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DATA SHEET

# CLV640-6120

CLV64x  
Fixed mount barcode scanners

# SICK

Sensor Intelligence



FIXED MOUNT BARCODE SCANNERS

CLV640-6120

ORDERING INFORMATION

| Type        | part no. |
|-------------|----------|
| CLV640-6120 | 1042023  |

Further device versions and accessories at [www.sick.com/CLV64x](http://www.sick.com/CLV64x)



DETAILED TECHNICAL DATA

FEATURES

|                              |                                                                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version                      | Standard Density                                                                                                                                            |
| Connection type              | Ethernet                                                                                                                                                    |
| Reading field                | Oscillating mirror                                                                                                                                          |
| Sensor type                  | Oscillating mirror                                                                                                                                          |
| Optical focus                | Dynamic focus control                                                                                                                                       |
| 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             | 45 mm ... 755 mm <sup>1)</sup>                                                                                                                              |
| Scanning frequency           | 400 Hz ... 1,200 Hz                                                                                                                                         |
| Code resolution              | 0.2 mm ... 1 mm                                                                                                                                             |
| 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°                                                                                                                                                |

<sup>1)</sup> 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 | 6.5 W                                                                                              |
| Housing material  | Aluminum die cast                                                                                  |
| Housing color     | Light blue (RAL 5012)                                                                              |
| Window material   | Glass                                                                                              |

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

<sup>2)</sup> At 25 °C.

|                        |                                      |
|------------------------|--------------------------------------|
| Enclosure rating       | IP65 (EN 60529)                      |
| Protection class       | III (EN 61140)                       |
| Weight                 | 350 g, without connecting cable      |
| Dimensions (L x W x H) | 95 mm x 107 mm x 41 mm <sup>1)</sup> |
| MTBF                   | 100,000 h                            |
| MTTF                   | 40,000 h (Laser diode) <sup>2)</sup> |

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

<sup>2)</sup> 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)<br>1 ... 6 (SMART decoder)                                                                                                              |
| No. of codes per reading interval      | 1 ... 50 (auto-discriminating)                                                                                                                                      |
| No. of characters per reading interval | 5,000<br>500 (for multiplexer function in CAN operation)                                                                                                            |
| No. of multiple readings               | 1 ... 99                                                                                                                                                            |

## INTERFACES

|                        |                              |                                                                                                                  |
|------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------|
| Ethernet               | Function                     | ✓, TCP/IP                                                                                                        |
|                        | Data transmission rate       | Data interface (read result output), Service interface<br>10/100 MBit/s                                          |
| PROFINET               | Function                     | ✓                                                                                                                |
|                        | Data transmission rate       | PROFINET Single Port, PROFINET Dual Port (optional via external connection module CDF600-2)<br>10/100 MBit/s     |
| EtherNet/IP™           | Function                     | ✓                                                                                                                |
|                        | Data transmission rate       | 10/100 MBit/s                                                                                                    |
| EtherCAT®              | Function                     | ✓                                                                                                                |
|                        | Type of fieldbus integration | Optional over external fieldbus module CDF600                                                                    |
| Serial                 | Function                     | ✓, RS-232, RS-422, RS-485                                                                                        |
|                        | Data transmission rate       | Data interface (read result output), Service interface<br>2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)   |
| CAN                    | Function                     | ✓                                                                                                                |
|                        | Data transmission rate       | SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)<br>20 kbit/s ... 1 Mbit/s            |
| CANopen                | Function                     | ✓                                                                                                                |
|                        | Data transmission rate       | 20 kbit/s ... 1 Mbit/s                                                                                           |
| PROFIBUS DP            | Function                     | ✓                                                                                                                |
|                        | 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 %                                     |

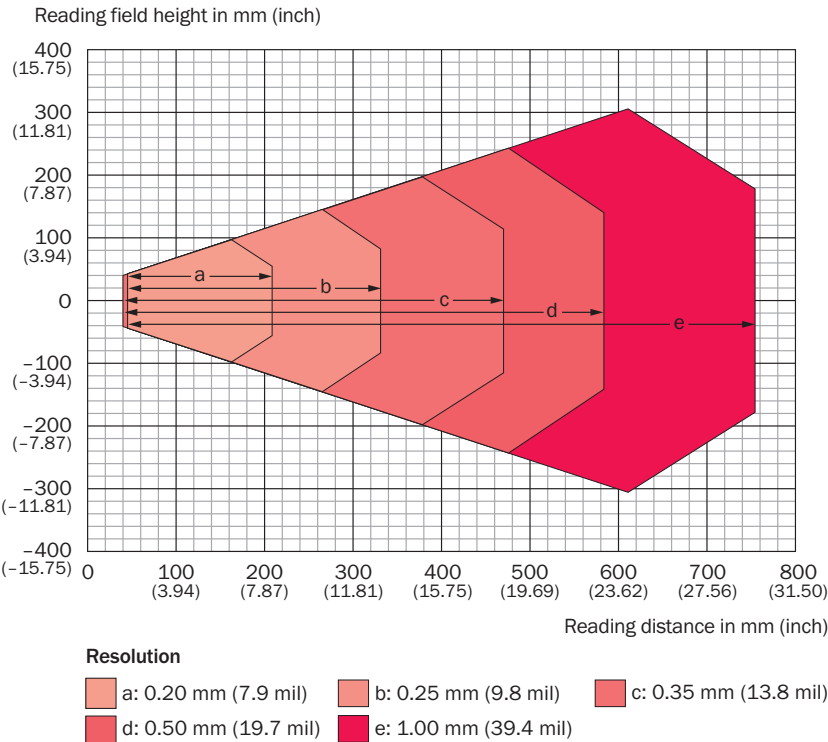
CERTIFICATES

|                                                                       |   |
|-----------------------------------------------------------------------|---|
| 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) | ✓ |

