



Part no.: 50129661
BCL 900i SN 102
Stationary bar code reader



Ethernet

Figure can vary

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Part number code
- Accessories

Technical data

| Basic data | |
|--|--|
| Series | BCL 900i |
| Functions | |
| Functions | Alignment mode AutoConfig Code fragment technology LED indicator |
| Read data | |
| Code types, readable | 2/5 Interleaved Codabar Code 128 Code 39 Code 93 EAN 128 EAN 8/13 EAN Addendum UPC |
| Scanning rate, typical | 1,000 scans/s |
| Optical data | |
| Reading distance | 525 ... 1,500 mm |
| Light source | Laser , Red |
| Laser light wavelength | 650 nm |
| Laser class | 2 , IEC/EN 60825-1:2007 |
| Transmitted-signal shape | Continuous |
| Usable opening angle (reading field opening) | 60 ° |
| Bar code contrast (PCS) | 60 % |
| Modulus size | 0.25 ... 0.38 mm |
| Reading method | Line scanner |
| Scanning rate | 1,000 ... 1,000 scans/s |
| Beam deflection | Via rotating polygon wheel |
| Light beam exit | Front |
| Electrical data | |
| Protective circuit | Polarity reversal protection |
| Performance data | |
| Supply voltage U_B | 10 ... 30 V , DC |
| Power consumption, max. | 10 W |
| Inputs | |
| Number of digital switching inputs | 3 Piece(s) |
| Switching inputs | |
| Voltage type | DC |
| Switching voltage | Typ. U_B / 0 V |
| Digital switching input 3 | |
| Function | Encoder input |

Outputs

Number of digital switching outputs 2 Piece(s)

Switching outputs

Voltage type DC

 Switching voltage Typ. $U_B / 0\text{ V}$
Switching output 1

Switching element Transistor , NPN

Switching principle Light/dark reversible

Switching output 2

Switching element Transistor , NPN

Switching principle Light/dark reversible

Interface

Type RS 232 , RS 422 , Ethernet

RS 232

Function Process

Transmission speed 1,200 ... 115,200 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 1,200 ... 115,200 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

Ethernet

 Architecture Client
Server

Address assignment DHCP

 Transmission speed 10 Mbit/s
100 Mbit/s

 Function Process
Service

Switch functionality Integrated

Transmission protocol TCP/IP , UDP

Connection

Number of connections 4 Piece(s)

Connection 1

| | |
|-----------------------|----------------|
| Type of connection | Connector |
| Designation on device | POWER |
| Function | Voltage supply |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 4 -pin |
| Encoding | A-coded |

Connection 2

| | |
|-----------------------|----------------------------------|
| Type of connection | Connector |
| Designation on device | I/O |
| Function | Internal communication interface |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 17 -pin |
| Encoding | A-coded |

Connection 3

| | |
|-----------------------|----------------|
| Type of connection | Connector |
| Designation on device | ETH1 |
| Function | Data interface |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 4 -pin |
| Encoding | D-coded |

Connection 4

| | |
|-----------------------|----------------|
| Type of connection | Connector |
| Designation on device | ETH2 |
| Function | Data interface |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 4 -pin |
| Encoding | D-coded |

Mechanical data

| | |
|-----------------------|------------------------------|
| Design | Cubic |
| Dimension (W x H x L) | 216 mm x 96 mm x 127 mm |
| Housing material | Metal , Diecast aluminum |
| Lens cover material | Glass |
| Net weight | 2,000 g |
| Housing color | Red Silver |
| Type of fastening | Via optional mounting device |

Operation and display

| | |
|-----------------|------------|
| Type of display | LED |
| Number of LEDs | 5 Piece(s) |

Part no.: 50129661 – BCL 900i SN 102 – Stationary bar code reader

| | |
|-----------------------|-----------------|
| Type of configuration | Via web browser |
| Operational controls | Button(s) |

Environmental data

| | |
|--|----------------|
| Ambient temperature, operation | 0 ... 50 °C |
| Ambient temperature, storage | -20 ... +70 °C |
| Relative humidity (non-condensing) | 0 ... 90 % |
| Extraneous light tolerance on the bar code, max. | 30,000 lx |

