

Technical data sheet Stationary bar code reader

Part no.: 50105456

BCL 500i SN 100 H

Contents

- Technical data
- Dimensioned drawings
- Electrical connection



Figure can vary



Technical data

Basic data

| | |
|--------|----------|
| Series | BCL 500i |
|--------|----------|

Special design

| | |
|----------------|---------|
| Special design | Heating |
|----------------|---------|

Functions

| | |
|-----------|---------------------------|
| Functions | Alignment mode |
| | AutoConfig |
| | AutoControl |
| | AutoReflAct |
| | Code fragment technology |
| | Heating |
| | LED indicator |
| | Reference code comparison |

Characteristic parameters

| | |
|------|------------|
| MTTF | 42.4 years |
|------|------------|

Read data

| | |
|---|-----------------------------|
| Code types, readable | 2/5 Interleaved |
| | Codabar |
| | Code 128 |
| | Code 39 |
| | Code 93 |
| | EAN 128 |
| | EAN 8/13 |
| | EAN Addendum |
| | GS1 Databar Expanded |
| | GS1 Databar Limited |
| | GS1 Databar Omnidirectional |
| | UPC |
| Scanning rate, typical | 1,000 scans/s |
| Bar codes per reading gate, max. number | 64 Piece(s) |

Optical data

| | |
|--------------------------|---|
| Reading distance | 200 ... 650 mm |
| Light source | Laser, Red |
| Laser light wavelength | 650 nm |
| Laser class | 2, IEC/EN 60825-1:2007 |
| Transmitted-signal shape | Continuous |
| Bar code contrast (PCS) | 60 % |
| Modulus size | 0.25 ... 0.5 mm |
| Reading method | Line scanner with deflecting mirror |
| Scanning rate | 800 ... 1,200 scans/s |
| Beam deflection | By means of rotating polygon mirror wheel + deflecting mirror |
| Light beam exit | Zero position at side at angle less than 90° |

Electrical data

| | |
|-------------------------|------------------------------|
| Protective circuit | Polarity reversal protection |
| Performance data | |
| Supply voltage U_B | 24 V, DC, -20 ... +20 % |
| Power consumption, max. | 75 W |

Inputs/outputs selectable

| | |
|-------------------------------------|------------------|
| Output current, max. | 100 mA |
| Number of inputs/outputs selectable | 4 Piece(s) |
| Voltage type, outputs | DC |
| Switching voltage, outputs | Typ. $U_B / 0$ V |
| Voltage type, inputs | DC |
| Switching voltage, inputs | Typ. $U_B / 0$ V |
| Input current, max. | 8 mA |

Interface

| | |
|------|---------------------------------------|
| Type | MultiNet Plus, RS 232, RS 422, RS 485 |
|------|---------------------------------------|

RS 232

| | |
|-----------------------|----------------------|
| Function | Process |
| Transmission speed | 4,800 ... 115,400 Bd |
| Data format | Adjustable |
| Start bit | 1 |
| Data bit | 7,8 |
| Stop bit | 1.2 |
| Parity | None |
| Transmission protocol | Adjustable |
| Data encoding | ASCII |

RS 422

| | |
|-----------------------|----------------------|
| Function | Process |
| Transmission speed | 4,800 ... 115,400 Bd |
| Data format | Adjustable |
| Start bit | 1 |
| Data bit | 7, 8 data bits |
| Stop bit | 1, 2 stop bits |
| Transmission protocol | Adjustable |
| Data encoding | ASCII |

RS 485

| | |
|-----------------------|-------------|
| Function | Process |
| Transmission speed | 57,600 Bd |
| Data format | Fixed |
| Start bit | 1 |
| Data bit | 9 data bits |
| Stop bit | 1 stop bit |
| Parity | None |
| Transmission protocol | Fixed |
| Data encoding | ASCII |

