

Technical data sheet

Stationary 2D-code reader

Part no.: 50155491

DCR 108i ADJ-0608-412-R3M

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- Dimensioned drawings
- Electrical connection
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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

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

Optical data

Reading distance	40 ... 550 mm
Light source	LED, Red
LED group	Exempt group (in acc. with EN 62471)
Target laser's laser class	1, EN 60825-1:2014+A11:2021
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
	Polarity reversal protection
	Short circuit protected

Performance data

Supply voltage U_B	12 ... 28 V, DC
Current consumption, additional note	max. = 11W, at 12 V DC

Inputs

Number of digital switching inputs	1 Piece(s)
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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	PNP

Switching output 2

Switching element	Opto-coupled transistor
Switching principle	PNP

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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Technical data

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)	44 mm x 29 mm x 53 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Glass
Net weight	150 g
Housing color	Silver
Type of fastening	Mounting thread
	Via optional mounting device

Operation and display

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

Environmental data

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

Certifications

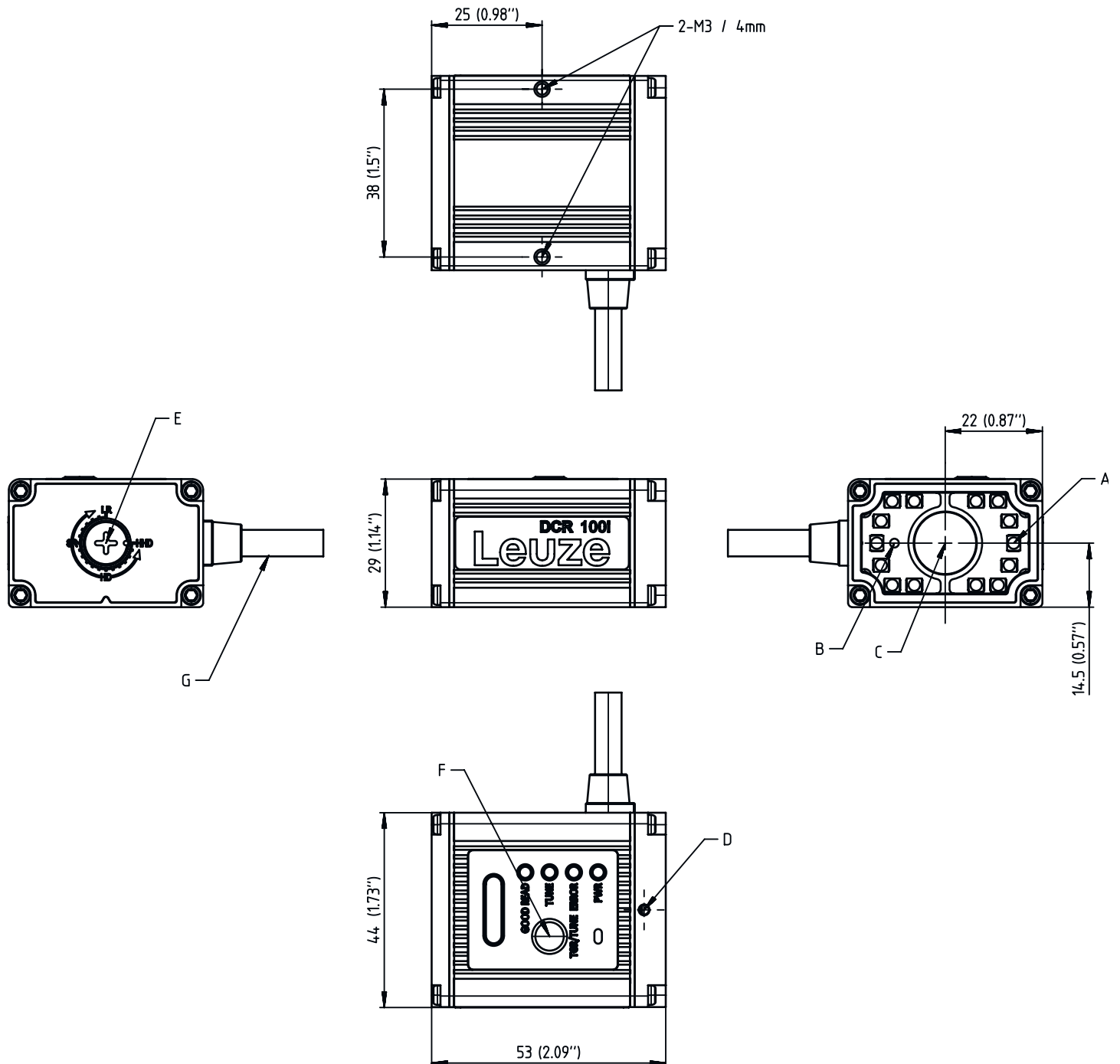
Degree of protection	IP 64
Protection class	III
Test procedure for EMC in accordance with standard	FCC 15-CFR 47 Part 15 Limits Class B
	IEC 61000-4-2
	IEC 61000-4-3
	IEC 61000-4-8

