SMART SENSOR BUSINESS

Leuze electronic
the *sensor* people

Part no.: 50132830
BCL 608i SM 102 H
Stationary bar code reader

CE · CDRH · UL LISTED c us · Ethernet

Figure can vary

Contents

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Part no.: 50132830 – BCL 608i SM 102 H – Stationary bar code reader

Technical data

Basic data	
Series	BCL 600i

Functions	
Functions	Alignment mode
	AutoConfig
	AutoControl
	AutoReflAct
	Code fragment technology
	Heating
	LED indicator
	Reference code comparison

Characteristic parameters	
MTTF	42.4 years

Read data	
Code types, readable	2/5 Interleaved
	Codabar
	Code 128
	Code 39
	Code 93
	EAN 128
	EAN 8/13
	EAN Addendum
	GS1 Databar Expanded
	GS1 Databar Limited
	GS1 Databar Omnidirectional
	UPC
Scanning rate, typical	1,000 scans/s
Bar codes per reading gate, max. number	64 Piece(s)

Optical data	
Reading distance	400 ... 900 mm
Light source	Laser , Blue
Laser light wavelength	405 nm
Laser class	2 , IEC/EN 60825-1:2007
Transmitted-signal shape	Continuous
Usable opening angle (reading field opening)	60 °
Bar code contrast (PCS)	60 %
Modulus size	0.25 ... 0.35 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_B	10 ... 30 V , DC
Power consumption, max.	14 W

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Inputs/outputs selectable	
Output current, max.	60 mA
Number of inputs/outputs selectable	4 Piece(s)
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U_B / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	Typ. U_B / 0 V
Input current, max.	8 mA

Interface	
Type	Ethernet
Ethernet	
Architecture	Client Server
Address assignment	DHCP Manual address assignment
Transmission speed	10 Mbit/s 100 Mbit/s
Function	Process
Switch functionality	Integrated
Transmission protocol	TCP/IP

Service interface	
Type	USB
USB	
Function	Configuration via software Service

Connection	
Number of connections	5 Piece(s)
Connection 1	
Type of connection	USB
Designation on device	SERVICE
Function	Service interface
Connector type	USB 2.0 Standard-A
Connection 2	
Type of connection	Connector
Designation on device	SW IN/OUT
Function	Signal IN Signal OUT
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

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Connection 3	
Type of connection	Connector
Designation on device	PWR
Function	PWR / SW IN/OUT
Thread size	M12
Type	Male
Material	Metal
No. of pins	5 -pin
Encoding	A-coded
Connection 4	
Type of connection	Connector
Designation on device	HOST / BUS IN
Function	BUS IN
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded
Connection 5	
Type of connection	Connector
Designation on device	BUS OUT
Function	BUS OUT
Thread size	M12
Type	Female
No. of pins	4 -pin

Mechanical data	
Design	Cubic
Dimension (W x H x L)	123.5 mm x 63 mm x 104.2 mm
Housing material	Metal , Diecast aluminum
Lens cover material	Glass
Net weight	1,400 g
Housing color	Red, RAL 3000 Silver
Type of fastening	Dovetail grooves Mounting thread Via optional mounting device

Operation and display	
Type of display	LED Monochromatic graphical display, 128x64 pixel, with background lighting
Number of LEDs	2 Piece(s)
Type of configuration	Via web browser
Operational controls	Button(s) Via service interface

