

## Technical data sheet

### Stationary 2D-code reader

Part no.: 50154402

DCR108iADJ-0608-412-R3M-F001

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- Dimensioned drawings
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For illustration purposes only

CE **RS232** Ethernet

## Technical data

### Basic data

Series	DCR 100i
Chip	CMOS (Global Shutter)

### Functions

Software functions	Reading of 1D codes Reading of 2D codes
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### Read data

Code types, readable	2/5 Hong Kong 2/5 IATA 2/5 Interleaved Aztec Codabar Code 128 Code 32 Code 39 Code 93 Composite Codes Data Matrix Code EAN 8/13 GS1 Databar Expanded GS1 Databar Expanded Stacked GS1 Databar Limited GS1 Databar RSS 14 GS1 Databar RSS 14 Stacked Maxicode Micro QR MSI Plessey PDF417 PDF417 Micro Pharma Code QR code UPC-A UPC-E
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### Optical data

Reading distance	40 ... 550 mm
Light source	LED, Red
Camera resolution, horizontal	1,080 px
Camera resolution, vertical	1,280 px
Focal length	6 mm
Reading field opening angle, horizontal	29 °
Reading field opening angle, vertical	34 °
Modulus size	0.08 ... 0.5 mm
Camera type	Monochrome
Focus	Manually adjustable

### Electrical data

Protective circuit	Overload protection
<b>Performance data</b>	
Supply voltage $U_B$	12 ... 28 V, DC
Current consumption, additional note	max.= 11W, at 12 V DC
<b>Inputs</b>	
Number of digital switching inputs	1 Piece(s)

### Switching inputs

Type	Digital switching input
Voltage type	DC
Switching principle	PNP/NPN (Opto-coupled transistor (Switching element))

### Outputs

Number of digital switching outputs	2 Piece(s)
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### Switching outputs

Type	Digital switching output
Voltage type	DC
Switching current, max.	100 mA

#### Switching output 1

Switching element	Opto-coupled transistor
Switching principle	NPN

#### Switching output 2

Switching element	Opto-coupled transistor
Switching principle	NPN

### Interface

Type	RS 232, Ethernet
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#### RS 232

Function	Process
Transmission speed	9,600 ... 230,400 Bd
Data format	Adjustable
Start bit	1
Data bit	8
Stop bit	1
Parity	None
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, Modbus TCP

### Connection

Number of connections	2 Piece(s)
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#### 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

## Technical data

### Connection 2

<b>Function</b>	Configuration interface Data interface
<b>Type of connection</b>	Connector
<b>Thread size</b>	M12
<b>Type</b>	Female
<b>Material</b>	Metal
<b>No. of pins</b>	4 -pin
<b>Encoding</b>	D-coded

### Mechanical data

<b>Design</b>	Cubic
<b>Dimension (W x H x L)</b>	44 mm x 29 mm x 53 mm
<b>Housing material</b>	Metal
<b>Metal housing</b>	Aluminum
<b>Lens cover material</b>	Glass
<b>Net weight</b>	150 g
<b>Housing color</b>	Silver
<b>Type of fastening</b>	Mounting thread Via optional mounting device

### Operation and display

<b>Type of display</b>	LED
<b>Number of LEDs</b>	5 Piece(s)
<b>Type of configuration</b>	Configuration codes Software Teach-in
<b>Operational controls</b>	Button(s)
<b>Function of the operational control</b>	Resetting to factory settings Trigger Tune

### Environmental data

<b>Ambient temperature, operation</b>	0 ... 50 °C
<b>Ambient temperature, storage</b>	-30 ... 70 °C
<b>Relative humidity (non-condensing)</b>	90 %

