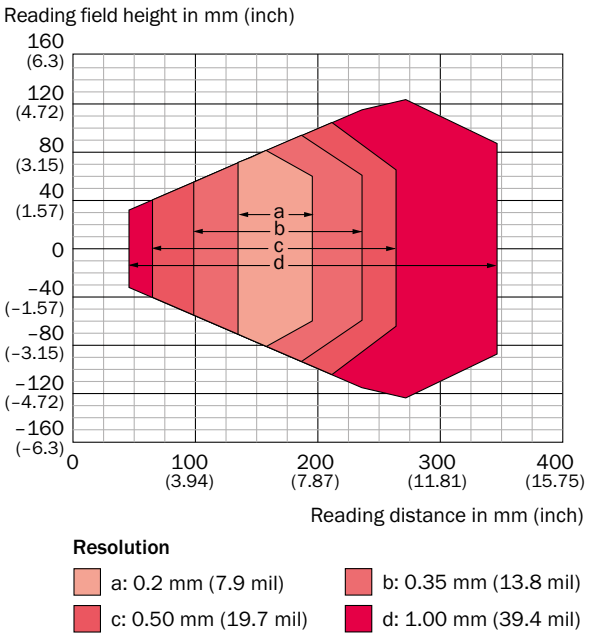
Version	Reading field	Scanner design	Items supplied	Type	Part no.
CLV615 Long Range	Side (105°)	Line scanner	Single scanner	CLV615-F2000	1058334
		Raster scanner	Single scanner	CLV615-F3000	1068240
		Line scanner	Kit includes single scanner and fieldbus module PROFIBUS DP (interface 2 x M12, male connector/female connector, 5-pin)	CLV615-F2000 CDF600-2100 Kit	1061528
			Kit including single scanner and fieldbus module PROFIBUS DP (interface 1 x D-Sub, female connector, 9-pin)	CLV615-F2000 CDF600-2103 Kit	1061529

Reading field diagrams

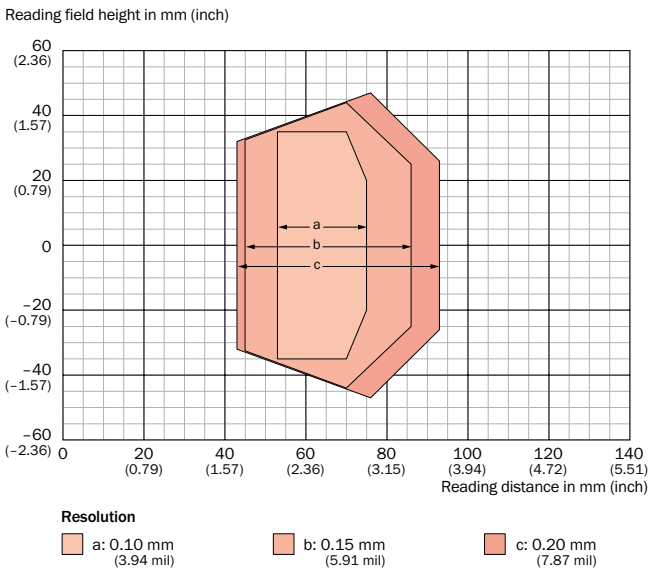
CLV610 Mid Range, front



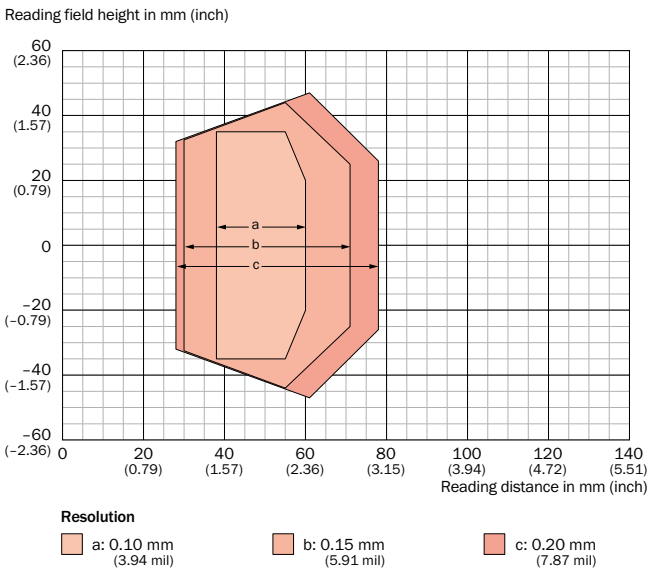
CLV610 Mid Range, side



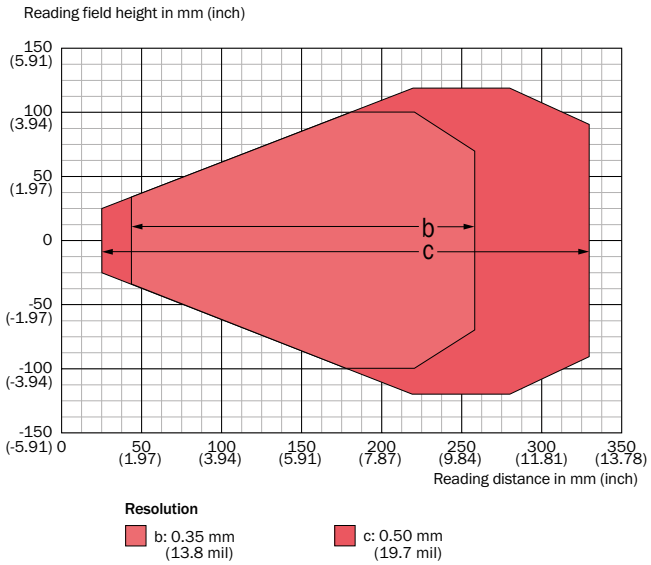
CLV612 Short Range, front



CLV612 Short Range, side



CLV615 Long Range, side



Recommended accessories

Mounting systems

Mounting brackets and plates

	Brief description	Part no.
	Bracket with adapter board	2042902

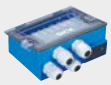
Connection systems

Plug connectors and cables

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

4D*pro*Connectivity

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

For more accessories, see ➜ 88

THE NETWORK PROFESSIONAL

Product description

The powerful, compact bar code scanners of the CLV61x Dual Port product family are specially attuned to the requirements of intralogistics. The integrated PROFINET with two facilities for connecting (Dual Port) makes it easy to integrate them into line and ring topologies for control systems. Configuration directly into the control environment or the intuitive SOPAS ET user interface enables quick integration into the system. The devices feature an Ethernet, a USB interface or a microSD memory card. Status indicator LEDs allow you to diagnose the read results and operational status quickly and effectively. Device variants with integrated heating also enable controlled and economical identification of objects even in cold storage units.

At a glance

- Straightforward PROFINET connection
- Minimal cabling complexity thanks to line and ring topologies
- PROFINET with integrated switch (Dual Port)
- Optimal reading field for intralogistics applications
- Compact design
- USB interface or microSD memory card.
- Adjustable scanning frequency of up to 1,000 scans per second

Your benefits

- Installed switch for easy installation and implementation of line and ring topologies
- Integrated cable for easy voltage supply via flat ribbon cable
- Compact housing with swivel connector makes it easier to mount the sensor – even where space is tight
- Simple configuration process via additional USB interfaces
- local parameter cloning for high planned availability thanks to microSD memory card
- Scanner variants with integrated heating and/or hardware input offer the highest level of flexibility for each application
- Adaptive temperature regulation for energy-efficient identification in cold storage environments (type-dependent)
- Configuration directly into the control environment or the intuitive SOPAS ET user interface enables quick integration into the conveyor system

Additional information

→ www.sick.com/CLV61x_Dual_Port

For more information, simply 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.

8016144/2018-06-04
Subject to change without notice

Detailed technical data

Features

	CLV615 Dual Port Long Range	CLV618 Dual Port Long Range
Connection type	Cable	
Focus	Fixed focus	
Light source	Visible red light (655 nm)	
MTBF	40,000 h	
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014)	
Aperture angle	≤ 50°	
Scanning frequency	400 Hz ... 1,000 Hz	
Code resolution	0.35 mm ... 0.5 mm	0.35 mm ... 1 mm
Reading distance		
Front	–	58 mm ... 705 mm [1]
Side	25 mm ... 330 mm [1]	44 mm ... 683 mm [1]
Raster height, number of lines, at distance		
Front	–	15 mm, 8, 200 mm
Side	–	

[1] For details see reading field diagram.

Performance

Bar code types	All current code types, Code 39, Code 128, Code 93, Codabar, UPC / GTIN / EAN, Interleaved 2 of 5, Pharmacode
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
No. of multiple readings	1 ... 99

Interfaces

PROFINET	✔
Function	PROFINET Dual Port
Data transmission rate	2-port Ethernet in accordance with IEEE 802.3 (baud rate 100 MBit/s, full-duplex transmission, 2-port switch, auto-negotiation, auto-crossover). Maximum data length is limited by the mode of communication (fragmentation protocol) to 4,000 bytes.
USB	– / ✔ (depending on type)
Function	AUX
Switching inputs	
Without hardware input	1 (via PROFINET Ctrl bits)
With hardware input	2 (1 x “Sensor 1”, 1 x via PROFINET Ctrl bits)
Switching outputs	4 (via PROFINET Ctrl bits)
Reading pulse	Non-powered, auto pulse, Fieldbus input, command, Switching input (depending on type)
Optical indicators	5 LEDs
Configuration software	SOPAS ET
Memory card	MicroSD memory card (flash card), optional (depending on type)

Mechanics/electronics

	CLV615 Dual Port Long Range	CLV618 Dual Port Long Range
Electrical connection		
Without hardware input	1 x “POWER” connection, 4-pin M12 plug (0.9 m), A-coded 1 x “PROFINET P1” connection, 4-pin M12 socket, D-coded 1 x “PROFINET P2” connection, 4-pin M12 socket, D-coded 1 x Micro USB female connector, type B (depending on type)	
With hardwareinput	1 x “POWER” connection, 5-pin M12 plug, A-coded 1 x “PROFINET P1” connection, 4-pin M12 socket, D-coded 1 x “PROFINET P2” connection, 4-pin M12 socket, D-coded 1 x Micro USB female connector, type B (depending on type)	
Operating voltage	10 V DC ... 30 V DC 18 V DC ... 30 V DC (with heating)	
Power consumption	5 W 15 W (with heating)	
Housing	Aluminum die cast	
Housing color	Light blue (RAL 5012)	
Front screen	Glass	
Enclosure rating	IP65 (DIN 40 050)	
Protection class	III (VDE 0106/IEC 1010-1)	
Weight		
Side	310.5 g 345.8 g (with heating)	310.5 g
Front	–	290.5 g
Dimensions (L x W x H)		
Side	80 mm x 96 mm x 38 mm	
Front	–	61 mm x 96 mm x 38 mm

Ambient data

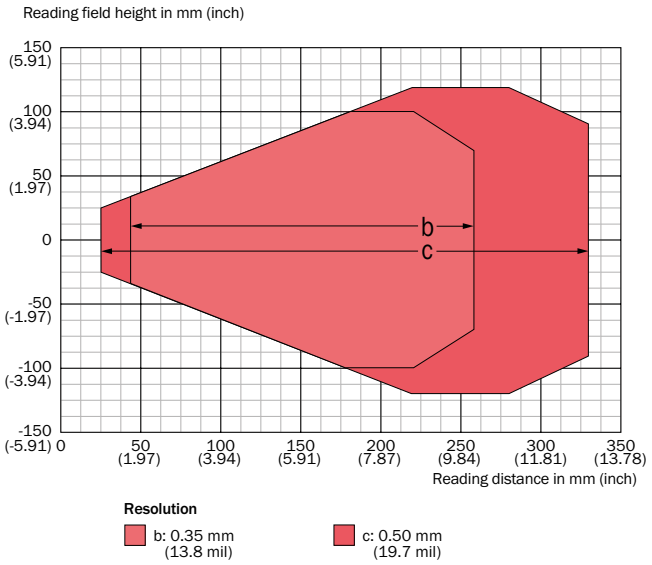
	CLV615 Dual Port Long Range	CLV618 Dual Port Long Range
Electromagnetic compatibility (EMC)	EN 61000-6-4 (2007-01) + A1 (2011) / EN 61000-6-2:2005-08	
Vibration resistance	EN 60068-2-6:2008-02	
Shock resistance	EN 60068-2-27:2009-05	
Ambient operating temperature	0 °C ... +40 °C –35 °C ... +40 °C (with heating)	0 °C ... +40 °C
Storage temperature	–20 °C ... +70 °C –35 °C ... +70 °C (with heating)	–20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing	
Ambient light immunity	2,000 lx, on bar code	
Bar code print contrast (PCS)	≥ 60 %	

Ordering information

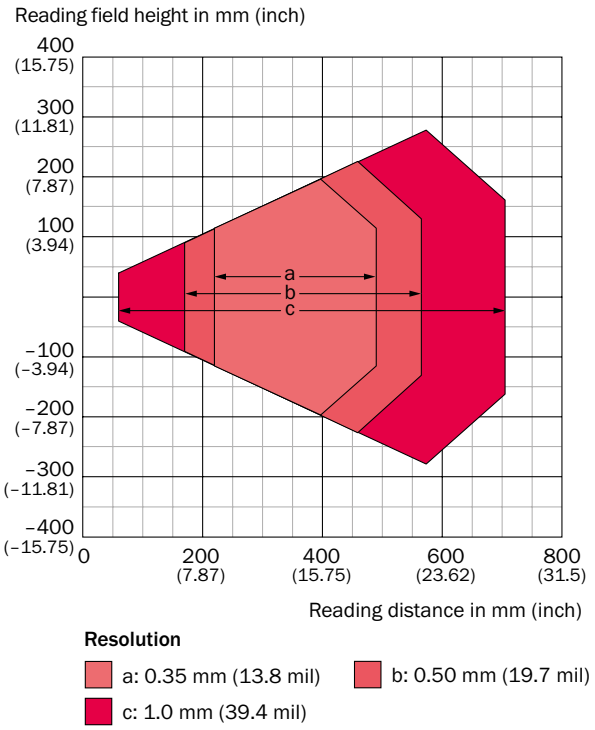
Version	Reading field	Scanner design	Communication interface	Heating	Memory card	Hardware input	Type	Part no.
CLV615 Dual Port Long Range	Side (105°)	Line scanner	PROFINET, USB	–	–	–	CLV615-D2410	1068608
				✔	–	–	CLV615-D2410F0	1078175
				–	–	✔	CLV615-D2520	1075150
			PROFINET	–	✔	✔	CLV615-D2540	1091389
CLV618 Dual Port Long Range	Front	Raster scanner	PROFINET, USB	–	–	✔	CLV618-D1520	1075152
	Side (105°)	Line scanner	PROFINET, USB	–	–	–	CLV618-D2410	1073188
				–		✔	CLV618-D2520	1078582
			PROFINET	–	✔	✔	CLV618-D2540	1091390

