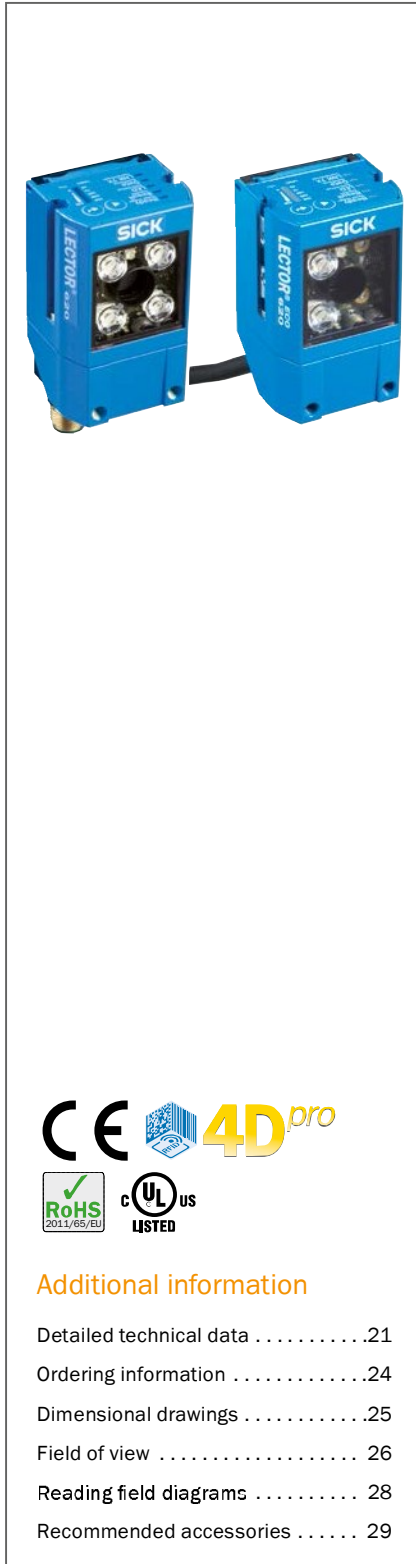




CLEVER. SIMPLE. INDUSTRIAL.



Product description

The Lector62x is a compact, image-based code reader that is specifically designed for industrial requirements. Whether items are mobile or stationary, the Lector62x identifies the most commonly used code types with exceptional reliability, even codes with poor quality. Its highly compact housing ensures flexible integration even where space is limited.

Lector620 Professional: Universal and inexpensive – can handle more than

80% of all code-reading applications.

Lector620 ECO: The attractively priced alternative for simpler applications.

Lector620 High Speed: The top-of-the-line solution for belt speeds of up to 6 m/s.

Lector620 DPM Plus: Excellent performance for the most challenging DPM codes in the automotive and solar industries.

Lector620 OCR: The best choice for optical character recognition.

At a glance

- Decoding of all common 1D, 2D, and stacked codes, as well as optical character recognition (depending on type)
- Flexible interfaces: serial interface, USB, and Ethernet
- Function buttons, aiming laser, focus adjustment, auto-setup, and green feedback LED
- Industrial, compact housing with swivel connector
- MicroSD memory card for storing images and backup copies of parameters

Your benefits

- Intelligent decoding algorithms ensure optimal reading performance, good read rates, and high throughput
- 4Dpro facilitates quick and easy integration into many industrial networks
- Intuitive setup with aiming laser, focus adjustment, and auto-setup reduces training and installation time and costs
- Simple mounting thanks to a compact housing and swivel connector, even when space is limited
- Quick and efficient analysis of reading performance and code quality
- Cloning systems create backup copies of parameters, ensuring short machine downtimes in the event of malfunctions
- Proven SICK LifeTime Services



Additional information

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→ www.mysick.com/en/Lector62x

