

# Technical data sheet Stationary bar code reader

Part no.: 50114822

BCL 308i SF 102 D



### Contents

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- Dimensioned drawings
- Electrical connection
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## **Technical data**



Series	BCL 300i	
Functions		
Functions	Alignment mode	
	AutoConfig	
	AutoControl	
	AutoReflAct	
	Code fragment technology	
	LED indicator	
	Reference code comparison	
Characteristic parameters		
MTTF	110 years	
Read data		
Code types readable	2/5 Interleaved	
Code types, readable		
	Coda 139	
	Code 128	
	Code 39	
	Code 93	
	EAN 8/13	
	GS1 Databar Expanded	
	GS1 Databar Limited	
	GS1 Databar Omnidirectional	
	UPC	
Scanning rate, typical	1,000 scans/s	
	64 Piece(s)	
number	04 FIECE(S)	
number Optical data	100 470 mm	
Bar codes per reading gate, max. number  Optical data  Reading distance  Light source	100 470 mm Laser, Red	
number  Optical data  Reading distance  Light source  Wavelength	100 470 mm Laser, Red 655 nm	
number  Optical data  Reading distance Light source  Wavelength Laser class	100 470 mm Laser, Red	
number  Optical data  Reading distance  Light source  Wavelength  Laser class	100 470 mm Laser, Red 655 nm	
number  Optical data  Reading distance  Light source	100 470 mm Laser, Red 655 nm 1, IEC/EN 60825-1:2014	
number  Optical data  Reading distance  Light source  Wavelength  Laser class  Transmitted-signal shape  Usable opening angle (reading field opening)	100 470 mm Laser, Red 655 nm 1, IEC/EN 60825-1:2014 Continuous	
number  Optical data  Reading distance  Light source  Wavelength  Laser class  Transmitted-signal shape  Usable opening angle (reading field opening)  Modulus size	100 470 mm Laser, Red 655 nm 1, IEC/EN 60825-1:2014 Continuous 60 °	
number  Optical data  Reading distance  Light source  Wavelength  Laser class  Transmitted-signal shape  Usable opening angle (reading field opening)  Modulus size  Reading method	100 470 mm Laser, Red 655 nm 1, IEC/EN 60825-1:2014 Continuous 60 °	
number  Optical data  Reading distance Light source  Wavelength Laser class Transmitted-signal shape Usable opening angle (reading field	100 470 mm  Laser, Red 655 nm  1, IEC/EN 60825-1:2014  Continuous 60 °  0.3 0.5 mm  Line scanner	
number  Optical data  Reading distance Light source Wavelength Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection	100 470 mm Laser, Red 655 nm 1, IEC/EN 60825-1:2014 Continuous 60 ° 0.3 0.5 mm Line scanner Via rotating polygon wheel	
number  Optical data  Reading distance Light source  Wavelength Laser class  Transmitted-signal shape  Usable opening angle (reading field opening)  Modulus size  Reading method  Beam deflection  Light beam exit	100 470 mm Laser, Red 655 nm 1, IEC/EN 60825-1:2014 Continuous 60 ° 0.3 0.5 mm Line scanner Via rotating polygon wheel	
Optical data  Reading distance Light source  Wavelength Laser class Transmitted-signal shape Usable opening angle (reading field opening)  Modulus size Reading method Beam deflection Light beam exit  Electrical data  Protective circuit	100 470 mm  Laser, Red 655 nm  1, IEC/EN 60825-1:2014  Continuous 60 °  0.3 0.5 mm  Line scanner  Via rotating polygon wheel  Front  Polarity reversal protection	
Optical data  Reading distance Light source Wavelength Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection Light beam exit  Electrical data Protective circuit  Performance data Supply voltage U <sub>B</sub>	100 470 mm  Laser, Red 655 nm  1, IEC/EN 60825-1:2014  Continuous 60 °  0.3 0.5 mm  Line scanner  Via rotating polygon wheel  Front  Polarity reversal protection	
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number  Optical data  Reading distance Light source Wavelength Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection Light beam exit  Electrical data  Protective circuit  Performance data Supply voltage U <sub>B</sub> Power consumption, max.  Inputs/outputs selectable Output current, max. Number of inputs/outputs selectable	100 470 mm  Laser, Red 655 nm  1, IEC/EN 60825-1:2014  Continuous 60 °  0.3 0.5 mm  Line scanner Via rotating polygon wheel Front  Polarity reversal protection  18 30 V, DC 4.5 W  60 mA 2 Piece(s)	

