

Technical data sheet

Stationary bar code reader

Part no.: 50129662

BCL 900i SM 102



Figure can vary

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Ethernet

Technical data

Basic data

Series	BCL 900i
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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	450 ... 1,700 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	0.33 ... 0.5 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
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Performance data

Supply voltage U_B	10 ... 30 V, DC
Power consumption, max.	10 W

Inputs

Number of digital switching inputs	3 Piece(s)
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Switching inputs

Voltage type	DC
Switching voltage	Typ. U_B / 0 V

Digital switching input 3

Function	Encoder input
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Outputs

Number of digital switching outputs	2 Piece(s)
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Switching outputs

Voltage type	DC
Switching voltage	Typ. U_B / 0 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
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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)
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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, 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

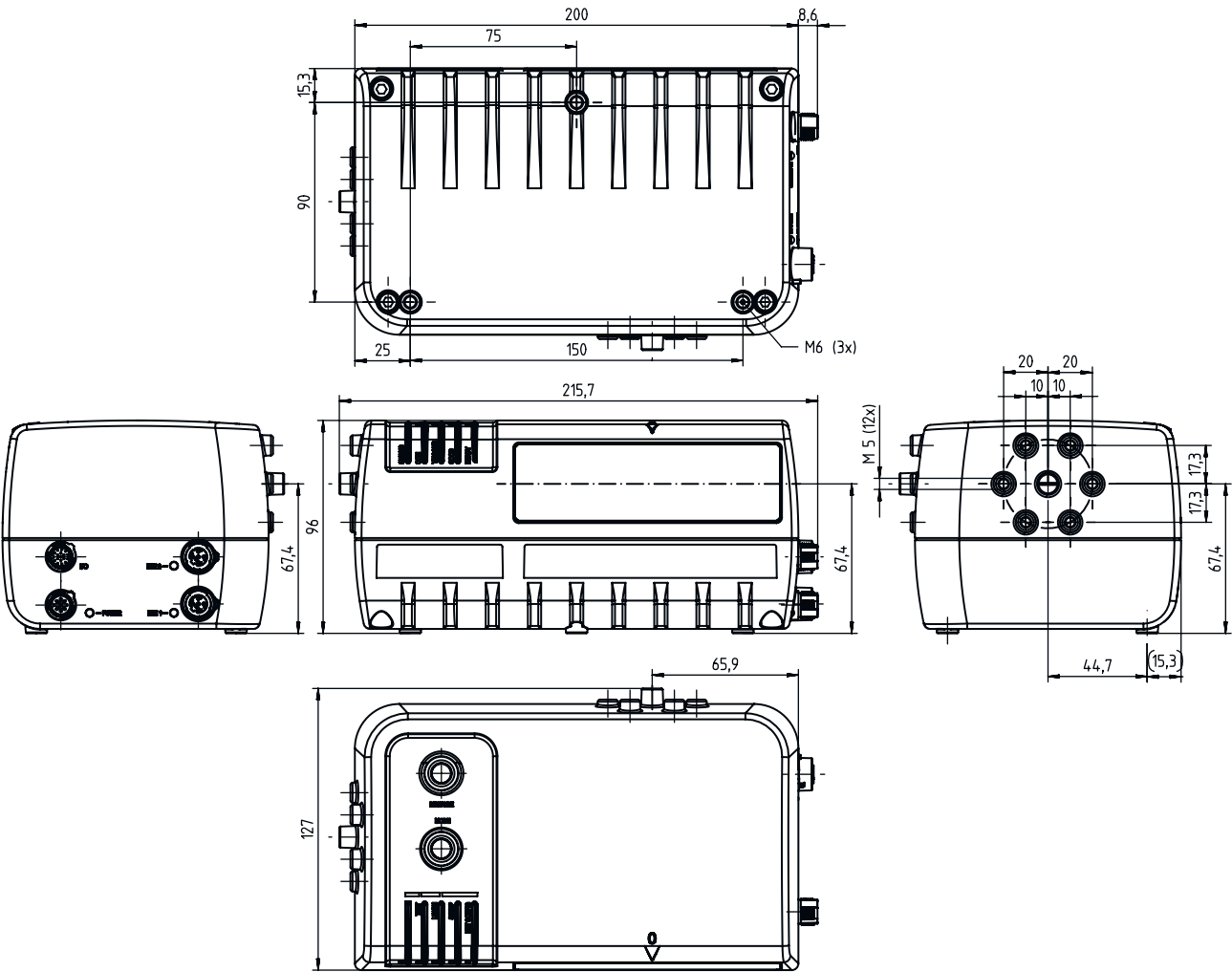
Degree of protection	IP 65
Certifications	c CSA US
Test procedure for EMC in accordance with standard	EN 55022 EN 61000-4-2, -3, -4, -6
Test procedure for shock in accordance with standard	IEC 60068-2-27, test Ea
Test procedure for continuous shock in accordance with standard	IEC 60068-2-29, test Eb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

