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

For Illustration purposes only

Contents

CDRH RS232 RS422

Ethernet

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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
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 V

Switching output 1

Switching element	Transistor, NPN
Switching principle	Light/dark switchable

Switching output 2

Switching element	Transistor, NPN
Switching principle	Light/dark switchable

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

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

Technical data

Connection 2

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

Connection 3

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

Connection 4

Function	Data interface
Type of connection	Connector
Designation on device	ETH2
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
Metal housing	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)
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

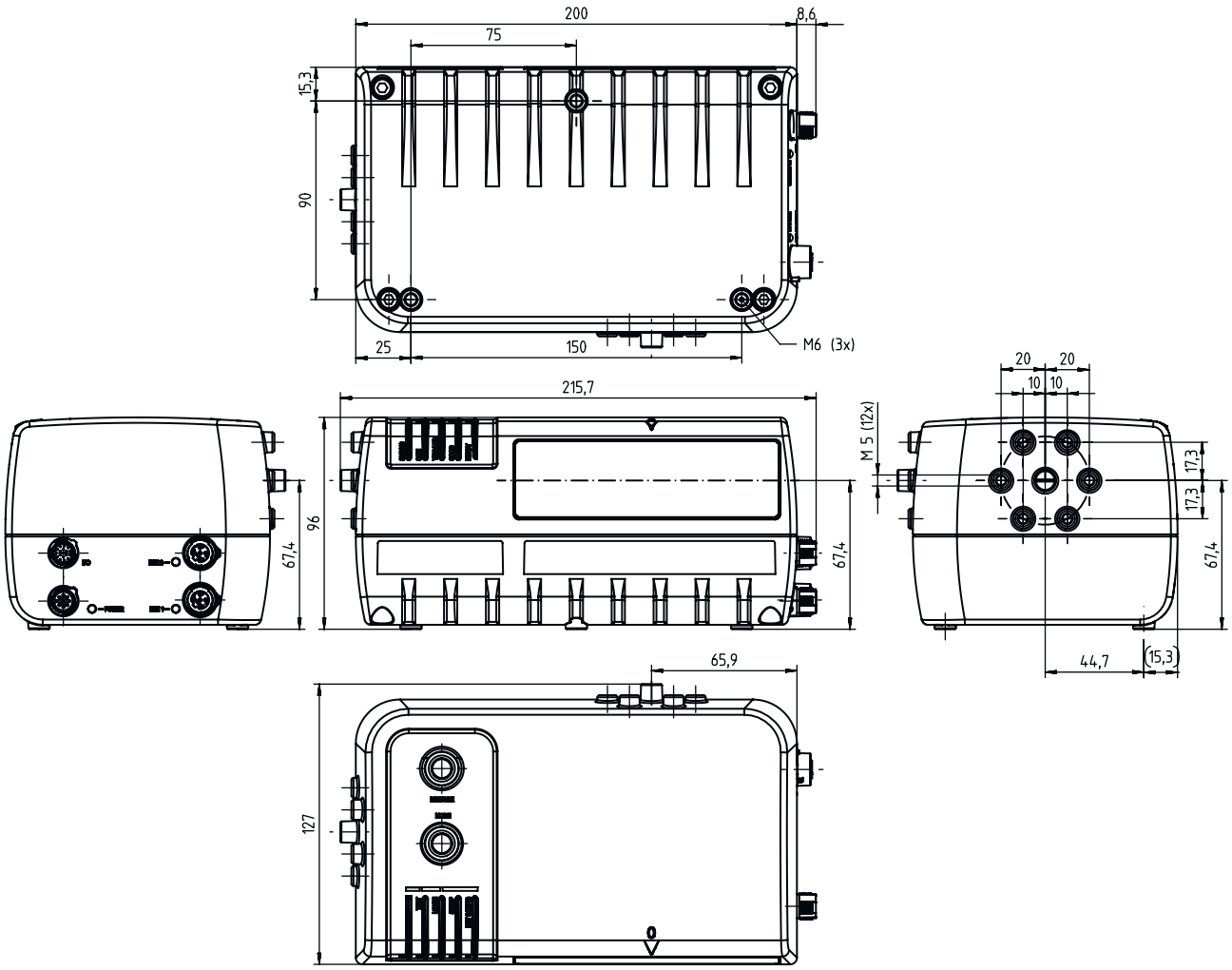
Degree of protection	IP 65
Approvals	c CSA US
Test procedure for EMC in accordance with standard	EN 55022
	EN 61000-4-2, -3, -4, -6
Test procedure for shock in accordance with standard	IEC 60068-2-27, test Ea
Test procedure for continuous shock in accordance with standard	IEC 60068-2-29, test Eb
Test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

Classification

Customs tariff number	84719000
ECLASS 5.1.4	27280102
ECLASS 8.0	27280102
ECLASS 9.0	27280102
ECLASS 10.0	27280102
ECLASS 11.0	27280102
ECLASS 12.0	27280102
ECLASS 13.0	27280102
ECLASS 14.0	27280102
ECLASS 15.0	27280102
ECLASS 16.0	27280102
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
ETIM 9.0	EC002550
ETIM 10.0	EC002550
UNSPSC 26.08	43211701