Ethornot			
Ethernet Architecture	Client		
Alontoctaro	Server		
Address assignment	DHCP		
Address assignment	Manual address assignment		
Transmission speed	10 Mbit/s		
manshinssion speed	100 Mbit/s		
Function	Process		
Switch functionality	Integrated		
Transmission protocol	TCP/IP , UDP		
Transmission protocol	101711 , 001		
Service interface			
Туре	USB 2.0		
.,,,,	005 2.0		
USB			
Function	Configuration via software		
	Service		
Connection			
Number of connections	1 Piece(s)		
Connection 1			
Function	BUS IN		
	BUS OUT		
	Connection to device		
	Data interface		
	PWR / SW IN / OUT		
	Service interface		
Type of connection	Plug connector, It is essential to use a connection unit when commissioning the device.		
No. of pins	32 -pin		
Туре	Male		
•			
Mechanical data			
Design	Cubic		
Dimension (W x H x L)	95 mm x 44 mm x 68 mm		
Housing material	Metal		
Metal housing	Diecast aluminum		
Lens cover material	Glass		
Net weight	270 g		
Housing color	Red		
	Silver		
Type of fastening	Dovetail grooves		
	Fastening on back		
	Via optional mounting device		
Operation and display			
Type of display	LED		
· · · · · · · · · · · · · · · · · · ·	Monochromatic graphic display, 128 x 32		
	pixels		
Number of LEDs	2 Piece(s)		
Type of configuration	Via web browser		
Environmental data			
Ambient temperature, operation	0 40 °C		
Ambient temperature, storage	-20 70 °C		
Ambient temperature, storage Relative humidity (non-condensing)			

## **Technical data**



### Certifications

Degree of protection	IP 65
Protection class	III
Approvals	c UL US
Test procedure for EMC in accordance	EN 55022
with standard	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

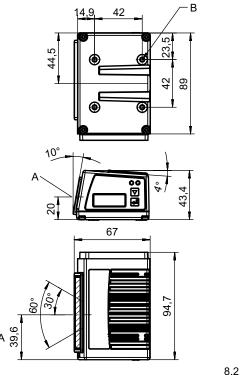
### Classification

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
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
ETIM 9.0	EC002550
ETIM 10.0	EC002550

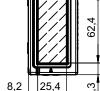
# **Dimensioned drawings**

Leuze

All dimensions in millimeters



- Optical axis
- M4 thread (5 mm deep)



## **Electrical connection**

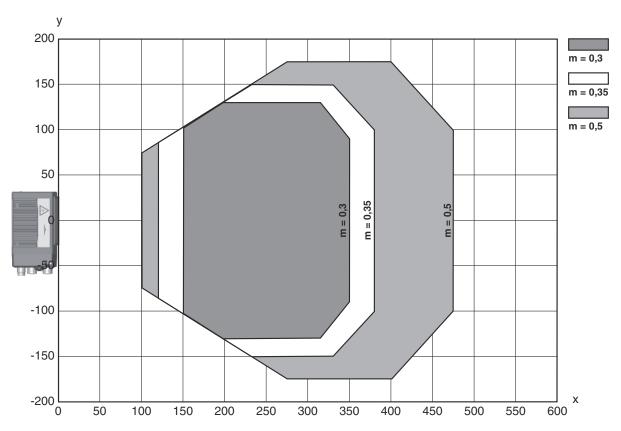
### **Connection 1**

Function	BUS IN
	BUS OUT
	Connection to device
	Data interface
	PWR / SW IN / OUT
	Service interface
Type of connection	Plug connector
Type of connection	It is essential to use a connection unit when commissioning the device.
No. of pins	32 -pin
Туре	Male

## **Diagrams**



## Reading field curve



- Reading field distance [mm]
- Reading field width [mm]

# **Operation and display**

LED	Display	Meaning
1 PWR	Green, flashing	Device ok, initialization phase
	Green, continuous light	Device OK
	Green, briefly off - on	Reading successful
	Green, briefly off - briefly red - on	Reading not successful
	Orange, continuous light	Service mode
	Red, flashing	Device OK, warning set
	Red, continuous light	Error, device error
2 BUS	Green, flashing	Initialization
	Green, continuous light	Bus operation ok
	Red, flashing	Communication error
	Red, continuous light	Bus error

