



Figure can vary

Part no.: 50142059
DCR 248i FIX-L1-102-R3-H
Stationary 2D-code reader



RS232

RS422

Ethernet



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Technical data

Basic data	
Series	DCR 200i
Chip	CMOS
Special design	
Special design	Heating
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	50 ... 800 mm
Light source	LED , Red
Transmitted-signal shape	Pulsed
Camera resolution, horizontal	1,280 px
Camera resolution, vertical	960 px
Modulus size	0.35 ... 1 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	12 W
Inputs	
Number of digital switching inputs	1 Piece(s)
Switching inputs	
Voltage type	DC

Outputs

Number of digital switching outputs 1 Piece(s)

Switching outputs

Voltage type DC

Switching current, max. 100 mA

Switching output 1

Switching element MOSFET semiconductor ,

Switching principle +24 V switching

Inputs/outputs selectable

Number of inputs/outputs selectable 2 Piece(s)

Voltage type, outputs DC

Voltage type, inputs DC

Interface

Type RS 232 , RS 422 , Ethernet , PROFINET

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

Transmission protocol Adjustable

Data encoding ASCII
Binary

Ethernet

Architecture Client
Server

Address assignment DHCP
Manual address assignment

Transmission speed 10 / 100 Mbit/s

Function Process

Switch functionality None

Transmission protocol TCP/IP , UDP

Profinet

Function Process

Conformance class B

Protocol PROFINET RT

Transmission speed 100 Mbit/s

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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 Metal

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 Metal

No. of pins 4 -pin

Encoding D-coded

Mechanical data

Design Cubic

Dimension (W x H x L) 43 mm x 61 mm x 44 mm

Housing material Metal
Plastic, Diecast aluminum, PC

Lens cover material Plastic

Net weight 120 g

Housing color Silver

Type of fastening Mounting thread
Via optional mounting device

Operation and display

Type of display LED

Number of LEDs 10 Piece(s)

Type of configuration Configuration codes
Teach-in
Via web browser

Operational controls Button(s)

Function of the operational control Adjustment mode
Auto-setup
Trigger

Environmental data

Ambient temperature, operation -30 ... 45 °C

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

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Relative humidity (non-condensing)	90 %
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Certifications

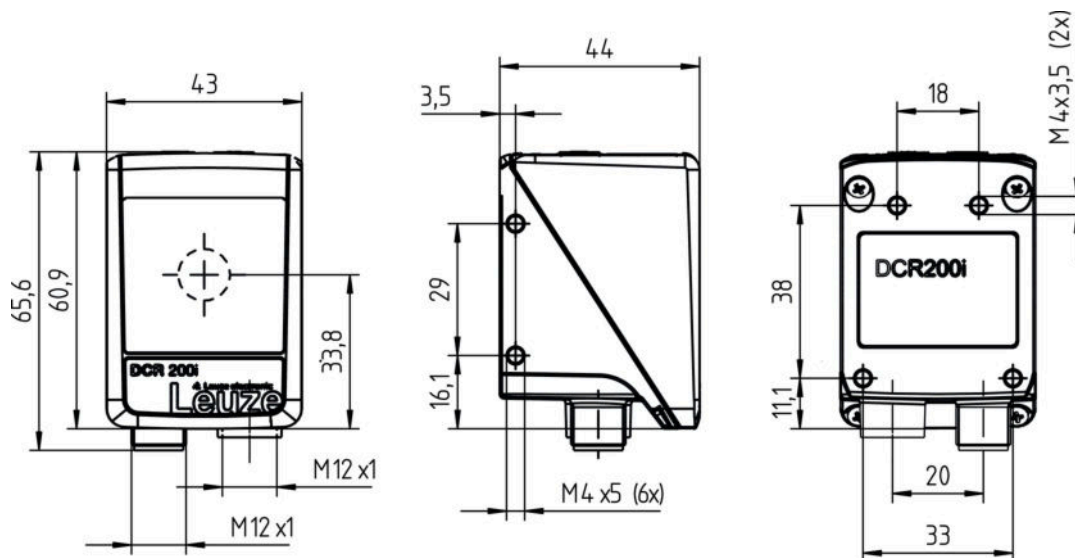
Degree of protection	IP 65
Protection class	III
Certifications	c UL US
Test procedure for EMC in accordance with standard	EN 61000-6-2 EN 61000-6-4
Test procedure for continuous shock in accordance with standard	IEC 60068-2-29, test Eb
Test procedure for vibration in accordance with standard	IEC 60068-2-6, 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



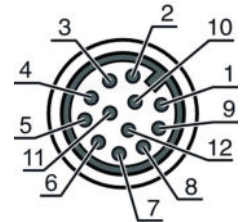
Electrical connection

Connection 1	PWR / SWIO
Function	Data interface Signal IN Signal OUT Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male

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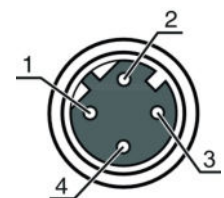
Connection 1	PWR / SWIO
Material	Metal
No. of pins	12 -pin
Encoding	A-coded

Pin	Pin assignment
1	V+
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	SWIO 3
12	SWIO 4