Reading field diagrams

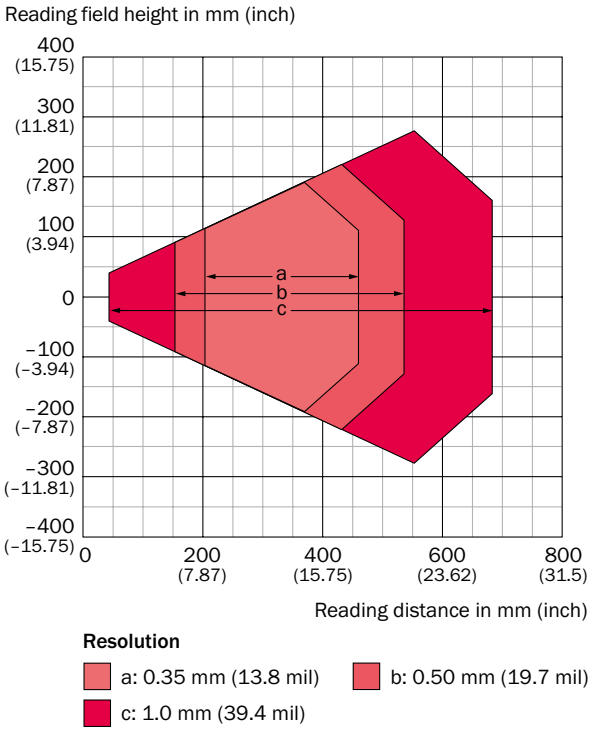
CLV615 Dual Port Long Range, side



CLV618 Dual Port Long Range, front



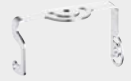
CLV618 Dual Port Long Range, side



Recommended accessories

Mounting systems

Mounting brackets and plates

	Brief description	Part no.
	Hanger-shaped mounting bracket	2042800
 Illustration may differ	Hanger-shaped mounting bracket, thermally isolated for use with heating devices	2050705

Terminal and alignment brackets

	Brief description	Part no.
 Illustration may differ	Rod clamp for outer diameter of 12 ... 20 mm, thermally isolated for use with heating devices	2058082

Connection systems

Adapters and distributors

	Cable	Part no.
	Male connector M12, 4-pin, straight, A-coded to 2 x female connector M12, 5-pin, straight, A-coded, for CLV61x Dual Port with hardware input	6058934

Plug connectors and cables

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.
	Power	Cable	Open cable ends	Black AS-i flat cable for looping in the power supply to 4Dpro Ethernet sensors, 2-wire, by the meter	–	6022463
		Connection clip, M12	–	AS-i clip for connection on black AS-i flat cable	–	6022472
		Female connector, M12, 4-pin, straight, A-coded	Male connector, M12, 4-pin, straight, A-coded	For connecting to black AS-i flat ribbon cable for supplying power to CLV61x Dual Port, silicone-free, free of paint wetting impairment substances	2 m	6060279
	PROFINET	Male connector, M12, 4-pin, straight, D-coded	Male connector, M12, 4-pin, straight	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6048241
			Male connector, RJ45, 4-pin, straight	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6048244

Further accessories

Storage media

	Brief description	Part no.
 Illustration may differ	microSD memory card with 1 GB for industrial use	4051366

For more accessories, see ➜ 88

POWERFUL SCANNER – FLEXIBLE USE

Product description

The CLV62x product family of bar code scanners are compact and powerful tools for a wide range of applications. Power, ease of operation, and flexibility are terms that perfectly describe the CLV62x product family. The CLV62x combines a high reading performance with the SMART620 code reconstruction system: A reading algorithm that can precisely identify bar codes even if they are damaged or partially covered. The device is available as a standard variant or with an integrated Ethernet interface, including Ethernet/IP and PROFINET protocols. These high-performance scanners are enhanced by other advanced features, including an embedded web server for remote diagnostics and reading performance statistics.

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 or IP 69K rated (depending on type)

Your benefits

- High read rate of damaged, dirty, and partially covered bar codes due to enhanced SMART620 code reconstruction
- 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 code identification even at very high conveyor speeds
- Compact design and easy operation enable installation in situations with limited space

Additional information

→ www.sick.com/CLV62x

For more information, simply 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.

8016144/2018-06-04
Subject to change without notice

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 (IEC 60825-1:2014, EN 60825-1:2014)		
Aperture angle	≤ 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			
Front	60 mm ... 365 mm [1] (depending on type)	60 mm ... 730 mm [1]	55 mm ... 200 mm [1]
Side	45 mm ... 365 mm [1] (depending on type)	60 mm ... 730 mm [1]	55 mm ... 200 mm [1]
Raster height, number of lines, at distance			
Front	15 mm, 8, 200 mm		
Side	15 mm, 8, 185 mm		

[1] For details see reading field diagram.

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

	CLV620 Mid Range	CLV621 Long Range	CLV622 Short Range
Ethernet	✔, TCP/IP		
Function	Host, AUX		
Data transmission rate	10/100 MBit/s		
EtherNet/IP™	✔		
Data transmission rate	10/100 MBit/s		
Serial	✔, RS-232, RS-422, RS-485		
Function	Host, AUX		
Data transmission rate	2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)		
CAN	✔		
Function	SICK CAN sensor network CSN (master/slave, multiplexer/server)		
Data transmission rate	20 kbit/s ... 1 Mbit/s		
CANopen	✔		
Data transmission rate	20 kbit/s ... 1 Mbit/s		
PROFINET	– / ✔ (depending on type)		
Function	PROFINET Single Port, PROFINET Dual Port optional via external connection module CDF600-2		
Data transmission rate	10/100 MBit/s		

	CLV620 Mid Range	CLV621 Long Range	CLV622 Short Range
PROFIBUS DP	✔		
Type of fieldbus integration	Optional over external fieldbus module CDF600-2		
EtherCAT®	✔		
Type of fieldbus integration	Optional over external fieldbus module CDF600		
DeviceNet™	✔		
Type of fieldbus integration	Optional, over external connection module CDM + CMF		
Switching inputs			
Cable	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)		
Ethernet 12-pin	3 (“Sensor 1”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)		
Ethernet 17-pin	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420/CDB650 (depending on type))		
Switching outputs			
Cable	4 (“Result 1”, “Result 2”, 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)		
Ethernet 12-pin	2 (via optional parameter storage CMC600 in CDB620/CDM420)		
Ethernet 17-pin	4 (“Result 1”, “Result 2”, 2 outputs via optional parameter storage CMC600 in CDB620/CDM420/CDB650 (depending on type))		
Reading pulse	Switching inputs, non-powered, serial interface, auto pulse, CAN (depending on type)		
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)		
Configuration software	SOPAS ET		

Mechanics/electronics

	CLV620 Mid Range	CLV621 Long Range	CLV622 Short Range
Electrical connection			
Cable	1 x 15-pin D-Sub HD male connector (0.9 m) 1 x 15-pin D-Sub HD male connector (2 m) (depending on type)	1 x 15-pin D-Sub HD male connector (0.9 m)	
Ethernet 12-pin	2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector		
Ethernet 17-pin	2 x M12 cylindrical connectors (1 x 17-pin male connector, 4-pin female connector) on swivel connector		
Ethernet 17-pin IP69K	2 x M12 cylindrical connectors (1 x 17-pin male connector, 4-pin female connector)		
Operating voltage	10 V DC ... 30 V DC		
Power consumption	4.5 W		
Housing	Aluminum die cast / stainless steel (depending on type)	Aluminum die cast	
Housing color	Light blue (RAL 5012) / stainless steel (unpainted) (depending on type)	Light blue (RAL 5012)	
Protection class	III (VDE 0106/IEC 1010-1)		
Weight			
Front	205 g ... 225 g 854 g (IP69K)	205 g ... 225 g	
Side	230 g ... 250 g		

[1] Swivel connector is 15 mm longer.

8016144/2018-06-04
Subject to change without notice

	CLV620 Mid Range	CLV621 Long Range	CLV622 Short Range
Dimensions (L x W x H)			
Front	61 mm x 66 mm x 38 mm [1)] 85 mm x 154 mm x 84 mm (IP69K)	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.

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-3 (2001-10) / EN 61000-6-2:2005
Vibration resistance	EN 60068-2-6 (1995)
Shock resistance	EN 60068-2-27 (1993)
Ambient operating temperature	0 °C ... +40 °C
Storage temperature	–20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	2,000 lx, on bar code
Bar code print contrast (PCS)	≥ 60 %

Ordering information

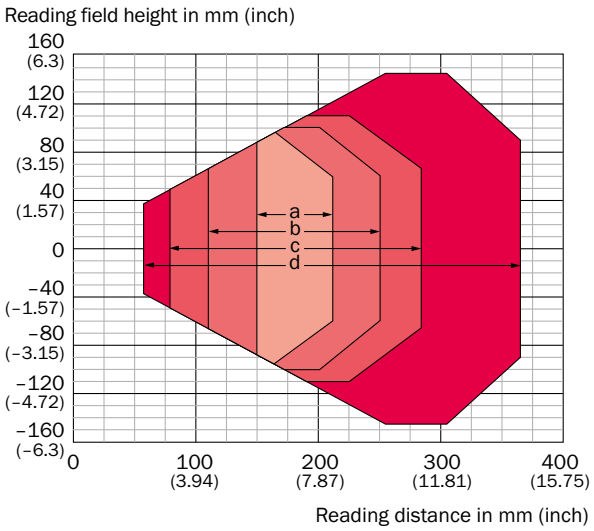
- **Focus:** Fixed focus

Version	Connection type	Enclosure rating	Front screen	Reading field	Scanner design	Type	Part no.
CLV620 Mid Range	Cable	IP65	Glass	Front	Line scanner	CLV620-0000	1040288
						CLV620-0300	1053918
					Raster scanner	CLV620-1000	1041548
				Side (105°)	Line scanner	CLV620-2000	1041550
					Raster scanner	CLV620-3000	1041552
						CLV620-3300	1047825
	Ethernet 12-pin	IP65	Glass	Front	Line scanner	CLV620-0120	1041547
					Raster scanner	CLV620-1120	1041549
				Side (105°)	Line scanner	CLV620-2120	1041551
					Raster scanner	CLV620-3120	1041553
			Plastic	Front	Line scanner	CLV620-0121	1044573
	Ethernet 17-pin	IP65	Glass	Front	Line scanner	CLV620-0830	1050940
		IP69K	Plastic	Front	Line scanner	CLV620-0831S01	1066374
					Raster scanner	CLV620-1831S01	1067933
CLV621 Long Range	Cable	IP65	Glass	Front	Line scanner	CLV621-0000	1041784
					Raster scanner	CLV621-1000	1041786
				Side (105°)	Line scanner	CLV621-2000	1041788
					Raster scanner	CLV621-3000	1041790
	Ethernet 12-pin	IP65	Glass	Front	Line scanner	CLV621-0120	1041785
					Raster scanner	CLV621-1120	1041787
				Side (105°)	Line scanner	CLV621-2120	1041789
					Raster scanner	CLV621-3120	1041791
	Ethernet 17-pin	IP65	Glass	Front	Line scanner	CLV621-0830	1067571
					Raster scanner	CLV621-1830	1067572
CLV622 Short Range	Cable	IP65	Glass	Front	Line scanner	CLV622-0000	1041792
					Raster scanner	CLV622-1000	1041794
				Side (105°)	Line scanner	CLV622-2000	1041796
					Raster scanner	CLV622-3000	1041798
			Plastic	Front	Line scanner	CLV622-0001	1047882
	Ethernet 12-pin	IP65	Glass	Front	Line scanner	CLV622-0120	1041793
					Raster scanner	CLV622-1120	1041795
				Side (105°)	Line scanner	CLV622-2120	1041797
					Raster scanner	CLV622-3120	1041799
			Plastic	Front	Line scanner	CLV622-0121	1044794
					Raster scanner	CLV622-1121	1043067
				Side (105°)	Raster scanner	CLV622-3121	1043068

8016144/2018-06-04

Reading field diagrams

CLV620 Mid Range, front

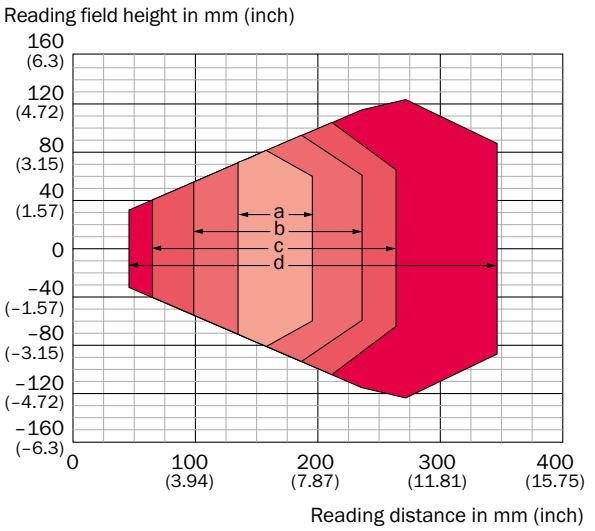


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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)

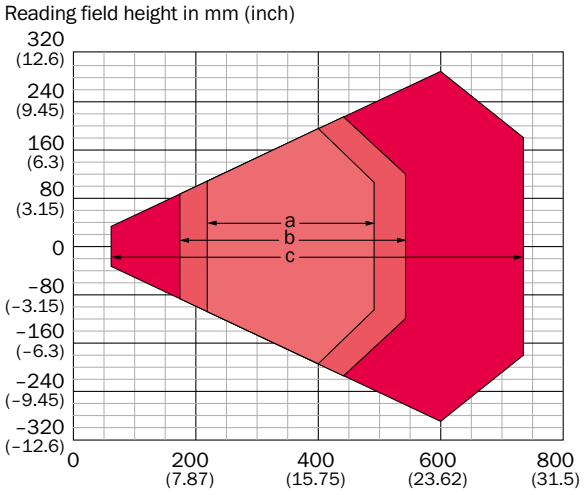
CLV620 Mid Range, side



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)

