

Identification Solutions

PRODUCTS AT A GLANCE

Image-based code readers, bar code scanners, RFID, hand-held scanners, connectivity



MORE THAN A VISION

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 decades, customers have recognized SICK as a pioneer in vision, a leader in industrial code reading, an RFID specialist, and an expert in connectivity and big data. Our global technology experts are specialists in your industry and are located in your corner of the world. To meet your everyday challenges, it takes more than a vision. We find intelligence is what truly makes the difference.



There is never only one answer to intelligent questions. The best technology depends on the task at hand.

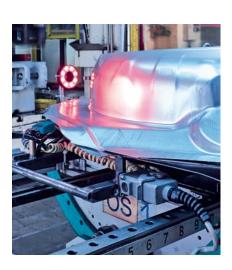
For every identification task, the same question is asked: Which technology is best? And as always in life, there is never just one answer for every question. The best possible solution is always tailored to the individual technical and economic conditions of the application.

Three identification technologies have dominated the market for many years: RFID, laser-based bar code scanners and image-based code readers. 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. Furthermore, SICK offers big data solutions such as Package Analytics to visualize your process data and thus to enable continuous process optimization by means of global data transparency.

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 MaxiCodes, 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







Laser-based bar code scanners

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.

- · Excellent depth of field and large field of view
- · Resistance to ambient light
- No additional illumination required
- Reliable reading even of foil-protected codes and other reflective surfaces
- High reading rate in start-stop situations and when objects are stationary
- Low costs



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.

- · No visual contact of the RFID tag required
- Omnidirectional reading
- Reliable use under harsh ambient conditions
- Large distances between reader and object possible
- Short reading cycles and possibility of bulk detection
- · Rewritable tags and high storage capacity
- · Durable design for industrial use

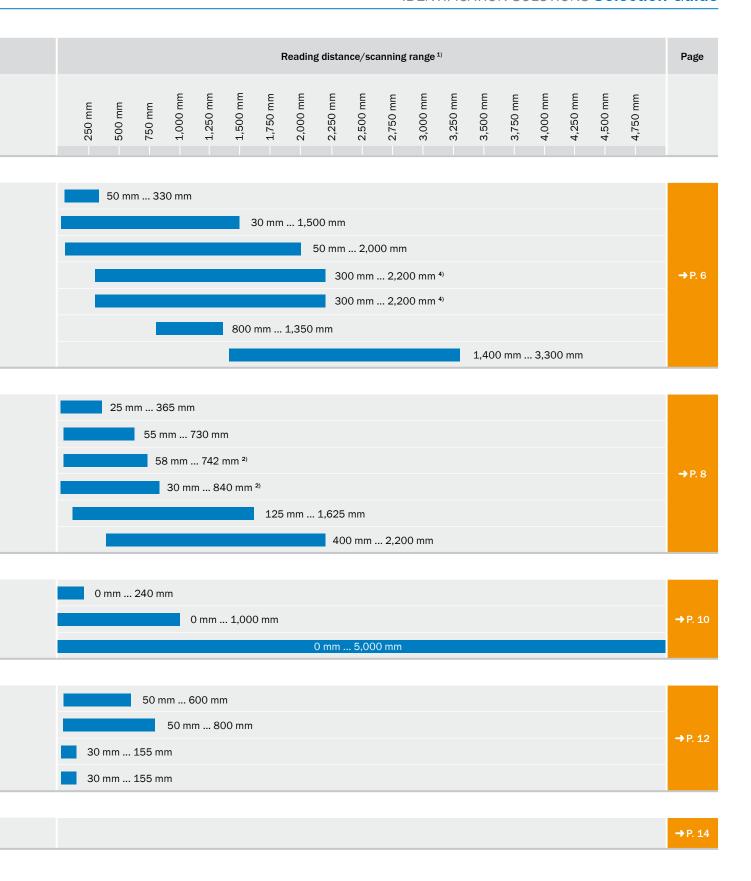
Product	IDpro		Focu	ssing			Supp	orted code	type		
	ID <i>pro</i> compliance	Fixed focus	Adjustable focus	Dynamic focus control	Auto focus	1D code	Stacked code	2D code	OCR	RFID tags	
mage-based code readers											
iCR80x		•				•	•		•		
Lector®62x	•		•		2), 3)	•	•		2)		
Lector®63x	•		•		2), 3)	•	•				
Lector®64x	•		•			•	•				
Lector®65x	•		•	2)	2), 3)	•	•				
ICR88x				•		•	•	•	•		
ICR89x				•		•	•		•		
Bar code scanners											
CLV61x	•	•				•					
CLV62x	•	•				•					
CLV63x	•	•				•					
CLV64x	•			•		•					
CLV65x	•				•	•					
CLV69x	•				•	•					
RFID											
RFH6xx	•									•	
RFU62x	•									•	
RFU63x	•									•	
Hand-held scanners											
IDM14x		•				•	•				
IDM16x		•					•				
IDM24x		•					•				
IDM26x		•					•	•			
Connectivity											
CDB, CDM, CDF600, CDF600-2	•										

