



# CLV601-1D200

CLV60x

**BAR CODE SCANNERS**

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
CLV601-1D200	1079206

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>Scanner design</b>	Line scanner						
<b>Focus</b>	Fixed focus (31 mm)						
<b>Sensor</b>	CMOS line sensor						
<b>Sensor resolution</b>	2,048 px						
<b>Light source</b>	LED (visible red light, 626 nm)						
<b>LED class</b>	Risk group 0 (IEC 62471:2006-07, EN 62471:2008-09)						
<b>Aperture angle</b>	≤ 71°						
<b>Scanning frequency</b>	750 Hz						
<b>Code resolution</b>	0.125 mm ... 0.5 mm						
<b>Reading angle</b>	<table border="0"> <tbody> <tr> <td>Tilt <math>\alpha</math></td> <td> <math>\pm 5^\circ</math> (with code resolution <math>\geq 0.125</math> mm)  <math>\pm 10^\circ</math> (with code resolution <math>\geq 0.15</math> mm)  <math>\pm 15^\circ</math> (with code resolution <math>\geq 0.2</math> mm)  <math>\pm 25^\circ</math> (with code resolution <math>\geq 0.35</math> mm) </td> </tr> <tr> <td>Pitch <math>\beta</math></td> <td> <math>\pm 6^\circ</math> (with code resolution <math>\geq 0.2</math> mm)  <math>\pm 15^\circ</math> (with code resolution <math>\geq 0.5</math> mm) </td> </tr> <tr> <td>Skew <math>\gamma</math></td> <td> <math>\pm 20^\circ</math> (with code resolution <math>\geq 0.2</math> mm)  <math>\pm 30^\circ</math> (with code resolution <math>\geq 0.5</math> mm) </td> </tr> </tbody> </table>	Tilt $\alpha$	$\pm 5^\circ$ (with code resolution $\geq 0.125$ mm) $\pm 10^\circ$ (with code resolution $\geq 0.15$ mm) $\pm 15^\circ$ (with code resolution $\geq 0.2$ mm) $\pm 25^\circ$ (with code resolution $\geq 0.35$ mm)	Pitch $\beta$	$\pm 6^\circ$ (with code resolution $\geq 0.2$ mm) $\pm 15^\circ$ (with code resolution $\geq 0.5$ mm)	Skew $\gamma$	$\pm 20^\circ$ (with code resolution $\geq 0.2$ mm) $\pm 30^\circ$ (with code resolution $\geq 0.5$ mm)
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<b>Reading distance</b>	15 mm ... 70 mm <sup>1)</sup>						
<b>MTTF</b>	670,000 h						

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

#### Performance

<b>Bar code types</b>	All current code types, Code 39, Code 128, Code 93, Codabar, UPC / GTIN / EAN, Interleaved 2 of 5
<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>Serial</b>	✓, RS-232
Function	Host, AUX
Data transmission rate	2,400 Baud ... 250 kBaud, AUX: 57.6 kBaud
<b>Switching inputs</b>	1 ("Input 1", Vin = max. 30 V)
<b>Switching outputs</b>	2 ("Output 1", "Output 2", Iout = max. 50 mA)
<b>Reading pulse</b>	Start: switching input, free, command, auto pulse, Stop: switching input, free, command, timer, Good Read
<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

## Mechanics/electronics

<b>Electrical connection</b>	1 x 9-pin D-sub male connector (2 m)
<b>Operating 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), black (RAL 9005)
<b>Front screen</b>	PMMA
<b>Enclosure rating</b>	IP40 (DIN 40 050)
<b>Protection class</b>	III (VDE 0106/IEC 1010-1)
<b>Weight</b>	230 g, with connecting cable
<b>Dimensions (L x W x H)</b>	55 mm x 52 mm x 20 mm

