PRODUCT OVERVIEW

Automatic Identification Technology

Bar Code and 2D Code Reading Systems
RF Identification Systems
Laser Measurement Systems

SICK
Sensor Intelligence.

All-Inclusive Support for Sensors

Pre-Sales

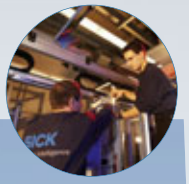
Individual, intelligent, dependable

Application Consulting
SICK has a solution for your identification task. Any system has to be commercially viable so we also evaluate the cost parameters and use this as a basis for suggesting the best possible individual solution for you.

Engineering
SICK engineering teams develop intelligent solutions and combine these to create individual systems. The SICK quality management system ensures that every aspect of each customer's system functions reliably.

Project Management
SICK project management teams guarantee that each project runs optimally. They reliably supervise your project from planning to final inspection.

After-Sales



Global, competent, cooperative

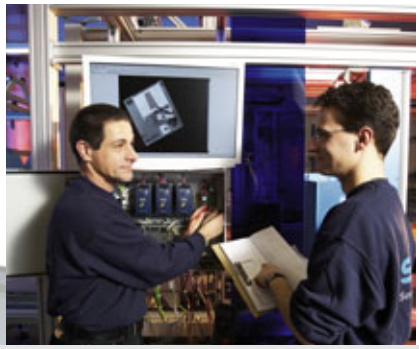
Installation
SICK service technicians install bar code and 2D code scanners, RFID systems, assembly frames and scanner networks world-wide. In doing so, they prepare the systems for commissioning.

Commissioning
SICK commissioning engineers professionally configure the specific application reader properties for the bar code and 2D code scanners und RFID systems.

Site Management
SICK site managers are on the spot to make sure each project runs smoothly. They flexibly coordinate the work of SICK technicians and are your on-site contact.

Final Inspection
During a test phase, which closely simulates real conditions, SICK service specialists demonstrate that the agreed features of the installed scanners and RFID systems function correctly. When everything is running smoothly, the identification system is handed over to the operator.

Support aroun



Services for the Operation Phase

Made-to-measure, quick to react, in partnership

Servicing
SICK scanners and RFID systems are maintenance-free. However, it is recommended that they are cleaned and adjusted at regular intervals depending on external conditions. This also allows the operator to identify any alterations or damage and perform repairs to the application. Regular servicing guarantees that the system will provide the best possible performance throughout its long operating life.

Troubleshooting and Spare Parts
SICK offers a spare parts and repair plan tailored to the customer's requirements and means. This develops commercially interesting concepts, which can be agreed in a service contract together with other services.

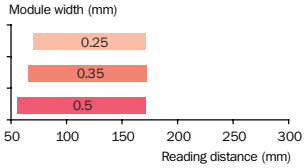
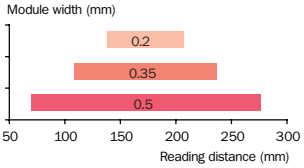
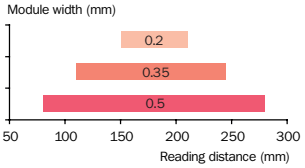
Hotline
SICK sales organisations can be contacted via a free technical hotline. Most questions about SICK products can be answered quickly on the telephone. However, it can also be used to report more complex queries. The case is then immediately passed on to the responsible specialist department.

Training
SICK trainers offer a complete training programme both at SICK and in-house. These include made-to-measure training units for project developers, commissioning personnel and maintenance staff. They help participants to fulfil their roles in the company.

d Sensors

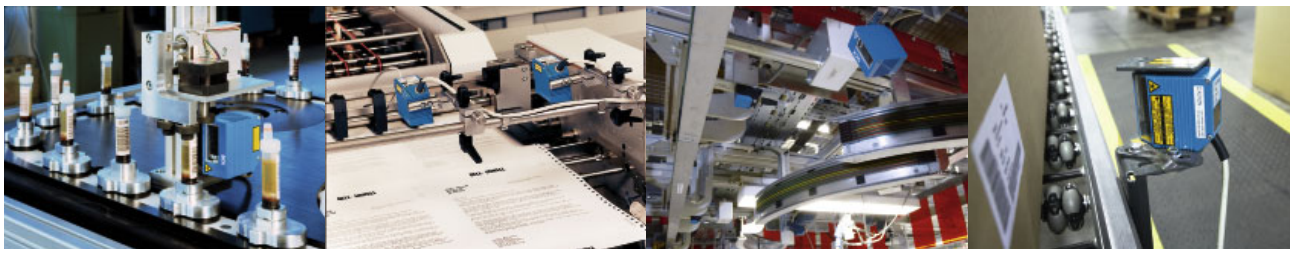
SICK provides services all over the world to support your successful identification solution. SICK is your reliable partner during every phase of the project – ensuring your project is technically and commercially perfect.

