

# CLV631-0120F0

CLV63x

FIXED MOUNT BARCODE SCANNERS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
CLV631-0120F0	1051861

Other models and accessories → [www.sick.com/CLV63x](http://www.sick.com/CLV63x)



### Detailed technical data

#### Features

<b>Version</b>	Mid Range
<b>Connection type</b>	Ethernet
<b>Reading field</b>	Front
<b>Sensor type</b>	Line scanner
<b>Optical focus</b>	Fixed focus
<b>Light source</b>	Light spot, laser, Visible, Red, 655 nm
<b>Light spot</b>	Circular
<b>Laser class</b>	2 (IEC 60825-1:2014, EN 60825-1:2014)
<b>Aperture angle</b>	≤ 50°
<b>Reading distance</b>	90 mm ... 450 mm <sup>1)</sup>
<b>Scanning frequency</b>	400 Hz ... 1,200 Hz
<b>Code resolution</b>	0.25 mm ... 0.5 mm
<b>Heating</b>	✓
<b>Cold storage applications</b>	✓

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

#### Mechanics/electronics

<b>Connection type</b>	2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector 1 x cable, open-ended, 3-wire (2 m)
<b>Supply voltage</b>	≤ 24 V DC, ± 10 %
<b>Power consumption</b>	40 W
<b>Housing</b>	Aluminum die cast
<b>Housing color</b>	Light blue (RAL 5012)
<b>Window material</b>	Glass

<sup>1)</sup> Swivel connector is 15 mm longer.

<sup>2)</sup> At 25 °C.

<b>Enclosure rating</b>	IP65 (EN 60529)
<b>Protection class</b>	III (EN 61140)
<b>Weight</b>	450 g, without connecting cable
<b>Dimensions (L x W x H)</b>	61 mm x 96 mm x 50 mm <sup>1)</sup>
<b>MTBF</b>	100,000 h
<b>MTTF</b>	40,000 h (Laser diode) <sup>2)</sup>

<sup>1)</sup> Swivel connector is 15 mm longer.

<sup>2)</sup> At 25 °C.

## Performance

<b>Readable code structures</b>	1D codes
<b>Bar code types</b>	All current code types
<b>Code printing process</b>	Label (printed codes)
<b>Print ratio</b>	2:1 ... 3:1
<b>No. of codes per scan</b>	1 ... 20 (Standard decoder) 1 ... 6 (SMART decoder)
<b>No. of codes per reading interval</b>	1 ... 50 (auto-discriminating)
<b>No. of characters per reading interval</b>	5,000 500 (for multiplexer function in CAN operation)
<b>No. of multiple readings</b>	1 ... 99

## Interfaces

<b>Ethernet</b>	✓, TCP/IP, RS-232, RS-422, RS-485
Type of fieldbus integration	Optional over external fieldbus module CDF600 Optional over external fieldbus module CDF600-2
Function	Data interface (read result output), Service interface PROFINET Single Port, PROFINET Dual Port (optional via external connection module CDF600-2) Data interface (read result output), Service interface SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)
Data transmission rate	10/100 MBit/s 10/100 MBit/s 10/100 MBit/s 2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232) 20 kbit/s ... 1 Mbit/s 20 kbit/s ... 1 Mbit/s
<b>Digital inputs</b>	3 ("Sensor 1", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
<b>Digital outputs</b>	2 (Via optional CMC600 parameter memory in CDB620/CDM420)
<b>Reading pulse</b>	Digital inputs
<b>Optical indicators</b>	6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate percentage (10 LEDs))
<b>Acoustic indicators</b>	Beeper/buzzer (can be switched off, can be allocated as a result indication function)
<b>Control elements</b>	2 buttons (choose and start/stop functions)
<b>Configuration software</b>	SOPAS ET
<b>Memory card</b>	MicroSD memory card (flash card), optional

