



Bar code scanners
CLV65x / CLV650 / Standard Density

CLV650-0120S01



Model Name > [CLV650-0120S01](#)
Part No. > [1051957](#)



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:	Front, with polarizing filter
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: 160 mm ... 1,400 mm ¹⁾
Scanning frequency: 600 Hz ... 1,000 Hz

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 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: 8.5 W

Housing: Die-cast aluminum

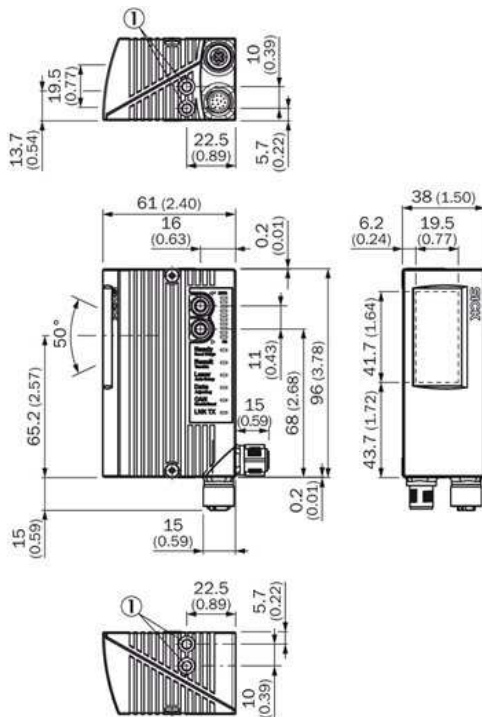
Housing color:	Light blue (RAL 5012)
Front screen:	Glass
Enclosure rating:	IP 65 (EN 60529)
Protection class:	III (EN 61140)
Weight:	250 g, without connecting cable
Dimensions:	61 mm x 96 mm x 38 mm ¹⁾

¹⁾ Swivel connector is 15 mm longer

Ambient data

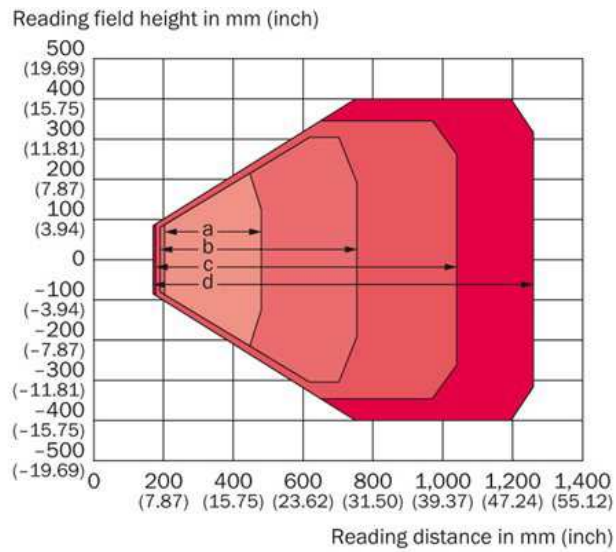
Electromagnetic compatibility (EMC):	EN 61000-6-3 (2001-10)/EN 61000-6-2:2005
Vibration resistance:	EN 60068-2-6 (1995)
Shock resistance:	EN 60068-2-27 (1993)
Ambient operating temperature:	0 °C ... +40 °C
Storage temperature:	-20 °C ... +70 °C
Permissible relative humidity:	90 %, non-condensing
Bar 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



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)

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