



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

Reading field	Side
Focus	Adjustable focus (electrically)
Sensor	CMOS matrix sensor, grayscale values
Sensor resolution	752 px x 480 px (WVGA)
Internal lighting	Red
Light source	Illumination LEDs: visible red light ($\lambda = 617 \pm 15$ nm), feedback spot: visible green light ($\lambda = 525 \pm 15$ nm)
MTBF	75,000 h
LED class	1 (IEC 62471 (2006-07) / EN 62471 (2008-09))
Scanning frequency	25 Hz, WVGA resolution
Focal length	7 mm
Code resolution	≥ 0.1 mm ¹⁾
Reading distance	40 mm ... 1,500 mm ^{1) 2)}

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

²⁾ For details see reading field diagram.

Performance

Readable code structures	1D, 2D, Stacked
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 via external connection module CDM
EtherCAT®		✓
	Type of fieldbus integration	Optional over external fieldbus module CDF600-2
Serial		✓, RS-232, RS-422
	Function	Host, AUX
	Data transmission rate	0.3 kBaud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)
CAN		✓
	Function	SICK CAN sensor network (Master/Slave, 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
USB		✓
	Remark	USB 2.0
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 optional parameter storage CMC600 in CDB620/CDM420)
Reading pulse		Switching 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)
Operating elements		2 buttons (choose and start/stop functions)
Configuration software		SOPAS ET
Data storage and retrieval		Image and data storage via microSD memory card, internal storage and external FTP
Maximum encoder frequency		300 Hz
External illumination control		Via digital output (max. 24 V trigger)

Mechanics/electronics

Electrical connection	1 x 15-pin D-Sub HD male connector (0.9 m)
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)
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⁾

¹⁾ Swivel connector is 17.8 mm longer.

Lens	7 mm, integrated
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¹⁾ Swivel connector is 17.8 mm longer.

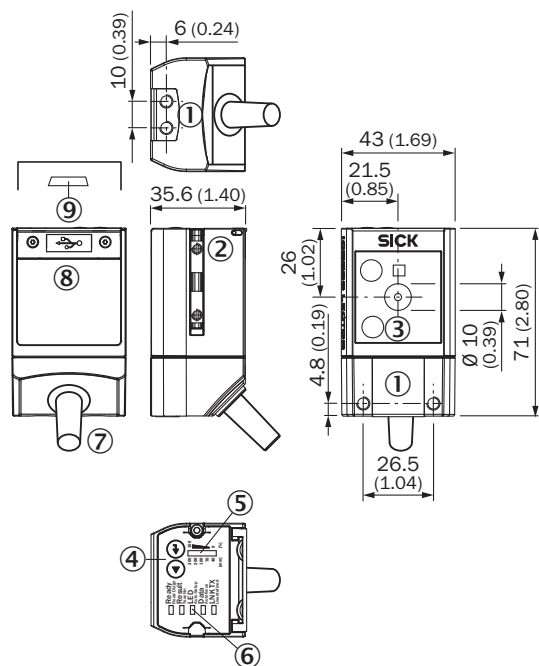
Ambient data

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)
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

ECl@ss 5.0	27280103
ECl@ss 5.1.4	27280103
ECl@ss 6.0	27280103
ECl@ss 6.2	27280103
ECl@ss 7.0	27280103
ECl@ss 8.0	27280103
ECl@ss 8.1	27280103
ECl@ss 9.0	27280103
ETIM 5.0	EC002550
ETIM 6.0	EC002550
UNSPSC 16.0901	43211701

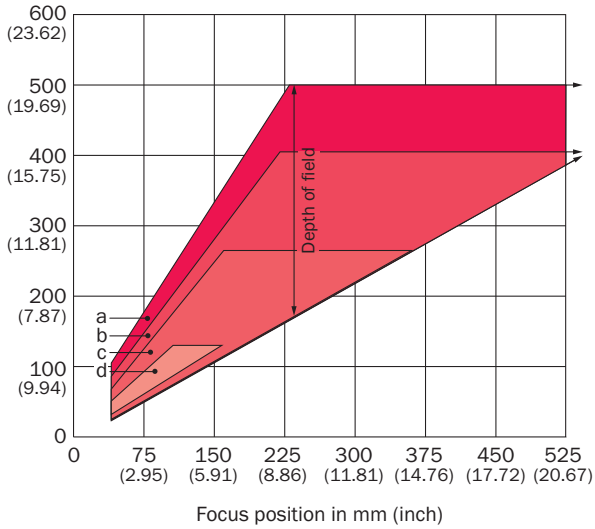
Dimensional drawing (Dimensions in mm (inch))



- 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

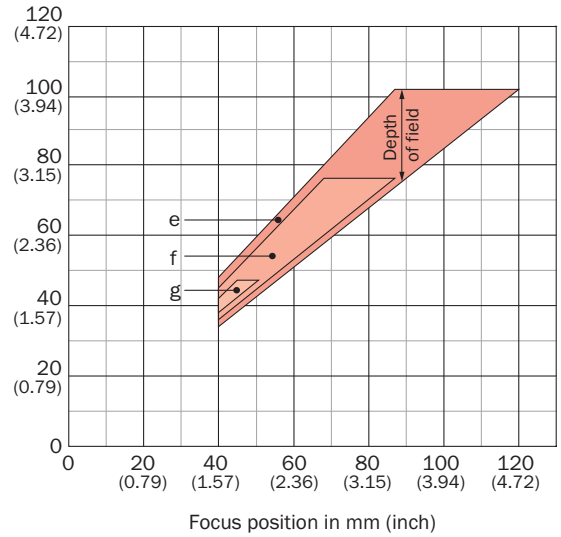
Working distance in mm (inch)



