



ICR620E-H12013 ECO

Lector62x

IMAGE-BASED CODE READERS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
ICR620E-H12013 ECO	1054507

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



Detailed technical data

Features

Optical focus	Adjustable focus (electric)
Sensor	CMOS matrix sensor, grayscale values
Sensor resolution	752 px x 480 px (WVGA)
Illumination	Integrated
Illumination color	Red, LED, Visible, 617 nm
LED class	1 (IEC 62471:2006-07, EN 62471:2008-09)
Feedback spot	LED, Visible, green, 525 nm
Laser class	EN 60825-1:2014+A11:2021
Lens	
	Focal length 7 mm
Reading distance	40 mm ... 1,500 mm ^{1) 2)}
Scanning frequency	25 Hz, WVGA resolution
Code resolution	≥ 0.1 mm ¹⁾

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

²⁾ For details see reading field diagram.

Mechanics/electronics

Connection type	1 x 15-pin D-Sub HD male connector (0.9 m)
Supply voltage	10 V DC ... 30 V DC
Power consumption	Typ. 3 W
Output current	≤ 100 mA

¹⁾ Swivel connector is 17.8 mm longer.

Housing material	Aluminum die cast
Housing color	Light blue (RAL 5012)
Window material	Glass
Enclosure rating	IP65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))
Protection class	III
Electrical safety	EN 60950-1 (2006-04) / EN 60950-1/A11 (2009-03)
Weight	170 g
Dimensions (L x W x H)	71 mm x 43 mm x 35.6 mm ¹⁾
MTBF	75,000 h

¹⁾ Swivel connector is 17.8 mm longer.

Performance

Readable code structures	1D codes, Stacked, 2D codes
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
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

Interfaces

PROFINET	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
Function	PROFINET Single Port, PROFINET Dual Port
EtherCAT	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
Serial	✓, 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)
CAN	✓
Function	SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)
Data transmission rate	20 kbit/s ... 1 Mbit/s
CANopen	✓
Data transmission rate	20 kbit/s ... 1 Mbit/s
PROFIBUS DP	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
Digital inputs	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Digital outputs	4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)
Reading pulse	Digital inputs, non-powered, serial interface, 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)
Operator interfaces	Web server
Configuration software	SOPAS ET
Data storage and retrieval	Image and data storage via microSD memory card and external FTP
Maximum encoder frequency	Max. 300 Hz
External illumination control	Via digital output (max. 24 V trigger)

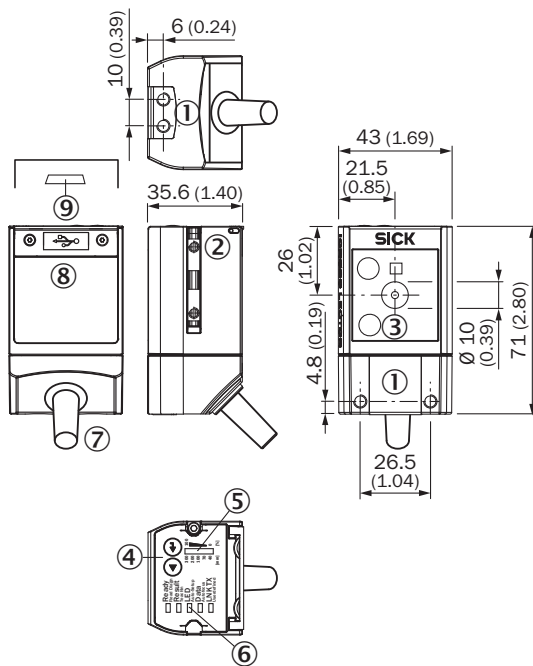
Ambient data

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
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

Classifications

ECLASS 5.0	27280103
ECLASS 5.1.4	27280103
ECLASS 6.0	27280103
ECLASS 6.2	27280103
ECLASS 7.0	27280103
ECLASS 8.0	27280103
ECLASS 8.1	27280103
ECLASS 9.0	27280103
ECLASS 10.0	27280103
ECLASS 11.0	27280103
ECLASS 12.0	27280103
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002999
ETIM 8.0	EC002999
UNSPSC 16.0901	43211701