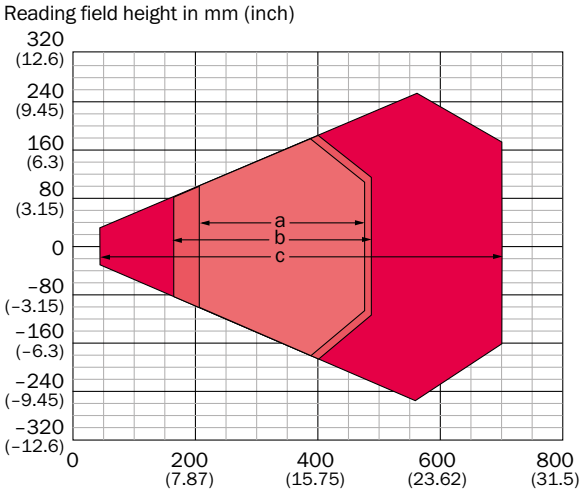
CLV621 Long Range, front



Resolution

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

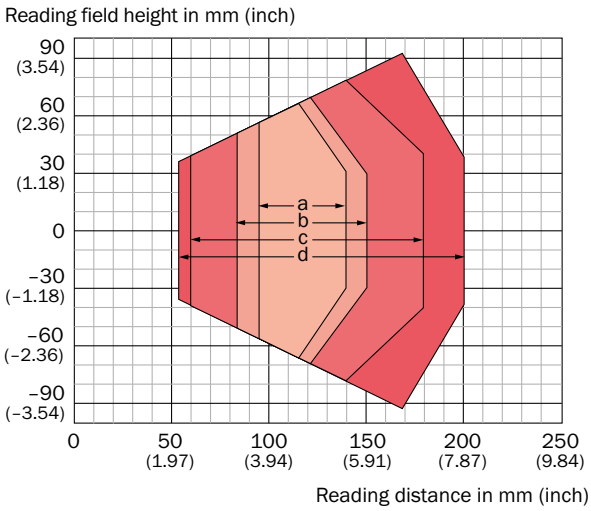
CLV621 Long Range, side



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

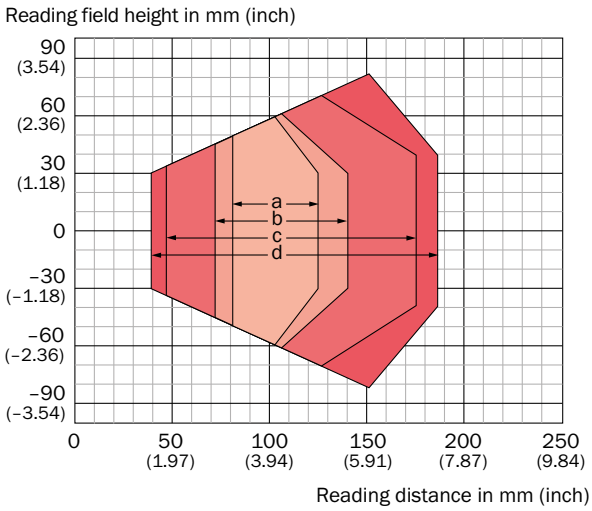


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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



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

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

Mounting systems

Mounting brackets and plates

	Brief description	Part no.	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K
	Bracket with adapter board	2042902	●	●	●	–
	Hanger-shaped mounting bracket	2042800	–	–	●	–

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Connection systems

Plug connectors and cables

	Signal type/appli-cation	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K
	Ethernet	Male connec-tor, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, twisted pair, AWG26, CAT5 (100 Mbit/s)	2 m	6034414	–	●	●	–
	Power, serial, CAN, digital I/Os	Female connec-tor, M12, 12-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	2 m	2041834	–	●	–	–
		Female connec-tor, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	2 m	2055419	–	–	●	–

4D*pro* Connectivity

Modules

	Brief description	Type	Part no.	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K
	Small connection module for one sensor, 4 cable glands, base for CMC600	CDB620-001	1042256	●	●	●	●
	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.	CDB650-204	1064114	–	–	–	●
	Modular connection module for one sensor	CDM420-0001	1025362	●	●	●	●

For more accessories, see ➜ 88

INTELLIGENT SCANNING SOLUTION FOR LOGISTICS AND AUTOMATION

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 function buttons, e. g., for starting auto setup or reading quality evaluation
- Integrated LED bar graph
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP on board. No additional Ethernet gateway required (for “Ethernet” connection type)
- 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 code identification even at very high conveyor speeds
- Increased scanning reliability due to high-performance computing power and high scanning frequency

Additional information

→ www.sick.com/CLV63x

For more information, simply 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.

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Detailed technical data

Features

	CLV630 Long Range	CLV631 Mid Range	CLV632 Short Range
Light source	Visible red light (655 nm)		
Light spot	Circular / oval (depending on type)	Circular	
MTBF	40,000 h		
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014)		
Aperture angle	≤ 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			
Front	60 mm ... 735 mm [1] (depending on type)	90 mm ... 450 mm [1] (depending on type)	60 mm ... 285 mm [1] (depending on type)
Side	44 mm ... 683 mm [1]	74 mm ... 412 mm [1]	44 mm ... 256 mm [1]
Oscillating mirror	45 mm ... 659 mm [1]	78 mm ... 397 mm [1] (depending on type)	45 mm ... 245 mm [1]
Raster height, number of lines, at distance			
Front	15 mm, 8, 200 mm		
Side	15 mm, 8, 185 mm		
Oscillating mirror functions	Fixed (adjustable position), oscillating (variable or fixed amplitude), one shot		
Oscillation frequency	0.5 Hz ... 6.25 Hz		
Angle of deflection	–20° ... 20°		

[1] For details see reading field diagram.

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
Ethernet	– / ✔, TCP/IP (depending on type)		
Function	Host, AUX		
Data transmission rate	10/100 MBit/s		
EtherNet/IP™	– / ✔ (depending on type)		
Data transmission rate	10/100 MBit/s		
Serial	✔, RS-232, RS-422, RS-485		
Function	Host, AUX		
Data transmission rate	2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)		
CAN	✔		
Function	SICK CAN sensor network CSN (master/slave, multiplexer/server)		
Data transmission rate	20 kbit/s ... 1 Mbit/s		

	CLV630 Long Range	CLV631 Mid Range	CLV632 Short Range
CANopen	✔		
Data transmission rate	20 kbit/s ... 1 Mbit/s		
PROFINET	– / ✔ (depending on type)		
Function	PROFINET Single Port, PROFINET Dual Port optional via external connection module CDF600-2		
Data transmission rate	10/100 MBit/s		
PROFIBUS DP	✔		
Type of fieldbus integration	Optional over external fieldbus module CDF600-2		
EtherCAT®	✔		
Type of fieldbus integration	Optional over external fieldbus module CDF600		
DeviceNet™	✔		
Type of fieldbus integration	Optional, over external connection module CDM + CMF		
Switching inputs			
Cable	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)		
Ethernet 12-pin	3 (“Sensor 1”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)		
Ethernet 17-pin	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420/CDB650 (depending on type))		
Switching outputs			
Cable	4 (“Result 1”, “Result 2”, 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)		
Ethernet 12-pin	2 (via optional parameter storage CMC600 in CDB620/CDM420)		
Ethernet 17-pin	4 (“Result 1”, “Result 2”, 2 via optional parameter storage CMC600 in CDB620/CDM420/CDB650 (depending on type))		
Reading pulse	Switching inputs, non-powered, serial interface, auto pulse, CAN (depending on type)		
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)		
Operating elements	2 buttons (choose and start/stop functions)		
Configuration software	SOPAS ET		
Memory card	MicroSD memory card (flash card), optional		

Mechanics/electronics

	CLV630 Long Range	CLV631 Mid Range	CLV632 Short Range
Electrical connection			
Cable	1 x 15-pin D-Sub HD male connector (0.9 m) 1 x cable open end, 3-wire (2 m) (with heating)		
Ethernet 12-pin	2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector 1 x cable open end, 3-wire (2 m) (with heating)		
Ethernet 17-pin			2 x M12 cylindrical connectors (1 x 17-pin male connector, 4-pin female connector) on swivel connector
Ethernet 17-pin IP69K	2 x M12 cylindrical connectors (1 x 17-pin male connector, 4-pin female connector)		
Operating voltage	18 V DC ... 30 V DC ≤ 24 V DC, ± 10 % (with heating)		
Power consumption	5 W / 6 W 40 W (with heating)		

[1] Swivel connector is 15 mm longer.

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	CLV630 Long Range	CLV631 Mid Range	CLV632 Short Range
Housing	Aluminum die cast Stainless steel (IP69K)		
Housing color	Light blue (RAL 5012) Stainless steel (unpainted) (IP69K)		
Protection class	III (EN 61140)		
Weight			
Front	250 g ... 320 g 450 g ... 520 g (with heating) 890 g (IP69K)		
Side	270 g, ... 340 g		270 g ... 340 g 540 g (with heating)
Oscillating mirror	350 g ... 420 g 550 g ... 620 g (with heating)	350 g ... 420 g, 550 g (with heating) 1,230 g (IP69K)	350 g ... 420 g
Dimensions (L x W x H)			
Front	61 mm x 96 mm x 38 mm [1] 61 mm x 96 mm x 50 mm [1] (with heating) 85 mm x 154 mm x 84 mm (IP69K)		
Side	80 mm x 96 mm x 38 mm [1]		80 mm x 96 mm x 38 mm [1] 80 mm x 96 mm x 50 mm (with heating)
Oscillating mirror	95 mm x 107 mm x 41 mm [1] 95 mm x 107 mm x 50 mm [1] (with heating)	95 mm x 107 mm x 41 mm [1] 95 mm x 107 mm x 50 mm [1] (with heating) 121 mm x 164 mm x 84 mm (IP69K)	95 mm x 107 mm x 41 mm [1]

[1] Swivel connector is 15 mm longer.

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 –35 °C ... +35 °C (with heating)
Storage temperature	–20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	2,000 lx, on bar code
Bar code print contrast (PCS)	≥ 60 %

Ordering information

- **Focus:** Fixed focus
- **Light spot:** circular

Version	Connection type	Enclosure rating	Front screen	Heating	Reading field	Scanner design	Type	Part no.
CLV630 Long Range	Cable	IP65	Glass	–	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
				✔	Front	Line scanner	CLV630-0000F0	1051733
						Raster scanner	CLV630-1000F0	1051734
					Oscillating mirror	Line scanner	CLV630-6000F0	1053927
			Plastic	–	Front	Raster scanner	CLV630-1001	1046493
	Ethernet 12-pin	IP65	Glass	–	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
				✔	Front	Line scanner	CLV630-0120F0	1063470
						Raster scanner	CLV630-1120F0	1061765
					Oscillating mirror	Line scanner	CLV630-6120F0	1051864
			Plastic	–	Front	Line scanner	CLV630-0121	1047278
						Raster scanner	CLV630-1121	1046959
					Oscillating mirror	Line scanner	CLV630-6121	1047279
	Ethernet 17-pin	IP69K	Plastic	–	Front	Line scanner	CLV630-0831S01	1068600
CLV631 Mid Range	Cable	IP65	Glass	–	Front	Line scanner	CLV631-0000	1041978
						Raster scanner	CLV631-1000	1041980
					Side (105°)	Line scanner	CLV631-2000	1041982
						Raster scanner	CLV631-3000	1041984
					Oscillating mirror	Line scanner	CLV631-6000	1041986
				✔	Front	Line scanner	CLV631-0000F0	1050778
	Ethernet 12-pin	IP65	Glass	–	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
				✔	Front	Line scanner	CLV631-0120F0	1051861
					Oscillating mirror	Line scanner	CLV631-6120F0	1065606
			Plastic	–	Oscillating mirror	Line scanner	CLV631-6121	1053805
	Ethernet 17-pin	IP69K	Plastic	–	Front	Line scanner	CLV631-0831S01	1062070
					Oscillating mirror	Line scanner	CLV631-6831S01	1062136

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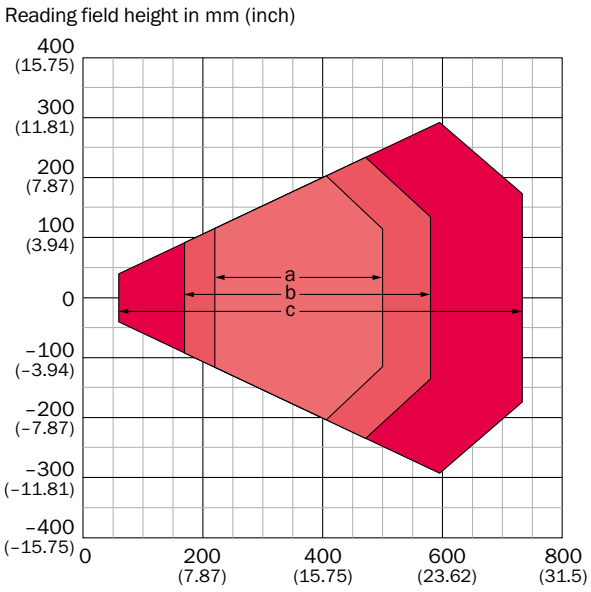
Version	Connection type	Enclosure rating	Front screen	Heating	Reading field	Scanner design	Type	Part no.
CLV632 Short Range	Cable	IP65	Glass	–	Front	Line scanner	CLV632-0000	1041988
						Raster scanner	CLV632-1000	1041990
					Side (105°)	Line scanner	CLV632-2000	1041992
						Raster scanner	CLV632-3000	1041994
					Oscillating mirror	Line scanner	CLV632-6000	1041996
				✔	Side (105°)	Line scanner	CLV632-2000F0	1059976
						Raster scanner	CLV632-3000F0	1056858
	Ethernet 12-pin	IP65	Glass	–	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
				✔	Front	Raster scanner	CLV632-1120F0	1059813
			Plastic	–	Front	Line scanner	CLV632-0121	1047280
						Raster scanner	CLV632-1121	1047281
					Side (105°)	Raster scanner	CLV632-3121	1077806
					Oscillating mirror	Line scanner	CLV632-6121	1046368
	Ethernet 17-pin	IP65	Plastic	–	Side (105°)	Line scanner	CLV632-2831	1060304
		IP69K	Plastic	–	Front	Raster scanner	CLV632-1831S01	1062530

- **Version:** CLV630 Long Range
- **Focus:** Fixed focus
- **Light spot:** oval
- **Enclosure rating:** IP65

Connection type	Front screen	Reading field	Scanner design	Type	Part no.
Cable	Plastic	Front	Line scanner	CLV630-0001S01	1049006
			Raster scanner	CLV630-1001S01	1049007
	Glass	Oscillating mirror	Line scanner	CLV630-6001S01	1049008
Ethernet	Plastic	Front	Line scanner	CLV630-0121S01	1048440
			Raster scanner	CLV630-1121S01	1048439
	Glass	Oscillating mirror	Line scanner	CLV630-6121S01	1066154

Reading field diagrams

CLV630 Long Range, front

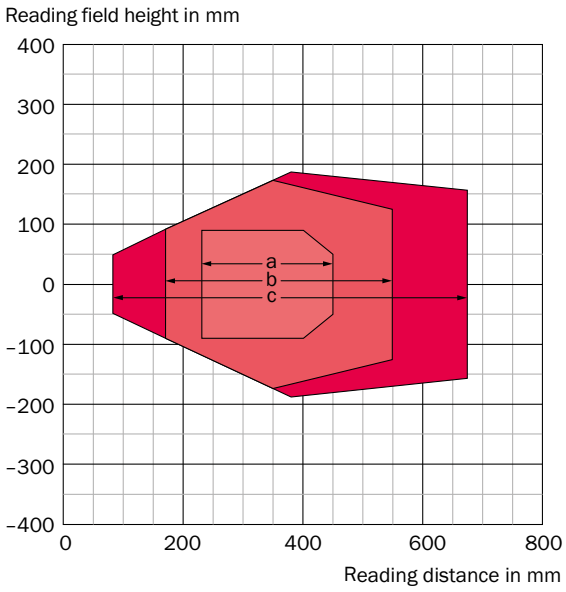


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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, front, Light spot oval

