Lector® Series
THE READING EDGE

Image-based code readers

SICK
Sensor Intelligence.

Bar code scanners

Laser-based bar code scanners have an outstanding depth of field and are thus easily able to identify bar codes on objects of varying heights. Thanks to the wide aperture angles up to 60°, one device is able to cover most belt widths.

RFID

RFID is particularly well suited to harsh ambient conditions, for example extreme temperatures or identification objects under high physical stresses. Optical technologies require visual contact at all times in order to detect the code and are therefore more susceptible to wear or contamination.

➜ www.sick.com/more-than-a-vision

MORE THAN A VISION

**Intelligent questions have more than one answer.
The best technology depends on the task at hand.**

In the real world, providing an effective solution for automatic identification requires more than just one technology. With SICK you have a choice. Three technologies, one philosophy: customer needs come first.

For every identification task, the same question is asked: Which technology is best? And as always in life, there is never just one answer for every question. The best possible solution is always tailored to the individual technical and economic conditions of the application.

Three identification technologies have dominated the market for many years: RFID, image-based code readers and laser-based bar code scanners. As the market leader in automatic identification, SICK has not only mastered all the main technologies, but also poses the right questions to ensure the right products are selected from its technology portfolio.

Image-based code readers

Image-based code readers with camera technology are characterized by their flexibility in reading a variety of code types. In addition to reading 1D bar codes, they employ a range of image processing algorithms to identify 2D codes, such as the frequently used Data Matrix, QR, or Maxi-Codes, as well as optical character recognition. They make light work of switching from bar codes to 2D codes.

- Flexible code reading (1D, 2D and OCR)
- Live image and image storage for analysis or data archiving
- Omnidirectional reading with just one device
- Reading, evaluation and analysis even when codes are damaged
- Reliable reading of codes with a wide variety of module widths
- No moving parts

WHAT'S YOUR CODE READING CHALLENGE?

The Lector® series of image-based code readers offers you a unique combination of accuracy, reliability and a quick, intuitive setup process.

Covering every imaginable application, the Lector® series offers you a solution to even your most demanding challenges. High conveyor speeds and partially damaged codes? Not an issue. Accurate identification of 1D, 2D and OCR codes on a wide range of different materials? Consider it done. A massive throughput of differently sized objects? We have it covered.

The whole range also offers a wide spectrum of connectivity options enabling you to integrate Lector® series readers

seamlessly into new or existing installations. This, coupled with a series-wide user interface, means you're up and running in no time.

With SICK's unparalleled experience in a wide range of industries, proven technology and great connectivity you get the right solution to the toughest challenges every time.

The Lector62x

Clever. Simple. Industrial.
The most compact reader of the series the Lector62x punches well above its weight. Accurate and reliable identification for 1D, 2D and OCR codes are its specialty, even when the codes are damaged. Lector62x comes in five specialized versions.

The Lector63x

Intelligent. Flexible. Intuitive.
Offering an optimal combination of performance and flexibility in a compact housing, the Lector63x is perfect where higher resolution, greater scanning performance and long range reading really come into play. The Lector63x handles fast moving objects and small codes with ease.

The Lector64x

Efficient. Adjustable. Functional.

If you like the all around nature of the Lector63x but need more performance, then this is the solution for you. The Lector64x offers even greater processing power and stronger illumination than the Lector63x. These factors in addition to its wide field of view and large depth of field mean the Lector64x can read codes in a wide variety of different positions, object heights, and at different transport speeds.

The Lector65x

Dynamic. Non-Stop. Precise.

With its high resolution and dynamic focus, the Lector65x is in a class of its own. Ideal for extremely high throughput installations such as logistics operations and factory automation. The combination of dynamic focus, 2-4 megapixel resolution and wide field of view makes the Lector65x the class leader.
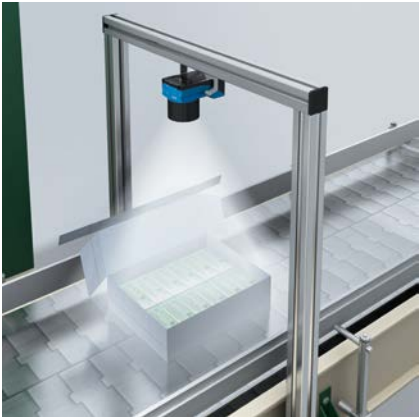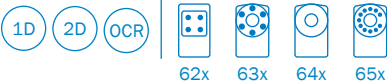
THERE'S A LECTOR® FOR
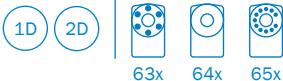# EVERY READING CHALLENGE

Consumer goods
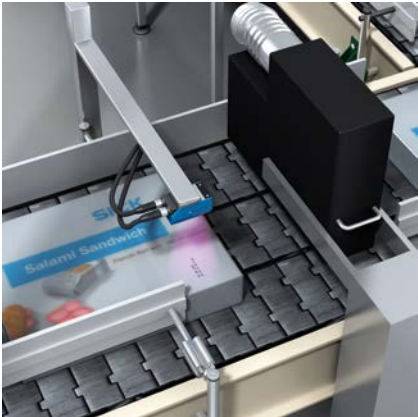
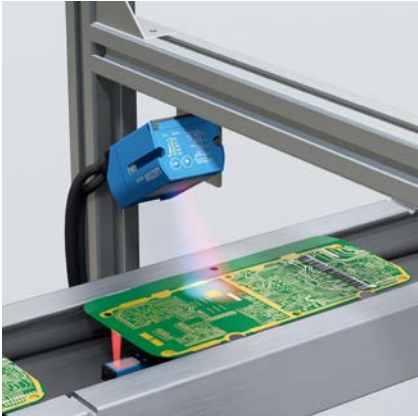**Date code inspection in food and beverage**

(OCR) | 62x

Serialization and box content verification in pharma and cosmetics

(1D) (2D) (OCR) | 62x 63x 64x 65x

End of line aggregation in pharma, food and beverage

(1D) (2D) | 63x 64x 65x

Electronics & Solar

PCB identification

(1D) (2D) | 62x 63x
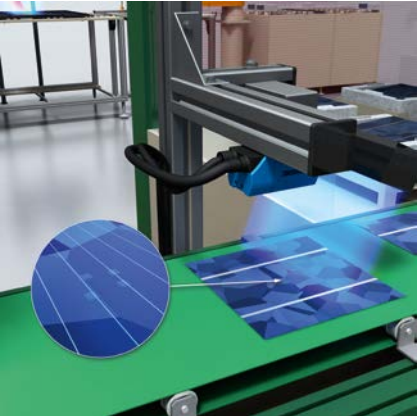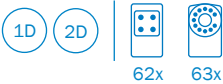
Quality assurance of freshly applied direct marked codes

(1D) (2D) | 62x

Part tracking in electronics assembly

(1D) (2D) | 62x 63x
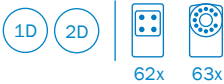
Automotive
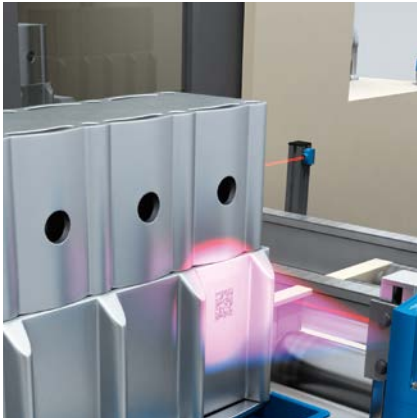
Individual production control and variant management

(1D) (2D) | 62x 63x 64x
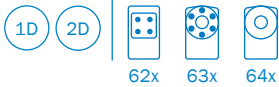
Tire identification in dynamic applications with varying height

(1D) (2D) | 63x 64x 65x
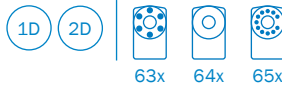
Long-range identification for traceability

(1D) (2D) | 63x 64x
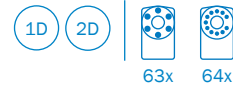
Courier, Express, Postal & Cargo (CEP)

Presentation camera for manual parcel sorting

(1D) (2D) | 63x 64x 65x

Material handling in automated sorting systems for courier, express, parcel as well as retail

(1D) (2D) | 63x 64x 65x

Tote box identification

(1D) (2D) | 62x 63x
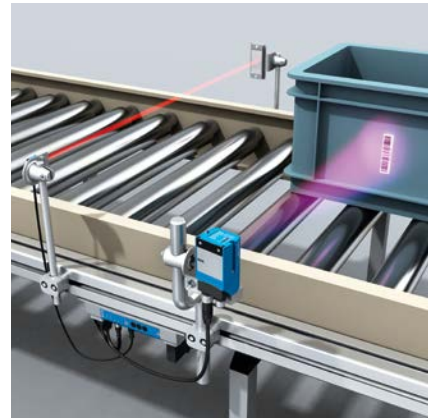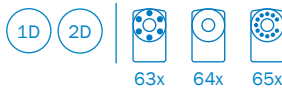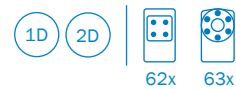
MAKING LIFE SIMPLE WITH A POWERFUL, COMMON PLATFORM ACROSS THE RANGE.

Easy to set up, easy to operate, easy to exchange. The whole Lector®
series of image-based readers offers a comprehensive range of
common features, each one aimed at maximizing performance and
reliability while allowing simplicity in use. This solid, common base
combined with each reader's individual strengths ensure that the
Lector® series really does cover all your needs.

SOPAS Interface.
Comprehensive configuration
and monitoring tool that allows
simple oversight of the reading
process.

IP65/67 housing. With adjustable mounting.
Industry proven housings for
tough environments, also allowing
multiple mounting options.

Function buttons.
Allow easy set up without
connection to PC.

Aiming laser.
Helps locate the center of field
of view during setup.
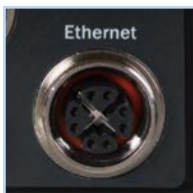
TCP/IP, EtherNet/IP, EtherCAT, PROFINET, PROFIBUS, Serial, CAN Ports.
Wide range of interfaces enhances
flexibility.

USB Interface.
Enables easy plug-and-play analysis.

Audio and visual feedback.
Instant read-feedback in all
environments via a green LED
and an audio signal.

MicroSD, memory card slot.
Parameter cloning and image storage.

THE SAME POWERFUL PLATFORM
BUT EACH WITH UNIQUE STRENGTHS

THE LECTOR62x

VARIANTS: ECO / PROFESSIONAL / HIGH SPEED / DPM PLUS /OCR

Available in 5 highly specialized versions each engineered to meet your specific needs.

- » Compact housing
- » 0.4 Megapixel
- » Swivel connector
- » Autofocus at teach
- » 1D/2D/DPM/OCR codes

THE LECTOR63x

VARIANTS: FLEX

The all around reader with flexible optics in a compact housing.

- » S-mount and C-mount
- » 1.9 Megapixel
- » Intelligent filter design
- » Exchangeable illumination
- » 1D/2D codes

THE LECTOR64x

VARIANTS: FLEX

The functional code reader with impressive depth of field.

» Dual-port PROFINET   » High power illumination
» 1.7 Megapixel   » 1D/2D codes
» Panorama accessory

THE LECTOR65x

VARIANTS: DYNAMIC FOCUS / FLEX

The hard to beat reader with dynamic focus, extremely high throughput and high image quality. Simply a class of its own.

» Dynamic focus   » High power illumination
» 4.2 or 2.1 Megapixel   » 1D/2D codes
» Panorama accessory

How you benefit from using 4D*pro* sensors

- **Investment security** due to the ability to switch between technologies
- **Simple commissioning** even with cross-technology applications
- **Fast and flexible exchange** thanks to standardized connectivity

- **Quick and easy integration** into programmable logic controllers (PLCs) as SICK provides the function blocks **free of charge**
- **Low storage effort** and **low storage costs** due to reduced component variety and accessory parts

You can find more information online at ➜ www.sick-4Dpro.com

4D*pro*

Ensure your investment over the long term

4D*pro* –
THE FLEXIBILITY YOU NEED

The sensor manufacturer SICK offers a broad portfolio of identification and vision solutions which are developed and produced in-house. Regardless of which technology you choose today, you can be sure to be flexible in the future with the 4D*pro* concept. All 4D*pro* sensors are compatible and interchangeable. Standardized connectivity, a common user interface, and a common set of accessories – we call this unique combination 4D*pro*.

Standardized connectivity

All 4D*pro* sensors feature the same modular connectivity. This provides the basis for a flexible fieldbus connection combined with high process reliability. What's more, you benefit twice over: the purchase order process is less complicated and the integration effort is reduced.

Common user interface

All 4D*pro* sensors use SICK's universal device configuration software. This means that you can quickly familiarize yourself with all technologies. Data is sent to the control in the required format and the inputs and outputs of the 4D*pro* sensors can be analyzed quickly by an event monitor.

Common set of accessories

All 4D*pro* sensors are supported by the same accessory pool. This reduces both component variety and storage effort, smoothing the way for low storage costs.

4D*pro* sensors are identified by the 4D*pro* mark

4D*pro*

Bar code scanners   **Image-based code readers**   **Vision sensors**   **RFID read/write device**

MODULAR CONNECTORS ALL FROM A SINGLE SOURCE

The ability to network sensors is becoming particularly important in the light of demands for cost-effective solutions. SICK has the tools to stand up to this challenge: Through the 4D*pro* platform, it offers a product portfolio that is perfect for fieldbus systems. It gives you the freedom to select the identification and vision technology you require, and enables flexible connection to numerous fieldbus technologies with very little cabling work. The function blocks, available free of charge, keep the amount of work required for integration and programming in the PLC to a minimum.

SICK CAN sensor network

PROFIBUS DP

PROFINET

Single port	Dual-port			
Lector62x Part no. 1054375	**Lector62x** Part no. 1054375	**Lector63x** Part no. 1067380	**Lector65x** Part no. 1060892	**Lector64x** Part no. 1071472

