



## Bar code scanners CLV65x / CLV650 / Standard Density

CLV650-6120



**Model Name** > **CLV650-6120**  
**Part No.** > **1042125**

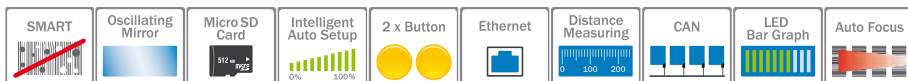


#### At a glance

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

#### Your benefits

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



#### Features

Version:	Standard Density
Connection type:	Ethernet
Reading field:	Oscillating mirror
Scanner design:	Line scanner
Focus:	Auto focus
Light source:	Visible red light (658 nm)
MTBF:	40,000 h
Laser class:	2 (EN 60825-1 (A2:2001-03))
Field of view:	≤ 50 °
Code resolution:	0.25 mm ... 1 mm

Reading distance:	125 mm ... 1,570 mm <sup>1)</sup>
Oscillating mirror functions:	Fixed (adjustable position), One shot, Oscillating (variable or fixed amplitude)
Oscillation frequency:	0.5 Hz ... 6.25 Hz
Angle of deflection:	-20 ° ... 20 °
Heating:	Optional
Scanning frequency:	600 Hz ... 1,000 Hz

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

## Performance

Bar code types:	Interleaved 2 of 5, All current code types, Codabar, Code 128, Code 39, Code 93, GS1 DataBar, GS1-128/EAN 128, MSI/Plessey, Pharmacode, Telepen, UPC/GTIN/EAN
Print ratio:	2:1 ... 3:1
No. of codes per scan:	1 ... 20 (Standard decoder), 1 ... 6 (SMART decoder)
No. of codes per reading interval:	1 ... 50 (auto-discriminating)
No. of characters per reading interval:	5,000, 500 (for multiplexer function in CAN operation)
No. of multiple readings:	1 ... 99

## Interfaces

Serial (RS-232, RS-422/485):	✓
Remark (Serial (RS-232, RS-422/485)):	AUX (only RS-232)
Function (Serial (RS-232, RS-422/485)):	Host, AUX
Data transmission rate (Serial (RS-232, RS-422/485)):	2,400 Baud ... 115 kBaud, AUX: 57.6 kBaud
Ethernet:	✓
Function (Ethernet):	Host, AUX
Protocol (Ethernet):	TCP/IP, EtherNet/IP, PROFINET, PROFINET Dual Port (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600)
Data transmission rate (Ethernet):	10/100 Mbit
CAN bus:	✓
Function (CAN bus):	SICK CAN sensor network (Master/Slave, Multiplexer/Server)
Protocol (CAN bus):	CANopen, CSN (SICK CAN Sensor Network)
Data transmission rate (CAN bus):	20 kbit/s ... 1 Mbit/s
PROFIBUS DP:	✓
Remark (PROFIBUS DP):	Optional via external connection module (CDF600-2)
DeviceNet:	✓
Remark (DeviceNet):	Optional via external connection module (CDM + CMF)
Control elements:	2 buttons (choose and start/stop functions)
Memory card:	MicroSD memory card (flash card) 512 MB, optional
Switching inputs:	3 ("Sensor 1", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Switching outputs:	2 (via CMC600 in CDB620/CDM420)
Reading pulse:	Auto pulse, CAN, Non-powered, "Sensor 1" switching input, Serial interface
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)
Configuration software:	SOPAS ET

## Mechanics/electronics

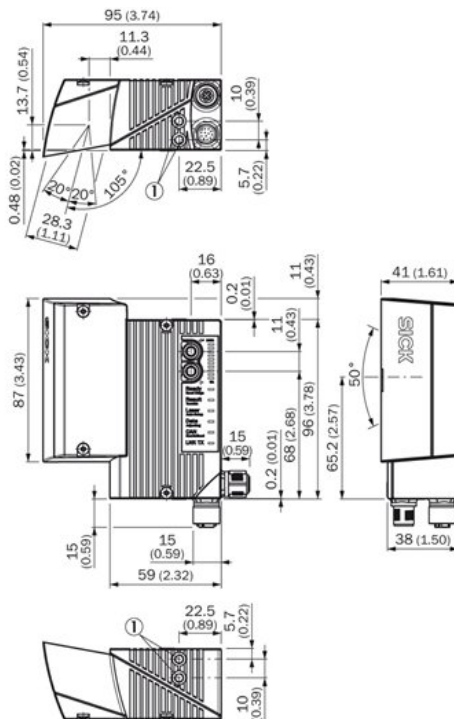
Electrical connection:	2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector
Operating voltage:	18 V DC ... 30 V DC
Power consumption:	9.5 W
Housing:	Die-cast aluminum
Housing color:	Light blue (RAL 5012)
Front screen:	Glass
Enclosure rating:	IP 65 (EN 60529)
Protection class:	III (EN 61140)
Weight:	250 g, without connecting cable
Dimensions:	95 mm x 96 mm x 41 mm <sup>1)</sup>

<sup>1)</sup> 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
Bar code print contrast (PCS):	≥ 60 %
Ambient light immunity:	2,000 lx, on bar code

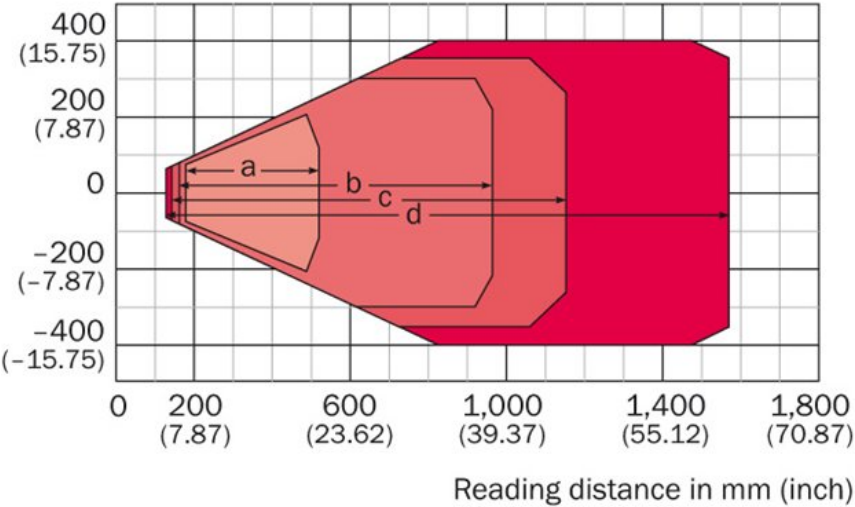
## Dimensional drawing







[1] M5 threaded mounting hole, 5.5 mm deep

Reading field diagram

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) |

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