Dimensions in mm (inch)

- 2026-08-05 23:21:07 · SUBJECT TO CHANGE WITHOUT NOTICE

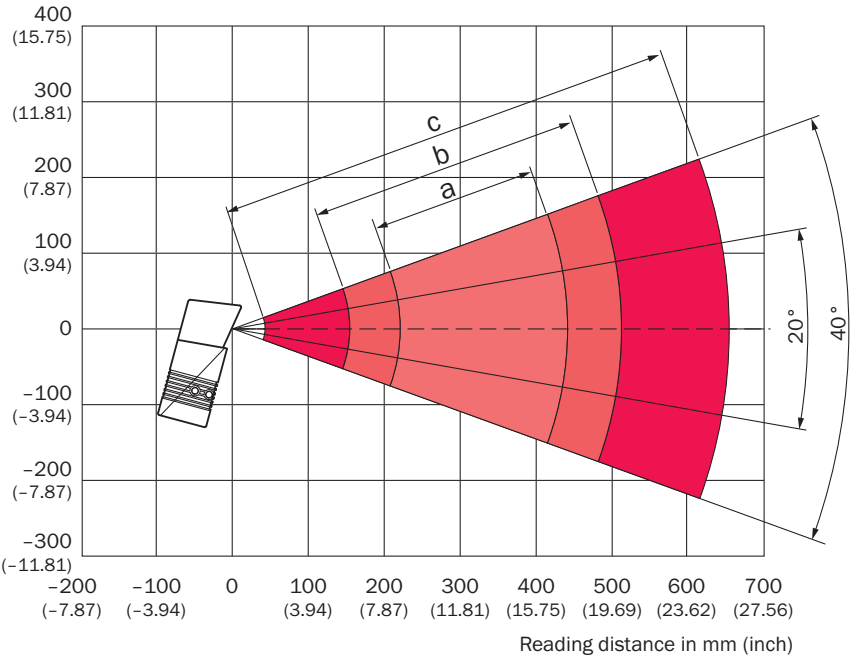
READING FIELD DIAGRAM



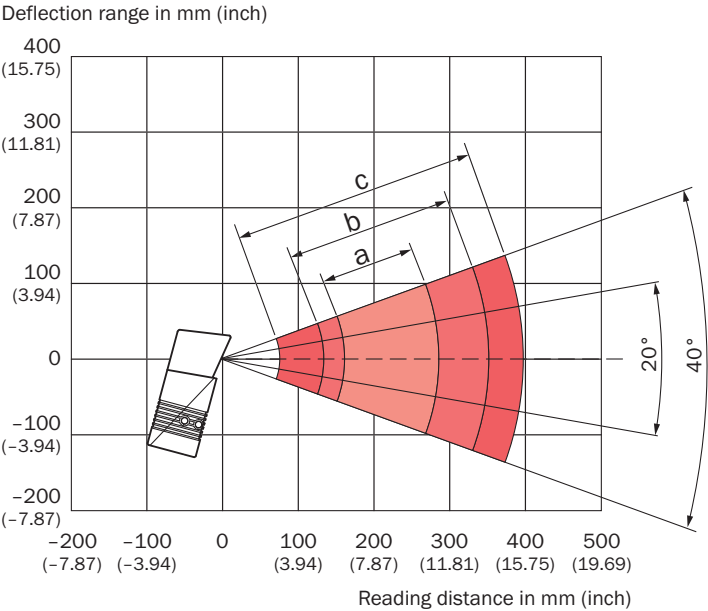
The depth of field is reduced by approx. 10% for devices with plastic lenses.

DEFLECTION WIDTH

Deflection range in mm (inch)

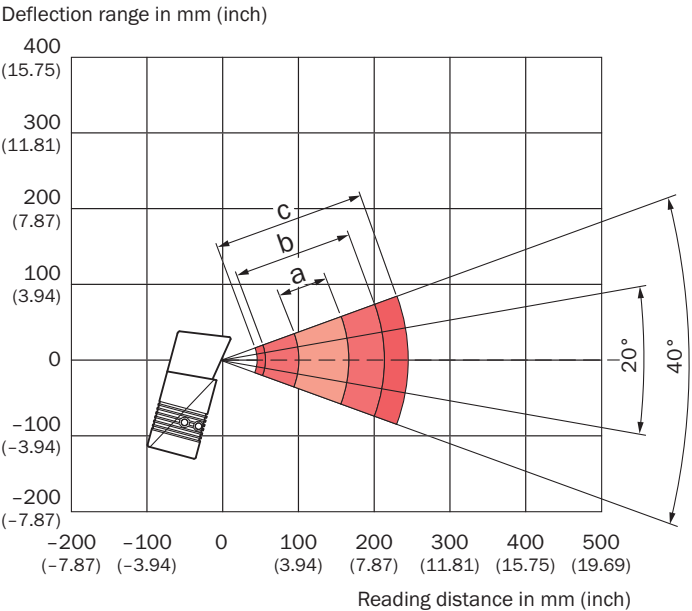


DEFLECTION WIDTH



① diagram applies to focus position of 215 mm

DEFLECTION WIDTH



① diagram applies to focus position of 140 mm

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/1042023](http://www.sick.com/1042023)



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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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