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

	Lector620 ECO	Lector620 Professional	Lector620 High Speed	Lector620 DPM Plus	Lector620 OCR
Focus	Adjustable focus (electrically)	Teach auto focus			
Sensor	CMOS matrix sensor, gray scale values				
Light source	Illumination LEDs: visible red light ($\lambda = 617 \pm 15$ nm), feedback spot: visible green light ($\lambda = 525 \pm 15$ nm)	Illumination LEDs: visible red light ($\lambda = 617 \pm 15$ nm), visible blue light ($\lambda = 470 \pm 15$ nm) Feedback spot: visible green light ($\lambda = 525 \pm 15$ nm) Aiming laser: visible red light ($\lambda = 630 \dots 680$ nm) / Illumination LEDs: invisible infrared light ($\lambda = 850 \pm 25$ nm)	Illumination LEDs: visible red light ($\lambda = 617 \pm 15$ nm), visible blue light ($\lambda = 470 \pm 15$ nm) Feedback spot: visible green light ($\lambda = 525 \pm 15$ nm) Aiming laser: visible red light ($\lambda = 630 \dots 680$ nm)	Illumination LEDs: visible red light ($\lambda = 617 \pm 15$ nm), visible blue light ($\lambda = 470 \pm 15$ nm) Feedback spot: visible green light ($\lambda = 525 \pm 15$ nm) Aiming laser: visible red light ($\lambda = 630 \dots 680$ nm) / Illumination LEDs: visible blue light ($\lambda = 470 \pm 15$ nm)	Illumination LEDs: visible red light ($\lambda = 617 \pm 15$ nm), visible blue light ($\lambda = 470 \pm 15$ nm) Feedback spot: visible green light ($\lambda = 525 \pm 15$ nm) Aiming laser: visible red light ($\lambda = 630 \dots 680$ nm)
MTBF	75,000 h				
LED class	1, Irradiance $L_B < 10$ kW/(m ² sr) within 100 s, $L_R < 7 \times 10^5$ W/(m ² sr) within 10 s, at a distance of ≥ 200 mm. (IEC 62471 (2006-07) / EN 62471 (2008-09))	1, Irradiance $L_B < 10$ kW/(m ² sr) within 100 s, $L_R < 7 \times 10^5$ W/(m ² sr) within 10 s, at a distance of ≥ 200 mm. (IEC 62471 (2006-07) / EN 62471 (2008-09)) 0, Irradiance: $E_{IR} < 100$ W/m ² within 1,000 s at a distance ≥ 200 mm (IEC 62471 (2006-07) / EN 62471 (2008-09)) (depending on type)	1, Irradiance $L_B < 10$ kW/(m ² sr) within 100 s, $L_R < 7 \times 10^5$ W/(m ² sr) within 10 s, at a distance of ≥ 200 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	25 Hz, WVGA resolution	60 Hz, WVGA resolution			
Code resolution	≥ 0.1 mm ¹⁾			≥ 0.1 mm ... ≥ 0.2 mm ¹⁾ (depending on type)	≥ 0.1 mm ¹⁾
Character height	-				≥ 1 mm

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

²⁾ For details see reading field diagram.

	Lector620 ECO	Lector620 Professional	Lector620 High Speed	Lector620 DPM Plus	Lector620 OCR
Reading distance	40 mm ... 1,500 mm ^{1) 2)}		30 mm ... 500 mm ^{1) 2)}	30 mm ... 1,000 mm ^{1) 2)} (depending on type)	30 mm ... 300 mm ^{1) 2)}

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

²⁾ For details see reading field diagram.

Performance

	Lector620 ECO	Lector620 Professional	Lector620 High Speed	Lector620 DPM Plus	Lector620 OCR
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			Data Matrix ECC200, GS1 Data-Matrix, PDF417, QR code, PDF417 Truncated, Data-Matrix SEMI PV29-0212 (depending on type)	Data Matrix ECC200, GS1 Data-Matrix, PDF417, QR code, PDF417 Truncated
Code qualification	-	On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 15416, ISO/IEC 18004		On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004, ISO TR 29158/AIM DPM	
OCR fonts	-				Trainable fonts
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	2 m/s	4 m/s	6 m/s	4 m/s	

Interfaces

	Lector620 ECO	Lector620 Professional	Lector620 High Speed	Lector620 DPM Plus	Lector620 OCR
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/s			
Protocol	PROFINET (optional via external connection module CDM), EtherCAT® (optional over external fieldbus module CDF600)	TCP/IP, FTP (image transmission), PROFINET (with special software only), EtherNet/IP, EtherCAT® (optional over external fieldbus 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 over external fieldbus module (CDF600-2)				
Switching inputs	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)				

	Lector620 ECO	Lector620 Professional	Lector620 High Speed	Lector620 DPM Plus	Lector620 OCR
Switching outputs	4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)	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)			
Reading pulse	Switching inputs, non-powered, serial interface, CAN, auto pulse, presentation mode	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	-	Micro SD memory card (flash card) max. 32 GB, optional			
Data storage and retrieval	Images and file logging via MicroSD memory card, internal memory and external FTP				
Maximum encoder frequency	300 Hz				
External illumination control	Via digital output (max. 24 V trigger)				