Connection cable, 2 m
Part no. 2055419

Connection cable, 2 m
Part no. 2055419

Connection cable, 2 m
Part no. 2055419

Connection cable, 2 m
Part no. 2055419

Connection cable, 2 m
Part no. 6052286
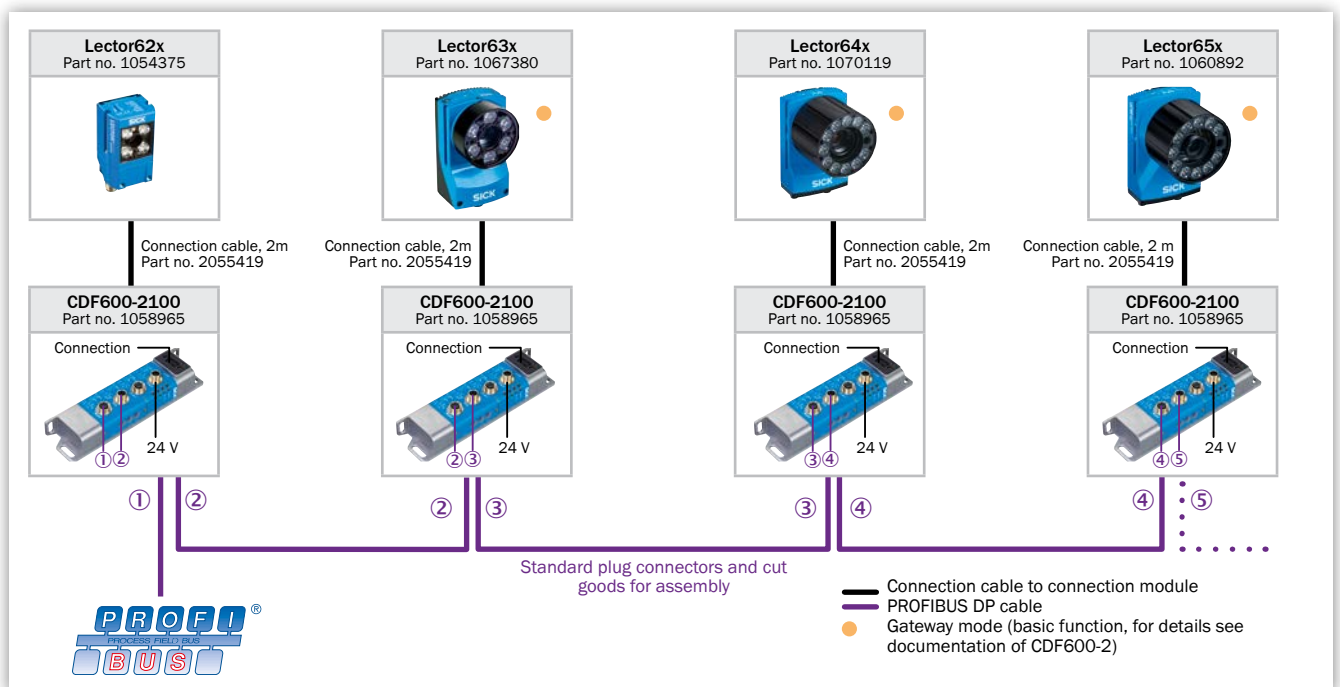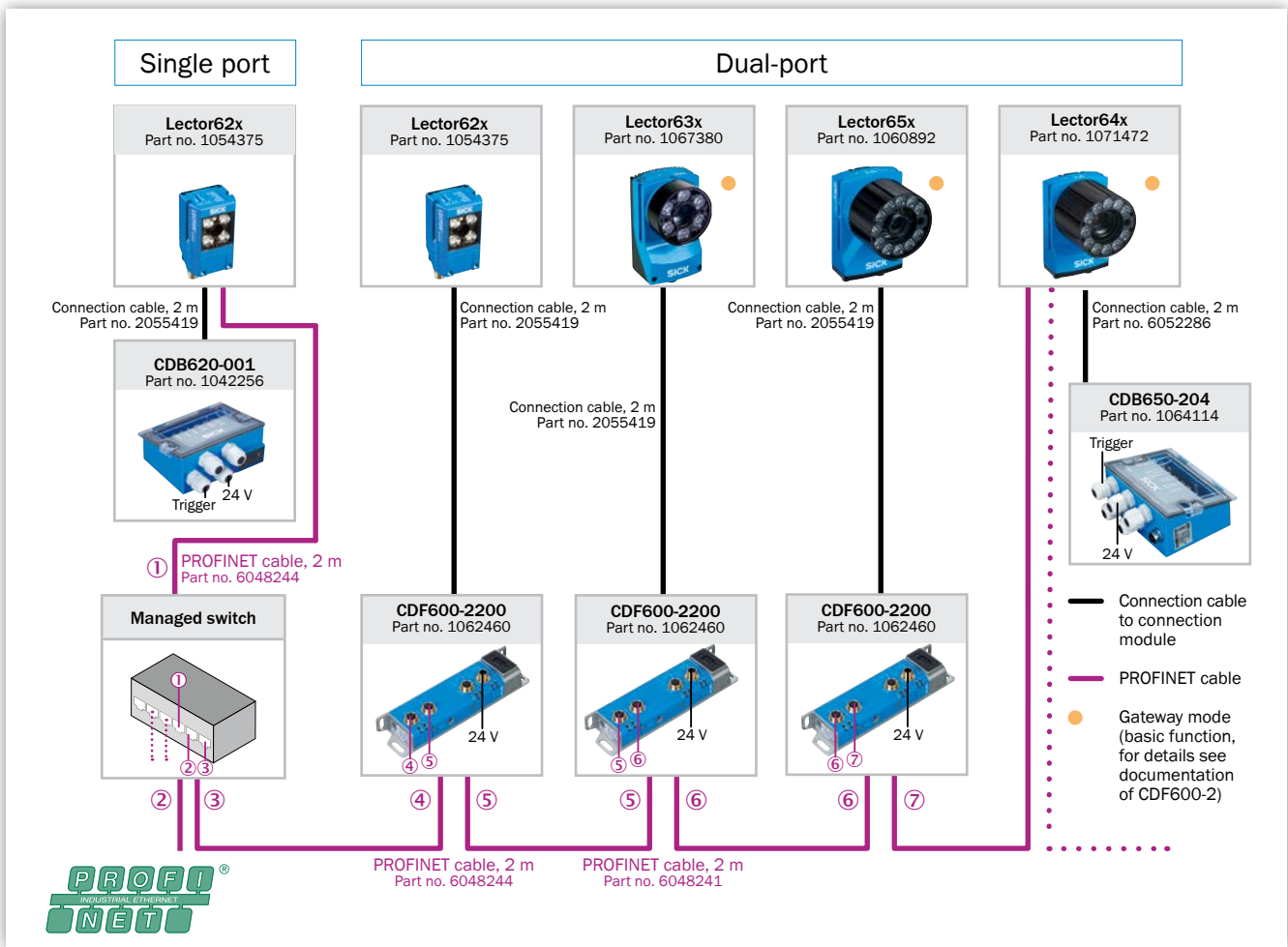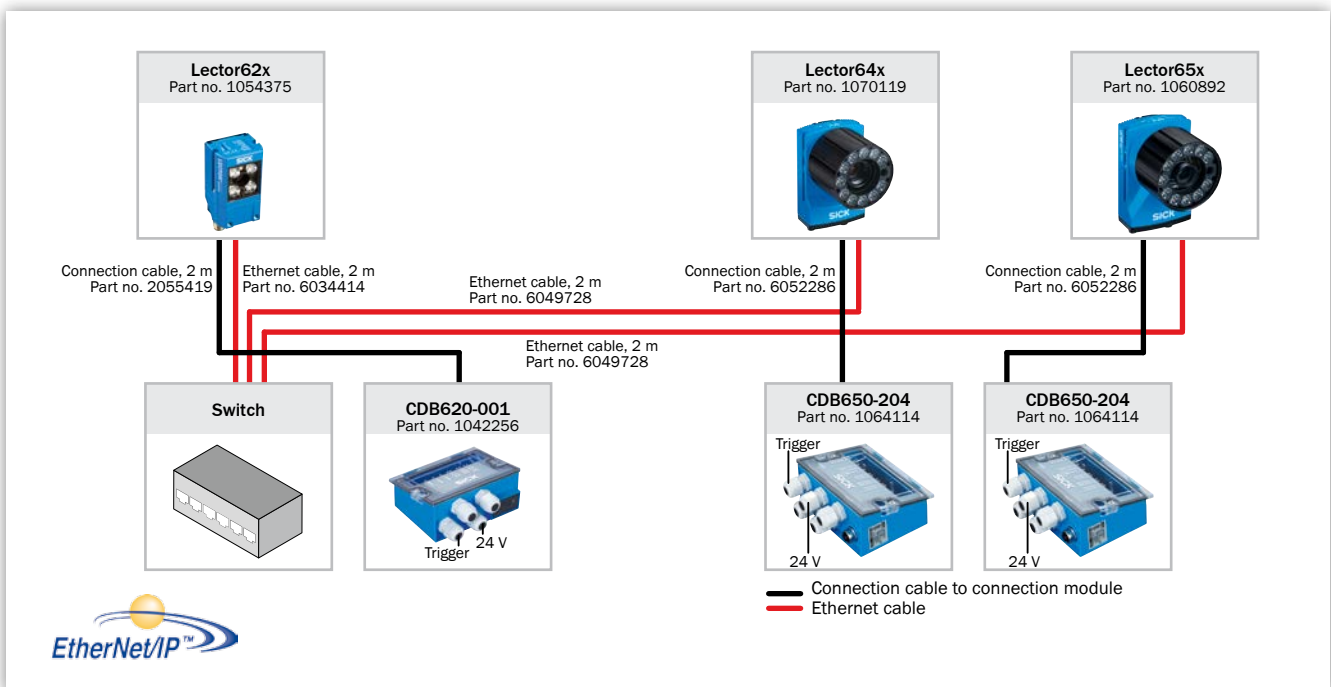
CDB620-001
Part no. 1042256

Connection cable, 2 m
Part no. 2055419

CDB650-204
Part no. 1064114

Trigger

24 V

① PROFINET cable, 2 m
Part no. 6048244

Managed switch

CDF600-2200
Part no. 1062460

CDF600-2200
Part no. 1062460

CDF600-2200
Part no. 1062460

④⑤ 24 V

⑤⑥ 24 V

⑥⑦ 24 V

① ② ③ ④ ⑤ ⑤ ⑥ ⑥ ⑦

PROFINET cable, 2 m
Part no. 6048244

PROFINET cable, 2 m
Part no. 6048241

— Connection cable to connection module

— PROFINET cable

● Gateway mode (basic function, for details see documentation of CDF600-2)

PROFI NET ® INDUSTRIAL ETHERNET

EtherNet/IP

Lector62x Part no. 1054375	**Lector64x** Part no. 1070119	**Lector65x** Part no. 1060892

Connection cable, 2 m
Part no. 2055419

Ethernet cable, 2 m
Part no. 6034414

Ethernet cable, 2 m
Part no. 6049728

Connection cable, 2 m
Part no. 6052286

Connection cable, 2 m
Part no. 6052286

Ethernet cable, 2 m
Part no. 6049728

Switch

CDB620-001
Part no. 1042256

CDB650-204
Part no. 1064114

CDB650-204
Part no. 1064114

Trigger

Trigger

24 V

Trigger

24 V

24 V

— Connection cable to connection module
— Ethernet cable

EtherNet/IP™

MAKING IT EASY

OK, you're convinced, Lector® is clearly the way to go. But how do you decide which is the optimum reader for your specific needs? We've put together an easy to use guide to help you make the right choice.

Adjustable During installation the focus is set manually.

Dynamic Uses external sensors and built in focus motors to adjust focus in real-time from object to object.

Auto During installation the reader uses built in focus motors to set the focus for the specific task at hand.

	Code type	Resolution (W x H)	Reading distance	Focus type		
Lector62x	1D 2D OCR DPM	0.4 Mpx (750 px x 480 px)	30mm - 1000mm			✓
Lector63x	1D 2D	1.9 Mpx (1600 px x 1200 px)	50mm - 2000mm	✓		
Lector64x	1D 2D	1.7 Mpx (1600 px x 1088 px)	300mm - 2200mm	✓		
Lector65x	1D 2D	2.1 Mpx (2048 px x 1088 px) 4.2 Mpx (2048 px x 2048 px)	300mm - 2200mm	✓	✓	✓

Lector Quick Selector: 1D/2D code cell size and field of view width

2D code cell size (mm)

1D code cell size (mm)

Lector620
Lector632/642
Lector652/654

Field of view width (mm)
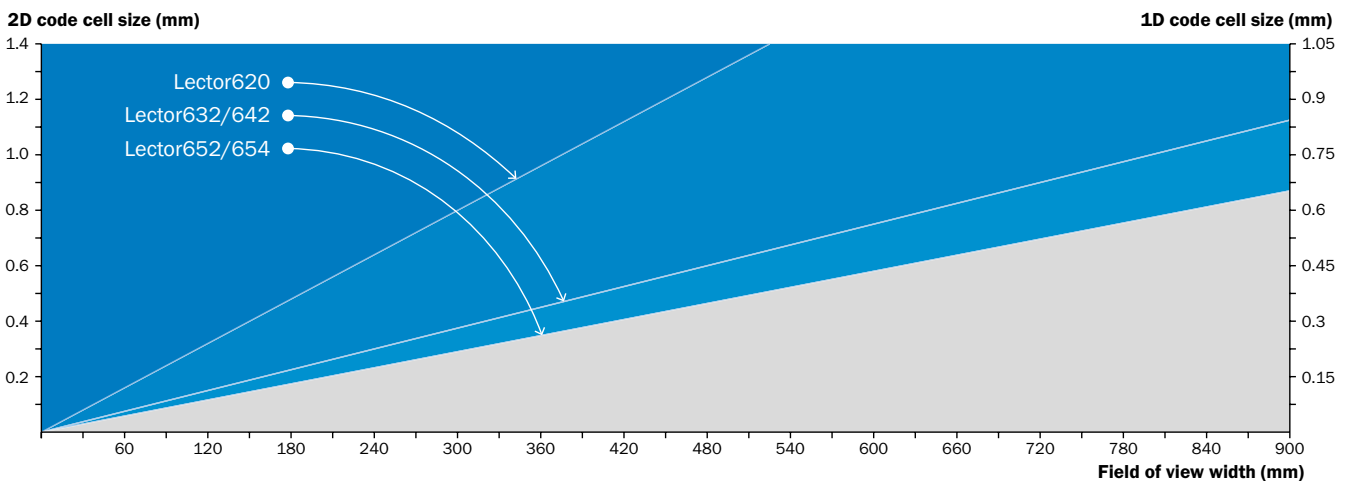
How to use the diagrams

1. Identify the cell size of your code, e.g, 1 mm cell size, find it on the y-axis and apply a horizontal line.
2. Identify needed field of view size (width and height), e.g. the belt width of your conveyor is 700 mm, find this value on the x-axis and apply a vertical line.
3. The cross-section of your y- and x-line indicates which Lector variant to use. If the cross-section is in the gray area, you will need multiple Lectors or use the Panorama accessory.

	Consumer goods			Electronics and Solar			Automotive			CEP		
	End of line aggregation	Date code inspection	Serialization	PCB identification	Quality assurance of DPM codes	Part tracking in assembly	Production control	Tire identification	Long range ID for traceability	Manual parcel sorting	Automated material handling	Tote box identification
		✓	✓	✓	✓	✓	✓					✓
	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	✓		✓				✓	✓	✓	✓	✓	
	✓		✓					✓	✓	✓	✓	

Lector Quick Selector: 1D/2D code cell size and field of view height
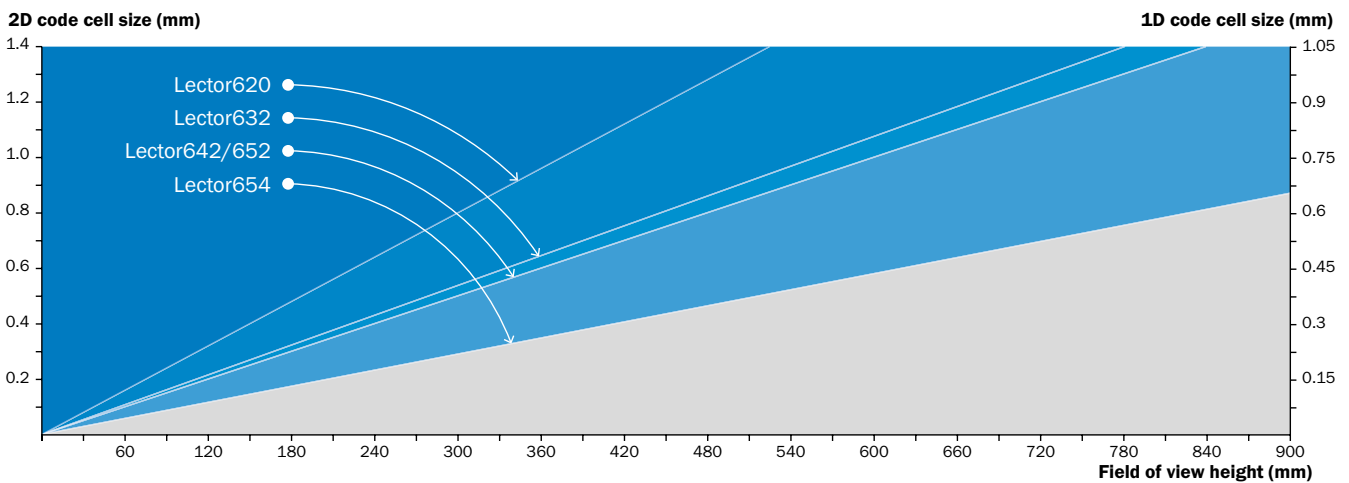
This Quick Selector does not cover feasibility aspects such as conveyor speed and depth of field.

PRODUCT FAMILY OVERVIEW

	Lector62x	**Lector63x**	
	Clever. Simple. Industrial.	Intelligent. Flexible. Intuitive.	

Technical data overview			
Focus	Adjustable focus / teach auto focus	Adjustable focus	
Scanning frequency	25 Hz / 60 Hz, WVGA resolution	≤ 50 Hz, at 1.9 megapixels resolution	
Code resolution	≥ 0.1 mm	≥ 0.1 mm	
Reading distance	30 mm ... 1,500 mm	50 mm ... 2,200 mm	
Serial (RS-232, RS-422)	✔	✔	
Ethernet	✔ , TCP/IP, FTP (image transmission), PROFINET, EtherNet/IP, EtherCAT® (optional over external fieldbus module CDF600)	✔ , TCP/IP, FTP (image transmission), EtherNet/IP, PROFINET (optional over external fieldbus module CDF600-2)	
CAN bus	✔ , CANopen, CSN (SICK CAN Sensor Network)	✔ , CSN (SICK CAN Sensor Network)	
PROFIBUS DP	✔ , Optional over external fieldbus module (CDF600-2)	✔ , Optional over external fieldbus module (CDF600-2)	
DeviceNet	–	–	
USB	✔ , USB 2.0	✔ , USB 2.0	
Weight	170 g	430 g	

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	• Code reader with 2 megapixel sensor • Flexible optics and filter design • Integrated, changeable high-power lighting • Intuitive user interface, including flexible result string with code analytics options • Function buttons, aiming laser, beeper and feedback indicator • MicroSD card	

| **Detailed information** | ➜ 20 | ➜ 30 | |

Lector64x	Lector65x
High efficiency for code reading applications	Nonstop code reading flexibility

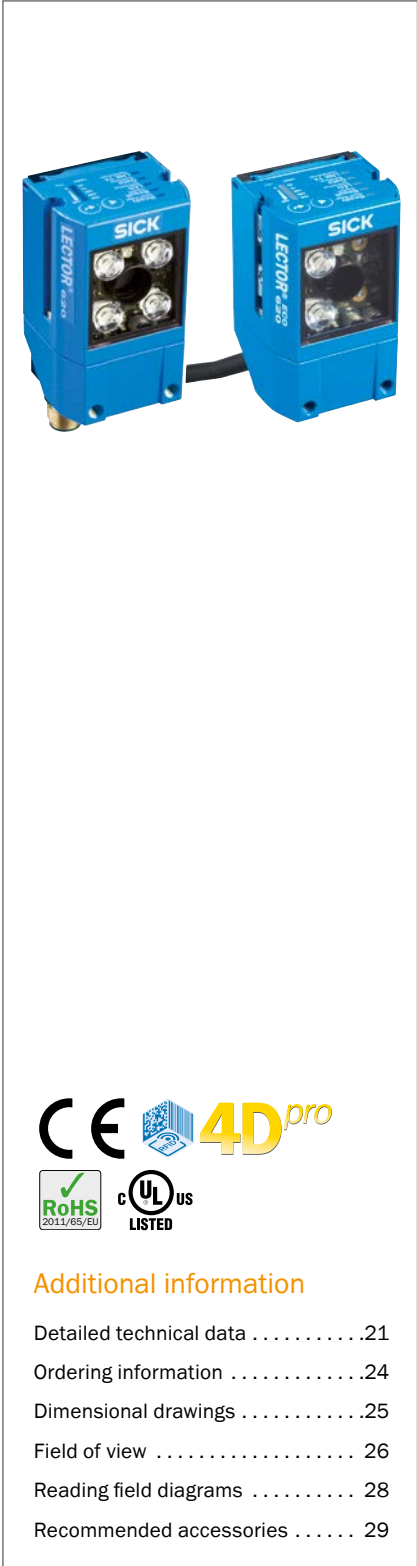|	
Adjustable focus	Adjustable focus / dynamic focus control / teach auto focus
40 Hz, at 1.7 megapixels resolution	70 Hz, at 2 megapixels resolution, 40 Hz, at 4 megapixels resolution
≥ 0.1 mm	≥ 0.1 mm ≥ 0.12 mm
300 mm ... 2,200 mm	300 mm ... 2,500 mm
✔	✔ / –
✔ , TCP/IP, FTP (image transmission), EtherNet/IP, PROFINET (optional over external fieldbus module CDF600-2), Dual Port PROFINET	✔ , TCP/IP, FTP (image transmission), EtherNet/IP, PROFINET (optional over external fieldbus module CDF600-2), Dual Port PROFINET
✔ , CSN (SICK CAN Sensor Network)	✔ , CSN (SICK CAN Sensor Network)
✔ , Optional over external fieldbus module (CDF600-2)	✔ , Optional over external fieldbus module (CDF600-2) / –
–	–
✔ , USB 2.0	✔ , USB 2.0 / –
635 g	635 g / 963 g