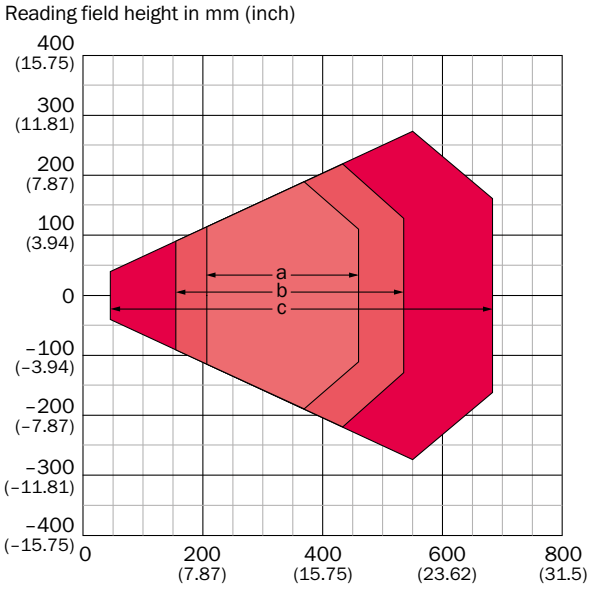


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

Resolution

- a: 0.35 mm
- b: 0.50 mm
- c: 1.0 mm

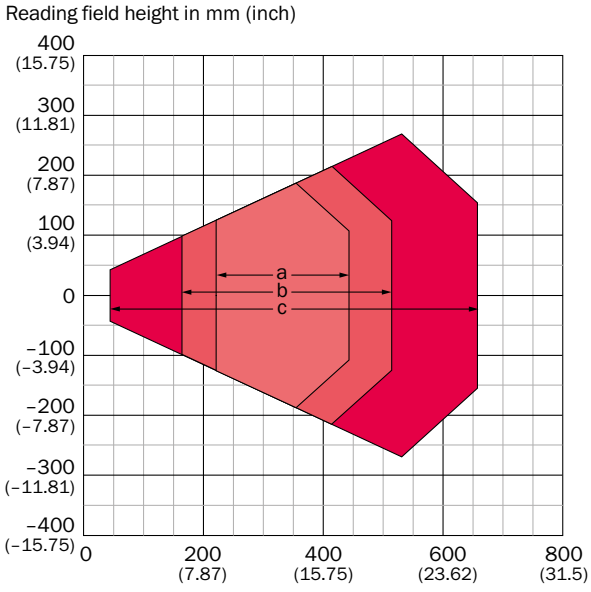
CLV630 Long Range, side



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



Resolution

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

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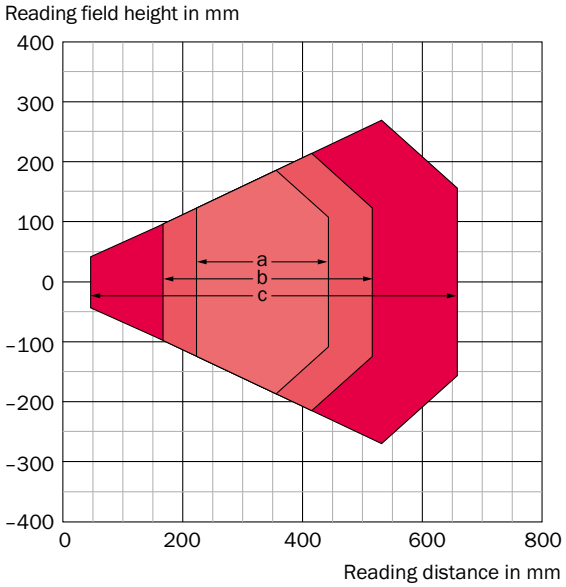
CLV630 Long Range, Oscillating mirror, Light spot oval

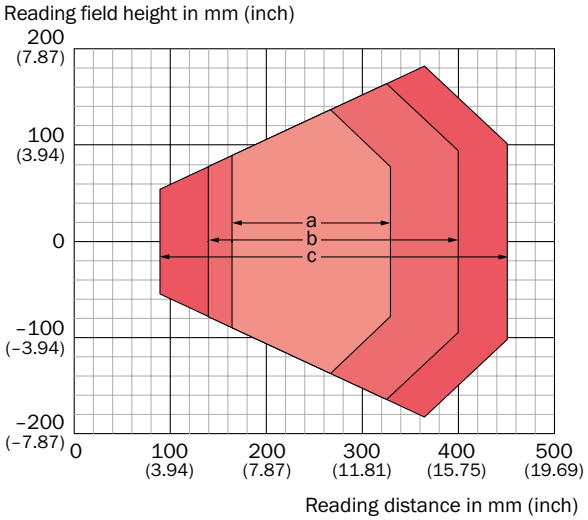


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

Resolution

a: 0.35 mm
b: 0.50 mm
c: 1.0 mm

CLV631 Mid Range, front

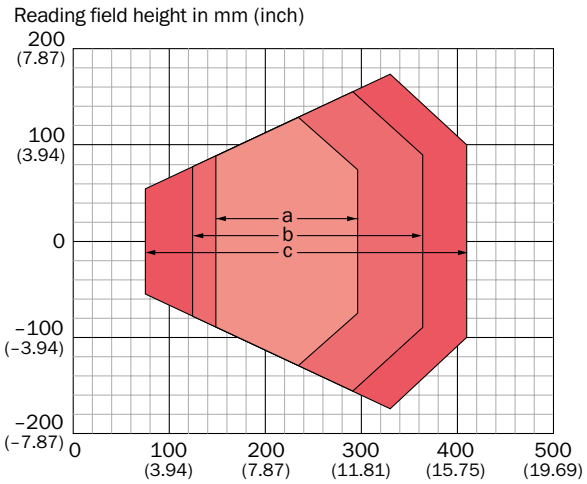


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

Resolution

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

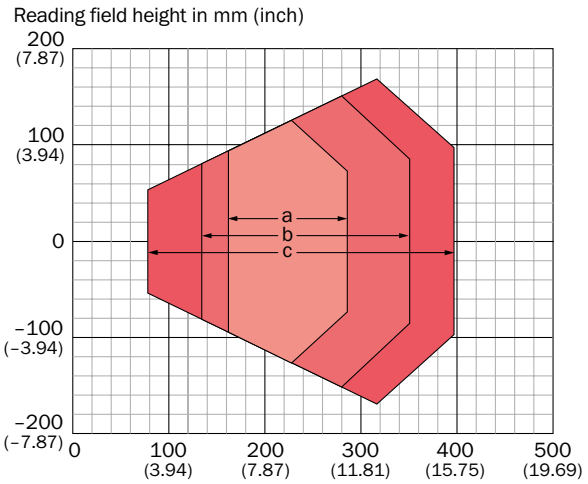
CLV631 Mid Range, side



Resolution

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

CLV631 Mid Range, Oscillating mirror



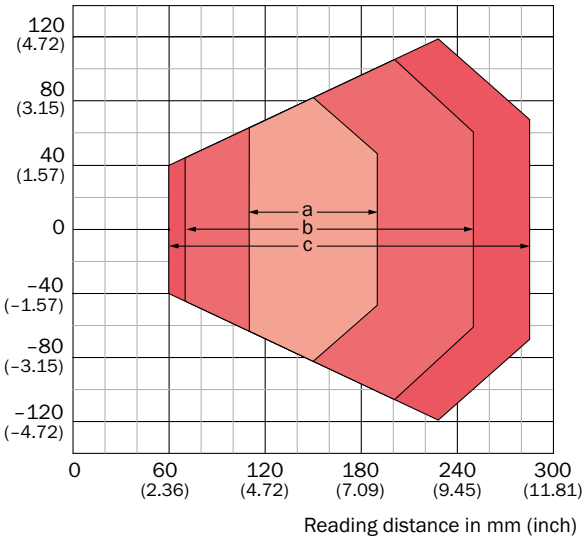
For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

Resolution

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

CLV632 Short Range, front

Reading field height in mm (inch)



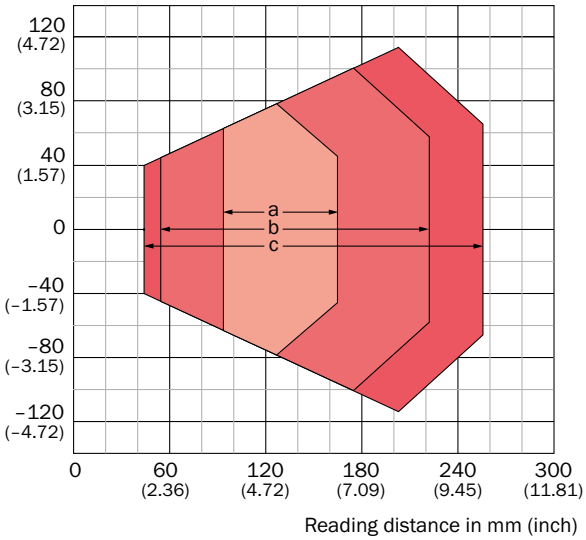
For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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)

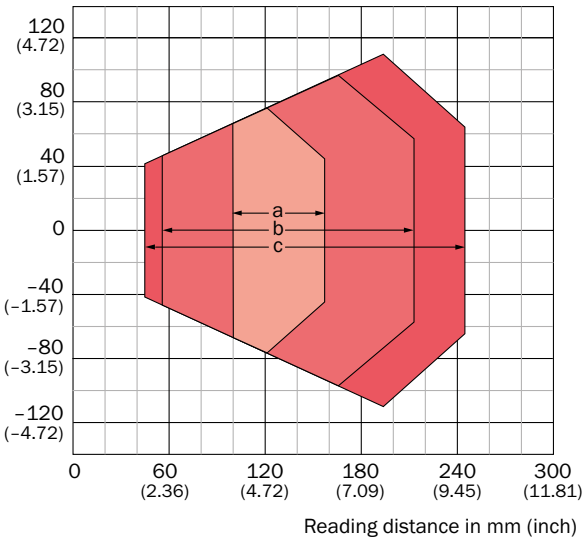


Resolution

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

Mounting systems

Mounting brackets and plates

	Brief description	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV62x-64x IP69K
	Hanger-shaped mounting bracket	2042800	●	●	●	–
 Illustration may differ	Hanger-shaped mounting bracket, thermally isolated for use with heating devices	2050705	●	●	●	–

Connection systems

Plug connectors and cables

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV62x-64x IP69K
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, twisted pair, AWG26, CAT5 (100 Mbit/s)	2 m	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)	2 m	2041834	–	●	●	–
		Female connector, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	2 m	2055419	–	–	●	–

4D*pro*Connectivity

Modules

	Brief description	Type	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV62x-64x IP69K
	Small connection module for one sensor, 4 cable glands, base for CMC600	CDB620-001	1042256	●	●	●	●
	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.	CDB650-204	1064114	–	–	–	●
	Modular connection module for one sensor	CDM420-0001	1025362	●	●	●	●

For more accessories, see ➜ 88

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DYNAMIC, MULTI-FUNCTIONAL

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 function buttons, e. g., for starting auto setup or reading quality evaluation
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP on board. No additional Ethernet gateway required (for “Ethernet” connection type)
- 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 code identification even at very high conveyor speeds

Additional information

→ www.sick.com/CLV64x

For more information, simply 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.

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Detailed technical data

Features

	CLV640 Standard Density	CLV642 High Density
Light source	Visible red light (655 nm)	
Light spot	Circular / oval (depending on type)	Circular
MTBF	40,000 h	
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014)	
Aperture angle	≤ 50°	
Scanning frequency	400 Hz ... 1,200 Hz	
Code resolution	0.2 mm ... 1 mm	0.15 mm ... 0.25 mm
Reading distance		
Front	60 mm ... 840 mm [1] (depending on type)	30 mm ... 345 mm [1]
Side	44 mm ... 738 mm [1]	–
Oscillating mirror	45 mm ... 798 mm [1] (depending on type)	–
Raster height, number of lines, at distance		
Front	15 mm, 8, 200 mm	–
Side	15 mm, 8, 185 mm	–
Oscillating mirror functions	Fixed (adjustable position), oscillating (variable or fixed amplitude), one shot	
Oscillation frequency	0.5 Hz ... 6.25 Hz	–
Angle of deflection	–20° ... 20°	–

[1] For details see reading field diagram.

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

	CLV640 Standard Density	CLV642 High Density
Ethernet	– / ✔, TCP/IP (depending on type)	
Function	Host, AUX	
Data transmission rate	10/100 MBit/s	
EtherNet/IP™	– / ✔ (depending on type)	
Data transmission rate	10/100 MBit/s	
Serial	✔, RS-232, RS-422, RS-485	
Function	Host, AUX	
Data transmission rate	2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)	
CAN	✔	
Remark	–	CSN (SICK CAN Sensor Network)
Function	SICK CAN sensor network CSN (master/slave, multiplexer/server)	
Data transmission rate	20 kbit/s ... 1 Mbit/s	

	CLV640 Standard Density	CLV642 High Density
CANopen	✔	
Data transmission rate	20 kbit/s ... 1 Mbit/s	
PROFINET	– / ✔ (depending on type)	
Function	PROFINET Single Port, PROFINET Dual Port optional via external connection module CDF600-2	
Data transmission rate	10/100 MBit/s	
PROFIBUS DP	✔	
Type of fieldbus integration	Optional over external fieldbus module CDF600-2	
EtherCAT®	✔	
Type of fieldbus integration	Optional over external fieldbus module CDF600	
DeviceNet™	✔	
Type of fieldbus integration	Optional, over external connection module CDM + CMF	
Switching inputs		
Cable	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)	
Ethernet 12-pin	3 (“Sensor 1”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)	
Ethernet 17-pin	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB650)	–
Switching outputs		
Cable	4 (“Result 1”, “Result 2”, 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)	
Ethernet 12-pin	2 (via optional parameter storage CMC600 in CDB620/CDM420)	
Ethernet 17-pin	4 (“Result 1”, “Result 2”, 2 via optional parameter storage CMC600 in CDB650)	–
Reading pulse	Switching inputs, non-powered, serial interface, auto pulse, CAN (depending on type)	
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)	
Operating elements	2 buttons (choose and start/stop functions)	
Configuration software	SOPAS ET	
Memory card	MicroSD memory card (flash card), optional	

Mechanics/electronics

	CLV640 Standard Density	CLV642 High Density
Electrical connection		
Cable	1 x 15-pin D-Sub HD male connector (0.9 m)	
Ethernet 12-pin	2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector	
Ethernet 17-pin	2 x M12 cylindrical connectors (1 x 17-pin male connector, 4-pin female connector)	–
Operating voltage	18 V DC ... 30 V DC	
Power consumption	5.5 W / 6.5 W (depending on type)	
Housing	Aluminum die cast Stainless steel (IP69K)	Aluminum die cast
Housing color	Light blue (RAL 5012) Stainless steel (unpainted) (IP69K)	Light blue (RAL 5012)
Protection class	III (EN 61140)	

[1] Swivel connector is 15 mm longer.