Mechanics/electronics

	Lector620 ECO	Lector620 Professional	Lector620 High Speed	Lector620 DPM Plus	Lector620 OCR
Electrical connection	1 x 15-pin D-Sub HD male connector (0.9 m)	1 x M12, 17-pin male connector 1 x M12, 4-pin Ethernet female connector Circular plug-in connector	1 x M12, 17-pin male connector 1 x M12, 4-pin Ethernet female connector		
Operating voltage	10 V DC ... 30 V DC				
Power consumption	Typ. 3 W				
Output current	≤ 100 mA				
Housing	Aluminum die cast				
Housing color	Light blue (RAL 5012)				
Protection class	III				
Weight	170 g				
Dimensions	71 mm x 43 mm x 35.6 mm ¹⁾				

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

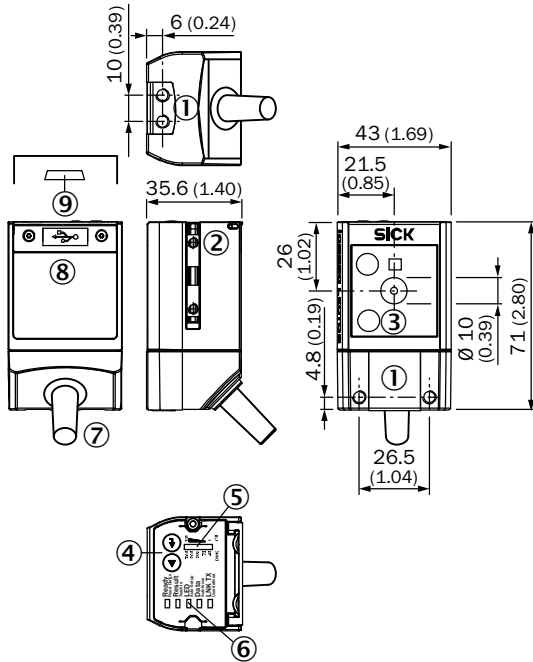
Ordering information

- **Reading field:** side
- **Sensor resolution:** 752 px x 480 px (WVGA)
- **Lens:** integrated

Version	Focal length	Internal lighting	Enclosure rating	Type	Part no.
Lector620 ECO	7 mm	Red	IP 65	ICR620E-H12013 ECO	1054507
Lector620 Professional	7 mm	Red, Blue	IP 65	ICR620S-T11503 Professional	1050589
			IP 67	ICR620S-T11504 Professional	1054375
		Infrared	IP 65	ICR620S-T16503 Professional	1058623
Lector620 High Speed	7 mm	Red, Blue	IP 65	ICR620H-T11503 High Speed	1055890
Lector620 DPM Plus	7 mm	Red, Blue	IP 65	ICR620D-T11503 DPM Plus	1055891
		Blue	IP 65	ICR620D-T17503 DPM Plus Solar	1060912
	12 mm	Red, Blue	IP 65	ICR620D-T31503 DPM Plus	1064255
	18 mm	Red, Blue	IP 65	ICR620D-T51503 DPM Plus	1064256
Lector620 OCR	7 mm	Red, Blue	IP 65	ICR620C-T11503S50 OCR	1062803

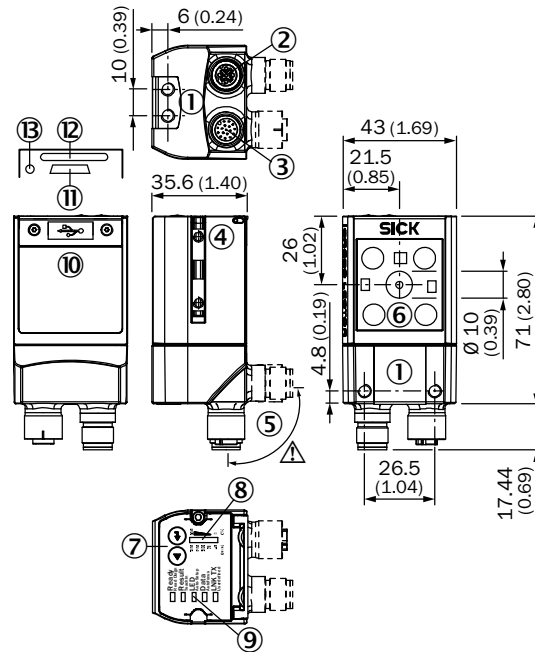
Dimensional drawings (Dimensions in mm (inch))