### Certifications

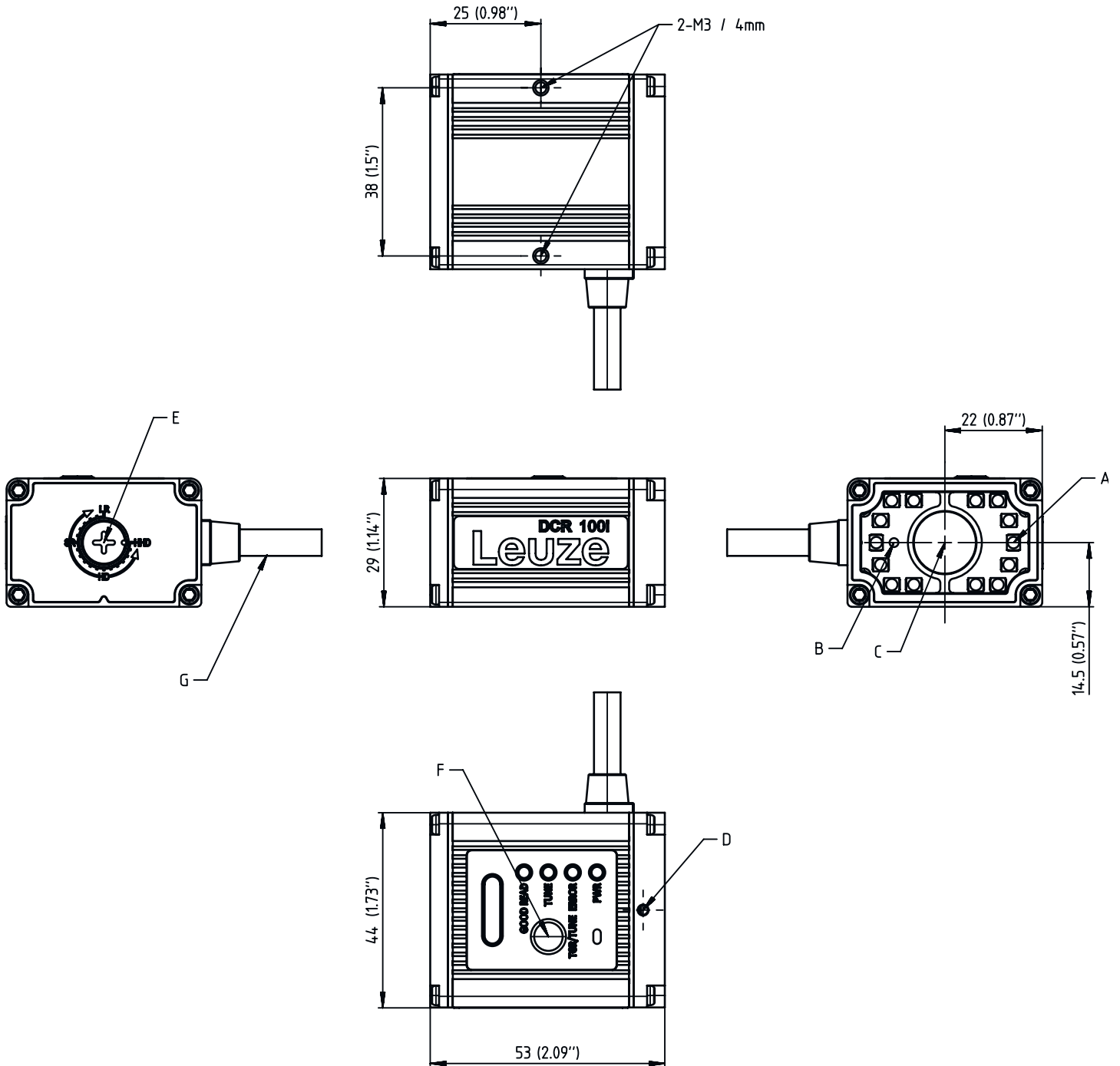
<b>Degree of protection</b>	IP 64
<b>Protection class</b>	III
<b>Test procedure for EMC in accordance with standard</b>	FCC 15-CFR 47 Part 15 Limits Class B IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-8

### Classification

<b>Customs tariff number</b>	84719000
<b>ECLASS 5.1.4</b>	27280103
<b>ECLASS 8.0</b>	27280103
<b>ECLASS 9.0</b>	27280103
<b>ECLASS 10.0</b>	27280103
<b>ECLASS 11.0</b>	27280103
<b>ECLASS 12.0</b>	27280103
<b>ECLASS 13.0</b>	27280103
<b>ECLASS 14.0</b>	27280103
<b>ECLASS 15.0</b>	27280103
<b>ECLASS 16.0</b>	27280103
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002999
<b>ETIM 7.0</b>	EC002999
<b>ETIM 8.0</b>	EC002999
<b>ETIM 9.0</b>	EC002999
<b>ETIM 10.0</b>	EC002999
<b>UNSPSC 26.08</b>	43211701

