



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.



→ 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 part suppliers



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

Document handling



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

Industrial vehicles



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

Clinical analysis



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

Courier, express post, and cargo (CEP)



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

Storage and conveyor systems



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

Food



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

Packaging



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

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Example applications

Forklift trucks: pallet identification



Customer benefits

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

Ideal product solution

CLV69x. Page 76



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 68



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 36



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 76



Storage and conveyor systems: tote identification



Customer benefits

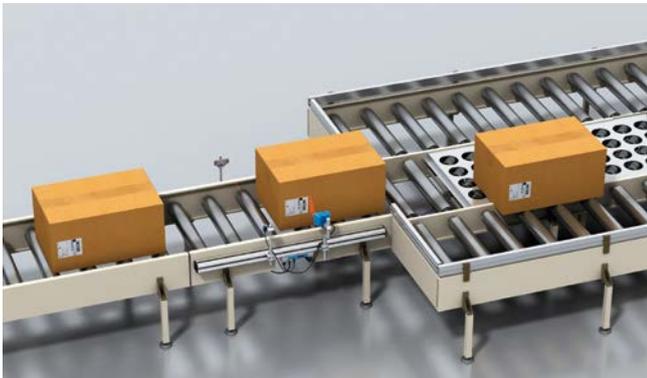
- Simple and fast integration into existing conveyor systems thanks to the optimized reading field
- Flexible fieldbus connection with optional external CDF600-2 PROFIBUS DP / CDF600-2 PROFINET connection module or with Dual Port PROFINET on board

Ideal product solutions

- CLV615 Page 22
- CLV61x Dual Port . . . Page 30



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 46
- CLV64x. Page 58



Clinical analysis: reading bar codes in samples



Customer benefits

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

Ideal product solution

- CLV61x. Page 22



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 68
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WIDE RANGE OF MODELS

VERSIONS WITHIN THE CLV6 SERIES

Designs



Front reading window



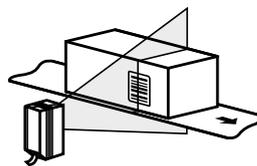
Side reading window, light emission below 105°



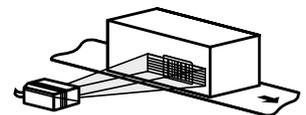
Side reading window with oscillating mirror



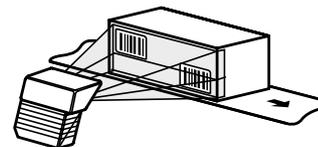
Scanning methods



Line scanner – for reading in tilted positions



Raster scanner – for reading codes redundantly



Oscillating mirror – for reading on large surfaces

Please refer to the selection guide on page 18 onwards.

Flexible interface concept

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



Uniform configuration concept

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

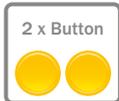
Statistics function

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

More information on page 16 onwards.

OUTSTANDING PRODUCT FEATURES

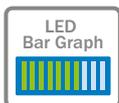
Two function buttons



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

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

LED bar graph



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

Intelligent auto-setup



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

microSD memory card



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

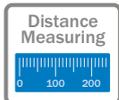
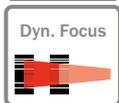


In addition to the Ethernet interface, the USB interface also enables configuration and observation of the scanner on-site.

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+



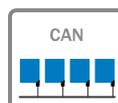
The CLV69x sets new benchmarks in computing power and reading performance. It also offers innovative analysis features, creating additional benefits.



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 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.

CLV61x, CLV61x DUAL PORT, CLV62x



RELIABLE DECODING, SIMPLE INTEGRATION

Display and status LEDs

For simple visual feedback.

SMART620 (code reconstruction)

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



USB interface

The CLV61x Dual Port features a USB auxiliary interface.



Flexible mounting

Space-saving solution in storage and conveyor systems.

Cable or male connector

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



Cable version



Ethernet version with 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 unit

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



Line scanner and/or raster scanner

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

Compact design

Maximum flexibility when mounting.

PRODUCT DETAILS

CLV61x	Page 22
CLV61x Dual Port	Page 30
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CLV63x to CLV65x



SIMPLE MOUNTING AND FIELDBUS CONNECTION

Integrated function buttons

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

SMART (code reconstruction)

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



microSD memory card



Cable or male connector

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



Swivel connector

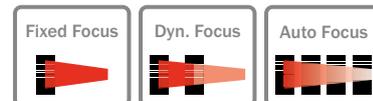
Exceptionally simple mounting thanks to the swivel connector and the SPEEDCON thread. As a result, the scanner can be integrated easily into your network, even under difficult installation conditions.

Flexible interface concept

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

Range of focus types

Fixed focus, dynamic focus, and auto-focus.



Line scanner and/or raster scanner

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

Oscillating mirror version and designs with side reading windows

Industry-tested IP 65 housing

Integrated event monitor

Analysis tool for commissioning support.

Remote monitoring with integrated web server

For monitoring the reading rate.

Auto-setup

For fast commissioning.

PRODUCT DETAILS

CLV63x	Page 46
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CLV69x



FLEXIBLE AND HIGH-PERFORMANCE AT THE HIGHEST LEVEL

Function buttons

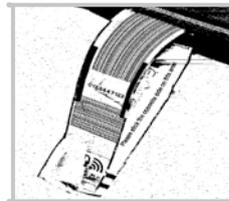
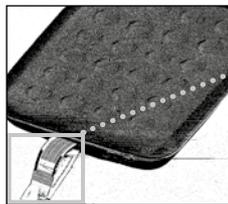
LED bar graph

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.

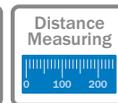


Flexible interface concept

Ethernet/IP, Ethernet TCP/IP, SICK CAN sensor network, 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

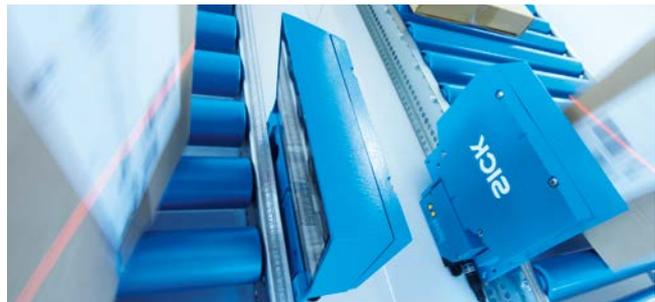
CLV69x Page 76

SPECIAL VERSIONS

FOR SPECIAL CHALLENGES

External mirror hood

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



IP 69K housing

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

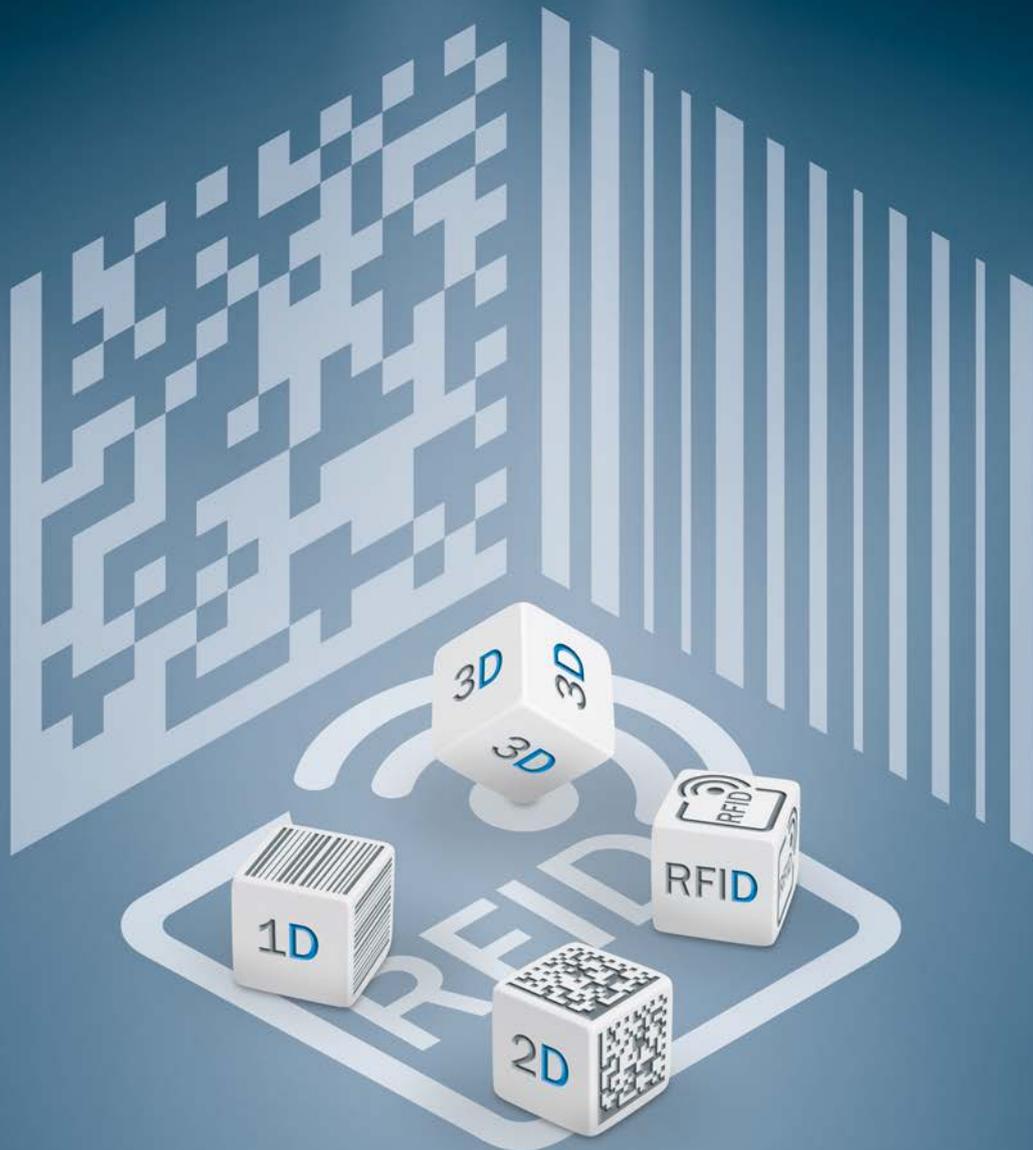


CLV6xx with heating

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



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



How you benefit from using 4Dpro 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 component variety and accessory parts



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



Ensure your investment over the long term

4Dpro – THE FLEXIBILITY YOU NEED

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

Standardized connectivity

All 4Dpro 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 4Dpro 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 4Dpro sensors can be analyzed quickly by an event monitor.

Common set of accessories

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

4Dpro sensors are identified by the 4Dpro mark



Bar code scanners



Image-based code readers



Vision sensors



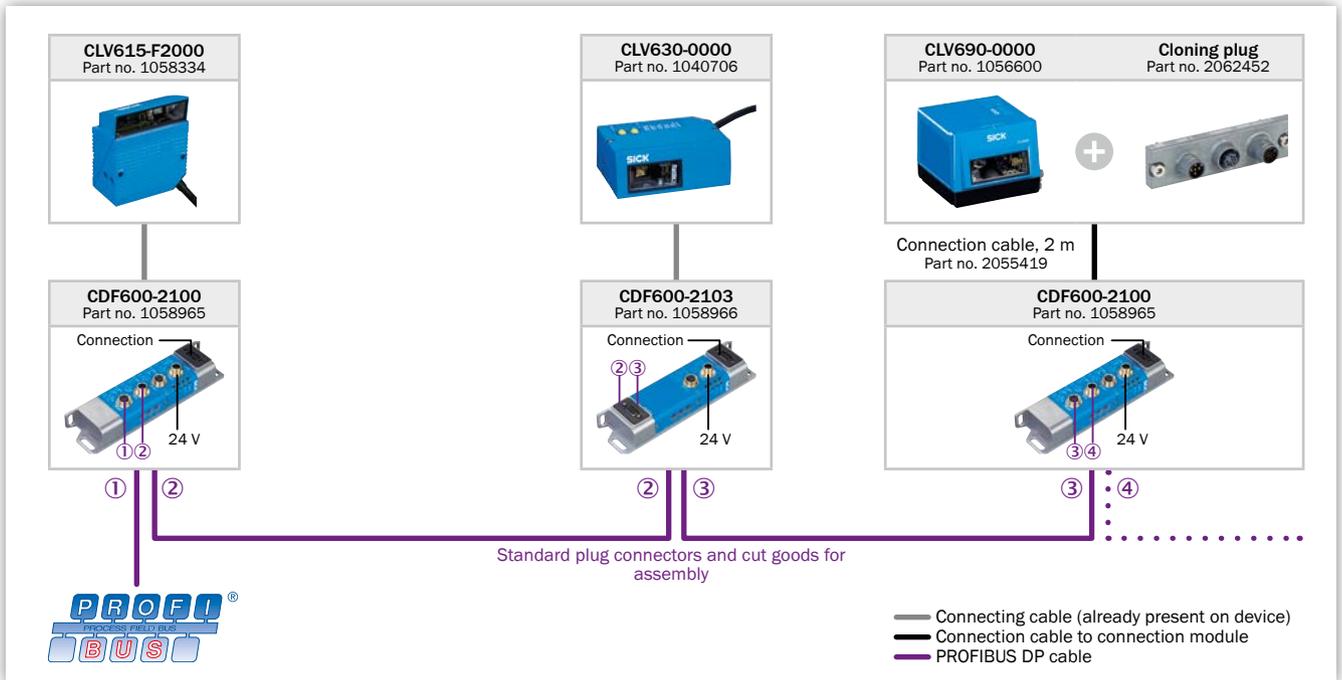
RFID read/write device

MODULAR CONNECTORS ALL FROM A SINGLE SOURCE

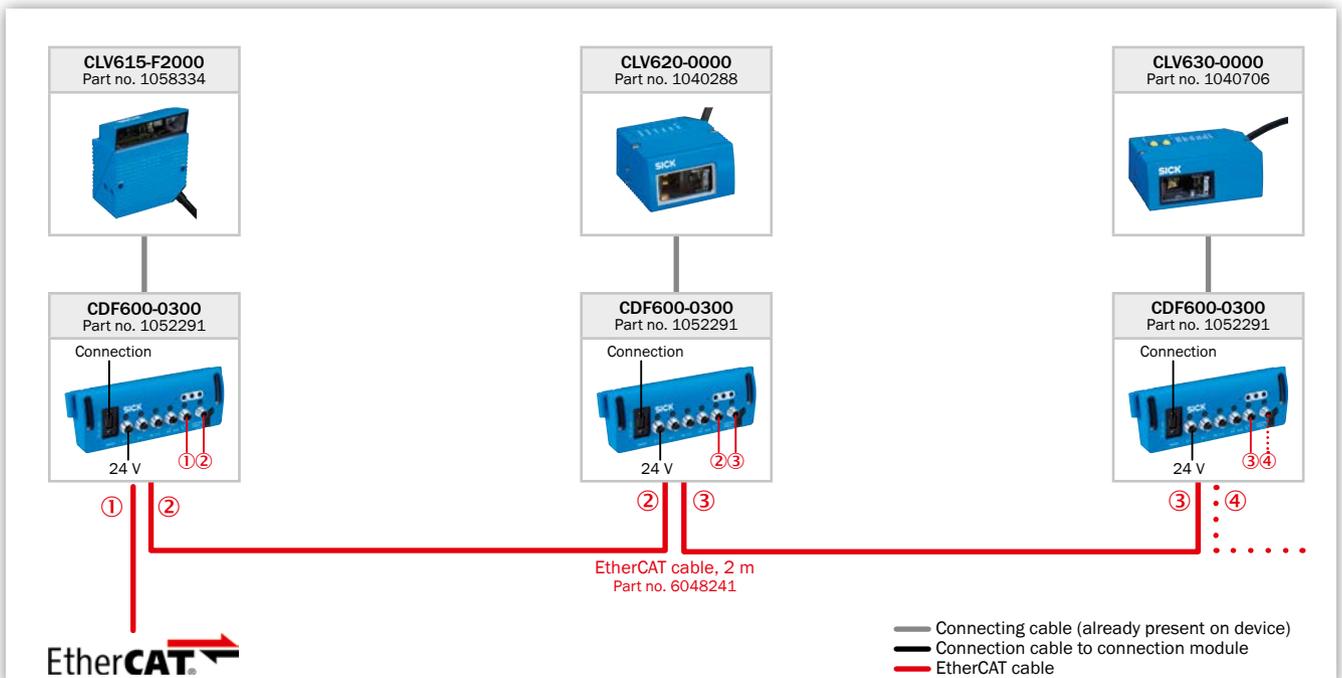
The ability to network sensors is becoming particularly important in the light of demands for cost-effective solutions. SICK has the tools to stand up to this challenge: Through the 4Dpro platform, it offers a product portfolio that is perfect for fieldbus systems.

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



SELECTION GUIDE

	Scanner design				Focus			SMART		
	Line scanner	Raster scanner	Oscillating mirror	Heating	Fixed focus	Dynamic focus control	Auto-focus	SMART620	SMART	SMART+
CLV61x										
CLV610 Mid Range	■	□			■			■		
CLV612 Short Range	■	□			■			■		
CLV615 Long Range	■	□			■			■		
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	■		■	□		■	■			■

- = 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	IP 69K	Integrated CAN bus	250	500	750	1,000	1,250	1,500	1,750	2,000	...			
									■	60 mm ... 365 mm (1 mm)										→ 22	
									■	43 mm ... 93 mm (0.2 mm)										→ 22	
									■	25 mm ... 330 mm (0.5 mm)										→ 22	
	■		■							25 mm ... 330 mm (0.5 mm)										→ 30	
	■		■							44 mm ... 683 mm (1 mm)										→ 30	
	■					■		□	■	60 mm ... 365 mm (1 mm)										→ 36	
	■					■		□	■	60 mm ... 730 mm (1 mm)										→ 36	
	■					■		□	■	55 mm ... 200 mm (0.5 mm)										→ 36	
	■	■			■	■	■	□	■	58 mm ... 742 mm (1 mm) ¹⁾										→ 46	
	■	■			■	■	■	□	■	87 mm ... 455 mm (0.5 mm) ¹⁾										→ 46	
	■	■			■	■	■	□	■	58 mm ... 288 mm (0.5 mm) ¹⁾										→ 46	
	■	■			■	■	■	□	■	58 mm ... 840 mm (1 mm) ¹⁾										→ 58	
	■	■			■	■	■	□	■	30 mm ... 338 mm (0.2 mm)										→ 58	
	■	■			■	■	■		■	125 mm ... 1,625 mm (1 mm) ¹⁾										→ 68	
	■	■			■	■	■		■	155 mm ... 930 mm (0.5 mm) ¹⁾										→ 68	
				■	■	■		■	■	500 mm ... 2,100 mm (0.5 mm)										→ 76	
				■	■	■		■	■	500 mm ... 2,200 mm (0.5 mm)										→ 76	
				■	■	■		■	■	400 mm ... 1,600 mm (0.3 mm)										→ 76	

¹⁾ Depending on scanner design.

PRODUCT FAMILY OVERVIEW

	 <p>CLV61x</p>	 <p>CLV61x Dual Port</p>	 <p>CLV62x</p>
	Reliable Decoding, Simple Integration	The network professional	Powerful scanner – flexible use

Technical data overview				
Focus	Fixed focus	Fixed focus	Fixed focus	
Aperture angle	≤ 50°	≤ 50°	≤ 50°	
Scanning frequency	400 Hz ... 1,000 Hz	400 Hz ... 1,000 Hz	400 Hz ... 1,200 Hz	
Code resolution	0.1 mm ... 1 mm	0.35 mm ... 1 mm	0.15 mm ... 1 mm	
Reading distance	25 mm ... 365 mm	25 mm ... 683 mm	45 mm ... 730 mm	
USB	-	✓	-	
Serial (RS-232, RS-422/-485)	✓ (only RS-232)	-	✓, AUX (only RS-232)	
Ethernet	- / ✓, Optional over external fieldbus module (CDF600-2)	✓	- / ✓	
CAN bus	✓	-	✓	
PROFIBUS DP	- / ✓, Optional over external fieldbus module (CDF600-2)	-	✓, Optional over external fieldbus module (CDF600-2)	
DeviceNet	-	-	✓, optional via external connection module (CDM + CMF)	
Weight	265 g / 295 g	310.5 g	205 g ... 854 g	

At a glance			
	<ul style="list-style-type: none"> • Optimized reading field for intralogistics applications • Available with SICK CAN sensor network • Configuration with SOPAS ET, 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 	<ul style="list-style-type: none"> • Straightforward PROFINET connection • Minimal cabling complexity thanks to line and ring topologies • PROFINET with integrated switch (Dual Port) • Optimal reading field for intralogistics applications • USB interface • Adjustable scanning frequency of up to 1,000 scans per second • Small, compact design 	<ul style="list-style-type: none"> • 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)

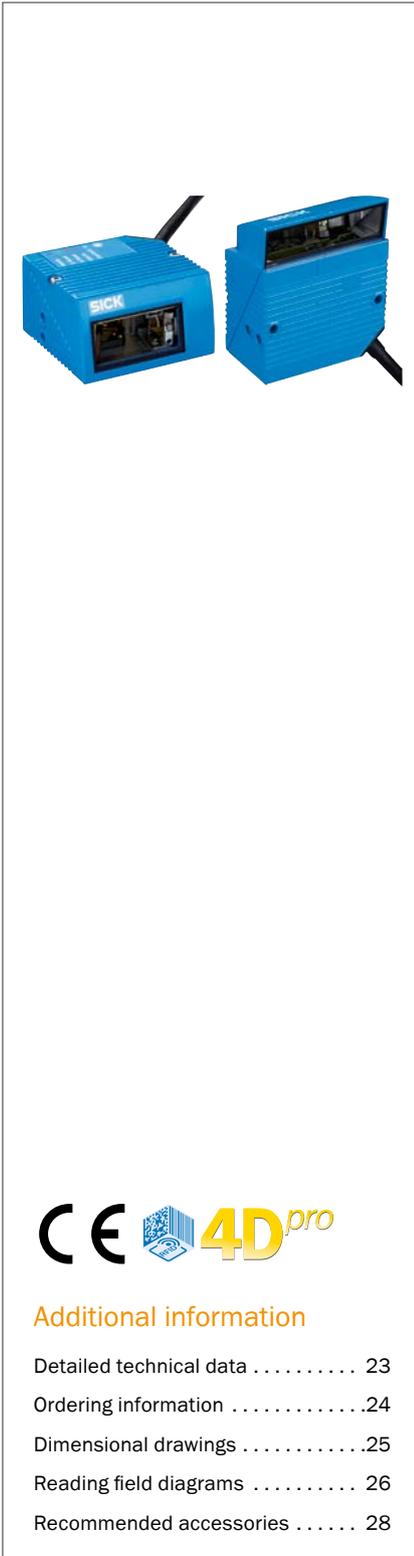
Detailed information	→ 22	→ 30	→ 36
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	Fixed focus ≤ 50°	Dynamic focus control ≤ 50°	Auto focus ≤ 50°	Auto focus ≤ 60° / ≤ 50°
	400 Hz ... 1,200 Hz	400 Hz ... 1,200 Hz	600 Hz ... 1,000 Hz	400 Hz ... 1,200 Hz
	0.2 mm ... 1 mm	0.15 mm ... 1 mm	0.25 mm ... 1 mm	0.17 mm ... 1.2 mm
	44 mm ... 735 mm	30 mm ... 840 mm	125 mm ... 1,625 mm	400 mm ... 2,200 mm
	-	-	-	-
	✓, AUX (only RS-232)	✓, AUX (only RS-232)	✓, AUX (only RS-232)	✓, only with cloning plug D-Sub and Ethernet
	- / ✓	- / ✓	- / ✓	✓, only with cloning plug I/O, CAN IN/OUT or CAN Redundant
	✓	✓	✓	✓
	✓, Optional over external field-bus module (CDF600-2)			
	✓, optional via external connection module (CDM + CMF)	✓, optional via external connection module (CDM + CMF)	✓, optional via external connection module (CDM + CMF)	✓, optional via external connection module (CDM + CMF)
	250 g ... 1,230 g	250 g ... 1,230 g	320 g / 250 g	1,500 g / 2,200 g