Lector620 ECO



- ① Blind hole thread M5, 5 mm deep (4 x), for mounting
- ② Sliding nut M5, 5 mm deep (2 x), for mounting (as alternative)
- ③ Reading field
- ④ Function button (2 x)
- ⑤ Bar graph display
- ⑥ LED for status display (2 levels), 5 x
- ⑦ Cable with 15-pin D-sub HD male connector
- ⑧ Cover (flap)
- ⑨ "Micro USB" connection

Lector620 Professional
Lector620 High Speed
Lector620 DPM Plus
Lector620 OCR



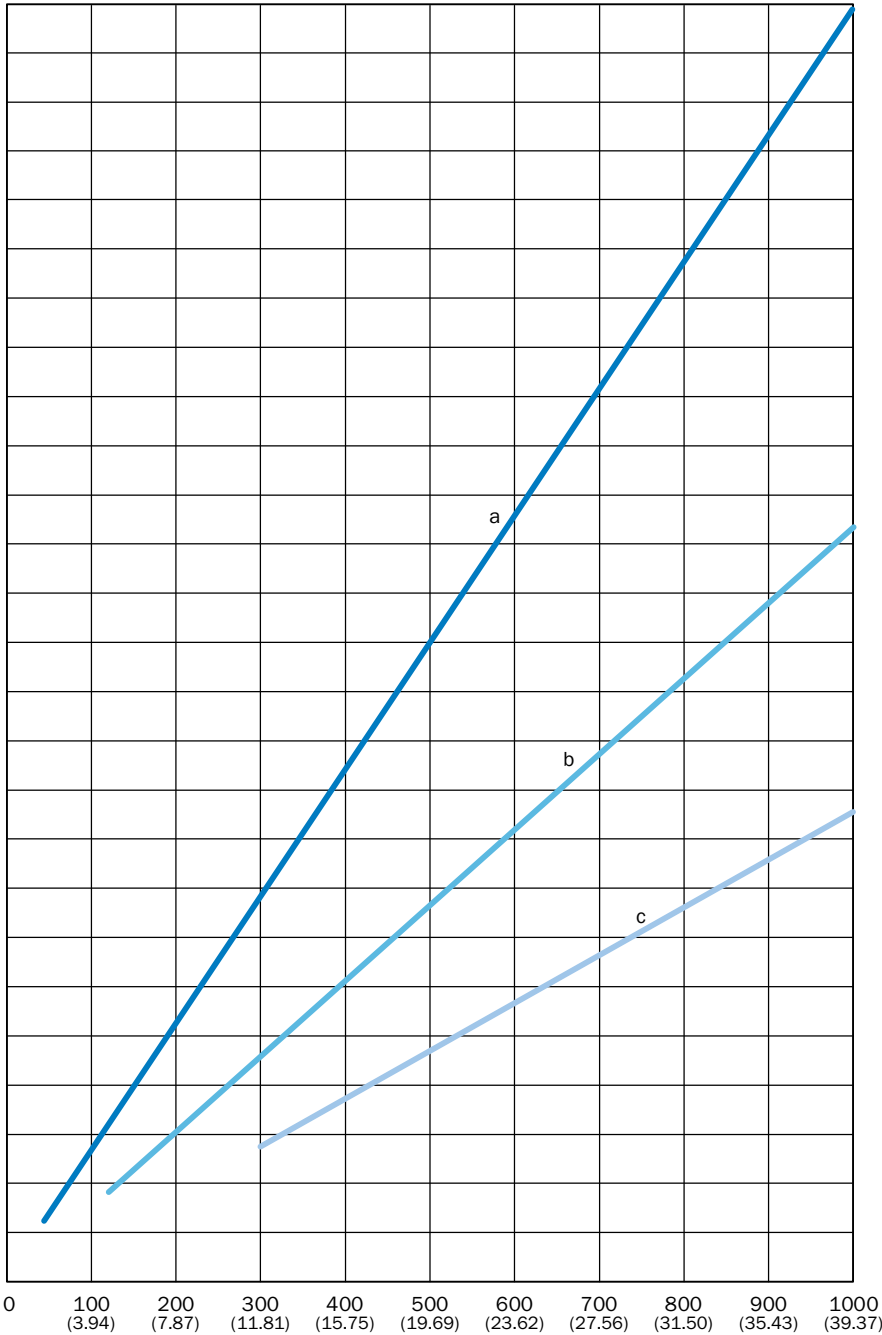
- ① Blind hole thread M5, 5 mm deep (4 x), for mounting
- ② Ethernet connection
- ③ "Power/Serial Data/CAN/I/O" connection
- ④ Sliding nut M5, 5 mm deep (2 x), for mounting (as alternative)
- ⑤ Swivel connector unit
- ⑥ Reading field
- ⑦ Function button (2 x)
- ⑧ Bar graph display
- ⑨ LED for status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

