

Technical data sheet Stationary bar code reader

Part no.: 50120786

BCL 358i SM 100 D H



Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Part number code
- Notes
- Accessories













Technical data



Basic data		Interface	
Series	BCL 300i	Туре	EtherNet IP
Special version		EtherNet IP	
Special version	Heating	Function	Process
Special version	Heating	Address assignment	DHCP
Functions			Manual address assignment
		Switch functionality	Integrated
Functions	Alignment mode	Transmission speed	10 Mbit/s
	AutoConfig	·	100 Mbit/s
	AutoControl		
	AutoReflAct	Service interface	
	Code fragment technology	Time	USB 2.0
	Heating	Туре	USB 2.0
	LED indicator	USB	
	Reference code comparison	Function	Configuration via software
		Tunotion	Comigaration via software
Characteristic parameters		Connection	
MTTF	110 years	Number of connections	1 Piece(s)
Read data			
	0/51 / 1	Connection 1	DUCIN
Code types, readable	2/5 Interleaved	Function	BUS IN
	Codabar		Connection to device
	Code 128		Data interface
	Code 39		PWR / SW IN / OUT
	Code 93		Service interface
	EAN 8/13	Type of connection	Plug connector, It is essential to use a
	GS1 Databar Expanded		connection unit when commissioning the device.
	GS1 Databar Limited	No. of pins	32 -pin
	GS1 Databar Omnidirectional	Туре	Male
	UPC	1,700	Water
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)	103 mm x 44 mm x 96 mm
Optical data		,	
Optical data		Housing material	Metal
Reading distance	30 290 mm	Metal housing	Diecast aluminum
Light source	Laser, Red	Lens cover material	Glass
Wavelength	655 nm	Net weight	350 g
Laser class	1, IEC/EN 60825-1:2014	Housing color	Red
Transmitted-signal shape	Continuous		Silver
Usable opening angle (reading field	60 °	Type of fastening	Dovetail grooves
opening)			Fastening on back
Modulus size	0.2 0.5 mm		Via optional mounting device
Reading method	Line scanner with deflecting mirror	0	
Beam deflection	By means of rotating polygon mirror wheel + deflecting mirror	Operation and display	LED
Light beam exit	Lateral with deflecting mirror	Type of display	LED Monochromatic graphic display, 128 x 32
			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	-35 40 °C
Power consumption, max.	27 W	Ambient temperature, storage	-20 70 °C
		Relative humidity (non-condensing)	0 90 %
		relative numbers (non-condensing)	U 3U /0
Inputs/outputs selectable			
Inputs/outputs selectable Output current, max.	60 mA		

Technical data



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

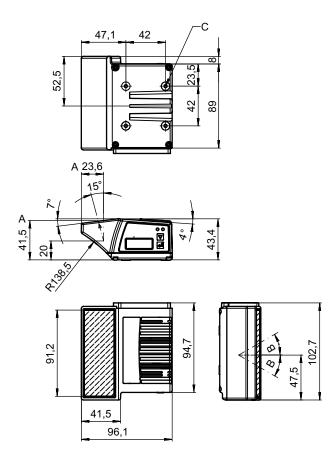
Classification

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

Leuze

All dimensions in millimeters



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

Electrical connection

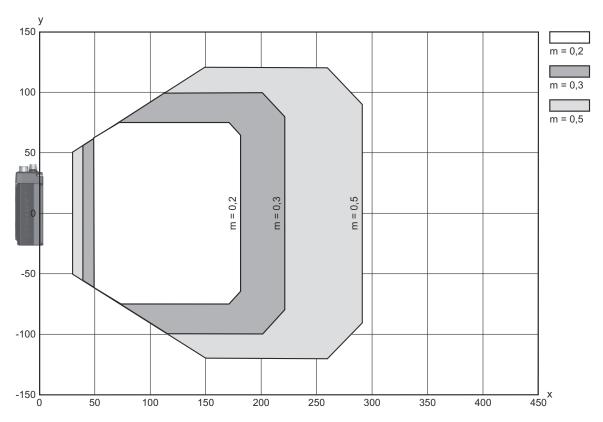
Connection 1

Function	BUS IN
	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 NET	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.

info@leuze.com • www.leuze.com

- 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.

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 Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC
¥	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
	50120796 *	MK 358	Connection unit	Suitable for: BCL 358i Interface: EtherNet IP Number of connections: 4 Piece(s) Connection: Terminal
o c	50120797 *	MS 358	Connection unit	Suitable for: BCL 358i Interface: EtherNet IP Number of connections: 4 Piece(s) Connection: Connector, M12

^{*} Necessary accessories, please order separately

Accessories



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

Services

	Part no.	Designation	Article	Description
الية الم	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.

Accessories



	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.
	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.