<ul style="list-style-type: none"> • Integrated pushbuttons for auto setup and reading diagnostics • Integrated LED bar graph • CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant) • Enhanced SMART code reconstruction technology • Flexible sorting, filtering, and logical functions • High scanning frequency of up to 1,200 Hz • Advanced remote diagnostics and network monitoring capabilities available over Ethernet 	<ul style="list-style-type: none"> • Dynamic focus adjustment enables extended depth of field • Integrated pushbuttons for auto setup and reading diagnostics • CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant) • Enhanced SMART code reconstruction technology • Flexible sorting, filtering, and logical functions • Integrated LED bar graph • Advanced remote diagnostics and network monitoring capabilities available over Ethernet 	<ul style="list-style-type: none"> • Huge depth of field due to auto focus • Integrated pushbuttons for auto setup and reading diagnostics • CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant) • Enhanced SMART code reconstruction technology • Flexible sorting, filtering, and logical functions • Integrated web server provides remote diagnostics and monitoring • Integrated LED bar graph 	<ul style="list-style-type: none"> • 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
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RELIABLE DECODING, SIMPLE INTEGRATION



Additional information

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Product description

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

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

At a glance

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

→ www.mysick.com/en/CLV61x

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



Detailed technical data

Features

	CLV610 Mid Range	CLV612 Short Range	CLV615 Long Range
Light source	Visible red light (655 nm)		
MTBF	40,000 h		
Laser class	2 (EN 60825-1 (2008-05), IEC 60825-1 : 2007-03, Ed. 2.0)		
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⁾
Raster height, number of lines, at distance	15 mm, 8, 200 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
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	✓	
	Data transmission rate	Host, AUX 2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud	
Ethernet		-	✓, Optional over external field-bus module (CDF600-2)
	Protocol	-	PROFINET Dual Port
CAN bus	Function	✓	
	Data transmission rate	SICK CAN sensor network (Master/Slave, Multiplexer/Server) 20 kbit/s ... 1 Mbit/s	
	Protocol	CSN (SICK CAN Sensor Network)	
PROFIBUS DP	-	✓, Optional over external field-bus module (CDF600-2)	
Switching inputs	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)		
Switching outputs	4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)		
Reading pulse	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	265 g ... 295 g (depending on type)		295 g
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 %

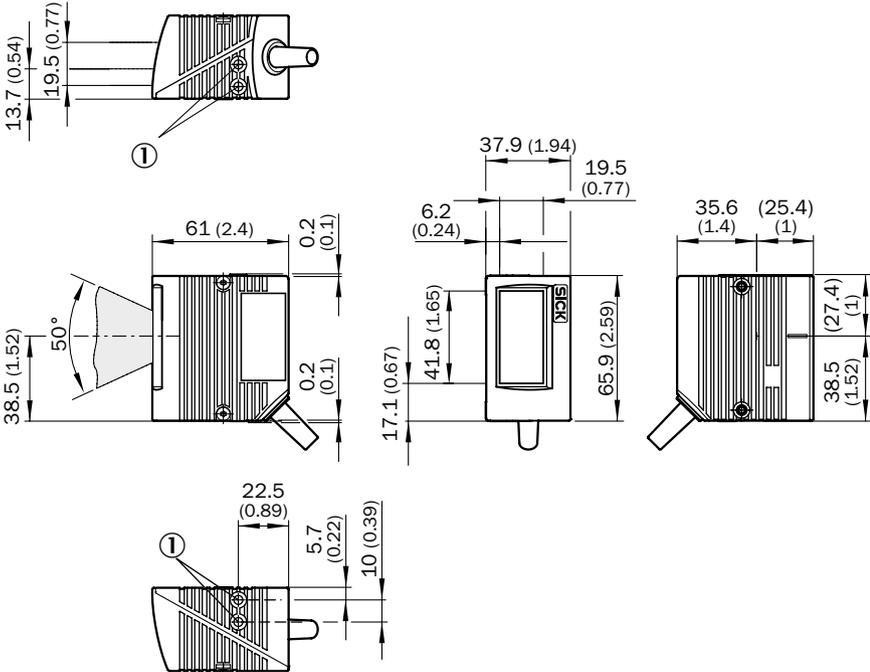
Ordering information

- **Focus:** Fixed focus
- **Connection type:** Cable
- **Enclosure rating:** IP 65
- **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
CLV615 Long Range		Line scanner	Single scanner	CLV615-F2000	1058334
		Raster scanner	Single scanner	CLV615-F3000	1068240
	Side (105°)	Line scanner	Kit including single scanner and fieldbus module PROFIBUS DP (interface 1 x D-Sub, female connector, 9-pin)	CLV615-F2000 CDF600-2100 Kit	1061528
			Kit includes single scanner and fieldbus module PROFIBUS DP (interface 2 x M12, male connector/female connector, 5-pin)	CLV615-F2000 CDF600-2103 Kit	1061529

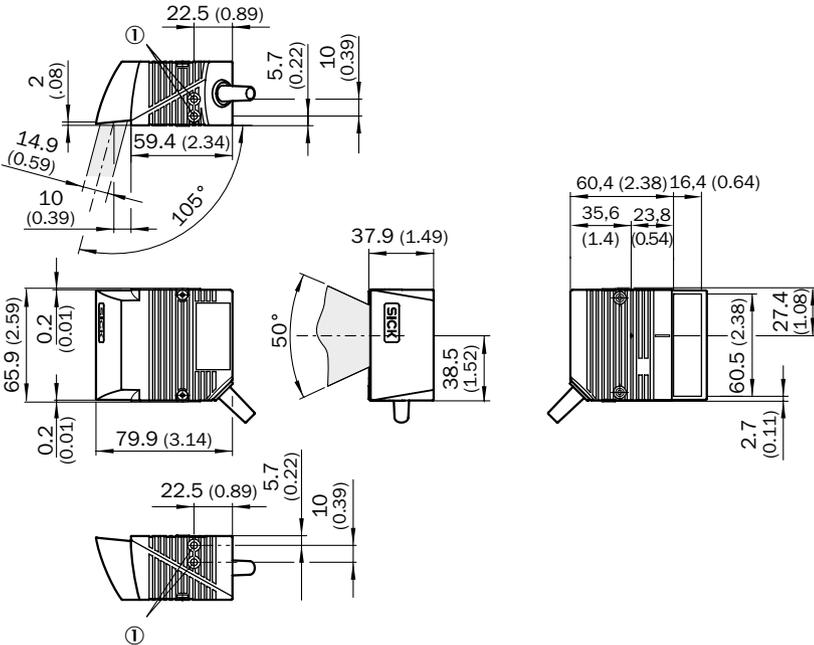
Dimensional drawings (dimensions in mm (inch))

CLV61x Standard, front



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

CLV61x Cable, side

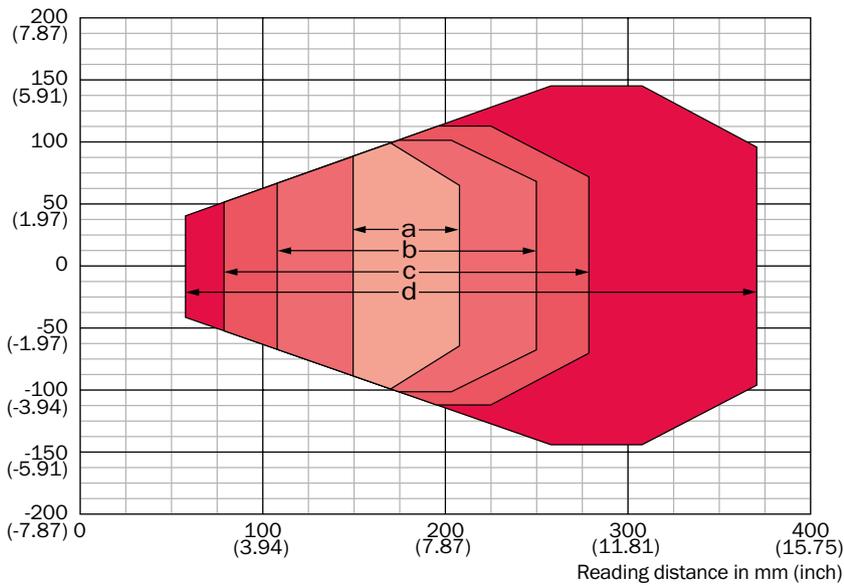


① Blind hole thread M5, 5 mm deep (2 x), for mounting

Reading field diagrams

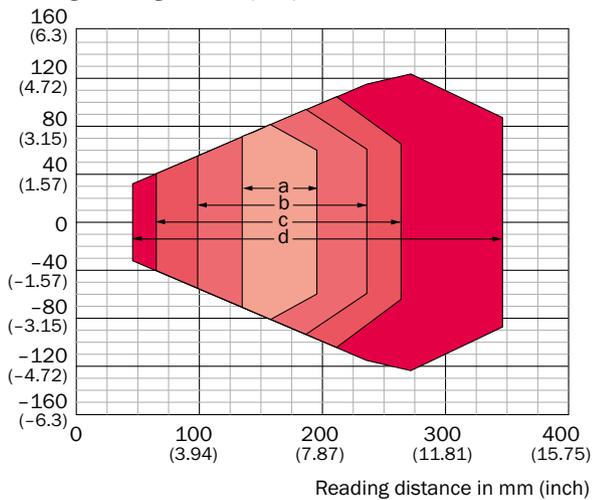
CLV610 Mid Range, front

Reading field height in mm (inch)



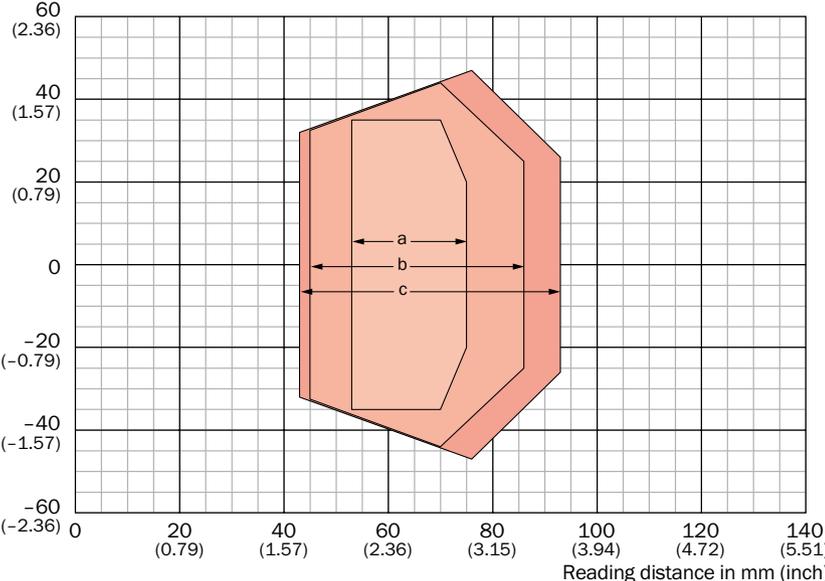
CLV610 Mid Range, side

Reading field height in mm (inch)



CLV612 Short Range, front

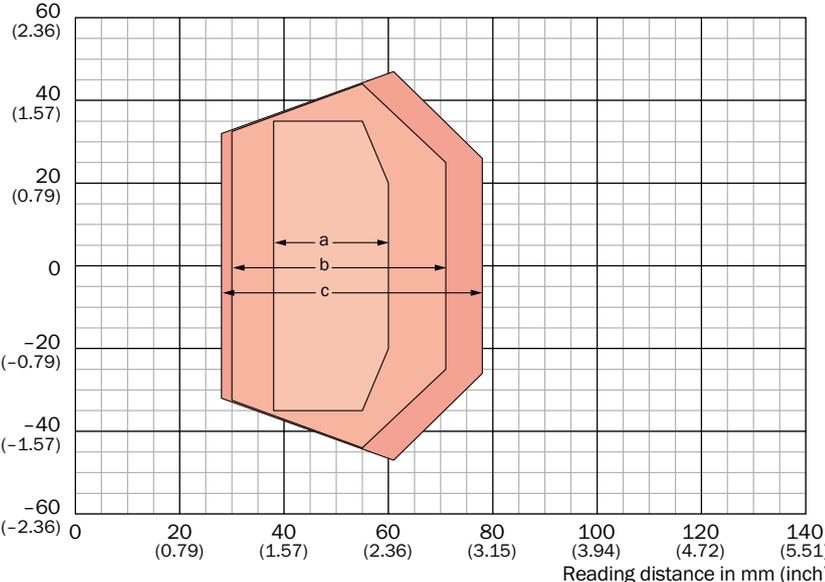
Reading field height in mm (inch)



- Resolution**
- a: 0.10 mm (3.94 mil)
 - b: 0.15 mm (5.91 mil)
 - c: 0.20 mm (7.87 mil)

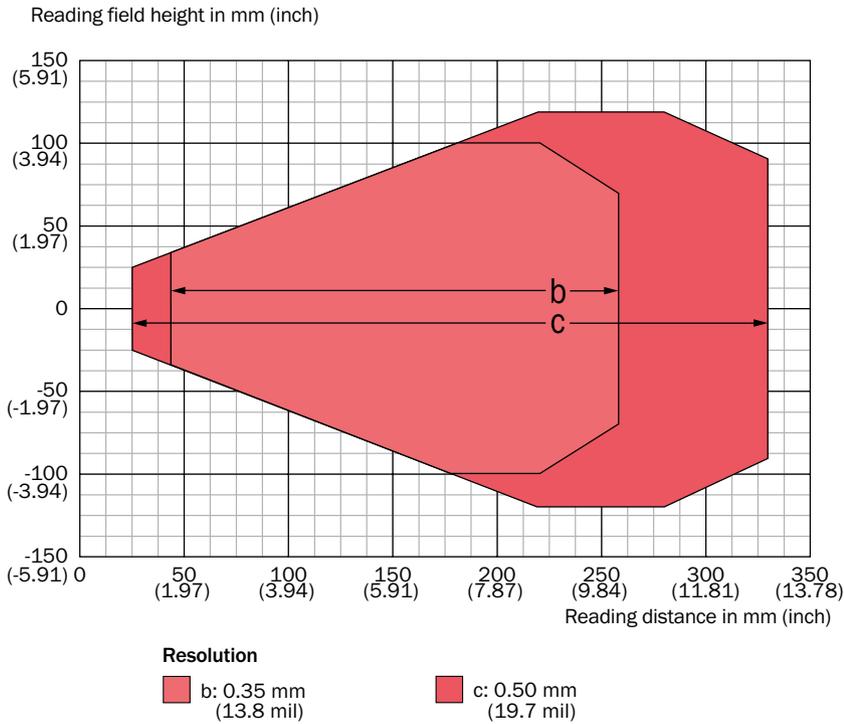
CLV612 Short Range, side

Reading field height in mm (inch)



- Resolution**
- a: 0.10 mm (3.94 mil)
 - b: 0.15 mm (5.91 mil)
 - c: 0.20 mm (7.87 mil)

CLV615 Long Range, side



Recommended accessories

Mounting systems

Mounting brackets and mounting plates

	Brief description	Part no.
	Bracket with adapter board	2042902

Connection systems

Modules

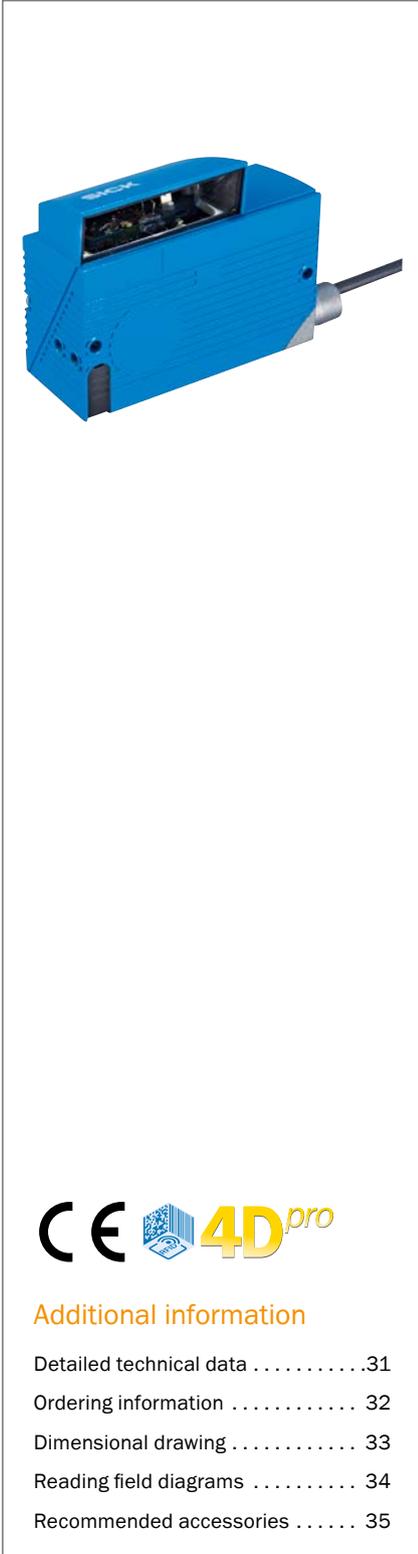
	Brief description	Type	Part no.
	Small connection module for one sensor, 4 cable glands, base for CMC600	CDB620-001	1042256
	Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin)	CDF600-2100	1058965
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

Plug connectors and cables

	Signal type/ 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

More accessories can be found → [85](#)

THE NETWORK PROFESSIONAL



Product description

The CLV61x Dual Port product family is made up of compact, high-performance bar code scanners that are specially designed for the requirements of intralogistics. The integrated PROFINET with two facilities for connecting (Dual Port) makes it easy to integrate the bar code scanners into line and ring topologies for control systems. The sensor configura-

tion can either take place directly in the control environment or via the intuitive SOPAS ET user interface for rapid integration into the system. The device also has a USB interface in addition to its Ethernet interface. The status indicator LEDs allow you to diagnose the read results and operational status quickly and effectively.

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
- USB interface
- Adjustable scanning frequency of up to 1,000 scans per second
- Small, compact design

Your benefits

- The switch installed within the housing makes it easy to install and implement line and ring topologies
- The cable integrated within the scanner has a 4-pin M12 male connector and provides a single power supply via a flat ribbon cable
- The compact housing with swivel connector makes it easier to mount the sensor – even where space is tight
- Simple configuration process via additional USB interfaces
- The configuration process can either take place directly in the control environment or via the SOPAS ET user interface for rapid integration into your conveyor system



Additional information

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Ordering information 32

Dimensional drawing 33

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→ www.mysick.com/en/CLV61x_Dual_Port

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



Detailed technical data

Features

	CLV615 Dual Port Long Range	CLV618 Dual Port Long Range
Light source	Visible red light (655 nm)	
MTBF	40,000 h	
Laser class	2 (EN 60825-1 (2008-05), IEC 60825-1 : 2007-03, Ed. 2.0)	
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	25 mm ... 330 mm ¹⁾	44 mm ... 683 mm ¹⁾

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 ... 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

USB	Function	✓ AUX
Ethernet	Function	✓ PROFINET Device
	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.
	Protocol	PROFINET
Switching inputs		1 (via PROFINET Ctrl bits)
Switching outputs		4 (via PROFINET Ctrl bits)
Reading pulse		Non-powered, auto pulse, Fieldbus input, command
Optical indicators		5 LEDs
Configuration software		SOPAS ET

Mechanics/electronics

Electrical connection	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
Operating voltage	10 V DC ... 30 V DC
Power consumption	5 W
Housing	Aluminum die cast
Housing color	Light blue (RAL 5012)
Protection class	III (VDE 0106/IEC 1010-1)
Weight	310.5 g
Dimensions (L x W x H)	80 mm x 96 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 %

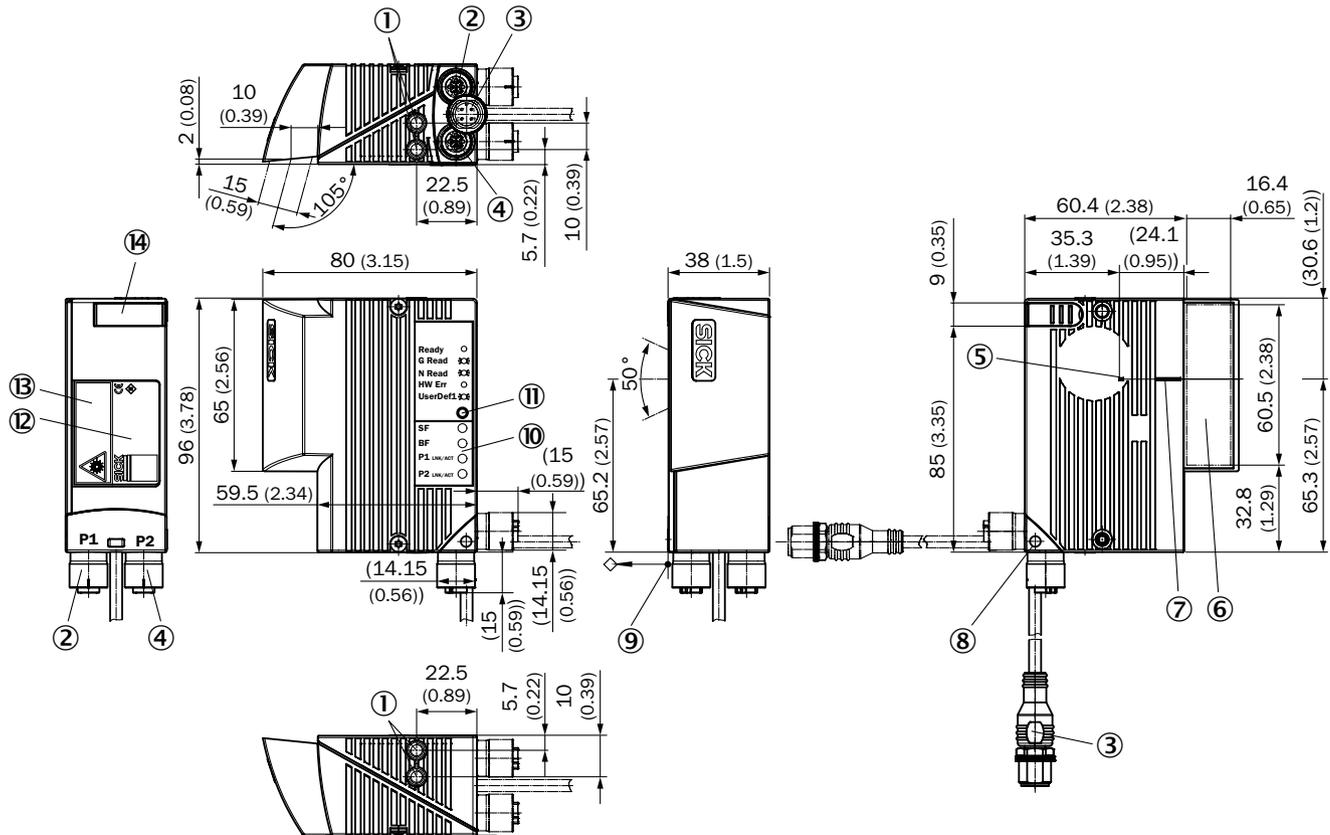
Ordering information

- **Focus:** Fixed focus
- **Connection type:** Cable
- **Enclosure rating:** IP 65
- **Front screen:** Glass
- **Reading field:** side (105°)
- **Scanner design:** Line scanner