Field of view

Lector620 ECO (ICR620E-H12013), Lector620 Professional (ICR620S-T11504, ICR620S-T11503),
Lector620 DPM Plus (ICR620D-T31503, ICR620D-51503)

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)



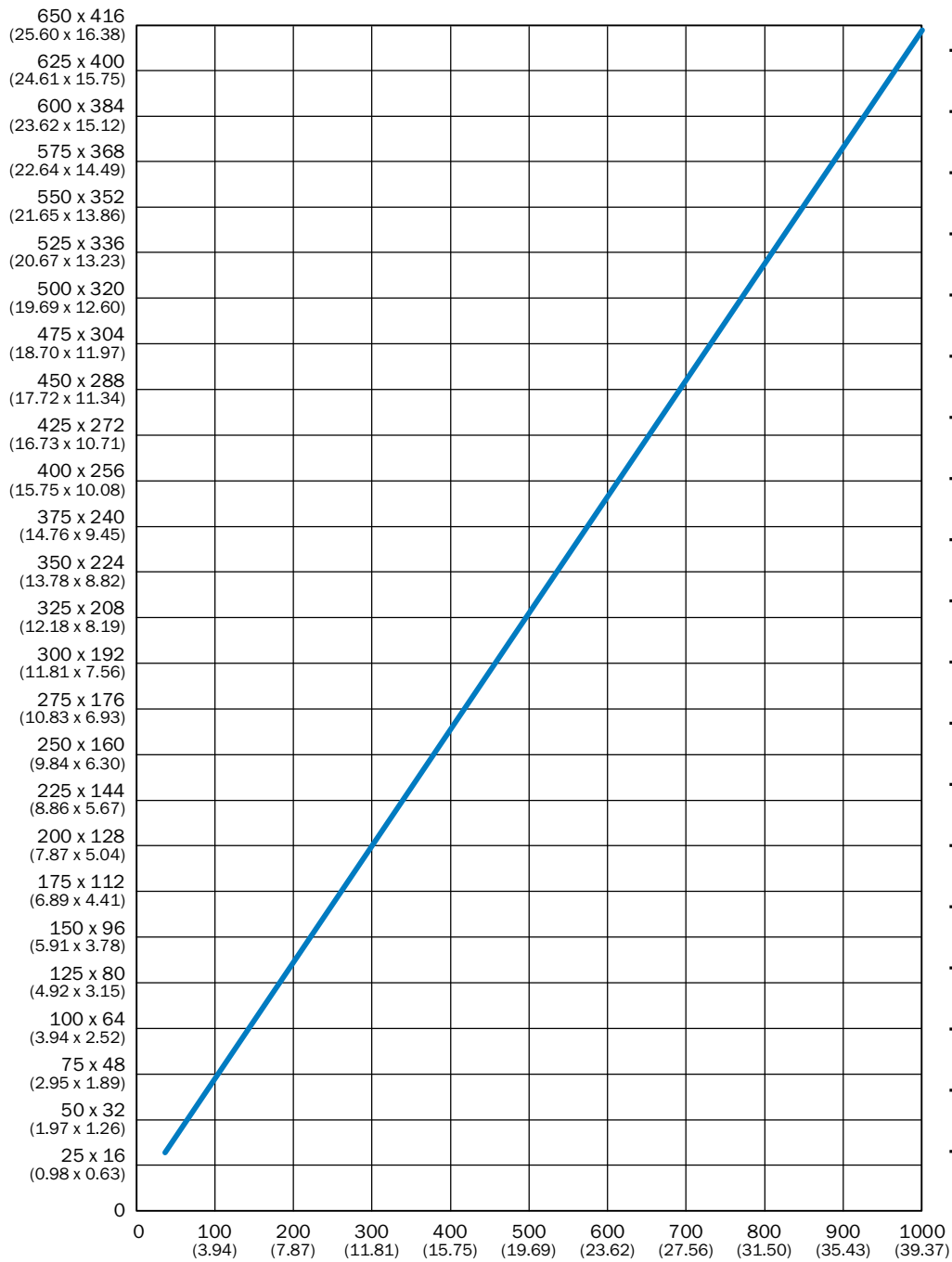
Min. resolution in mm (mil)