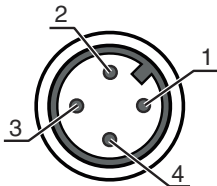
All dimensions in millimeters



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

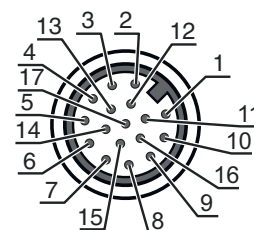
Connection 2

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+



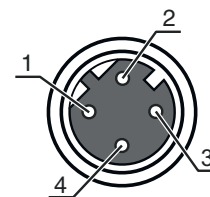
Connection 3

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-



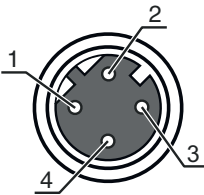
Connection 4

ETH2

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

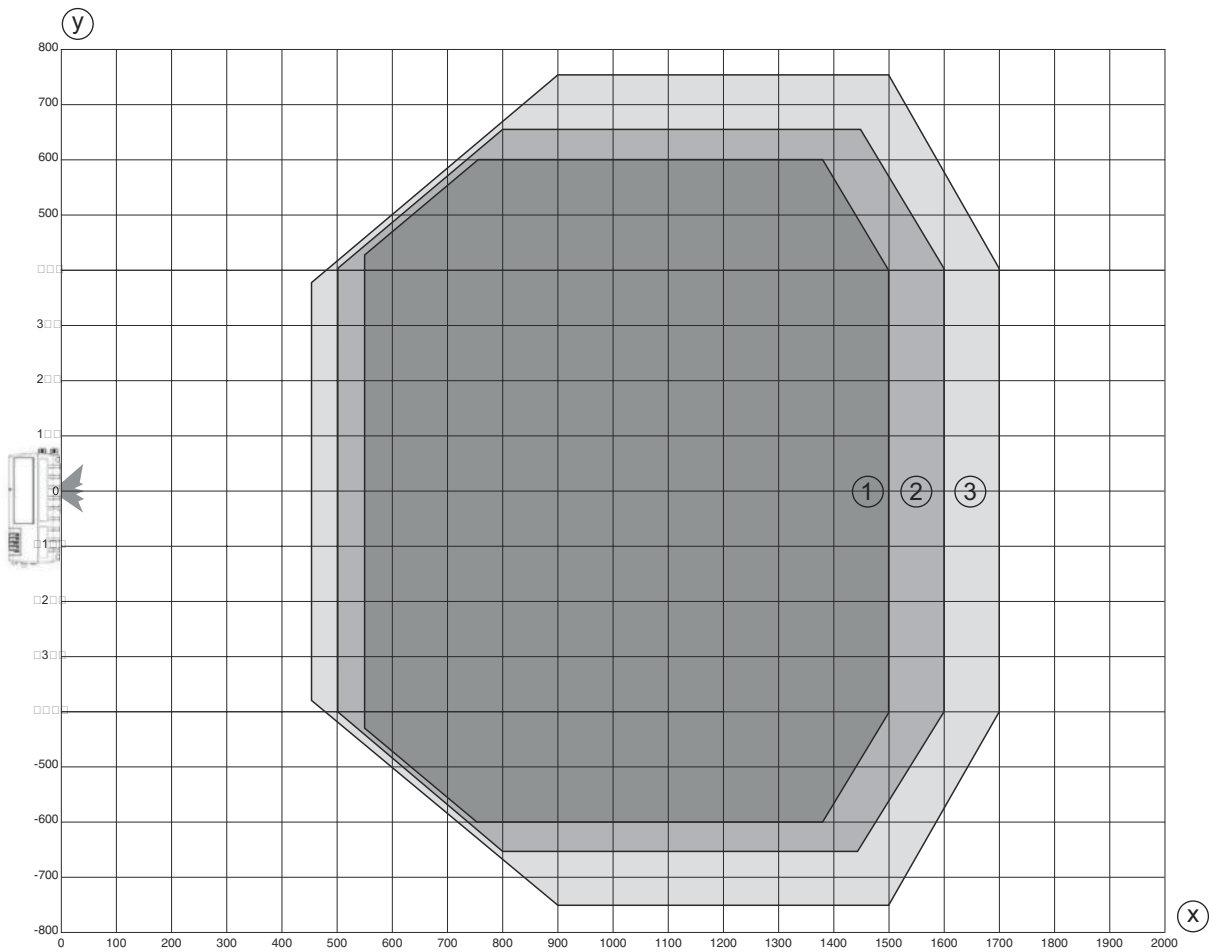
Electrical connection

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



Diagrams

Reading field curve - Medium Density



- x Reading field distance [mm]
- y Reading field width [mm]
- 1 Module: 0.33 mm / 13 mil
- 2 Module: 0.38 mm / 15 mil
- 3 Module: 0.50 mm / 20 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

Operation and display

LED	Display	Meaning
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
	50131531	KB 900-1000	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 17 -pin Connection 2: Sub-HD, Axial, Male, 25 -pin Shielded: Yes Cable length: 1,000 mm
	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

Accessories

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50131534 **	BT 900	Fastening	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

** Included in delivery contents

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