• 1.7 megapixel resolution; high frame repetition rate of 40 Hz • Integrated high-power LED illumination • Function buttons, aiming laser, optical and audible feedback signal • Intelligent, rapid decoding algorithms	• 2/4 megapixel resolution; high frame repetition rate of 40 Hz • Dynamic focus adjustment from object to object • Integrated high-power LED illumination • Function buttons, aiming laser, optical and acoustic feedback signal • Intelligent, rapid decoding algorithms

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
- 4D*pro* 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

➔ 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 (λ= 617 ± 15 nm), feedback spot: visible green light (λ = 525 ± 15 nm)	Illumination LEDs: visible red light (λ = 617 ± 15 nm), visible blue light (λ = 470 ± 15 nm) Feedback spot: visible green light (λ = 525 ± 15 nm) Aiming laser: visible red light (λ = 630 ... 680 nm) / Illumination LEDs: invisible infrared light (λ = 850 ± 25 nm)	Illumination LEDs: visible red light (λ = 617 ± 15 nm), visible blue light (λ = 470 ± 15 nm) Feedback spot: visible green light (λ = 525 ± 15 nm) Aiming laser: visible red light (λ = 630 ... 680 nm)	Illumination LEDs: visible red light (λ = 617 ± 15 nm), visible blue light (λ = 470 ± 15 nm) Feedback spot: visible green light (λ = 525 ± 15 nm) Aiming laser: visible red light (λ = 630 ... 680 nm) / Illumination LEDs: visible blue light (λ = 470 ± 15 nm)	Illumination LEDs: visible red light (λ = 617 ± 15 nm), visible blue light (λ = 470 ± 15 nm) Feedback spot: visible green light (λ = 525 ± 15 nm) Aiming laser: visible red light (λ = 630 ... 680 nm)
MTBF	75,000 h				
LED class	1, Irradiance L_B < 10 kW/(m^2sr) within 100 s, L_R < 7 x 10^5 W/(m^2sr) within 10 s, at a distance of ≥ 200 mm. (IEC 62471 (2006-07) / EN 62471 (2008-09))	1, Irradiance L_B < 10 kW/(m^2sr) within 100 s, L_R < 7 x 10^5 W/(m^2sr) 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^2sr) within 100 s, L_R < 7 x 10^5 W/(m^2sr) 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
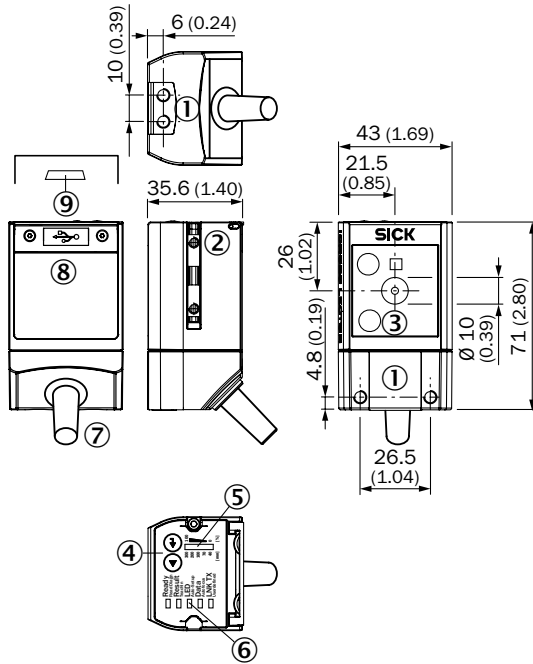
① Blind hole thread M5, 5 mm deep (4 x), for mounting
② Sliding nut M5, 5 mm deep (2 x), for mounting (as alternative)
③ Reading field
④ Function button (2 x)
⑤ Bar graph display
⑥ LED for status display (2 levels), 5 x
⑦ Cable with 15-pin D-sub HD male connector
⑧ Cover (flap)
⑨ "Micro USB" connection

Lector620 Professional
Lector620 High Speed
Lector620 DPM Plus
Lector620 OCR
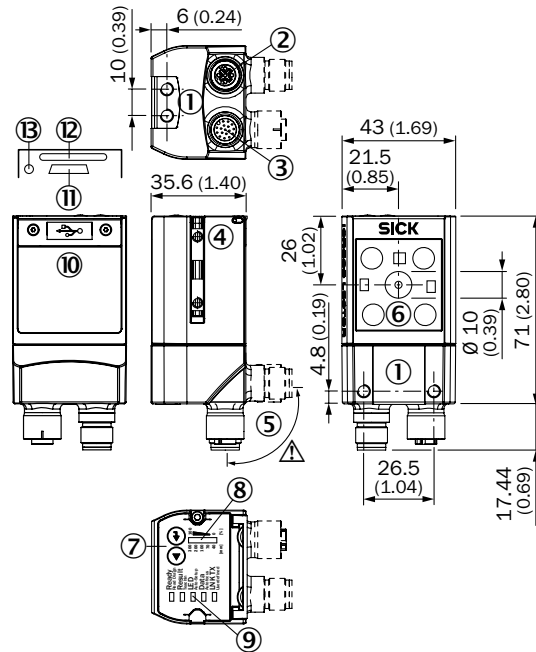
① Blind hole thread M5, 5 mm deep (4 x), for mounting
② Ethernet connection
③ "Power/Serial Data/CAN/I/O" connection
④ Sliding nut M5, 5 mm deep (2 x), for mounting (as alternative)
⑤ Swivel connector unit
⑥ Reading field
⑦ Function button (2 x)
⑧ Bar graph display
⑨ LED for status display (2 levels), 5 x
⑩ Cover (flap)
⑪ "Micro USB" connection
⑫ Slot for microSD memory card
⑬ 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)

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)
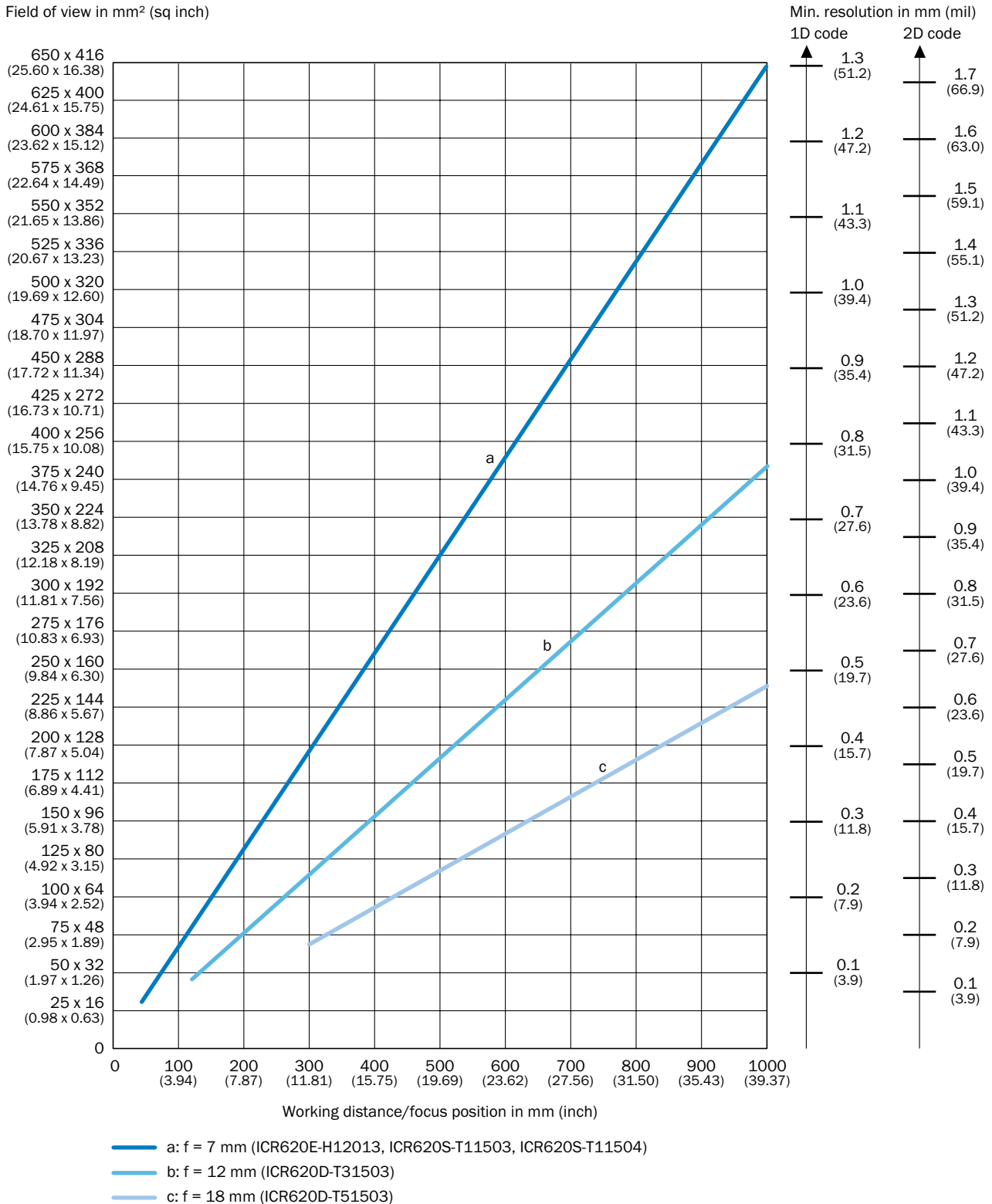
Lector620 Professional (ICR620S-T16503)

Field of view in mm² (sq inch)
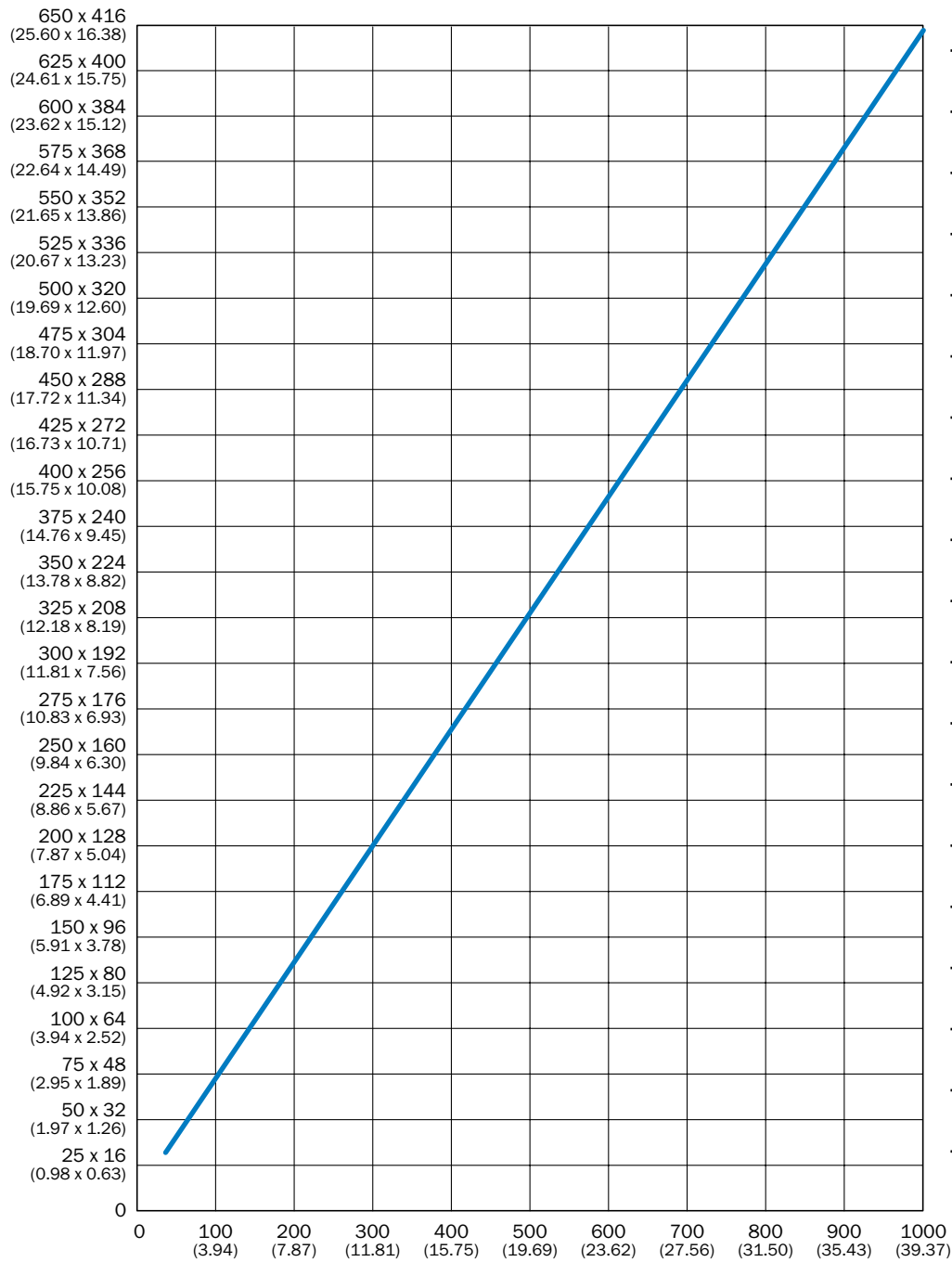
Min. resolution in mm (mil)

f = 7 mm (ICR620S-T16503)

Working distance/focus position in mm (inch)
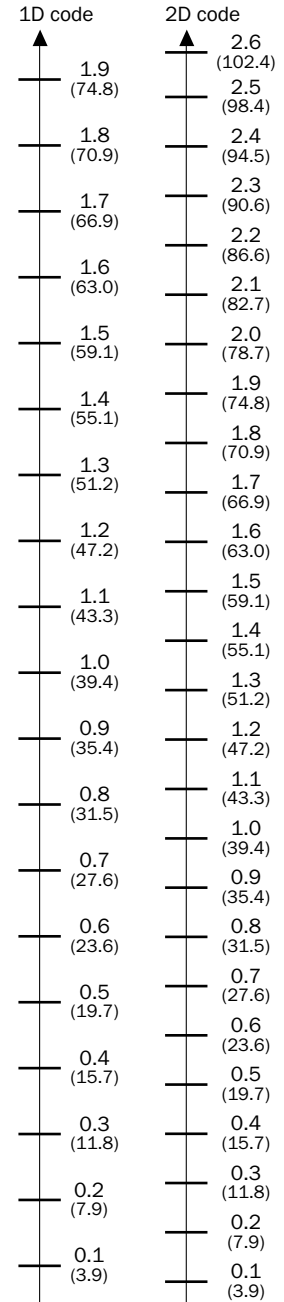
Lector620 High Speed (ICR620H-T11503), Lector620 DPM Plus (ICR620D-T11503, ICR620D-T17503),
Lector620 OCR (ICR620C-T11503S50)

Field of view in mm² (sq inch)
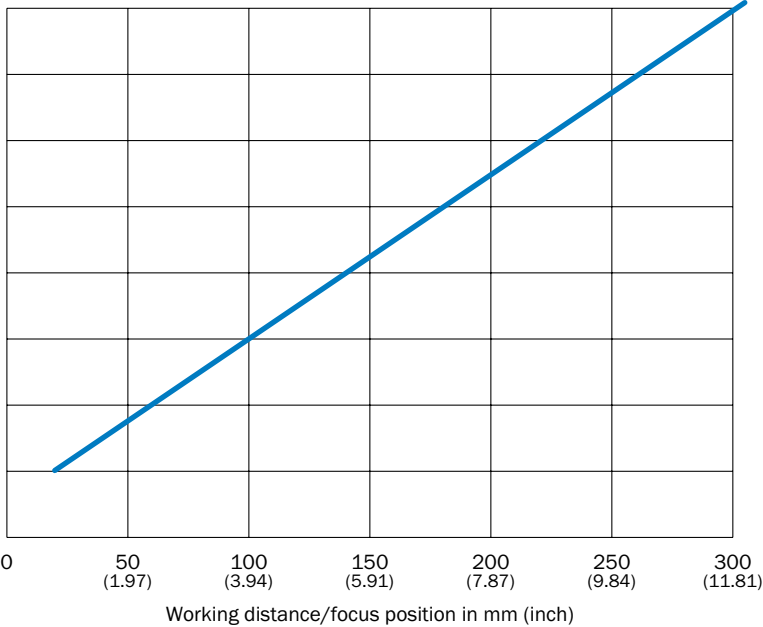
Min. resolution in mm (mil)
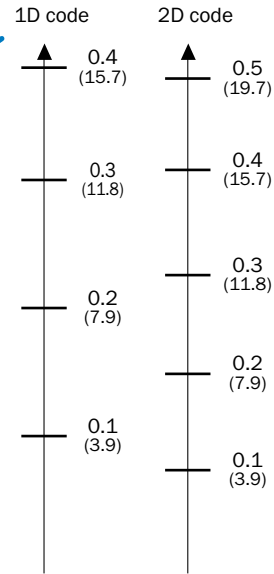
f = 7 mm (ICR620H-T11503, ICR620D-T11503, ICR620D-T17503, ICR620C-T11503S50)

Reading field diagrams

Lector620 OCR

Working distance in mm (inch)