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)

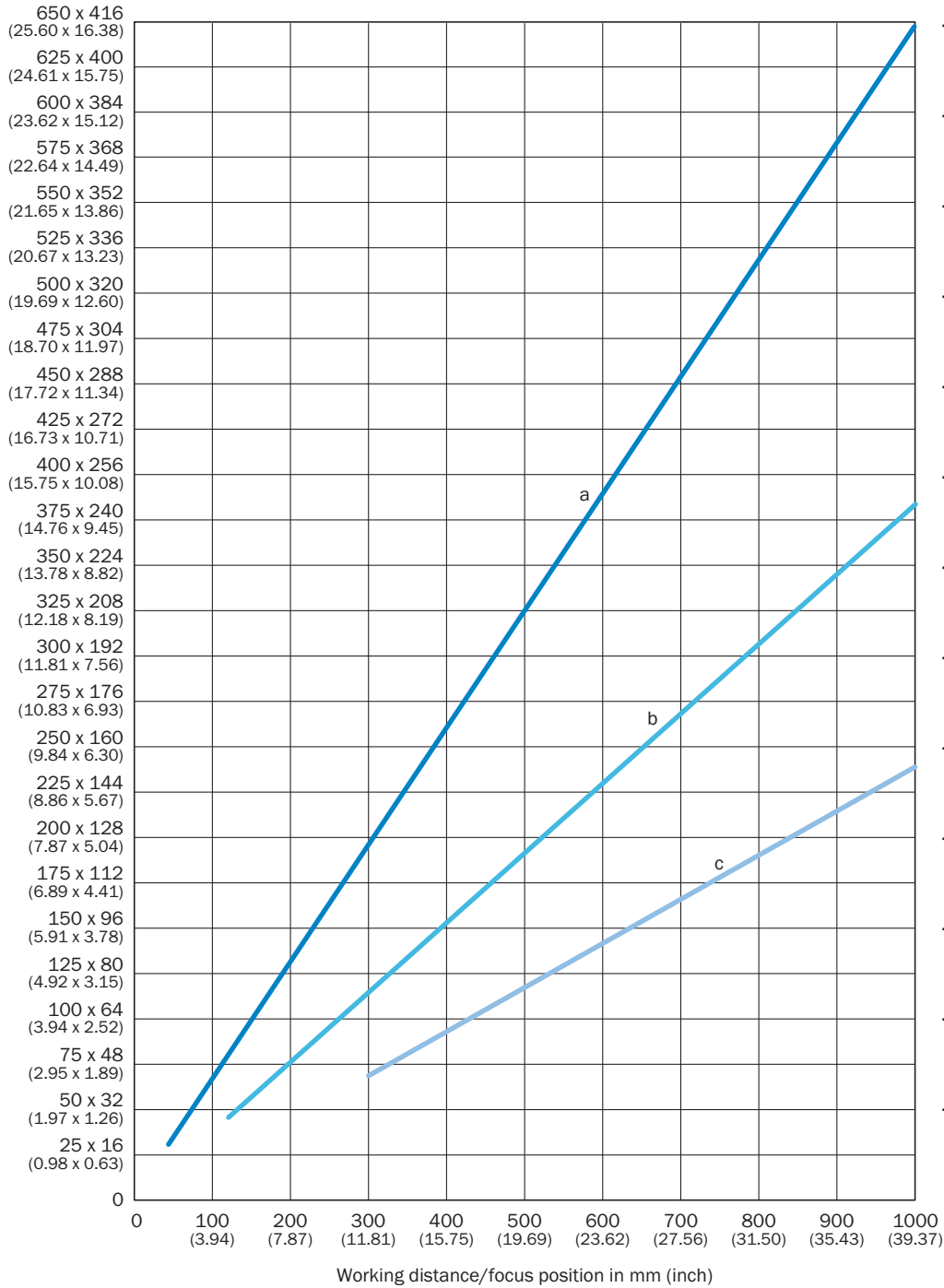


Resolution

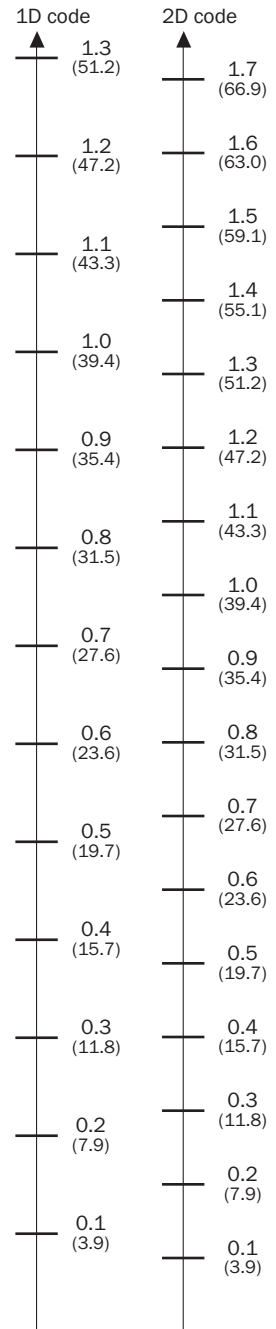
- e: 0.20 mm (7.9 mil)
- f: 0.15 mm (5.9 mil)
- g: 0.10 mm (3.9 mil)

Field of view

Field of view in mm² (sq inch)





Min. resolution in mm (mil)



- 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.com/Lector62x

	Brief description	Type	Part no.
Mounting brackets and plates			
	Bracket with adapter board	Mounting bracket	2042902
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: male connector, USB-A Head B: male connector, Micro-B Cable: USB 2.0, unshielded, 2 m	USB cable	6036106

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:

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