Classification

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

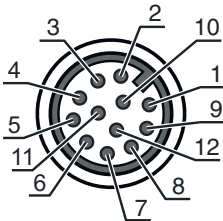
F Trigger/Tune button

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

Electrical connection

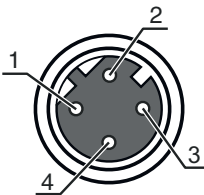
Connection 1		PWR / SWIO
Function		Data interface
		Signal IN
		Signal OUT
		Voltage supply
Type of connection		Connector
Thread size		M12
Type		Male
Material		Metal
No. of pins		12 -pin
Encoding		A-coded

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



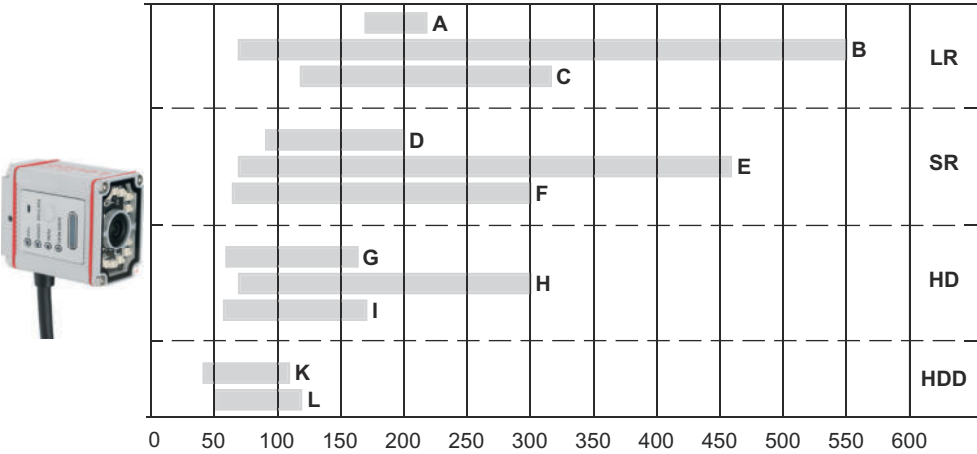
Connection 2		HOST
Function		Configuration interface
		Data interface
Type of connection		Connector
Thread size		M12
Type		Female
Material		Metal
No. of pins		4 -pin
Encoding		D-coded

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



Diagrams

Reading distances (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

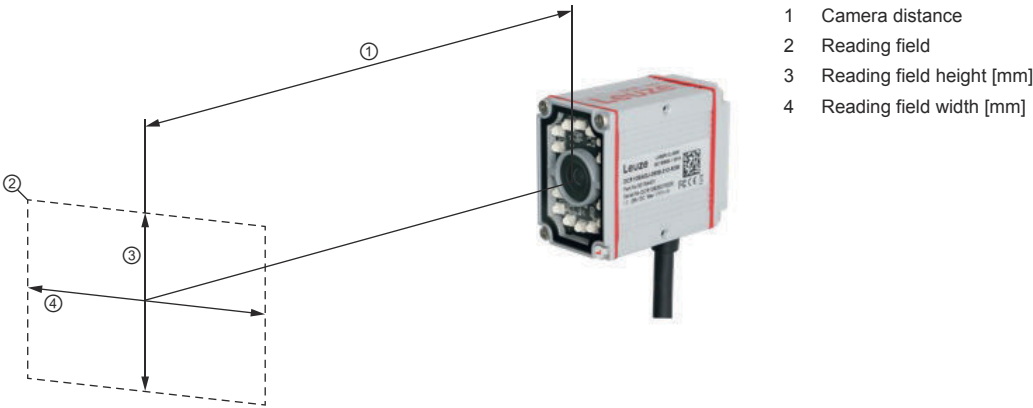
High density, 0.18 mm (7 mil) / 2D-Codes
- H

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	No supply voltage
	Amber, continuous light	Device ON
2 ERROR	Red, continuous light	Device error
	Red, 1x flashing	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	Operating principle DCR: Dual Code Reader
XXXX	Series/interface (integrated fieldbus technology) 108i : Ethernet TCP/IP, RS 232, Modbus TCP
YYY	Focus ADJ: adjustable (manually)
ZZZZ	Optics model 06: focal length 6 mm 08: aperture f/8.0
A	Connection 3: cable with single industrial plug 4: special cable (with dual industrial plug)
B	Cable length 1: 0.3 m
C	Beam exit 2: front side
D	Illumination R: red
E	Resolution range 3: 1024x768 - 1280x1024 pixels
F	Image sensor type M: monochrome
GGGG	Special equipment F001: NPN switching output

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.



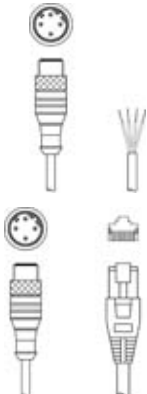
ATTENTION! LASER RADIATION – CLASS 1 LASER PRODUCT



- The device satisfies the requirements of IEC 60825-1:2014 / EN 60825-1:2014+A11:2021 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.
- ⚠ 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
	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.