## 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 bar code
<b>Bar code print contrast (PCS)</b>	≥ 60 %

## General notes

<b>Items supplied</b>	Single scanner, Safety Notes
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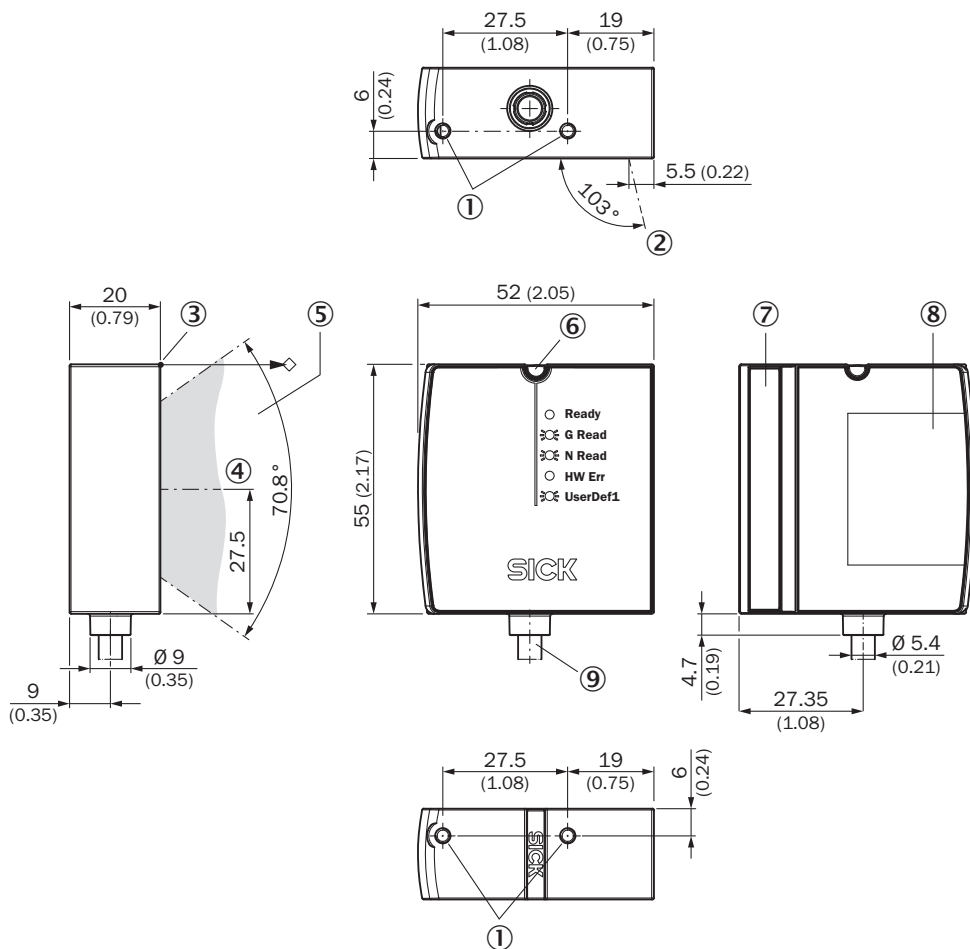
## Classifications

<b>ECl@ss 5.0</b>	27280102
<b>ECl@ss 5.1.4</b>	27280102
<b>ECl@ss 6.0</b>	27280102

<b>ECl@ss 6.2</b>	27280102
<b>ECl@ss 7.0</b>	27280102
<b>ECl@ss 8.0</b>	27280102
<b>ECl@ss 8.1</b>	27280102
<b>ECl@ss 9.0</b>	27280102
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>UNSPSC 16.0901</b>	43211701

### Dimensional drawing (Dimensions in mm (inch))

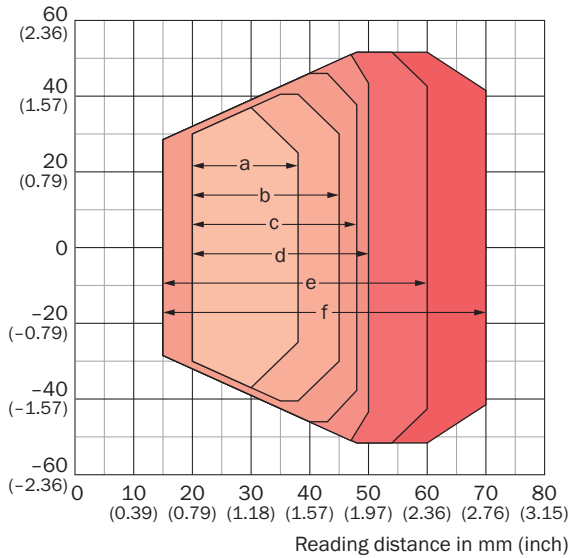
CLV60x side



- 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

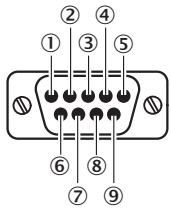
Reading field height in mm (inch)



### Resolution

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

## Connection type



- ① In1
- ② RxD (HOST)
- ③ TxD (HOST)
- ④ OUT1
- ⑤ GND
- ⑥ OUT2
- ⑦ RxD
- ⑧ TxD
- ⑨ +5 V

## 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)