1D code	2D code
1.3 (51.2)	1.7 (66.9)
1.2 (47.2)	1.6 (63.0)
1.1 (43.3)	1.5 (59.1)
1.0 (39.4)	1.4 (55.1)
0.9 (35.4)	1.3 (51.2)
0.8 (31.5)	1.2 (47.2)
0.7 (27.6)	1.1 (43.3)
0.6 (23.6)	1.0 (39.4)
0.5 (19.7)	0.9 (35.4)
0.4 (15.7)	0.8 (31.5)
0.3 (11.8)	0.7 (27.6)
0.2 (7.9)	0.6 (23.6)
0.1 (3.9)	0.5 (19.7)
	0.4 (15.7)
	0.3 (11.8)
	0.2 (7.9)
	0.1 (3.9)

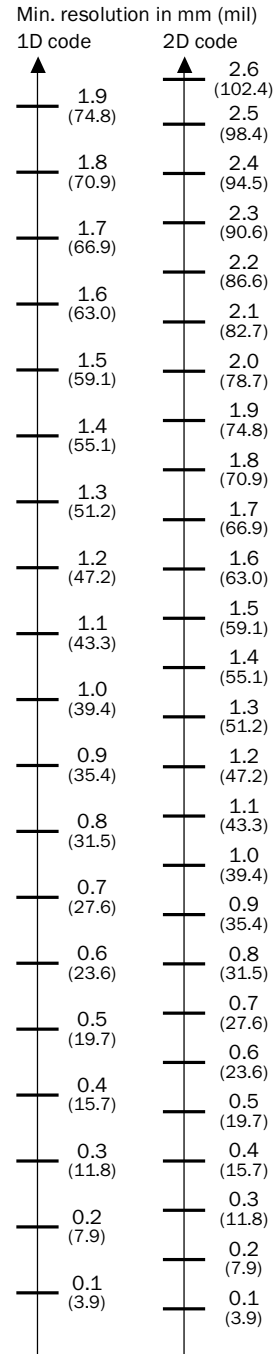
- a: f = 7 mm (ICR620E-H12013, ICR620S-T11503, ICR620S-T11504)
- b: f = 12 mm (ICR620D-T31503)
- c: f = 18 mm (ICR620D-T51503)

Lector620 Professional (ICR620S-T16503)

Field of view in mm² (sq inch)



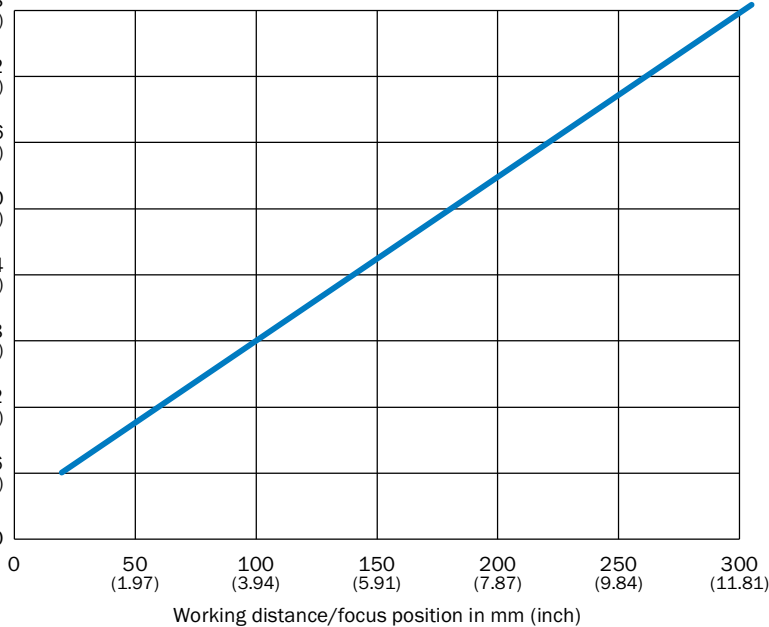
— f = 7 mm (ICR620S-T16503)