Character height in mm (inch)
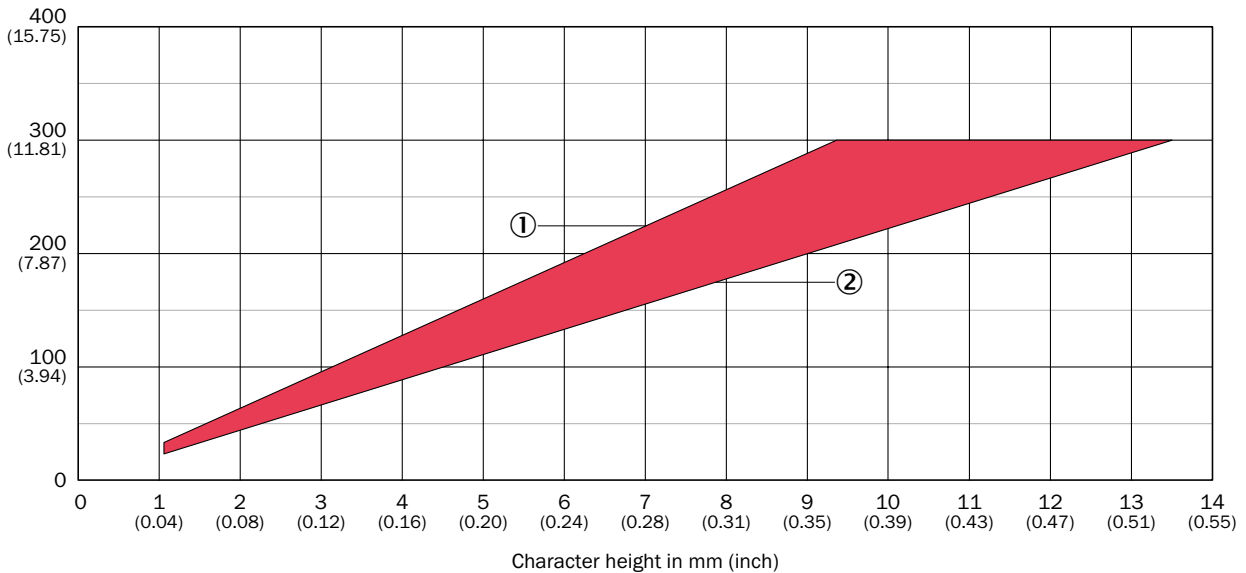
① Maximum distance
② Minimum distance

Recommended accessories
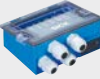
Mounting systems

Mounting brackets and mounting plates

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

Connection systems

Modules

	Brief description	Type	Part no.	Lector62x ECO	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.	Lector62x ECO	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

INTELLIGENT. FLEXIBLE. INTUITIVE.
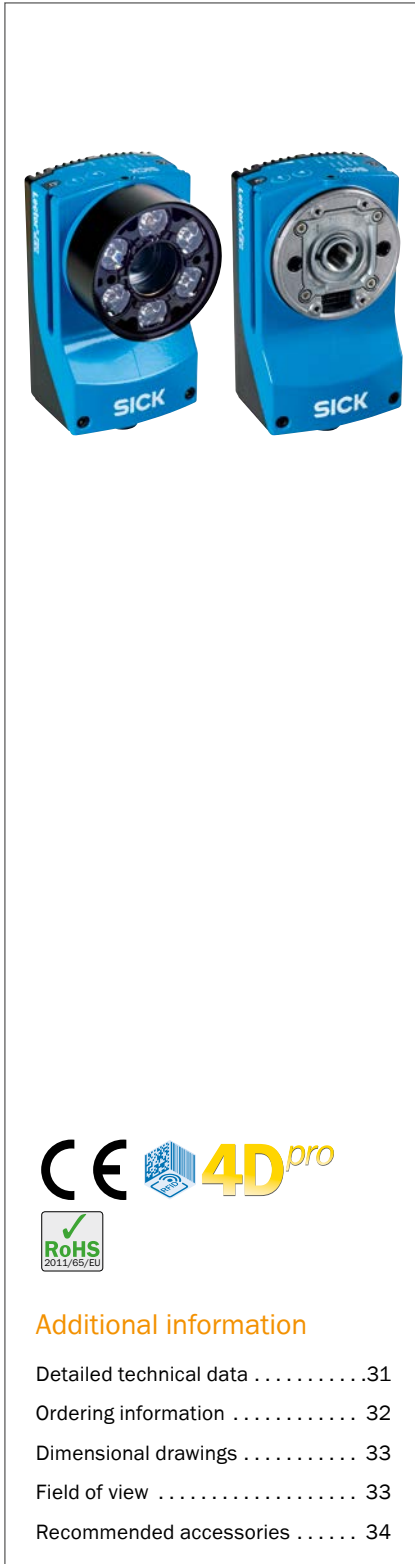
Product description

The Lector63x is a flexible image-based code reader. With its high image resolution, compact housing and exchangeable optical design it is well equipped for a variety of needs. It can easily be used for small codes, in high production speeds or for long-range identification. The Lector63x is easy to handle: quick optical exchange, intuitive user interface, aiming laser, beeper, LED feedback and MicroSD card – simplifying setup, operation and maintenance!

At a glance

- Code reader with 2 megapixel sensor
- Flexible optics and filter design
- Integrated, changeable high-power lighting
- Intuitive user interface, including flexible result string with code analytics options
- Function buttons, aiming laser, beeper and feedback indicator
- MicroSD card

Your benefits

- High-resolution sensor and intelligent processing ensure outstanding reading performance, even under difficult reading conditions
- Flexible optical design and high-power illumination enable small codes to be read at high speeds or in applications with a large reading distance
- Fast, straightforward commissioning thanks to the intuitive user interface; function button for rapid device setup; integrated illumination and aiming laser
- Direct results monitoring thanks to acoustic signal and colored feedback spot on the object
- Few machine downtimes in the event of faults on the production line, thanks to straightforward cloning function using microSD memory card

Additional information

➜ www.mysick.com/en/Lector63x

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

Focus	Adjustable focus (manually)
Sensor	CMOS matrix sensor, gray scale values
Light source	To be ordered separately as accessory Aiming laser: visible red light (λ = 630 nm ... 680 nm)
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	$\leq$ 50 Hz, at 1.9 megapixels resolution
Code resolution	$\geq$ 0.1 mm [1]
Reading distance	50 mm ... 2,200 mm [1]

[1] Depends on lens used, for details see field of view 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, USPS (Postnet, Planet, USPS4SCB), Australian Post, Dutch KIX Post, Royal Mail, Swedish Post
2D code types	Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code
Stacked code types	PDF417
Code qualification	On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004

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
Data transmission rate	10/100/1,000 Mbit/s
Protocol	TCP/IP, FTP (image transmission), EtherNet/IP, PROFINET (optional over external fieldbus module CDF600-2)
CAN bus	✔
Function	SICK CAN sensor network (Master/Slave, Multiplexer/Server)
Data transmission rate	250 kbit/s ... 500 kbit/s
Protocol	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 CMC600 parameter memory in CDB650/CDM420)
Configurable inputs	Encoder input, external trigger
Switching outputs	6 (CDB650: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4")
Configurable outputs	Good read, External illumination control, free configurable output condition, "device ready"
Reading pulse	Switching inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode
Optical indicators	11 LEDs (5 x status display, 5 x LED bar graph, 1 green/red feedback spot)
Acoustic indicators	Beeper (configurable)
Control elements	2 buttons
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	1 kHz
External illumination control	Via digital output (max. 24 V trigger) or via external illumination connector

Mechanics/electronics

Electrical connection	1 x M12, 17-pin plug (serial, CAN, I/Os, power supply) 1 x M12, 8-pin socket (Ethernet, 1 GBit/s) 1 x M8, 4-pin socket (USB) 1 x M12, 4-pin socket (external illumination control)
Operating voltage	24 V DC, ± 20 %
Power consumption	Typ. 10 W, ± 20 %
Output current	≤ 100 mA
Housing	Aluminum die cast
Weight	430 g, without lens and connection cables
Dimensions	108 mm x 63 mm x 46 mm [1]

[1] Only housing without lens and protective hood.

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-2 (2005-08) / EN 61000-6-3 (2007-01)
Vibration resistance	EN 60068-2-6 (2008-02)
Shock resistance	EN 60068-2-27 (2009-05)
Electrical safety	EN 60950-1 (2011-01)
Ambient operating temperature	0 °C … +50 °C
Storage temperature	–20 °C … +70 °C
Permissible relative humidity	90 %, Non-condensing

Ordering information

- **Version:** Lector632 Flex
- **Sensor resolution:** 1,600 px x 1,200 px
- **Enclosure rating:** IP 67

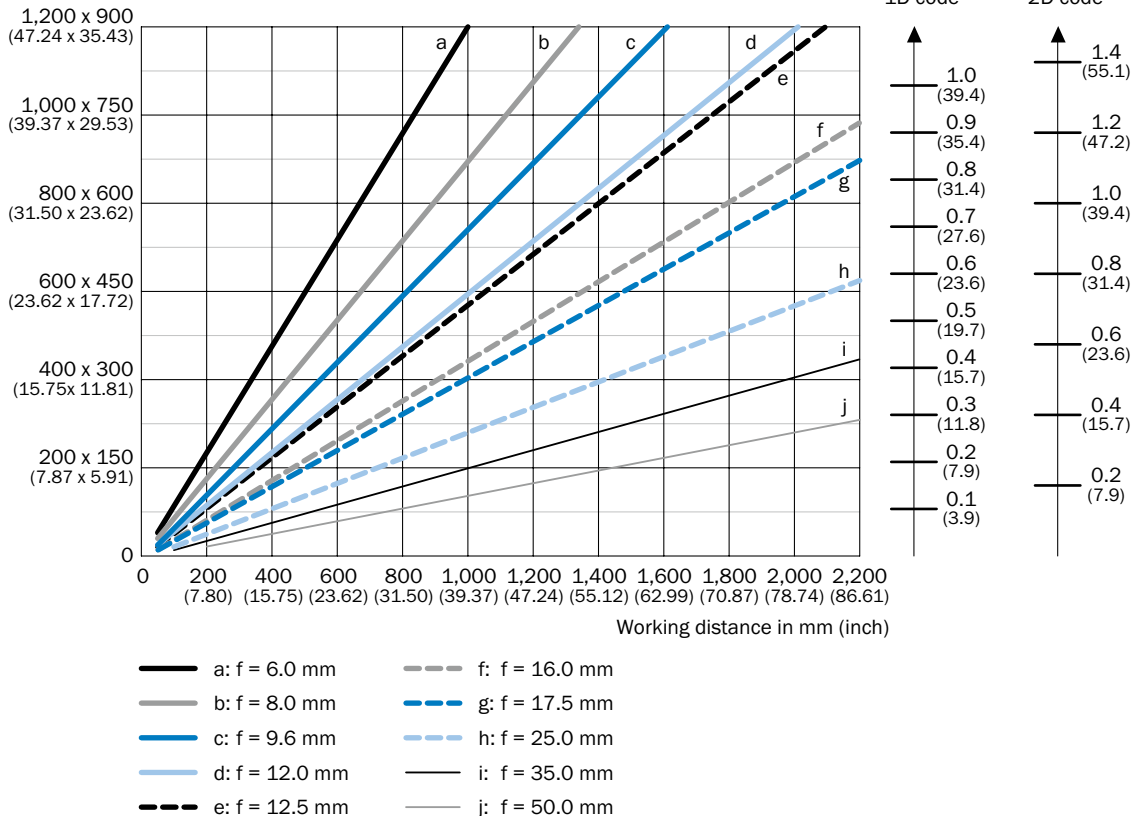| Lens	Type	Part no.
Exchangeable (C-mount), to be ordered separately as accessory	V2D632R-MXCXB0 Flex	1075881
Exchangeable (S-mount), to be ordered separately as accessory	V2D632R-MXSXB0 Flex	1067380

Dimensional drawings (Dimensions in mm (inch))

Lector632 Flex

① External light connector
② Gigabit Ethernet connector
③ USB connector
④ Power, serial, CAN and I/O connector
⑤ 23 mm protection hood for lens and lighting
⑥ 38 mm protection hood for lens and lighting
⑦ Plug to ensure IP67 for unused connectors
⑧ Blind hole thread M5, 5.5 mm deep (4 x)
⑨ Sliding nut M5, 5.5 mm deep (4 x)
⑩ Integrated lighting connector
⑪ Aiming laser (2 x)
⑫ S- or C-mount optical module
⑬ Blind hole thread 2.5 mm (4 x) for mounting integrated lighting
⑭ Optical axis and center of image sensor
⑮ Manual focus screw, hidden under cover/sticker (S-mount Flex)
⑯ Function button (2 x)
⑰ Bar graph LED display (5 x)
⑱ Removable cover for microSD card and manual focus screw
⑲ Status LED display (5 x 2 levels)

Field of view

Long sensing range of up to 2.2 m working distance

Field of view width x height in mm² (sq inch), typical values

Min. resolution in mm (mil)

a: f = 6.0 mm		f: f = 16.0 mm
b: f = 8.0 mm		g: f = 17.5 mm
c: f = 9.6 mm		h: f = 25.0 mm
d: f = 12.0 mm		i: f = 35.0 mm
e: f = 12.5 mm		j: f = 50.0 mm

For S-mount and standard C-mount lenses, distance rings are needed for working distances shorter than approximately 10 times the focal length.
For Compact C-mount lenses, distance rings are not needed, but the integratable lighting cannot be used for distances shorter than 300 mm

Short sensing range of up to 0.3 m working distance
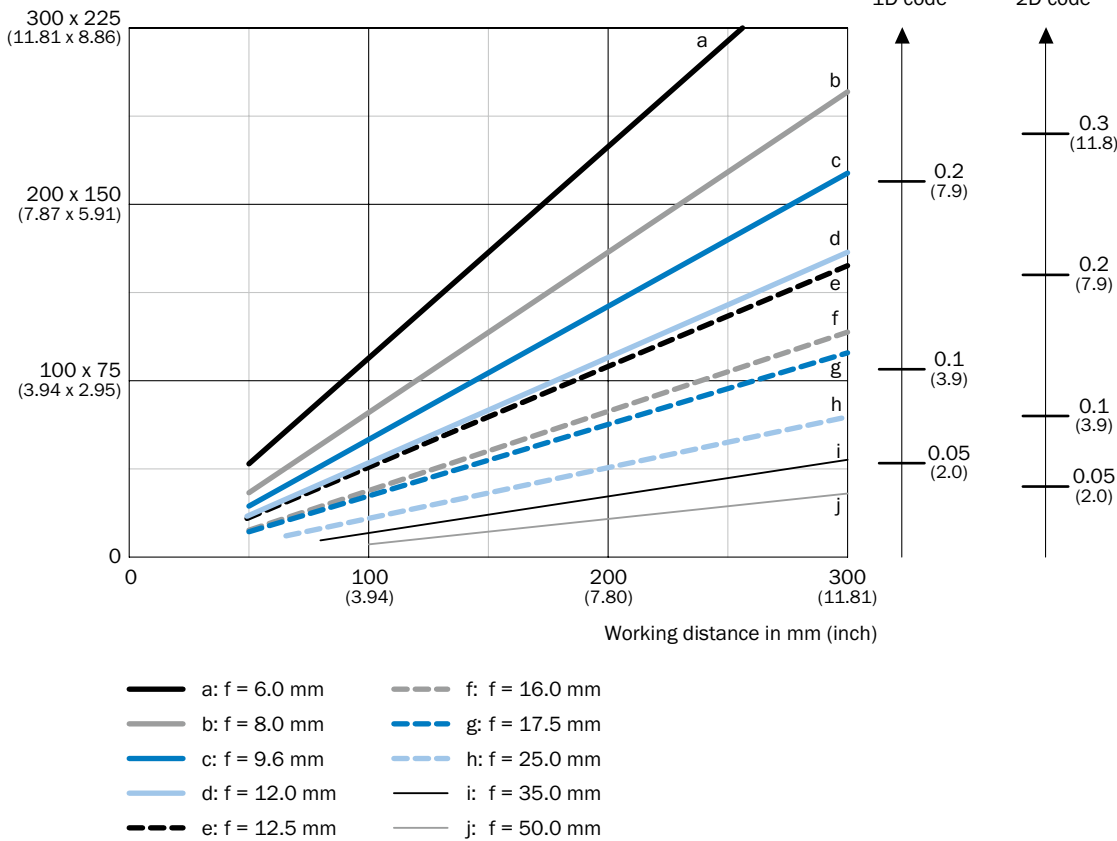
Field of view width x height in mm² (sq inch), typical values

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

Working distance in mm (inch)

——— a: f = 6.0 mm	- - - f: f = 16.0 mm
——— b: f = 8.0 mm	- - - g: f = 17.5 mm
——— c: f = 9.6 mm	- - - h: f = 25.0 mm
——— d: f = 12.0 mm	——— i: f = 35.0 mm
- - - e: f = 12.5 mm	——— j: f = 50.0 mm

For S-mount and standard C-mount lenses, distance rings are needed for working distances shorter than approximately 10 times the focal length.
For Compact C-mount lenses, distance rings are not needed, but the integratable lighting cannot be used for distances shorter than 300 mm

Recommended accessories

Mounting systems

Mounting brackets and mounting plates

	Brief description	Part no.
	Mounting bracket with screws, L-shaped for sliding nuts mounting including skew angle display	2078970

Terminal and alignment brackets

	Brief description	Part no.
Illustration may differ	Distance bracket and light extension connector for mounting integratable lighting, length 15 mm, used with compact C-mount lenses with focal length of 12 mm or 25 mm and S-mount lens with focal length 25mm	2079501

Connection systems

Modules

	Brief description	Type	Part no.
	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination	CDB650-204	1064114

Plug connectors and cables

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.
	Power, serial, CAN, digital I/Os	Female connector, M12, 17-pin, straight, A-coded	Male connector, M12, 17-pin, straight, A-coded	Drag chain use, suitable for 2 A, suitable for refrigeration	2 m	6053230
	Gigabit Ethernet/PoE	Male connector, M12, 8-pin, straight, X-coded	Male connector, RJ45, 8-pin, straight	AWG26	2 m	6049728

Reflectors and optics

Illuminations

	Brief description	Part no.
	Integratable lighting, lighting color white, suitable for S-mount and compact C-mount lenses with a focal length of 25 mm and 35 mm	2078431

Lens and accessories

	Brief description	Part no.
Illustration may differ	Compact C-mount 2/3", focal length 25 mm, aperture 8	2079343
	Lens protective hood, enclosure rating IP 67, length 37.7 mm, PMMA, used with compact C-mount lenses with focal length of 12 mm or 25 mm and S-mount lens with focal length 25mm	2079127

→

HIGH EFFICIENCY FOR CODE READING APPLICATIONS
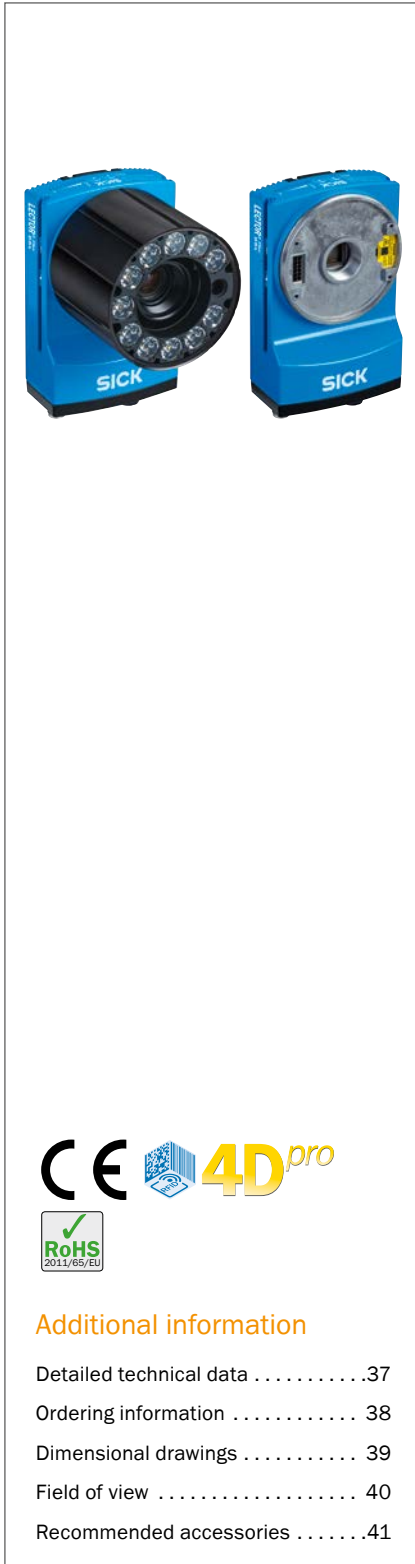
Product description

The Lector642 image-based code reader from SICK provides maximum performance and optimum throughput in logistics and factory automation. With a frame repetition rate of 40 Hz and real-time decoding, the Lector642 can reliably identify 1D, 2D and directly marked codes at the highest possible speed. The 1,7 megapixel image resolution offers a large field of view. The intuitive device equipment – featuring function buttons, auto setup, an aiming laser, an acoustic feedback signal, and a green feedback LED – reduce the amount of work required for training and installation. The microSD memory card can be used to store images or back-up copies of parameters. Due to SICK's 4D*pro* feature, the Lector642 can be integrated into numerous industrial network.

