



# 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.com/Lector62x](http://www.sick.com/Lector62x)



### Detailed technical data

#### Features

<b>Optical focus</b>	Teach auto focus
<b>Sensor</b>	CMOS matrix sensor, grayscale values
<b>Sensor resolution</b>	752 px x 480 px (WVGA)
<b>Illumination</b>	Integrated
<b>Illumination color</b>	Red, LED, Visible, 617 nm, ± 15 nm Blue, LED, Visible, 470 nm, ± 15 nm
<b>LED class</b>	1 (IEC 62471:2006-07, EN 62471:2008-09)
<b>Feedback spot</b>	LED, Visible, green, 525 nm, ± 15 nm
<b>Alignment aid</b>	Laser, Red, 630 nm ... 680 nm
<b>Laser class</b>	1, complies with 21 CFR 1040.10 except for the conformance according to "Laser Notice No. 50" from June 24, 2007 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021)
<b>Lens</b>	
	Focal length 7 mm
<b>Reading distance</b>	40 mm ... 1,500 mm <sup>1) 2)</sup>
<b>Scanning frequency</b>	60 Hz, WVGA resolution
<b>Code resolution</b>	≥ 0.1 mm <sup>1)</sup>

<sup>1)</sup> Valid for Data Matrix, PDF417, and 1D codes with good print quality.

<sup>2)</sup> For details see reading field diagram.

#### Mechanics/electronics

<b>Connection type</b>	1 x M12, 17-pin male connector 1 x M12, 4-pin Ethernet female connector
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<sup>1)</sup> Swivel connector is 17.8 mm longer.

	Circular plug-in connector
<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Power consumption</b>	Typ. 3 W
<b>Output current</b>	≤ 100 mA
<b>Housing material</b>	Aluminum die cast
<b>Housing color</b>	Light blue (RAL 5012)
<b>Window material</b>	Glass
<b>Enclosure rating</b>	IP65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))
<b>Protection class</b>	III
<b>Electrical safety</b>	EN 60950-1 (2006-04) / EN 60950-1/A11 (2009-03)
<b>Weight</b>	170 g
<b>Dimensions (L x W x H)</b>	71 mm x 43 mm x 35.6 mm <sup>1)</sup>
<b>MTBF</b>	75,000 h

<sup>1)</sup> Swivel connector is 17.8 mm longer.

## Performance

<b>Readable code structures</b>	1D codes, Stacked, 2D codes
<b>Bar code types</b>	GS1-128 / EAN 128, UPC / GTIN / EAN, Interleaved 2 of 5, Pharmacode, GS1 DataBar, Code 39, Code 128, Codabar, Code 32, Code 93
<b>2D code types</b>	Data Matrix ECC200, GS1 Data-Matrix, PDF417, PDF417 Truncated, QR code
<b>Code qualification</b>	On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 15416, ISO/IEC 18004
<b>No. of codes per reading interval</b>	1 ... 50
<b>No. of characters per reading interval</b>	500 (for multiplexer function in CAN operation)
<b>Internal image storage</b>	135 MB
<b>Transport speed</b>	4 m/s

## Interfaces

<b>Ethernet</b>	✓, TCP/IP
Function	Data interface (read result output), Service interface, OPC DA Server, FTP (image transmission)
Data transmission rate	10/100 MBit/s
<b>PROFINET</b>	✓
Function	PROFINET Single Port, PROFINET Dual Port (optional via external connection module CDF600-2)
Data transmission rate	10/100 MBit/s
<b>EtherNet/IP™</b>	✓
Data transmission rate	10/100 MBit/s
<b>EtherCAT</b>	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600
<b>Serial</b>	✓, RS-232, RS-422
Function	Data interface (read result output), Service interface
Data transmission rate	0.3 kBaud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)
<b>CAN</b>	✓
Function	SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)
Data transmission rate	20 kbit/s ... 1 Mbit/s