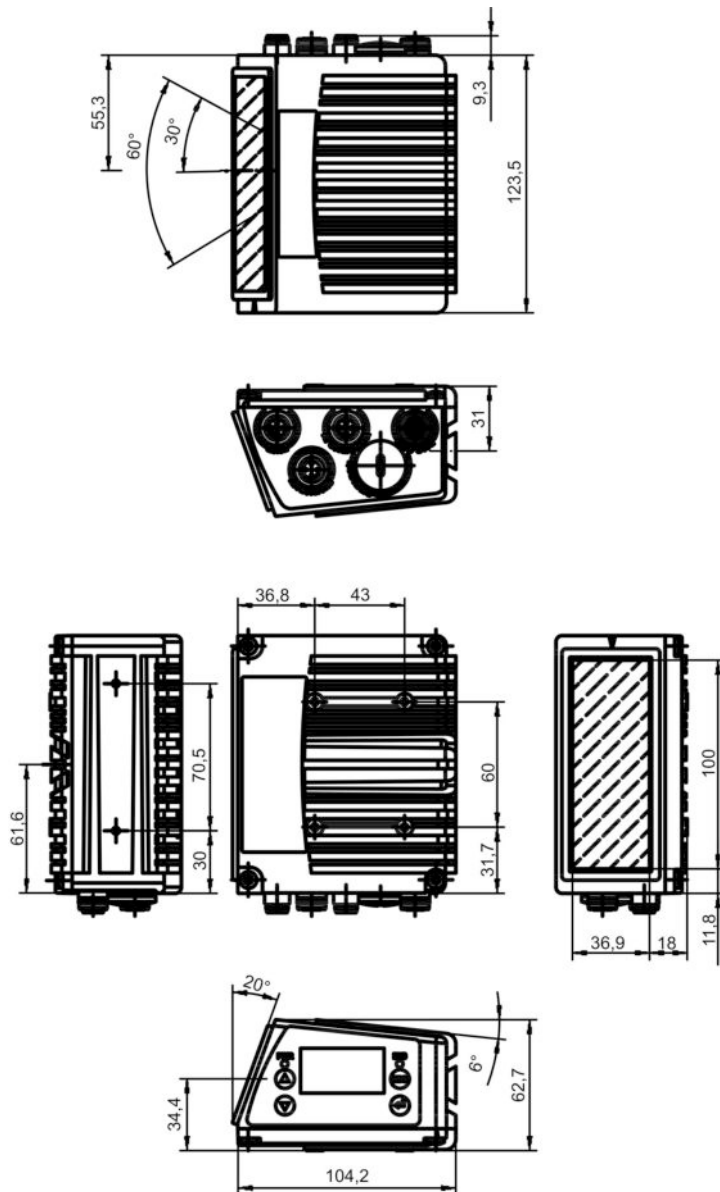| *Environmental data*	
Ambient temperature, operation	-35 ... 40 °C
Ambient temperature, storage	-20 ... 70 °C
Relative humidity (non-condensing)	90 %
Extraneous light tolerance on the bar code, max.	2,000 lx

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Certifications	
Degree of protection	IP 65
Protection class	III
Certifications	c UL US
Test procedure for EMC in accordance with standard	EN 55022 EN 61000-4-2, -3, -4, -6 EN 61000-6-2
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
US patents	US 6,854,649 B

Classification	
Customs tariff number	84719000
eCl@ss 8.0	27280102
eCl@ss 9.0	27280102
ETIM 5.0	EC002550
ETIM 6.0	EC002550

Dimensioned drawings

All dimensions in millimeters

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Electrical connection

Connection 1	SERVICE
Type of connection	USB
Function	Service interface
Connector type	USB 2.0 Standard-A

Pin	Pin assignment
1	+5 V DC
2	DATA-
3	DATA+
4	GND

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Connection 2	SW IN/OUT
Type of connection	Connector
Function	Signal IN Signal OUT
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	VOUT
2	SWIO 1
3	GND
4	SWIO 2
5	FE
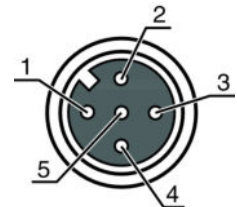
Connection 3	PWR
Type of connection	Connector
Function	PWR / SW IN/OUT
Thread size	M12
Type	Male
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	VIN
2	SWIO 3
3	GND
4	SWIO 4
5	FE
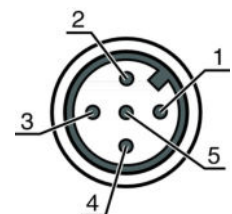
Connection 4	HOST / BUS IN
Type of connection	Connector
Function	BUS IN
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Pin	Pin assignment
1	TD+
2	RD+
3	TD-
4	RD-

Part no.: 50132830 – BCL 608i SM 102 H – Stationary bar code reader
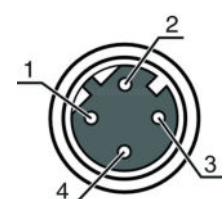
Connection 5	BUS OUT
Type of connection	Connector
Function	BUS OUT
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Pin	Pin assignment
1	TD+
2	RD+
3	TD-
4	RD-
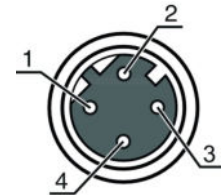
Diagrams