At a glance

- 1,7 megapixel resolution; high frame repetition rate of 40 Hz
- Integrated high-power LED illumination
- Function buttons, aiming laser, optical and audible feedback signal
- Intelligent, rapid decoding algorithms

Your benefits

- Highly flexible code position, object height, and transport speed due to a large field of view and large depth of field
- Cost-effective, straightforward, modular integration of multiple devices adapted to the width of the conveyor belt
- Minimum training and installation work due to intuitive device equipment that includes function buttons, auto setup, integrated illumination, an aiming laser, an acoustic feedback signal, and a green feedback LED
- Intelligent decoding algorithms ensure maximum reading performance and high package throughput, even with codes that are difficult to read
- SICK 4D*pro* platform facilitates quick and easy integration into numerous industrial networks

Additional information

➔ www.mysick.com/en/Lector64x

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

Focus	Adjustable focus (manually)
Sensor	CMOS matrix sensor, gray scale values
Light source	Illumination LEDs: (to be ordered separately as accessories) Aiming laser: visible red light (λ = 630 ... 680 nm)
Laser class	1M, 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	40 Hz, at 1.7 megapixels resolution
Code resolution	≥ 0.1 mm [1]
Reading distance	300 mm ... 2,200 mm, depends on lens used [2]

[1] Depends on lens used.

[2] Depends on lens used, for details see field of view 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, USPS (Postnet, Planet, USPS4SCB), Australian Post, Swedish Post, Royal Mail, Dutch KIX Post
2D code types	Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code
Stacked code types	PDF417
Code qualification	On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004
Internal image storage	512 MB

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
Data transmission rate	10/100/1,000 Mbit/s
Protocol	TCP/IP, FTP (image transmission), EtherNet/IP, PROFINET (optional over external fieldbus module CDF600-2) TCP/IP, FTP (image transmission), EtherNet/IP, Dual Port PROFINET (depending on type)
CAN bus	✔
Function	SICK CAN sensor network (Master/Slave, Multiplexer/Server)
Data transmission rate	20 kbit/s ... 1 Mbit/s
Protocol	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 CMC600 parameter memory in CDB650/CDM420)
Configurable inputs	Encoder input, external trigger
Switching outputs	6 (CDB650: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4")
Configurable outputs	Good read, External illumination control, free configurable output condition, "device ready"
Reading pulse	Switching inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode
Optical indicators	21 LEDs (10 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. 16 GB, optional
Data storage and retrieval	Images and file logging via MicroSD memory card, internal memory and external FTP
Maximum encoder frequency	1 kHz
External illumination control	Via digital output (max. 24 V trigger) or via external illumination connector

Mechanics/electronics

Electrical connection	1 x M12, 17-pin plug (serial, CAN, I/Os, power supply)
	2 x M12, 8-pin socket (Ethernet, P1 not yet with function)
	1 x M8, 4-pin socket (USB)
	1 x M12, 17-pin plug (serial, CAN, I/Os, power supply)
	1 x M12, 8-pin socket (Ethernet, 1 GBit/s)
	1 x M8, 4-pin socket (USB)
	2 x M12, 4-pin female connector (Ethernet, 100 mBit/s)
	(depending on type)
Operating voltage	24 V DC, ± 20 %
Power consumption	Typ. 20 W, ± 20 %
Output current	≤ 100 mA
Housing	Aluminum die cast
Housing color	Light blue (RAL 5012)
Protection class	III
Weight	635 g
Dimensions	142 mm x 89 mm x 46 mm [1]

[1] Only housing without lens and protective hood.

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-2 (2005-08) / EN 61000-6-3 (2007-01)
Shock resistance	EN 60068-2-6
Electrical safety	EN 60950-1 (2011-01)
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

- **Version:** Lector642 Flex
- **Reading field:** side
- **Sensor resolution:** 1,600 px x 1,088 px
- **Lens:** exchangeable (C-mount), to be ordered separately as accessory
- **Enclosure rating:** IP 65

Type	Part no.
V2D642R-MCXXA6 Flex	1070119
V2D642R-MCXXH6 Flex with Dual Port PROFINET	1071472

Dimensional drawings (Dimensions in mm (inch))

Lector642 Flex,: side

① P1 connection, no function, planned "Ethernet", depending on type
② P3 connection "Ethernet"
③ X2 "USB" connection or "trigger external lighting", depending on type
④ P2 connection "CAN OUT", depending on type
⑤ X1 "Power/Serial Data/CAN/I/O" connection or "CAN IN", depending on type
⑥ Cover (flap) for the slot of the microSD memory card
⑦ Blind hole thread M5, 5 mm deep (4 x), for mounting
⑧ Sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
⑨ Plug connector for connecting the integrated lighting
⑩ Outlet, aiming laser
⑪ Blind hole thread M2.5, 5.5 mm deep (4 x), for mounting the lighting fixture
⑫ Bar graph display
⑬ Function button (2 x)
⑭ LED for status display (2 levels), 10 x

Lector642 Flex,: side
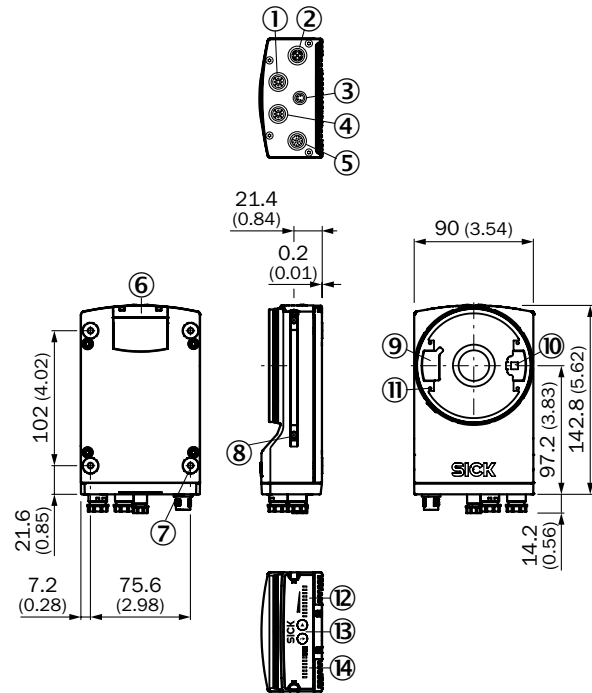
① P1/P2 connection "Ethernet", 100 mBit/s
② P3 connection "Ethernet", 1 GBit/s
③ X2 "USB" connection or "trigger external lighting", depending on type
④ P1/P2 connection "Ethernet", 100 mBit/s
⑤ X1 "Power/Serial Data/CAN/I/O" connection or "CAN IN", depending on type
⑥ Cover (flap) for the slot of the microSD memory card
⑦ Blind hole thread M5, 5 mm deep (4 x), for mounting
⑧ Sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
⑨ Plug connector for connecting the integrated lighting
⑩ Outlet, aiming laser
⑪ Blind hole thread M2.5, 5.5 mm deep (4 x), for mounting the lighting fixture
⑫ Bar graph display
⑬ Function button (2 x)
⑭ LED for status display (2 levels), 10 x

Field of view

Lector642 Flex

Field of view in mm² (sq inch)
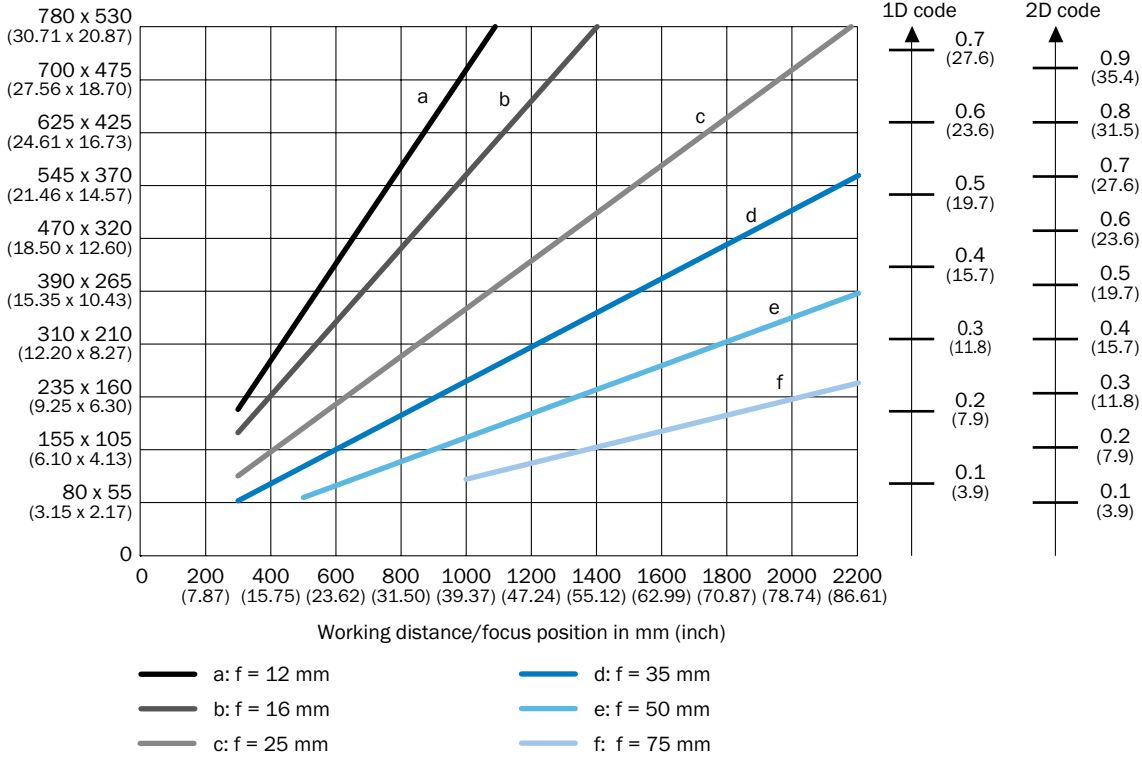
Min. resolution in mm (mil)

a: f = 12 mm	d: f = 35 mm
b: f = 16 mm	e: f = 50 mm
c: f = 25 mm	f: f = 75 mm

Working distance/focus position in mm (inch)

Field of view, Lector642 Flex with Panorama 35 mm

Dimensions in mm (inch/*mil)

Max. code size	35 (1.38)	59 (2.32)	77 (3.03)	91 (3.58)	105 (4.13)
Min. resolution 1D-Code	0.11 (*4.2)	0.18 (*7.1)	0.25 (*9.9)	0.33 (*12.8)	0.40 (*15.6)
Min. resolution 2D-Code	0.14 (*5.7)	0.24 (*9.4)	0.34 (*13.2)	0.43 (*17.1)	0.53 (*20.8)

Field of view LECTOR®642

170 x 39	304 x 65	437 x 91	570 x 118	703 x 143
(6.69 x 1.54)	(11.97 x 2.56)	(17.20 x 3.58)	(22.44 x 4.65)	(27.68 x 5.63)

Working distance/focus position

Field of view, Lector642 Flex with Panorama 50 mm

Dimensions in mm (inch/*mil)

Max. code size	35 (1.38)	55 (2.17)	70 (2.76)	85 (3.35)	100 (3.94)
Min. resolution 1D-Code	0.11 (*4.2)	0.15 (*6.1)	0.21 (*8.1)	0.26 (*10.1)	0.30 (*12.0)
Min. resolution 2D-Code	0.14 (*5.5)	0.21 (*8.1)	0.27 (*10.8)	0.34 (*13.5)	0.41 (*16.0)

Field of view LECTOR®642

172 x 38	261 x 56	349 x 74	438 x 93	527 x 111
(6.77 x 1.50)	(10.28 x 2.20)	(13.74 x 2.91)	(17.24 x 3.66)	(20.75 x 4.37)

Field of view width: 400 (15.75), 300 (11.81), 200 (7.87), 100 (3.94), 0, 100 (3.94), 200 (7.87), 300 (11.81), 400 (15.75)

Working distance/focus position: 181 (7.13) … 600 (23.62), 900 (35.43), 1,200 (47.24), 1,500 (59.06), 1,800 (70.87)

Recommended accessories

Mounting systems

Mounting brackets and mounting plates

	Brief description	Part no.
	Mounting bracket with screws including skew angle display	2069169

Connection systems

Modules

	Brief description	Type	Part no.
	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination	CDB650-204	1064114

Plug connectors and cables

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.
	USB 2.0	Male connector, M8, 4-pin, straight	Male connector, USB-A, 4-pin, straight	–	2 m	6051164
	Power, serial, CAN, digital I/Os	Female connector, M12, 17-pin, straight, A-coded	Male connector, M12, 17-pin, straight, A-coded	To connection module CDB650, suitable for 2 A, drag chain use	3 m	6051194

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.
	Gigabit Ethernet/PoE	Male connector, M12, 8-pin, straight, X-coded	Male connector, RJ45, 8-pin, straight	AWG26	2 m	6049728

Reflectors and optics

Lens and accessories

	Brief description	Part no.
	Optic kit 04 including lens with a focal length of 35 mm, white lighting, distance bracket and protective hood	1064794
	Optic kit 05 including lens with a focal length of 50 mm, white lighting, distance bracket and protective hood	1064776

NONSTOP CODE READING FLEXIBILITY

Product description

Maximum performance and optimized throughput: The Lector65x image-based code reader from SICK stands up to the challenges of logistics and factory automation. Thanks to its frame repetition rate of 40 Hz and real-time decoding, it reliably identifies 1D, 2D, and directly marked codes at the highest possible speed. An image resolution of 2/4 megapixels gives it a large field of view. In combination with its dynamic focus, the highest levels of flexibility are achieved

for code positioning, object height, and transport speed. The intuitive device equipment – featuring function buttons, auto-setup, aiming laser, an acoustic feedback signal, and a green feedback LED – reduce the amount of work required for training and installation. The microSD memory card can be used to store images or backup copies of parameters. Thanks to SICK's 4D*pro* feature, the Lector65x can be integrated into any numerous industrial networks.

