

Technical data sheet Stationary bar code reader

Part no.: 50116214

BCL 300i SL 102



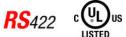
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Technical data



		RS 232	
Series	BCL 300i	Function	Process
		Transmission speed	4,800 115,200 Bd
Functions		Data format	Adjustable
Functions	Alignment mode	Start bit	1
runctions	AutoConfig	Data bit	7,8
	-	Stop bit	1.2
	AutoControl	Parity	Adjustable
	AutoReflAct	Transmission protocol	<stx><data><cr><lf></lf></cr></data></stx>
	Code fragment technology	Data encoding	ASCII
	LED indicator		
	Reference code comparison	RS 422	
Characteristic parameters		Function	Process
·		Transmission speed	4,800 115,200 Bd
MTTF	110 years	Data format	Adjustable
Dood data		Start bit	1
Read data		Data bit	7, 8 data bits
Code types, readable	2/5 Interleaved	Stop bit	1, 2 stop bits
	Codabar	Transmission protocol	Adjustable
	Code 128	Data encoding	ASCII
	Code 39		
	Code 93	Service interface	
	EAN 8/13	Туре	USB 2.0
	GS1 Databar Expanded		
	GS1 Databar Limited	USB	
	GS1 Databar Omnidirectional	Function	Configuration via software
	UPC		
Scanning rate, typical	1,000 scans/s	Connection	
Bar codes per reading gate, max.	64 Piece(s)	Number of connections	1 Piece(s)
number			
Ontical data		Connection 1	
Optical data		Function	BUS OUT
Reading distance	100 700 mm		Connection to device
Light source	Laser, Red		Data interface
	055		PWR / SW IN / OUT
Wavelength	655 nm		1 1111/1 011 111/1 001
	1, IEC/EN 60825-1:2014		Service interface
Laser class		Type of connection	Service interface Plug connector, It is essential to use a
Laser class Transmitted-signal shape	1, IEC/EN 60825-1:2014	Type of connection	Service interface Plug connector, It is essential to use a connection unit when commissioning th
Laser class Transmitted-signal shape Usable opening angle (reading field opening)	1, IEC/EN 60825-1:2014 Continuous 60 °		Service interface Plug connector, It is essential to use a connection unit when commissioning th device.
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size	1, IEC/EN 60825-1:2014 Continuous 60 °	No. of pins	Service interface Plug connector, It is essential to use a connection unit when commissioning th device. 32 -pin
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner		Service interface Plug connector, It is essential to use a connection unit when commissioning th device.
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel	No. of pins	Service interface Plug connector, It is essential to use a connection unit when commissioning th device. 32 -pin
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner	No. of pins Type Mechanical data	Service interface Plug connector, It is essential to use a connection unit when commissioning th device. 32 -pin Male
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection Light beam exit	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel	No. of pins Type Mechanical data Design	Service interface Plug connector, It is essential to use a connection unit when commissioning th device. 32 -pin Male Cubic
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection Light beam exit	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel	No. of pins Type Mechanical data Design Dimension (W x H x L)	Service interface Plug connector, It is essential to use a connection unit when commissioning th device. 32 -pin Male Cubic 95 mm x 44 mm x 68 mm
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection Light beam exit	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel	No. of pins Type Mechanical data Design Dimension (W x H x L) Housing material	Service interface Plug connector, It is essential to use a connection unit when commissioning th device. 32 -pin Male Cubic 95 mm x 44 mm x 68 mm Metal
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection Light beam exit	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel Front	No. of pins Type Mechanical data Design Dimension (W x H x L) Housing material Metal housing	Service interface Plug connector, It is essential to use a connection unit when commissioning th device. 32 -pin Male Cubic 95 mm x 44 mm x 68 mm Metal Diecast aluminum
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection Light beam exit	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel Front	No. of pins Type Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material	Service interface Plug connector, It is essential to use a connection unit when commissioning the device. 32 -pin Male Cubic 95 mm x 44 mm x 68 mm Metal Diecast aluminum Glass
Laser class Transmitted-signal shape Usable opening angle (reading field opening) Modulus size Reading method Beam deflection Light beam exit Electrical data Protective circuit	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel Front	No. of pins Type Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight	Service interface Plug connector, It is essential to use a connection unit when commissioning the device. 32 -pin Male Cubic 95 mm x 44 mm x 68 mm Metal Diecast aluminum Glass 270 g
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	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel Front Polarity reversal protection	No. of pins Type Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material	Service interface Plug connector, It is essential to use a connection unit when commissioning the device. 32 -pin Male Cubic 95 mm x 44 mm x 68 mm Metal Diecast aluminum Glass 270 g Red
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 _B Power consumption, max.	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel Front Polarity reversal protection	No. of pins Type Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	Service interface Plug connector, It is essential to use a connection unit when commissioning the device. 32 -pin Male Cubic 95 mm x 44 mm x 68 mm Metal Diecast aluminum Glass 270 g Red Silver
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 _B Power consumption, max. Inputs/outputs selectable	1, IEC/EN 60825-1:2014 Continuous 60 ° 0.35 0.8 mm Line scanner Via rotating polygon wheel Front Polarity reversal protection 18 30 V, DC 4.5 W	No. of pins Type Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight	Service interface Plug connector, It is essential to use a connection unit when commissioning the device. 32 -pin Male Cubic 95 mm x 44 mm x 68 mm Metal Diecast aluminum Glass 270 g Red Silver Dovetail grooves
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Technical data



