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DATA SHEET

CLV631-2120

CLV63x
Fixed mount barcode scanners

SICK Sensor Intelligence



FIXED MOUNT BARCODE SCANNERS

CLV631-2120

ORDERING INFORMATION

Type	part no.
CLV631-2120	1041983

Further device versions and accessories at www.sick.com/CLV63x

DETAILED TECHNICAL DATA

FEATURES

Version	Mid Range
Connection type	Ethernet
Reading field	Side (105°)
Sensor type	Line scanner
Optical focus	Fixed focus
Light source	Light spot, laser, Visible, Red, 655 nm
Light spot	Circular
Laser class	2, complies with 21 CFR 1040.10 except for the conformance according to “Laser Notice No. 56” from May 8, 2019 (EN 60825-1:2014+A11:2021, IEC 60825-1:2014)
Aperture angle	≤ 50°
Reading distance	74 mm ... 412 mm [1]
Scanning frequency	400 Hz ... 1,200 Hz
Code resolution	0.25 mm ... 0.5 mm

[1] For details see reading field diagram.

MECHANICS/ELECTRONICS

Connection type	2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector
Supply voltage	18 V DC ... 30 V DC
Power consumption	5 W
Housing material	Aluminum die cast
Housing color	Light blue (RAL 5012)
Window material	Glass
Enclosure rating	IP65 (EN 60529)
Protection class	III (EN 61140)

[1] Swivel connector is 15 mm longer.

[2] At 25 °C.

Weight	270 g, without connecting cable
Dimensions (L x W x H)	80 mm x 96 mm x 38 mm [1]
MTBF	100,000 h
MTTF	40,000 h (Laser diode) [2]

[1] Swivel connector is 15 mm longer.

[2] At 25 °C.

PERFORMANCE

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

INTERFACES

Ethernet	✓, TCP/IP
Function	Data interface (read result output), Service interface
Data transmission rate	10/100 MBit/s
PROFINET	✓
Function	PROFINET Single Port, PROFINET Dual Port (optional via external connection module CDF600-2)
Data transmission rate	10/100 MBit/s
EtherNet/IP™	✓
Data transmission rate	10/100 MBit/s
EtherCAT®	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600
Serial	✓, RS-232, RS-422, RS-485
Function	Data interface (read result output), Service interface
Data transmission rate	2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)
CAN	✓
Function	SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)
Data transmission rate	20 kbit/s ... 1 Mbit/s
CANopen	✓
Data transmission rate	20 kbit/s ... 1 Mbit/s
PROFIBUS DP	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
Digital inputs	3 (“Sensor 1”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Digital outputs	2 (Via optional CMC600 parameter memory in CDB620/CDM420)
Reading pulse	Digital inputs, 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), optional