At a glance

- 2/4 megapixel resolution; high frame repetition rate of 40 Hz
- Dynamic focus adjustment from object to object

- Integrated high-power LED illumination
- Function buttons, aiming laser, optical and acoustic feedback signal
- Intelligent, rapid decoding algorithms

Your benefits

- Highly flexible code position, object height, and transport speed due to a large field of view and dynamic focus
- Cost-effective, straightforward, modular integration of multiple devices adapted to the width of the conveyor belt
- Minimum training and installation work due to intuitive device equipment that includes function buttons, auto setup, integrated illumination, an aiming laser, an acoustic feedback signal, and a green feedback LED

- Intelligent decoding algorithms ensure maximum reading performance and high package throughput, even with codes that are difficult to read
- SICK 4D*pro* platform facilitates quick and easy integration into numerous industrial networks

Additional information

➜ www.mysick.com/en/Lector65x

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

	Lector652 Flex	Lector652 Dynamic Focus	Lector654 Flex	Lector654 Dynamic Focus	Lector654 Dynamic Focus for Systems
Focus	Adjustable focus (manually)	Dynamic focus control	Adjustable focus (manually)	Dynamic focus control	
Sensor	CMOS matrix sensor, gray scale values				
Light source	Illumination LEDs: (to be ordered separately as accessories) Aiming laser: visible red light (λ = 630 ... 680 nm)	Illumination LEDs: blue (λ = 455 nm ± 20 nm) Feedback spot: visible green light (λ = 525 nm ± 15 nm) Aiming laser: visible red light (λ = 630 ... 680 nm) / lighting LEDs: white (λ = 6000 K ± 500 K)	Illumination LEDs: (to be ordered separately as accessories) Aiming laser: visible red light (λ = 630 ... 680 nm)	Illumination LEDs: blue (λ = 455 nm ± 20 nm) Feedback spot: visible green light (λ = 525 nm ± 15 nm) Aiming laser: visible red light (λ = 630 ... 680 nm) / lighting LEDs: white (λ = 6000 K ± 500 K)	Lighting LEDs: white (λ = 6000 K ± 500 K) Feedback spot: visible green light (λ = 525 nm ± 15 nm) Aiming laser: visible red light (λ = 630 nm ... 680 nm)
LED class	–	Risk group 2, Irradiance L_B < 10 x 10³ W/(m²sr) within 50 s (RG2), L_R < 7 x 10⁵ W/(m²sr) within 10 s (RG1), at a distance of ≥ 200 mm. Risk RG 1 (low risk) corresponding to L_B < 10 x 10³ W/(m²sr) within 100 s at distances of > 1 m. (IEC 62471 (2006-07) / EN 62471 (2008-09)) Risk group 1 (IEC 62471 (2006-07) / EN 62471 (2008-09)) (depending on type)	–	Risk group 2, Irradiance L_B < 10 x 10³ W/(m²sr) within 50 s (RG2), L_R < 7 x 10⁵ W/(m²sr) within 10 s (RG1), at a distance of ≥ 200 mm. Risk RG 1 (low risk) corresponding to L_B < 10 x 10³ W/(m²sr) within 100 s at distances of > 1 m. (IEC 62471 (2006-07) / EN 62471 (2008-09)) Risk group 1 (IEC 62471 (2006-07) / EN 62471 (2008-09)) (depending on type)	Risk group 1 (IEC 62471 (2006-07) / EN 62471 (2008-09))
Laser class	1M, 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	70 Hz, With resolution of 2 megapixels		40 Hz, With resolution of 4 megapixels		
Code resolution	≥ 0.1 mm [1]	≥ 0.12 mm [2]	≥ 0.1 mm [1]	≥ 0.12 mm [2]	
Reading distance	300 mm ... 2,200 mm, depends on lens used [3]	500 mm ... 2,500 mm [3] (depending on type)	300 mm ... 2,200 mm, depends on lens used [3]	500 mm ... 2,500 mm [3] (depending on type)	670 mm ... 2,000 mm [3]

[1] Depends on lens used.

[2] Depends on distance.

[3] Depends on lens used, for details see field of view 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, USPS (Postnet, Planet, USPS4SCB), Australian Post, Dutch KIX Post, Royal Mail, Swedish Post
2D code types	Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code
Stacked code types	PDF417
Code qualification	On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004
Internal image storage	512 MB

Interfaces

		Lector652 Flex	Lector652 Dynamic Focus	Lector654 Flex	Lector654 Dynamic Focus	Lector654 Dynamic Focus for Systems
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				
	Data transmission rate	10/100/1,000 Mbit/s				
	Protocol	TCP/IP, FTP (image transmission), EtherNet/IP, PROFINET (optional over external fieldbus module CDF600-2), Dual Port PROFINET				TCP/IP, FTP (image transmission), EtherNet/IP
CAN bus		✔				
	Function	SICK CAN sensor network (Master/Slave, Multiplexer/Server)				
	Data transmission rate	20 kbit/s … 1 Mbit/s				
	Protocol	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 CMC600 parameter memory in CDB650/CDM420)				0
Configurable inputs		Encoder input, external trigger				
Switching outputs		6 (CDB650: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4")				0
Configurable outputs		Good read, External illumination control, free configurable output condition, "device ready"				
Reading pulse		Switching inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode				
Optical indicators		21 LEDs (10 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. 16 GB, optional				
Data storage and retrieval		Images and file logging via MicroSD memory card, internal memory and external FTP				
Maximum encoder frequency		1 kHz				
External illumination control		Via digital output (max. 24 V trigger) or via external illumination connector				

Mechanics/electronics

	Lector652 Flex	Lector652 Dynamic Focus	Lector654 Flex	Lector654 Dynamic Focus	Lector654 Dynamic Focus for Systems
Electrical connection	1 x M12, 17-pin plug (serial, CAN, I/Os, power supply) 2 x M12, 8-pin socket (Ethernet, P1 not yet with function) 1 x M8, 4-pin socket (USB)				1 x M12, 5-pin plug (CAN) 2 x M12, 5-pin female connector (CAN) 1 x M8, 3-pin socket (external illumination) 2 x M12, 8-pin socket (Ethernet, P1 not yet with function)
Operating voltage	24 V DC, ± 20 %				
Power consumption	Typ. 20 W, ± 20 %				
Output current	≤ 100 mA				
Housing	Aluminum die cast				
Housing color	Light blue (RAL 5012)				
Protection class	III				
Weight	635 g	963 g	635 g	963 g	
Dimensions	142 mm x 89 mm x 46 mm [1]	142.8 mm x 90 mm x 106.1 mm	142 mm x 89 mm x 46 mm [1]	142.8 mm x 90 mm x 106.1 mm	142.6 mm x 90 mm x 106.1 mm

[1] Only housing without lens and protective hood.

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-2 (2005-08) / EN 61000-6-3 (2007-01)
Shock resistance	EN 60068-2-6
Electrical safety	EN 60950-1 (2011-01)
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
- **Enclosure rating:** IP 65

Version	Sensor resolution	Lens	Focal length	Internal lighting	Type	Part no.
Lector652 Flex	2,048 px x 1,088 px	Exchangeable (C-mount), to be ordered separately as accessory	–	–	V2D652R-MCXXA6 Flex	1063404
Lector652 Dynamic Focus	2,048 px x 1,088 px	Integrated	40 mm	Blue	V2D652R-MEBKA6 Dynamic Focus	1072317
			54 mm	White	V2D652R-MEWHA6 Dynamic Focus	1063405
			40 mm	White	V2D652R-MEWKA6 Dynamic Focus	1068681
Lector654 Flex	2,048 px x 2,048 px	Exchangeable (C-mount), to be ordered separately as accessory	–	–	V2D654R-MCXXA6 Flex	1060892

Version	Sensor resolution	Lens	Focal length	Internal lighting	Type	Part no.
Lector654 Dynamic Focus	2,048 px x 2,048 px	Integrated	40 mm	Blue	V2D654R-MEBKA6 Dynamic Focus	1072316
			54 mm	White	V2D654R-MEWHA6 Dynamic Focus	1060893
			40 mm	White	V2D654R-MEWKA6 Dynamic Focus	1068680
Lector654 Dynamic Focus for Systems	2,048 px x 2,048 px	Integrated	54 mm	White	V2D654R-MEWHF6 Dynamic Focus for Systems	1063229

Dimensional drawings (Dimensions in mm (inch))

Lector652 Flex
Lector654 Flex

Lector652 Dynamic Focus
Lector654 Dynamic Focus
Lector654 Dynamic Focus for Systems

① P1 connection, no function, planned "Ethernet", depending on type
② P3 connection "Ethernet"
③ X2 "USB" connection or "trigger external lighting", depending on type
④ P2 connection "CAN OUT", depending on type
⑤ X1 "Power/Serial Data/CAN/I/O" connection or "CAN IN", depending on type
⑥ Cover (flap) for the slot of the microSD memory card
⑦ Blind hole thread M5, 5 mm deep (4 x), for mounting
⑧ Sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
⑨ Plug connector for connecting the integrated lighting
⑩ Outlet, aiming laser
⑪ Blind hole thread M2.5, 5.5 mm deep (4 x), for mounting the lighting fixture
⑫ Bar graph display
⑬ Function button (2 x)
⑭ LED for status display (2 levels), 10 x

① P1 connection, no function, planned "Ethernet", depending on type
② P3 connection "Ethernet"
③ X2 "USB" connection or "trigger external lighting", depending on type
④ P2 connection "CAN OUT", depending on type
⑤ X1 "Power/Serial Data/CAN/I/O" connection or "CAN IN", depending on type
⑥ Cover (flap) for the slot of the microSD memory card
⑦ Blind hole thread M5, 5 mm deep (4 x), for mounting
⑧ Lens protective cover
⑨ Sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
⑩ Green feedback LED
⑪ Ring light
⑫ Lens
⑬ Outlet, aiming laser
⑭ Bar graph display
⑮ Function button (2 x)
⑯ LED for status display (2 levels), 10 x

Field of view

Lector652 Flex

Field of view in mm² (sq inch)
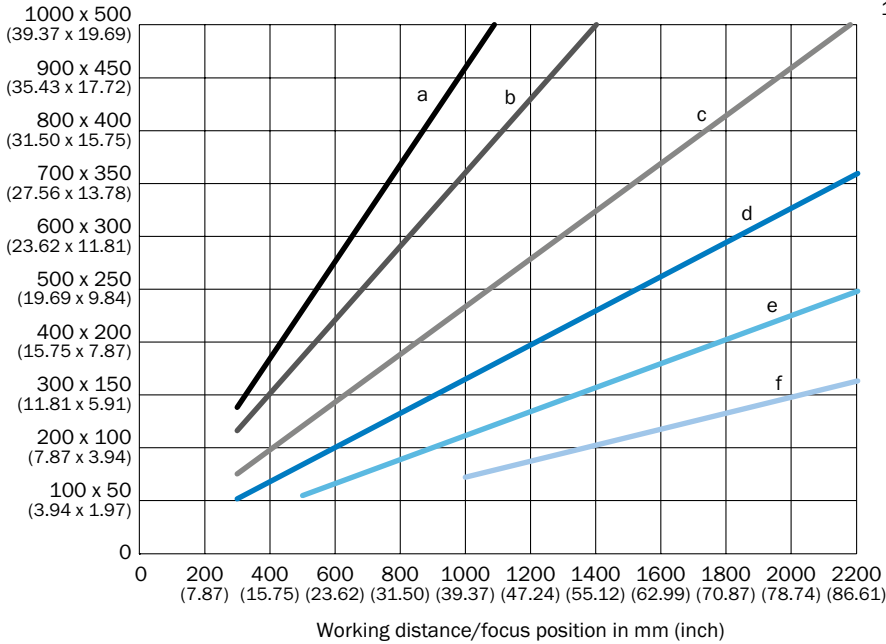
Min. resolution in mm (mil)
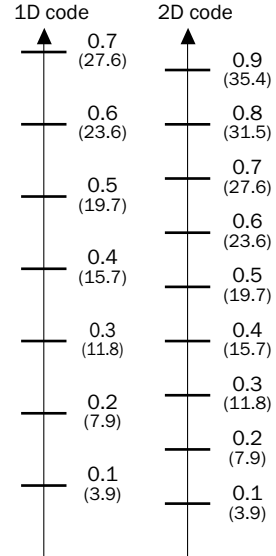
a: f = 12 mm	d: f = 35 mm
b: f = 16 mm	e: f = 50 mm
c: f = 25 mm	f: f = 75 mm

Lector652 Dynamic Focus

Field of view in mm² (sq inch)
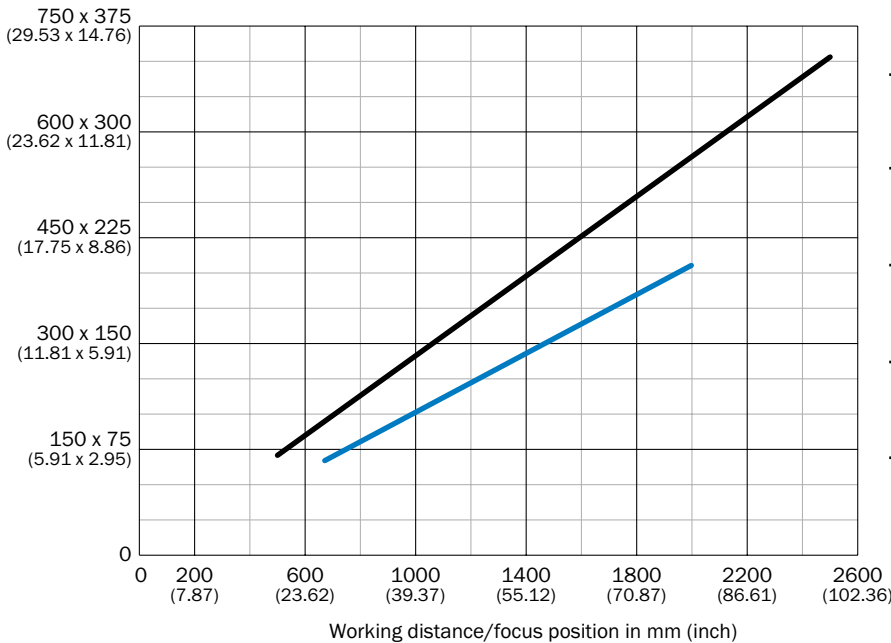
Min. resolution in mm (mil)
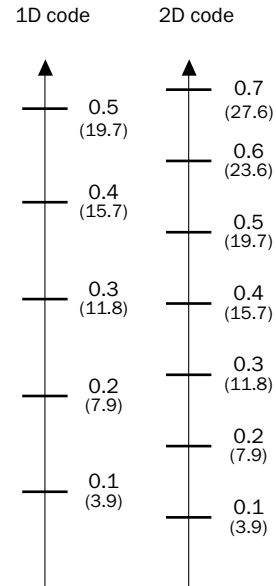
f = 40 mm (V2D65xR-xxKxx)
f = 54 mm (V2D652R-xxHxx)

Lector654 Flex

Field of view in mm² (sq inch)
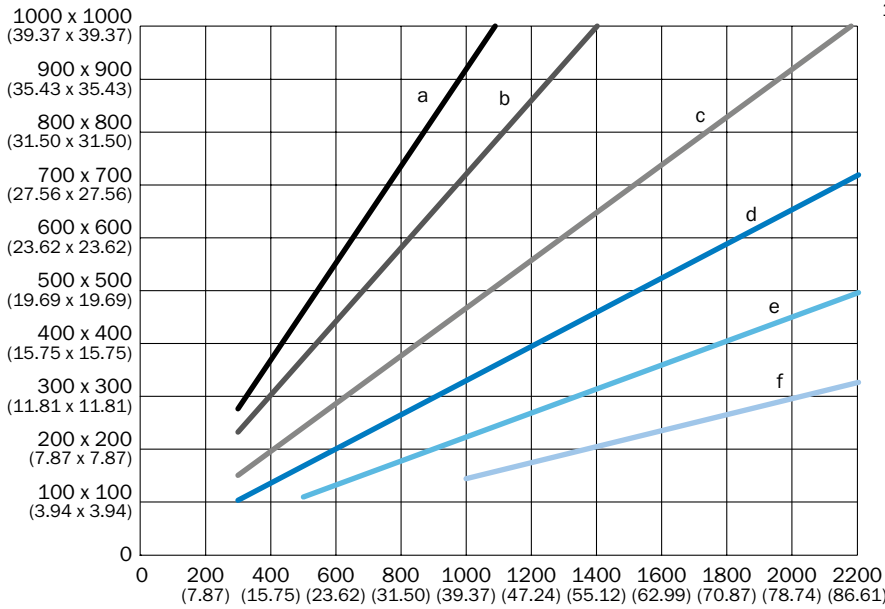
Min. resolution in mm (mil)

1D code   2D code

a: f = 12 mm	d: f = 35 mm
b: f = 16 mm	e: f = 50 mm
c: f = 25 mm	f: f = 75 mm

Working distance/focus position in mm (inch)
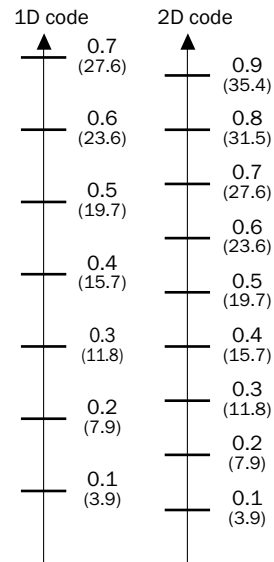
Lector654 Dynamic Focus
Lector654 Dynamic Focus for Systems

Field of view in mm² (sq inch)

Min. resolution in mm (mil)

1D code   2D code
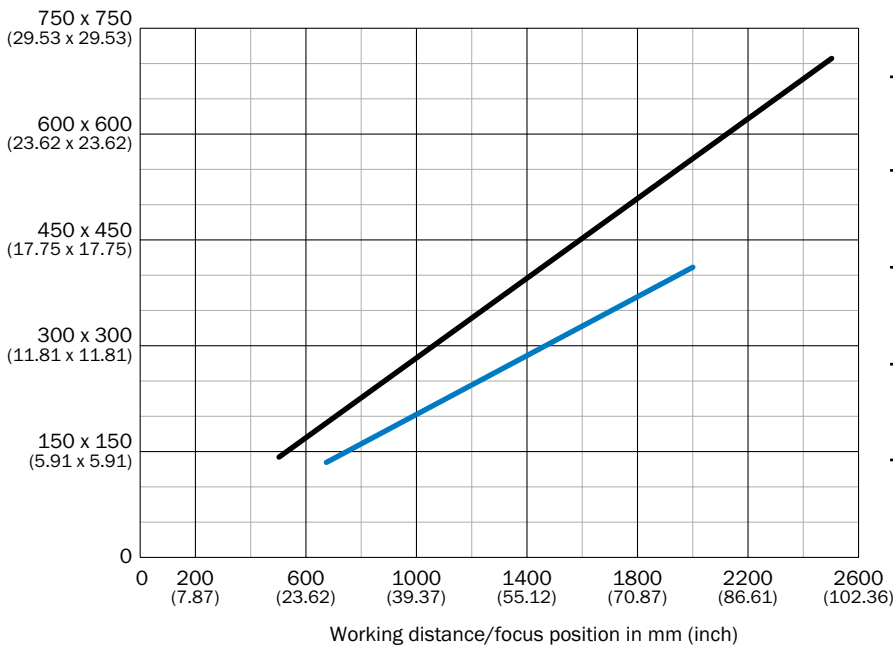
f = 40 mm (V2D65xR-xxKxx)
f = 54 mm (V2D654R-xxHxx)