Dimensioned drawings

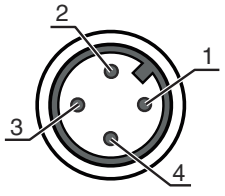
All dimensions in millimeters



Electrical connection

Connection 1	POWER
Function	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	4 -pin
Encoding	A-coded

Pin	Pin assignment
1	VIN
2	n.c.
3	GND
4	n.c.
5	FE

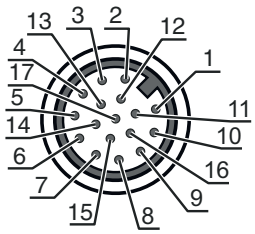


Electrical connection

Connection 2 — I/O

Function	Internal communication interface
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	17 -pin
Encoding	A-coded

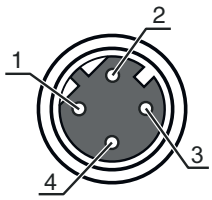
Pin	Pin assignment
1	V+
2	GND
3	ENB
4	Tx
5	IN 1
6	IN 1
7	RES
8	OUT 2
9	OUT 1
10	CTS/RX-
11	RX / RX+
12	RTS/TX-
13	ENA
14	RX
15	IN 2
16	IN 2
17	TX / TX+



Connection 3 — ETH1

Function	Data interface
Type of connection	Connector
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-

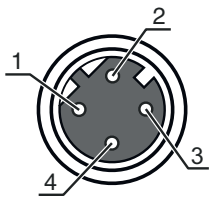


Connection 4 — ETH2

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

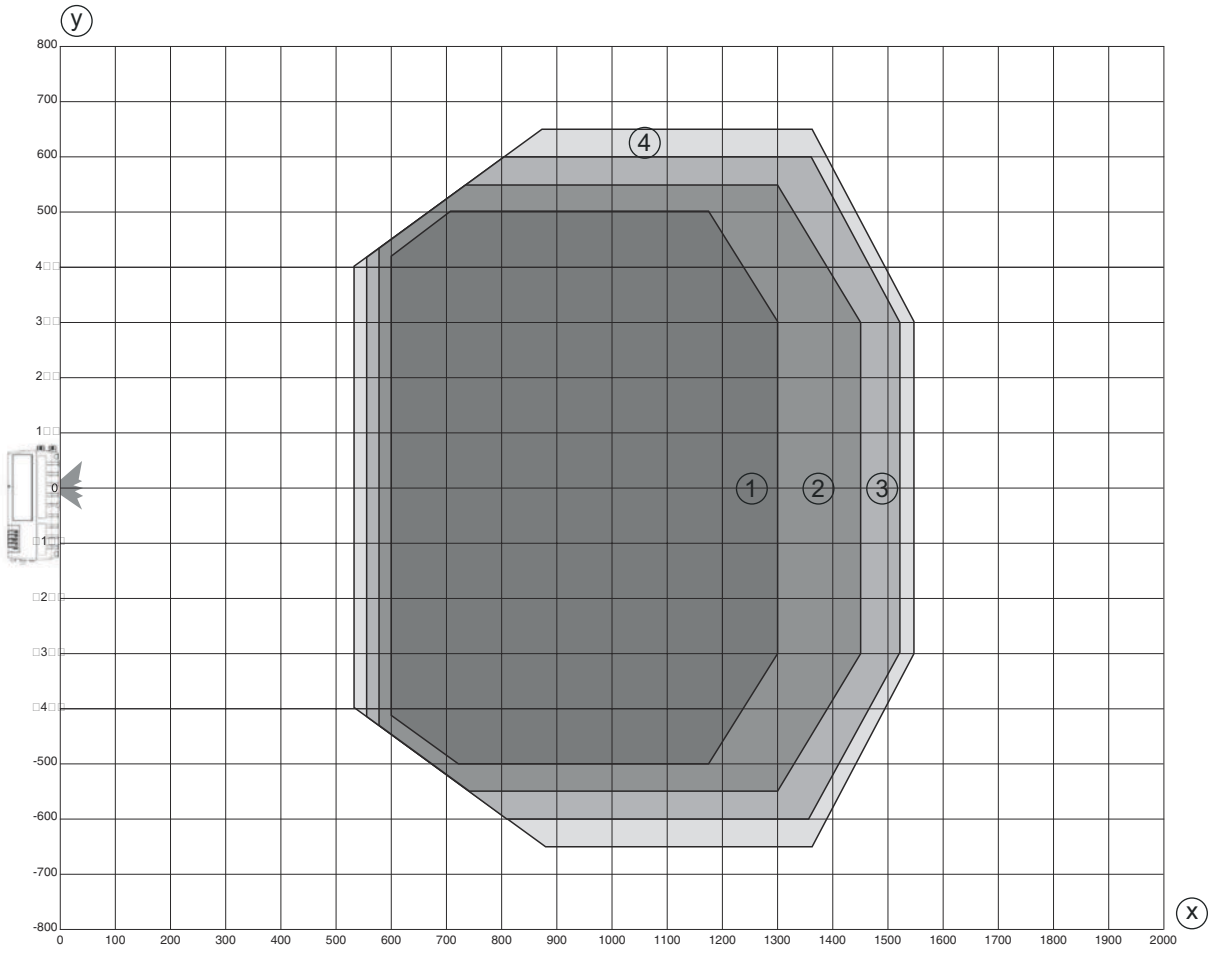
Electrical connection

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

Operation and display

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 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

Note

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