Reading field curve - Medium Density
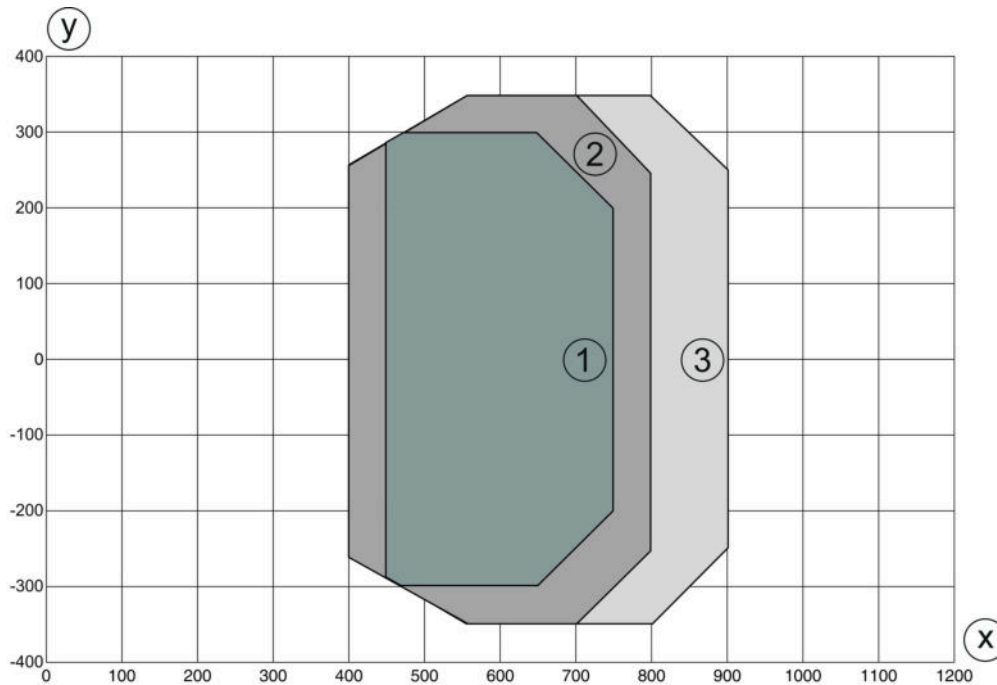
y   Reading field width [mm]
x   Reading field distance [mm]
1   Module = 0.25 mm: 450 mm - 750 mm (300 mm depth of field)
2   Module = 0.3 mm: 400 mm - 800 mm (400 mm depth of field)
3   Module = 0.35 mm: 400 mm - 900 mm (500 mm depth of field)

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Operation and display

LEDs

LED		Display	Meaning
1	PWR	Off	No supply voltage
		Green, flashing	Initialization
		Green, continuous light	Device OK
		Orange, flashing	Service operation
		Orange, continuous light	Reset
		Red, flashing	Device OK, warning set
		Red, continuous light	Device error
2	NET	Off	No supply voltage
		Green, flashing	BUS initialization
		Green, continuous light	Bus operation ok
		Orange, flashing	Service mode
		Orange, continuous light	Reset
		Red, flashing	Communication error
		Red, continuous light	Network error

Part number code

Part designation: **BCL XXXX YYZ AAA B**

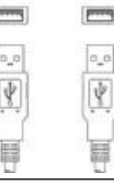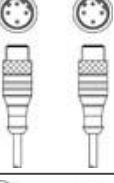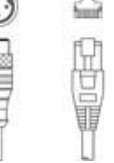| BCL	**Operating principle:** BCL: bar code reader
XXXX	**Series/interface (integrated fieldbus technology):** 600i: RS 232/RS 422/ RS 485 (multiNet master) 601i: RS 485 (multiNet slave) 604i: PROFIBUS DP 608i: Ethernet 648i: PROFINET
YY	**Scanning principle:** S: line scanner (single line) O: oscillating-mirror scanner (oscillating mirror)
Z	**Optics:** N: High Density (close) M: Medium Density (medium distance) F: Low Density (remote) L: Long Range (very large distances)
AAA	**Beam exit:** 100: lateral 102: front
BB	**Special equipment:** H: with heating

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

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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

Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50107726	KB USB A - USB A	Interconnection cable	Suitable for interface: USB Connection 1: USB Connection 2: USB Shielded: Yes Cable length: 1,800 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 - Other

	Part no.	Designation	Article	Description
	50111224	BT 59	Mounting bracket	Fastening, at system: Groove mounting Mounting bracket, at device: Clampable Material: Metal

Services

	Part no.	Designation	Article	Description
	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.

	Part no.	Designation	Article	Description
	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.

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