

Technical data sheet

Stationary bar code reader

Part no.: 50138195

BCL 95 M0/R2

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Notes
- Accessories



Figure can vary



RS232



Technical data

Basic data

| | |
|--------|--------|
| Series | BCL 95 |
|--------|--------|

Functions

| | |
|-----------|---------------------------|
| Functions | Alignment mode |
| | AutoConfig |
| | I/O |
| | LED indicator |
| | Multiple read / MultiScan |
| | Output format selectable |
| | Reading gate control |
| | Reference code comparison |

Read data

| | |
|------------------------|--|
| Code types, readable | 2/5 Interleaved |
| | Codabar |
| | Code 128 |
| | Code 32 |
| | Code 39 |
| | Code 93 |
| | EAN 128 |
| | EAN 8/13 |
| | EAN Addendum |
| | EAN/UPC |
| | Pharmacode (available upon consultation) |
| | UPC-A |
| | UPC-E |
| Scanning rate, typical | 600 scans/s |

Optical data

| | |
|--|--|
| Reading distance | 25 ... 170 mm |
| Light source | Laser, Red |
| Laser light wavelength | 655 nm |
| Laser class | 1 acc. to IEC 60825-1:2014 (EN 60825-1:2014)2 acc. to IEC 60825-1:2007 (EN 60825-1:2007) |
| Transmitted-signal shape | Continuous |
| Usable opening angle (reading field opening) | 66 ° |
| Modulus size | 0.15 ... 0.5 mm |
| Reading method | Line scanner |
| Scanning rate | 600 scans/s |
| Beam deflection | Via rotating polygon wheel |
| Light beam exit | Lateral |

Electrical data

| | |
|------------------------------------|-------------------------|
| Protective circuit | Short circuit protected |
| Performance data | |
| Supply voltage U_B | 4.75 ... 5.5 V, DC |
| Current consumption, max. | 450 mA |
| Inputs | |
| Number of digital switching inputs | 1 Piece(s) |
| Switching inputs | |
| Voltage type | DC |
| Switching voltage | 5V DC |

Outputs

| | |
|-------------------------------------|----------------------|
| Number of digital switching outputs | 1 Piece(s) |
| Switching outputs | |
| Voltage type | DC |
| Switching voltage | 5 ... 30 V DC, 20 mA |
| Switching output 1 | |
| Switching element | Transistor, NPN |
| Function | configurable |

Interface

| | |
|-----------------------|---------------------|
| Type | RS 232 |
| RS 232 | |
| Function | Process |
| Transmission speed | 4,800 ... 57,600 Bd |
| Data format | Adjustable |
| Start bit | 1 |
| Data bit | 7,8 |
| Stop bit | 1.2 |
| Parity | Adjustable |
| Transmission protocol | Adjustable |
| Data encoding | ASCII |
| | HEX |

Service interface

| | |
|---------------|---------|
| Type | RS 232 |
| RS 232 | |
| Function | Service |

Connection

| | |
|-----------------------|-----------------------|
| Number of connections | 1 Piece(s) |
| Connection 1 | |
| Function | Data interface |
| | Signal IN |
| | Signal OUT |
| | Voltage supply |
| Type of connection | Cable |
| Cable length | 2,000 mm |
| Sheathing material | PVC |
| Cable color | Black |
| Number of conductors | 6 -wire |
| Wire cross section | 0.081 mm ² |

Mechanical data

| | |
|-----------------------|---------------------------|
| Design | Cubic |
| Dimension (W x H x L) | 62 mm x 56.9 mm x 23.8 mm |
| Housing material | Metal |
| Metal housing | Diecast zinc |
| Lens cover material | Glass |
| Net weight | 210 g |
| Housing color | Red |
| | Silver |
| Type of fastening | Fastening thread |

Operation and display

| | |
|-----------------|------------|
| Type of display | LED |
| Number of LEDs | 2 Piece(s) |

Technical data

Environmental data

| | |
|------------------------------------|---------------|
| Ambient temperature, operation | 5 ... 40 °C |
| Ambient temperature, storage | -20 ... 60 °C |
| Relative humidity (non-condensing) | 0 ... 90 % |
| Extraneous light protection, max. | 2,000 lx |