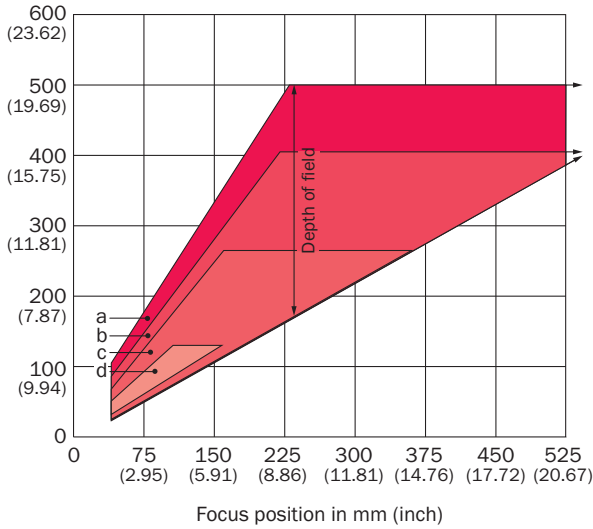
Dimensional drawing (Dimensions in mm (inch))



- ① M5 blind tapped holes, 5 mm deep (4 x), for mounting the sensor
- ② 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 LEDs for status display (2 levels), 5 x
- ⑦ Cable with 15-pin D-sub HD male connector
- ⑧ Cover (flap)
- ⑨ "Micro USB" connection

Reading field diagram

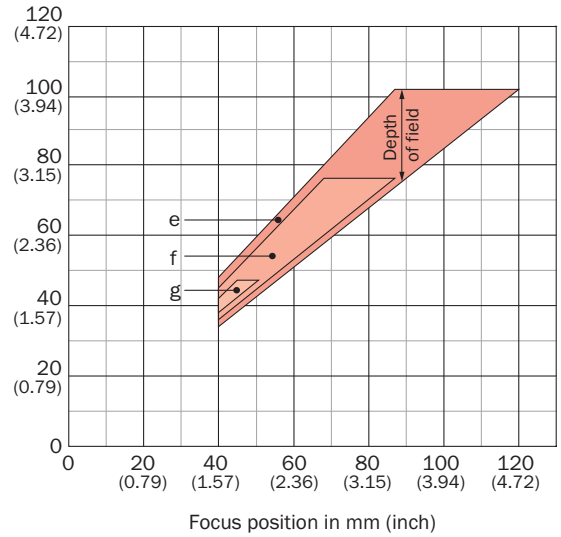
Working distance in mm (inch)



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)