 $^{^{\}mbox{\tiny 1)}}$ For details see reading field diagram online.

 $^{^{\}rm 2)}$ Depending on th scanner design.

³⁾ During teach-in.

 $^{^{\}mbox{\tiny 4)}}$ Depending on lens and illumination.





ICR80x
Easy, small and light



Lector®62x

Clever. Simple. Industrial.



Lector®63x

Intelligent. Flexible. Intuitive.

Technical data overview				
Focus	Fixed focus	Adjustable focus / teach auto focus	Adjustable focus / teach auto focus	
Scanning frequency	-	25 Hz / 60 Hz, WVGA resolution	50 Hz, at 1.9 megapixels resolution	
Code resolution	≥ 0.19 mm ≥ 0.25 mm	≥ 0.1 mm	≥ 0,1 mm	
Reading distance	50 mm 330 mm	30 mm 1,500 mm	30 mm 2,000 mm	
Serial (RS-232, RS-422)	✓ (only RS-232)	<i>V</i>	✓	
Ethernet	 , optional via external connection module (CDM + CMF) 	✓, TCP/IP, FTP (image transmission), PROFINET, EtherNet/IP, EtherCAT (optional via external connection module CDF600)	✓, TCP/IP, FTP (image transmission), PROFINET (optional via external connection module CDF600-2)	
CAN bus	, optional via external connection module (CAN232)	, CANopen, CSN (SICK CAN Sensor Network)	, CANopen, CSN (SICK CAN Sensor Network)	
PROFIBUS DP	, optional via external connection module (CDF)	✓, optional via external connection module (CDF600-2)	✓, optional via external connection module (CDF600-2)	
DeviceNet	, optional via external connection module (CDM + CMF)	-	-	
USB	- / v	✓ , USB 2.0	✓ , USB 2.0	
Weight	37 g	170 g	395 g / 500 g	
A1 4				

At a glance

- Omni-directional code reading
- Optical alignment
- Extremely compact
- Lightweight
- USB and RS-232 versions
- RoHS and WEEE compliant
- Decoding of all common 1D, 2D, and stacked codes, as well as optical character recognition (depending on type)
- 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

- Intelligent code reader with 2 megapixel sensor
- Flexible optics, filter and lighting design
- Function buttons, aiming laser, optical and acoustic feedback signal
- Intuitive user interface, web server and MicroSD card



→ www.mysick.com/en/ICR80x



→ www.mysick.com/en/Lector62



→ www.mysick.com/en/Lector63x 1

Detailed information

¹⁾ Available in 2015.



Lector®64x

High efficiency for code reading applications



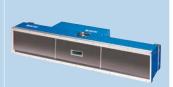
Lector®65x

Nonstop code reading flexibility



ICR88x

Compact and powerful line-scan camera system



ICR89x

Faster. More reliable. More brilliant.

