



Figure can vary

Part no.: 50141236
DCR 202i FIX-F2-102-R3-F001
Stationary 2D-code reader



RS232

RS422

Ethernet



Contents

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Technical data

Basic data	
Series	DCR 200i
Chip	CMOS
Functions	
Software functions	Reading of 1D codes Reading of 2D codes
Read data	
Code types, readable	2/5 Interleaved Aztec Codabar Code 128 Code 32 Code 39 Code 93 Data Matrix Code EAN 128 EAN 8/13 GS1 Databar GS1 Databar Omnidirectional GS1 Databar QR code GS1 Databar Stacked PDF417 Pharma Code QR code UPC
Optical data	
Reading distance	70 ... 360 mm
Light source	LED , Red
Transmitted-signal shape	Pulsed
Camera resolution, horizontal	1,280 px
Camera resolution, vertical	960 px
Modulus size	0.19 ... 0.5 mm
Electronic shutter speed	0.068 ... 5 ms
Camera type	Monochrome
Electrical data	
Protective circuit	Polarity reversal protection Short circuit protected
Performance data	
Supply voltage U_B	18 ... 30 V , DC
Average power consumption	8 W
Inputs	
Number of digital switching inputs	2 Piece(s)
Switching inputs	
Voltage type	DC
Switching voltage	< 10V high, > 17V low at $V_{IN} = 24V$
Switching principle	NPN

Outputs	
Number of digital switching outputs	2 Piece(s)
Switching outputs	
Voltage type	DC
Switching current, max.	100 mA
Switching output 1	
Switching element	Transistor , NPN
Switching principle	GND switching
Switching output 2	
Switching element	Transistor , NPN
Switching principle	GND switching

Interface	
Type	RS 232 , RS 422 , Ethernet
RS 232	
Function	Process
Transmission speed	4,800 ... 115,200 Bd
Data format	Adjustable
Start bit	1
Data bit	8 data bits
Stop bit	1 stop bit
Parity	None
Transmission protocol	<STX><data><CR><LF>
Data encoding	ASCII Binary
RS 422	
Function	Process
Transmission speed	4,800 ... 115,200 Bd
Data format	Adjustable
Start bit	1
Data bit	7, 8 data bits
Stop bit	1, 2 stop bits
Parity	Adjustable
Data encoding	ASCII Binary
Ethernet	
Architecture	Client Server
Address assignment	DHCP Manual address assignment
Transmission speed	10 Mbit/s 100 Mbit/s
Function	Process
Switch functionality	None
Transmission protocol	TCP/IP , UDP

Service interface	
Type	Ethernet
Ethernet	
Function	Service

Connection

Number of connections 2 Piece(s)

Connection 1

Function Data interface
Signal IN
Signal OUT
Voltage supply

Type of connection Connector

Thread size M12

Type Male

Material Stainless steel

No. of pins 12 -pin

Encoding A-coded

Connection 2

Function Configuration interface
Data interface

Type of connection Connector

Thread size M12

Type Female

Material Stainless steel

No. of pins 4 -pin

Encoding D-coded

Mechanical data

Design Cubic

Dimension (W x H x L) 46 mm x 61 mm x 46 mm

Housing material Metal
Plastic , Diecast aluminum , PC

Lens cover material Plastic

Net weight 392 g

Housing color Silver

Type of fastening Mounting thread
Via optional mounting device

Operation and display

Type of display LED

Number of LEDs 3 Piece(s)

Type of configuration Configuration codes
Teach-in
Via web browser

Environmental data

Ambient temperature, operation 0 ... 50 °C

Ambient temperature, storage -20 ... 70 °C

Relative humidity (non-condensing) 90 %

Certifications

Degree of protection IP 67 when in the plugged-in and screwed-down state (EN 60529)
IP 69K