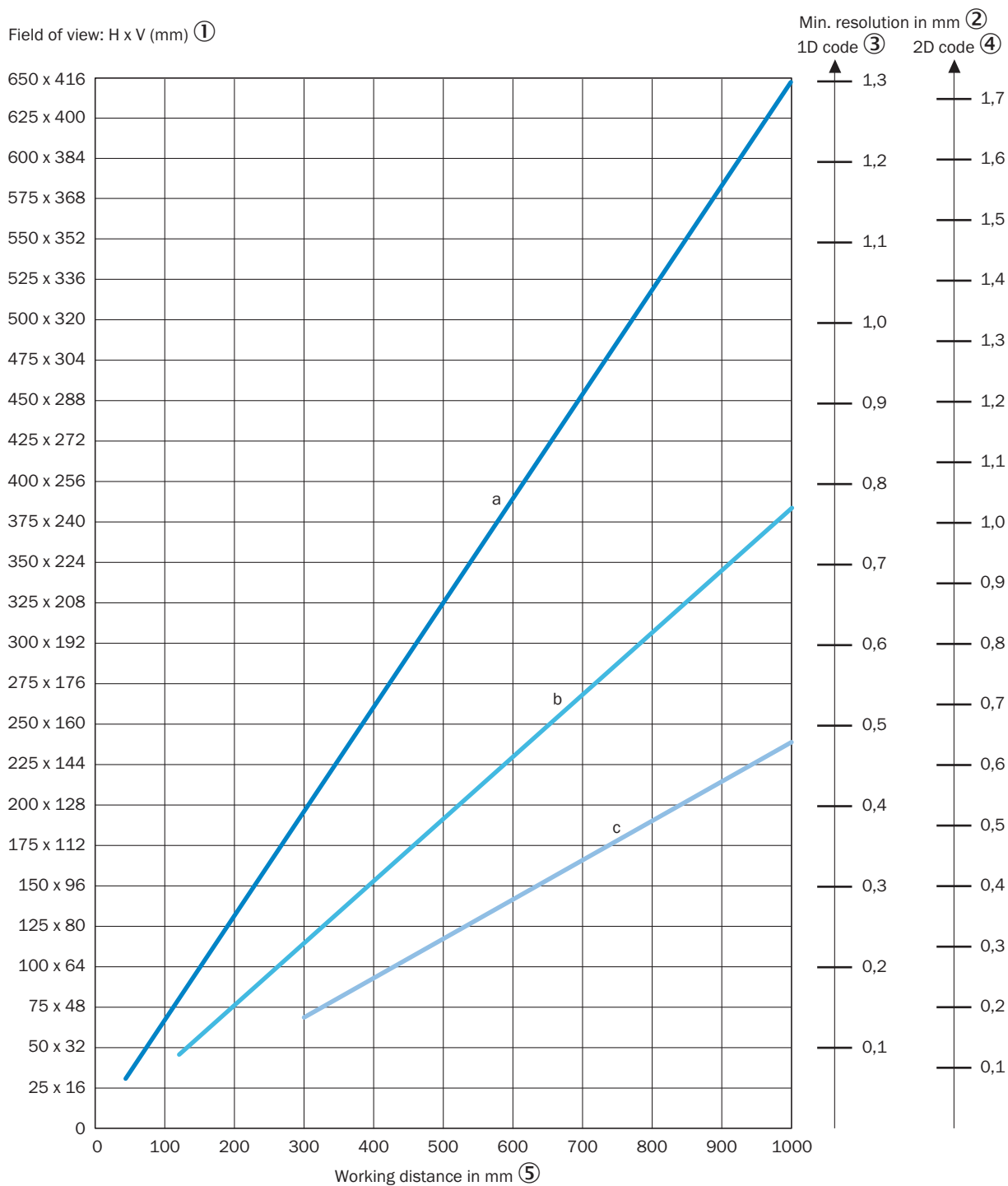
Working distance in mm (inch)



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

	Brief description	Type	Part no.
Modules			
	<ul style="list-style-type: none"> Accessory group: 4DproConnectivity Product family: Connection Device Basic Sub product family: CDB620 Supported products: CLV61x - CLV65xLector62xRFH6xxRFU62x Brief description: Small connection module for one sensor, 4 cable glands, base for CMC600 	CDB620-001	1042256
	<ul style="list-style-type: none"> Accessory group: 4DproConnectivity Product family: Connection Device Fieldbus Sub product family: CDF600-2 PROFIBUS DP Supported products: Lector seriesCLV61x - CLV65xCLV69xRFID read/write deviceMo- bile handheld scanners Brief description: 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
	<ul style="list-style-type: none"> Accessory group: 4DproConnectivity Product family: Connection Device Fieldbus Sub product family: CDF600-2 PROFIBUS DP Supported products: Lector seriesCLV61x - CLV65xCLV69xRFID read/write deviceMo- bile handheld scanners Brief description: Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin) 	CDF600-2103	1058966
Mounting brackets and plates			
	Bracket with adapter board	Mounting bracket	2042902
Others			
	<ul style="list-style-type: none"> Connection type head A: Male connector, Micro-B, 4-pin, straight Connection type head B: Male connector, USB-A, 4-pin, straight Signal type: USB 2.0 Cable: 2 m, 4-wire Description: USB 2.0, unshielded 	USB cable	6036106

Recommended services

Additional services → www.sick.com/Lector62x

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

	Type	Part no.
Maintenance		
<ul style="list-style-type: none"> • Product area: Image-based code readers • Range of services: 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 • Duration: Additional work will be invoiced separately 	Maintenance Lector	1611421
Commissioning		
<ul style="list-style-type: none"> • Product area: Image-based code readers • Range of services: 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 • Duration: Additional work will be invoiced separately 	Commissioning Lector	1608206
Extended warranty		
<ul style="list-style-type: none"> • Product area: 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 • Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery). • Duration: Five-year warranty from delivery date. 	Extended warranty for a total of five years from delivery date	1680671

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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.”

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