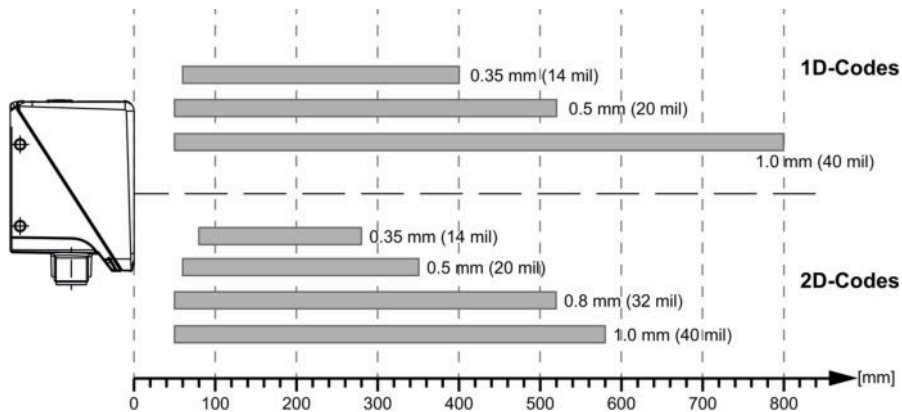
Connection 2	HOST
Function	Configuration interface Data interface
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

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

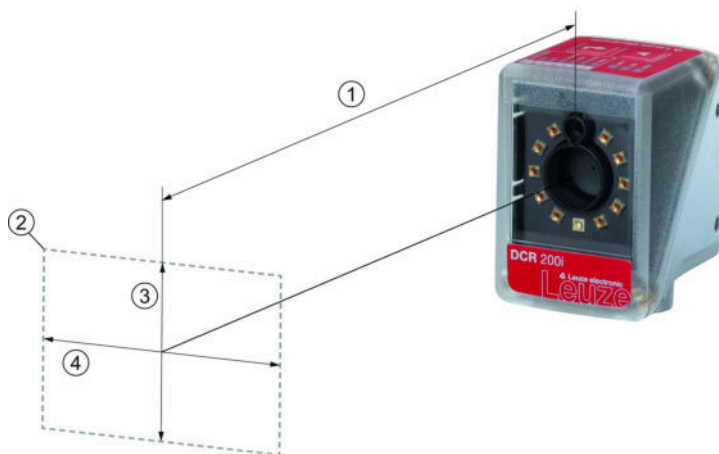


Diagrams

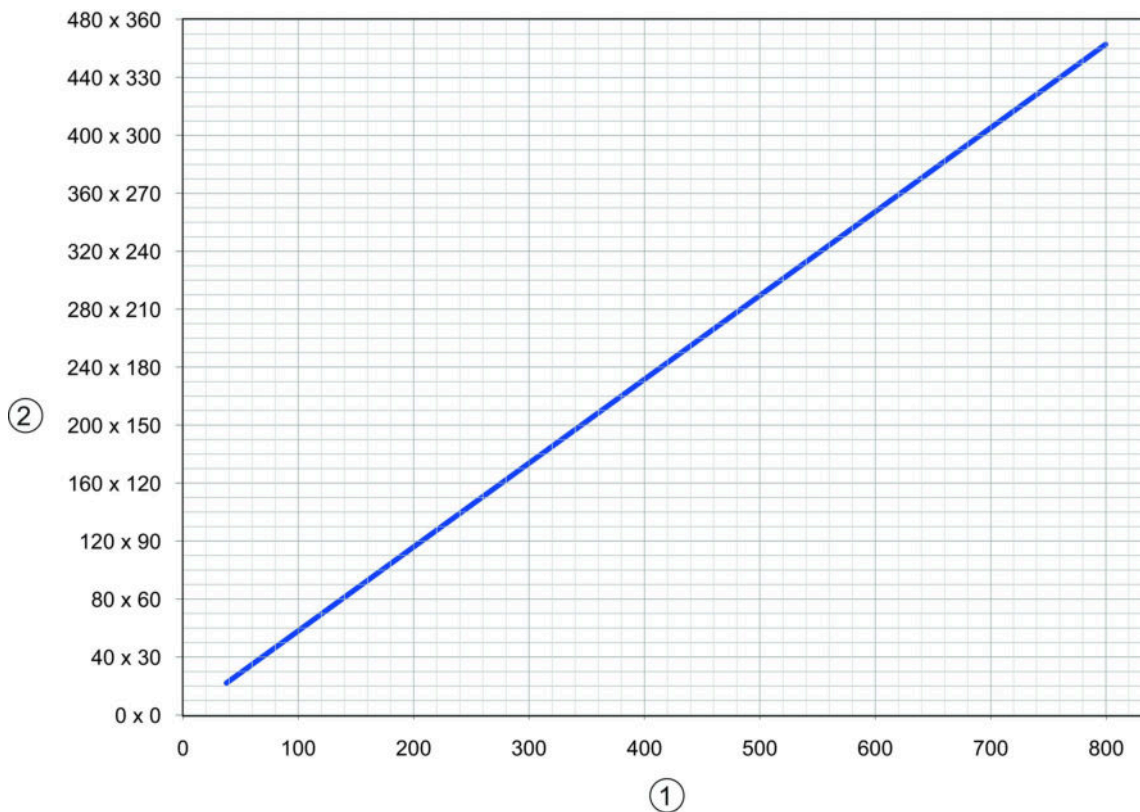
Reading distances



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
		Green, flashing
		Green, continuous light
		Orange, continuous light
		Red, flashing
		Red, continuous light
2	NET	Off
		Green, flashing
		Green, continuous light
		Red, flashing
		Red, continuous light
3	LINK	Green, continuous light
		Yellow, flashing
4	TRIG	Green, flashing
5	AUTO	Green, flashing
6	ADJ	Green, flashing
7	TEACH	Green, flashing

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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


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	Part no.	Designation	Article	Description
	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

Services

	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.

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Note

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