Version	Type	Part no.
CLV615 Dual Port Long Range	CLV615-D2410	1068608
CLV618 Dual Port Long Range	CLV618-D2410	1073188

Dimensional drawing (dimensions in mm (inch))

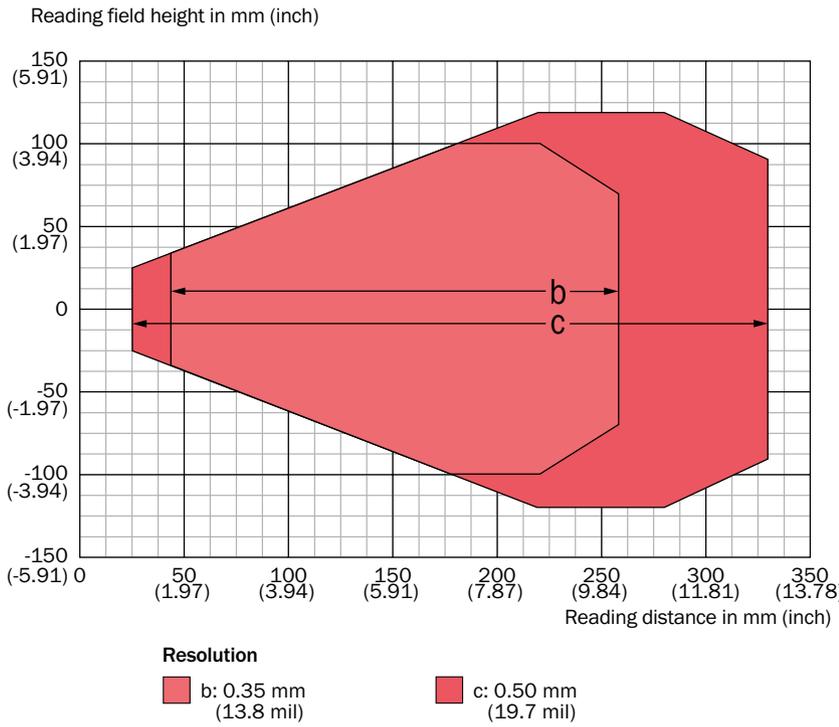
CLV61x Dual Port



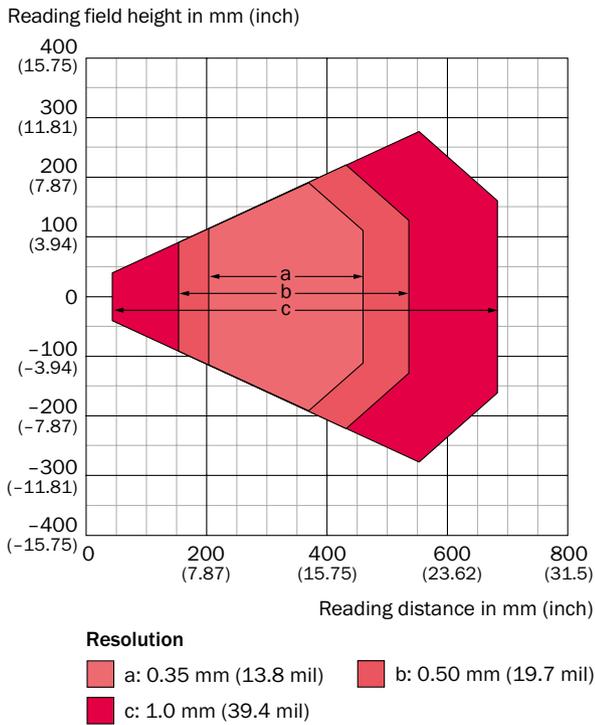
- ① Blind hole thread M5, 5 mm deep (2 x), for mounting
- ② P1 (PROFINET Port 1) connection, 4-pin M12 female connector, D-coded
- ③ Acble (0.9 m) with POWER connection, 4-pin M12 male connector, A-coded
- ④ P2 (PROFINET Port 2) connection, 4-pin M12 female connector, D-coded
- ⑤ Internal impact point: rotation point of the variable direction laser beam
- ⑥ Reading window, side orientation
- ⑦ Central position of the deflected laser beam in the V-shaped aperture angle
- ⑧ Swivel connector unit (max 180° rotation angle from end position to end position)
- ⑨ Reference point for reading distance (from housing edge to object)
- ⑩ LED (4 x), status display for PROFINET
- ⑪ RGB-LED (1 x), status display with signal color allocation for events
- ⑫ Type label
- ⑬ Type label
- ⑭ Cover for USB port, 4-pin female connector, Micro B type

Reading field diagrams

CLV615 Dual Port Long Range, side



CLV618 Dual Port Long Range, side



Recommended accessories

Mounting systems

Mounting brackets and mounting plates

	Brief description	Part no.
	Hanger-shaped mounting bracket	2042800

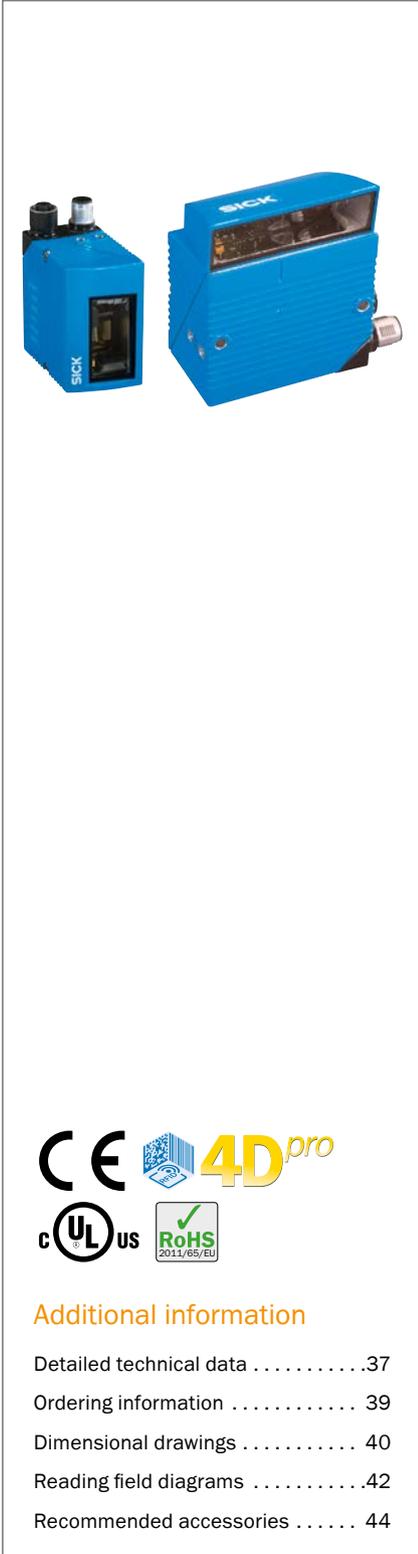
Connection systems

Plug connectors and cables

	Signal type/ application	Connection type head A	Connection type head B	Cable	Cable length	Part no.
	Power	Cable	Cable	Black AS-i flat cable for looping in the power supply to 4Dpro Ethernet sensors, 2-wire, by the meter	-	6022463
		AS-i clip, M12	-	AS-i clip for connection on black AS-i flat cable	-	6022472
	PROFINET	Male connector, M12, 4-pin, straight, D-coded	Male connector, M12, 4-pin, straight	4-wire, CAT5, CAT5e	2 m	6048241
			Male connector, RJ45, 4-pin, straight	4-wire, CAT5, CAT5e	2 m	6048244
	USB 2.0	Male connector, USB-A	Male connector, Micro-B	-	2 m	6036106

More accessories can be found → [85](#)

POWERFUL SCANNER – FLEXIBLE USE



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Product description

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

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

At a glance

- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant)
- SMART620 code reconstruction technology
- Flexible sorting, filtering, and logical functions
- Advanced, easy-to-use SOPAS ET 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 on damaged and obscured codes using SMART620 code recognition technology
- Increased scanner intelligence enables sophisticated configuration of logical operations, reducing the control system programming effort. Data is then delivered in the desired format
- No supplementary Ethernet gateway required with Ethernet models – lowers costs
- The CLV62x scanner can be used as a multiplexer in any CAN scanner network from SICK – no supplementary multiplexer necessary
- Real-time decoding at very high speeds
- Small size and simple setup enables fast installation, even in compact machines

→ www.mysick.com/en/CLV62x

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



Detailed technical data

Features

	CLV620 Mid Range	CLV621 Long Range	CLV622 Short Range
Light source	Visible red light (655 nm)		
MTBF	40,000 h		
Laser class	2 (EN 60825-1 (A2:2001-03), IEC 60825-1 : 2007-03, Ed. 2.0)		
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)	55 mm ... 200 mm ¹⁾
	Side	45 mm ... 365 mm ¹⁾ (depending on type)	55 mm ... 200 mm ¹⁾
Raster height, number of lines, at distance	15 mm, 8, 200 mm 15 mm, 8, 185 mm (depending on type)		

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

		CLV620 Mid Range	CLV621 Long Range	CLV622 Short Range
Switching inputs	Cable	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)		
	Ethernet IP 65	3 ("Sensor 1", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)		
	Ethernet IP 69K	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 IP 65	2 (via CMC600 in CDB620/CDM420)		
	Ethernet IP 69K	4 ("Result 1", "Result 2", 2 via CMC600 in CDB650)	-	
Reading pulse		Switching inputs, non-powered, serial interface, auto pulse, CAN (depending on type)	Switching inputs, non-powered, serial interface, auto pulse, CAN	
Optical indicators		6 LEDs (Ready, Result, laser, Data, CAN, LNK TX)		
Acoustic indicators		Beeper/buzzer (can be switched off, can be allocated as a result indication function)		
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)		
	Ethernet IP 65	2 x M12 cylindrical connectors (1 x 12-pin male connector, A-coded, 1 x 4-pin female connector, D-coded) on swivel connector		
	Ethernet IP 69K	2 x M12 cylindrical connectors (1 x 17-pin male connector, 1 x 4-pin female connector, D-coded)	-	
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	Ethernet IP 65	205 g ... 250 g (depending on type)		
	Ethernet IP 69K	854 g	-	
Dimensions (L x W x H)	Front	61 mm x 66 mm x 38 mm ¹⁾ 85 mm x 154 mm x 84 mm (depending on type)	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

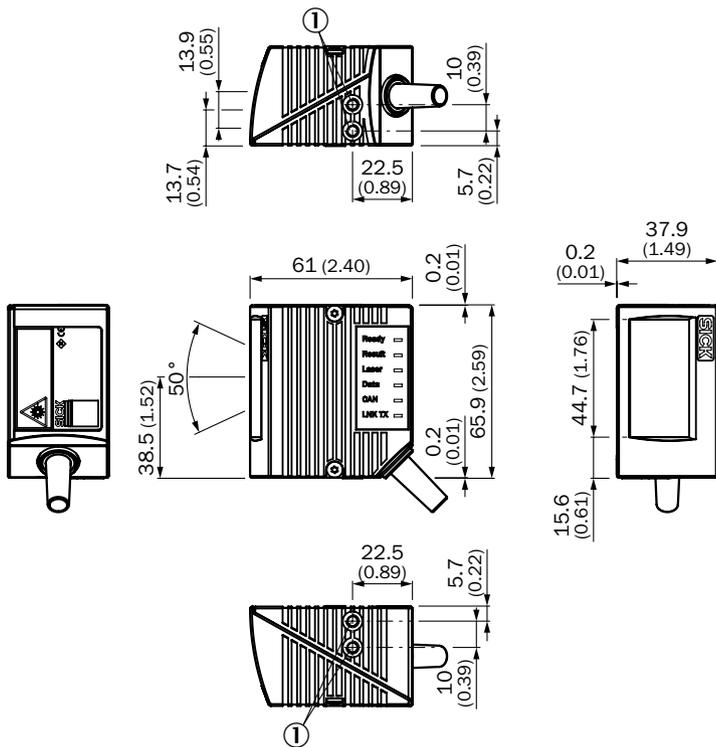
- **Focus:** Fixed focus

Version	Connection type	Enclosure rating	Front screen	Reading field	Scanner design	Type	Part no.				
CLV620 Mid Range	Cable	IP 65	Glass	Front	Line scanner	CLV620-0000	1040288				
					Raster scanner	CLV620-1000	1041548				
				Side (105°)	Line scanner	CLV620-2000	1041550				
					Raster scanner	CLV620-3000	1041552				
	Ethernet	IP 65	Glass	Front	Line scanner	CLV620-0120	1041547				
					Raster scanner	CLV620-1120	1041549				
				Side (105°)	Line scanner	CLV620-2120	1041551				
					Raster scanner	CLV620-3120	1041553				
				IP 69K	Plastic	Front	Line scanner	CLV620-0831S01	1066374		
							Raster scanner	CLV620-1831S01	1067933		
CLV621 Long Range	Cable	IP 65	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	IP 65	Glass	Front	Line scanner	CLV621-0120	1041785				
					Raster scanner	CLV621-1120	1041787				
				Side (105°)	Line scanner	CLV621-2120	1041789				
					Raster scanner	CLV621-3120	1041791				
				CLV622 Short Range	Cable	IP 65	Glass	Front	Line scanner	CLV622-0000	1041792
									Raster scanner	CLV622-1000	1041794
Side (105°)	Line scanner	CLV622-2000	1041796								
	Raster scanner	CLV622-3000	1041798								
Ethernet	IP 65	Glass	Front		Line scanner	CLV622-0120	1041793				
					Raster scanner	CLV622-1120	1041795				
			Side (105°)		Line scanner	CLV622-2120	1041797				
					Raster scanner	CLV622-3120	1041799				

Dimensional drawings (dimensions in mm (inch))

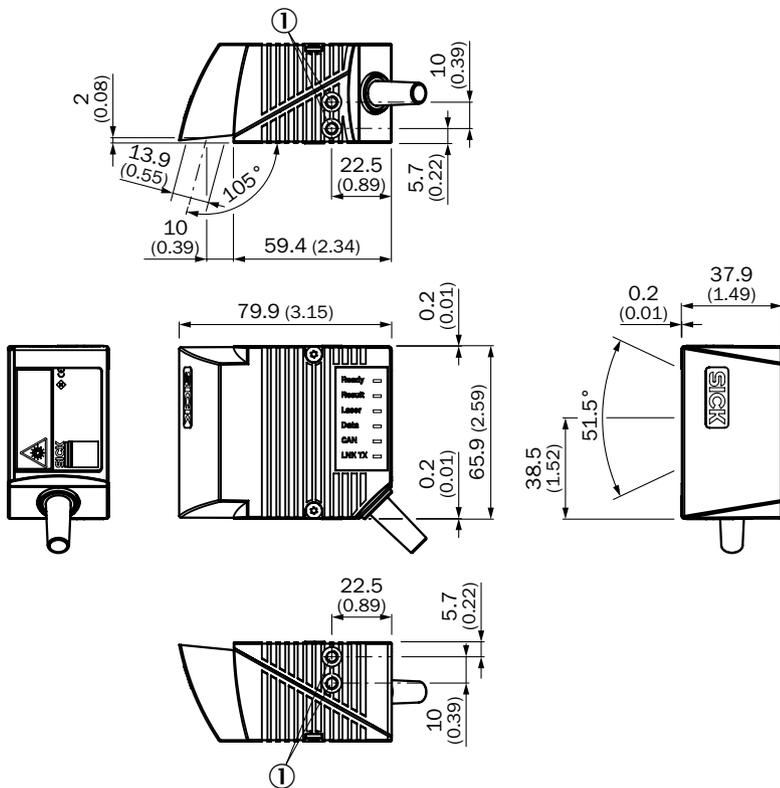
CLV62x Standard, front

① M5



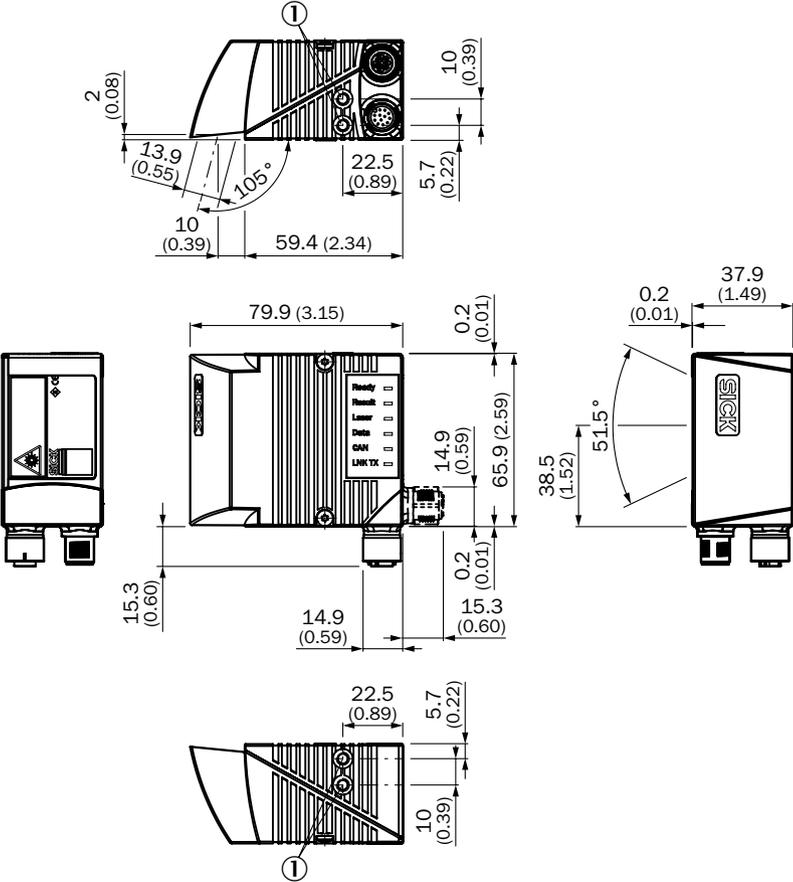
CLV62x Standard, side

① M5

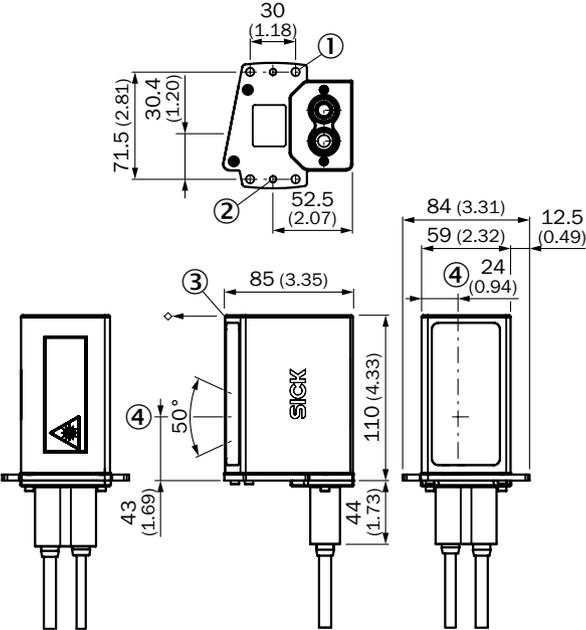


CLV62x Ethernet IP 65, side

① M5



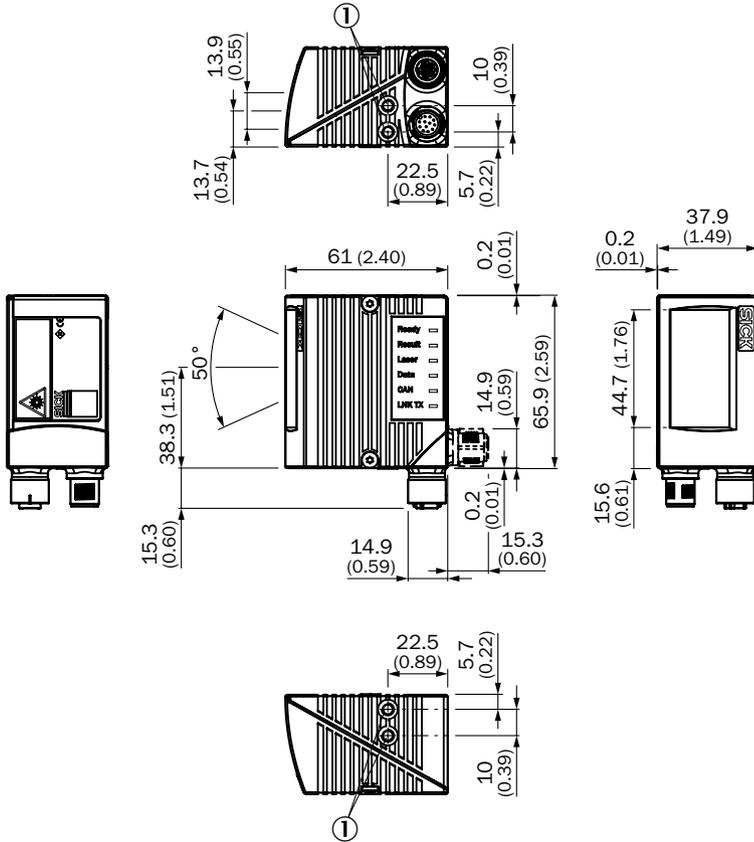
CLV620 Ethernet IP 69K, front



- ① Mounting holes, Ø 5.5 mm (4 x)
- ② Threaded holes, M5 (2 x)
- ③ Reference point for reading distance (from housing edge to object)
- ④ Position light emission