Certifications

| | |
|---|--------------------------------------|
| Degree of protection | IP 65 |
| Protection class | |
| Certifications | c CSA 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 |

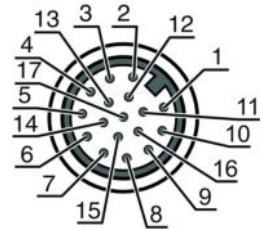
Dimensioned drawings

All dimensions in millimeters

Part no.: 50129661 – BCL 900i SN 102 – Stationary bar code reader

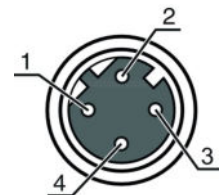
| Connection 2 | I/O |
|--------------------|----------------------------------|
| Type of connection | Connector |
| Function | Internal communication interface |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 17 -pin |
| Encoding | A-coded |

| Pin | Pin assignment |
|-----|----------------|
| 1 | V+ |
| 2 | GND |
| 3 | ENB |
| 4 | Tx |
| 5 | IN 1 |
| 6 | IN 1 |
| 7 | RES |
| 8 | OUT 2 |
| 9 | OUT 1 |
| 10 | CTS/RX- |
| 11 | RX / RX+ |
| 12 | RTS/TX- |
| 13 | ENA |
| 14 | RX |
| 15 | IN 2 |
| 16 | IN 2 |
| 17 | TX / TX+ |



| Connection 3 | ETH1 |
|--------------------|----------------|
| Type of connection | Connector |
| Function | Data interface |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 4 -pin |
| Encoding | D-coded |

| Pin | Pin assignment |
|-----|----------------|
| 1 | Tx+ |
| 2 | Rx+ |
| 3 | Tx- |
| 4 | Rx- |

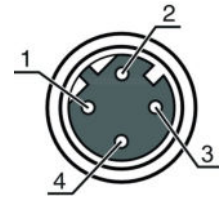


| Connection 4 | ETH2 |
|--------------------|----------------|
| Type of connection | Connector |
| Function | Data interface |
| Thread size | M12 |
| Type | Female |
| Material | Metal |

Part no.: 50129661 – BCL 900i SN 102 – Stationary bar code reader

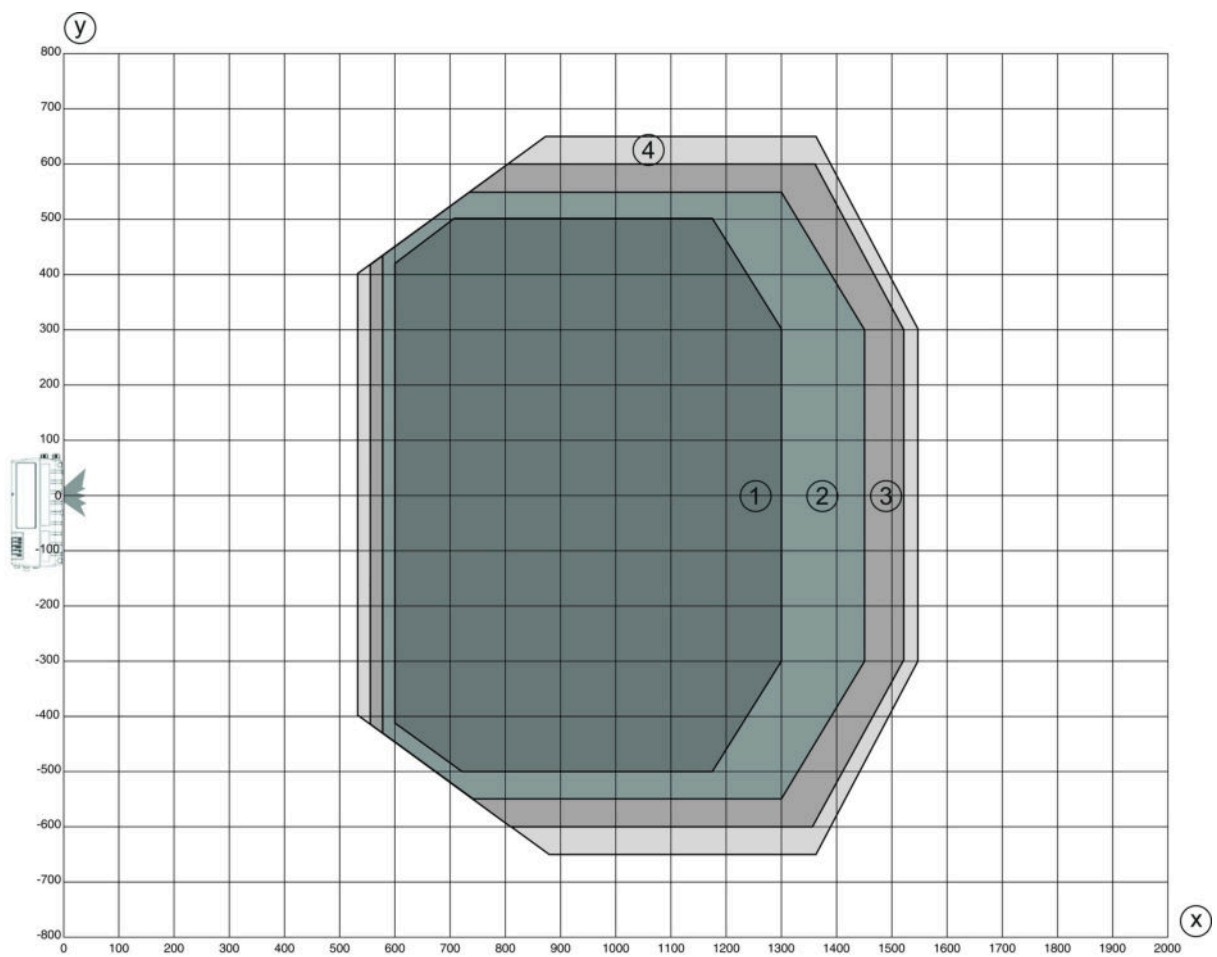
| | |
|---------------------|-------------|
| Connection 4 | ETH2 |
| No. of pins | 4 -pin |
| Encoding | D-coded |