<b>CANopen</b>	✓
Data transmission rate	20 kbit/s ... 1 Mbit/s
<b>PROFIBUS DP</b>	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
<b>Digital inputs</b>	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
<b>Digital outputs</b>	4 ("Result 1", "Result 2", 2 outputs via CMC and CDB620/CDM420 or "Result 1", "Result 2", "Result 3", "Result 4" when using the 17-wire cable with open cable end)
<b>Reading pulse</b>	Digital inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode
<b>Optical indicators</b>	16 LEDs (5 x status display, 10 x LED bar graph, 1 green feedback spot)
<b>Acoustic indicators</b>	Beeper/buzzer (can be switched off, can be assigned a function to signal a result)
<b>Control elements</b>	2 buttons (choose and start/stop functions)
<b>Operator interfaces</b>	Web server
<b>Configuration software</b>	SOPAS ET
<b>Memory card</b>	Micro SD memory card (flash card) max. 32 GB, optional
<b>Data storage and retrieval</b>	Image and data storage via microSD memory card and external FTP
<b>Maximum encoder frequency</b>	Max. 300 Hz
<b>External illumination control</b>	Via digital output (max. 24 V trigger)

### Ambient data

<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2 (2006-03) / EN 61000-6-2 (2009-05)
<b>Vibration resistance</b>	EN 60068-2-6:2008-02
<b>Shock resistance</b>	EN 60068-2-27:2009-05
<b>Ambient operating temperature</b>	0 °C ... +50 °C
<b>Storage temperature</b>	-20 °C ... +70 °C
<b>Permissible relative humidity</b>	90 %, Non-condensing
<b>Ambient light immunity</b>	2,000 lx, on code

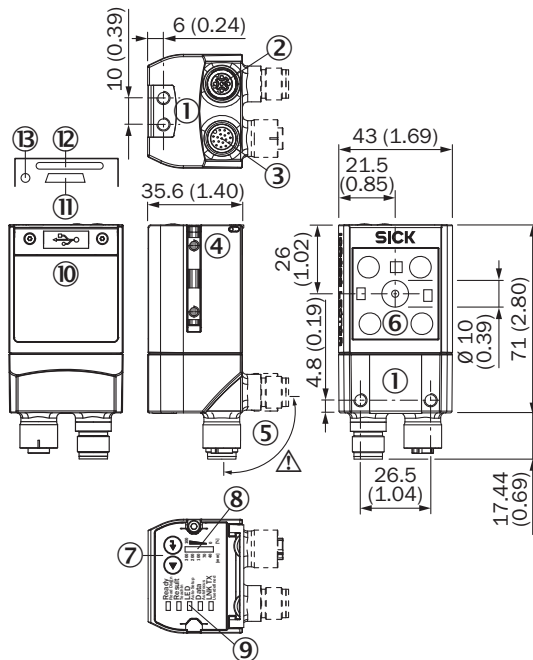
### Classifications

<b>ECLASS 5.0</b>	27280103
<b>ECLASS 5.1.4</b>	27280103
<b>ECLASS 6.0</b>	27280103
<b>ECLASS 6.2</b>	27280103
<b>ECLASS 7.0</b>	27280103
<b>ECLASS 8.0</b>	27280103
<b>ECLASS 8.1</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>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>ETIM 7.0</b>	EC002999
<b>ETIM 8.0</b>	EC002999

UNSPSC 16.0901

43211701

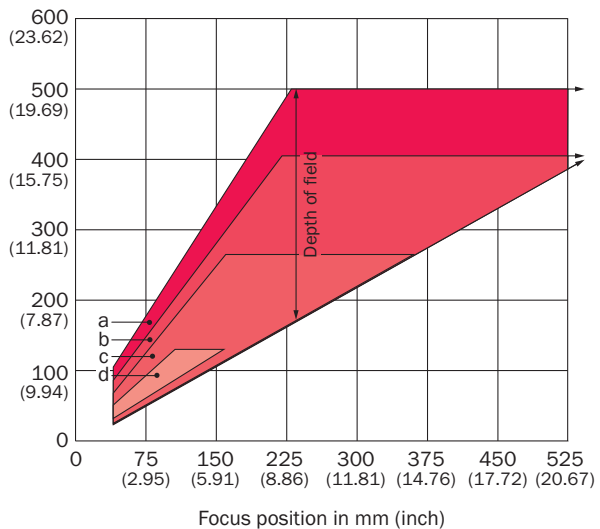
## Dimensional drawing (Dimensions in mm (inch))



- ① M5 blind tapped holes, 5 mm deep (4 x), for mounting the sensor
- ② "Ethernet" connection, 4-pin M12 female connector, D-coded
- ③ "Power/Serial Data/CAN/I/O" connection, 17-pin M12 male connector, A-coded
- 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 LEDs 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