### Part number code



Part designation: BCL XXXX YYZ AAA BB CCCC

BCL	Operating principle BCL: bar code reader
xxxx	Series/interface (integrated fieldbus technology) 300i: RS 232 / RS 422 (stand-alone) 301i: RS 485 (multiNet slave) 304i: PROFIBUS DP 308i: EtherNet TCP/IP, UDP 338i: EtherCAT 348i: PROFINET RT 358i: EtherNet/IP
YY	Scanning principle S: line scanner (single line) R1: line scanner (raster) O: oscillating-mirror scanner (oscillating mirror)
Z	Optics N: High Density (close) M: Medium Density (medium distance) F: Low Density (remote) L: Long Range (very large distances) J: ink-jet (depending on the application)
AAA	Beam exit 100: lateral 102: front
ВВ	Special equipment D: With display H: with heating DH: optionally with display and heating P: plastic exit window
cccc	Functions F007: optimized process data structure F099: OPC-UA function

### Note



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

### **Notes**



### Observe intended use!



- This product is not a safety sensor and is not intended as personnel protection.
- Only use the product in accordance with its intended use.

### ATTENTION! LASER RADIATION - CLASS 1 LASER PRODUCT



The device satisfies the requirements of IEC/EN 60825-1:2014 safety regulations for a product of laser class 1 and complies with 21 CFR 1040.10 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.

- 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.

We reserve the right to make technical Leuze electronic GmbH + Co. KG info@leuze.com • www.leuze.com changes

## **Accessories**



# Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50132079	KD U-M12-5A-V1- 050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC
W	50135074	KS ET-M12-4A-P7- 050	Connection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5.000 mm Sheathing material: PUR

# Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50117011	KB USB A - USB miniB	Service line	Suitable for interface: USB Connection 1: USB Connection 2: USB Shielded: Yes Cable length: 1,500 mm Sheathing material: PVC
	50137078	KSS ET-M12-4A- M12-4A-P7-050	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Connector, M12, Axial, Male, D-coded, 4 -pin Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50135081	KSS ET-M12-4A- RJ45-A-P7-050	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

# Connection technology - Connection boxes

	Part no.	Designation	Article	Description
6	50131255 *	ME 308 103	Connection unit	Suitable for: BCL 308i Interface: Ethernet Number of connections: 4 Piece(s) Connection: Cable with connector, M12, 900 mm
6	50131254 *	ME 308 104	Connection unit	Suitable for: BCL 308i Interface: Ethernet Number of connections: 5 Piece(s) Connection: Cable with connector, M12, 900 mm

### **Accessories**



	Part no.	Designation	Article	Description
	50116466 *	MK 308	Connection unit	Suitable for: BCL 308i Interface: Ethernet Number of connections: 4 Piece(s) Connection: Terminal
a c	50114823 *	MS 308	Connection unit	Suitable for: BCL 308i Interface: Ethernet Number of connections: 4 Piece(s) Connection: Connector, M12

<sup>\*</sup> Necessary accessories, please order separately

# Mounting technology - Mounting brackets

Part no.	Designation	Article	Description
50121433	BT 300 W	Mounting device	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Adjustable Material: Metal

# Mounting technology - Rod mounts

Part no.	Designation	Article	Description
50121435	BT 56 - 1	Mounting device	Functions: Static applications Design of mounting device: Mounting system Fastening, at system: For 12 mm rod, For 14 mm rod, For 16 mm rod Mounting bracket, at device: Clampable Material: Metal Tightening torque of the clamping jaws: 8 N·m

# Mounting technology - Other

Part no.	Designation	Article	Description
50124941	BTU 0300M-W	Mounting device	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable, Groove mounting, Suited for M4 screws Material: Metal Shock absorber: No

# Reflective tapes for standard applications

Part no.	Designation	Article	Description
50106119	REF 4-A-100x100	Reflective tape	Design: Rectangular Reflective surface: 100 mm x 100 mm Material: Plastic Chemical designation of the material: PMMA Fastening: Self-adhesive

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info@leuze.com • www.leuze.com

We reserve the right to make technical

## **Accessories**



## Services

	Part no.	Designation	Article	Description
D	S981020	CS30-E-212	Hourly rate	Details: Compilation of the application data, selection and suggestion of suitable sensor system, drawing prepared as assembly sketch. Conditions: Completed questionnaire or project specifications with a description of the application have been provided.
	S981014	CS30-S-110	Start-up support	Details: Performed at location of customer's choosing, duration: max. 10 hours.  Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses.
	S981019	CS30-T-110	Product training	Details: Location and content to be agreed upon, duration: max. 10 hours. Conditions: Price not including travel costs and, if applicable, accommodation expenses.
<del>       </del>	S981021	CS30-V-212	Hourly rate	Details: REA evaluation with creation of a test report, evaluation of the code quality.  Conditions: Original bar codes to be provided by the client.

### Note



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