| Pin | Pin assignment |
|-----|----------------|
| 1 | Tx+ |
| 2 | Rx+ |
| 3 | Tx- |
| 4 | Rx- |



Diagrams

Reading field curve - High Density



- x Reading field distance [mm]
- y Reading field width [mm]
- 1 Module: 0.25 mm / 10 mil
- 2 Module: 0.30 mm / 12 mil
- 3 Module: 0.33 mm / 13 mil
- 4 Module: 0.38 mm / 15 mil

Part no.: 50129661 – BCL 900i SN 102 – Stationary bar code reader

Operation and display

LEDs

| LED | Display | Meaning |
|-----|----------------|--|
| 1 | READY Green | Operational readiness |
| 2 | GOOD Green | Reading successful |
| 3 | TRIGGER Yellow | Reading gate active |
| 4 | COM Yellow | Active communication with serial interface |
| 5 | STATUS Red | No reading result |

Part number code

Part designation: **BCL XXXX YYZ AAA B**


| | |
|------|--|
| BCL | Operating principle: BCL: bar code reader |
| XXXX | Series/interface (integrated fieldbus technology): 900i: RS 232 / RS 422 / EtherNet IP |
| YY | Scanning principle: S: line scanner (single line) |
| Z | Optics: N: High Density (close) M: Medium Density (medium distance) |
| AAA | Beam exit: 102: front |

Note

A list with all available device types can be found on the Leuze electronic website at www.leuze.com.

Accessories

Connection technology - Connection unit

| | Part no. | Designation | Article | Description |
|---|------------|-------------|-------------------------|---|
|  | 50129663 * | MA 900 | Modular connection unit | Interface: RS 232, RS 422 Connections: 1 Piece(s) Degree of protection: IP 65 |

* Necessary accessories, please order separately

Connection technology - Interconnection cables

| | Part no. | Designation | Article | Description |
|--|----------|-------------|-----------------------|--|
| | 50131529 | KB 900-3000 | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 17 -pin Connection 2: Sub-HD, Axial, Male, 25 -pin Shielded: Yes Cable length: 3,000 mm |

Part no.: 50129661 – BCL 900i SN 102 – Stationary bar code reader

Note

A list with all available accessories can be found on the Leuze electronic website in the Download tab of the article detailed page.