Service interface

| | |
|------------|---------------------------------------|
| Type | USB |
| USB | |
| Function | Configuration via software Service |

Connection

| | |
|-----------------------|--------------------|
| Number of connections | 5 Piece(s) |
| Connection 1 | |
| Function | Service interface |
| Type of connection | USB |
| Designation on device | SERVICE |
| Connector type | USB 2.0 Standard-A |

Technical data

Connection 2

| | |
|-----------------------|-------------------------|
| Function | Signal IN Signal OUT |
| Type of connection | Connector |
| Designation on device | SW IN/OUT |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | A-coded |

Connection 3

| | |
|-----------------------|---|
| Function | Signal IN Signal OUT Voltage supply |
| Type of connection | Connector |
| Designation on device | PWR |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | A-coded |

Connection 4

| | |
|-----------------------|---------------|
| Function | BUS IN |
| Type of connection | Connector |
| Designation on device | HOST / BUS IN |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | B-coded |

Connection 5

| | |
|-----------------------|-----------|
| Function | BUS OUT |
| Type of connection | Connector |
| Designation on device | BUS OUT |
| Thread size | M12 |
| Type | Female |
| No. of pins | 5 -pin |

Mechanical data

| | |
|-----------------------|---|
| Design | Cubic |
| Dimension (W x H x L) | 173 mm x 84 mm x 147 mm |
| Housing material | Metal, Aluminum |
| Lens cover material | Glass |
| Net weight | 1,400 g |
| Housing color | Black, RAL 9005 Red, RAL 3000 |
| Type of fastening | Dovetail grooves Mounting thread Via optional mounting device |

Operation and display

| | |
|-----------------------|---|
| Type of display | LED Monochromatic graphical display, 128x64 pixel, with background lighting |
| Number of LEDs | 2 Piece(s) |
| Type of configuration | Via web browser |
| Operational controls | Button(s) |

Environmental data

| | |
|--|----------------|
| Ambient temperature, operation | -35 ... 40 °C |
| Ambient temperature, storage | -20 ... +70 °C |
| Relative humidity (non-condensing) | 90 % |
| Extraneous light tolerance on the bar code, max. | 2,000 lx |

