



Bar code scanners  
CLV45x / CLV450 / Standard Density

CLV450-0010



**Model Name** > [CLV450-0010](#)  
**Part No.** > [1018556](#)



**At a glance**

- Dynamic focus control in real time
- Immune to ambient light
- Large reading distance of up to 1.6 m
- Auto setup ensures automatic optimizing of reading performance
- CAN bus compatible
- High read rates, even with damaged, rotated, or dirty bar codes
- Adjustable scanning frequency up to 1,000 scans per second

**Your benefits**

- Reliable bar code identification across large reading distances
- Dynamic focus control allows the scanner to accommodate a large depth of field by dynamically adjusting the focus to the object distance
- Small size and simple setup enables fast installation, even in compact machines
- Extremely easy to configure, shortening commissioning time
- Short commissioning time
- Reliable operation
- Parameter cloning plug ensures very short MTTR

**The product is currently being phased out and can be ordered until September 30, 2013. A replacement product can be found under "Replacement Products"**



**Features**

|                                 |   |
|---------------------------------|---|
| Version:                        | Standard Density                                    |
| Connection type:                | Standard  |
| Reading field:                  | Front   |
| Scanner design:                 | Line scanner  |
| Focus:                          | Dynamic focus control                               |
| No. of distance configurations: | 8   |
| Focus adjustment time:          | ≤ 50 ms   |
| Focus trigger source:           | Switching input "Sensor 2", Serial interface, Timer |
| Light source:                   | Visible red light (650 nm)                          |
| MTBF:                           | 20,000 h  |
| Laser class:                    | 2 (DIN EN 60825-1)                                  |

|  |                            |
|--|----------------------------|
| Field of view:                         | ≤ 50 °                     |
| Code resolution:                       | 0.25 mm ... 1 mm           |
| Reading distance (at code resolution): | 125 mm ... 1,600 mm (1 mm) |
| Scanning frequency:                    | 400 Hz ... 1,000 Hz        |

## Performance

---

|   |  |
|---|--|
| Bar code types:                         | Interleaved 2 of 5, All current code types, Codabar, Code 128, Code 39, Code 93, GS1-128/EAN 128, UPC/GTIN/EAN |
| 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: | 500  |
| No. of multiple readings:               | 1 ... 99   |

## Interfaces

---

|   |  |
|---|--|
| Serial (RS-232, RS-422/485):                          | ✓  |
| Remark (Serial (RS-232, RS-422/485)):                 | AUX (only RS-232)  |
| Function (Serial (RS-232, RS-422/485)):               | Host, AUX  |
| Data transmission rate (Serial (RS-232, RS-422/485)): | 300 Baud ... 57,600 Baud, AUX: 9,600 Baud  |
| Ethernet:   | ✓  |
| Remark (Ethernet):                                    | Optional via external connection module (CDM + CMF)  |
| CAN bus:  | ✓  |
| Function (CAN bus):                                   | SICK CAN sensor network (Master/Slave, Multiplexer)  |
| Protocol (CAN bus):                                   | CANopen, CSN (SICK CAN Sensor Network)   |
| Data transmission rate (CAN bus):                     | 10 kbit/s ... 1 Mbit/s   |
| PROFIBUS DP:  | ✓  |
| Remark (PROFIBUS DP):                                 | Optional via external connection module (CDM + CMF)  |
| EtherCAT:   | -  |
| DeviceNet:  | ✓  |
| Remark (DeviceNet):                                   | Optional via external connection module (CDM + CMF)  |
| Switching inputs:                                     | 2 ("Sensor 1", "Sensor 2")   |
| Switching outputs:                                    | 2 ("Result 1", "Result 2")   |
| Reading pulse:  | Non-powered, "Sensor 1" switching input, Serial interface                                    |
| Optical indicators:                                   | 4 LEDs (function indicator)  |
| Acoustic indicators:                                  | Beeper/buzzer (can be switched off, can be allocated as a result status indication function) |