## Dimensioned drawings

All dimensions in millimeters



A Integrated LED for illumination (red light)

B Integrated target Laser diode (red)

C Center of optical axis

D Locking screw for focus adjustment (1.27mm Hex)

E Screw for focus adjustment

LR: Long range

SR: Standard range

HD: High density

HHD: Hyper High density

F Trigger/Tune button

G Cable with M12 12-pin male connector & M12 4-pin female connector

## Electrical connection

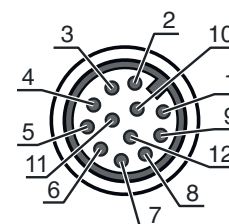
### Connection 1

### PWR / SWIO

<b>Function</b>	Data interface Signal IN Signal OUT Voltage supply
<b>Type of connection</b>	Connector
<b>Thread size</b>	M12
<b>Type</b>	Male
<b>Material</b>	Metal
<b>No. of pins</b>	12 -pin
<b>Encoding</b>	A-coded

### Pin Pin assignment

<b>1</b>	V+
<b>2</b>	GND
<b>3</b>	Trigger IN
<b>4</b>	SWOUT 1 (Good read)
<b>5</b>	FE
<b>6</b>	n.c.
<b>7</b>	n.c.
<b>8</b>	n.c.
<b>9</b>	RS 232 RxD
<b>10</b>	RS 232 TxD
<b>11</b>	SWOUT 2 (No read)
<b>12</b>	n.c.



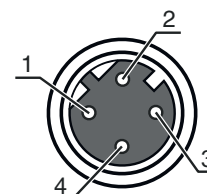
### Connection 2

### HOST

<b>Function</b>	Configuration interface Data interface
<b>Type of connection</b>	Connector
<b>Thread size</b>	M12
<b>Type</b>	Female
<b>Material</b>	Metal
<b>No. of pins</b>	4 -pin
<b>Encoding</b>	D-coded