Certifications

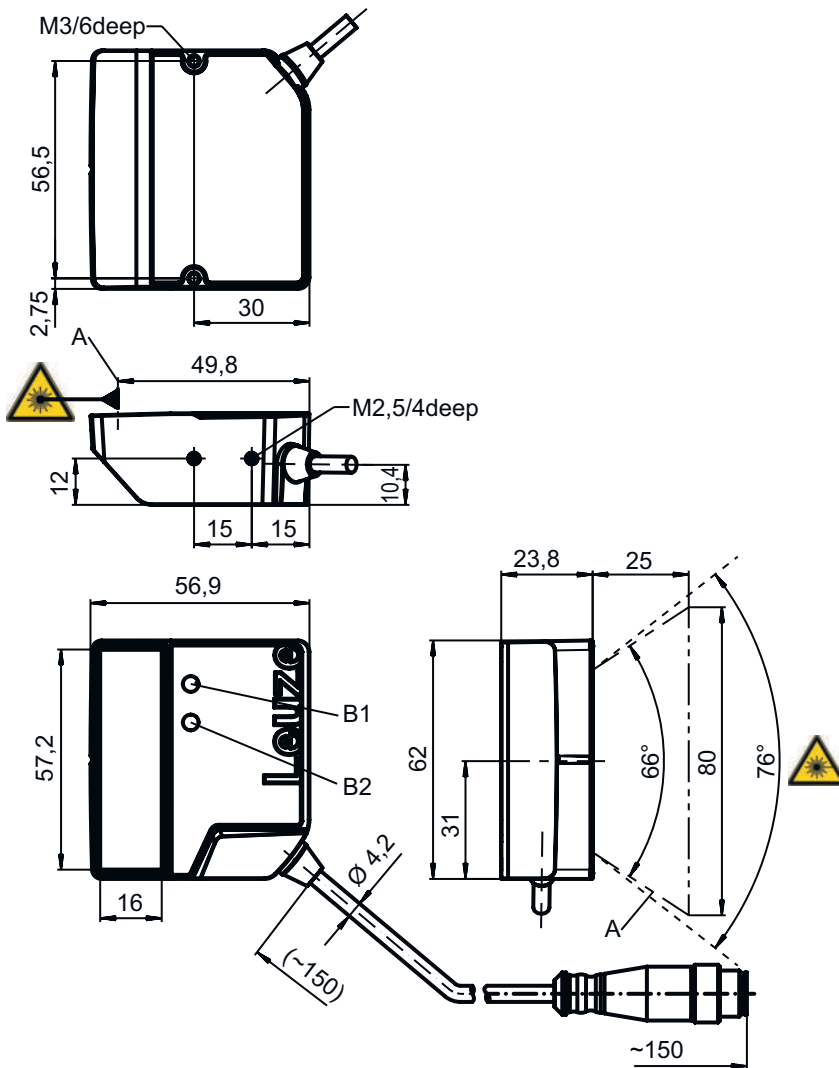
| | |
|--|--|
| Degree of protection | IP 54 |
| Protection class | III |
| Certifications | c UL US |
| Test procedure for EMC in accordance with standard | EN 61326-1:2013-01 FCC 15-CFR 47 Part 15 (09-07-2015) Limits Class B |
| Test procedure for shock in accordance with standard | IEC 60068-2-27, test Ea |
| Test procedure for vibration in accordance with standard | IEC 60068-2-6, test Fc |

Classification

| | |
|-----------------------|----------|
| Customs tariff number | 84719000 |
| eCl@ss 5.1.4 | 27280102 |
| eCl@ss 8.0 | 27280102 |
| eCl@ss 9.0 | 27280102 |
| eCl@ss 10.0 | 27280102 |
| eCl@ss 11.0 | 27280102 |
| ETIM 5.0 | EC002550 |
| ETIM 6.0 | EC002550 |
| ETIM 7.0 | EC002550 |

Dimensioned drawings

All dimensions in millimeters



- A Laser beam
- B1 Decode LED
- B2 Status LED

NOTE For exact positioning of the laser beam in the application, the scanner must be aligned.