## Mechanics/electronics

---

|                        |   |
|------------------------|---|
| Electrical connection: | 1 15-pin D-Sub HD plug (0.9 m)                                      |
| Operating voltage:     | 10 V DC ... 30 V DC <sup>1)</sup>                                   |
| Power consumption:     | 6 W   |
| Housing:               | Die-cast zinc, does not contain paint wetting impairment substances |
| Housing color:         | Light blue (RAL 5012)   |
| Enclosure rating:      | IP 65 (DIN 40 050)  |
| Protection class:      | III (VDE 0106)  |
| Weight:                | 530 g, with connecting cable  |
| Dimensions:            | 90 mm x 60 mm x 35.7 mm   |

<sup>1)</sup> UL certified for use with a Class 2 mains supply unit (checked to UL 1310)

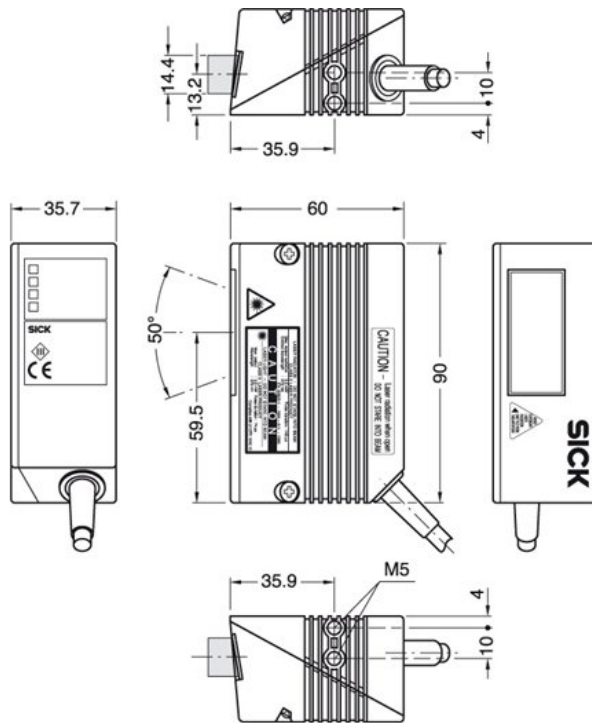
## Ambient data

|                                      |  |
|--------------------------------------|--|
| Electromagnetic compatibility (EMC): | (EN 61000-6-4)<br>(EN 61000-6-1)<br>(EN 61000-6-2) |
| Vibration resistance:                | (IEC 68-2-6 Test FC)                               |
| Shock resistance:                    | (IEC 68-2-27 Test EA)                              |
| Ambient operating temperature:       | 0 °C ... 40 °C                                     |
| Storage temperature:                 | -20 °C ... 70 °C                                   |
| Permissible relative humidity:       | ± 90 %, non-condensing                             |
| Ambient light safety:                | 2,000 lx, on bar code                              |

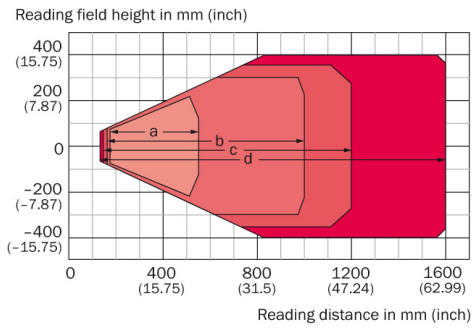
## General notes

|                   |                                      |
|-------------------|--------------------------------------|
| Life cycle phase: | Available until September 30th, 2013 |
|-------------------|--------------------------------------|

## Dimensional drawing



## Reading field diagram



### Resolution

- |   |   |
|---|---|
|  a: 0.25 mm (9.8 mil)  |  b: 0.35 mm (13.8 mil) |
|  c: 0.50 mm (19.7 mil) |  d: 1.00 mm (39.4 mil) |

**Australia**

Phone +61 3 9457 0600  
1800 334 802 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail sac@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail kundenservice@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)