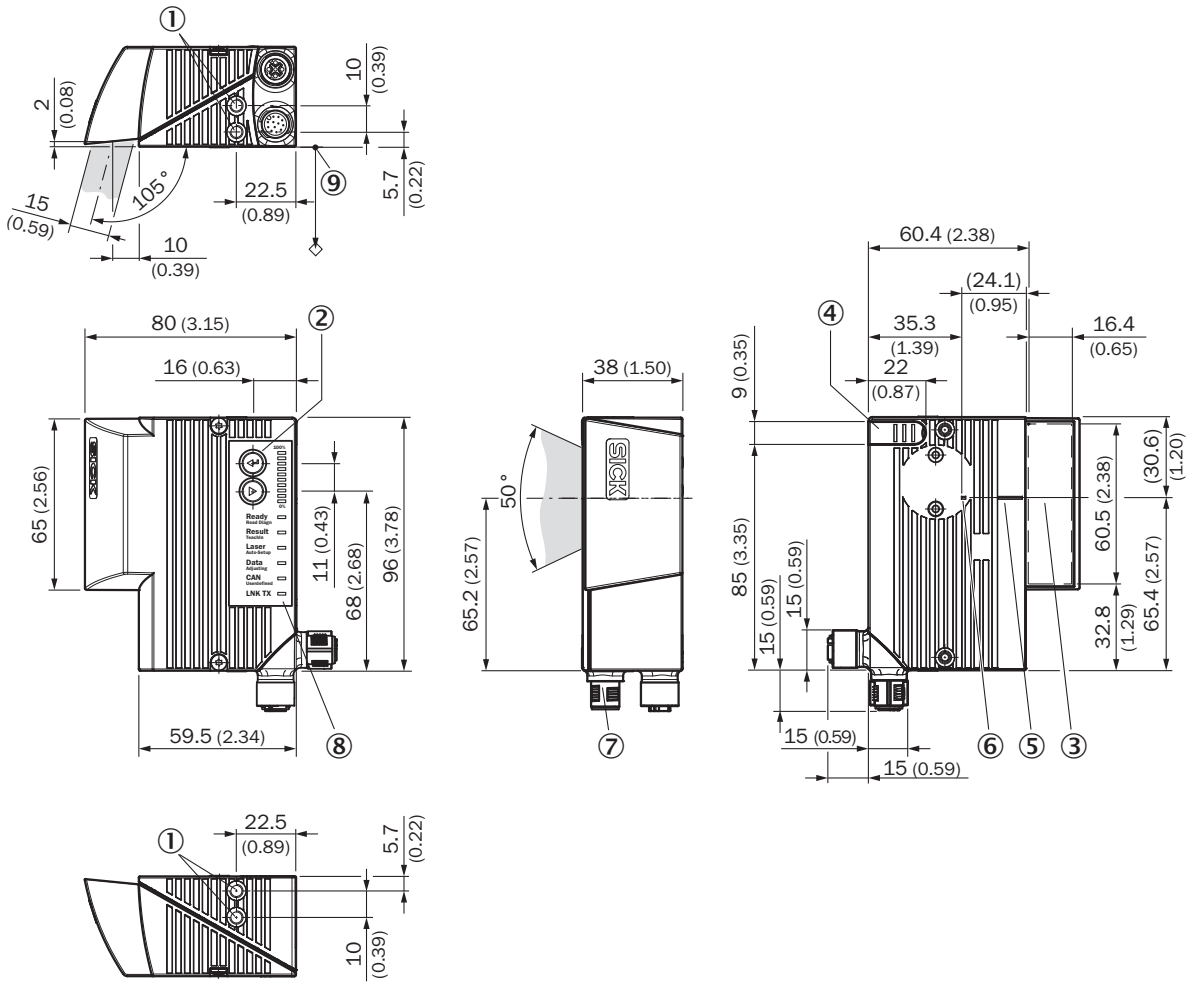
AMBIENT DATA

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
Relative humidity	90 %, Non-condensing
Ambient light immunity	2,000 lx, on barcode
Bar code print contrast (PCS)	≥ 60 %

CERTIFICATES

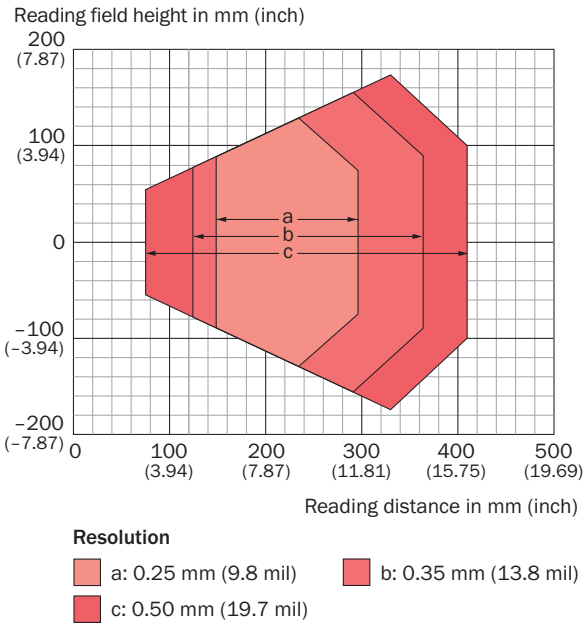
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Ethercat certificate	✓
Profinet certificate	✓
Laser safety (IEC 60825-1) declaration of manufacturer	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

DIMENSIONAL DRAWING CLV63X/64X ETHERNET, SIDE



Dimensions in mm (inch)
① blind hole thread M5, 5 mm deep (2 x), for mounting
② Function button (2 x)
③ Reading field
④ cover for the microSD memory card
⑤ central position of the deflected laser beam in the V-shaped aperture angle
⑥ internal impact point: rotation point of the variable direction laser beam
⑦ M12 round connectors (1 x 12-pin or 1 x 17-pin male connector, A-coded, 1 x 4-pin female connector, D-coded) with swivel connector
⑧ LED status indicator (6x) and bar graph
⑨ reference point for reading distance (from housing edge to object)

READING FIELD DIAGRAM



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1041983

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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