



ICR620S-T11503 Professional

Lector62x

IMAGE-BASED CODE READERS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
ICR620S-T11503 Professional	1050589

Other models and accessories → www.sick.de/Lector62x



Detailed technical data

Features

Reading field	Side
Focus	Teach auto focus
Sensor	CMOS matrix sensor, gray scale values
Sensor resolution	752 px x 480 px (WVGA)
Internal lighting	Red, blue
Light source	Lighting LEDs: visible red light ($\lambda = 617 \pm 15 \text{ nm}$), visible blue light ($\lambda = 470 \pm 15 \text{ nm}$) Feedback spot: visible green light ($\lambda = 525 \pm 15 \text{ nm}$) Aiming laser: visible red light ($\lambda = 630 \text{ nm} \dots 680 \text{ nm}$)
MTBF	75.000 h
LED class	1, radiance $L_B < 10 \text{ kW}/(\text{m}^2 \text{ sr})$ within 100 s, $L_R < 28/\alpha \text{ kW}/(\text{m}^2 \text{ sr})$ within 10 s At distance $> 200 \text{ mm}$ (IEC 62471 (2006-07) / EN 62471 (2008-09))
Laser class	1, complies with 21 CFR 1040.10 except for the tolerance according to "Laser Notice No. 50" from June 24, 2007 (IEC 60825-1 (2007-3))
Scanning frequency	60 Hz, WVGA resolution
Focal length	7 mm
Code resolution	$\geq 0,1 \text{ mm}^{1)}$
Reading distance	40 mm ... 1.500 mm ^{1) 2)}

¹⁾ Valid for Data Matrix, PDF417 and 1D codes with good printing quality.

²⁾ For details see reading field diagram.

Performance

Bar code types	GS1-128 / EAN 128, UPC / GTIN / EAN, Interleaved 2 of 5, Pharmacode, GS1 DataBar, Code 39, Code 128, Codabar, Code 32, Code 93
2D code types	Data Matrix ECC200, GS1 Data-Matrix, PDF417, PDF417 Truncated, QR code
Code qualification	On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 15416, ISO/IEC 18004

No. of codes per reading interval	1 ... 50
No. of characters per reading interval	500 (for multiplexer function in CAN operation)
Internal image storage	135 MB
Transport speed	4 m/s

Interfaces

Serial (RS-232, RS-422)	✓
Function	Host, AUX
Data transmission rate	300 Baud ... 115,2 kBaud, AUX: 57.6 kBaud (RS-232)
USB	✓, USB 2.0
Ethernet	✓
Function	Host, AUX, image transmission, OPC DA Server
Data transmission rate	10/100 Mbit
Protocol	TCP/IP, FTP (image transmission), PROFINET (with special software only), EtherNet/IP, Ether-CAT (optional via external connection module CDF600)
CAN bus	✓
Function	SICK CAN sensor network (Master/Slave, Multiplexer/Server)
Data transmission rate	20 kbit/s ... 1 Mbit/s
Protocol	CANopen, CSN (SICK CAN Sensor Network)
PROFIBUS DP	✓, optional via external connection module (CDF600-2)
Switching inputs	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Switching outputs	4 ("Result 1", "Result 2", 2 outputs via CMC in CDB620/CDM420 or "Result 1", "Result 2", "Result 3", "Result 4" using the 17-pin cable with open end)
Reading pulse	Switching inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode
Optical indicators	16 LEDs (5 x status display, 10 x LED bar graph, 1 green feedback spot)
Acoustic indicators	Beeper/buzzer (can be switched off, can be assigned a function to signal a result)
Control elements	2 buttons (choose and start/stop functions)
Configuration software	SOPAS ET
Memory card	MicroSD memory card (flash card) max. 32 GB, optional
Data store and retrieve	Images and file logging via MicroSD memory card, internal memory and external FTP
Maximum encoder frequency	300 Hz
Control of external illumination	Via digital output (max. 24 V trigger)

Mechanics/electronics

Electrical connection	1 x M12, 17-pin male connector 1 x M12, 4-pin female connector Ethernet Circular plug-in connector
Operating voltage	10 V DC ... 30 V DC
Power consumption	Typ. 3 W
Output current	≤ 100 mA
Housing	Die-cast aluminum
Housing color	Light blue (RAL 5012)
Enclosure rating	IP 65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))

¹⁾ Swivel connector is 17.8 mm longer.