Certifications

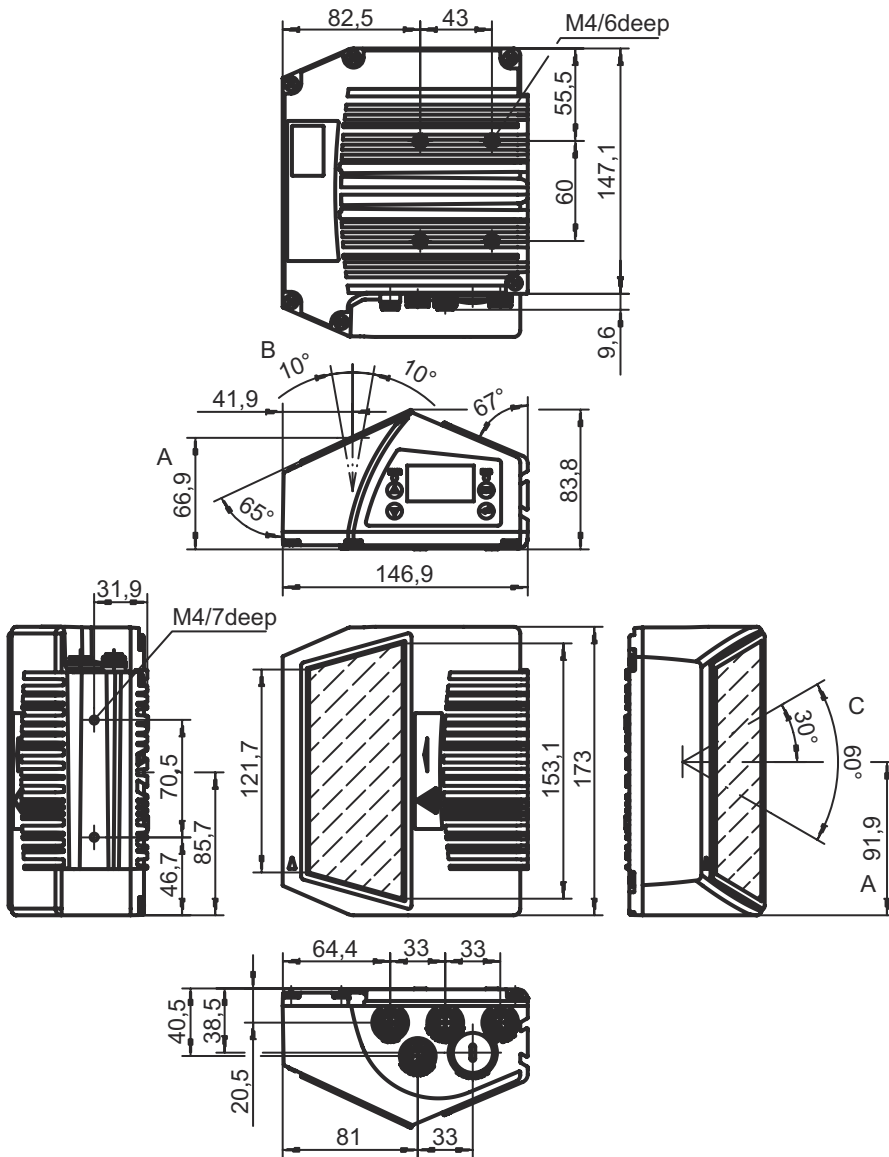
| | |
|---|--------------------------------------|
| Degree of protection | IP 65 |
| Protection class | III |
| Certifications | c UL US |
| Test procedure for EMC in accordance with standard | EN 55022 EN 61000-4-2, -3, -4, -6 |
| Test procedure for shock in accordance with standard | IEC 60068-2-27, test Ea |
| Test procedure for continuous shock in accordance with standard | IEC 60068-2-29, test Eb |
| Test procedure for vibration in accordance with standard | IEC 60068-2-6, test Fc |

Classification

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

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

SERVICE

| | |
|--------------------|--------------------|
| Function | Service interface |
| Type of connection | USB |
| Connector type | USB 2.0 Standard-A |

Electrical connection

Connection 2

SW IN/OUT

| | |
|--------------------|------------|
| Function | Signal IN |
| | Signal OUT |
| Type of connection | Connector |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | A-coded |

Pin Pin assignment

| | |
|---|--------|
| 1 | VOUT |
| 2 | SWIO 1 |
| 3 | GND |
| 4 | SWIO 2 |
| 5 | FE |

Connection 3

PWR

| | |
|--------------------|----------------|
| Function | Signal IN |
| | Signal OUT |
| | Voltage supply |
| Type of connection | Connector |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | A-coded |

Pin Pin assignment

| | |
|---|--------|
| 1 | VIN |
| 2 | SWIO 3 |
| 3 | GND |
| 4 | SWIO 4 |
| 5 | FE |

Connection 4

HOST / BUS IN

| | |
|--------------------|-----------|
| Function | BUS IN |
| Type of connection | Connector |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | B-coded |

Pin Pin assignment

| | |
|---|-----------|
| 1 | CTS / RX+ |
| 2 | TxD/Tx- |
| 3 | GND_H |
| 4 | RTS/TX+ |
| 5 | RxD/RX- |

Electrical connection

Connection 5

BUS OUT

| | |
|--------------------|-----------|
| Function | BUS OUT |
| Type of connection | Connector |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | B-coded |

| Pin | Pin assignment |
|-----|----------------|
| 1 | V CC485 |
| 2 | RS 485 B |
| 3 | GND 485 |
| 4 | RS 485 A |
| 5 | FE |