Electrical connection

Connection 1

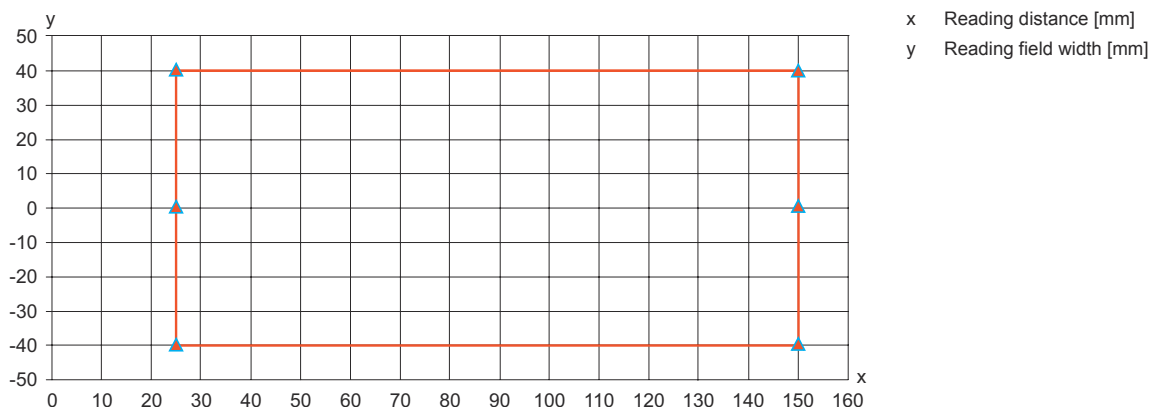
| | |
|----------------------|-----------------------|
| Function | Data interface |
| | Signal IN |
| | Signal OUT |
| | Voltage supply |
| Type of connection | Cable |
| Cable length | 2,000 mm |
| Sheathing material | PVC |
| Cable color | Black |
| Number of conductors | 6 -wire |
| Wire cross section | 0.081 mm ² |

Electrical connection

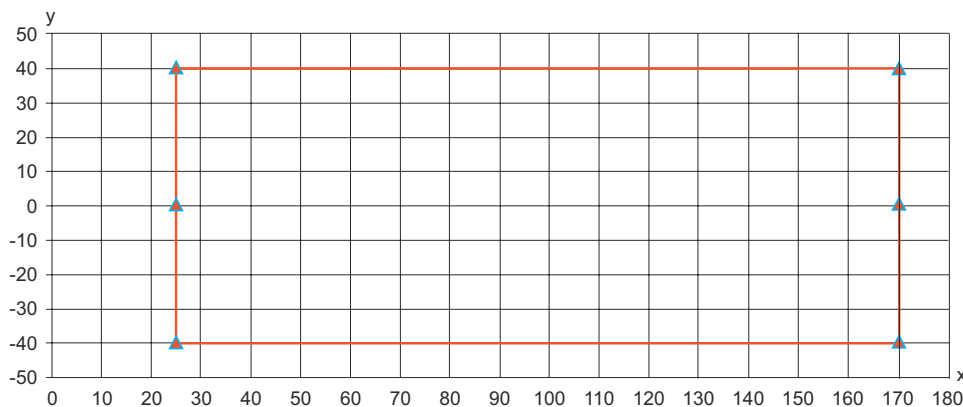
| Conductor color | Conductor assignment |
|-----------------|----------------------|
| Red | V+ |
| Orange | IN 1 |
| Violet | GND |
| Black | OUT 1 |
| White | RS 232 RxD |
| Green | RS 232 TxD |

Diagrams

Reading field curve for module m = 0.165 ... 0.5 mm (6.5 ... 20 mil)



Reading field curve for module m = 0.2 ... 0.5 mm (8 ... 20 mil)



Operation and display

| LED | Display | Meaning |
|-------|-------------------------|--------------------------|
| 1 PWR | Green, flashing | Initialization |
| | Green, continuous light | Operational readiness |
| | Red, flashing | Warnings |
| | Red, continuous light | Error |
| | Orange, flashing | Service operation active |

Operation and display

| LED | Display | Meaning |
|-------------|--------------------------|---------------------|
| 2 GOOD READ | Green, 200 ms on | Reading successful |
| | Red, 200 ms off | No reading result |
| | Orange, continuous light | Reading gate active |

Notes

Observe intended use!