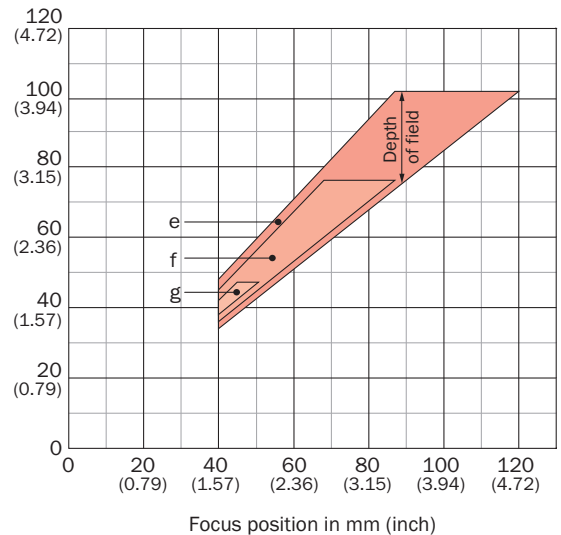
Working distance in mm (inch)



**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)

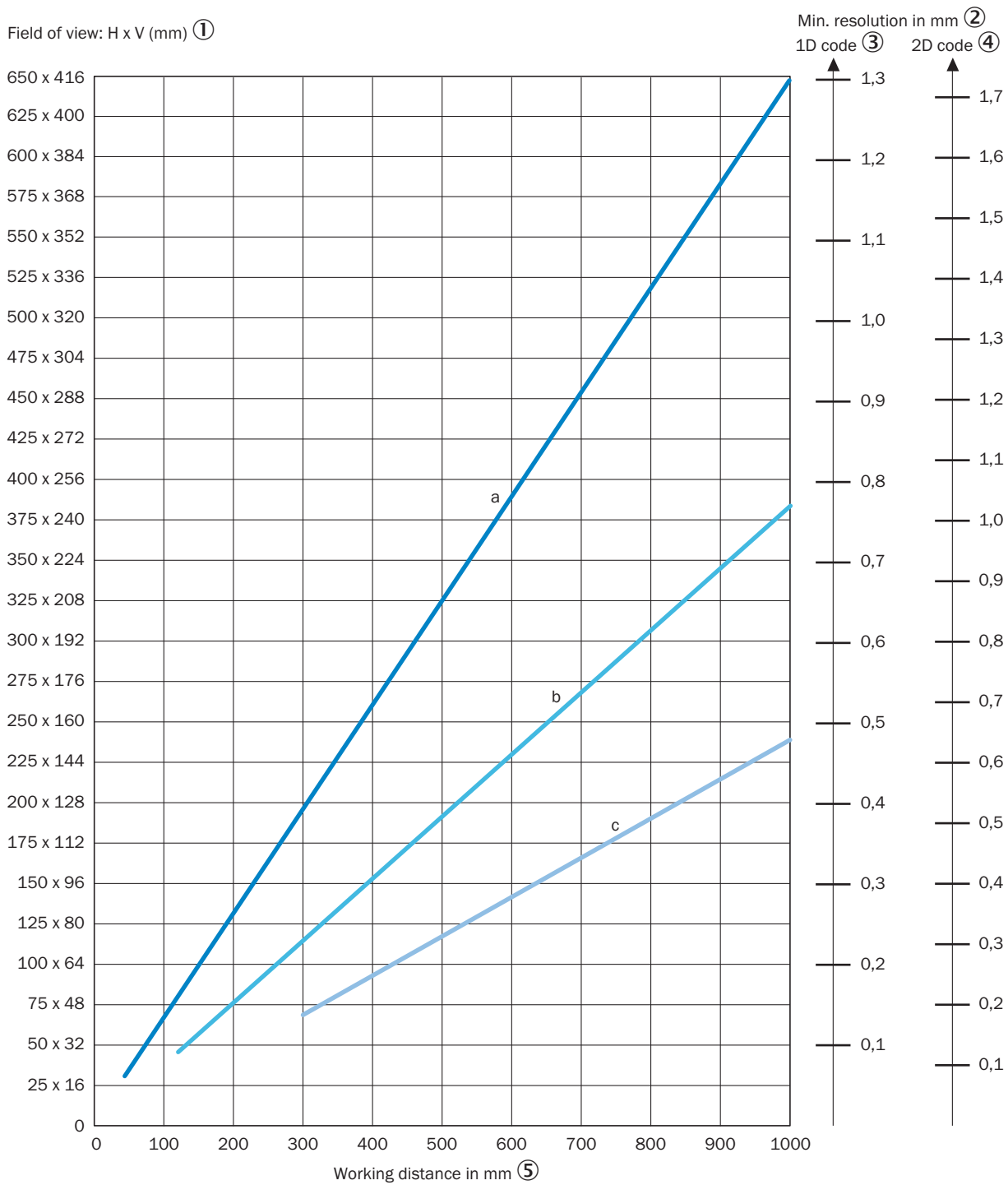
Working distance in mm (inch)