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	CLV640 Standard Density	CLV642 High Density
Weight		
Front	250 g ... 320 g 890 g (IP69K)	250 g ... 320 g,
Side	270 g ... 340 g	–
Oscillating mirror	350 g ... 420 g 1,230 g, (IP69K)	–
Dimensions (L x W x H)		
Front	61 mm x 96 mm x 38 mm [1)] 85 mm x 154 mm x 84 mm (IP69K)	61 mm x 96 mm x 38 mm [1)]
Side	80 mm x 96 mm x 38 mm [1)]	–
Oscillating mirror	95 mm x 107 mm x 41 mm [1)] 121 mm x 164 mm x 84 mm (IP69K)	–

[1)] Swivel connector is 15 mm longer.

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-3 (2001-10) / EN 61000-6-2:2005
Vibration resistance	EN 60068-2-6 (1995)
Shock resistance	EN 60068-2-27 (1993)
Ambient operating temperature	0 °C ... +40 °C
Storage temperature	–20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	2,000 lx, on bar code
Bar code print contrast (PCS)	≥ 60 %

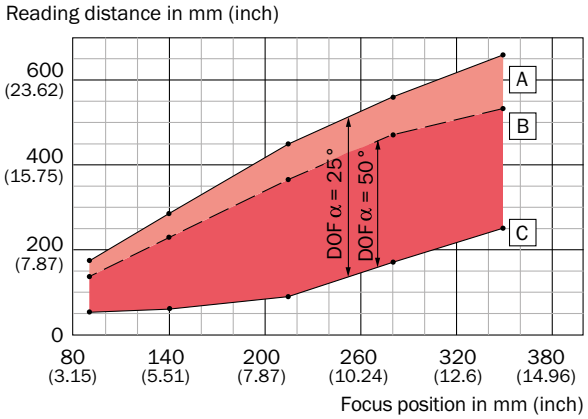
Ordering information

- **Focus:** dynamic focus control

Version	Connection type	Enclosure rating	Front screen	Light spot	Reading field	Scanner design	Type	Part no.
CLV640 Standard Density	Cable	IP65	Glass	Circular	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
				Oval	Side (105°)	Raster scanner	CLV640-3000S01	1063838
	Ethernet 12-pin	IP65	Glass	Circular	Front	Raster scanner	CLV640-1120	1042017
						Line scanner	CLV640-0120	1042015
					Side (105°)	Line scanner	CLV640-2120	1042019
						Raster scanner	CLV640-3120	1042021
					Oscillating mirror	Line scanner	CLV640-6120	1042023
				Oval	Oscillating mirror	Line scanner	CLV640-6120S01	1048449
			Plastic	Oval	Oscillating mirror	Line scanner	CLV640-6121S01	1056544
	Ethernet 17-pin	IP69K	Plastic	Circular	Front	Line scanner	CLV640-6831S01	1063932
					Oscillating mirror	Line scanner	CLV640-0831S01	1064718
CLV642 High Density	Cable	IP65	Glass	Circular	Front	Line scanner	CLV642-0000	1044873
	Ethernet 12-pin	IP65	Glass	Circular	Front	Line scanner	CLV642-0120	1044874

Reading field diagrams

CLV640 Standard Density, front



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

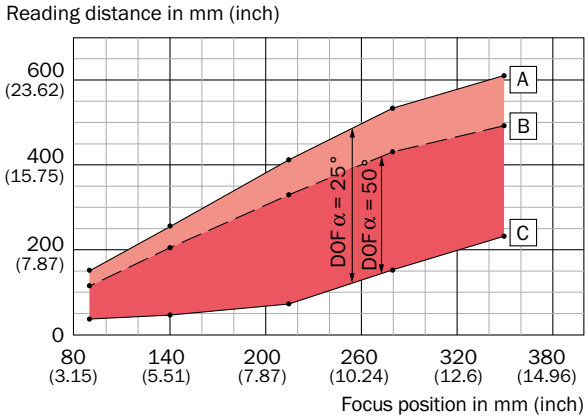
Resolution 0.5 mm (19.7 mil)

A max. reading distance (aperture angle 25°)

B max. reading distance (aperture angle 50°)

C min. reading distance

CLV640 Standard Density, side



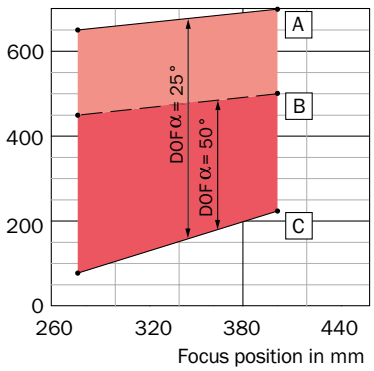
Resolution 0.5 mm (19.7 mil)

A max. reading distance (aperture angle 25°)

B max. reading distance (aperture angle 50°)

C min. reading distance

CLV640 Standard Density, side, Light spot oval



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

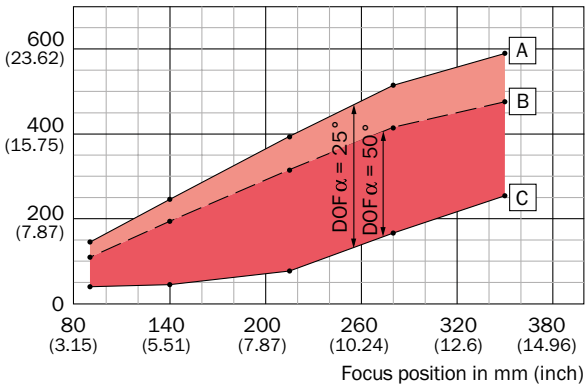
Resolution 0.5 mm

A max. reading distance (aperture angle 25°)

B max. reading distance (aperture angle 50°)

C min. reading distance

CLV640 Standard Density, Oscillating mirror



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

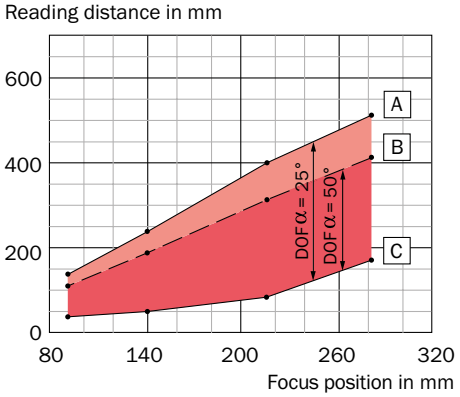
Resolution 0.5 mm (19.7 mil)

A max. reading distance (aperture angle 25°)

B max. reading distance (aperture angle 50°)

C min. reading distance

CLV640 Standard Density, Oscillating mirror



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

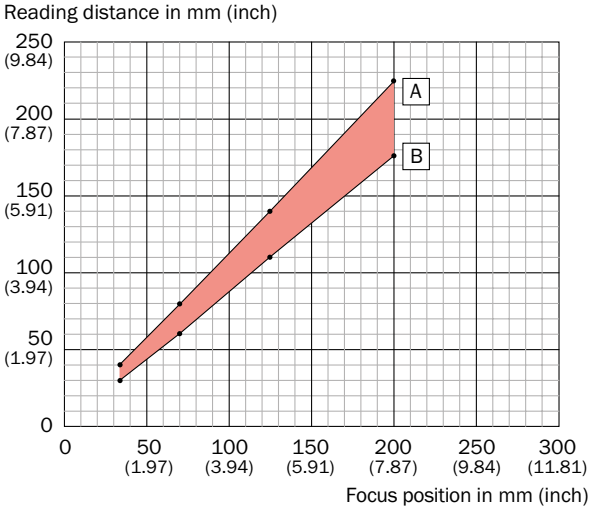
Resolution 0.5 mm

A max. reading distance (aperture angle 25°)

B max. reading distance (aperture angle 50°)

C min. reading distance

CLV642 High Density



Resolution 0.15 mm (5.9 mil)

A max. reading distance (aperture angle 25°)

B min. reading distance

Recommended accessories

Mounting systems

Mounting brackets and plates

	Brief description	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet	CLV62x-64x IP69K
	Hanger-shaped mounting bracket	2042800	●	●	–
 Illustration may differ	Hanger-shaped mounting bracket, thermally isolated for use with heating devices	2050705	●	●	–

Connection systems

Plug connectors and cables

	Signal type/ application	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet	CLV62x-64x IP69K
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, twisted pair, AWG26, CAT5 (100 Mbit/s)	2 m	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)	2 m	2041834	–	●	–
		Female connector, M12, 17-pin, straight		To connection module CDx (except CDB650)	2 m	2055419	–	–	●

4D*pro*Connectivity

Modules

	Brief description	Type	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet	CLV62x-64x IP69K
	Small connection module for one sensor, 4 cable glands, base for CMC600	CDB620-001	1042256	●	●	●
	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.	CDB650-204	1064114	–	–	●
	Modular connection module for one sensor	CDM420-0001	1025362	●	●	●

For more accessories, see ➜ 88

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ALWAYS IN AUTO FOCUS

Product description

The CLV65x high-performance scanner with auto focus system identifies bar codes with different module widths of 0.25 mm through 1.0 mm and has an extremely high depth of field. Depending on module width, reading widths of up to 1,600 mm at a depth of field of 1,425 mm can be achieved. It combines high-performance reading with the further enhanced SMART code reconstruction system, a reading algorithm that can accurately detect and decode bar codes even if they are damaged, poorly printed, or partially covered. The entire product family is designed to be so flexible that almost any reading requirement and output format can be met perfectly. Diagnosis data such as reading rate statistics, scanner monitoring data, etc. can be called up via the integrated web server without the need for additional software.

This scanner, with integrated Ethernet and auto focus system, is the most compact in its class and is ideally suited for use in storage and conveyor systems. An oscillating mirror variant is also available.

At a glance

- Huge depth of field due to auto focus
- Integrated function buttons, e. g., for starting auto setup or reading quality evaluation
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP on board. No additional Ethernet gateway required (for “Ethernet” connection type)
- Enhanced SMART code reconstruction technology
- Flexible sorting, filtering, and logical functions
- Integrated web server for diagnostic data and network monitoring
- Advanced, easy-to-use SOPAS configuration software
- Integrated LED bar graph

Your benefits

- Cost-effective, as auto focus means no variants 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 is required

Additional information

→ www.sick.com/CLV65x

For more information, simply 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.

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Detailed technical data

Features

	CLV650 Standard Density	CLV651 Low Density
Light source	Visible red light (658 nm)	
MTBF	40,000 h	
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014)	
Aperture angle	≤ 50°	
Scanning frequency	600 Hz ... 1,000 Hz	
Code resolution	0.25 mm ... 1 mm	0.5 mm
Reading distance		
Front	140 mm ... 1,625 mm [1]	170 mm ... 930 mm [1]
Oscillating mirror	125 mm ... 1,570 mm [1]	155 mm ... 880 mm [1]
Front, with polarizing filter	160 mm ... 1,400 mm [1]	–
Oscillating mirror functions	Fixed (adjustable position), oscillating (variable or fixed amplitude), one shot	
Oscillation frequency	0.5 Hz ... 6.25 Hz	
Angle of deflection	–20° ... 20°	

[1] For details see reading field diagram.

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

Ethernet	– / ✔, TCP/IP (depending on type)
Function	Host, AUX
Data transmission rate	10/100 MBit/s
EtherNet/IP™	– / ✔ (depending on type)
Data transmission rate	10/100 MBit/s
Serial	✔, RS-232, RS-422, RS-485
Function	Host, AUX
Data transmission rate	2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)
CAN	✔
Function	SICK CAN sensor network CSN (master/slave, multiplexer/server), object tracking (depending on type)
Data transmission rate	20 kbit/s ... 1 Mbit/s
CANopen	✔
Data transmission rate	20 kbit/s ... 1 Mbit/s
PROFINET	– / ✔ (depending on type)
Function	PROFINET Single Port, PROFINET Dual Port optional via external connection module CDF600-2
Data transmission rate	10/100 MBit/s

PROFIBUS DP	✔
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
EtherCAT®	✔
Type of fieldbus integration	Optional over external fieldbus module CDF600
DeviceNet™	✔
Type of fieldbus integration	Optional, over external connection module CDM + CMF
Switching inputs	
Cable	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Ethernet 12-pin	3 (“Sensor 1”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Ethernet 17-pin	4 (“Sensor 1”, “Sensor 2”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Switching outputs	
Cable	4 (“Result 1”, “Result 2”, 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)
Ethernet 12-pin	2 (via optional parameter storage CMC600 in CDB620/CDM420)
Ethernet 17-pin	4 (“Result 1”, “Result 2”, 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)
Reading pulse	Switching inputs, non-powered, serial interface, auto pulse, CAN (depending on type)
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)
Operating elements	2 buttons (choose and start/stop functions)
Configuration software	SOPAS ET
Memory card	MicroSD memory card (flash card), optional

Mechanics/electronics

	CLV650 Standard Density	CLV651 Low Density
Electrical connection		
Cable	1 x 15-pin D-Sub HD male connector (0.9 m) 1 x cable open end, 3-wire (2 m) (with heating)	1 x 15-pin D-Sub HD male connector (0.9 m)
Ethernet 12-pin	2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector 1 x cable open end, 3-wire (2 m) (with heating)	2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector
Ethernet 17-pin	2 x M12 cylindrical connectors (1 x 17-pin male connector, 4-pin female connector) on swivel connector	
Operating voltage	18 V DC ... 30 V DC ≤ 24 V DC, ± 10 % (with heating)	18 V DC ... 30 V DC
Power consumption	8.5 W / 9.5 W 40 W (with heating)	8.5 W / 9.5
Housing	Aluminum die cast	
Housing color	Light blue (RAL 5012)	
Protection class	III (EN 61140)	

[1] Swivel connector is 15 mm longer.

	CLV650 Standard Density	CLV651 Low Density
Weight		
Front	250 g ... 320 g 450 g ... 520 g (with heating)	250 g ... 320 g
Oscillating mirror	250 g ... 320 g 450 g, ... 520 g (with heating)	250 g ... 320 g
Front, with polarizing filter	250 g	–
Dimensions (L x W x H)		
Front	61 mm x 96 mm x 38 mm [1] 61 mm x 96 mm x 50 mm [1] (with heating)	61 mm x 96 mm x 38 mm [1]
Oscillating mirror	95 mm x 107 mm x 41 mm [1] 95 mm x 107 mm x 50 mm (with heating)	95 mm x 107 mm x 41 mm [1])
Front, with polarizing filter	61 mm x 96 mm x 38 mm [1]	–

[1] Swivel connector is 15 mm longer.