Adjustable focus	Adjustable focus / dynamic focus control / teach auto focus	Dynamic focus control	Dynamic focus control
40 Hz, at 1.7 megapixels resolution	70 Hz, at 2 megapixels resolu- tion, 40 Hz, at 4 megapixels resolution	19,100 Hz	19,100 Hz
≥ 0.1 mm	≥ 0.1 mm ≥ 0.12 mm	-	-
300 mm 2,200 mm	300 mm 2,200 mm	0.8 m 1.35 m	1.4 m 3.3 m
✓	v / -	✓ (only RS-232)	✓ (only RS-232)
✓, TCP/IP, FTP (image transmission), EtherNet/IP, PROFINET (optional via external connection module CDF600-2)	✓, TCP/IP, FTP (image transmission), EtherNet/IP, PROFINET (optional via external connection module CDF600-2)	✓ (3) , TCP/IP	✓ (3) , TCP/IP
, CSN (SICK CAN Sensor Network)	, CSN (SICK CAN Sensor Network)	✓ (2) , CSN (SICK CAN Sensor Network)	✓ (2) , CSN (SICK CAN Sensor Network)
✓ , optional via external connection module (CDF600-2)	✓, optional via external connection module (CDF600-2) / -	✓ , via MSC800 controller	✓ , via MSC800 controller
-	-	-	-
✓ , USB 2.0	✓, USB 2.0 / -	-	-
635 g	635 g / 963 g	28.5 kg	37 kg

- 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
- High-end camera system, optimized for applications with short reading distances
- Dual-line CMOS sensor for the best possible read rates
- High scanning frequency of up to 19 kHz for high-resolution images (> 200 dpi)
- All decoders are integrated in the camera
- Maximum reliability, no external PC required
- System can read all common 1D and 2D codes

- Dual-line CMOS sensor for maximum bar code and OCR read rates
- Maximum scanning frequency up to 30 kHz for high-resolution images (200 dpi) at up to 3.8 m/s
- Large reading field of up to 1,200 mm
- Ability to read all common 1D and 2D codes and postal codes
- Intelligent control standby mode



→ www.mysick.com/en/Lector64



→ www.mysick.com/en/Lector65



→ www.mysick.com/en/ICR88x



→ www.mysick.com/en/ICR89



Technical data overview				
Focus	Fixed focus	Fixed focus	Fixed focus	
Field of view	≤ 50°	≤ 50°	≤ 50°	
Scanning frequency	400 Hz 1,000 Hz	400 Hz 1,200 Hz	400 Hz 1,200 Hz	
Code resolution	0.1 mm 1 mm	0.15 mm 1 mm	0.2 mm 1 mm	
Reading distance	25 mm 365 mm	55 mm 730 mm	44 mm 735 mm	
Serial (RS-232, RS-422/485)	✓ (only RS-232)	✓ , AUX (only RS-232)	✓, AUX (only RS-232)	
Ethernet	-	-/ 🗸	- / V	
CAN bus	✓	✓	<i>V</i>	
PROFIBUS DP	 - / ✓, optional via external connection module (CDF600-2) 	✓ , optional via external connection module (CDF600-2)	✓ , optional via external connection module (CDF600-2)	
DeviceNet	-	, optional via external connection module (CDM + CMF)	✓ , optional via external connection module (CDM + CMF)	
Weight	265 g/295 g	205 g 854 g	250 g 1,230 g	

At a glance

- · Optimized reading field for intralogistics applications
- · Available with SICK CAN sensor network
- · Available in different versions (CAN, Fieldbus) for use in almost any application
- Adjustable scanning frequency of up to 1000 scans/second
- · Compact design

- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/ IP available on board, no additional gateway needed (depending on variant)
- SMART620 code reconstruction technology
- Flexible sorting, filtering, and logical functions
- · High scanning frequency of up to 1,200 Hz
- Small housing
- · Advanced remote diagnostics and network monitoring capabilities available over Ethernet
- IP 65 or IP 69K rated (depending on type)

- Integrated pushbuttons for auto setup and reading diagnostics
- Integrated LED bar graph
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/ IP available on board, no additional gateway needed (depending on variant)
- Enhanced SMART code reconstruction technology
- Flexible sorting, filtering, and logical functions
- High scanning frequency of up to 1,200 Hz
- Advanced remote diagnostics and network monitoring capabilities available over Ethernet





→ www.mysick.com/en/CLV61x → www.mysick.com/en/CLV62x → www.mysick.com/en/CLV63x



CLV64x

Dynamic, multi-functional



CLV65x

Always in auto focus



CLV69x

The highest level of flexibility and power

Dynamic focus control	Auto focus	Auto focus
≤ 50°	≤ 50°	≤ 60° / ≤ 50°
400 Hz 1,200 Hz	600 Hz 1,000 Hz	400 Hz 1,200 Hz
0.15 mm 1 mm	0.25 mm 1 mm	0.17 mm 1.2 mm
30 mm 840 mm	125 mm 1,625 mm	400 mm 2,200 mm
✓, AUX (only RS-232)	✓, AUX (only RS-232)	${m arepsilon}$, only with cloning plug D-Sub and Ethernet
- / v	- / V	✓ , only with cloning plug I/O, CAN IN/OUT or CAN Redundant
✓	✓	✓
✓ , optional via external connection module (CDF600-2)	✓ , optional via external connection module (CDF600-2)	✓ , optional via external connection module (CDF600-2)
✓, optional via external connection module (CDM + CMF)	✓ , optional via external connection module (CDM + CMF)	✓ , optional via external connection module (CDM + CMF)
250 g 1,230 g	320 g / 250 g	1,500 g / 2,200 g