CLV62x Ethernet IP 65, front

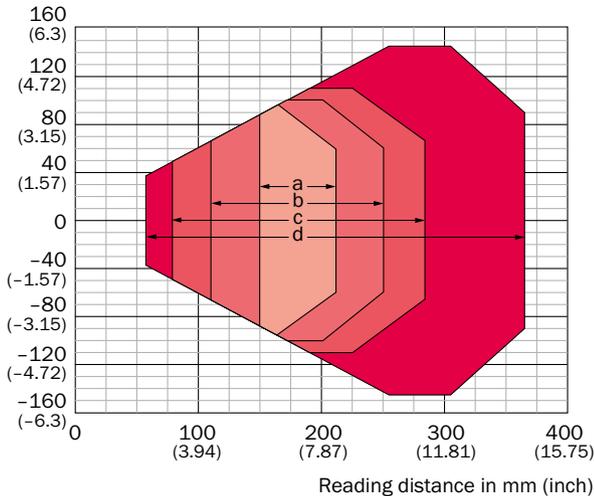
① M5



Reading field diagrams

CLV620 Mid Range, front

Reading field height in mm (inch)



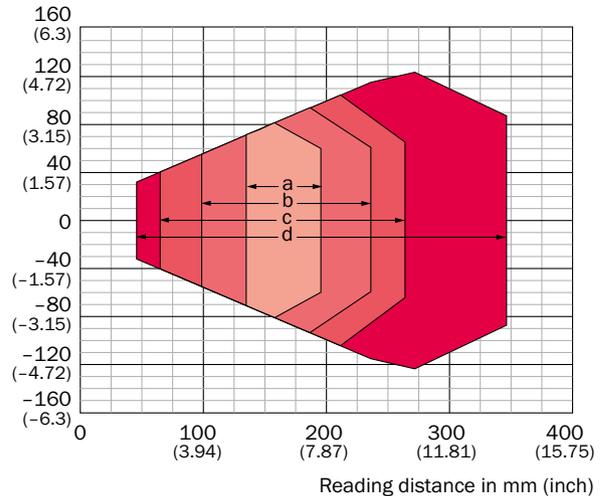
For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

Resolution

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

CLV620 Mid Range, side

Reading field height in mm (inch)

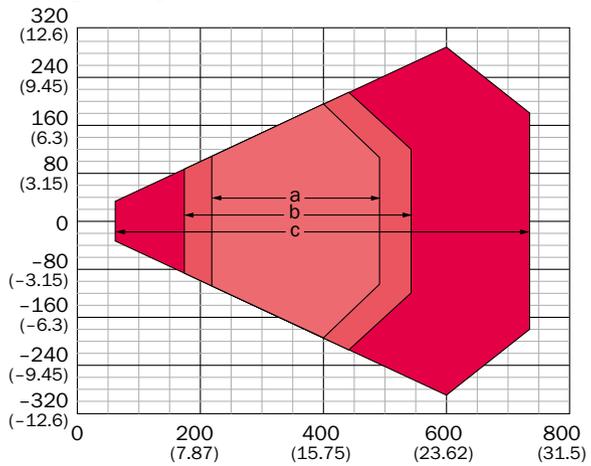


Resolution

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

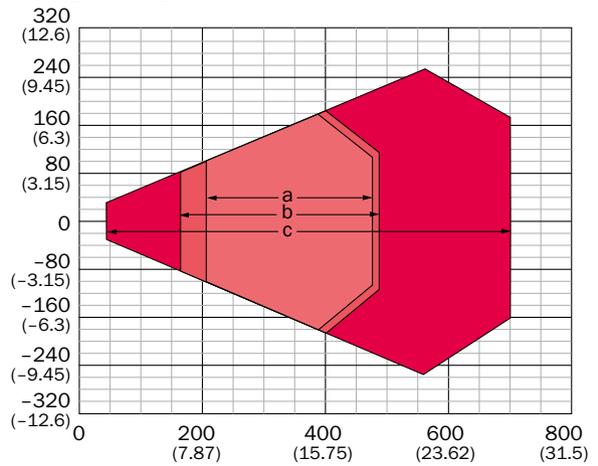
CLV621 Long Range, front

Reading field height in mm (inch)



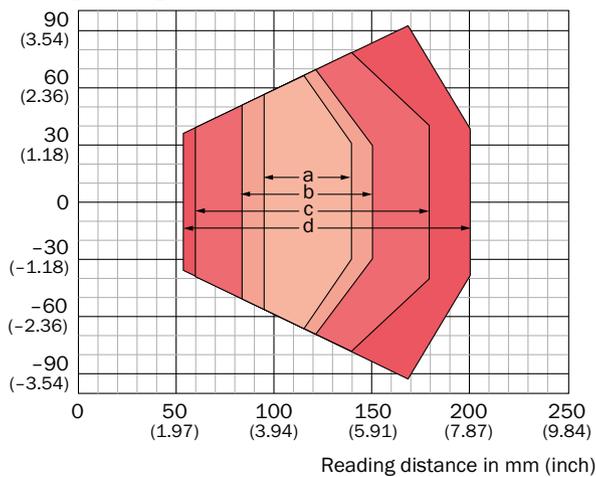
CLV621 Long Range, side

Reading field height in mm (inch)



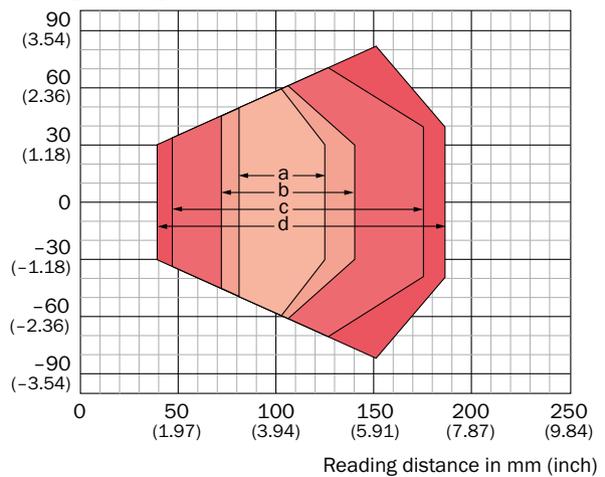
CLV622 Short Range, front

Reading field height in mm (inch)



CLV622 Short Range, side

Reading field height in mm (inch)



Recommended accessories

Mounting systems

Mounting brackets and mounting plates

	Brief description	Part no.	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K
	Bracket with adapter board	2042902	●	●	-

Connection systems

Modules

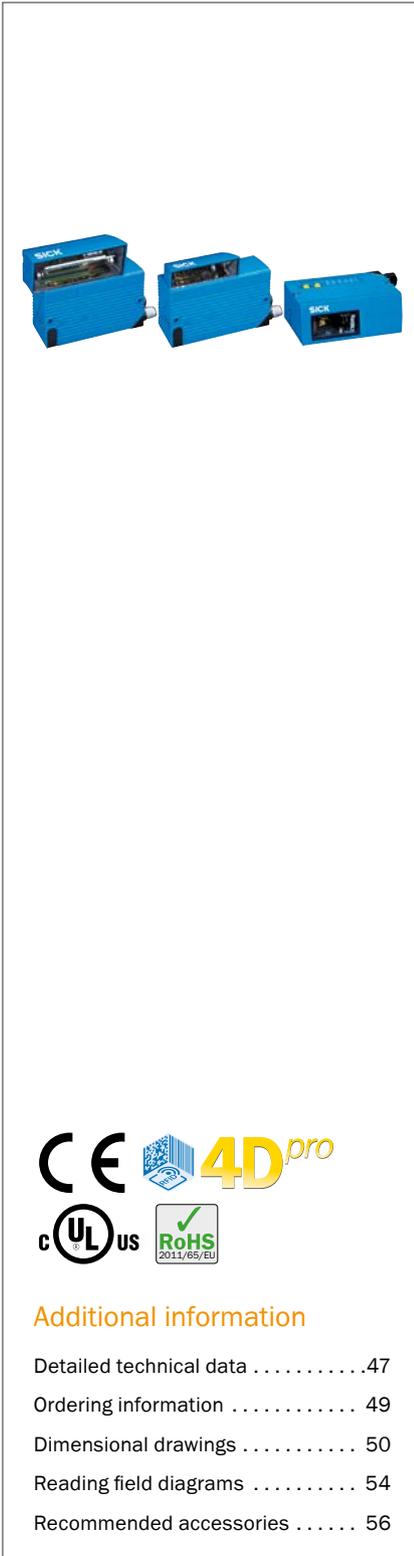
	Brief description	Type	Part no.	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K
	Small connection module for one sensor, 4 cable glands, base for CMC600	CDB620-001	1042256	●	●	●
	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination of Lector65x	CDB650-204	1064114	-	-	●
	Modular connection module for one sensor	CDM420-0001	1025362	●	●	●

Plug connectors and cables

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K
	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	-	●	-
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, drag chain use, AWG26	2 m	6034414	-	●	-

More accessories can be found → 85

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 pushbuttons for auto setup and reading diagnostics
- Integrated LED bar graph
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant)
- Enhanced SMART code reconstruction technology
- Flexible sorting, filtering, and logical functions
- Advanced, easy-to-use SOPAS ET configuration software
- High scanning frequency of up to 1,200 Hz
- Advanced remote diagnostics and network monitoring capabilities available over Ethernet

Your benefits

- Intelligent auto setup and multi-function pushbuttons save time during commissioning
- Easily execute firmware updates using the microSD memory card: no need for a PC
- Enhanced SMART technology reads damaged and partially obscured codes, increasing read rates
- Increased scanner intelligence enables sophisticated configuration of logical operations, reducing the control system programming effort. Data is then delivered in the desired format
- Real-time decoding at very high speeds
- Increased reading reliability due to high-performance computing power and a high scanning frequency



Additional information

→ www.mysick.com/en/CLV63x

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



Detailed technical data

Features

	CLV630 Long Range	CLV631 Mid Range	CLV632 Short Range	
Light source	Visible red light (655 nm)			
MTBF	40,000 h			
Laser class	2 (EN 60825-1 (A2:2001-03), IEC 60825-1 : 2007-03, Ed. 2.0)			
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⁾ 77 mm ... 718 mm ¹⁾ (depending on type)	90 mm ... 450 mm ¹⁾ (de- pending on type)	60 mm ... 285 mm ¹⁾ (de- pending 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⁾ (de- pending on type)	45 mm ... 245 mm ¹⁾
Raster height, number of lines, at distance	15 mm, 8, 200 mm 15 mm, 8, 185 mm (depending on type)			
Oscillating mirror functions	Fixed (adjustable position), oscillating (variable or fixed amplitude), one shot			
Oscillation frequency	0.5 Hz ... 6.25 Hz			
Angle of deflection	-20° ... 20°			
Heating	Ethernet Optional			

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

Serial (RS-232, RS-422/485)	✓, AUX (only RS-232)
Function	Host, AUX
Data transmission rate	2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud
Ethernet	- / ✓ (depending on type)
Function	Host, AUX
Data transmission rate	10/100 MBit/s
Protocol	TCP/IP, EtherNet/IP, PROFINET, PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT® (optional over external fieldbus module CDF600) (depending on type)

CAN bus		✓
	Function	SICK CAN sensor network (Master/Slave, Multiplexer/Server)
	Data transmission rate	20 kbit/s ... 1 Mbit/s
	Protocol	CANopen, CSN (SICK CAN Sensor Network)
PROFIBUS DP		✓, Optional over external fieldbus module (CDF600-2)
DeviceNet		✓, optional via external connection module (CDM + CMF)
Switching inputs		
	Cable	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
	Ethernet IP 65	3 ("Sensor 1", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
	Ethernet IP 69K	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 IP 65	2 (via CMC600 in CDB620/CDM420)
	Ethernet IP 69K	4 ("Result 1", "Result 2", 2 via CMC600 in CDB650)
Reading pulse		"Sensor 1" switching input, non-powered, serial interface, auto pulse, CAN, switching inputs (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)
Control elements		2 buttons (choose and start/stop functions)
Configuration software		SOPAS ET
Memory card		MicroSD memory card (flash card) 512 MB, optional

Mechanics/electronics

		CLV630 Long Range	CLV631 Mid Range	CLV632 Short Range
Electrical connection				
	Cable	1 x 15-pin D-Sub HD male connector (0.9 m)		
	Ethernet IP 65	2 x M12 cylindrical connectors (1 x 12-pin male connector, A-coded, 1 x 4-pin female connector, D-coded) on swivel connector		
	Ethernet IP 69K	2 x M12 cylindrical connectors (1 x 17-pin male connector, A-coded, 1 x 4-pin female connector, D-coded)		
Operating voltage		18 V DC ... 30 V DC		
Power consumption		5 W / 6 W (depending on type)		
Housing		Aluminum die cast / Stainless steel (depending on type)		
Housing color		Light blue (RAL 5012) / stainless steel (unpainted) (depending on type)		
Protection class		III (EN 61140)		
Weight				
	Ethernet IP 65	250 g ... 420 g (depending on type)		
	Ethernet IP 69K	890 g ... 1,230 g (depending on type)		
Dimensions (L x W x H)				
	Front	61 mm x 96 mm x 38 mm ¹⁾ 85 mm x 154 mm x 84 mm (depending on type)		
	Side	80 mm x 96 mm x 38 mm ¹⁾		
	Oscillating mirror	95 mm x 96 mm x 41 mm ¹⁾	95 mm x 96 mm x 41 mm ¹⁾ 121 mm x 164 mm x 84 mm (depending on type)	95 mm x 96 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
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

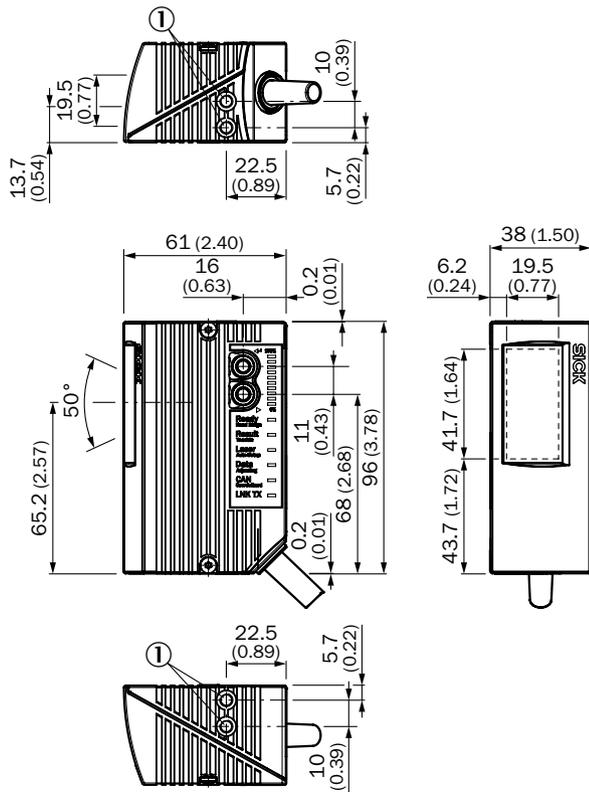
- **Focus:** Fixed focus

Version	Connection type	Enclosure rating	Front screen	Heating	Reading field	Scanner design	Type	Part no.
CLV630 Long Range	Cable	IP 65	Glass	Optional	Front	Line scanner	CLV630-0000	1040706
						Raster scanner	CLV630-1000	1041970
					Side (105°)	Line scanner	CLV630-2000	1041972
						Raster scanner	CLV630-3000	1041974
					Oscillating mirror	Line scanner	CLV630-6000	1041976
					Ethernet	IP 65	Glass	Optional
	Raster scanner	CLV630-1120	1041971					
	Side (105°)	Line scanner	CLV630-2120	1041973				
		Raster scanner	CLV630-3120	1041975				
	Oscillating mirror	Line scanner	CLV630-6120	1041977				
		IP 69K	Plastic	-				
	CLV631 Mid Range	Cable	IP 65	Glass	Optional	Front	Line scanner	CLV631-0000
Raster scanner							CLV631-1000	1041980
Side (105°)						Line scanner	CLV631-2000	1041982
						Raster scanner	CLV631-3000	1041984
Oscillating mirror						Line scanner	CLV631-6000	1041986
Ethernet						IP 65	Glass	Optional
		Raster scanner	CLV631-1120	1041981				
		Side (105°)	Line scanner	CLV631-2120	1041983			
			Raster scanner	CLV631-3120	1041985			
		Oscillating mirror	Line scanner	CLV631-6120	1041987			
			IP 69K	Plastic	-			
					Oscillating mirror	Line scanner	CLV631-6831S01	1062136

Version	Connection type	Enclosure rating	Front screen	Heating	Reading field	Scanner design	Type	Part no.
CLV632 Short Range	Cable	IP 65	Glass	Optional	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
					Ethernet	IP 65	Glass	Optional
	Raster scanner	CLV632-1120	1041991					
	Side (105°)	Line scanner	CLV632-2120	1041993				
		Raster scanner	CLV632-3120	1041995				
	Oscillating mirror	Line scanner	CLV632-6120	1041997				
		IP 69K	Plastic	-	Front	Raster scanner	CLV632-1831S01	1062530

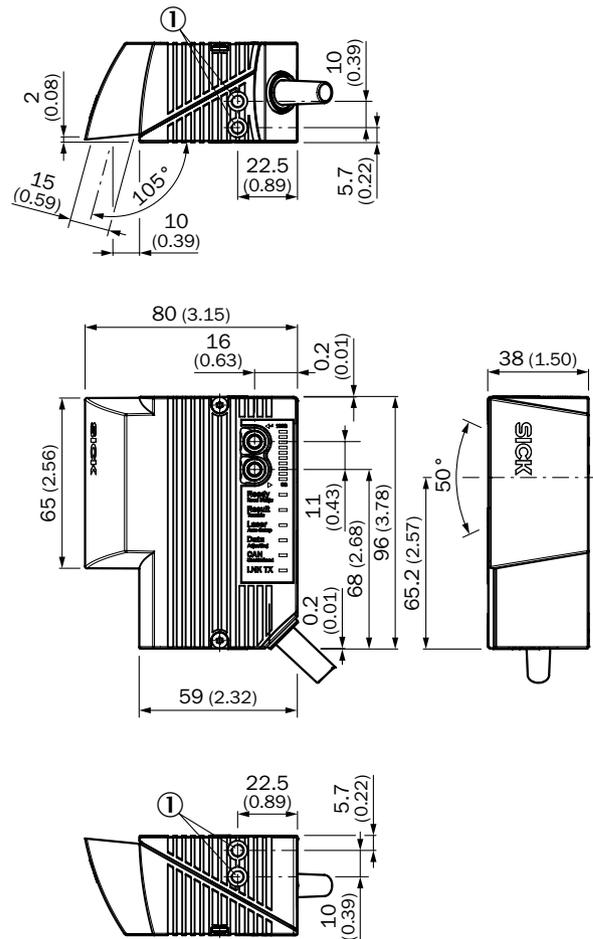
Dimensional drawings (dimensions in mm (inch))

CLV63x/64x/65x Standard, front



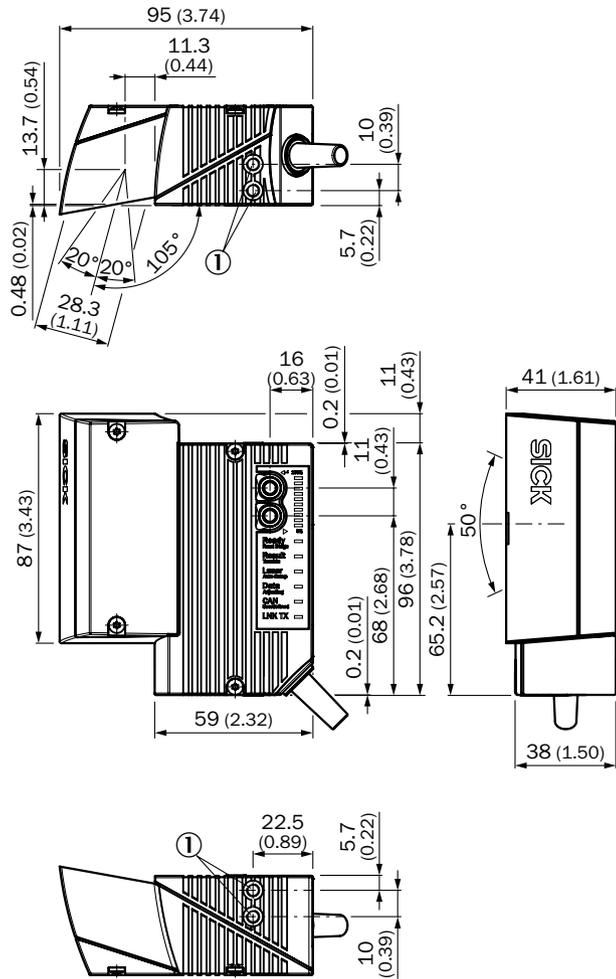
① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x Standard, side



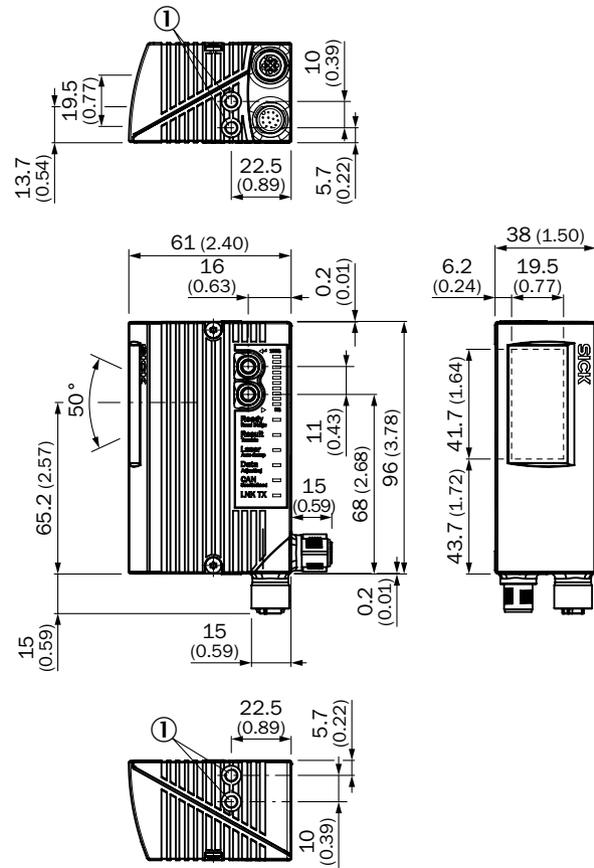
① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x/65x Standard, oscillating mirror