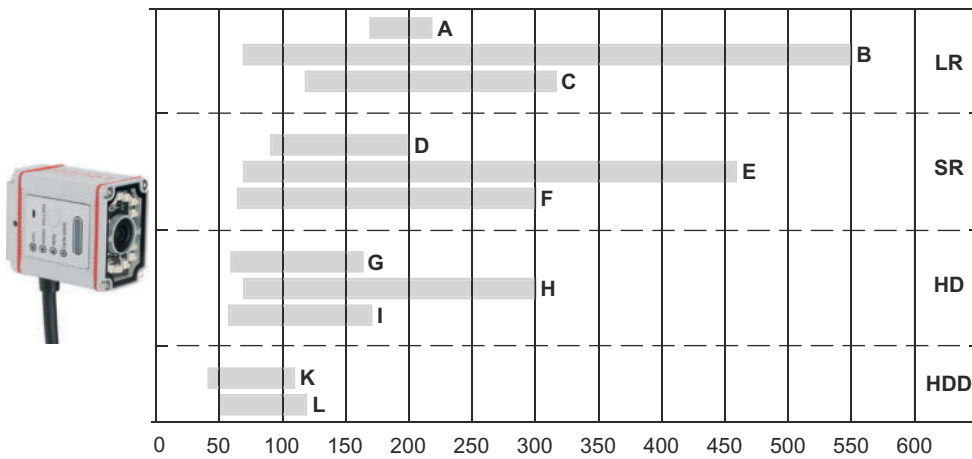
### Pin Pin assignment

<b>1</b>	TD+
<b>2</b>	RD+
<b>3</b>	TD-
<b>4</b>	RD-

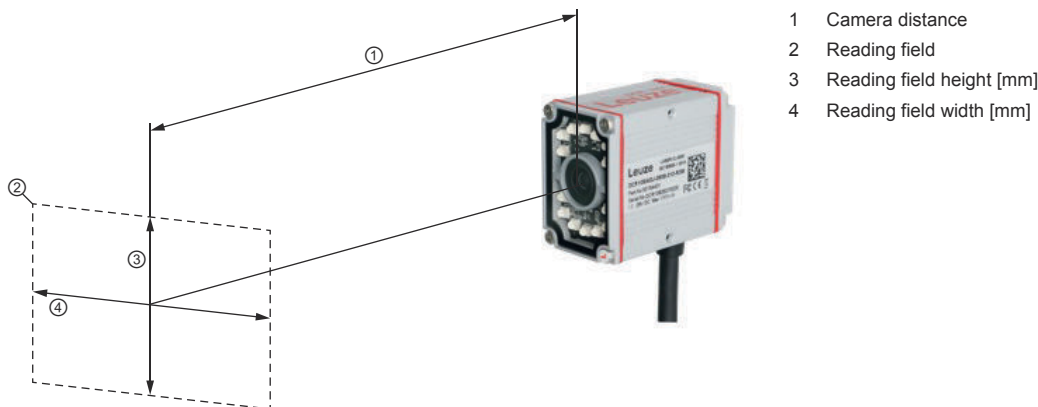


# Diagrams

## Reading distances (typical)



- A Long Range, 0.254 mm (10 mil) / 2D-Codes
- B Long Range, 0.33 mm (13 mil) / 1D-Codes
- C Long Range, 0.127 mm (5 mil) / 1D-Codes
- D Standard Range, 0.18mm (7 mil) / 2D-Code
- E Standard Range, 0.33mm (13 mil) / 1D-Codes
- F Standard Range, 0.127mm (5 mil) / 1D-Codes
- G High density, 0.18 mm (7 mil) / 2D-Codes
- H High density, 0.33 mm (13 mil) / 1D-Codes
- I High density, 0.08 mm (3 mil) / 1D-Codes
- K Hyper high density, 0.18mm (7 mil) / 2D-Codes
- L Hyper high density, 0.08mm (3 mil) / 1D-Codes



## Field of view (typical)

Field of view (typical)		
1 Distance (mm)	3 Reading field height (mm)	4 Reading field width (mm)
100	52	61
200	103	122
300	155	183
400	206	244
500	257	306

# Operation and display

LED	Display	Meaning
1 PWR	Off Amber, continuous light	No supply voltage Device ON
2 ERROR	Red, continuous light Red, 1x flashing	Device error Reading not successful
3 TUNE	Blue, flashing	Device in tuning mode
4 GOOD READ	Green, flashing	Reading successful

## Part number code

Part designation: DCR XXXX YYY-ZZZZ-ABC-DEF-GGGG


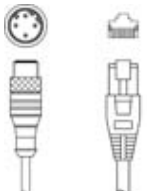
DCR	<b>Operating principle</b> DCR: Dual Code Reader
XXXX	<b>Series/interface (integrated fieldbus technology)</b> 108i : Ethernet TCP/IP, RS 232, Modbus TCP
YYY	<b>Focus</b> ADJ: adjustable (manually)
ZZZZ	<b>Optics model</b> 06: focal length 6 mm 08: aperture f/8.0
A	<b>Connection</b> 3: cable with single industrial plug 4: special cable (with dual industrial plug)
B	<b>Cable length</b> 1: 0.3 m
C	<b>Beam exit</b> 2: front side
D	<b>Illumination</b> R: red
E	<b>Resolution range</b> 3: 1024x768 - 1280x1024 pixels
F	<b>Image sensor type</b> M: monochrome
GGGG	<b>Special equipment</b> F001: NPN switching output

## Notes



<b>Observe intended use!</b>	
	<ul style="list-style-type: none"> <li>⌘ This product is not a safety sensor and is not intended as personnel protection.</li> <li>⌘ The product may only be put into operation by competent persons.</li> <li>⌘ Only use the product in accordance with its intended use.</li> </ul>

## Accessories


### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135073	KS ET-M12-4A-P7-020	Connection cable	Application: Oil and lubricant resistant 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: 2,000 mm Sheathing material: PUR
	50135080	KSS ET-M12-4A-RJ45-A-P7-020	Interconnection cable	Application: Oil and lubricant resistant 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

### Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50130281	KD S-M12-CA-P1-020	Connection cable	Application: Oil and lubricant resistant Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR
	50147677	KD S-M12-CA-P1-150-V4A	Connection cable	Application: Oil and lubricant resistant, Hygienic and wet areas Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 15,000 mm Sheathing material: PUR

### Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50154483	BT DCR 100	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: Rigid Material: Metal

#### Note



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