- Dynamic focus adjustment enables extended depth of field
- Integrated pushbuttons for auto setup and reading diagnostics
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant)
- Enhanced SMART code reconstruction technology
- Flexible sorting, filtering, and logical functions
- · Integrated LED bar graph
- Advanced remote diagnostics and network monitoring capabilities available over Ethernet

- Huge depth of field due to auto focus
- Integrated pushbuttons for auto setup and reading diagnostics
- CAN, Ethernet TCP/IP, PROFINET, and EtherNet/IP available on board, no additional gateway needed (depending on variant)
- Enhanced SMART code reconstruction technology
- Flexible sorting, filtering, and logical functions
- Integrated web server provides remote diagnostics and monitoring
- · Integrated LED bar graph

- Advanced SMART+ code reconstruction technology
- New and flexible cloning plug technology
- CAN, Ethernet and serial communications available on board (dependent on cloning plug variant)
- Large depth of field due to real-time auto focus
- Consistent, user-friendly "SOPAS ET" software
- Built-in tracking without the use of an additional system controller
- Flexible sorting, filtering, and logical functions
- Integrated LED bar graph with pushbuttons



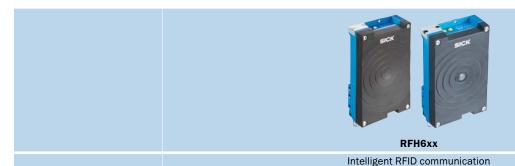
→ www.mysick.com/en/CLV64x



→ www.mysick.com/en/CLV65



→ www.mysick.com/en/CLV69x



Technical data overview		
Product category	Write/read device with integrated antenna	
Frequency band	HF (13.56 MHz)	
Version	Short Range / Mid Range	
Scanning range	Max. 150 mm / max. 240 mm	
Serial	✓ (RS-232, RS-422)	
USB	-	
Ethernet	-/ √	
CAN bus	✓	
PROFIBUS DP	✓ , optional via external connection module (CDF)	
DeviceNet	✓ , optional available externally	
Weight	450 g 760 g	

At a glance

- 13.56 MHz RFID write/read device for ranges up to 240 mm
- Transponder communication according to ISO/IEC 15693 standard
- Compact, industrial design with integrated antenna
- Embedded protocols allow interfacing with standard industrial fieldbus technologies
- Powerful micro-processor executes internally configurable logic
- Flexible trigger control
- Supports parameter cloning via microSD memory card
- Built-in diagnostics



Detailed information → www.mysick.com/



RFU62x

Short-range ultra high frequency scanner



RFU63x

Intelligent technology ensures easy integration

Write/read device with integrated antenna

UHF (860 ... 960 MHz)

Mid Range

Max. 1 m

✓ (RS-232, RS-422/-485) / -

✓ , USB 2.0

-/ 🗸

v / -

✓ , optional via external connection module (CDF)

✓ , optional available externally

780 g

Write/read device with integrated antenna / write/read device without integrated antenna

UHF (860 ... 960 MHz)

Long Range

Typ. 2 m / typ. 5 m

✔ (RS-232, RS-422/-485)

✓ , USB 2.0

•

✓, optional via external connection module (CDF)

✓ , optional available externally

3.5 kg

- Compact UHF RFID read/write device with integrated antenna for scanning ranges up to 1 m
- Standard-compatible transponder interface (ISO/ IEC 18000-6C / EPC C1G2)
- Supports industry-standard data interfaces and fieldbuses, as well as PoE
- MicroSD memory card for parameter cloning
- · Extensive diagnostic and service functions