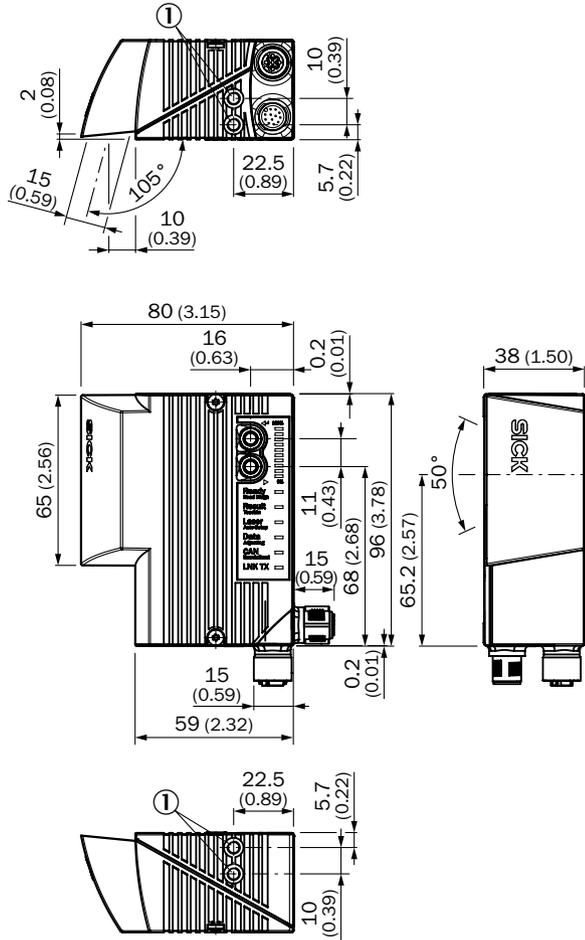
① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x/65x Ethernet IP 65, front



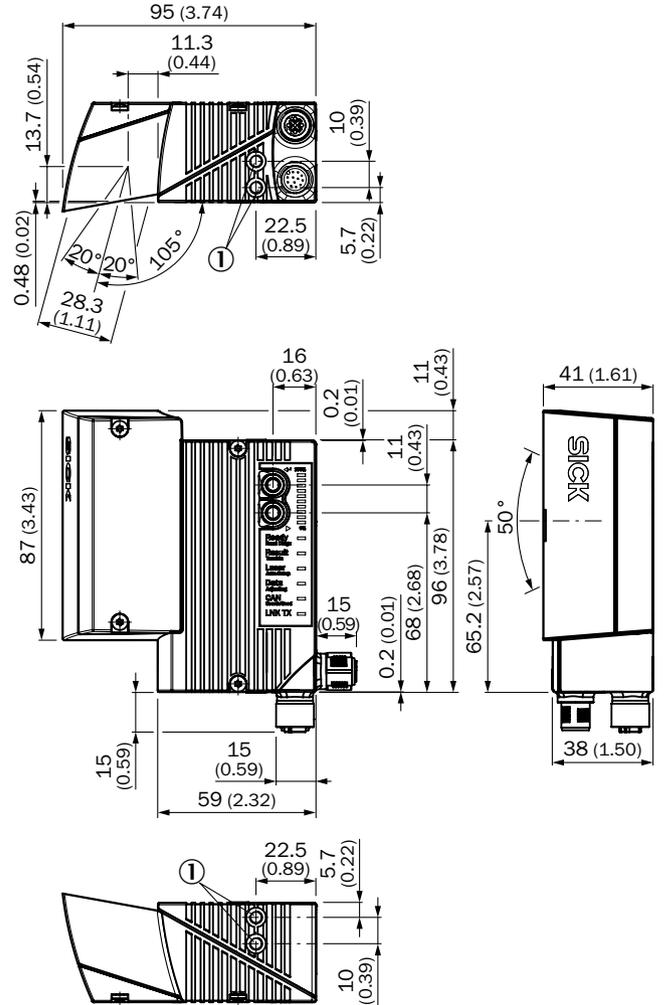
① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x Ethernet IP 65, side



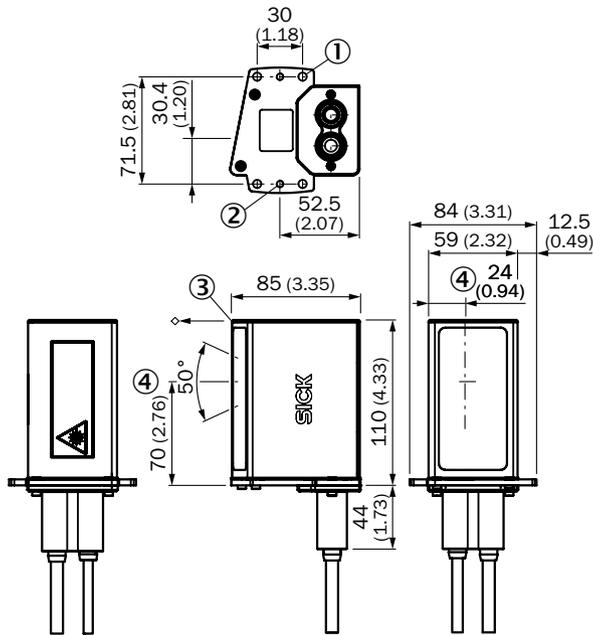
① M5 threaded mounting hole, 5.5 mm deep

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



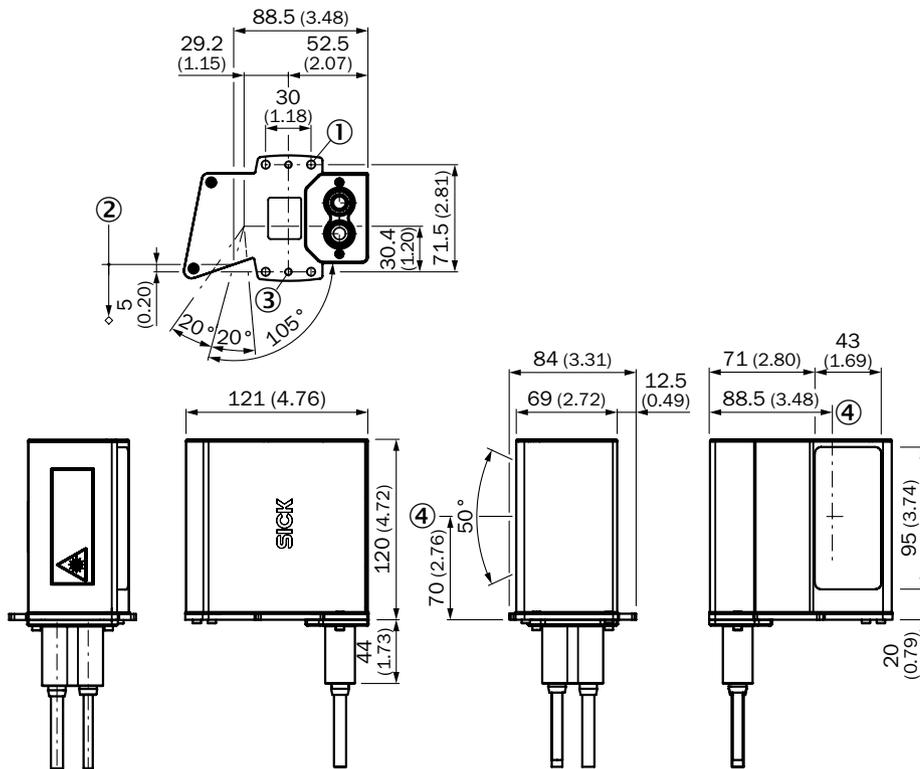
① M5 threaded mounting hole, 5.5 mm deep

CLV63x Ethernet IP 69K, front



- ① Mounting holes, Ø 5.5 mm (4 x)
- ② Threaded holes, M5 (2 x)
- ③ Reference point for reading distance (from housing edge to object)
- ④ Position light emission

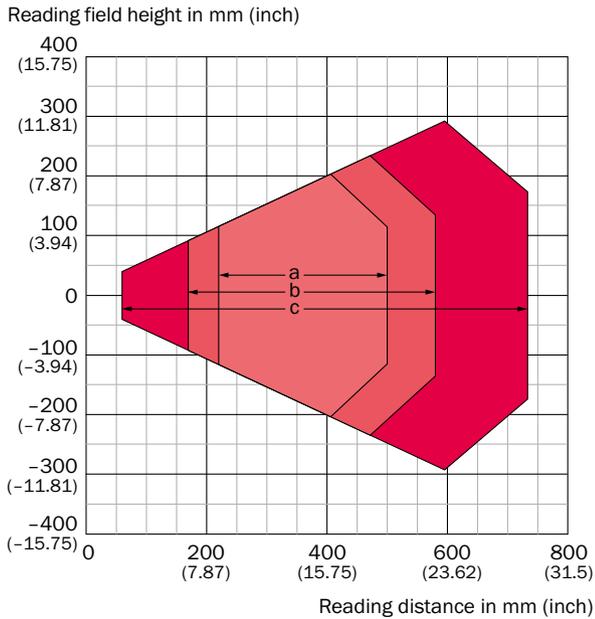
CLV631 Ethernet IP 69K, Oscillating mirror



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

Reading field diagrams

CLV630 Long Range, front

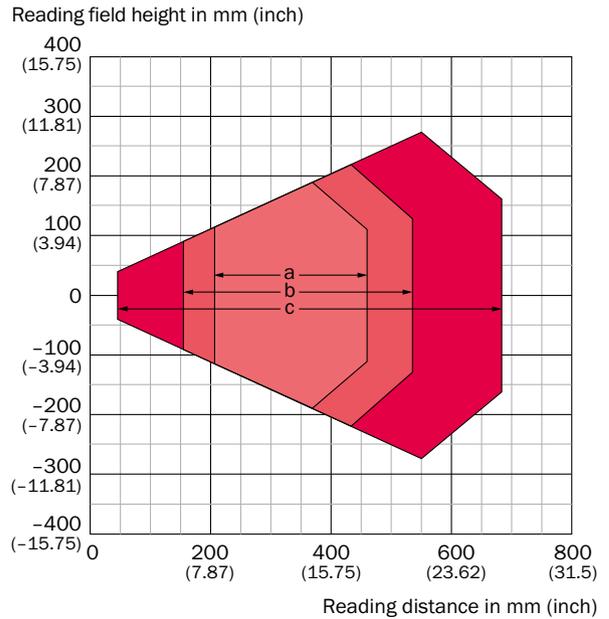


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

Resolution

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

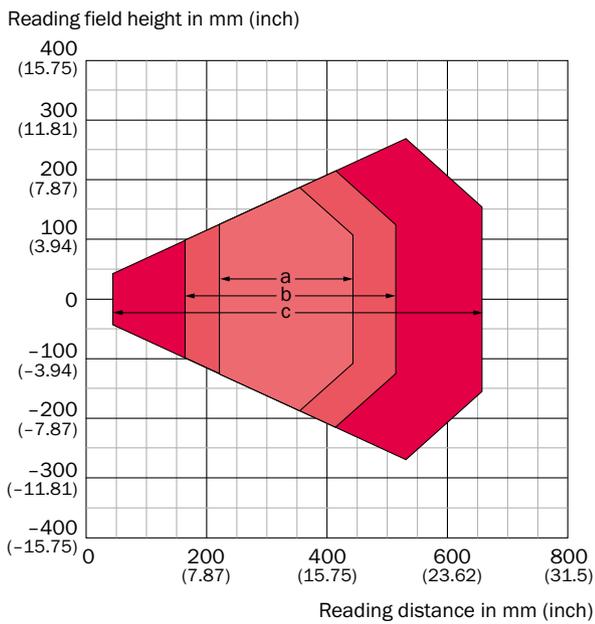
CLV630 Long Range, side



Resolution

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

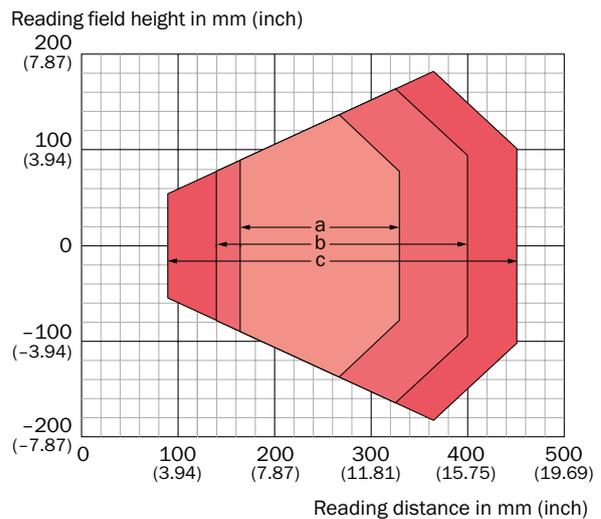
CLV630 Long Range, Oscillating mirror



Resolution

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

CLV631 Mid Range, front

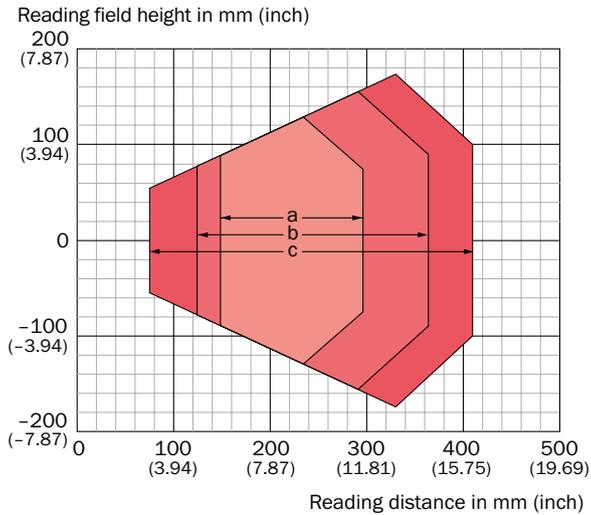


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

Resolution

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

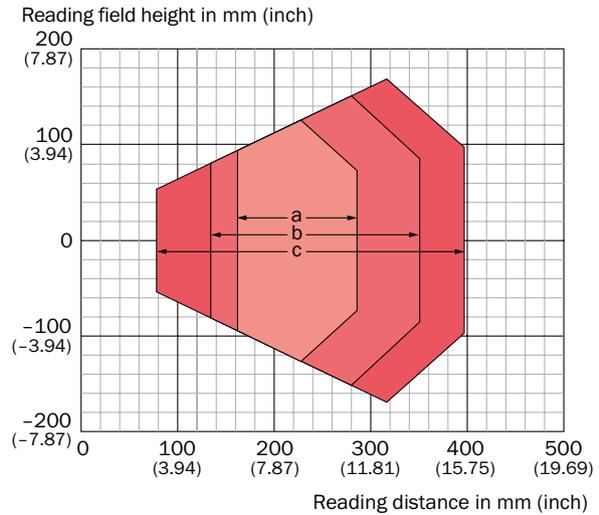
CLV631 Mid Range, side



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

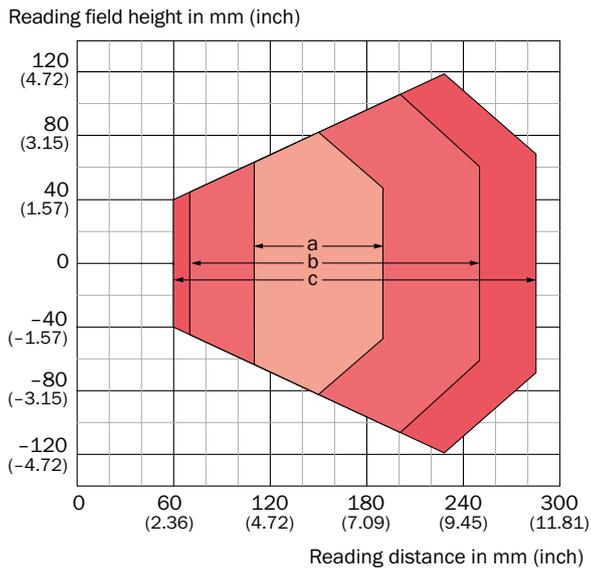


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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

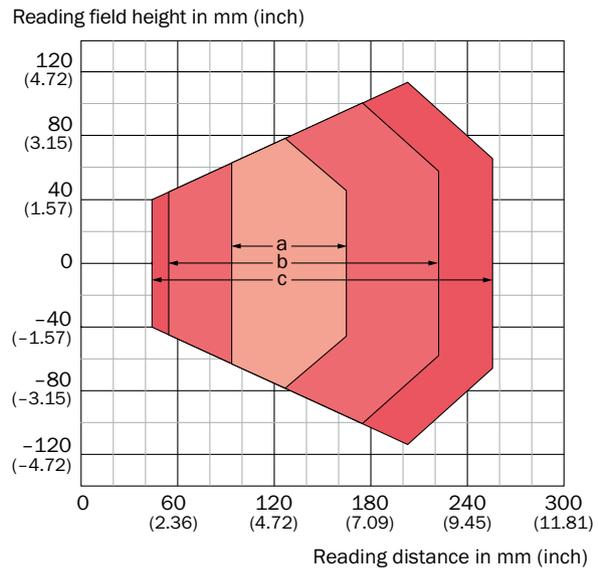


For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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

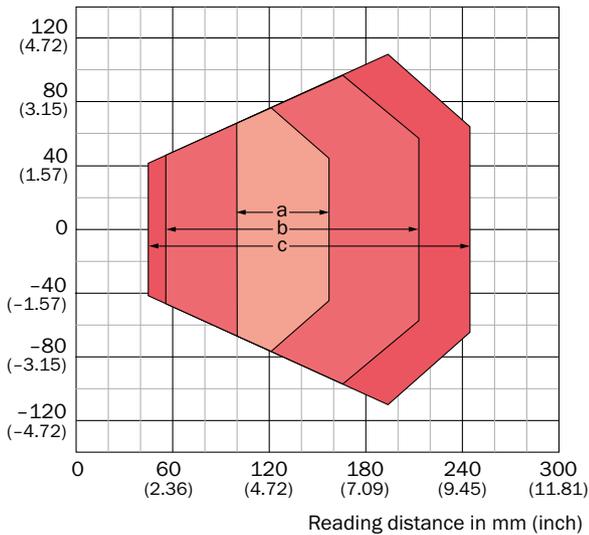


Resolution

- 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)



Recommended accessories

Mounting systems

Mounting brackets and mounting 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

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	●	●	●

	Brief description	Type	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet	CLV62x-64x IP69K
	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	-	-	●
	Modular connection module for one sensor	CDM420-0001	1025362	●	●	●

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
	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	-	●	-
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, drag chain use, AWG26	2 m	6034414	-	●	-

More accessories can be found → [85](#)

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 pushbuttons for auto setup and reading diagnostics
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant)
- Enhanced SMART code reconstruction technology
- Flexible sorting, filtering, and logical functions
- Advanced, easy-to-use SOPAS ET configuration software
- Integrated LED bar graph
- Advanced remote diagnostics and network monitoring capabilities available over Ethernet

Your benefits

- Economical, as only one CLV64x is required for all focus positions
- Intelligent auto setup and multi-function pushbuttons save time during commissioning
- Teach-in of match code possible via the pushbuttons
- Easily execute firmware updates using the microSD memory card: no need for a PC
- No supplementary Ethernet gateway required with Ethernet models – lowers costs
- Enhanced SMART technology reads damaged and partially obscured codes, increasing read rates
- Increased scanner intelligence enables sophisticated configuration of logical operations, reducing the control system programming effort. Data is then delivered in the desired format
- Real-time decoding at very high speeds



Additional information

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→ www.mysick.com/en/CLV64x

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



Detailed technical data

Features

	CLV640 Standard Density	CLV642 High Density
Light source	Visible red light (655 nm)	
MTBF	40,000 h	
Laser class	2 (EN 60825-1 (A2:2001-03), IEC 60825-1 : 2007-03, Ed. 2.0)	
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	15 mm, 8, 200 mm 15 mm, 8, 185 mm (depending on type)	–
Oscillating mirror functions	Fixed (adjustable position), oscillating (variable or fixed amplitude), one shot	
Oscillation frequency	0.5 Hz ... 6.25 Hz	–
Angle of deflection	–20° ... 20°	–
Heating		
Ethernet	Optional	

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
Serial (RS-232, RS-422/485)	✓, AUX (only RS-232)	
Function	Host, AUX	
Data transmission rate	2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud	
Ethernet	– / ✓ (depending on type)	
Function	Host, AUX	
Data transmission rate	10/100 MBit/s	
Protocol	TCP/IP, EtherNet/IP, PROFINET, PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT® (optional over external fieldbus module CDF600) (depending on type)	
CAN bus	✓	
Function	SICK CAN sensor network (Master/Slave, Multiplexer/Server)	
Data transmission rate	20 kbit/s ... 1 Mbit/s	
Protocol	CANopen, CSN (SICK CAN Sensor Network)	

	CLV640 Standard Density	CLV642 High Density
PROFIBUS DP	✓, optional over external fieldbus module (CDF600-2)	
DeviceNet	✓, optional via external connection module (CDM + CMF)	
Switching inputs		
Cable	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)	
Ethernet IP 65	3 ("Sensor 1", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)	
Ethernet IP 69K	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 IP 65	2 (via CMC600 in CDB620/CDM420)	
Ethernet IP 69K	4 ("Result 1", "Result 2", 2 via CMC600 in CDB650)	-
Reading pulse	"Sensor 1" switching input, non-powered, serial interface, auto pulse, CAN, switching inputs (depending on type)	"Sensor 1" switching input, non-powered, serial interface, auto pulse, CAN
Optical indicators	6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate percentage (10 LEDs))	
Acoustic indicators	Beeper/buzzer (can be switched off, can be allocated as a result indication function)	
Control elements	2 buttons (choose and start/stop functions)	
Configuration software	SOPAS ET	
Memory card	MicroSD memory card (flash card) 512 MB, 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 IP 65	2 x M12 cylindrical connectors (1 x 12-pin male connector, A-coded, 1 x 4-pin female connector, D-coded) on swivel connector	
Ethernet IP 69K	2 x M12 cylindrical connectors (1 x 17-pin male connector, A-coded, 1 x 4-pin female connector, D-coded)	-
Operating voltage	18 V DC ... 30 V DC	
Power consumption	5.5 W / 6.5 W (depending on type)	5.5 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 (EN 61140)	
Weight		
Ethernet IP 65	250 g ... 420 g (depending on type)	250 g ... 320 g (depending on type)
Ethernet IP 69K	890 g ... 1,230 g (depending on type)	-
Dimensions (L x W x H)		
Front	61 mm x 96 mm x 38 mm ¹⁾ 85 mm x 154 mm x 84 mm (depending on type)	61 mm x 96 mm x 38 mm ¹⁾ (depending on type)
Side	80 mm x 96 mm x 38 mm ¹⁾ (depending on type)	-
Oscillating mirror	95 mm x 96 mm x 41 mm ¹⁾ 121 mm x 164 mm x 84 mm (depending on type)	-

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 (1996), EN 60068-2-64 (1965)
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 %