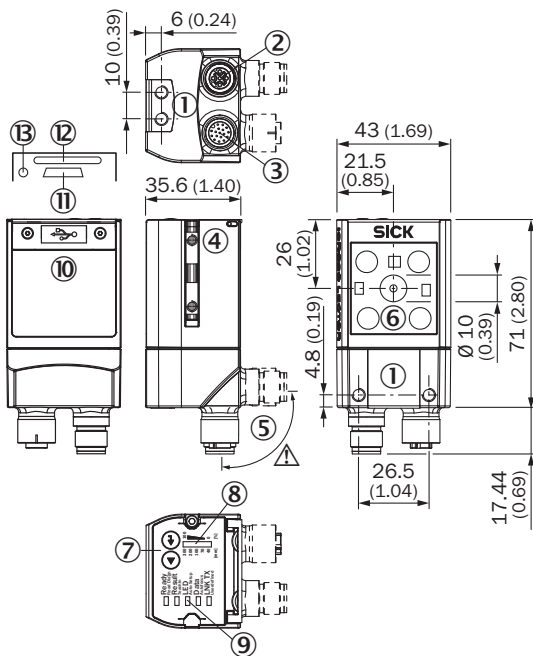
Protection class	III
Weight	170 g
Dimensions	71 mm x 43 mm x 35,6 mm ¹⁾
Lens	7 mm, integrated

¹⁾ Swivel connector is 17.8 mm longer.

Ambient data

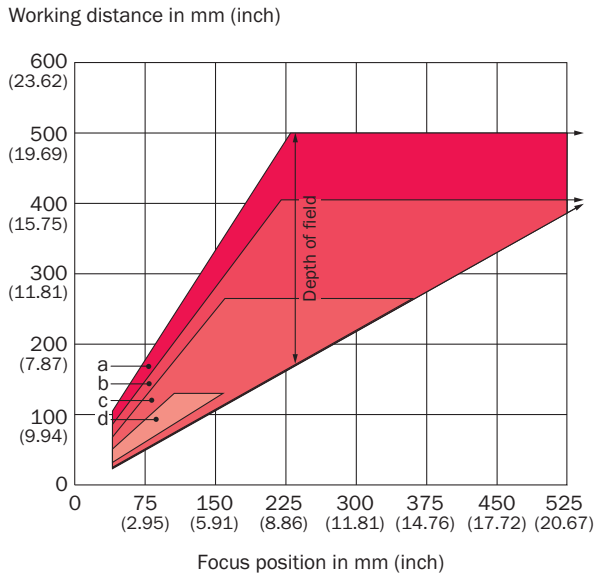
Electromagnetic compatibility (EMC)	EN 61000-6-2 (2006-03) / EN 61000-6-2 (2009-05)
Vibration resistance	EN 60068-2-6 (2008-02)
Shock resistance	EN 60068-2-27 (2009-05)
Electrical safety	EN 60950-1 (2006-04) / EN 60950-1/A11 (2009-03)
Ambient operating temperature	0 °C ... +50 °C
Storage temperature	-20 °C ... +70 °C
Permissible relative humidity	90 %, non-condensing
Ambient light immunity	2.000 lx, on code

Dimensional drawing (Dimensions in mm (inch))

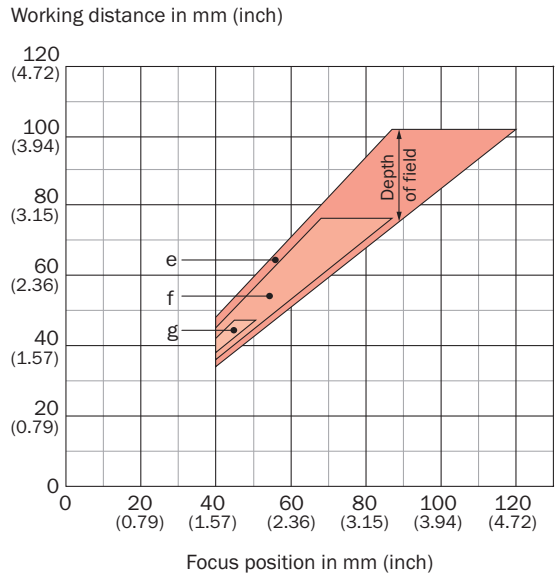


- ① Blind hole thread M5, 5 mm deep (4 x), for mounting
- ② Ethernet connection
- ③ "Power/Serial Data/CAN/I/O" connection
- ④ Sliding nut M5, 5 mm deep (2 x), for mounting (as alternative)
- ⑤ Swivel connector unit
- ⑥ Reading field
- ⑦ Function button (2 x)
- ⑧ Bar graph display
- ⑨ LED for status display (2 levels), 5 x
- ⑩ Cover (flap)
- ⑪ "Micro USB" connection
- ⑫ Slot for microSD memory card
- ⑬ LED for microSD memory card