→ www.mysick.com/en/RFU62

- UHF RFID read/write unit for industrial applications
- With or without integrated antenna, depending on the type (up to four external antennas can be connected)
- Standard-compliant transponder interface (ISO/ IEC 18000-6C/EPC G2C1)
- Supports common industrial data interfaces and fieldbuses
- MicroSD memory card for device parameter cloning
- Several diagnostic and service options available



→ www.mysick.com/en/RFU63:



Technical data overview			
Scanner design	1D code hand-held scanner	1D code hand-held scanner	
Code resolution	0.076 mm 0.1 mm	≥ 0.076 mm	
Supported code type	1D, Stacked	1D, Stacked	
Serial	✓	v / -	
Ethernet	✓, optional via external connection or fieldbus mod- ule, TCP/IP (optional via external connection module CDM + CMF), PROFINET (optional via external con- nection module CDF600-2), EtherCAT (optional via external connection module CDF600)	✓, optional via external connection or fieldbus mod- ule, TCP/IP (optional via external connection module CDM + CMF), PROFINET (optional via external con- nection module CDF600-2), EtherCAT (optional via external connection module CDF600) / –	
PROFIBUS DP	✓ , optional via external connection module (CDF600-2)	✓, optional via external connection module (CDF600-2) / -	
DeviceNet	✓ , optional via external connection module (CDM + CMF)	✓, optional via external connection module (CDM +	
PS/2	✓	v / -	
USB	✓	v / -	
Bluetooth	-	✓ , Bluetooth [™] V2.1 EDR, 2.4 2.4835 GHz / -	
WIFI	-	✓ , IEEE 802.11 b/g	

At a glance

- Reading at contact and distances up to 25 cm
- Identification of all popular 1D codes, with PDF version, also stacked codes
- Scan rate up to 300 scans/second
- Withstands 25 drops from 1.5 m height
- Extremely lightweight, only 106 g
- Connection as PS/2 and USB keyboard wedge, serial USB or via RS-232 TTL
- IP 41 enclosure rating

- Reading distance up to 850 mm
- Identifies all popular linear bar codes
- Scan rate up to 500 scans/second
- Withstands 24 drops from 1.8 m height
- Highly visible scan line
- IP 41 enclosure rating



→ www.mysick.com/en/IDM12



→ www.mysick.com/en/IDM14



IDM16x

Industrial mobile reliability



IDM24x

Convenient and secure identification of 2D codes



IDM26x

Reliable 2D code identification in harsh environments

1D code hand-held scanner

≥ 0.076 mm

1D, Stacked

V/-

- ✓, optional via external connection or fieldbus module, TCP/IP (optional via external connection module CDM + CMF), PROFINET (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600) / –
- ✓, optional via external connection module

 (CDF600-2) / -
- ✓, optional via external connection module
 (CDM + CMF) / –

//-

v / -

 \checkmark , Bluetooth[™] V2.1 EDR, 2.4 ... 2.4835 GHz

/ -

✓ , IEEE 802.11 b/g

2D code hand-held scanner

≥ 0.08 mm ≥ 0.13 mm

1D, 2D, Stacked

1

- ✓, optional via external connection or fieldbus module, TCP/IP (optional via external connection module CDM + CMF), PROFINET (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600)
- ✓ , optional via external connection module (CDF600-2)
- ✓ , optional via external connection module (CDM + CMF)

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✓ , Bluetooth[™] V4.0, 2.402 ... 2.4830 GHz

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2D code hand-held scanner / 2D DPM handheld scanner

≥ 0.08 mm

≥ 0.13 mm

1D, 2D, Stacked, DPM

V

- ✓, optional via external connection or fieldbus module, TCP/IP (optional via external connection module CDM + CMF), PROFINET (optional via external connection module CDF600-2), EtherCAT (optional via external connection module CDF600)
- ✓ , optional via external connection module (CDF600-2)
- ✓ , optional via external connection module (CDM + CMF)

~

✓ , Bluetooth™ V4.0, 2.402 ... 2.4830 GHz

- Identification of all popular 1D codes, with PDF version also stacked codes
- Compact housing with up to IP 65 withstanding 50 drops from 2 m on concrete
- Good read feedback via LED, beeper and vibrator
- Supports all popular corded and cordless interfaces as well as industrial fieldbuses via SICK connectivity
- Tool-free exchange of cable and battery
- Corded and cordless versions available