Working distance/focus position in mm (inch)
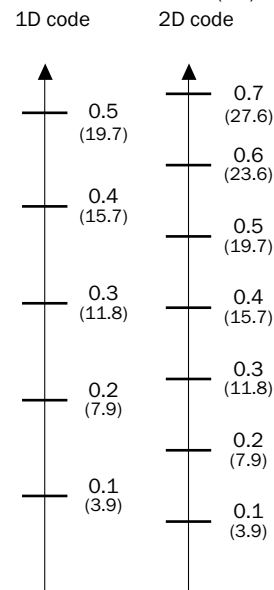
Field of view Lector65x with Panorama 25 mm

Dimensions in mm (inch/*mil)

Max. code size	58 (2.28)	83 (3.27)	108 (4.25)	121 (4.76)	134 (5.28)
Min. resolution 1D-Code	0.16 (*6.2)	0.23 (*8.9)	0.29 (*11.6)	0.36 (*14.3)	0.43 (*17.0)
Min. resolution 2D-Code	0.21 (*8.2)	0.30 (*11.8)	0.39 (*15.4)	0.48 (*19.1)	0.58 (*22.7)

Field of view LECTOR®652

313 x 58	474 x 83	634 x 109	795 x 134	955 x 159
(12.32 x 2.28)	(18.66 x 3.27)	(24.96 x 4.29)	(31.30 x 5.28)	(37.60 x 6.26)

Field of view LECTOR®654

313 x 107	474 x 154	634 x 201	795 x 248	955 x 295
(12.32 x 4.21)	(18.66 x 6.06)	(24.96 x 7.91)	(31.30 x 9.76)	(37.60 x 11.61)

Field of view width: 600 (23.62), 500 (19.69), 400 (15.75), 300 (11.81), 200 (7.87), 100 (3.94), 0, 100 (3.94), 200 (7.87), 300 (11.81), 400 (15.75), 500 (19.69), 600 (23.62)

Working distance/focus position: 181 (7.13) … 400 (15.75), 600 (23.62), 800 (31.50), 1,000 (39.37), 1,200 (47.24)

Field of view, Lector65x Flex with Panorama 35 mm

Dimensions in mm (inch/*mil)

Max. code size	39 (1.54)	66 (2.60)	92 (3.62)	118 (4.65)	144 (5.67)
Min. resolution 1D-Code	0.11 (*4.2)	0.18 (*7.0)	0.25 (*9.9)	0.32 (*12.7)	0.39 (*15.5)
Min. resolution 2D-Code	0.14 (*5.6)	0.24 (*9.4)	0.33 (*13.2)	0.43 (*16.9)	0.53 (*20.7)

Field of view LECTOR®652

203 x 39	358 x 66	513 x 92	668 x 118	823 x 144
(7.99 x 1.54)	(14.09 x 2.60)	(20.20 x 3.62)	(26.30 x 4.65)	(32.40 x 5.67)

Field of view LECTOR®654

203 x 73	358 x 122	513 x 171	668 x 220	823 x 269
(7.99 x 2.87)	(14.09 x 4.80)	(20.20 x 6.73)	(26.30 x 8.66)	(23.40 x 10.59)

Field of view width: 500 (19.69), 400 (15.75), 300 (11.81), 200 (7.87), 100 (3.94), 0, 100 (3.94), 200 (7.87), 300 (11.81), 400 (15.75), 500 (19.69)

Working distance/focus position: 181 (7.13) … 400 (15.75), 700 (27.56), 1,000 (39.37), 1,300 (51.18), 1,600 (74.80)

Field of view Lector65x Dynamic Focus with Panorama 40 mm

Dimensions in mm (inch/*mil)

	34 (1.34)	64 (2.52)	95 (3.74)	125 (4.92)	156 (6.14)
Max. code size					
Min. resolution 1D-Code	0.09 (*3.6)	0.18 (*6.9)	0.26 (*10.3)	0.34 (*13.5)	0.43 (*16.8)
Min. resolution 2D-Code	0.12 (*4.8)	0.23 (*9.2)	0.35 (*13.7)	0.46 (*18.0)	0.57 (*22.4)
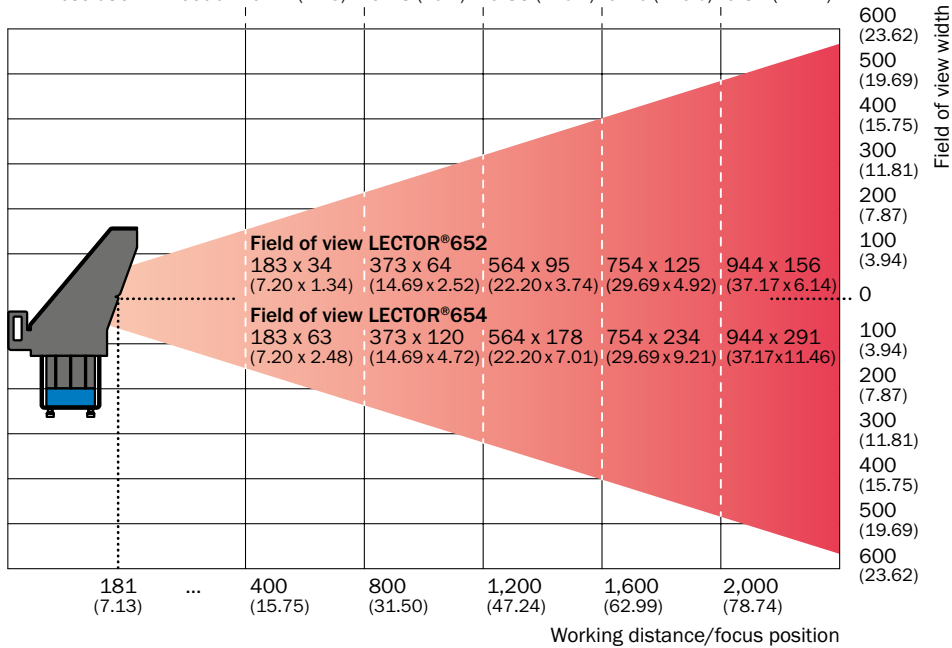
Field of view LECTOR®652
183 x 34 | 373 x 64 | 564 x 95 | 754 x 125 | 944 x 156
(7.20 x 1.34) | (14.69 x 2.52) | (22.20 x 3.74) | (29.69 x 4.92) | (37.17 x 6.14)

Field of view LECTOR®654
183 x 63 | 373 x 120 | 564 x 178 | 754 x 234 | 944 x 291
(7.20 x 2.48) | (14.69 x 4.72) | (22.20 x 7.01) | (29.69 x 9.21) | (37.17 x 11.46)

Field of view width

600 (23.62)
500 (19.69)
400 (15.75)
300 (11.81)
200 (7.87)
100 (3.94)
0
100 (3.94)
200 (7.87)
300 (11.81)
400 (15.75)
500 (19.69)
600 (23.62)

181 (7.13) ... 400 (15.75) 800 (31.50) 1,200 (47.24) 1,600 (62.99) 2,000 (78.74)

Working distance/focus position

Field of view, Lector65x Flex with Panorama 50 mm

Dimensions in mm (inch/*mil)

	72 (2.83)	105 (4.13)	133 (5.24)	162 (6.38)	190 (7.48)
Max. code size					
Min. resolution 1D-Code	0.11 (*4.1)	0.16 (*6.1)	0.20 (*8.1)	0.25 (*10.0)	0.30 (*12.0)
Min. resolution 2D-Code	0.14 (*5.5)	0.21 (*8.2)	0.27 (*10.8)	0.34 (*13.4)	0.41 (*16.0)

Field of view LECTOR®652
203 x 38 | 307 x 56 | 411 x 75 | 515 x 93 | 618 x 111
(7.99 x 1.50) | (12.09 x 2.20) | (16.18 x 2.95) | (20.28 x 3.66) | (24.33 x 4.37)

Field of view LECTOR®654
203 x 72 | 307 x 106 | 411 x 140 | 515 x 174 | 618 x 208
(7.99 x 2.83) | (12.09 x 4.17) | (16.18 x 5.51) | (20.28 x 6.85) | (24.33 x 8.19)

Field of view width

400 (15.75)
300 (11.81)
200 (7.87)
100 (3.94)
0
100 (3.94)
200 (7.87)
300 (11.81)
400 (15.75)

181 (7.13) ... 600 (23.62) 900 (35.43) 1,200 (47.24) 1,500 (59.06) 1,800 (70.87)

Working distance/focus position
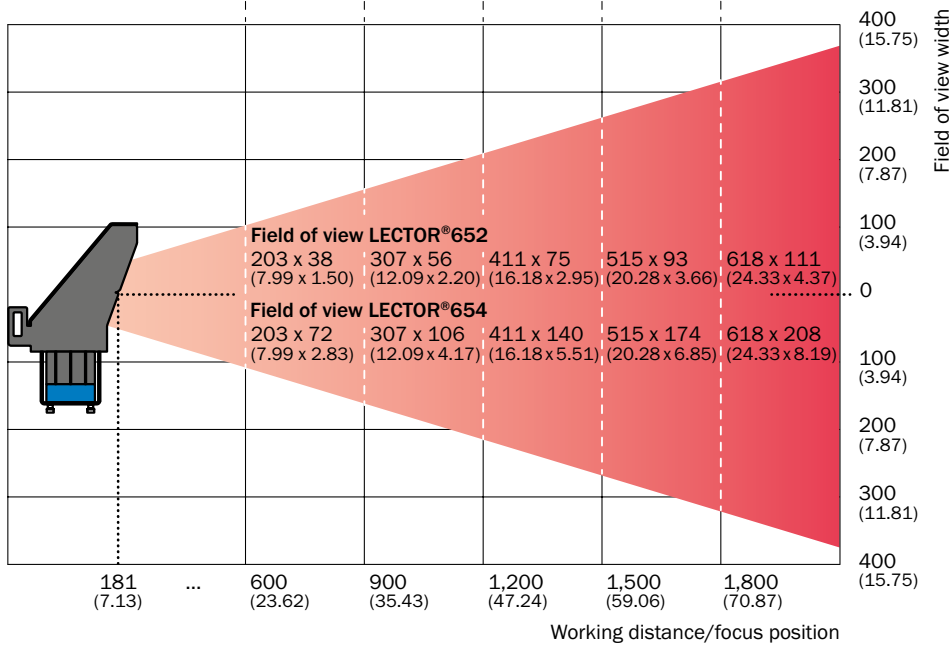
Field of view Lector65x Dynamic Focus with Panorama 54 mm

Dimensions in mm (inch/*mil)

	35 (1.38)	52 (2.05)	68 (2.68)	85 (3.35)	102 (4.02)
Max. code size					
Min. resolution 1D-Code	0.10 (*3.8)	0.14 (*5.7)	0.19 (*7.4)	0.24 (*9.3)	0.28 (*11.1)
Min. resolution 2D-Code	0.13 (*5.1)	0.19 (*7.5)	0.25 (*9.9)	0.31 (*12.4)	0.37 (*14.8)

Field of view LECTOR®652

192 x 35	291 x 52	389 x 69	488 x 86	587 x 102
(7.56 x 1.38)	(11.46 x 2.05)	(15.31 x 2.72)	(19.21 x 3.39)	(23.11 x 4.02)

Field of view LECTOR®654

192 x 66	291 x 98	389 x 129	488 x 161	587 x 192
(7.56 x 2.60)	(11.46 x 3.86)	(15.31 x 5.08)	(19.21 x 6.34)	(23.11 x 7.56)

Field of view width: 400 (15.75), 300 (11.81), 200 (7.87), 100 (3.94), 0, 100 (3.94), 200 (7.87), 300 (11.81), 400 (15.75)

Working distance/focus position: 181 (7.13) ... 600 (23.62), 900 (35.43), 1,200 (47.24), 1,500 (59.06), 1,800 (70.87)

Recommended accessories

Mounting systems

Mounting brackets and mounting plates

	Brief description	Part no.	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Mounting bracket with screws including skew angle display	2069169	●	●	●

Connection systems

Modules

	Brief description	Type	Part no.	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination	CDB650-204	1064114	●	●	–

Plug connectors and cables

	Signal type/application	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	USB 2.0	Male connector, M8, 4-pin, straight	Male connector, USB-A, 4-pin, straight	–	2 m	6051164	●	●	–
	Power, serial, CAN, digital I/Os	Female connector, M12, 17-pin, straight, A-coded	Male connector, M12, 17-pin, straight, A-coded	To connection module CDB650, suitable for 2 A, drag chain use	3 m	6051194	●	●	–
	Gigabit Ethernet/PoE	Male connector, M12, 8-pin, straight, X-coded	Male connector, RJ45, 8-pin, straight	AWG26	2 m	6049728	●	●	●

Reflectors and optics

Lens and accessories

	Brief description	Part no.	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Optic kit 04 including lens with a focal length of 35 mm, white lighting, distance bracket and protective hood	1064794	●	–	–
	Optic kit 05 including lens with a focal length of 50 mm, white lighting, distance bracket and protective hood	1064776	●	–	–

Accessories

Mounting systems

Device protection (mechanical)

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	IP-65 sealing rubber for extension cables with 15-pin D-Sub plug connection (6010075 and 6020092)	4038847	●	●	●	●	●	●	–
	Weld spark guard for direct mounting in front of front screen on device including fixing screws	2065807	●	●	–	–	–	–	–

Mounting brackets and mounting plates

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Bracket with adapter board	2042902	●	●	–	–	–	–	–
	Mounting bracket (simple bracket)	2020410	●	●	–	–	–	–	–
	Mounting bracket to mount the ICL illuminations	2063992	●	●	–	–	–	–	–
	Mounting bracket for mounting the dome illumination including fixing screws	2068087	●	●	–	–	–	–	–
	Mounting bracket with screws, L-shaped for sliding nuts mounting including skew angle display	2078970	–	–	●	–	–	–	–
	Mounting bracket set consisting of L-shaped cooling plate and L-shaped bracket including skew angle display	2076735	–	–	●	–	–	–	–
	Mounting bracket with screws including skew angle display	2069169	–	–	–	●	●	●	●
	Mounting bracket set consisting of mounting angle, cooling plate and screw including skew angle display	2069171	–	–	–	●	●	●	●
	Universal clamping bracket for rod mounting, diameter 12 mm	2076472	●	●	–	–	–	–	–

Other mounting accessories

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Sliding nut, M5, short	5324896	●	●	●	●	●	●	●
	Sliding nut, M4, short	5324897	●	●	●	●	●	●	●
	Sliding nut, M3, short	5324898	●	●	●	●	●	●	●

Terminal and alignment brackets

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Distance bracket and light extension connector for mounting integratable lighting, length 37 mm, used with compact C-mount lenses with focal length of 16 mm or 35 mm	2079502	–	–	●	–	–	–	–
Illustration may differ	Distance bracket and light extension connector for mounting integratable lighting, length 15 mm, used with compact C-mount lenses with focal length of 12 mm or 25 mm and S-mount lens with focal length 25mm	2079501	–	–	●	–	–	–	–
	Distance bracket for mounting integratable lighting, length 51.3 mm	2069007	–	–	–	●	●	–	–
	Quick-action lock system	2025526	●	●	–	–	–	–	–
		2016110	–	–	●	●	●	●	●

Connection systems

Adapters and distributors

	Cable	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Lighting trigger and NPN/PNP converter, to be installed in CDB620 and CDM420	2056990	●	●	●	●	●	–	–

Modules
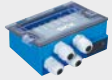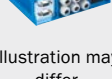
	Brief description	Type	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Small connection module for one sensor, 4 cable glands, base for CMC600	CDB620-001	1042256	●	●	–	–	–	–	–
	Small connection module for one sensor, 2 cable glands, 2 x M12 connector/socket for CAN, base for CMC600	CDB620-101	1042257	●	●	–	–	–	–	–
	Small connection module for a sensor, 5 cable glands, socket for CMC cloning module	CDB620-201	1042258	●	●	–	–	–	–	–
	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination	CDB650-204	1064114	●	●	●	●	●	●	–
	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	●	●	●	●	●	●	–
	Fieldbus proxy/gateway for connecting one identification sensor to PROFINET-IO networks (interface 2 x M12, female connector/female connector, 4-pin)	CDF600-2200	1062460	●	●	●	●	●	●	–
	Fieldbus proxy/gateway for connecting one identification sensor to PROFINET-IO networks (interface 2 x RJ45 AIDA, female connector/female connector, 4-pin)	CDF600-2201	1063390	●	●	●	●	●	●	–
	Modular connection module for one sensor	CDM420-0001	1025362	●	●	–	–	–	–	–
	Modular connection module for two sensors	CDM420-0004	1028487	●	●	–	–	–	–	–
	Modular connection module for one sensor, 2 A fuse	CDM420-0006	1058634	●	●	●	●	●	●	–
	Modular connection module for two sensors, 2 A fuse	CDM420-0007	1060324	●	●	●	●	●	●	–
Illustration may differ	Modular connection module for one sensor, Host and AUX interface available on face plate	CDM420-0101	1025364	●	●	–	–	–	–	–
Illustration may differ	Kit: modular connection module for one sensor, Host and AUX interface available on face plate, power supply CMP400, US power cord	CDM420-0102	1026220	●	●	–	–	–	–	–
	Kit: modular connection module for one sensor, 2 A fuse, Host and AUX interface available on face plate, power supply CMP490, US power cord	CDM420-0108	1064248	●	●	●	●	●	●	●

	Brief description	Type	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	External parameter memory for integration in CDB620/CDB650/CDM42x	CMC600-101	1042259	●	●	●	●	●	●	–

