# Leuze

# Technical data sheet Stationary bar code reader Part no.: 50141825 BCL 338i SL 102 F007



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## **Technical data**

#### **Basic data** Series BCL 300i **Special version 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 Codabar Code 128 Code 39 Code 93 EAN 8/13 GS1 Databar Expanded GS1 Databar Limited GS1 Databar Omnidirectional UPC 1,000 scans/s Scanning rate, typical Bar codes per reading gate, max. 64 Piece(s) number **Optical data** Reading distance 100 ... 700 mm Light source Laser, Red Wavelength 655 nm Laser class 1, IEC/EN 60825-1:2014 Transmitted-signal shape Continuous Usable opening angle (reading field 60 ° opening) Modulus size 0.35 ... 0.8 mm Reading method Line scanner Beam deflection Via rotating polygon wheel Light beam exit Front **Electrical data** Protective circuit Polarity reversal protection Performance data Supply voltage U<sub>B</sub> 18 ... 30 V, DC Power consumption, max. 4.5 W Inputs/outputs selectable 60 mA Output current, max. Number of inputs/outputs selectable 2 Piece(s) 8 mA Input current, max. Interface EtherCAT Туре

EtherCAT		
Function	Process	
Transmission protocol	EtherCAT, CoE and EoE	
Service interface		
Туре	USB 2.0	
USB		
Function	Configuration via software	
	Service	
Connection		
Number of connections	1 Piece(s)	
Compaction 1		
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	Cubic	
Design	95 mm x 44 mm x 68 mm	
Dimension (W x H x L) Housing material	Metal	
Metal housing		
Lens cover material	Diecast aluminum	
	Class	
	Glass	
Net weight	290 g	
	290 g Red	
Net weight Housing color	290 g Red Silver	
Net weight Housing color	290 g Red Silver Dovetail grooves	
Net weight Housing color	290 g Red Silver	
Net weight Housing color Type of fastening	290 g Red Silver Dovetail grooves Fastening on back	
Net weight	290 g Red Silver Dovetail grooves Fastening on back	
Net weight Housing color Type of fastening Operation and display	290 g Red Silver Dovetail grooves Fastening on back Via optional mounting device	
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Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Environmental data	290 g Red Silver Dovetail grooves Fastening on back Via optional mounting device LED 2 Piece(s) Via web browser	
Net weight Housing color Type of fastening Operation and display Operation and display Type of display Number of LEDs Type of configuration Environmental data Ambient temperature, operation	290 g Red Silver Dovetail grooves Fastening on back Via optional mounting device LED 2 Piece(s) Via web browser 0 40 °C	

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## **Technical data**

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#### 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

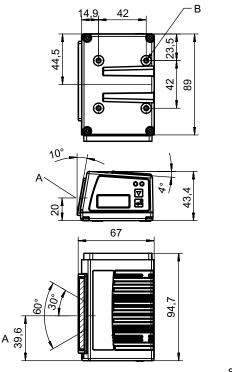
Classification	
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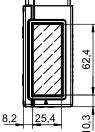
Customs tariff number	84719000
ECLASS 5.1.4	27280102
ECLASS 8.0	27280102
ECLASS 9.0	27280102
ECLASS 10.0	27280102
ECLASS 11.0	27280102
ECLASS 12.0	27280102
ECLASS 13.0	27280102
ECLASS 14.0	27280102
ECLASS 15.0	27280102
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
ETIM 9.0	EC002550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

## **Dimensioned drawings**

All dimensions in millimeters







# **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

Optical axis

M4 thread (5 mm deep)

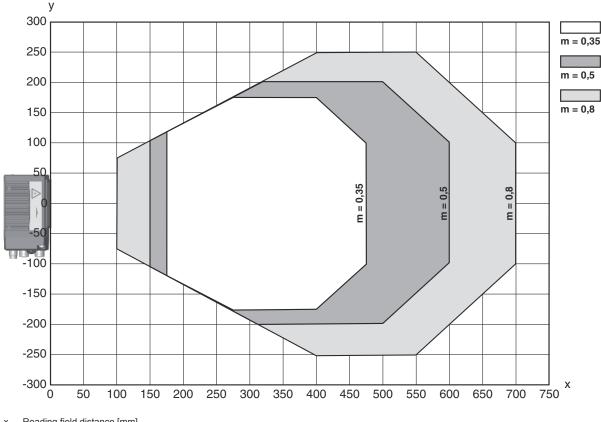
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### **Diagrams**

#### Reading field curve



Reading field distance [mm] х

Reading field width [mm] y

#### **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

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### 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	

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#### Notes

Observe intended use!
$\ensuremath{\mathfrak{B}}$ This product is not a safety sensor and is not intended as personnel protection.
$\boldsymbol{\$}$ The product may only be put into operation by competent persons.
v Only use the product in accordance with its intended use.

ATTENTION! LASER RADIATION - CLASS 1 LASER PRODUCT
<ul> <li>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.</li> <li>Observe the applicable statutory and local laser protection regulations.</li> <li>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.</li> </ul>

#### Accessories

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# Connection technology - Connection cables

	Part no.	Designation	Article	Description
W D	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
Ŵ	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	50134929 *	ME 338 103	Connection unit	Suitable for: BCL 338i, BPS 338i Interface: EtherCAT Number of connections: 4 Piece(s) Connection: Cable with connector, M12, 900 mm
C.	50134927 *	ME 338 104	Connection unit	Suitable for: BCL 338i Interface: EtherCAT Number of connections: 5 Piece(s) Connection: Cable with connector, M12, 900 mm
60	50134928 *	ME 338 214	Connection unit	Suitable for: BCL 338i Interface: EtherCAT Number of connections: 5 Piece(s) Connection: Cable with connector, M12, 600 mm

### Accessories

 Part no.	Designation	Article	Description
50134931 *	MK 338	Connection unit	Suitable for: BCL 338i, BPS 338i Interface: EtherCAT Number of connections: 4 Piece(s) Connection: Terminal
50134930 *	MS 338	Connection unit	Suitable for: BCL 338i, BPS 338i Interface: EtherCAT 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
<b>S</b>	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

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#### Accessories

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# 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
₽ ©	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.