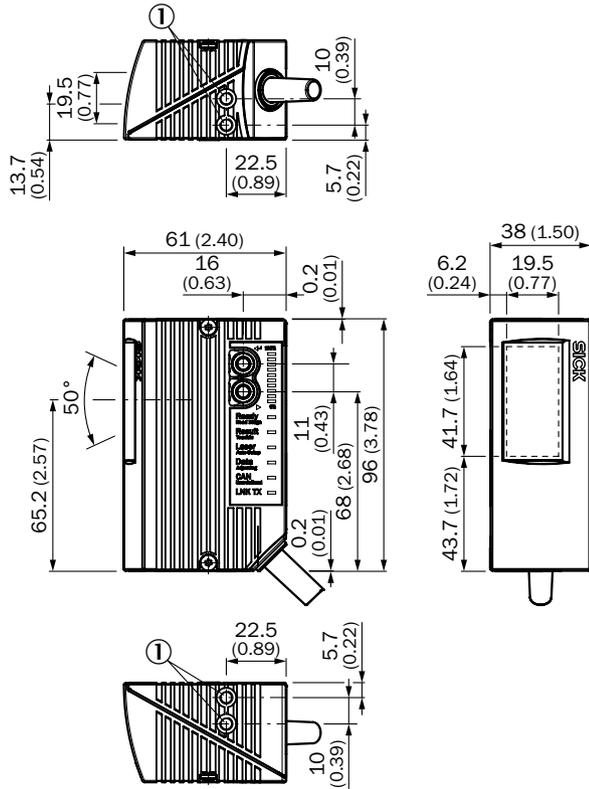
Ordering information

- **Focus:** dynamic focus control

Version	Connec- tion type	Enclosure rating	Front screen	Heating	Reading field	Scanner design	Type	Part no.
CLV640 Standard Density	Cable	IP 65	Glass	Optional	Front	Line scanner	CLV640-0000	1042014
						Raster scanner	CLV640-1000	1042016
					Side (105°)	Line scanner	CLV640-2000	1042018
						Raster scanner	CLV640-3000	1042020
	Ethernet	IP 65	Glass	Optional	Oscillating mirror	Line scanner	CLV640-6000	1042022
						Front	Raster scanner	CLV640-1120
					Side (105°)		Line scanner	CLV640-0120
						Raster scanner	CLV640-2120	1042019
					Raster scanner	CLV640-3120	1042021	
					Line scanner	CLV640-6120	1042023	
CLV642 High Den- sity	Cable	IP 65	Glass	Optional	Front	Line scanner	CLV640-6831S01	1063932
						Line scanner	CLV640-0831S01	1064718
CLV642 High Den- sity	Ethernet	IP 65	Glass	Optional	Front	Line scanner	CLV642-0000	1044873
						Line scanner	CLV642-0120	1044874

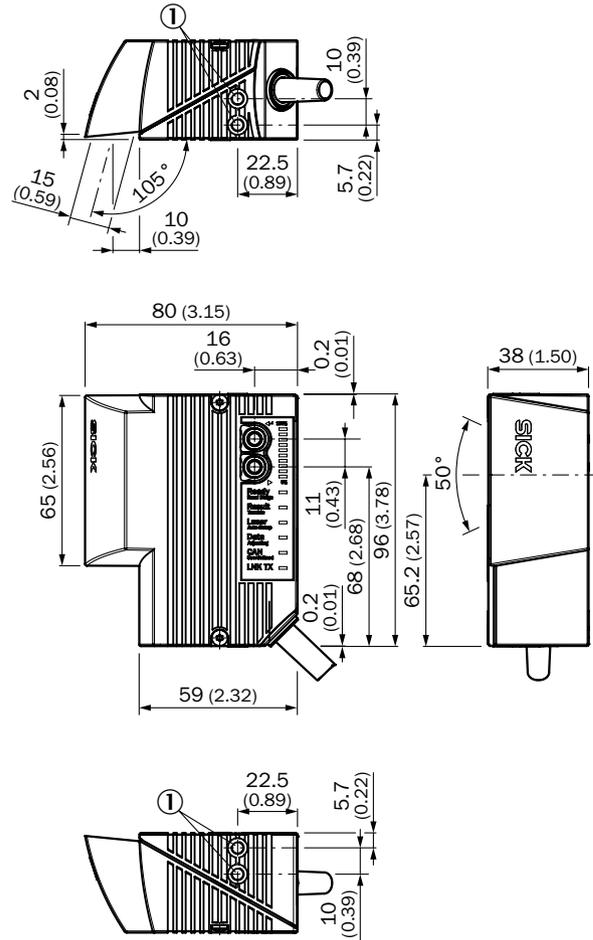
Dimensional drawings (dimensions in mm (inch))

CLV63x/64x/65x Standard, front



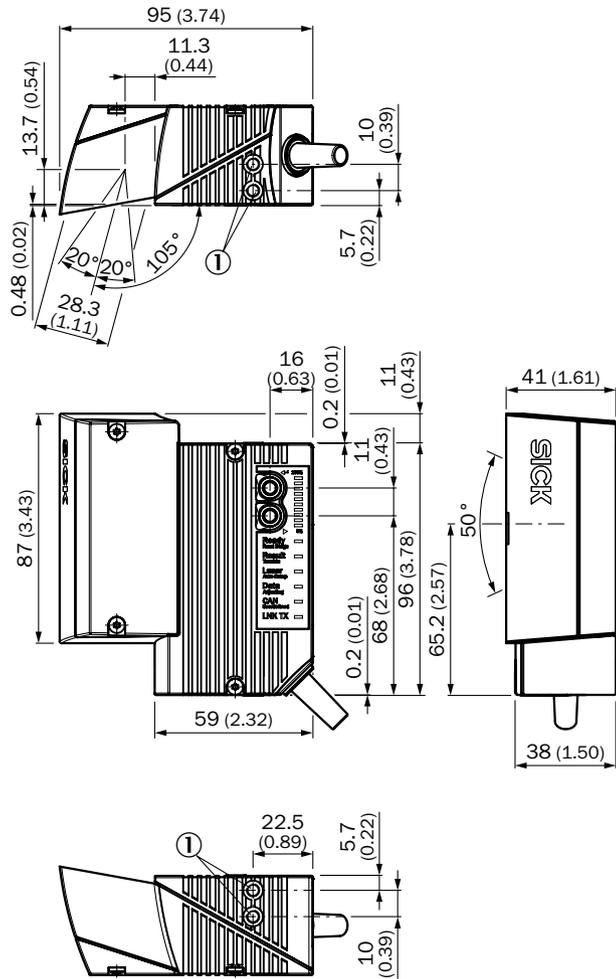
① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x Standard, side



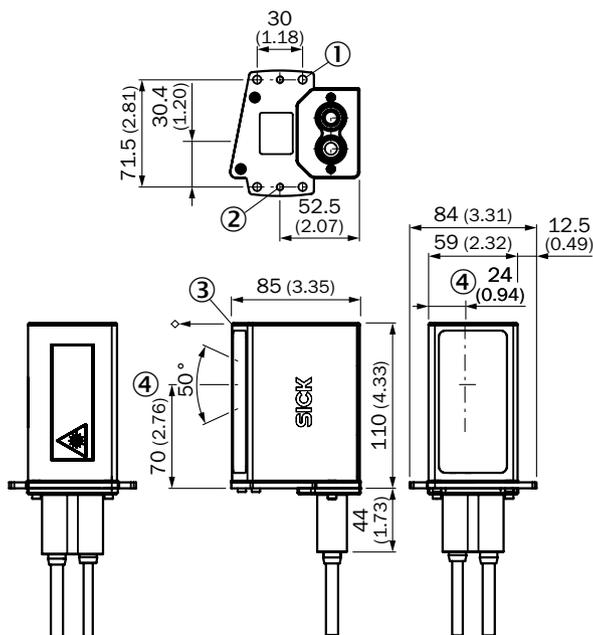
① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x/65x Standard, oscillating mirror

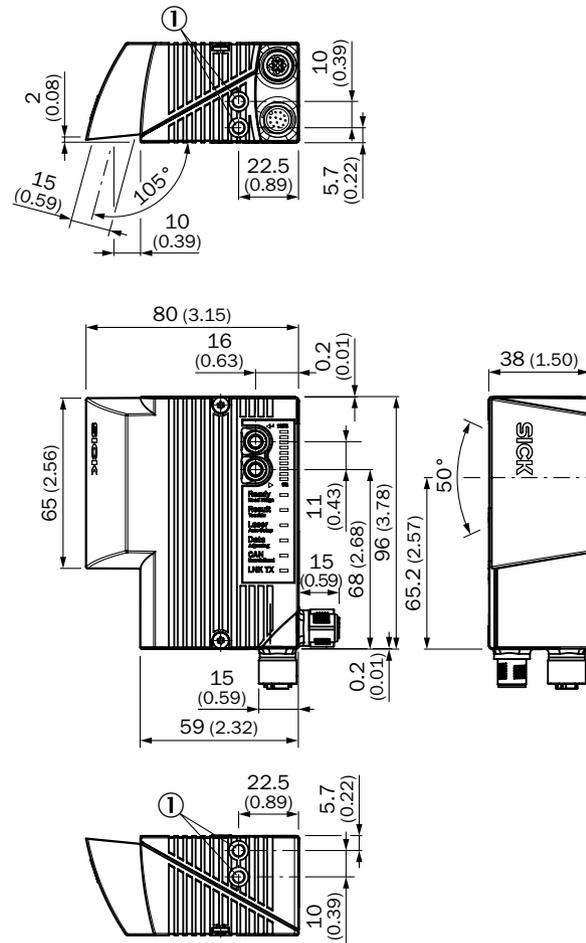


① M5 threaded mounting hole, 5.5 mm deep

CLV640 Ethernet IP 69K, front



CLV63x/64x Ethernet IP 65, side



① M5 threaded mounting hole, 5.5 mm deep

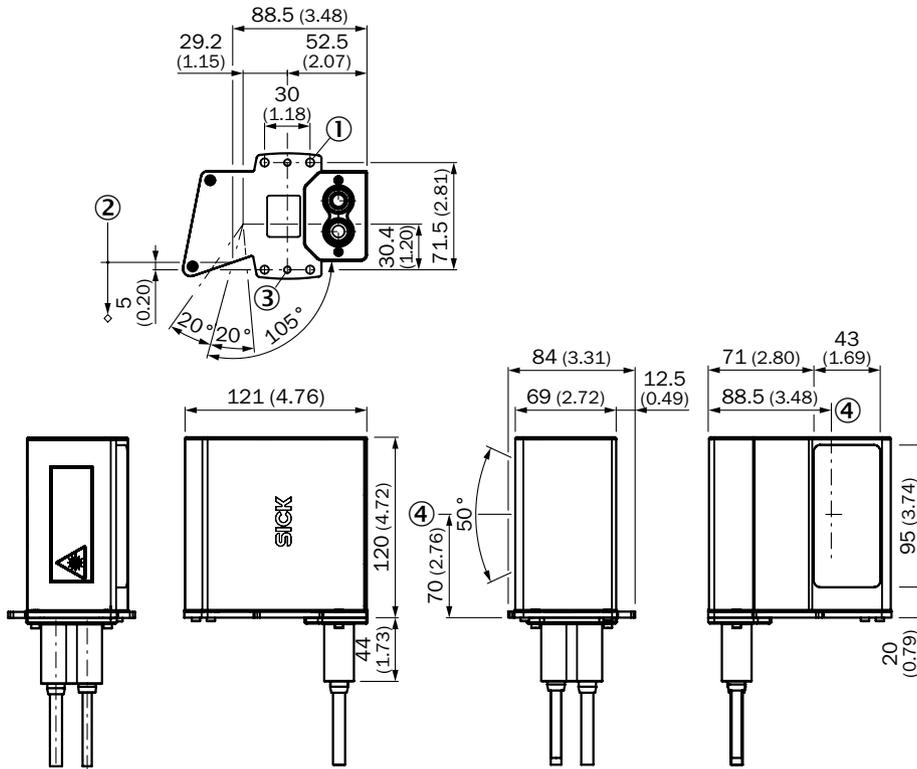
① Mounting holes, Ø 5.5 mm (4 x)

② Threaded holes, M5 (2 x)

③ Reference point for reading distance (from housing edge to object)

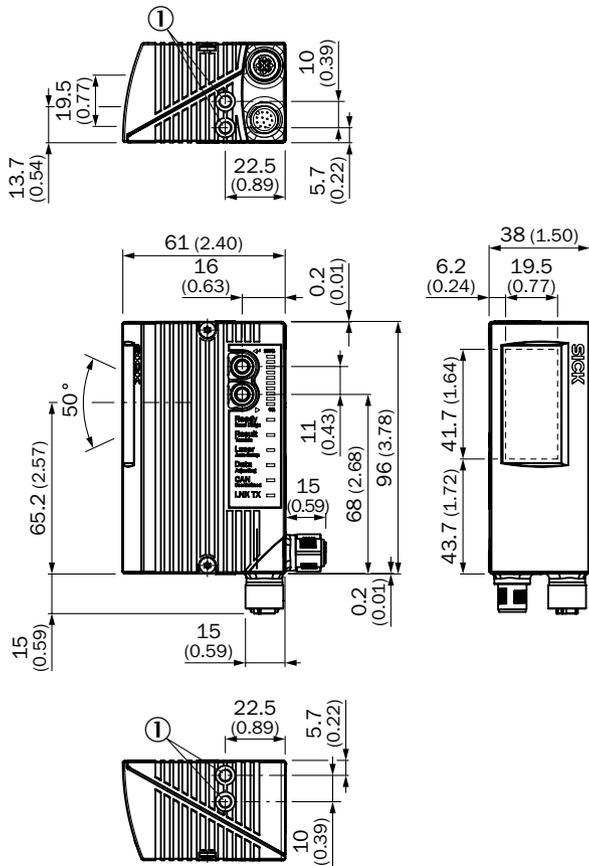
④ Position light emission

CLV640 Ethernet IP 69K, Oscillating mirror



- ① Mounting holes, \varnothing 5.5 mm (4 x)
- ② Reference point for reading distance (from housing edge to object)
- ③ Threaded holes, M5 (2 x)
- ④ Position light emission (oscillating mirror in central position)

CLV63x/64x/65x Ethernet IP 65, front

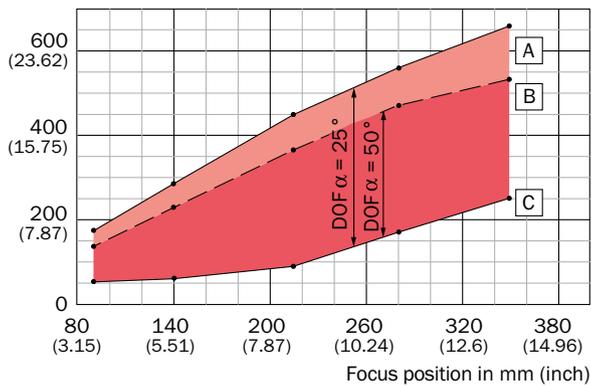


① M5 threaded mounting hole, 5.5 mm deep

Reading field diagrams

CLV640 Standard Density, front

Reading distance in mm (inch)



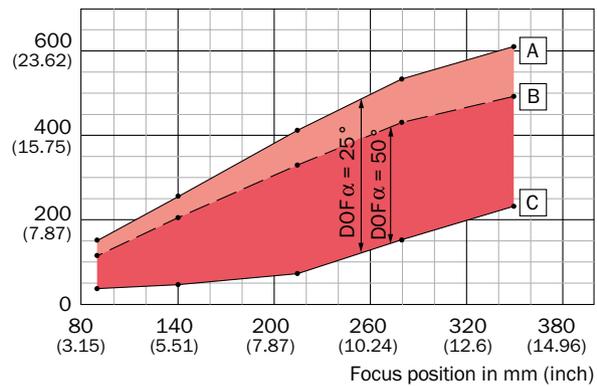
For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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

Reading distance in mm (inch)

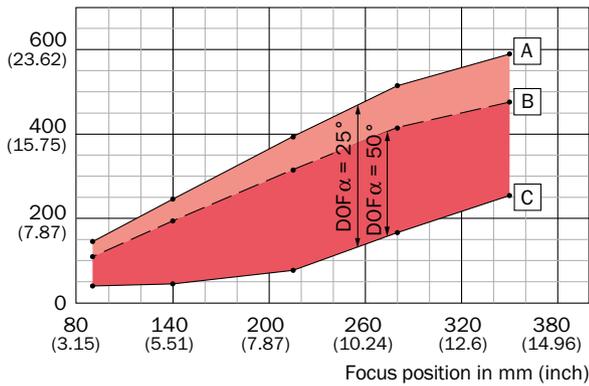


Resolution 0.5 mm (19.7 mil)

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

CLV640 Standard Density, Oscillating mirror

Reading distance in mm (inch)



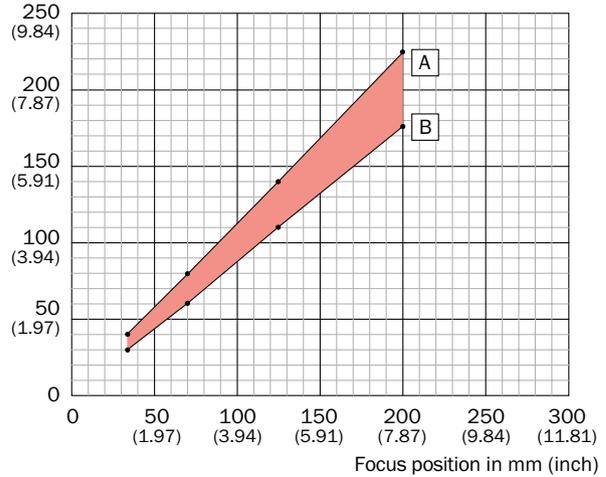
For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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

CLV642 High Density, front

Reading distance in mm (inch)



Resolution 0.15 mm (5.9 mil)

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

Recommended accessories

Mounting systems

Mounting brackets and mounting 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

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	●	●	●

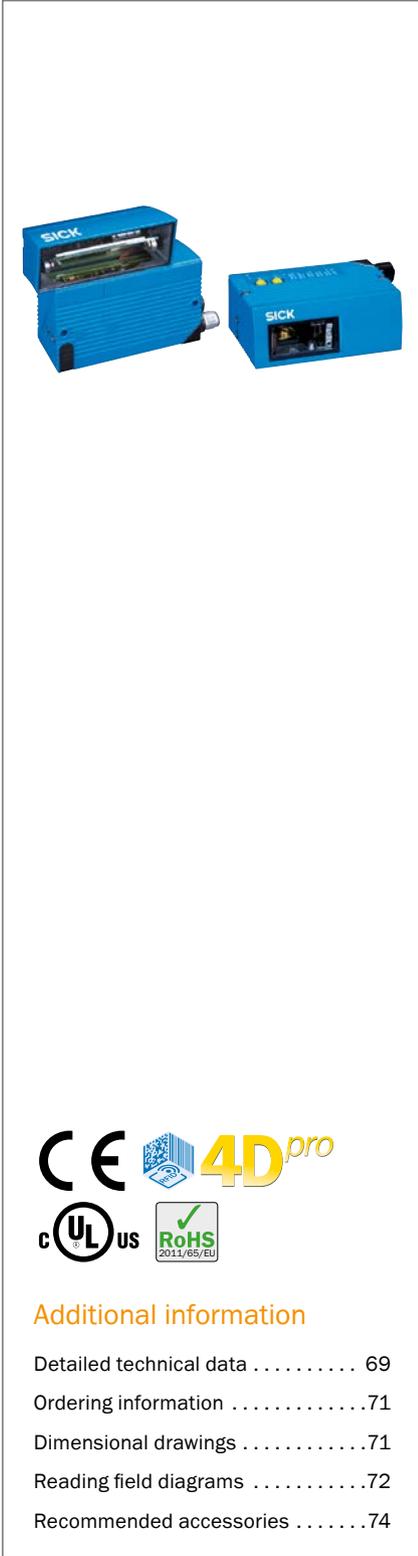
	Brief description	Type	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet	CLV62x-64x IP69K
	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination of Lector65x	CDB650-204	1064114	-	-	●
	Modular connection module for one sensor	CDM420-0001	1025362	●	●	●

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
	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	-	●	-
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, drag chain use, AWG26	2 m	6034414	-	●	-

More accessories can be found → [85](#)

ALWAYS IN AUTO FOCUS



Additional information

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Product description

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

and expertly engineered optics give it a competitive advantage in applications where space is limited and a large depth of field is required.

Other advanced features, like an embedded web server for remote diagnostics and reading performance statistics, enhance the performance of the CLV65x family.

Variants include line, side reading window and oscillating mirror versions; available with Ethernet.