**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









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

- ① Field of view: Horizontal x vertical in mm
- ② Minimum resolution in mm
- ③ 1D code
- ④ 2D code
- ⑤ Working distance in mm (inch)

### Recommended accessories

Other models and accessories → [www.sick.com/Lector62x](http://www.sick.com/Lector62x)

	Brief description	Type	Part no.
Modules			
	<ul style="list-style-type: none"> <li><b>Accessory group:</b> 4DproConnectivity</li> <li><b>Product family:</b> Connection Device Basic</li> <li><b>Sub product family:</b> CDB620</li> <li><b>Supported products:</b> CLV61x - CLV65xLector62xRFH6xxRFU62x</li> <li><b>Brief description:</b> Small connection module for one sensor, 4 cable glands, base for CMC600</li> </ul>	CDB620-001	1042256
	<ul style="list-style-type: none"> <li><b>Accessory group:</b> 4DproConnectivity</li> <li><b>Product family:</b> Connection Device Fieldbus</li> <li><b>Sub product family:</b> CDF600-2 PROFIBUS DP</li> <li><b>Supported products:</b> Lector seriesCLV61x - CLV65xCLV69xRFID read/write deviceMobile handheld scanners</li> <li><b>Brief description:</b> Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin)</li> </ul>	CDF600-2100	1058965
	<ul style="list-style-type: none"> <li><b>Accessory group:</b> 4DproConnectivity</li> <li><b>Product family:</b> Connection Device Fieldbus</li> <li><b>Sub product family:</b> CDF600-2 PROFIBUS DP</li> <li><b>Supported products:</b> Lector seriesCLV61x - CLV65xCLV69xRFID read/write deviceMobile handheld scanners</li> <li><b>Brief description:</b> Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin)</li> </ul>	CDF600-2103	1058966
Mounting brackets and plates			
	Bracket with adapter board	Mounting bracket	2042902
Others			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, Micro-B, 4-pin, straight</li> <li><b>Connection type head B:</b> Male connector, USB-A, 4-pin, straight</li> <li><b>Signal type:</b> USB 2.0</li> <li><b>Cable:</b> 2 m, 4-wire</li> <li><b>Description:</b> USB 2.0, unshielded</li> </ul>	USB cable	6036106
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Signal type:</b> Ethernet, PROFINET</li> <li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Ethernet, PROFINET, shielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>	YM2D24-020PN1MRJA4	2106182

### Recommended services

Additional services → [www.sick.com/Lector62x](http://www.sick.com/Lector62x)

	Type	Part no.
Performance check		
<ul style="list-style-type: none"> <li><b>Product area:</b> Image-based code readers</li> <li><b>Range of services:</b> Inspection of defined functions, e.g., reading performance</li> <li><b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Performance check Lector	1608207



	Type	Part no.
Maintenance		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Image-based code readers</li> <li>• <b>Range of services:</b> Inspection, analysis and restoring of defined functions, Inspection and adaptation of previously defined functions of possible Lector6xx illumination, code configuration, trigger and digital inputs, interfaces and digital outputs as well as data processing</li> <li>• <b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Maintenance Lector	1611421
Commissioning		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Image-based code readers</li> <li>• <b>Range of services:</b> Inspection of connection, fine adjustment, optimization of parameters of SICK product as well as tests, Set-up of previously defined functions of possible illumination, code configuration, trigger and digital inputs, interfaces and digital outputs as well as data processing</li> <li>• <b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Commissioning Lector	1608206
Extended warranty		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Machine vision, LiDAR sensors, safety camera sensors, Safety laser scanners, Safety radar sensors, Radar sensors, Fixed mount barcode scanners, Image-based code readers, RFID, Mobile handheld scanners</li> <li>• <b>Range of services:</b> The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery).</li> <li>• <b>Duration:</b> Five-year warranty from delivery date.</li> </ul>	Extended warranty for a total of five years from delivery date	1680671

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)