Environmental data

Ambient temperature, operation	0 40 °C
Ambient temperature, storage	-20 70 °C
Relative humidity (non-condensing)	0 90 %

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

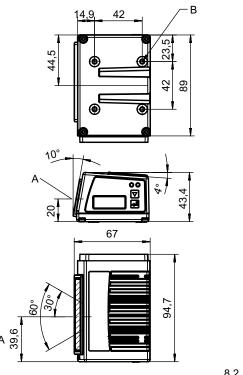
Classification

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

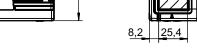
Dimensioned drawings



All dimensions in millimeters



- Optical axis
- M4 thread (5 mm deep)



Electrical connection

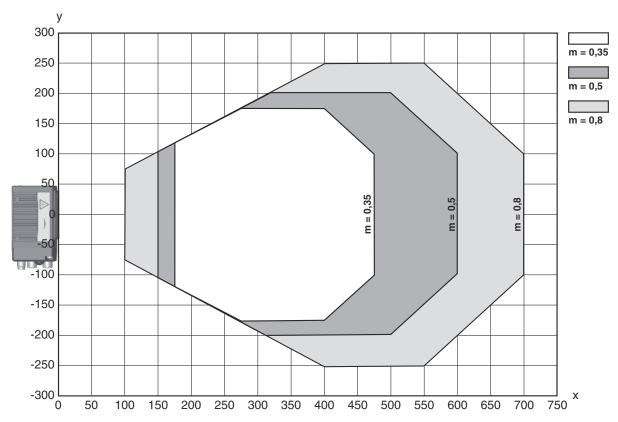
Connection 1

Function	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 unit

Part no.	Designation	Article	Description
50114369	MA 100	Modular connection unit	Supply voltage: 18 30 V Interface: RS 232, RS 485 Connections: 1 Piece(s) Degree of protection: IP 54

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

Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
7	50114571 *	KB 301-3000	Interconnection cable	Suitable for interface: RS 232, RS 422, RS 485 Connection 1: Socket connector Connection 2: JST ZHR connector, 10 -pin, 6 -pin Shielded: Yes Cable length: 3,000 mm Sheathing material: PVC
	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

^{*} Necessary accessories, please order separately

Connection technology - Connection boxes

Part no.	Designation	Article	Description
50116463 *	MK 300	Connection unit	Suitable for: BCL 300i, BPS 300i Interface: RS 232 Number of connections: 3 Piece(s) Connection: Terminal
50116468 *	MS 300	Connection unit	Suitable for: BCL 300i, BPS 300i Interface: RS 232 Number of connections: 3 Piece(s) Connection: Connector, M12

Accessories



Part no.	Designation	Article	Description
50150597 *	MS 342	Connector hood	Suitable for: BCL 348i Supply voltage: DC Interface: IO-Link Number of connections: 1 Piece(s) Connection: Connector, M12

^{*} 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

The Sensor People In der Braike 1, D-73277 Owen/Germany Phone: +49 7021 573-0 • Fax: +49 7021 573-199 eng • 2025-04-03

Accessories



Services

	Part no.	Designation	Article	Description
上談	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.
 	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.