

Technical data sheet Stationary bar code reader

Part no.: 50116348

BCL 304i SF 102 D



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Technical data



Basic data		PROFIBUS DP	
Series	BCL 300i	Function	Process
		Classification	V1
Functions		Transmission speed	0.0096 12 Mbit/s
Functions	Alignment mode	Service interface	
	AutoConfig	_	1100.00
	AutoControl	Туре	USB 2.0
	AutoReflAct	Hen	
	Code fragment technology	USB Function	Service
	LED indicator	Tunction	Gervice
	Reference code comparison	Connection	
Characteristic parameters		Number of connections	1 Piece(s)
MTTF	110 years	Connection 1	
	•	Function	BUS IN
Read data			BUS OUT
Code types, readable	2/5 Interleaved	_	Connection to device
Code types, readable	Codabar		Data interface
	Code 128		PWR / SW IN / OUT
			Service interface
	Code 39 Code 93	Type of connection	
		Type of connection	Plug connector, It is essential to use a connection unit when commissioning th
	EAN 8/13		device.
	GS1 Databar Expanded	No. of pins	32 -pin
	GS1 Databar Limited	Туре	Male
	GS1 Databar Omnidirectional UPC	Mechanical data	
Scanning rate, typical	1,000 scans/s	Mechanical data	
Bar codes per reading gate, max.	64 Piece(s)	Design	Cubic
number		Dimension (W x H x L)	95 mm x 44 mm x 68 mm
		Housing material	Metal
Optical data		Metal housing	Diecast aluminum
Reading distance	100 470 mm	Lens cover material	Glass
Light source	Laser, Red	Net weight	270 g
Wavelength	655 nm	Housing color	Red
Laser class	1, IEC/EN 60825-1:2014		Silver
Transmitted-signal shape	Continuous	Type of fastening	Dovetail grooves
Usable opening angle (reading field	60 °		Fastening on back
opening)			Via optional mounting device
Modulus size	0.3 0.5 mm	Operation and display	
Reading method	Line scanner	Operation and display	
Beam deflection	Via rotating polygon wheel	Type of display	LED
Light beam exit	Front		Monochromatic graphic display, 128 x 3 pixels
Electrical data		Number of LEDs	2 Piece(s)
Protective circuit	Polarity reversal protection	Type of configuration	Via web browser
Performance data		Environmental data	
Supply voltage U _B	18 30 V, DC	Ambient temperature, operation	0 40 °C
Power consumption, max.	4.5 W	Ambient temperature, storage	-20 70 °C
Inputs/outputs selectable		Relative humidity (non-condensing)	0 90 %
Output current, max.	60 mA		
Number of inputs/outputs selectable			
Input current, max.	8 mA		
	OTHA		
input current, max.			

Technical data



Certifications

Degree of protection	IP 65
Protection class	III
Certifications	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

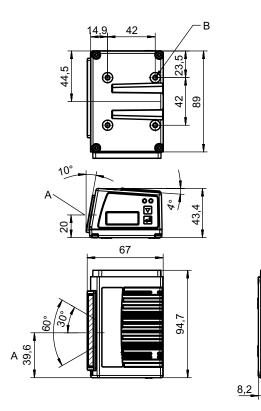
Classification

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

Dimensioned drawings

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All dimensions in millimeters



- Optical axis
- M4 thread (5 mm deep)



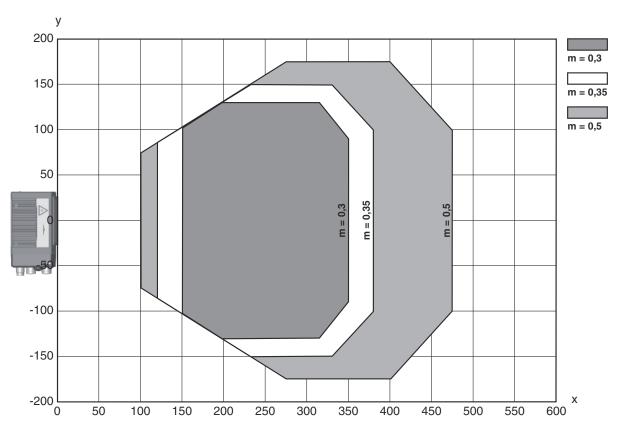
Connection 1

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 info@leuze.com • www.leuze.com changes

Accessories



Connection technology - Connection cables

	Part no.	Designation	Article	Description
Y	50135243	KD PB-M12-4A-P3- 050	Connection cable	Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Female, B-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5.000 mm Sheathing material: PUR
	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
V	50135248	KS PB-M12-4A-P3- 050	Connection cable	Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Male, B-coded, 5 -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
	50135254	KDS PB-M12-4A- M12-4A-P3-050	Interconnection cable	Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Female, B-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, B-coded, 4 -pin Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Connection technology - Terminating resistors

Part no.	Designation	Article	Description
50038539	TS 02-4-SA	Terminator plug	Suitable for: MultiNet Plus, PROFIBUS DP Function: Bus termination Connection 1: Connector, M12, Axial, Male, B-coded, 4 -pin

Accessories



Connection technology - Connection boxes

Part no.	Designation	Article	Description
50116465 *	MK 304	Connection unit	Suitable for: BCL 304i, BPS 304i Interface: PROFIBUS DP Number of connections: 4 Piece(s) Connection: Terminal
50116470 *	MS 304	Connection unit	Suitable for: BCL 304i, BPS 304i Interface: PROFIBUS DP Number of connections: 4 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

Accessories



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

Services

	Part no.	Designation	Article	Description
<u>В</u>	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.