



# CLV601-1U110

CLV60x

**FIXED MOUNT BARCODE SCANNERS**

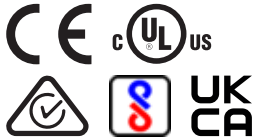
**SICK**  
Sensor Intelligence.



## Ordering information

Type	Part no.
CLV601-1U110	1079207

Other models and accessories → [www.sick.com/CLV60x](http://www.sick.com/CLV60x)



## Detailed technical data

### Features

<b>Connection type</b>	Cable						
<b>Reading field</b>	Side						
<b>Sensor type</b>	Line scanner						
<b>Optical focus</b>	Fixed focus (31 mm)						
<b>Sensor</b>	CMOS line sensor						
<b>Sensor resolution</b>	2,048 px						
<b>Light source</b>	Light spot, LED, Visible, Red, 626 nm						
<b>LED class</b>	Risk group 0 (IEC 62471:2006-07, EN 62471:2008-09)						
<b>Aperture angle</b>	≤ 71°						
<b>Reading distance</b>	15 mm ... 70 mm <sup>1)</sup>						
<b>Scanning frequency</b>	750 Hz						
<b>Reading angle</b>	<table border="0"> <tr> <td>Tilt <math>\alpha</math></td> <td>± 5° (with code resolution ≥ 0.125 mm) ± 10° (with code resolution ≥ 0.15 mm) ± 15° (with code resolution ≥ 0.2 mm) ± 25° (with code resolution ≥ 0.35 mm)</td> </tr> <tr> <td>Pitch <math>\beta</math></td> <td>± 6° (with code resolution ≥ 0.2 mm) ± 15° (with code resolution ≥ 0.5 mm)</td> </tr> <tr> <td>Skew <math>\gamma</math></td> <td>± 20° (with code resolution ≥ 0.2 mm) ± 30° (with code resolution ≥ 0.5 mm)</td> </tr> </table>	Tilt $\alpha$	± 5° (with code resolution ≥ 0.125 mm) ± 10° (with code resolution ≥ 0.15 mm) ± 15° (with code resolution ≥ 0.2 mm) ± 25° (with code resolution ≥ 0.35 mm)	Pitch $\beta$	± 6° (with code resolution ≥ 0.2 mm) ± 15° (with code resolution ≥ 0.5 mm)	Skew $\gamma$	± 20° (with code resolution ≥ 0.2 mm) ± 30° (with code resolution ≥ 0.5 mm)
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Skew $\gamma$	± 20° (with code resolution ≥ 0.2 mm) ± 30° (with code resolution ≥ 0.5 mm)						
<b>Code resolution</b>	0.125 mm ... 0.5 mm						

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

### Mechanics/electronics

<b>Connection type</b>	1 x USB A male connector (1.5 m)
<b>Supply voltage</b>	5 V DC, ± 10 %
<b>Power consumption</b>	Typ. 1 W

<b>Housing</b>	Zinc diecast
<b>Housing color</b>	Light blue (RAL 5012)
<b>Window material</b>	Plastic
<b>Enclosure rating</b>	IP40 (DIN 40 050)
<b>Protection class</b>	III (VDE 0106/IEC 1010-1)
<b>Weight</b>	170 g, with connecting cable
<b>Dimensions (L x W x H)</b>	55 mm x 52 mm x 20 mm
<b>MTBF</b>	100,000 h

### 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 ... 1
<b>No. of codes per reading interval</b>	1 ... 15 (auto-discriminating)
<b>No. of characters per reading interval</b>	450
<b>Number of characters per code</b>	≤ 30
<b>No. of multiple readings</b>	1 ... 100

### Interfaces

<b>Digital inputs</b>	0
<b>Digital outputs</b>	Virtual (via SOPAS ET)
<b>Reading pulse</b>	Start: Free, command, auto pulse
<b>Optical indicators</b>	1 RGB LED (multifunctional)
<b>Acoustic indicators</b>	Beeper/buzzer (can be switched off, can be allocated as a result indication function)
<b>Configuration software</b>	SOPAS ET

### Ambient data

<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-3/A1:2011-03 / EN 61000-6-2:2005-08
<b>Vibration resistance</b>	EN 60068-2-6:2008-02
<b>Shock resistance</b>	EN 60068-2-27:2009-05
<b>Ambient operating temperature</b>	0 °C ... +50 °C
<b>Storage temperature</b>	-20 °C ... +70 °C
<b>Permissible relative humidity</b>	90 %, Non-condensing
<b>Ambient light immunity</b>	5,000 lx, on barcode
<b>Bar code print contrast (PCS)</b>	≥ 60 %