## Ambient data

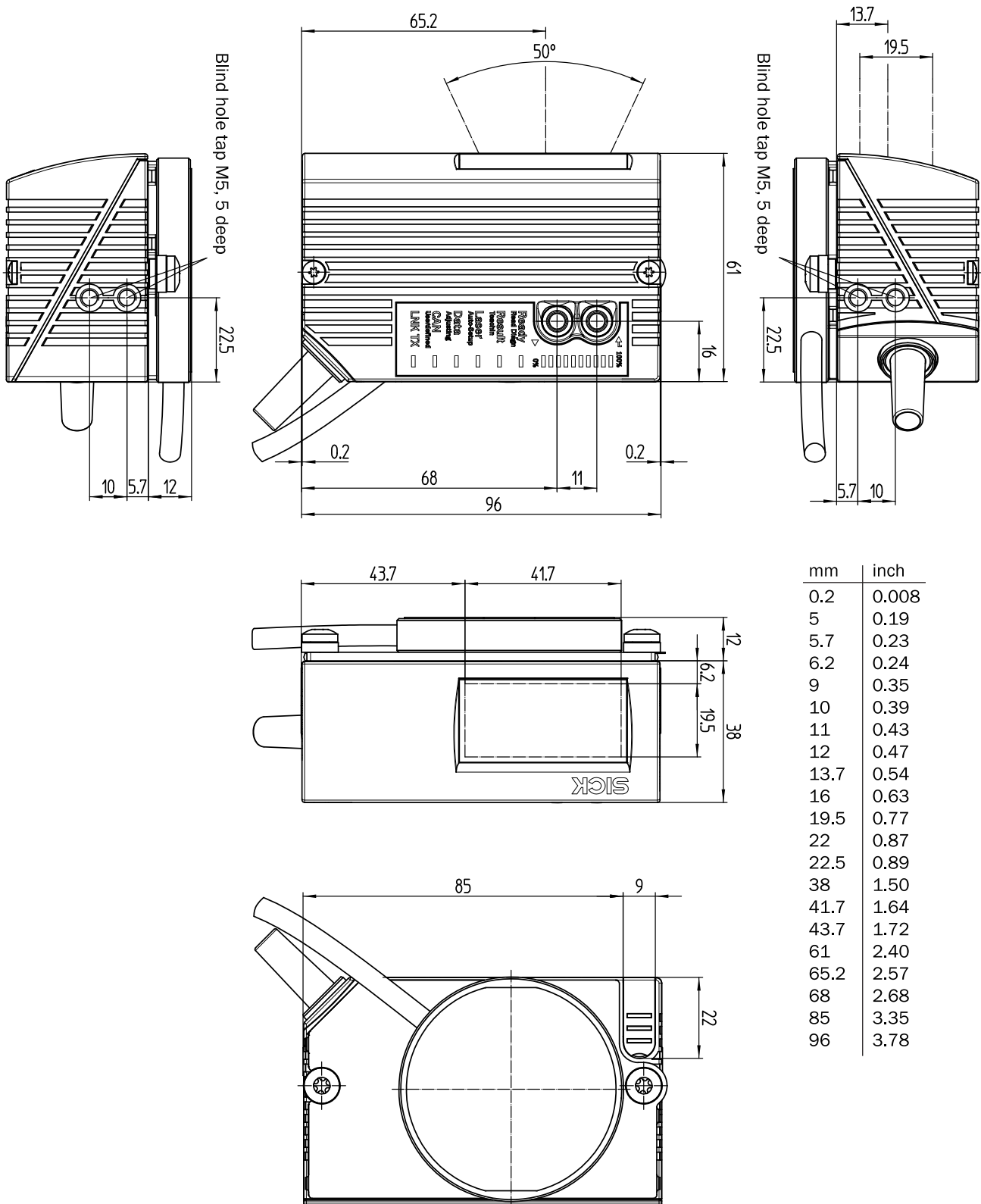
<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-3 (2001-10) / EN 61000-6-2:2005
<b>Vibration resistance</b>	EN 60068-2-6 (1995)

<b>Shock resistance</b>	EN 60068-2-27 (1993)
<b>Ambient operating temperature</b>	-35 °C ... +35 °C
<b>Storage temperature</b>	-20 °C ... +70 °C
<b>Permissible relative humidity</b>	90 %, Non-condensing
<b>Ambient light immunity</b>	2,000 lx, on barcode
<b>Bar code print contrast (PCS)</b>	≥ 60 %