→ www.mysick.com/en/IDM16x

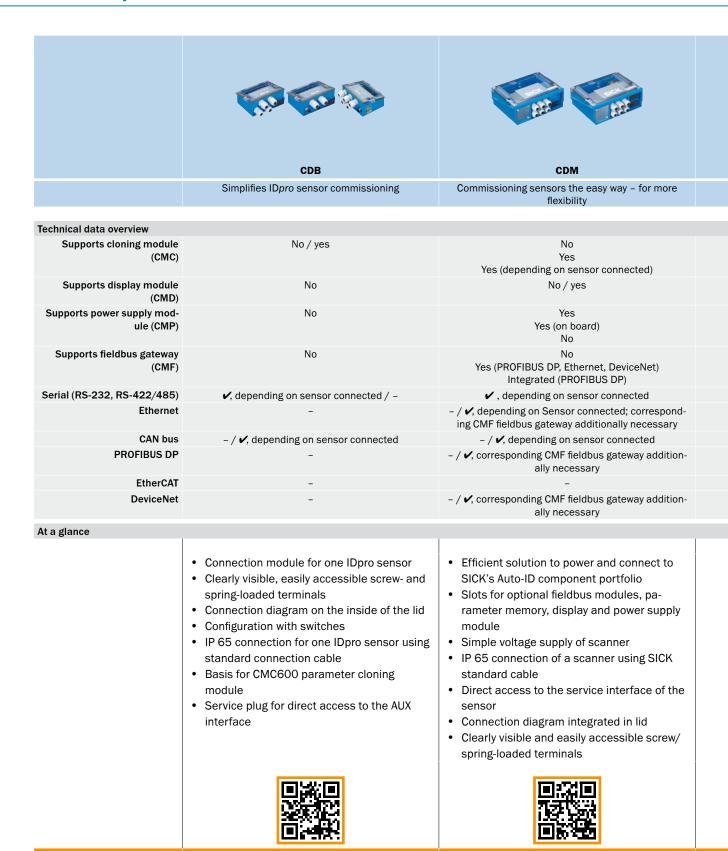
- Identification of all current 1D, stacked, and 2D codes
- Reliable, secure, and fast code reading
- · Compact design, light housing
- Manual operation and hands-free operation in presentation mode
- Corded and cordless variants available
- Identification of all current 1D, stacked, and 2D codes
- Reliable, secure, and fast code reading
- Rugged, stable housing with IP 65 enclosure rating
- Supports all common corded and cordless interfaces as well as industrial fieldbuses via SICK connectivity
- Good read feedback via LED, beeper, and vibration
- Decoding algorithms ideal for direct part marked codes (depending on type)



→ www.mvsick.com/en/IDM24



→ www.mysick.com/en/IDM26x





CDF600



CDF600-2

Easy EtherCAT connection

Simply easy to connect

Integrated / no	Integrated
No	No
No	No
Integrated (EtherCAT)	Integrated (PROFINET IO) Integrated (PROFIBUS DP)
✓ (only RS-232)	✓ (only RS-232)
-	V / -
✓, depending on sensor connected / –	- / ✔, depending on sensor connected
-	- / V
✓	-
-	-

- Simple mounting saves time on installation, commissioning, and provides flexibility for different application environments
- All electrical connections are pluggable
- Integrated parameter storage
- 6 LEDs for status and error display
- Integrated CAN interface

- Flexible mounting on all standard profiles
- Flexible fieldbus connection for PROFIBUS DP and PROFI-NET IO (depending on type)
- Code switch for setting node address and operating mode (depending on type)
- · LEDs for status and diagnostics
- Plug-in electrical connections
- Integrated configuration memory for connected sensors
- Compact and flexible



→ www.mysick.com/en/CDF600



→ www.mysick.com/en/CDF600-2

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 6,500 employees and over 50 subsidiaries and equity investments as well as numerous representative offices worldwide, we are always close to our customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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

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

For us, that is "Sensor Intelligence."

Worldwide presence:

Australia, Austria, Belgium/Luxembourg, Brazil, Czech Republic, Canada, China, Denmark, Finland, France, Germany, Great Britain, Hungary, India, Israel, Italy, Japan, Mexico, Netherlands, Norway, Poland, Romania, Russia, Singapore, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Turkey, United Arab Emirates, USA

Detailed addresses and additional representatives → www.sick.com