Ambient data

	CLV650 Standard Density	CLV651 Low Density
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 –35 °C ... +35 °C (with heating)	0 °C ... +40 °C
Storage temperature	–20 °C ... +70 °C	
Permissible relative humidity	90 %, Non-condensing	
Ambient light immunity	2,000 lx, on bar code	
Bar code print contrast (PCS)	≥ 60 %	

Ordering information

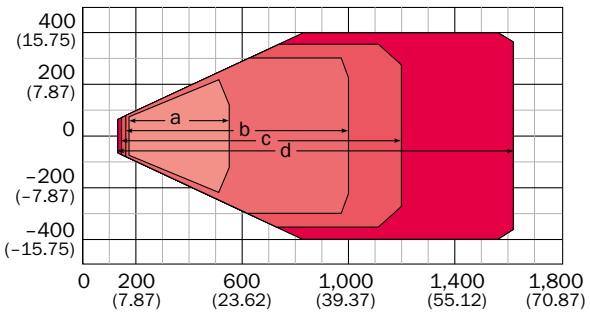
- **Focus:** Auto focus
- **Enclosure rating:** IP65
- **Front screen:** Glass
- **Scanner design:** Line scanner

Version	Connection type	Heating	Reading field	Type	Part no.
CLV650 Standard Density	Cable	–	Front	CLV650-0000	1041290
			Oscillating mirror	CLV650-6000	1042124
		✔	Front	CLV650-0000F0	1052180
			Oscillating mirror	CLV650-6000F0	1052181
	Ethernet 12-pin	–	Front	CLV650-0120	1042121
			Front, with polarizing filter	CLV650-0120S01	1051957
			Oscillating mirror	CLV650-6120	1042125
		✔	Front	CLV650-0120F0	1058893
			Oscillating mirror	CLV650-6120F0	1053104
	Ethernet 17-pin	–	Front	CLV650-08300A	1050845
			Oscillating mirror	CLV650-68300A	1050848
CLV651 Low Density	Cable	–	Front	CLV651-0000	1046557
			Oscillating mirror	CLV651-6000	1046559
	Ethernet 12-pin	–	Front	CLV651-0120	1046558
			Oscillating mirror	CLV651-6120	1046560
	Ethernet 17-pin	–	Front	CLV651-08300A	1050847
			Oscillating mirror	CLV651-68300A	1050849

Reading field diagrams

CLV650 Standard Density, front

Reading field height in mm (inch)



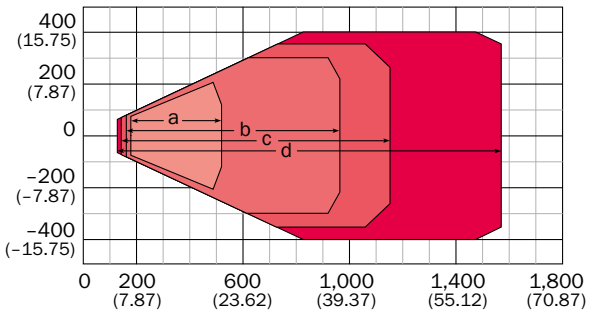
Reading distance in mm (inch)

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)



Reading distance 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)

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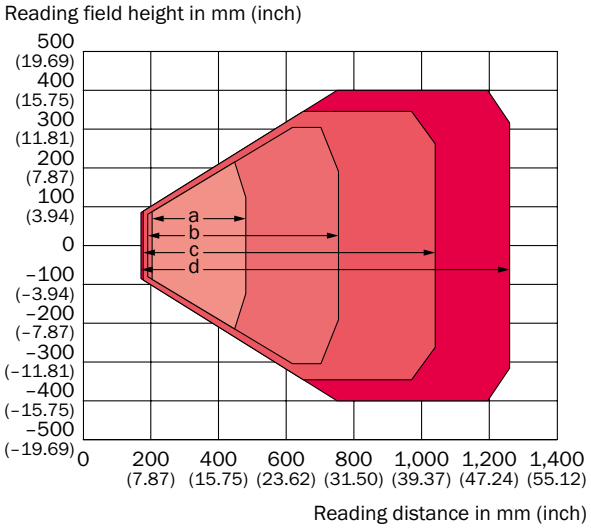
CLV650 Standard Density, front, with polarizing filter

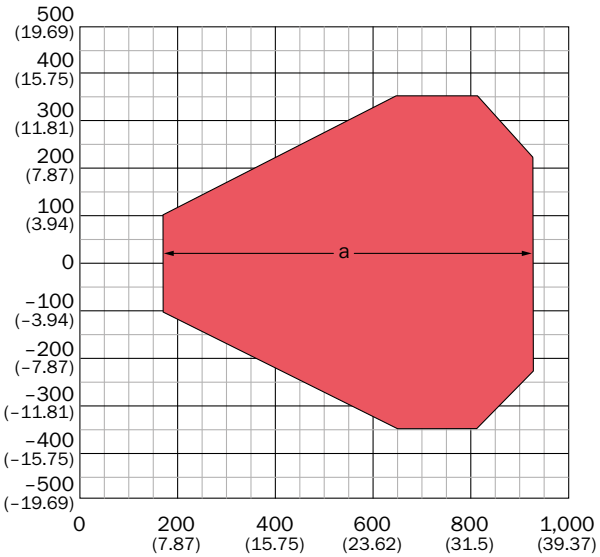


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

Resolution

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

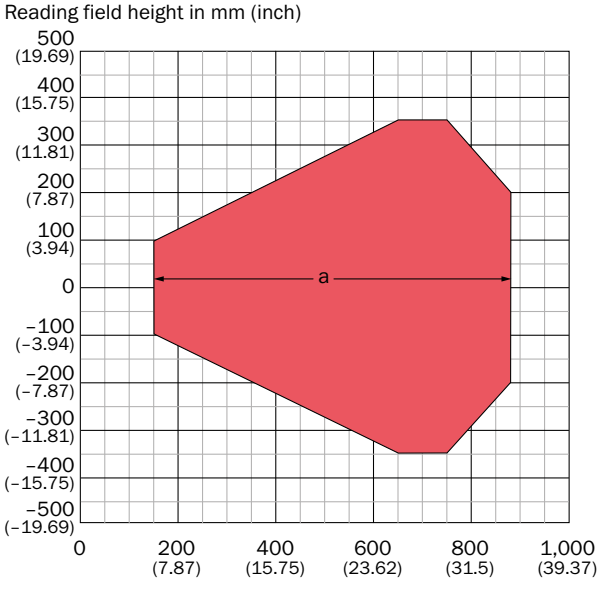
CLV651 Low Density, front



Resolution

- a: 0.50 mm (19.7 mil)

CLV651 Low Density, Oscillating mirror



Resolution

- a: 0.50 mm (19.7 mil)

Recommended accessories

Mounting systems

Mounting brackets and plates

	Brief description	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin
	Hanger-shaped mounting bracket	2042800	●	●	●
 Illustration may differ	Hanger-shaped mounting bracket, thermally isolated for use with heating devices	2050705	●	●	●

Connection systems

Plug connectors and cables

	Signal type/ application	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, twisted pair, AWG26, CAT5 (100 Mbit/s)	2 m	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)	2 m	2041834	–	●	–
		Female connector, M12, 17-pin, straight		To connection module CDx (except CDB650)	2 m	2055419	–	–	●

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4D*pro*Connectivity

Modules

	Brief description	Type	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin
	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	●	●	●
	Basisanschlussmodul zur Anbindung eines Sensors mit 2-A-Sicherung, 5 Leitungsverschraubungen und RS-232-Schnittstelle zum Sensor über M12, 17-polige Dose, alle Ausgänge auf Klemme aufgelegt.	CDB650-204	1064114	–	–	●

For more accessories, see ➜ 88

THE HIGHEST LEVEL OF FLEXIBILITY AND POWER

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

Additional information

➜ www.sick.com/CLV69x

For more information, simply 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.

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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 60825-1:2014, EN 60825-1:2014)		
Aperture angle			
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	500 mm ... 2,100 mm [1]	500 mm ... 2,200 mm [1]	400 mm ... 1,600 mm [1]
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)		

[1] For details see reading field diagram.

Performance

Bar code types	Interleaved 2 of 5, all current code types, Codabar, Code 128, Code 39, Code 93, GS1-128 / EAN 128, UPC / GTIN / EAN
Print ratio	2:1 ... 3:1
No. of codes per scan	1 ... 20 (Standard decoder) 1 ... 6 (SMART decoder)
No. of codes per reading interval	1 ... 50 (auto-discriminating)
No. of characters per reading interval	5,000
No. of multiple readings	1 ... 100

Interfaces

Ethernet	✔, TCP/IP
Remark	Only with cloning plug I/O, CAN IN/OUT or CAN Redundant
Function	Host, AUX
Data transmission rate	10/100 MBit/s
EtherNet/IP™	✔
Remark	Only with cloning plug I/O, CAN IN/OUT or CAN Redundant
Data transmission rate	10/100 MBit/s
Serial	✔, RS-232, RS-422, RS-485
Remark	Only with cloning plug D-Sub and Ethernet
Function	Host, AUX (only RS-232)
Data transmission rate	0.3 kBaud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)
CAN	✔
Function	SICK CAN sensor network CSN (master/slave, multiplexer/server)
Data transmission rate	20 kbit/s ... 1 Mbit/s

PROFINET	✔
Remark	Only with cloning plug I/O, CAN IN/OUT or CAN Redundant
Function	PROFINET Dual Port (optional via external connection module CDF600-2)
PROFIBUS DP	✔
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
DeviceNet™	✔
Type of fieldbus integration	Optional, over 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))
Operating elements	2 buttons
Parameter storage	Integrated in cloning plug
Configuration software	SOPAS ET

Mechanics/electronics

Electrical connection	Depending on the cloning plug used
Operating voltage	18 V DC ... 30 V DC 21,6 V DC ... 28,8 V DC (with heating)
Power consumption	15 W ... 17 W 78 W ... 80 W (with heating)
Housing	Aluminum die cast
Housing color	Light blue (RAL 5012)
Electrical safety	In accordance with UL 60950-1 certification
Weight	
Front	1,500 g
Oscillating mirror	2,200 g
Dimensions (L x W x H)	
Front	117 mm x 117 mm x 94 mm
Oscillating mirror	182 mm x 128 mm x 97 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 –35 °C ... +35 °C (with heating)
Storage temperature	–20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	2,000 lx, on bar code

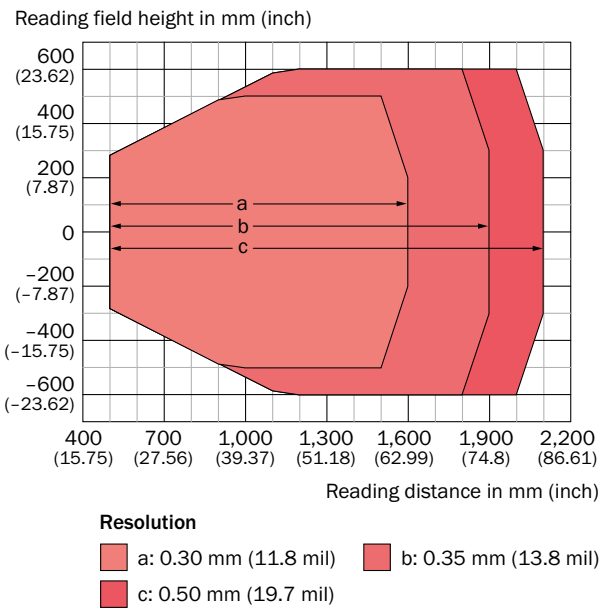
Ordering information

- **Focus:** Auto focus
- **Connection type:** depending on the cloning plug used
- **Enclosure rating:** IP65
- **Scanner design:** Line scanner

Version	Front screen	Heating	Reading field	Type	Part no.
CLV690-0/1 Standard Density	Glass	–	Front	CLV690-0000	1056600
		✔	Front	CLV690-0001	1056602
		–	Oscillating mirror	CLV690-1000	1056601
		✔	Oscillating mirror	CLV690-1001	1056603
	Plastic	–	Front	CLV690-0010	1056614
CLV691-0/1 Low Density	Glass	–	Front	CLV691-0000	1056604
		✔	Front	CLV691-0001	1056606
		–	Oscillating mirror	CLV691-1000	1056605
		✔	Oscillating mirror	CLV691-1001	1056607
CLV692-0/1 High Density	Glass	–	Front	CLV692-0000	1056608
		✔	Front	CLV692-0001	1056610
		–	Oscillating mirror	CLV692-1000	1056609
		✔	Oscillating mirror	CLV692-1001	1056611

Reading field diagrams

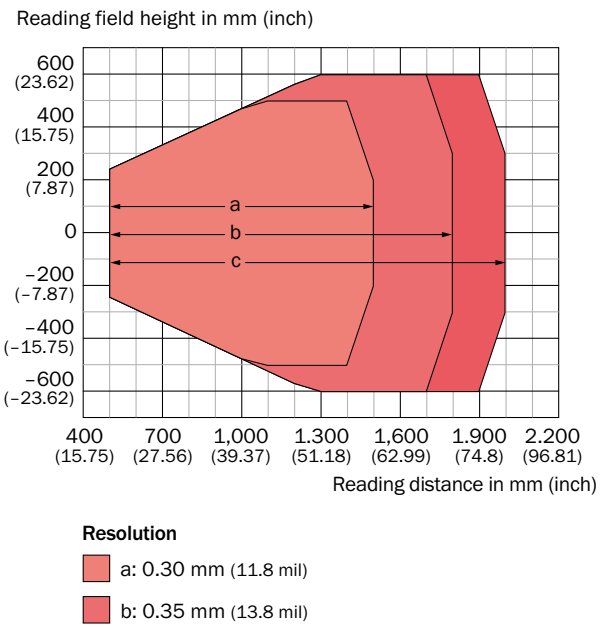
CLV690-0/1 Standard Density, front



Resolution

a: 0.30 mm (11.8 mil)
b: 0.35 mm (13.8 mil)
c: 0.50 mm (19.7 mil)

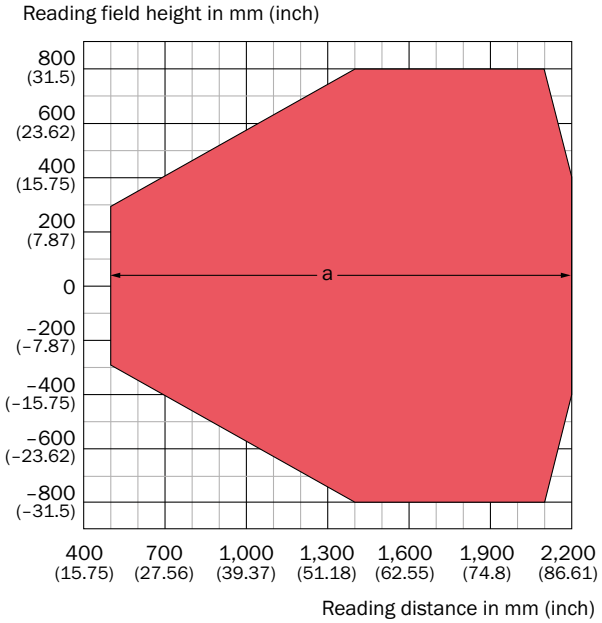
CLV690-0/1 Standard Density, Oscillating mirror



Resolution

a: 0.30 mm (11.8 mil)
b: 0.35 mm (13.8 mil)
c: 0.50 mm (19.7 mil)

