# Leuze

### **Technical data sheet** Stationary bar code reader Part no.: 50141843 BCL 338i S L 100 F007



The Sensor People In der Braike 1, 73277 Owen

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We reserve the right to make technical changes eng • 2021-01-28

### **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** 70 ... 670 mm Reading distance Laser, Red Light source Laser light wavelength 655 nm Laser class 2, IEC/EN 60825-1:2007 Transmitted-signal shape Continuous Usable opening angle (reading field 60 ° opening) Modulus size 0.35 ... 0.8 mm Reading method Line scanner with deflecting mirror By means of rotating polygon mirror Beam deflection wheel + deflecting mirror Light beam exit Lateral with deflecting mirror **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 Output current, max. 60 mA Number of inputs/outputs selectable 2 Piece(s) Input current, max. 8 mA Interface EtherCAT Туре

Function         Process           Transmission protocol         EtherCAT, CoE and EGE           Service interface         Service           Type         USB           Function         Configuration via software Service           Connection         Service           Connection 1         BUS IN BUS OUT           Function         BUS IN BUS OUT           Connection 1         Connection to Service interface           Type of connection         Plug connector           No. of pins         32-pin           Type         Male           Mechanical data         Design           Design         Cubic           Dimension (W x H x L)         103 mm x 44 mm x 96 mm           Housing material         Metal           Metal housing         Diack           Red         Via optional mounting device           Dype of display         LED           Number of LEDS         2 Piece(s)	EtherCAT	
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Test procedure for vibration in IEC 60068-2-6, test Fc	Test procedure for continuous shock	IEC 60068-2-29, test Eb
	Test procedure for vibration in	IEC 60068-2-6, test Fc
	accordance with standard	

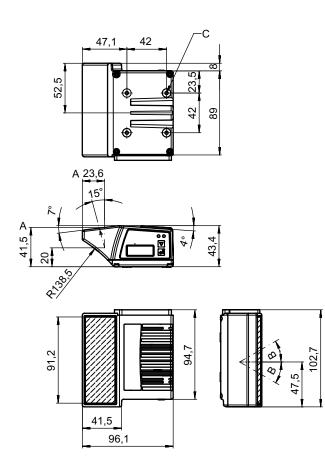
Leuze electronic GmbH + Co. KG The Sensor People In der Braike 1, 73277 Owen

### **Technical data**

Customs tariff number	84719000
eCl@ss 5.1.4	27280102
eCl@ss 8.0	27280102
eCl@ss 9.0	27280102
eCl@ss 10.0	27280102
eCl@ss 11.0	27280102
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550

### **Dimensioned drawings**

All dimensions in millimeters



- A Optical axis
- B Deflection angle of the laser beam: ± 30°
- C M4 thread (5 deep)

### **Electrical connection**

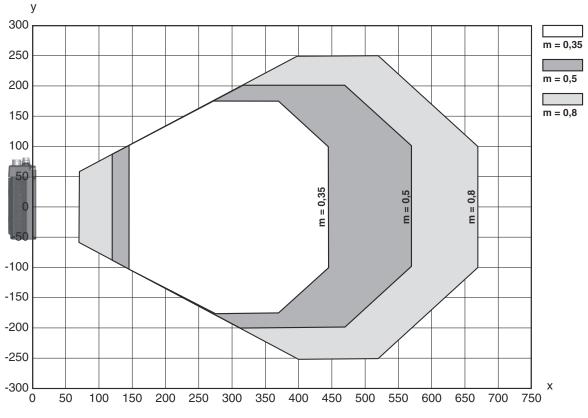
# Leuze

#### **Connection 1**

Function	BUS IN
	BUS OUT
	Connection to device
	Data interface
	PWR / SW IN / OUT
	Service interface
Type of connection	Plug connector
No. of pins	32 -pin
Туре	Male

### Diagrams

#### Reading field curve



x Reading field distance [mm]

y Reading field width [mm]

### **Operation and display**

LED		Display	Meaning
1 P	WR	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

### **Operation and display**

# LED Display Meaning 2 BUS Green, flashing Initialization Green, continuous light Bus operation ok Bus operation ok Red, flashing Communication error 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 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
BB	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
Nc	ite
*	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.
the product may only be put into operation by competent persons.
∜ Only use the product in accordance with its intended use.

### Notes

# Leuze

#### WARNING! LASER RADIATION – CLASS 2 LASER PRODUCT

#### Do not stare into beam!

- The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of laser class 2 as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to "Laser Notice No. 50" from June 24, 2007.
- Never look directly into the laser beam or in the direction of reflected laser beams! If you look into the beam path over a longer time period, there is a risk of injury to the retina.
- ✤ Do not point the laser beam of the device at persons!
- the laser beam using a non-transparent, non-reflective object if the laser beam is accidentally directed towards a person.
- b When mounting and aligning the device, avoid reflections of the laser beam off reflective surfaces!
- & CAUTION! Use of controls or adjustments or performance of procedures other than specified herein may result in hazardous light exposure.
- by 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.

#### NOTE Affix la Laser

#### Affix laser information and warning signs!

- Laser information and warning signs are affixed to the device. In addition, self-adhesive laser information and warning signs (stick-on labels) are supplied in several languages.
- ✤ Affix the laser information sheet to the device in the language appropriate for the place of use. When using the device in the US, use the stick-on label with the "Complies with 21 CFR 1040.10" note.
- Affix the laser information and warning signs near the device if no signs are attached to the device (e.g. because the device is too small) or if the attached laser information and warning signs are concealed due to the installation position.
- ♦ Affix the laser information and warning signs so that they are legible without exposing the reader to the laser radiation of the device or other optical radiation.

### 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 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 Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

### Accessories

### 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: 1,000 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

### 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

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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
D-	S981020	CS30-E-212	Hourly rate for "Configuration"	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. Restrictions: Travel and accommodation charged separately and according to expenditure.
	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. Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.
	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. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.
	S981021	CS30-V-212	Hourly rate for "Bar code qualification"	Details: REA evaluation with creation of a test report, evaluation of the code quality. Conditions: Original bar codes to be provided by the client.



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