This product is not a safety sensor and is not intended as personnel protection.

The product may only be put into operation by competent persons.

Only use the product in accordance with its intended use.

For UL applications:

For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).

WARNING! LASER RADIATION – CLASS 1 LASER PRODUCT

The device satisfies the requirements of IEC 60825-1:2014 (EN 60825-1:2014) safety regulations for a product of **laser class 1**

Observe the applicable statutory and local laser protection regulations.

The device must not be tampered with and must not be changed in any way. There are no user-serviceable parts inside the device. Repairs must only be performed by Leuze electronic GmbH + Co. KG.

WARNING! LASER RADIATION – CLASS 2 LASER PRODUCT

Do not stare into beam!
The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of laser class 2 as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to "Laser Notice No. 50" from June 24, 2007.

Never look directly into the laser beam or in the direction of reflected laser beams! If you look into the beam path over a longer time period, there is a risk of injury to the retina.

Do not point the laser beam of the device at persons!

Interrupt the laser beam using a non-transparent, non-reflective object if the laser beam is accidentally directed towards a person.

When mounting and aligning the device, avoid reflections of the laser beam off reflective surfaces!

CAUTION! Use of controls or adjustments or performance of procedures other than specified herein may result in hazardous light exposure. The glass optics cover is the only aperture through which laser radiation may be observed on this product.

Observe the applicable statutory and local laser protection regulations.

The device must not be tampered with and must not be changed in any way. There are no user-serviceable parts inside the device. Repairs must only be performed by Leuze electronic GmbH + Co. KG.

Notes

| NOTE | |
|------|--|
| | <p>Affix laser information and warning signs! Laser information and warning signs are affixed to the device. In addition, self-adhesive laser information and warning signs (stick-on labels) are supplied in several languages.</p> <ul style="list-style-type: none"> ☞ Affix the laser information sheet to the device in the language appropriate for the place of use. When using the device in the US, use the stick-on label with the "Complies with 21 CFR 1040.10" note. ☞ Affix the laser information and warning signs near the device if no signs are attached to the device (e.g. because the device is too small) or if the attached laser information and warning signs are concealed due to the installation position. ☞ Affix the laser information and warning signs so that they are legible without exposing the reader to the laser radiation of the device or other optical radiation. |

| WARNING! | |
|----------|--|
| | <p>If the scanner motor fails during the emission of laser radiation, the limit value of laser class 2 in accordance with IEC 60825-1 Edition 2.0 (2007) and Edition 3.0 (2014) could be exceeded. The device has safeguards to prevent this occurrence.</p> <ul style="list-style-type: none"> ☞ If the emitted laser beam is at a standstill, immediately disconnect the faulty bar code reader from the voltage supply. ☞ The BCL 95 emits scanned optical radiation at a wavelength of 655 nm (red). Looking at the device's mirror and operating at the lowest scanning rate (400 scans/s) at a viewing distance of 65 mm results in pulses with a pulse duration of 120 µs on the retina of the eye. The total pulse peak power at the exit window is less than 2.1 mW. The average laser power is, thus, less than 1 mW, corresponding to laser class 2 in accordance with EN 60825-1, Edition 2.0 (2007) and IEC 60825-1, Edition 2.0 (2007) and less than the limit value of 0.39 mW for laser class 1 in accordance with EN 60825-1, Edition 3.0 (2014) and IEC 60825-1, Edition 3.0 (2014). |

Accessories

Mounting technology - Mounting brackets

| | Part no. | Designation | Article | Description |
|--|----------|-------------|------------------|---|
| | 50118542 | BT 200M.5 | Mounting bracket | Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type, Suited for M3 screws Type of mounting device: Adjustable Material: Stainless steel |

Mounting technology - Rod mounts

| | Part no. | Designation | Article | Description |
|--|----------|--------------|-----------------|---|
| | 50119331 | BTU 900M-D12 | Mounting system | Design of mounting device: Mounting system Fastening, at system: For 12 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Swiveling, Turning, 360° Material: Metal |

| Note | |
|------|--|
| | <p>☞ A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.</p> |