Protection class III

Certifications c UL US

Test procedure for EMC in accordance with standard EN 61000-6-2
EN 61000-6-4

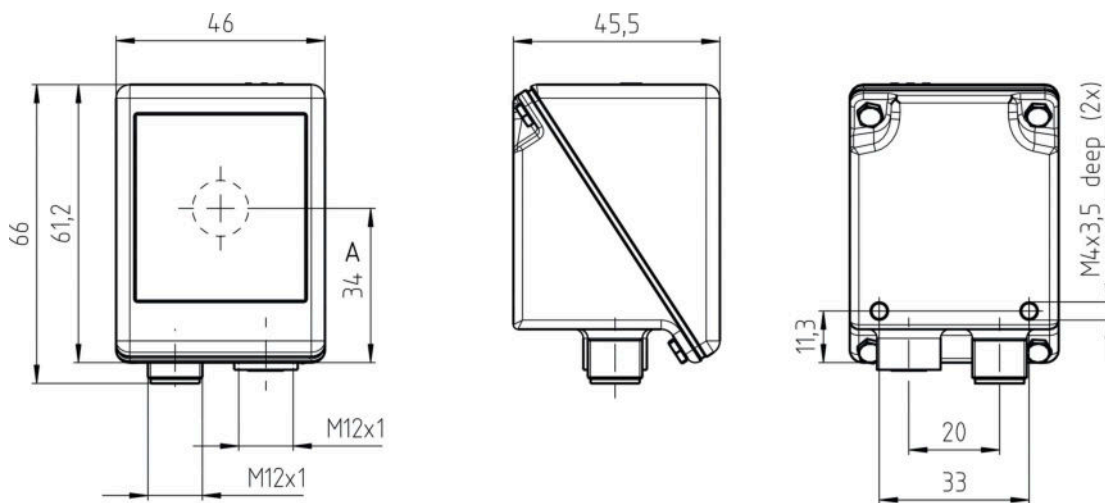
Test procedure for continuous shock in accordance with standard	IEC 60068-2-29, test Eb
Test procedure for vibration in accordance with standard	IEC 60068-2-6, test Fc

Classification

Customs tariff number	84719000
eCl@ss 8.0	27280103
eCl@ss 9.0	27280103
ETIM 5.0	EC002999
ETIM 6.0	EC002999

Dimensioned drawings

All dimensions in millimeters

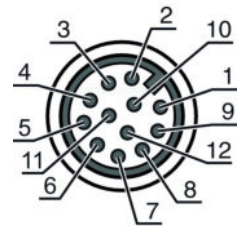


Electrical connection

Connection 1	PWR / SWIO
Function	Data interface Signal IN Signal OUT Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Stainless steel
No. of pins	12 -pin
Encoding	A-coded

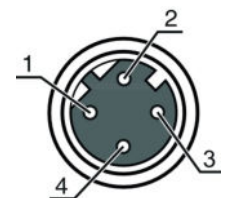
Part no.: 50141236 – DCR 202i FIX-F2-102-R3-F001 – Stationary 2D-code

Pin	Pin assignment
1	VIN
2	GNDIN
3	SWIN 1
4	SWOUT 2
5	FE
6	GND RS 232 / GND RS 422
7	Rx-
8	Tx-
9	RxD/Rx+
10	TxD/Tx+
11	SWIN 3
12	SWOUT 4



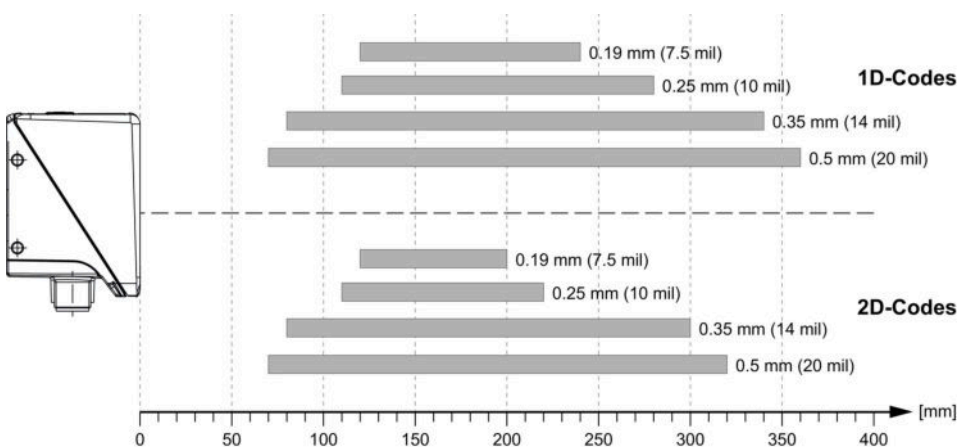
Connection 2	HOST
Function	Configuration interface Data interface
Type of connection	Connector
Thread size	M12
Type	Female
Material	Stainless steel
No. of pins	4 -pin
Encoding	D-coded