CLV691-0/1 Low Density, front

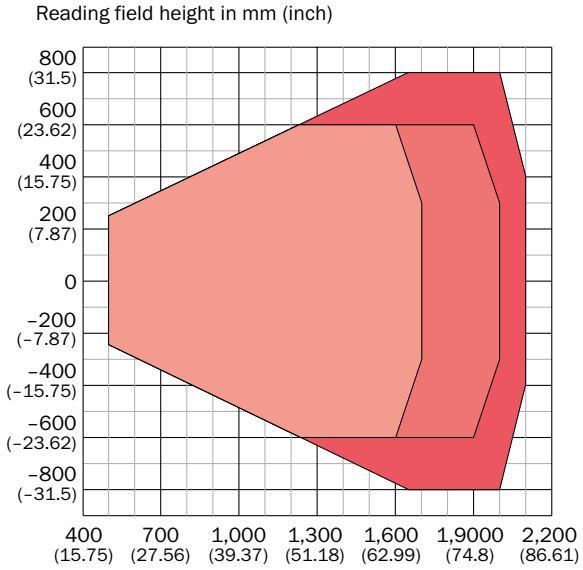


Resolution

a: 0.50 mm (19.7 mil)

Tilt ±15°, typical specification

CLV691-0/1 Low Density, Oscillating mirror



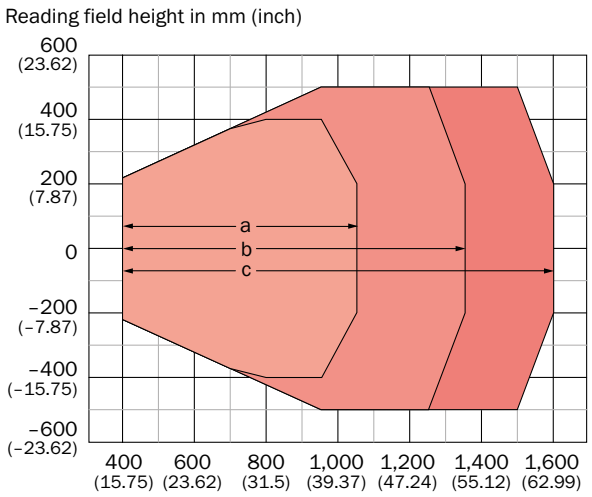
Resolution 0.5 mm (19.7 mil)

Tilt ± 45°

Tilt ± 30°

Tilt ± 15° (typical values)

CLV692-0/1 High Density, front



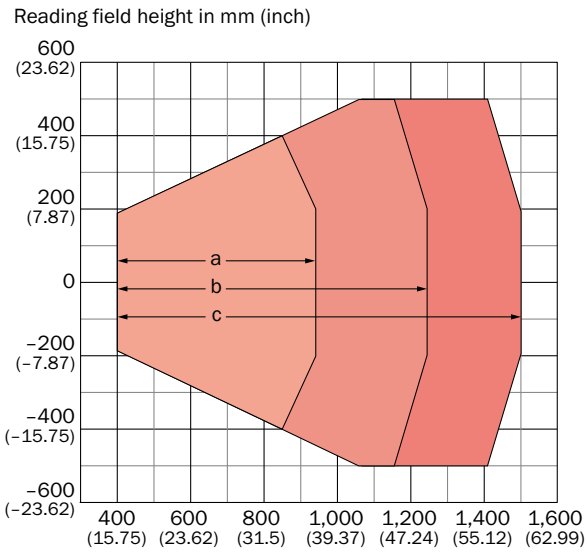
Resolution

a: 0.20 mm (7.9 mil)

b: 0.25 mm (9.8 mil)

c: 0.30 mm (11.8 mil)

CLV692-0/1 High Density, Oscillating mirror



Resolution

a: 0.20 mm (7.9 mil)

b: 0.25 mm (9.8 mil)

c: 0.30 mm (11.8 mil)

Recommended accessories

Mounting systems

Mounting brackets and plates

	Brief description	Part no.
	Simple mounting bracket	2013824

Terminal and alignment brackets

	Brief description	Part no.
	Quick-action lock system	2016110

Connection systems

Plug connectors and cables

	Signal type/ application	Connection type head A	Connection type head B	Description	Cable length	Part no.
	Power, Ethernet, serial, CAN, digital I/Os	Male connector, M12, 17-pin Male connector, M12, 5-pin Female connector, M12, 4-pin	–	Required for connecting the CLV69x to the CDM420-006/7/8, CDB650 and CDF600-2	–	2062452
	Power, CAN, Ethernet	Male connector, M12, 5-pin	Female connector, M12, 5-pin	Required for connecting the CLV69x in systems and in the case of CAN In/Out	–	2074708
	Power, CAN	Female connector (AUX), M12, 5-pin Female connector, M12, 5-pin Male connector, M12, 5-pin	–	Required for connecting the CLV69x in systems and in the case of CAN In/Out	–	2062453
	Power, serial, CAN, digital I/Os	Male connector, D-Sub-HD, 15-pin Female connector, D-Sub-HD, 15-pin	–	Required for connecting the CLV69x in the CLV490; takes the place of a D-Sub HD adapter for connecting a CLV490 modular hood	–	2062450
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, twisted pair, AWG26, CAT5 (100 Mbit/s)	2 m	6034414
	Power, serial, CAN, digital I/Os	Female connector, M12, 17-pin, straight, A-coded	Male connector, M12, 17-pin, straight, A-coded	To connection module CDB650, 17-wire, suitable for 2 A	2 m	6052286
		Female connector, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	2 m	2055419
		Female connector, M12, 17-pin, straight, A-coded	Male connector, M12, 17-pin, straight, A-coded	Suitable for 2 A	2 m	6053230
	Power	Female connector, M12, 5-pin, straight	Open cable ends	3-wire	5 m	6053224

4D*pro*Connectivity

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.	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 one identification sensor to PROFINET-IO networks (interface 2 x M12, female connector/female connector, 4-pin)	CDF600-2200	1062460
	Modular connection module for one sensor, 2 A fuse	CDM420-0006	1058634

For more accessories, see ➜ 88

Cloning plugs

Cloning plug inputs and outputs

Brief description	Part no.	Sensor (Sensor 1)	IN0 (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 (with CDM420-0006 connection module)	2062452	●	●	–	–	–	–	●	●	●	●	●	●	●	–	●
CAN redundant Ethernet clone plug [1]	2074710	–	–	–	–	–	–	–	–	–	–	–	–	●	●	●
CAN IN/OUT Ethernet clone plug	2074708	–	–	–	–	–	–	–	–	–	–	–	–	●	–	●
CAN IN/OUT clone plug	2062453	–	–	–	●	–	–	–	–	–	–	●	–	●	–	–
CAN redundant clone plug [1]	2062454	–	–	–	●	–	–	–	–	–	–	●	–	●	●	–

[1] No heating.

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Assignment of connection to cloning plug

	Brief description	Type	Part no.	D-sub clone plug	I/O Ethernet clone plug	CAN redundant Ethernet clone plug	CAN IN/OUT Ethernet clone plug	CAN IN/OUT clone plug	CAN redundant clone plug
	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 Lector65x	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	–	●	–	–	–	–
	Fieldbus proxy/gateway for connecting one identification sensor to PROFINET networks (interface 2 x M12, female connector/female connector, 4-pin)	CDF600-2200	1062460	–	●	–	–	–	–
	Fieldbus proxy/gateway for connecting one identification sensor to PROFINET networks (interface 2 x RJ45 AIDA, female connector/female connector, 4-pin)	CDF600-2201	1063390	–	●	–	–	–	–
	Modular connection module for one sensor, 2 A fuse	CDM420-0006	1058634	–	●	–	–	–	–
	Modular connection module for two sensors, 2 A fuse	CDM420-0007	1060324	–	●	–	–	–	–
	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	●	–	–	–	–	–
	Modular system controller	MSC800	On request	–	–	●	●	●	●

Bar code scanners CLV6 series

Mounting systems

Mounting brackets and plates

	Brief description	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Mounting plate	2068602	–	–	–	–	–	–	●	–	–	–	–
	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	–	–	●	–	–	–	–	●	●	●	–
 Illustration may differ	Hanger-shaped mounting bracket, thermally isolated for use with heating devices	2050705	–	–	●	–	–	–	–	●	●	●	–
	Bracket with adapter board	2068605	–	–	–	–	–	–	●	–	–	–	–
	Bracket	2068600	–	–	–	–	–	–	●	–	–	–	–
	Mounting support with integrated vibration/shock absorption for suspended mounting (absorber elements above the CLV)	2088163	–	–	–	–	–	–	–	–	–	–	●
	Mounting bracket with integrated vibration/shock absorption for mounting the scanner on a manned forklift truck, for example (mounting in the direction of travel, on the left-hand side), to use with ball-and-socket bracket 2014726	2017628	–	–	–	–	–	–	–	–	–	–	●
	Simple mounting bracket	2013824	–	–	–	–	–	–	–	–	–	–	●
	Articulated mounting bracket, self-locking	2018435	–	–	–	–	–	–	–	–	–	–	●
	Universal clamping bracket for rod mounting, diameter upto 12 mm	2042802	–	●	–	●	●	●	–	–	–	–	–
	Universal clamping bracket for rod mounting, diameter 12 mm	2076472	–	●	–	●	●	●	–	–	–	–	–

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Terminal and alignment brackets

	Brief description	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Articulated bracket for mounting on mirror hood	2046822	–	●	–	●	●	●	–	●	●	●	–
	Ball-and-socket bracket for mounting	2014726	–	–	–	–	–	–	–	–	–	–	●
	Rod clamp for mirror hood	2048633	–	●	–	●	●	●	–	●	●	●	–
	Rod clamp for outer diameter of 12 ... 20 mm	2042801	–	–	●	–	–	–	–	●	●	●	–
 Illustration may differ	Rod clamp for outer diameter of 12 ... 20 mm, thermally isolated for use with heating devices	2058082	–	–	●	–	–	–	–	●	●	●	–
	Rod clamp with mounting bracket, for a diameter of 12 mm ... 20 mm	2068599	–	–	–	–	–	–	●	–	–	–	–
	Rod clamp with mounting plate, for a diameter of 12 mm ... 20 mm	2068601	–	–	–	–	–	–	●	–	–	–	–
	Rod clamp with mounting bracket and quick clamp, for a diameter of 12 mm ... 20 mm	2062830	–	–	–	–	–	–	–	–	–	–	●
	Quick-action lock system	2025526	–	●	●	●	●	●	–	●	●	●	–
		2016110	–	–	–	–	–	–	–	–	–	–	●

Device protection (mechanical)

	Brief description	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	IP-65 sealing rubber for extension cables with 15-pin D-Sub plug connection	4038847	–	●	–	●	●	●	–	●	●	●	–

4D*pro* Connectivity

Modules

	Brief description	Type	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	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.	CDB650-204	1064114	–	–	–	–	–	●	●	–	–	●	●
	Fieldbus proxy/gateway for connecting a sensor to EtherCAT networks	CDF600-0300	1052291	–	●	–	●	●	●	●	●	●	●	–
	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	–	●	–	●	●	●	●	●	●	●	●
	Fieldbus proxy/gateway for connecting one identification sensor to PROFINET-IO networks (interface 2 x M12, female connector/female connector, 4-pin)	CDF600-2200	1062460	–	●	–	●	●	●	●	●	●	●	●
	Fieldbus proxy/gateway for connecting an identification sensor to PROFINET IO networks (interface 2 x RJ45 AIDA, female/female connector, 4-pin)	CDF600-2201	1063390	–	●	–	●	●	●	●	●	●	●	●
	Modular connection module for one sensor	CDM420-0001	1025362	–	●	–	●	●	●	●	●	●	●	–
	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	–	●	–	●	●	●	●	●	●	●	–

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	Brief description	Type	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
 Illustration may differ	Kit: Modular connection module for one sensor, Host and AUX interface available on front plate, CMP400 power supply, 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/CDB650/CDM42x	CMC600-101	1042259	–	●	–	●	●	●	●	●	●	●	●
	Sensor Integration Machine Application Development Kit: SICK AppStudio Communication interfaces: Ethernet, PROFINET, EtherNet/IP™, EtherCAT®, IO-Link, Serial, CAN, USB	SIM4000-0P03G10	1078787	–	–	–	–	●	●	–	–	●	●	●

Connection systems

Adapters and distributors

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
 Illustration may differ	Male connector, D-Sub-HD, 15-pin, straight	Female connector, D-Sub-HD, 15-pin, straight	The adapter adapts the CLV61x to the electrical connection diagram previously used for the CLV41x.	–	2068506	–	●	–	–	–	–	–	–	–	–	–
 Illustration may differ	Male connector, D-Sub-HD, 15-pin, straight	Female connector, D-Sub-HD, 15-pin, straight	The adapter adapts the CLV62x to the electrical connection diagram previously used for the CLV41x	–	2072514	–	–	–	●	●	●	–	–	–	–	–
	–	–	male connector M12, 4-pin, straight, A-coded to 2 x female connector M12, 5-pin, straight, A-coded, for CLV61x Dual Port with hardware input	–	6058934	–	–	●	–	–	–	–	–	–	–	–

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	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, 5-wire	0.5 m	6027647	–	–	–	–	–	–	–	–	–	–	●
	Male connector, M12, 5-pin	Male connector, M12, 5-pin Female connector, M12, 5-pin	Y-CAN cable	–	6042167	–	–	–	–	–	–	–	–	–	–	●

Plug connectors and cables

- **Signal type/application:** Power

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Cable	Open cable ends	Black AS-i flat cable for looping in the power supply to 4Dpro Ethernet sensors, 2-wire, by the meter, For use with connection clip 6022472	–	6022463	–	–	●	–	●	●	–	–	●	●	–
	Connection clip, M12	–	AS-i clip for connection on black AS-i flat cable	–	6022472	–	–	●	–	●	●	–	–	●	●	–
	Female connector, M12, 5-pin, straight	Open cable ends	3-wire	5 m	6053224	–	–	–	–	–	–	–	–	–	–	●
				10 m	6053225	–	–	–	–	–	–	–	–	–	–	●
	Female connector, M12, 4-pin, straight, A-coded	Male connector, M12, 4-pin, straight, A-coded	For connecting to black AS-i flat ribbon cable for supplying power to CLV61x Dual Port, silicone-free, free of paint wetting impairment substances	2 m	6060279	–	–	●	–	–	–	–	–	–	–	–

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	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	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 4Dpro-Ethernet sensors, silicone-free, free of paint wetting impairment substances	1 m	6044572	–	–	–	–	●	–	–	–	●	●	–
				2.5 m	6044573	–	–	–	–	●	–	–	–	●	●	–
	Female connector, M12, 17-pin, straight	Male connector, M12, 4-pin, straight	4-pin for connecting one 4Dpro sensor, 17-pin to AS-i clip on black AS-i flat cable, silicone-free, free of paint wetting impairment substances	1 m	6044574	–	–	–	–	–	●	–	–	–	–	–
				2.5 m	6044575	–	–	–	–	–	●	–	–	–	–	–