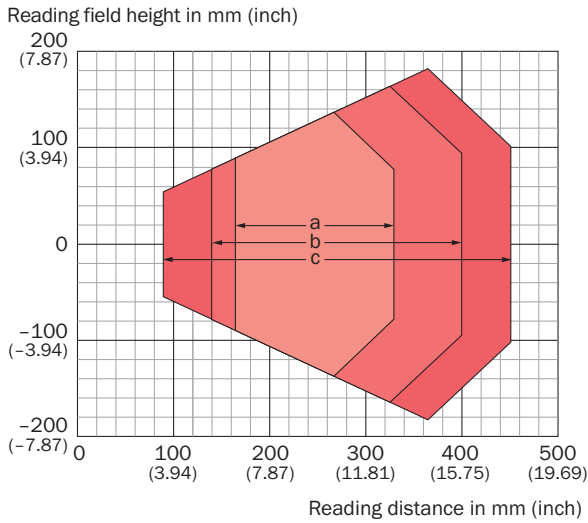
## Classifications

<b>ECLASS 5.0</b>	27280102
<b>ECLASS 5.1.4</b>	27280102
<b>ECLASS 6.0</b>	27280102
<b>ECLASS 6.2</b>	27280102
<b>ECLASS 7.0</b>	27280102
<b>ECLASS 8.0</b>	27280102
<b>ECLASS 8.1</b>	27280102
<b>ECLASS 9.0</b>	27280102
<b>ECLASS 10.0</b>	27280102
<b>ECLASS 11.0</b>	27280102
<b>ECLASS 12.0</b>	27280102
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>ETIM 7.0</b>	EC002550
<b>ETIM 8.0</b>	EC002550
<b>UNSPSC 16.0901</b>	43211701

Dimensional drawing (Dimensions in mm (inch))










### Reading field diagram



### Recommended accessories

Other models and accessories → [www.sick.com/CLV63x](http://www.sick.com/CLV63x)

	Brief description	Type	Part no.
<b>Cloning modules</b>			
	External parameter memory for integration in CDB620/CDB650/CDM42x	CMC600-101	1042259
<b>Electronic modules</b>			
	Additional board for connecting a bar code scanner with heater in combination with CDM-420	Additional board	2055071
<b>Storage media</b>			
	microSD memory card with 1 GB for industrial use	microSD memory card	4051366
<b>Mounting brackets and plates</b>			
	Hanger-shaped mounting bracket, thermally isolated for use with heating devices, mounting hardware included	Mounting bracket	2050705

	Brief description	Type	Part no.
Plug connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li>• <b>Connection type head B:</b> Male connector, RJ45, 8-pin, straight</li> <li>• <b>Signal type:</b> Ethernet</li> <li>• <b>Cable:</b> 2 m, 4-wire, AWG26</li> <li>• <b>Description:</b> Ethernet, shielded</li> </ul>	YM2D24-020EB2MRJA4	6050198
Modules			
	<ul style="list-style-type: none"> <li>• <b>Sub product family:</b> CDB620</li> <li>• <b>Supported products:</b> CLV61x - CLV65x, Lector62x, RFH6xx, RFU62x</li> <li>• <b>Brief description:</b> Small connection module for one sensor, 4 cable glands, base for CMC600</li> </ul>	CDB620-001	1042256
	<ul style="list-style-type: none"> <li>• <b>Sub product family:</b> CDM420</li> <li>• <b>Fieldbus interface:</b> PROFIBUS DP, Ethernet, DeviceNet™</li> <li>• <b>Supported products:</b> Lector62x, CLV61x - CLV65x, Mobile handheld scanners, RFH6xx, RFU62x, RFU63x</li> <li>• <b>Brief description:</b> Modular connection module for one sensor</li> </ul>	CDM420-0001	1025362

## Recommended services

Additional services → [www.sick.com/CLV63x](http://www.sick.com/CLV63x)

	Type	Part no.
Performance check		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Fixed mount barcode scanners</li> <li>• <b>Range of services:</b> Inspection of defined functions, e.g., reading performance</li> <li>• <b>Travel expenses:</b> The prices do not include travel costs such as hotel, flight, travel time and expenses.</li> <li>• <b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Performance check CLV4xx/CLV6xx	1682028
Commissioning		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Fixed mount barcode scanners</li> <li>• <b>Range of services:</b> Inspection of connection, fine adjustment, optimization of parameters of SICK product as well as tests, Setup of previously defined functions of reading configuration, code configuration, data processing and network, interfaces or inputs and outputs</li> <li>• <b>Travel expenses:</b> The prices do not include travel costs such as hotel, flight, travel time and expenses.</li> <li>• <b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Commissioning CLV61x ... CLV64x	1681925
Extended warranty		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Identification solutions, machine vision, Detection and ranging solutions, safety camera sensors, Safety laser scanners, Safety radar sensors</li> <li>• <b>Range of services:</b> The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery).</li> <li>• <b>Duration:</b> Five-year warranty from delivery date.</li> </ul>	Extended warranty for a total of five years from delivery date	1680671

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)