### General notes

<b>Items supplied</b>	Single scanner
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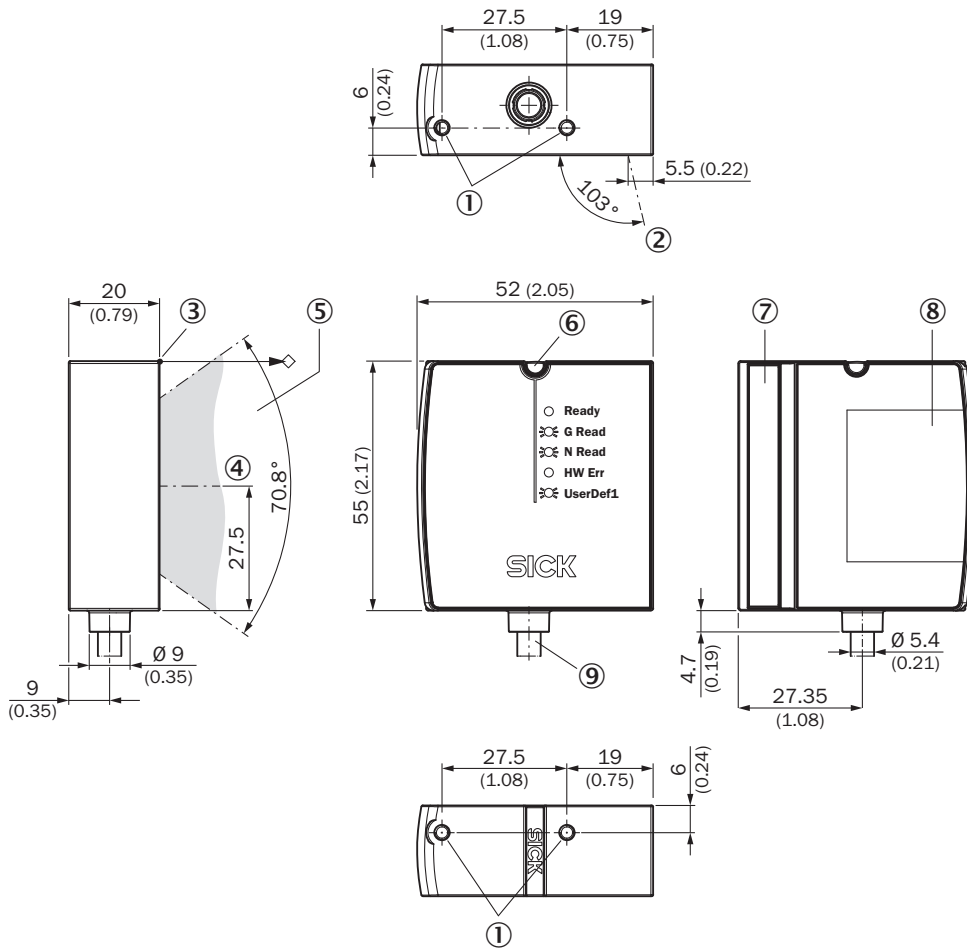
### Classifications

<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))

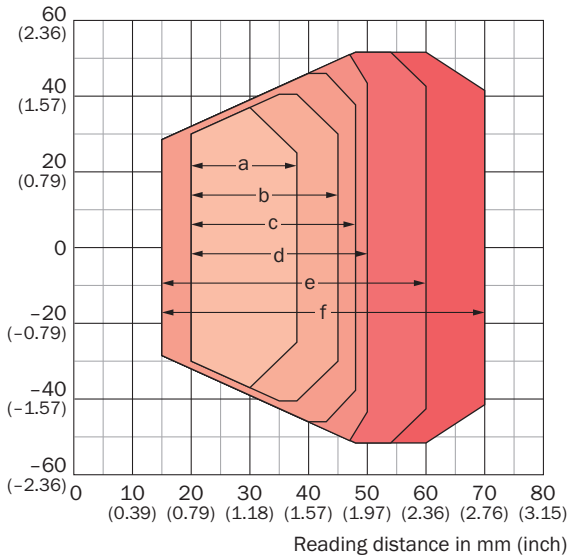
CLV60x side



- ① Mounting thread M3 x 5 mm
- ② Optical axis, reading window
- ③ Reading distance reference point
- ④ Reading field axis center
- ⑤ Reading field
- ⑥ Status LED
- ⑦ Reading field
- ⑧ Type label
- ⑨ Connection cable

### Reading field diagram

Reading field height in mm (inch)



**Resolution**

- a: 0.125 mm (4.9 mil)
- b: 0.15 mm (5.9 mil)
- c: 0.2 mm (7.9 mil)
- d: 0.25 mm (9.8 mil)
- e: 0.35 mm (13.8 mil)
- f: 0.5 mm (19.7 mil)

### Recommended services

Additional services → [www.sick.com/CLV60x](http://www.sick.com/CLV60x)

	Type	Part no.
<b>Performance check</b>		
<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
<b>Extended warranty</b>		
<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)