- **Signal type/application:** serial

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Female connector, D-Sub, 9-pin, straight, A-coded	Male connector, M12, 5-pin, straight, A-coded	Configuration cable for connection to the AUX interface of cloning plugs 2062453 and 2062454, 3-wire	5 m	2027955	–	–	–	–	–	–	–	–	–	–	●
	Female connector, D-Sub, 9-pin, straight	Open cable ends	3-wire	3 m	2020319	–	●	–	●	●	●	–	●	●	●	●
		Female connector, D-Sub, 9-pin, straight	For PC connection	3 m	2014054	–	●	–	●	●	●	–	●	●	●	●

- **Signal type/application:** CAN

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Female connector, M12, 5-pin, straight	Open cable ends	–	1 m	6053723	–	–	–	–	–	–	–	–	–	–	●
				3 m	6053724	–	–	–	–	–	–	–	–	–	–	●
				5 m	6053720	–	–	–	–	–	–	–	–	–	–	●
				10 m	6053721	–	–	–	–	–	–	–	–	–	–	●
	Male connector, M12, 5-pin, straight	–	CAN male connector, with terminating resistor	–	6021167	–	–	–	–	–	–	–	–	–	–	●

- **Signal type/application:** Power, serial, CAN, digital I/Os

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Female connector, M12, 12-pin, straight	Open cable ends	12-wire, UL	5 m	6034605	–	–	–	–	●	–	–	–	●	–	–
	Female connector, M12, 12-pin, straight, A-coded	Open cable ends	Suitable for 2 A, suitable for refrigeration	5 m	2075219	–	–	–	–	●	–	–	–	●	–	–
	Female connector, M12, 17-pin, straight, A-coded	Open cable ends	17-wire, suitable for 2 A, Changed color coding of the flying leads, stripped	2 m	2081094	–	–	–	–	–	●	●	–	–	●	●
				3 m	2070425	–	–	–	–	–	●	●	–	–	●	●
				5 m	2070426	–	–	–	–	–	●	●	–	–	●	●
				10 m	2070427	–	–	–	–	–	●	●	–	–	●	●
			Suitable for 2 A, suitable for refrigeration	5 m	2075220	–	–	–	–	–	●	–	–	–	●	●

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	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Female connector, M12, 12-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	0.35 m	2047698	–	–	–	–	●	–	–	–	●	–	–
				0.9 m	2042916	–	–	–	–	●	–	–	–	●	–	–
				2 m	2041834	–	–	–	–	●	–	–	–	●	–	–
				3 m	2042914	–	–	–	–	●	–	–	–	●	–	–
				5 m	2042915	–	–	–	–	●	–	–	–	●	–	–
				3 m	2061604	–	–	–	–	●	–	–	–	●	–	–
	Female connector, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	0.35 m	2056184	–	–	–	–	–	●	–	–	–	●	●
				0.9 m	2049764	–	–	–	–	–	●	–	–	–	●	●
				2 m	2055419	–	–	–	–	–	●	–	–	–	●	●
				3 m	2055420	–	–	–	–	–	●	–	–	–	●	●
				5 m	2055859	–	–	–	–	–	●	–	–	–	●	●
				3 m	2061605	–	–	–	–	–	●	–	–	–	●	●
	Female connector, M12, 17-pin, straight, A-coded	Male connector, M12, 17-pin, straight, A-coded	To connection module CDB650, 17-wire, suitable for 2 A	0.9 m	6052945	–	–	–	–	–	●	●	–	–	●	●
				2 m	6052286	–	–	–	–	–	●	●	–	–	●	●
				3 m	6051194	–	–	–	–	–	●	●	–	–	●	●
				5 m	6051195	–	–	–	–	–	●	●	–	–	●	●
			Suitable for 2 A, suitable for refrigeration	2 m	6053230	–	–	–	–	–	●	–	–	–	●	●
				3 m	6053231	–	–	–	–	–	●	–	–	–	●	●
				5 m	6053232	–	–	–	–	–	●	–	–	–	●	●
	Female connector, D-Sub-HD, 15-pin, straight	Open cable ends	Extension cable, 15-wire, AWG26	2 m	2043413	–	●	–	●	●	●	–	●	●	●	–
		Male connector, D-Sub-HD, 15-pin, straight	Extension cable, 15-wire, AWG26	2 m	6054331	–	●	–	●	●	●	–	●	●	●	–
				3 m	6054332	–	●	–	●	●	●	–	●	●	●	–
	Male connector, female connector, cable, D-Sub-HD	Plug housing, D-Sub-HD	With EEPROM parameter store	0.8 m	2061409	–	–	–	–	–	–	–	–	–	–	●
				3 m	2034150	–	–	–	–	–	–	–	–	–	–	●
				5 m	2049613	–	–	–	–	–	–	–	–	–	–	●
				10 m	2035119	–	–	–	–	–	–	–	–	–	–	●
				15 m	2033127	–	–	–	–	–	–	–	–	–	–	●
	Male connector, D-Sub-HD, 15-pin Female connector, D-Sub-HD, 15-pin	Male connector, D-Sub-HD, 15-pin	To connection module CDM42x, 15-wire, without EEPROM parameter store	3 m	2027046	–	–	–	–	–	–	–	–	–	–	●

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Male connector, female connector, D-Sub-HD, 15-pin	Male connector, D-Sub-HD, 15-pin Female connector	To connection module CDM490, with EEPROM parameter store	1 m	2021806	–	–	–	–	–	–	–	–	–	–	●
				3 m	2020307	–	–	–	–	–	–	–	–	–	–	●
	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, 13-/15-wire	5 m	2022884	–	–	–	–	–	–	–	–	–	–	●
	Male connector, D-Sub-HD, 15-pin Female connector, D-Sub-HD, 15-pin	Male connector, D-Sub-HD, 15-pin Female connector, D-Sub-HD, 15-pin	To connection module CDM490, with plug housing and parameter store (EEPROM)	3 m	2030065	–	–	–	–	–	–	–	–	–	–	●
				10 m	2031034	–	–	–	–	–	–	–	–	–	–	●
		–	Required for connecting the CLV69x in the CLV490; takes the place of a D-Sub HD adapter for connecting a CLV490 modular hood	–	2062450	–	–	–	–	–	–	–	–	–	–	●

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- **Signal type/application:** Power, CAN

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Female connector, M12, 5-pin, straight, A-coded	Male connector, M12, 5-pin, straight, A-coded	CAN cable	1 m	6021164	–	–	–	–	–	–	–	–	–	–	●
				3 m	6021165	–	–	–	–	–	–	–	–	–	–	●
				5 m	6021168	–	–	–	–	–	–	–	–	–	–	●
	Female connector (AUX), M12, 5-pin Female connector, M12, 5-pin Male connector, M12, 5-pin	–	Required for connecting the CLV69x in systems and in the case of CAN In/Out	–	2062453	–	–	–	–	–	–	–	–	–	–	●
	Male connector, M12, 5-pin Male connector, M12, 5-pin Female connector (AUX), M12, 5-pin	–	Required for connecting the CLV69x in redundant systems	–	2062454	–	–	–	–	–	–	–	–	–	–	●

- **Signal type/application:** Power, Ethernet, serial, CAN, digital I/Os

	Connection type head A	Cable	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Male connector, M12, 17-pin Male connector, M12, 5-pin Female connector, M12, 4-pin	Required for connecting the CLV69x to the CDM420-006/7/8, CDB650, and CDF600-2	2062452	–	–	–	–	–	–	–	–	–	–	●

- **Signal type/application:** Power, CAN, Ethernet

	Connection type head A	Connection type head B	Cable	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Male connector, M12, 5-pin	Female connector, M12, 5-pin	Required for connecting the CLV69x in systems and in the case of CAN In/Out	2074708	–	–	–	–	–	–	–	–	–	–	●
		Male connector, M12, 5-pin	Required for connecting the CLV69x in redundant systems	2074710	–	–	–	–	–	–	–	–	–	–	●

- **Signal type/application:** PROFINET

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Male connector, M12, 4-pin, angled, D-coded	Male connector, M12, 4-pin, straight	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6048250	–	–	●	–	●	●	–	–	●	●	–
				5 m	6048251	–	–	●	–	●	●	–	–	●	●	–
				10 m	6048252	–	–	●	–	●	●	–	–	●	●	–
	Male connector, M12, 4-pin, straight, D-coded	Male connector, M12, 4-pin, straight	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6048241	–	–	●	–	●	●	–	–	●	●	–
				5 m	6048242	–	–	●	–	●	●	–	–	●	●	–
				10 m	6048243	–	–	●	–	●	●	–	–	●	●	–
	Male connector, M12, 4-pin, angled, D-coded	Male connector, M12, 4-pin, angled, D-coded	PUR, halogen-free, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6050635	–	–	●	–	●	●	–	–	●	●	–
				5 m	6050636	–	–	●	–	●	●	–	–	●	●	–
				10 m	6050637	–	–	●	–	●	●	–	–	●	●	–
	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 4-pin, straight	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6048244	–	–	●	–	●	●	–	–	●	●	–
		Male connector, RJ45, 4-pin, straight	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	5 m	6048245	–	–	●	–	●	●	–	–	●	●	–
				10 m	6048246	–	–	●	–	●	●	–	–	●	●	–
		Open cable ends	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6048247	–	–	●	–	●	●	–	–	●	●	–
				5 m	6048248	–	–	●	–	●	●	–	–	●	●	–
				10 m	6048249	–	–	●	–	●	●	–	–	●	●	–
	Male connector, M12, 4-pin, angled, D-coded	Open cable ends	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6048256	–	–	●	–	●	●	–	–	●	●	–
				5 m	6048257	–	–	●	–	●	●	–	–	●	●	–
				10 m	6048258	–	–	●	–	●	●	–	–	●	●	–
				25 m	6048259	–	–	●	–	●	●	–	–	●	●	–
	Male connector, RJ45, 4-pin, straight	Male connector, M12, 4-pin, angled, D-coded	PVC, shielded, 4 x 0.34 mm², Ø 6.5 mm, 4-wire, CAT5, CAT5e	2 m	6048253	–	–	●	–	●	●	–	–	●	●	–
				5 m	6048254	–	–	●	–	●	●	–	–	●	●	–
				10 m	6048255	–	–	●	–	●	●	–	–	●	●	–

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- **Signal type/application:** Ethernet

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Male connector, M12, 4-pin, D-coded	Male connector, M12, 4-pin, D-coded	4-wire, twisted pair	2 m	6034420	–	–	–	–	●	●	–	–	●	●	●
				3 m	6034421	–	–	–	–	●	●	–	–	●	●	●
				5 m	6034422	–	–	–	–	●	●	–	–	●	●	●
	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, twisted pair, AWG26, CAT5 (100 Mbit/s)	2 m	6034414	–	–	–	–	●	●	–	–	●	●	●
				3 m	6044400	–	–	–	–	●	●	–	–	●	●	●
				5 m	6034415	–	–	–	–	●	●	–	–	●	●	●
				10 m	6030928	–	–	–	–	●	●	–	–	●	●	●
				20 m	6036158	–	–	–	–	●	●	–	–	●	●	●
 Illustration may differ	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, Ecolab, AWG26	2 m	6050198	–	–	–	–	●	●	●	–	●	●	●
				3 m	6050199	–	–	–	–	●	●	●	–	●	●	●
				5 m	6050200	–	–	–	–	●	●	●	–	●	●	●
				10 m	6050201	–	–	–	–	●	●	●	–	●	●	●
				20 m	6050596	–	–	–	–	●	●	●	–	●	●	●

- **Signal type/application:** USB 2.0

	Connection type head A	Connection type head B	Cable length	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Male connector, USB-A	Male connector, Micro-B	2 m	6036106	–	–	●	–	–	–	–	–	–	–	–

- **Signal type/application:** RS-232, USB

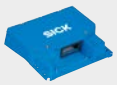
	Connection type head A	Connection type head B	Cable	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Male connector, D-Sub, 9-pin, straight	Male connector, USB-A, straight	Converter RS-232 to USB (if no RS-232 interface is available with the PC)	6042499	–	●	–	●	●	●	–	●	●	●	●

Reflectors and optics

Optics cloths

	Brief description	Type	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Cloth for cleaning the front screen	Lens cloth	4003353	●	●	●	●	●	●	●	●	●	●	●

Mirror adapters

	Brief description	Type	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	External mirror hood (105°) for reducing reading distance between two closely spaced conveyor belts	Mirror hood	2046811	–	●	–	●	●	●	–	●	●	●	–
	Standard mirror shield with glass front window (for reducing the mounting area)	Mirror hood	2032070	–	–	–	–	–	–	–	–	–	–	●
	Mirror shield with plastic front window (for reducing the mounting area)	Mirror hood	2055917	–	–	–	–	–	–	–	–	–	–	●

Further accessories

Cleaning agent

	Brief description	Type	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
	Plastic cleaner and care product, anti-static, 0.5 liter	Plastic cleaner	5600006	●	●	●	●	●	●	●	●	●	●	●

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Storage media

	Brief description	Type	Part no.	CLV60x	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet 12-pin	CLV62x Ethernet 17-pin	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet 12-pin	CLV63x-65x Ethernet 17-pin	CLV69x
 Illustration may differ	microSD memory card with 1 GB for industrial use	microSD memory card	4051366	–	–	–	–	–	–	–	●	●	●	–

Services

Brief description	Part no.	CLV60x	CLV61x	CLV61x Dual Port	CLV62x	CLV63x	CLV64x	CLV65x	CLV69x
Performance check CLV4xx/CLV6xx	1682028	●	●	●	●	●	●	●	●
Maintenance CLV4xx/CLV6xx	1611420	●	●	●	●	●	●	●	●
Commissioning CLV61x ... CLV64x	1681925	●	●	●	●	●	●	–	–
Commissioning CLV65x ... CLV69x	1681926	–	–	–	–	–	–	●	●
Three-year extended warranty for Identification & Measuring products	1680670	●	●	●	●	●	●	●	●
Five-year extended warranty for Identification & Measuring products	1680671	●	●	●	●	●	●	●	●

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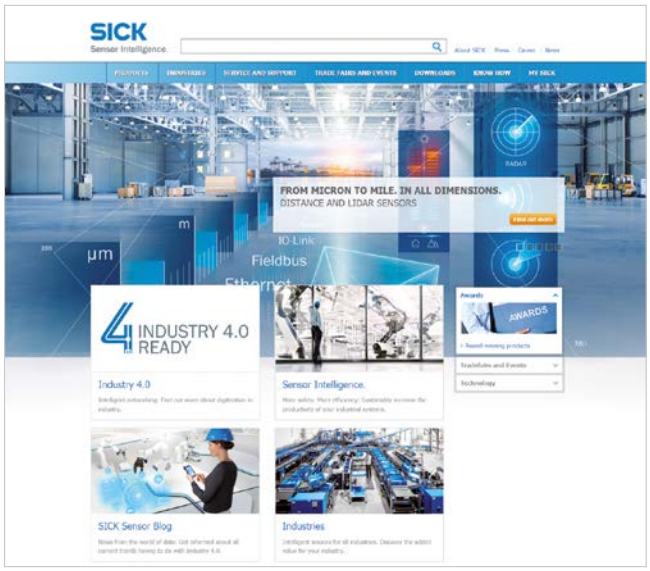

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