Reading field diagram



- Resolution**
- a: 1.00 mm (39.4 mil)
 - b: 0.75 mm (29.5 mil)
 - c: 0.50 mm (19.7 mil)
 - d: 0.25 mm (9.8 mil)

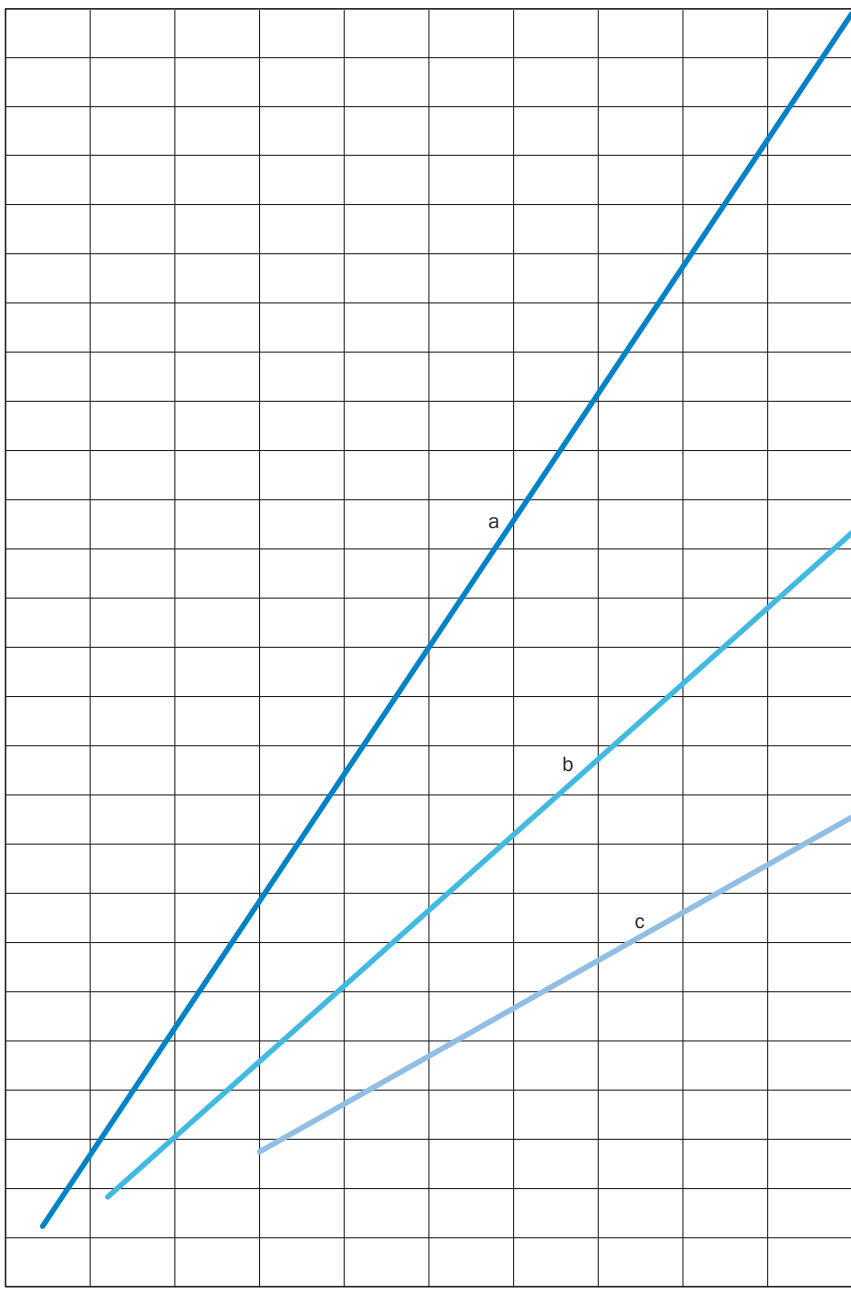


- Resolution**
- e: 0.20 mm (7.9 mil)
 - f: 0.15 mm (5.9 mil)
 - g: 0.10 mm (3.9 mil)