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

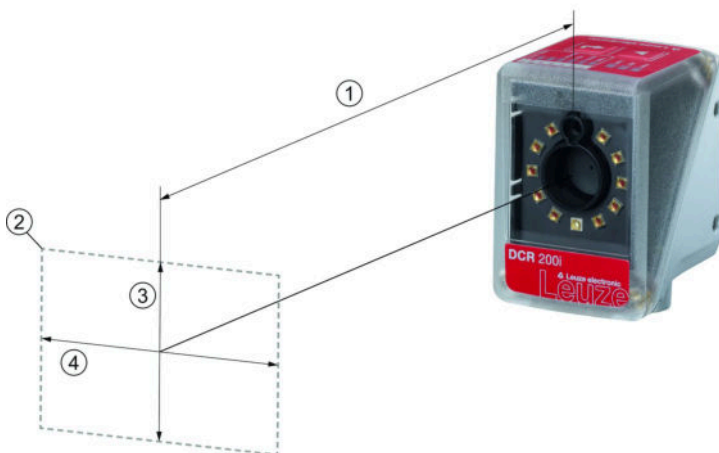


Diagrams

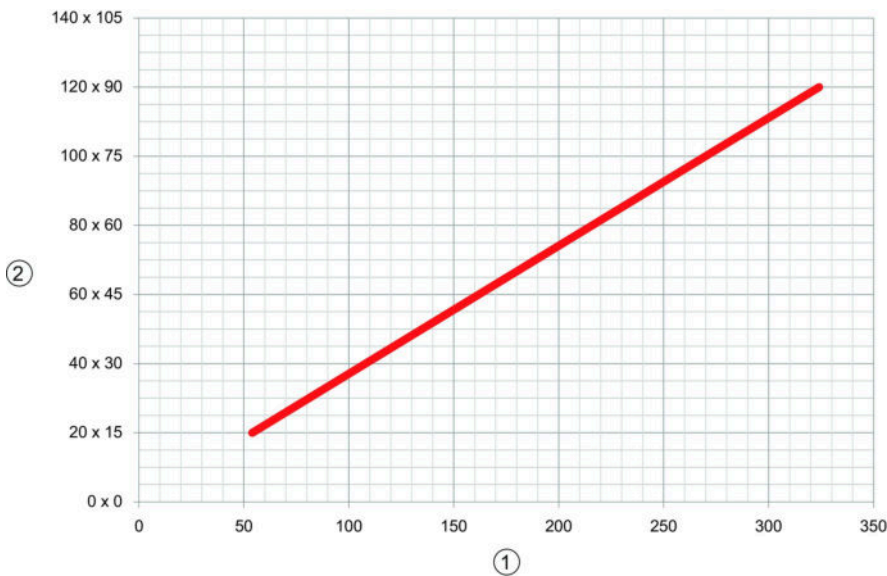
Reading distances



Relationship between camera distance and reading field size



- 1 Camera distance
- 2 Reading field
- 3 Reading field height [mm]
- 4 Reading field width [mm]



- 1 Camera distance [mm]
- 2 Reading field: width x height [mm]

Operation and display

LEDs

LED		Display	Meaning
1	PWR	Off	No supply voltage
		Green, flashing	Initialization
		Green, continuous light	Operational readiness

LED	Display	Meaning	
	Orange, continuous light	Service operation	
	Red, flashing	Device OK, warning set	
	Red, continuous light	Device error	
2	NET	Off	No supply voltage
		Green, flashing	Initialization
		Green, continuous light	Operational readiness
		Red, flashing	Communication error
		Red, continuous light	Network error
3	LINK	Green, continuous light	Ethernet connection is established
		Yellow, flashing	Data exchange active

Part number code

Part designation: **DCR XXX YYY-Z-AAA-BC-D-EEEE**

DCR	Operating principle: DCR: Dual Code Reader
XXXX	Series/interface (integrated fieldbus technology): 202i: Ethernet TCP/IP, UDP, RS 232/RS 422 248i: PROFINET-IO, Ethernet TCP/IP, UDP, RS 232/RS 422
YYY	Equipment: FIX: Fixed focal length
Z	Optics: U: Ultra high density (very close) N: High Density (close) M: Medium Density (medium distance) F: Low Density (remote) L: Ultra low density (very large distance)
AAA	Beam exit: 102: front
B	Illumination: R: Red light I: infrared light
C	Resolution range: 3: 1280 x 960 pixels
D	Protective screen: n/a: plastic G: Glass P: Polarization filter
EEEE	Special equipment: V: Stainless steel housing F001: NPN inputs/outputs H: with heating

Note

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



Notes

Observe intended use!

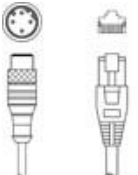
- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

Accessories


Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130281	KD S-M12-CA-P1-020	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Open end Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR
	50135073	KS ET-M12-4A-P7-020	Connection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR


Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50135080	KSS ET-M12-4A-RJ45-A-P7-020	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50132151	BT 320M	Mounting bracket	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50132150	BTU 320M-D12	Mounting system	Design of mounting device: Mounting system Fastening, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal

Note

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