At a glance

- Huge depth of field due to auto focus
- Integrated pushbuttons for auto setup and reading diagnostics
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant)
- Enhanced SMART code reconstruction technology
- Flexible sorting, filtering, and logical functions
- Integrated web server provides remote diagnostics and monitoring
- Advanced, easy-to-use SOPAS ET configuration software
- Integrated LED bar graph

Your benefits

- Economical, as auto focus means no versions or additional light barriers are required for focus adjustment
- Intelligent auto setup and multi-function pushbuttons save time during commissioning
- Easily execute firmware updates using the microSD memory card: no need for a PC
- Enhanced SMART technology reads damaged and partially obscured codes, increasing read rates
- Increased scanner intelligence enables sophisticated configuration of logical operations, reducing the control system programming effort. Data is then delivered in the desired format
- Integrated web server provides remote diagnostics and monitoring, no additional software required

→ www.mysick.com/en/CLV65x

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



Detailed technical data

Features

	CLV650 Standard Density	CLV651 Low Density
Light source	Visible red light (658 nm)	
MTBF	40,000 h	
Laser class	2 (EN 60825-1 (A2:2001-03), IEC 60825-1 : 2007-03, Ed. 2.0)	
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°	
Heating		
Ethernet	Optional	

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

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

Switching inputs	Cable	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
	Ethernet	3 ("Sensor 1", 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	2 (via CMC600 in CDB620/CDM420)
Reading pulse		"Sensor 1" switching input, non-powered, serial interface, auto pulse, CAN
Optical indicators		6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate percentage (10 LEDs))
Acoustic indicators		Beeper/buzzer (can be switched off, can be allocated as a result indication function)
Control elements		2 buttons (choose and start/stop functions)
Configuration software		SOPAS ET
Memory card		MicroSD memory card (flash card) 512 MB, optional

Mechanics/electronics

		CLV650 Standard Density	CLV651 Low Density
Electrical connection	Cable	1 x 15-pin D-Sub HD male connector (0.9 m)	
	Ethernet	2 x M12 cylindrical connectors (1 x 12-pin male connector, A-coded, 1 x 4-pin female connector, D-coded) on swivel connector	
Operating voltage		18 V DC ... 30 V DC	
Power consumption		8.5 W / 9.5 W (depending on type)	
Housing		Aluminum die cast	
Housing color		Light blue (RAL 5012)	
Protection class		III (EN 61140)	
Weight		250 g ... 320 g (depending on type)	
Dimensions (L x W x H)	Front	61 mm x 96 mm x 38 mm ¹⁾ (depending on type)	
	Oscillating mirror	95 mm x 96 mm x 41 mm ¹⁾ (depending on type)	
	Front, with polarizing filter	61 mm x 96 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 %

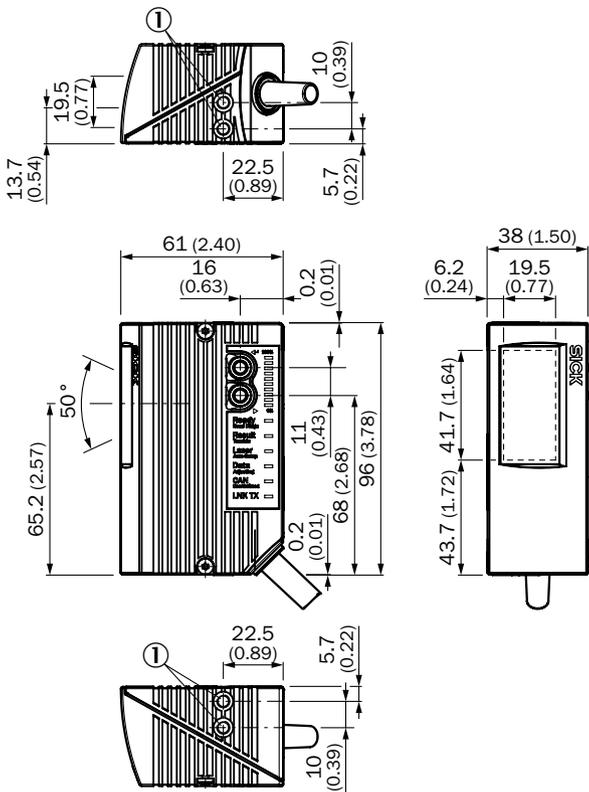
Ordering information

- **Focus:** Auto focus
- **Enclosure rating:** IP 65
- **Front screen:** Glass
- **Scanner design:** Line scanner

Version	Connection type	Heating	Reading field	Type	Part no.
CLV650 Standard Density	Cable	Optional	Front	CLV650-0000	1041290
			Oscillating mirror	CLV650-6000	1042124
	Ethernet	Optional	Front	CLV650-0120	1042121
			Front, with polarizing filter	CLV650-0120S01	1051957
			Oscillating mirror	CLV650-6120	1042125
CLV651 Low Density	Cable	Optional	Front	CLV651-0000	1046557
			Oscillating mirror	CLV651-6000	1046559
	Ethernet	Optional	Front	CLV651-0120	1046558
			Oscillating mirror	CLV651-6120	1046560

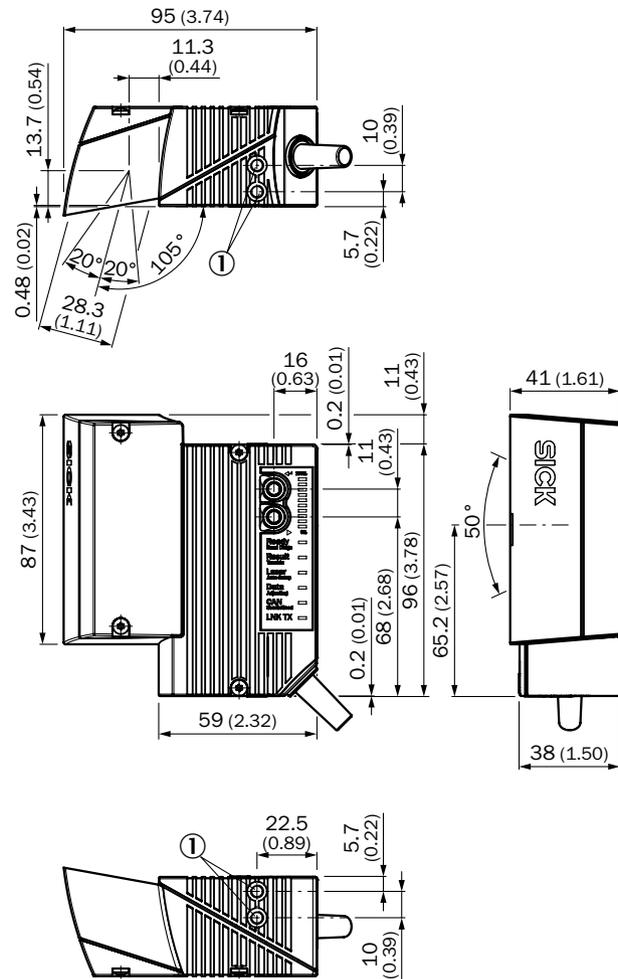
Dimensional drawings (dimensions in mm (inch))

CLV63x/64x/65x Standard, front



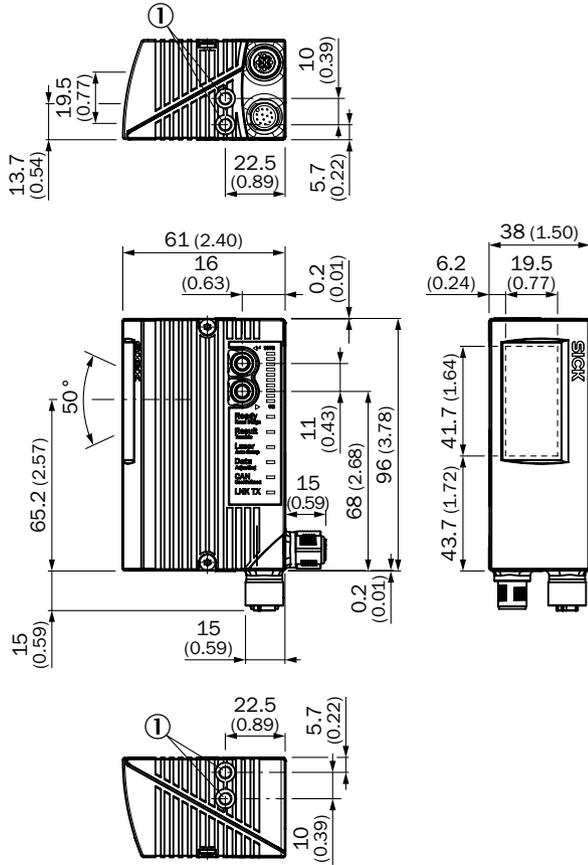
① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x/65x Standard, oscillating mirror



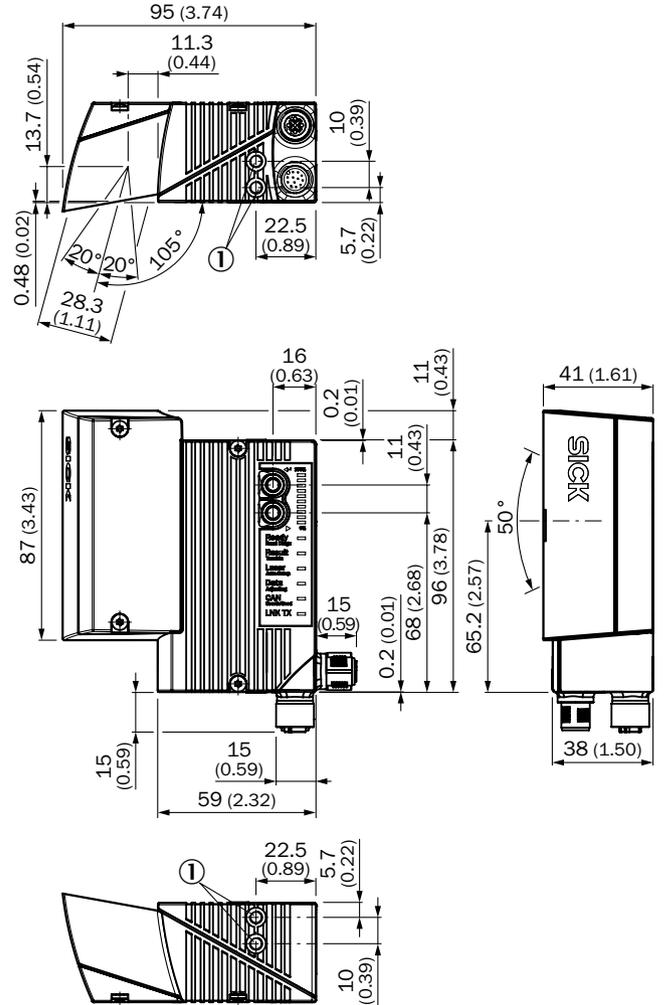
① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x/65x Ethernet, front



① M5 threaded mounting hole, 5.5 mm deep

CLV63x/64x/65x Ethernet, oscillating mirror

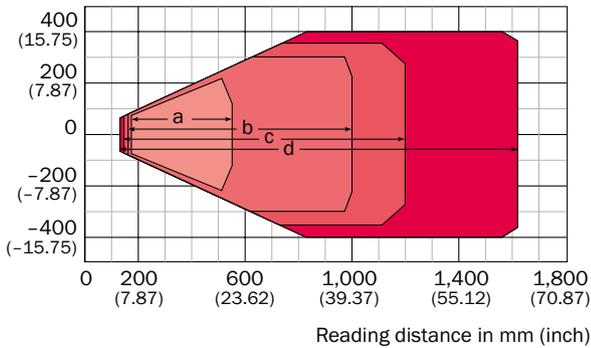


① M5 threaded mounting hole, 5.5 mm deep

Reading field diagrams

CLV650 Standard Density, front

Reading field height in mm (inch)

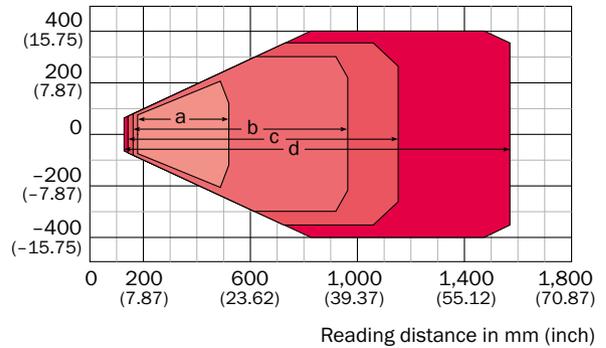


Resolution

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

CLV650 Standard Density, Oscillating mirror

Reading field height in mm (inch)

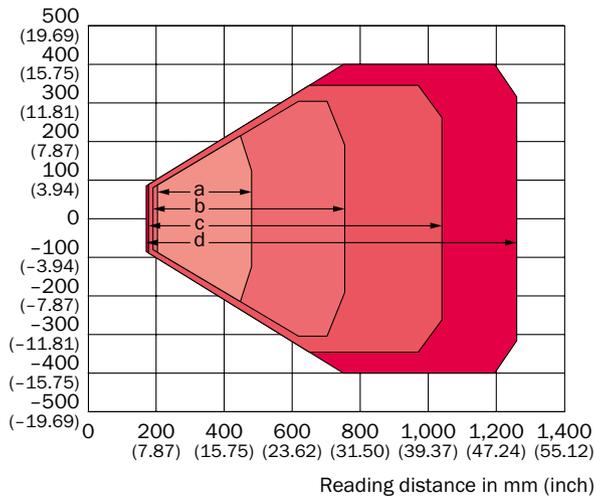


Resolution

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

CLV650-0120S01 Standard Density, front, with polarizing filter

Reading field height in mm (inch)



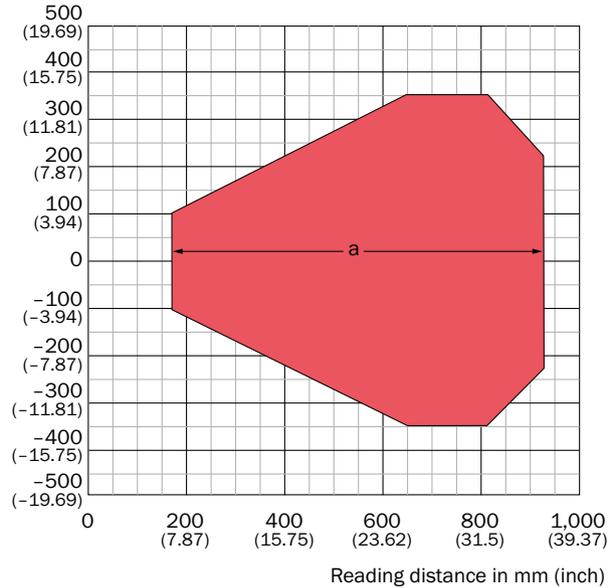
For devices with plastic reading window, the depth of field is reduced by approx. 10 %.

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

Reading field height in mm (inch)

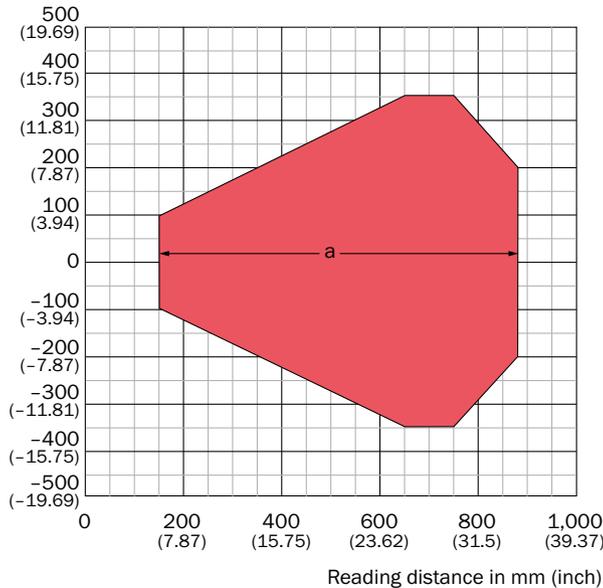


Resolution

- a: 0.50 mm (19.7 mil)

CLV651 Low Density, Oscillating mirror

Reading field height in mm (inch)



Resolution

- a: 0.50 mm (19.7 mil)

Recommended accessories

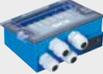
Mounting systems

Mounting brackets and mounting plates

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

Connection systems

Modules

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

Plug connectors and cables

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV63x-65x cable	CLV63x-65x Ethernet
	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	-	●
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, drag chain use, AWG26	2 m	6034414	-	●

More accessories can be found → 85

THE HIGHEST LEVEL OF FLEXIBILITY AND POWER



Additional information

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- Cloning plug..... 83

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 technolo-

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

At a glance

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

Your benefits

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

→ www.mysick.com/en/CLV69x

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



Detailed technical data

Features

	CLV690-0/1 Standard Density	CLV691-0/1 Low Density	CLV692-0/1 High Density
No. of distance configurations	≤ 8		
Focus adjustment time	≤ 20 ms		
Focus trigger source	Data interface / switching inputs		
Light source	Visible red light (660 nm)		
MTBF	100,000 h		
Laser class	2 (IEC 60825-1 (2007-3), EN 60825-1 (2008-05))		
Aperture angle	Front	≤ 60°	
	Oscillating mirror	≤ 50° / ≤ 60° (depending on type)	
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⁾ (depending on type)
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

Serial (RS-232, RS-422/485)	Function	✓, only with cloning plug D-Sub and Ethernet Host, AUX (only RS-232)
	Data transmission rate	300 Baud ... 500 kBaud, AUX: 57.6 kBaud (RS-232)
Ethernet	Function	✓, only with cloning plug I/O, CAN IN/OUT or CAN Redundant Host, AUX
	Data transmission rate	10/100 MBit/s
	Protocol	TCP/IP, EtherNet/IP, PROFINET (optional over external fieldbus module CDF600-2), PROFINET Dual Port (optional via external connection module CDF600-2)
CAN bus	Function	✓ SICK CAN sensor network (Master/Slave, Multiplexer/Server)
	Data transmission rate	20 kbit/s ... 1 Mbit/s
	Protocol	CSN (SICK CAN Sensor Network)
PROFIBUS DP		✓, optional over external fieldbus module (CDF600-2)
DeviceNet		✓, optional via external connection module (CDM + CMF)
Switching inputs		6 ("Sensor 1" ... "Sensor 6")
Switching outputs		4 ("Result 1" ... "Result 4")

Reading pulse	Switching inputs, serial interface, auto pulse, CAN
Optical indicators	6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate percentage (10 LEDs))
Control elements	2 buttons
Parameter storage	Integrated in cloning plug
Configuration software	SOPAS ET

Mechanics/electronics

Electrical connection	Depending on the cloning plug used
Operating voltage	18 V DC ... 30 V DC (depending on type)
Power consumption	15 W ... 17 W 78 W ... 80 W (with heating)
Housing	Aluminum die cast
Housing color	Light blue (RAL 5012)
Protection class	III (EN 60950-1 (2011-01))
Weight	1,500 g / 2,200 g (depending on type)
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

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

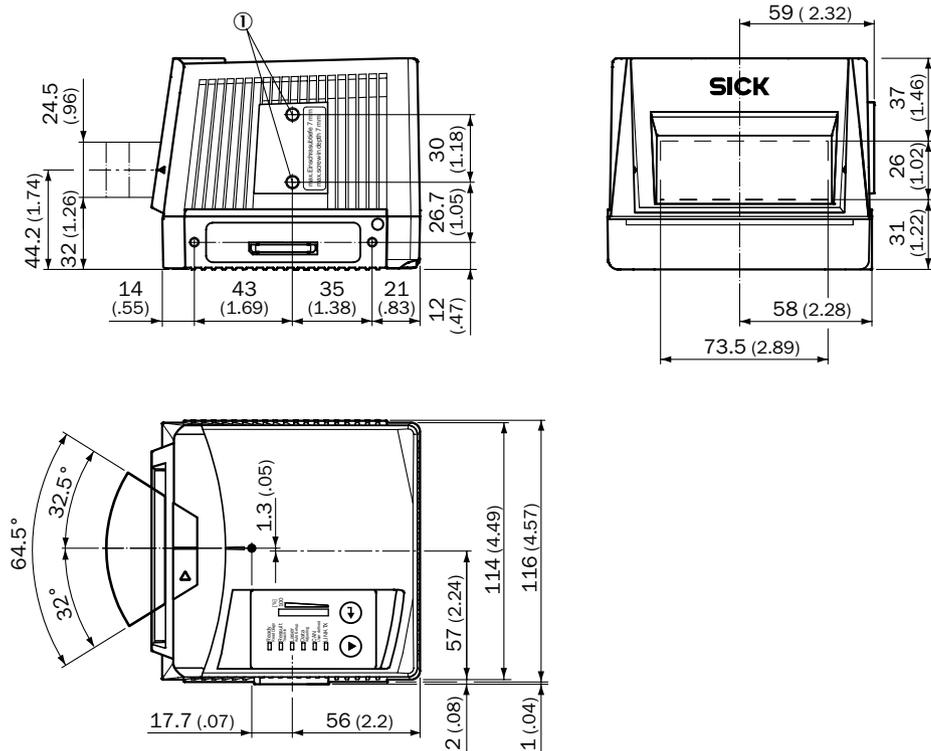
Ordering information

- **Focus:** Auto focus
- **Connection type:** depending on the cloning plug used
- **Enclosure rating:** IP 65
- **Scanner design:** Line scanner

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

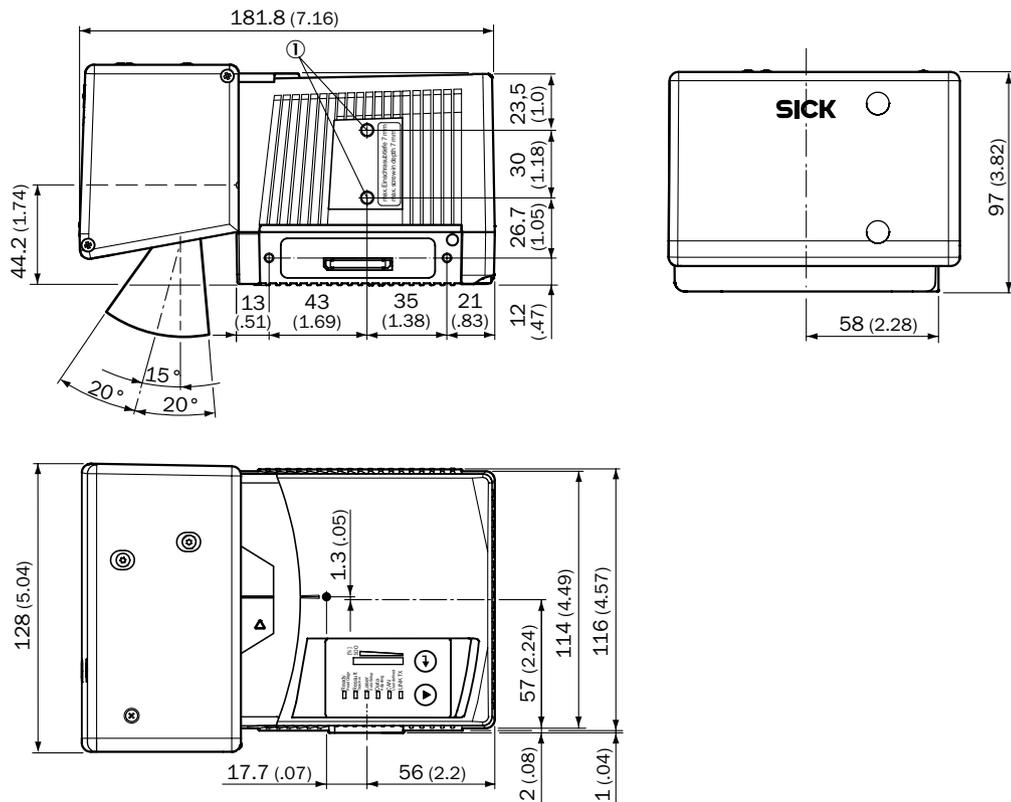
Dimensional drawings (dimensions in mm (inch))

CLV69x-0/1 depending on the cloning plug used, front



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

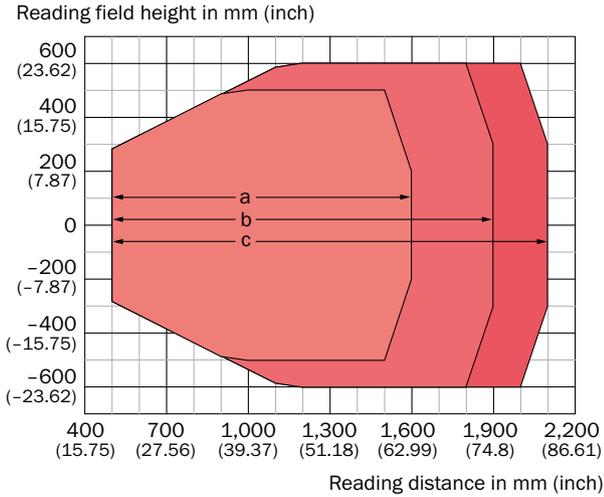
CLV69x-0/1 depending on the cloning plug used, Oscillating mirror