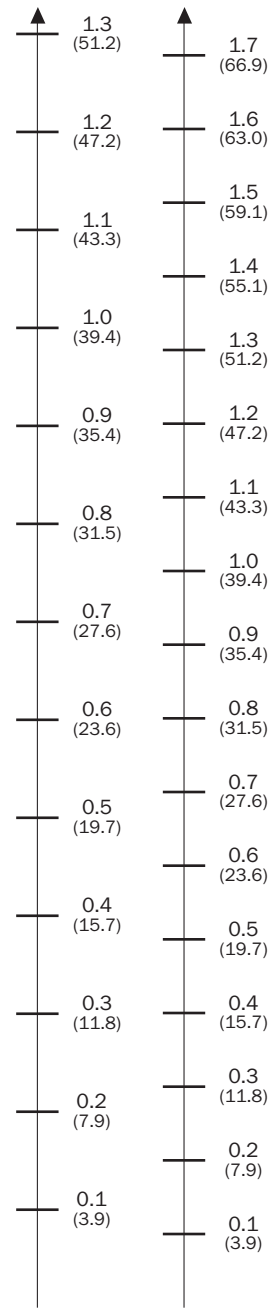
Field of view

Field of view in mm² (sq inch)

650 x 416
(25.60 x 16.38)
 625 x 400
(24.61 x 15.75)
 600 x 384
(23.62 x 15.12)
 575 x 368
(22.64 x 14.49)
 550 x 352
(21.65 x 13.86)
 525 x 336
(20.67 x 13.23)
 500 x 320
(19.69 x 12.60)
 475 x 304
(18.70 x 11.97)
 450 x 288
(17.72 x 11.34)
 425 x 272
(16.73 x 10.71)
 400 x 256
(15.75 x 10.08)
 375 x 240
(14.76 x 9.45)
 350 x 224
(13.78 x 8.82)
 325 x 208
(12.79 x 8.19)
 300 x 192
(11.81 x 7.56)
 275 x 176
(10.83 x 6.93)
 250 x 160
(9.84 x 6.30)
 225 x 144
(8.86 x 5.67)
 200 x 128
(7.87 x 5.04)
 175 x 112
(6.89 x 4.41)
 150 x 96
(5.91 x 3.78)
 125 x 80
(4.92 x 3.15)
 100 x 64
(3.94 x 2.52)
 75 x 48
(2.95 x 1.89)
 50 x 32
(1.97 x 1.26)
 25 x 16
(0.98 x 0.63)



Min. resolution in mm (mil)
 1D code 2D code










0 100 (3.94) 200 (7.87) 300 (11.81) 400 (15.75) 500 (19.69) 600 (23.62) 700 (27.56) 800 (31.50) 900 (35.43) 1000 (39.37)

Working distance/focus position in mm (inch)

- a: f = 7 mm (ICR620E-H12013, ICR620S-T11503, ICR620S-T11504)
- b: f = 12 mm (ICR620D-T31503)
- c: f = 18 mm (ICR620D-T51503)

Recommended accessories

Other models and accessories → www.sick.de/Lector62x

	Brief description	Model name	Part no.
Mounting brackets and mounting plates			
	Mounting bracket (simple bracket), mounting hardware included	Mounting bracket	2020410
Modules			
	Small connection module for one sensor, 4 cable glands, base for CMC600	CDB620-001	1042256
	Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin)	CDF600-2100	1058965
	Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin)	CDF600-2103	1058966
Plug connectors and cables			
	Head A: female connector, M12, 17-pin, straight Head B: male connector, D-Sub-HD, 15-pin, straight Cable: Power, serial, CAN, digital I/Os, unshielded, 2 m	Connection cable (male connector-female connector)	2055419
	Head A: male connector, M12, 4-pin, D-coded Head B: male connector, M12, 4-pin, D-coded Cable: Ethernet, shielded, 2 m	SSL-1204-G02ME	6034420
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, PUR, shielded, 2 m	SSL-2J04-G02ME	6034414
	Head A: male connector, USB-A Head B: male connector, Micro-B Cable: USB 2.0, unshielded, 2 m	USB cable	6036106

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