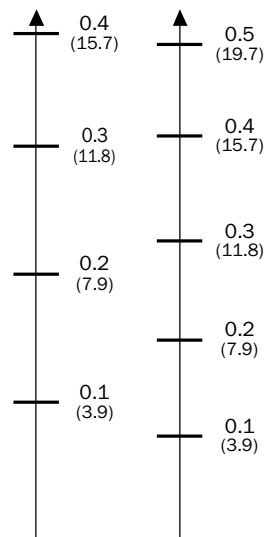
Lector620 High Speed (ICR620H-T11503), Lector620 DPM Plus (ICR620D-T11503, ICR620D-T17503),
Lector620 OCR (ICR620C-T11503S50)

Field of view in mm² (sq inch)

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

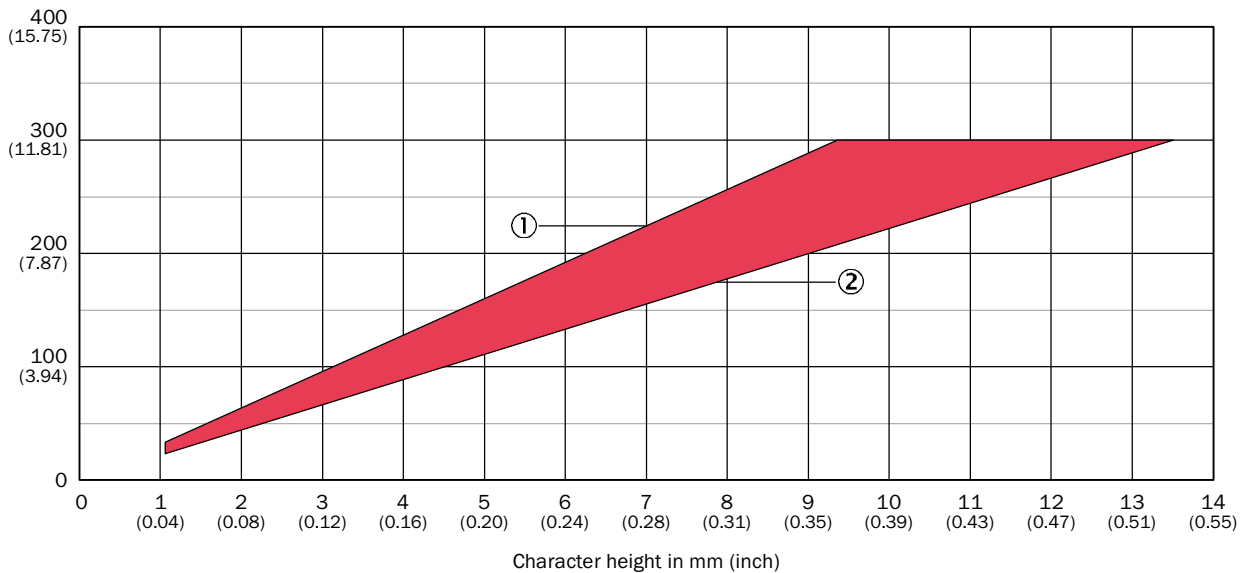


— f = 7 mm (ICR620H-T11503, ICR620D-T11503, ICR620D-T17503, ICR620C-T11503S50)

Reading field diagrams

Lector620 OCR

Working distance in mm (inch)




- ① Maximum distance
- ② Minimum distance

Recommended accessories




Mounting systems

Mounting brackets and mounting plates





	Brief description	Part no.	Lector62xECO	Lector62x
	Bracket with adapter board	2042902	●	●

Connection systems

Modules

	Brief description	Type	Part no.	Lector62xECO	Lector62x
	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

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62xECO	Lector62x
	Power, serial, CAN, digital I/Os	Female connector, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	2 m	2055419	-	●
	Ethernet	Male connector, M12, 4-pin, D-coded	Male connector, M12, 4-pin, D-coded	4-wire	2 m	6034420	-	●
		Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, drag chain use, AWG26	2 m	6034414	-	●
	USB 2.0	Male connector, USB-A	Male connector, Micro-B	-	2 m	6036106	●	●

→ For additional accessories, please see page 56