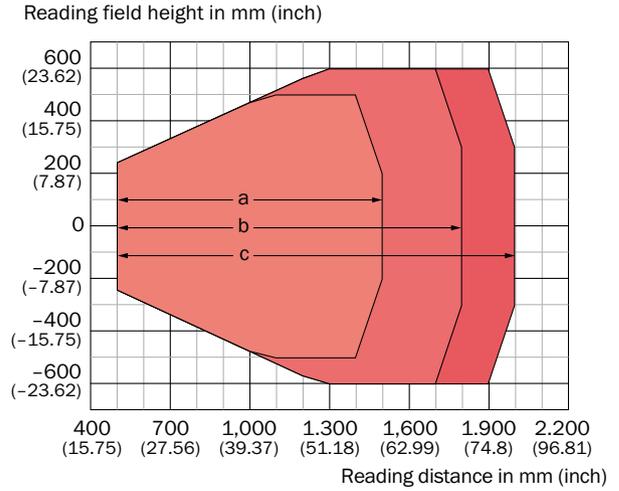
① Blind hole thread M6, 7 mm deep (2 x), for mounting

Reading field diagrams

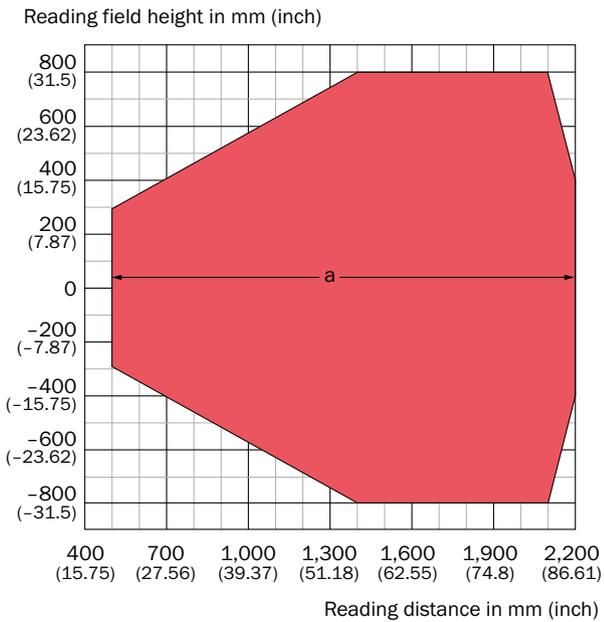
CLV690-0/1 Standard Density, front



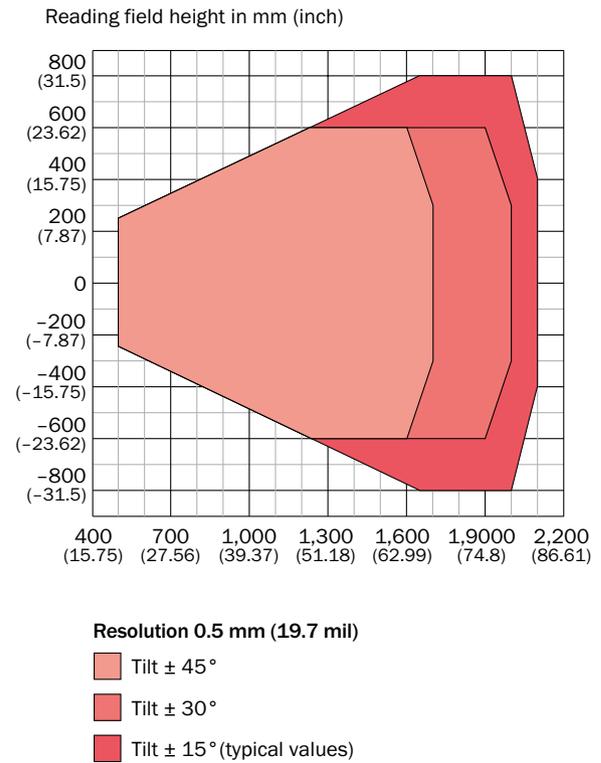
CLV690-0/1 Standard Density, Oscillating mirror



CLV691-0/1 Low Density, front

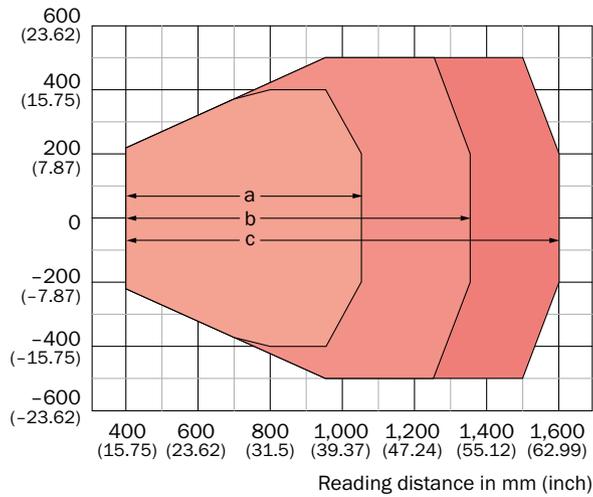


CLV691-0/1 Low Density, Oscillating mirror



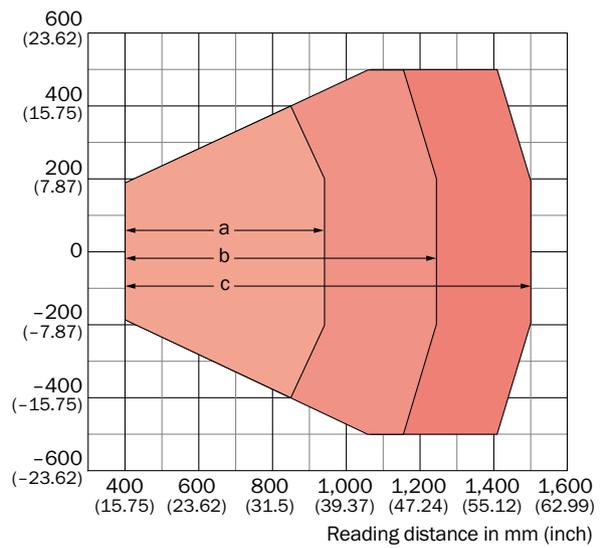
CLV692-0/1 High Density, front

Reading field height in mm (inch)



CLV692-0/1 High Density, Oscillating mirror

Reading field height in mm (inch)



Recommended accessories

Mounting systems

Mounting brackets and mounting plates

	Brief description	Part no.
	Simple mounting bracket	2013824

Terminal and alignment brackets

	Brief description	Part no.
	Quick-action lock system	2016110

Connection systems

Modules

	Brief description	Type	Part no.
	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination of 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 one identification sensor to PROFINET 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

Plug connectors and cables

	Signal type/ application	Connection type head A	Connection type head B	Cable	Cable length	Part no.
	Power, serial, CAN, digital I/Os	Female connector, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	2 m	2055419
		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, drag chain use	2 m	6052286
		Female connector, M12, 17-pin, straight, A-coded	Male connector, M12, 17-pin, straight, A-coded	Drag chain use, suitable for 2 A, suitable for refrigeration	2 m	6053230
		Male connector, D-Sub-HD, 15-pin Female connector, D-Sub-HD, 15-pin	-	Required for connecting a CLV69x (serial)	-	2062450
	Power	Female connector, M12, 5-pin, straight	Cable	3-wire, suitable for refrigeration	5 m	6053224
	Power, CAN	Female connector (AUX), M12, 5-pin Female connector, M12, 5-pin Male connector, M12, 5-pin	-	Required for connecting a CLV69x (CAN)	-	2062453
	Ethernet	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, drag chain use, AWG26	2 m	6034414
	Power, CAN, Ethernet	Male connector, M12, 5-pin	Female connector, M12, 5-pin	Required for connecting a CLV69x (CAN/Ethernet)	-	2074708
	Power, Ethernet, serial, CAN	Male connector, M12, 17-pin Male connector, M12, 5-pin Female connector, M12, 4-pin	-	Required for connecting a CLV69x (Ethernet/stand-alone)	-	2062452

More accessories can be found → 85

Cloning plugs

Cloning plug inputs and outputs

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

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	●	-	-	-	-	-

	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
	Modular system controller	MSC800	On request	-	-	●	●	●	●

Accessories

Mounting systems

Mounting brackets and mounting plates

	Brief description	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Mounting plate	2068602	-	-	-	-	●	-	-	-
	Bracket with adapter board	2042902	●	-	●	●	-	-	-	-
	Mounting bracket (simple bracket)	2020410	●	●	●	●	-	●	●	-
	Mounting bracket with integrated vibration and shock absorber for mounting the scanner e.g., on a forklift	2042799	-	●	-	-	-	●	●	-
	Hanger-shaped mounting bracket	2042800	-	●	-	-	-	●	●	-
	Bracket	2068600	-	-	-	-	●	-	-	-
	Bracket with adapter board	2068605	-	-	-	-	●	-	-	-
 Illustration may differ	Hanger-shaped mounting bracket, thermally isolated for use with heating devices	2050705	-	-	-	-	-	●	●	-
	Mounting bracket with integrated vibration/shock absorption for mounting the scanner on a forklift, for example (mounted in the direction of travel, on the left side)	2017628	-	-	-	-	-	-	-	●
	Mounting bracket with integrated vibration/shock absorption for mounting the scanner on a forklift, for example (mounted in the direction of travel, on the right side)	2039493	-	-	-	-	-	-	-	●
	Simple mounting bracket	2013824	-	-	-	-	-	-	-	●
	Articulated mounting bracket, self-locking	2018435	-	-	-	-	-	-	-	●
	Universal clamping bracket for rod mounting, diameter up to 12 mm	2042802	●	-	●	●	-	-	-	-
	Universal clamping bracket for rod mounting, diameter 12 mm	2076472	●	-	●	●	-	-	-	-

Terminal and alignment brackets

	Brief description	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	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	-	●	-	-	-	●	●	-
	Rod clamp with mounting plate, for a diameter of 12 mm ... 20 mm	2068601	-	-	-	-	●	-	-	-
	Rod clamp with mounting bracket, for a diameter of 12 mm ... 20 mm	2068599	-	-	-	-	●	-	-	-
	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.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	IP-65 sealing rubber for extension cables with 15-pin D-Sub plug connection (6010075 and 6020092)	4038847	●	-	●	●	-	●	●	-

Connection systems

Modules

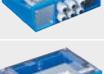
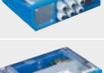
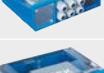
	Brief description	Type	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Small connection module for one sensor, 4 cable glands, base for CMC600	CDB620-001	1042256	●	-	●	●	●	●	●	-
	Small connection module for one sensor, 2 cable glands, 2 x M12 connector/socket for CAN, base for CMC600	CDB620-101	1042257	●	-	●	●	●	●	●	-
	Small connection module for a sensor, 5 cable glands, socket for CMC cloning module	CDB620-201	1042258	●	-	●	●	●	●	●	-
	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination of 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	●	-	●	●	●	●	●	●
	Fieldbus proxy/gateway to connect to a EtherCAT network	CDF600-0300	1052291	●	-	●	●	●	●	●	-
	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	●	-	●	●	●	●	●	●
	Modular connection module for one sensor, Host and AUX interface available on face plate	CDM420-0101	1025364	●	-	●	●	●	●	●	-

Illustration may differ

	Brief description	Type	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
 Illustration may differ	Kit: modular connection module for one sensor, Host and AUX interface available on face plate, power supply CMP400, US power cord	CDM420-0102	1026220	●	-	●	●	●	●	●	-
	Kit: modular connection module for one sensor, 2 A fuse, Host and AUX interface available on face plate, power supply CMP490, US power cord	CDM420-0108	1064248	●	-	●	●	●	●	●	●
	Modular connection module for one sensor	CDM490-0001	1025363	-	-	-	-	-	-	-	●
	External parameter memory for integration in CDB620/CDB650/CDM42x	CMC600-101	1042259	●	-	●	●	●	●	●	●

Adapters and distributors

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	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	-	-	-	-	-	-	-	●
 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	-	-	●	●	-	-	-	-

Plug connectors and cables

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

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x		
	Female connector, M12, 12-pin, straight	Cable	12-wire, UL	5 m	6034605	-	-	-	●	-	-	●	-		
	Female connector, M12, 12-pin, straight, A-coded	Cable	Drag chain use, suitable for 2 A, suitable for refrigeration	5 m	2075219	-	-	-	●	-	-	●	-		
	Female connector, M12, 17-pin, straight, A-coded	Cable	17-wire, suitable for 2 A, adapted color coding of open conductor heads, drag chain use, stripped	3 m	2070425	-	-	-	-	●	-	-	●		
				5 m	2070426	-	-	-	-	●	-	-	●		
				10 m	2070427	-	-	-	-	●	-	-	●		
				5 m	2075220	-	-	-	-	-	-	-	-	●	
	Female connector, M12, 12-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	0.9 m	2042916	-	-	-	●	-	-	●	-		
				2 m	2041834	-	-	-	●	-	-	●	-		
				3 m	2042914	-	-	-	●	-	-	●	-		
				5 m	2042915	-	-	-	●	-	-	●	-		
			To connection module CDx (except CDB650), drag chain use	3 m	2061604	-	-	-	●	-	-	●	-		
	Female connector, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	0.9 m	2049764	-	-	-	-	-	-	-	●		
				2 m	2055419	-	-	-	-	-	-	-	-	●	
				3 m	2055420	-	-	-	-	-	-	-	-	-	●
				5 m	2055859	-	-	-	-	-	-	-	-	-	●
			To connection module CDx (except CDB650), drag chain use	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, drag chain use	0.9 m	6052945	-	-	-	-	-	-	-	●		
				2 m	6052286	-	-	-	-	●	-	-	-	●	
				3 m	6051194	-	-	-	-	●	-	-	-	●	
				5 m	6051195	-	-	-	-	●	-	-	-	●	
				2 m	6053230	-	-	-	-	-	-	-	-	-	●
				3 m	6053231	-	-	-	-	-	-	-	-	-	●
			Drag chain use, suitable for 2 A, suitable for refrigeration	5 m	6053232	-	-	-	-	-	-	-	●		
	Female connector, D-Sub-HD, 15-pin, straight	Cable	Extension cable, 15-wire, AWG26	2 m	2043413	●	-	●	●	-	●	●	-		
		Male connector, D-Sub-HD, 15-pin, straight	Extension cable, 15-wire, AWG26	2 m	6034417	●	-	●	●	-	●	●	-		
				3 m	6034418	●	-	●	●	-	●	●	-		

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x		
	Male connector, female connector, Cable, D-Sub-HD	Plug housing, D-Sub-HD	Suitable for refrigeration, 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	-	-	-	-	-	-	-	●		
	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 for connection with CDM490, with 2 cables, each 15-pin shielded	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	-	-	-	-	-	-	-	-	-	●
	Male connector, D-Sub-HD, 15-pin Female connector, D-Sub-HD, 15-pin	-	Required for connecting a CLV69x (serial)	-	2062450	-	-	-	-	-	-	-	●		

• **Signal type/application:** Power

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Cable	Cable	Black AS-i flat cable for looping in the power supply to 4Dpro Ethernet sensors, 2-wire, by the meter	-	6022463	-	●	-	●	-	-	●	-
	AS-i clip, M12	-	AS-i clip for connection on black AS-i flat cable	-	6022472	-	●	-	●	-	-	●	-

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	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, drag chain use	1 m	6044572	-	-	-	●	-	-	●	-
				2.5 m	6044573	-	-	-	●	-	-	●	-
	Female connector, M12, 5-pin, straight	Cable	3-wire, suitable for refrigeration	10 m	6053225	-	-	-	-	-	-	-	●
				5 m	6053224	-	-	-	-	-	-	-	-

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

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	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 a CLV69x (CAN)	-	2062453	-	-	-	-	-	-	-	●	
	Male connector, M12, 5-pin Male connector, M12, 5-pin Female connector (AUX), M12, 5-pin	-	Required for connecting a CLV69x (CAN redundant)	-	2062454	-	-	-	-	-	-	-	●	

• **Signal type/application:** CAN

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Female connector, M12, 5-pin, straight	Male connector, M12, 5-pin, straight	Suitable for refrigeration	1 m	6053723	-	-	-	-	-	-	-	●
				3 m	6053724	-	-	-	-	-	-	-	-
	Female connector, M12, 5-pin, straight	Cable	Suitable for refrigeration	5 m	6053720	-	-	-	-	-	-	-	●
				10 m	6053721	-	-	-	-	-	-	-	-

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Male connector, M12, 5-pin, straight	-	CAN plug, with resistance	-	6021167	-	-	-	-	-	-	-	●

• **Signal type/application:** Ethernet

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Male connector, M12, 4-pin, D-coded	Male connector, M12, 4-pin, D-coded	4-wire	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, drag chain use, AWG26	2 m	6034414	-	-	-	●	-	-	●	●
				3 m	6044400	-	-	-	●	-	-	●	●
				5 m	6034415	-	-	-	●	-	-	●	●
				10 m	6030928	-	-	-	●	-	-	●	●
				20 m	6036158	-	-	-	●	-	-	●	●
 <small>Illustration may differ</small>	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, suitable for refrigeration, Ecolab, AWG26	2 m	6050198	-	-	-	●	●	-	●	●
				3 m	6050199	-	-	-	●	●	-	●	●
				5 m	6050200	-	-	-	●	●	-	●	●
				10 m	6050201	-	-	-	●	●	-	●	●
				20 m	6050596	-	-	-	●	●	-	●	●
			35,000 torsion flex cycles, Robot	5 m	6053217	-	-	-	●	-	●	●	

• **Signal type/application:** PROFINET

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Male connector, M12, 4-pin, straight, D-coded	Cable	4-wire, CAT5, CAT5e	2 m	6048247	-	●	-	●	-	-	●	-
				5 m	6048248	-	●	-	●	-	-	●	-
				10 m	6048249	-	●	-	●	-	-	●	-
	Male connector, M12, 4-pin, angled, D-coded	Cable	4-wire, CAT5, CAT5e	2 m	6048256	-	●	-	●	-	-	●	-
				5 m	6048257	-	●	-	●	-	-	●	-
				10 m	6048258	-	●	-	●	-	-	●	-
				25 m	6048259	-	●	-	●	-	-	●	-
	Male connector, M12, 4-pin, straight, D-coded	Male connector, M12, 4-pin, straight, D-coded	4-wire, CAT5, CAT5e	2 m	6048241	-	●	-	●	-	-	●	-
				5 m	6048242	-	●	-	●	-	-	●	-
				10 m	6048243	-	●	-	●	-	-	●	-

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Male connector, M12, 4-pin, angled, D-coded	Male connector, M12, 4-pin, straight, D-coded	4-wire, CAT5, CAT5e	2 m	6048250	-	●	-	●	-	-	●	-
				5 m	6048251	-	●	-	●	-	-	●	-
				10 m	6048252	-	●	-	●	-	-	●	-
	Male connector, M12, 4-pin, angled, D-coded	Male connector, M12, 4-pin, straight, D-coded	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	4-wire, CAT5, CAT5e	2 m	6048244	-	●	-	●	-	-	●	-
				5 m	6048245	-	●	-	●	-	-	●	-
				10 m	6048246	-	●	-	●	-	-	●	-
	Male connector, RJ45, 4-pin, straight	Male connector, M12, 4-pin, angled, D-coded	4-wire, CAT5, CAT5e	2 m	6048253	-	●	-	●	-	-	●	-
				5 m	6048254	-	●	-	●	-	-	●	-
				10 m	6048255	-	●	-	●	-	-	●	-

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

	Connection type head A	Connection type head B	Cable	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Male connector, M12, 5-pin	Female connector, M12, 5-pin	Required for connecting a CLV69x (CAN/Ethernet)	2074708	-	-	-	-	-	-	-	●
		Male connector, M12, 5-pin	Required for connecting a CLV69x (CAN redundant/Ethernet)	2074710	-	-	-	-	-	-	-	-

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

	Connection type head A	Cable	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Male connector, M12, 17-pin Male connector, M12, 5-pin Female connector, M12, 4-pin	Required for connecting a CLV69x (Ethernet/stand-alone)	2062452	-	-	-	-	-	-	-	●

• **Signal type/application:** Serial

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Female connector, D-Sub, 9-pin, straight	Cable	3-wire	3 m	2020319	●	-	●	●	-	●	●	●
	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	Female connector, D-Sub, 9-pin, straight	For PC connection	3 m	2014054	●	-	●	●	-	●	●	●

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

	Connection type head A	Connection type head B	Cable	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	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	●	-	●	●	-	●	●	●

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

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

Connection inlays

	Connection type	Cable	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Connection inlay (female connector), D-Sub-HD, 15-pin	Ready-to-assemble	6010019	●	-	●	●	-	●	●	-
	Connection inlay (male connector), D-Sub-HD, 15-pin	Ready-to-assemble	6010020	●	-	●	●	-	●	●	-

	Connection type	Cable	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
	Connection inlay (male connector), D-Sub-HD, 9-pin, 15-pin	Ready-to-assemble	6009438	●	-	●	●	-	●	●	-

Reflectors and optics

Mirror adapters

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

Further accessories

Heating units

All CLV63x, CLV64x, CLV65x and CLV69x bar code scanners have heated versions – with separate part numbers – available upon request. (The heating can't be retrofitted.)

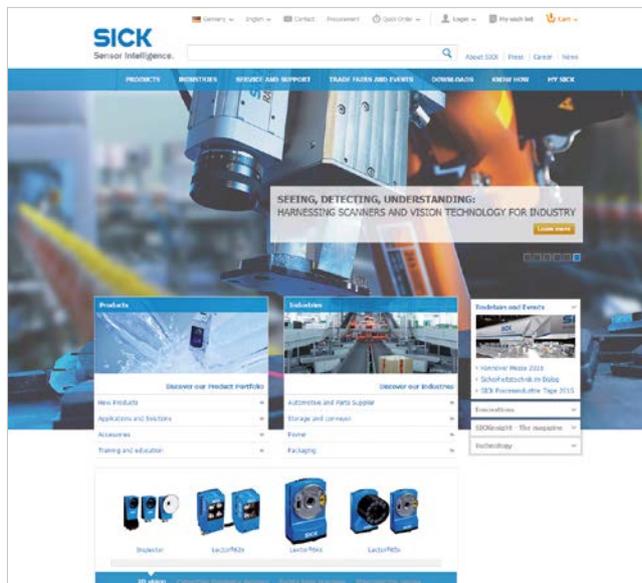
	Type	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
 Illustration may differ	CLV6xx-Heating-Standard-Front	On request	-	-	-	-	-	●	●	-
 Illustration may differ	CLV6xx-Heating-Standard-OM	On request	-	-	-	-	-	●	●	-
 Illustration may differ	CLV6xx-Heating-Standard-Side	On request	-	-	-	-	-	●	●	-

Storage media

	Brief description	Part no.	CLV61x cable	CLV61x Dual Port	CLV62x cable	CLV62x Ethernet	CLV62x-64x IP69K	CLV63x-65x cable	CLV63x-65x Ethernet	CLV69x
 <p>Illustration may differ</p>	microSD memory card with 1 GB for industrial use	4051366	-	-	-	-	-	●	●	-

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