Plug connectors and cables

Signal type/application: Power, serial, CAN, digital I/Os

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Female connector, M12, 17-pin, straight, A-coded	Cable	17-wire, suitable for 2 A, adapted color coding of open conductor heads, drag chain use, stripped	3 m	2070425	–	●	●	●	●	●	–
				5 m	2070426	–	●	●	●	●	●	–
				10 m	2070427	–	●	●	●	●	●	–
			Drag chain use, suitable for 2 A, suitable for refrigeration	5 m	2075220	●	●	●	●	●	●	●
	Female connector, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650)	0.35 m	2056184	–	●	●	●	●	●	–
				0.9 m	2049764	–	●	●	●	●	●	–
				2 m	2055419	–	●	●	●	●	●	–
				3 m	2055420	–	●	●	●	●	●	–
				5 m	2055859	–	●	●	●	●	●	–
	Female connector, M12, 17-pin, straight	Male connector, D-Sub-HD, 15-pin, straight	To connection module CDx (except CDB650), drag chain use	3 m	2061605	–	●	●	●	●	●	–
	Male connector, M12, 17-pin, straight, A-coded	Female connector, M12, 17-pin, straight, A-coded	To connection module CDB650, 17-wire, suitable for 2 A, drag chain use	0.9 m	6052945	–	●	●	●	●	●	–
				2 m	6052286	–	●	●	●	●	●	–
			To connection module CDB650, suitable for 2 A, drag chain use	3 m	6051194	–	●	●	●	●	●	–
			To connection module CDB650, 17-wire, suitable for 2 A, drag chain use	5 m	6051195	–	●	●	●	●	●	–
	Female connector, M12, 17-pin, straight, A-coded	Male connector, M12, 17-pin, straight, A-coded	Drag chain use, suitable for 2 A, suitable for refrigeration	2 m	6053230	●	●	●	●	●	●	●
				3 m	6053231	●	●	●	●	●	●	●
				5 m	6053232	●	●	●	●	●	●	●
	Female connector, D-Sub-HD, 15-pin, straight	Cable		2 m	2043413	●	●	–	–	–	–	–
		Male connector, D-Sub-HD, 15-pin, straight	Extension cable, 15-wire, AWG26	2 m	6034417	●	●	●	●	●	●	–
				3 m	6034418	●	●	●	●	●	●	–

	Connection type head A	Connection type head B	Cable		Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
Illustration may differ	Female connector, M12, 17-pin, straight	Cable	17-wire		3 m	6042772	–	●	–	–	–	–	–
					5 m	6042773	–	●	–	–	–	–	–
					10 m	6048817	–	●	–	–	–	–	–

Signal type/application: Power

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Cable	Cable	Black AS-i flat cable for looping in the power supply to 4Dpro Ethernet sensors, sold per meter, 2-wire, by the meter	–	6022463	–	●	–	–	–	–	–
	AS-i clip, M12	–	AS-i clip for connection on black AS-i flat cable	–	6022472	–	●	–	–	–	–	–
	Female connector, M12, 17-pin, straight	Male connector, M12, 4-pin, straight	4-pin for connecting one 4Dpro sensor, 17-pin to AS-i clip on black AS-i flat cable, drag chain use	1 m	6044574	–	●	–	–	–	–	–
				2.5 m	6044575	–	●	–	–	–	–	–

Signal type/application: Power, CAN

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Female connector, M12, 5-pin, straight	Male connector, M12, 5-pin, straight	CAN cable	1 m	6021164	–	–	–	–	–	–	●
				3 m	6021165	–	–	–	–	–	–	●
				5 m	6021168	–	–	–	–	–	–	●

Signal type/application: CAN

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Male connector, M12, 5-pin, straight	–	CAN plug, M12, 5-pin, with resistance	–	6021167	–	–	–	–	–	–	●

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Female connector, M12, 5-pin	Cable	5-wire	5 m	6021166	–	–	–	–	–	–	●

Signal type/application: CAN/CANopen

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Female connector, M12, 5-pin, straight	Cable	5-wire, shielded on pin 1	10 m	6021175	–	–	–	–	–	–	●

Signal type/application: Ethernet

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Male connector, M12, 4-pin, D-coded	Male connector, M12, 4-pin, D-coded	4-wire	2 m	6034420	–	●	–	–	–	–	–
				3 m	6034421	–	●	–	–	–	–	–
				5 m	6034422	–	●	–	–	–	–	–
	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	4-wire, drag chain use, AWG26	2 m	6034414	–	●	–	–	–	–	–
			Drag chain use	3 m	6044400	–	●	–	–	–	–	–
			4-wire, drag chain use, AWG26	5 m	6034415	–	●	–	–	–	–	–
				10 m	6030928	–	●	–	–	–	–	–
				20 m	6036158	–	●	–	–	–	–	–
			4-wire, suitable for refrigeration, Ecolab, AWG26	2 m	6050198	–	●	–	–	–	–	–
				3 m	6050199	–	●	–	–	–	–	–
				5 m	6050200	–	●	–	–	–	–	–
				10 m	6050201	–	●	–	–	–	–	–
				20 m	6050596	–	●	–	–	–	–	–
Illustration may differ			4-wire, drag chain use, AWG26	5 m	6053217	–	●	–	–	–	–	–
	Male connector, M12, 4-pin, angled, D-coded		–	5 m	6039488	–	●	–	–	–	–	–

Signal type/application: Gigabit Ethernet/PoE

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Male connector, M12, 8-pin, straight, X-coded	Male connector, RJ45, 8-pin, straight	AWG26	2 m	6049728	–	–	●	●	●	●	●
				5 m	6049729	–	–	●	●	●	●	●
				10 m	6049730	–	–	●	●	●	●	●

Signal type/application: trigger input, switching output

Connection type head A	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
Male connector, M8, 3-pin, straight	3-wire	5 m	2031169	–	–	●	●	●	●	●

Signal type/application: serial

	Connection type head A	Connection type head B	Cable	Cable length	Type	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Female connector, D-Sub, 9-pin, straight	Female connector, D-Sub, 9-pin, straight	For PC connection	3 m	Data connection cable (RS-232) to PC	2014054	●	●	●	●	●	●	●

Signal type/application: RS-232, USB

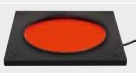|	Connection type head A	Connection type head B	Cable	Type	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Male connector, D-Sub, 9-pin, straight	Male connector, USB-A, straight	Converter RS-232 to USB (if no RS-232 interface is available with the PC)	Converter RS-232 to USB	6042499	●	●	●	●	●	●	●

Signal type/application: USB 2.0

	Connection type head A	Connection type head B	Cable	Cable length	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Male connector, USB-A	Male connector, Micro-B	–	2 m	6036106	●	●	–	–	–	–	–
	Male connector, M8, 4-pin, straight	Male connector, USB-A, 4-pin, straight	4-wire	1.5 m	6051163	–	–	●	●	●	●	–
			–	2 m	6051164	–	–	●	●	●	●	–
			4-wire	3 m	6051165	–	–	●	●	●	●	–

Connection inlays
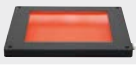
	Connection type	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Connection inlay (male connector), D-Sub-HD, 15-pin	6010020	●	●	●	●	●	●	–
	Connection inlay (female connector), D-Sub-HD, 15-pin	6010019	●	●	●	●	●	●	–
	Connection inlay (male connector), D-Sub-HD, 9-pin, 15-pin	6009438	●	●	●	●	●	●	–

Reflectors and optics

Illuminations

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Ring lighting, bright field, red lighting color, lighting distance 0.2 m … 1 m	1048371	●	●	●	–	–	–	–
	Ring illumination, bright field, red lighting color, lighting distance 200 mm … 1.5 m	1052495	●	●	●	–	–	–	–
	Ring lighting, bright field, red lighting color, lighting distance 200 mm … 1.1 m	1052472	●	●	●	–	–	–	–
	Ring lighting, bright field spot, infrared lighting color, lighting distance 0.2 m … 2 m, temperature 0 °C … +40 °C	1047957	●	●	●	–	–	–	–
	Ring lighting, bright field spot, red lighting color, lighting distance 0.2 m … 2 m, temperature 0 °C … +40 °C	1046820	●	●	●	–	–	–	–
	UV illumination, light source ultraviolet, 365 nm, 47 mm x 45 mm x 45 mm	6051200	●	●	●	●	●	●	–
	Integratable lighting, lighting color white, suitable for S-mount and compact C-mount lenses with a focal length of 9.6 mm	2078428	–	–	●	–	–	–	–

Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
Integratable lighting, lighting color white, suitable for S-mount and compact C-mount lenses with a focal length of 12 mm, 16 mm and 17.5 mm	2078430	–	–	●	–	–	–	–
Integratable lighting, lighting color white, suitable for S-mount and compact C-mount lenses with a focal length of 25 mm and 35 mm	2078431	–	–	●	–	–	–	–
Integratable lighting, lighting color blue, suitable for lenses with a focal length of 12.5 mm and 16 mm	2074009	–	–	–	●	●	–	–
Integratable lighting, lighting color blue, suitable for lenses with a focal length of 25 mm	2074012	–	–	–	●	●	–	–
Integratable lighting, lighting color blue, suitable for lenses with a focal length of 35 mm, 50 mm and 75 mm	2074007	–	–	–	●	●	–	–
Integratable lighting, lighting color white, suitable for lenses with a focal length of 12.5 mm and 16 mm	2069006	–	–	–	●	●	–	–
Integratable lighting, lighting color white, suitable for lenses with a focal length of 25 mm	2074001	–	–	–	●	●	–	–
Integratable lighting, lighting color white, suitable for lenses with a focal length of 35 mm, 50 mm and 75 mm	2069099	–	–	–	●	●	–	–
Bar light, light source white, outer dimension 109 mm x 28 mm	6035959	●	●	●	●	●	–	–
Spot lighting set, white lighting color, incl. 24 V power supply (in 24 V, out max. 7 V)	6037795	●	●	●	●	●	–	–
Dark field light, light source white, outer dimension 138 mm x 102 mm	6037800	●	●	●	●	●	–	–
Square ring light, light source white, outer dimension 70 mm x 70 mm	6035958	●	●	●	●	●	–	–
Bar light, light source blue, 470 nm, outer dimension 109 mm x 28 mm	6035960	●	●	●	●	●	–	–
Spot lighting set, blue lighting color, incl. 24 V power supply (in 24 V, out max. 7 V)	6037797	●	●	●	●	●	–	–
Ring light, light source blue, 470 nm, outer diameter 90 mm	6037792	●	●	●	●	●	–	–
Bar light, light source green, 525 nm, outer dimension 109 mm x 28 mm	6035961	●	●	●	●	●	–	–
Spot lighting set, green lighting color, incl. 24 V power supply (in 24 V, out max. 7 V)	6037796	●	●	●	●	●	–	–

Illustration may differ

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Back light, light source red, 660 nm, outer dimension 60 mm x 58 mm	6041961	●	●	●	●	●	–	–
	Back light, light source red, 660 nm, outer dimension 120 mm x 118 mm	6041962	●	●	●	●	●	–	–
	Bar light, light source red, 660 nm, outer dimension 109 mm x 28 mm	6035962	●	●	●	●	●	–	–
	Coaxial light, light source red, 660 nm, outer dimension 73 mm x 70 mm	6035964	●	●	●	●	●	–	–
	Flat dome light, light source red, 660 nm, outer dimension 143 mm x 143 mm	6035965	●	●	●	●	●	–	–
	Spot lighting set, red lighting color, incl. 24 V power supply (in 24 V, out max. 7 V)	6037794	●	●	●	●	●	–	–
	Low angle light, light source red, 660 nm, outer diameter 134 mm	6035963	●	●	●	●	●	–	–
	Low angle light, light source red, 660 nm, outer diameter 208 mm	6037798	●	●	●	●	●	–	–
	Dark field light, light source red, 660 nm, outer dimension 138 mm x 102 mm	6037799	●	●	●	●	●	–	–
	Ring light, light source red, 660 nm, outer diameter 50 mm	6035957	●	●	●	●	●	–	–
	Ring light, light source red, 660 nm, outer diameter 90 mm	6037793	●	●	●	●	●	–	–

Lens and accessories

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	C-mount module for V2D63x	2073188	–	–	●	–	–	–	–
	C-mount 2/3", focal length 8 mm, aperture 1.4 – 16	5325091	–	–	●	–	–	–	–
	C-mount 2/3", focal length 12 mm, aperture 1.4 – 16	5325403	–	–	●	–	–	–	–
	C-mount 2/3", focal length 16 mm, aperture 1.4 – 16	5325404	–	–	●	–	–	–	–
	C-mount 2/3", focal length 25 mm, aperture 1.4 – 16	5325405	–	–	●	–	–	–	–
Illustration may differ	C-mount 2/3", focal length 35 mm, aperture 1.4 – 16	5325406	–	–	●	–	–	–	–

Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
Compact C-mount 2/3", focal length 25 mm, aperture 8	2079343	–	–	●	–	–	–	–
Compact C-mount 2/3", focal length 12 mm, aperture 8	2079348	–	–	●	–	–	–	–
Compact C-mount 2/3", focal length 35 mm, aperture 8	2079344	–	–	●	–	–	–	–
Compact C-mount 2/3", focal length 16 mm, aperture 8	2079346	–	–	●	–	–	–	–
C-Mount lens 1", focal length 50 mm, lens aperture 1.4 – 16	5327526	–	–	–	●	●	–	–
C-Mount lens 1", focal length 75 mm, lens aperture 1.4 – 16	5327527	–	–	–	●	●	–	–
C-Mount lens 1", focal length 12.5 mm, lens aperture 1.4 – 16	5327522	–	–	–	●	●	–	–
C-Mount lens 1", focal length 16 mm, lens aperture 1.4 – 16	5327523	–	–	–	●	●	–	–
C-Mount lens 1", focal length 25 mm, lens aperture 1.4 – 16	5327524	–	–	–	●	●	–	–
C-Mount lens 1", focal length 35 mm, lens aperture 1.4 – 16	5327525	–	–	–	●	●	–	–
Distance ring/expansion ring for C-mount lenses, diameter 25.5 mm to 32.0 mm, 0.6 mm thick	4041112	–	–	●	●	●	–	–
Distance ring package for S-mount lenses, including three 1.5 mm rings	2066933	–	–	●	–	–	–	–
Distance ring package for S-mount lenses, including 1.5 mm, 2.3 mm, 3 mm rings	2081459	–	–	●	–	–	–	–
Lector620 dome accessories for glossy and curved surfaces inclusive bracket and mounting material	2063093	●	●	–	–	–	–	–
Optic kit 01 including lens with a focal length of 12.5 mm, white lighting, distance bracket and protective hood	1064791	–	–	–	●	●	–	–
Optic kit 02 including lens with a focal length of 16 mm, white lighting, distance bracket and protective hood	1064792	–	–	–	●	●	–	–
Optic kit 03 including lens with a focal length of 25 mm, white lighting, distance bracket and protective hood	1064793	–	–	–	●	●	–	–
Optic kit 04 including lens with a focal length of 35 mm, white lighting, distance bracket and protective hood	1064794	–	–	–	●	●	–	–
Optic kit 05 including lens with a focal length of 50 mm, white lighting, distance bracket and protective hood	1064776	–	–	–	●	●	–	–
Optic kit 06 including lens with a focal length of 75 mm, white lighting, distance bracket and protective hood	1064777	–	–	–	●	●	–	–
Optic kit 07 including lens with a focal length of 12.5 mm, blue lighting, distance bracket and protective hood	1069612	–	–	–	●	●	–	–
Optic kit 08 including lens with a focal length of 16 mm, blue lighting, distance bracket and protective hood	1069613	–	–	–	●	●	–	–
Optic kit 09 including lens with a focal length of 25 mm, blue lighting, distance bracket and protective hood	1069614	–	–	–	●	●	–	–
Optic kit 10 including lens with a focal length of 35 mm, blue lighting, distance bracket and protective hood	1069615	–	–	–	●	●	–	–
Optic kit 11 including lens with a focal length of 50 mm, blue lighting, distance bracket and protective hood	1069616	–	–	–	●	●	–	–
Optic kit 12 including lens with a focal length of 75 mm, blue lighting, distance bracket and protective hood	1069617	–	–	–	●	●	–	–
S-mount 1/1.8", focal length 17.5 mm, aperture 8	5330231	–	–	●	–	–	–	–

Illustration may differ

Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
S-mount 1/1.8", focal length 9.6 mm, aperture 8	2079336	–	–	●	–	–	–	–
S-mount 1/1.8", focal length 25 mm, aperture 8	2076656	–	–	●	–	–	–	–
S-mount module for V2D63x	2079020	–	–	●	–	–	–	–
Lens protective hood, enclosure rating IP 67, length 22.7 mm, PMMA, used with S-mount lenses with focal length of 9.6 mm or 17.5 mm	2079176	–	–	●	–	–	–	–
Lens protective hood, enclosure rating IP 67, length 60 mm, PMMA, used with compact C-mount lenses with focal length of 16 mm or 35 mm	2079204	–	–	●	–	–	–	–
Lens protective hood, enclosure rating IP 67, length 37.7 mm, PMMA, used with compact C-mount lenses with focal length of 12 mm or 25 mm and S-mount lens with focal length 25mm	2079127	–	–	●	–	–	–	–
Lens protective hood, enclosure rating IP 65, length 74.5 mm, glass window	2066565	–	–	–	●	●	–	–

Mirror adapters

Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
Panorama mirror hood to extend the field of view, useable with lens focal length 25 mm	2076621	–	–	–	–	●	–	●
Panorama mirror hood to extend the field of view, useable with lens focal length 35 mm or 40 mm	2076622	–	–	–	●	●	–	●
Panorama mirror hood to extend the field of view, useable with lens focal length 50 mm or 54 mm	2076623	–	–	–	●	●	●	●

Optical filters

Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
C-mount visible block filter (> 800 nm)	2052458	–	–	●	–	–	–	–
C-mount IR block filter (< 650 nm)	2068812	–	–	●	●	●	–	–

Further accessories

Sets and kits

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	MLG 440 mm length, 20 mm resolution and required mounting brackets as well as cabels for the MLG	1068533	–	–	–	–	–	●	–
	MLG 740 mm length, 20 mm resolution and required mounting brackets as well as cabels for the MLG	1068534	–	–	–	–	–	●	–

Storage media

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	microSD memory card with 1 GB for industrial use	4051366	–	●	●	●	●	●	–
Illustration may differ	microSD memory card with 2 GB for industrial use	4077575	–	●	●	●	●	●	–

Test and monitoring tools

	Brief description	Part no.	Lector62x ECO	Lector62x	Lector63x Flex	Lector64x Flex	Lector65x Flex	Lector65x Dynamic Focus	Lector65x for Systems
	Lector6 Viewer, for connecting Lector6xx devices for displaying images (with multi-view), auto-setup, device diagnostics, match-code teach-in, and parameter switching, operating voltage of 24 V DC	2080544	●	●	●	●	●	●	●

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