Bar Code Scanners

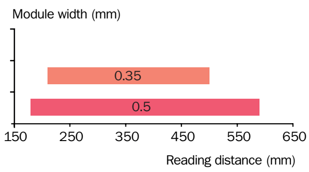
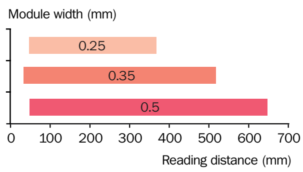
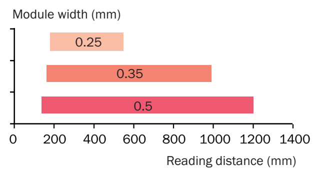
PRODUCT	CLV405	CLV410	CLV420
Reading ranges	 ○ High Density – max. 90 mm	 ○ High Density – max. 95 mm	 ○ High Density – max. 200 mm ○ Long Range – max. 730 mm
Application areas	• Document processing • PCB manufacturing • Clinical analysers	• Labelling • Robotic systems • Packaging industry	• Material handling • Packaging industry • Document processing
Technical data Scanning frequency Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 300 to 1,000 Hz 5 V DC ± 5 % RS 232 (True, TTL) 2 x IN/3 x OUT 44.5/44.5/21.6 mm 57 g IP 52	 200 to 800 Hz 5 to 30 V DC RS 232, RS 422/485 2 x IN/3 x OUT 59/62/35 mm 250 g IP 65	 400 to 1,200 Hz 10 to 30 V DC RS 232, RS 422/485, CAN 2 x IN/2 x OUT 59/62/35 mm 250 g IP 65
Special features	● Auto Setup ● Profile programming ● Setup button ● Bargraph for visualisation ○ Raster scanner	● Auto Setup ● Profile programming ● Reflector polling ○ Raster scanner ○ Angle attachment	● Auto Setup ● Profile programming ● Reflector polling ● Host and Aux interfaces ○ Raster scanner ○ Angle attachment
Accessories	● CLV Setup Software, CLV Connect Software ○ CDB405 connection module ○ Reading trigger sensors	● CLV Setup Software, CLV Connect Software ○ CDB410, CDM410 connection modules ○ Reading trigger sensors ○ Mounting bracket ○ Round rod bracket	● CLV Setup Software, CLV Connect Software ○ CDB420, CDM420 connection modules ○ Gateways for PROFIBUS, DeviceNet, Ethernet ○ Reading trigger sensors ○ Mounting bracket ○ Round rod bracket

NOTE:
More detailed information about the products presented in this product overview can be found in the corresponding product informations. These can be ordered as printed materials or downloaded as PDF files from the internet at **www.sick.com**.

● Standard
○ Optional



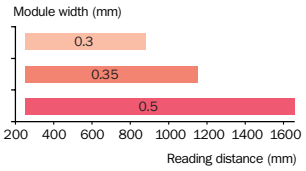
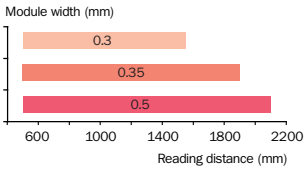


PRODUCT	CLV430	CLV440	CLV450
Reading ranges	 ○ Short Range – max. 260 mm ○ Mid Range – max. 440 mm	 ○ High Density – max. 340 mm	 ○ Optimised for resolution 0.5 mm – max. 950 mm
Application areas	• Stacker crane • Material handling • Pallet handling	• Material handling • PCB manufacturing • Clinical analysers	• Pallet handling • Forklift truck • Automotive industry
Technical data			
Scanning frequency	300 to 800 Hz	300 to 800 Hz	300 to 1,000 Hz
Operating voltage	10 to 30 V DC	10 to 30 V DC	10 to 30 V DC
Data interfaces	RS 232, RS 422/485, CAN	RS 232, RS 422/485, CAN	RS 232, RS 422/485, CAN
Switching inputs/outputs	2 x IN/2 x OUT	2 x IN/2 x OUT	2 x IN/2 x OUT
Dimensions (L, W, H)	90/60/35.7 mm	90/60/35.7 mm	90/60/35.7 mm
Weight	420 g	420 g	420 g
Enclosure rating	IP 65	IP 65	IP 65
Special features	● SMART decoder ● Auto Setup ● Profile programming ● Reflector polling ● Host and Aux interfaces ○ Oscillating mirror ○ Raster scanner ○ Angle attachment	● Adjustable focus ● SMART decoder ● Auto Setup ● Profile programming ● Reflector polling ● Host and Aux interfaces ○ Oscillating mirror ○ Raster scanner ○ Angle attachment	● Adjustable focus ● SMART decoder ● Auto Setup ● Profile programming ● Host and Aux interfaces ○ Oscillating mirror
Accessories	● CLV Setup Software, CLV Connect Software ○ CDB420, CDM420 connection modules ○ Gateways for PROFIBUS, DeviceNet, Ethernet ○ Reading trigger sensors ○ Mounting bracket ○ Round rod bracket	● CLV Setup Software, CLV Connect Software ○ CDB420, CDM420 connection modules ○ Gateways for PROFIBUS, DeviceNet, Ethernet ○ Reading trigger sensors ○ Mounting bracket ○ Round rod bracket	● CLV Setup Software, CLV Connect Software ○ CDB420, CDM420 connection modules ○ Gateways for PROFIBUS, DeviceNet, Ethernet ○ Reading trigger sensors ○ Mounting bracket ○ Round rod bracket ○ Mounting bracket with shock-absorber

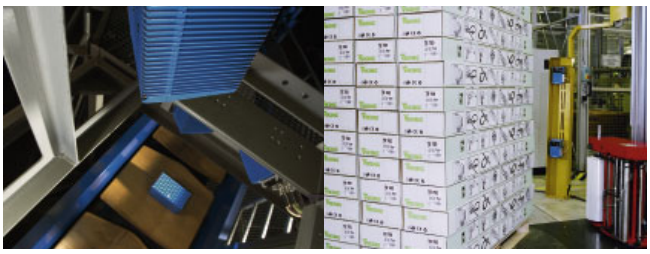
● Standard
○ Optional



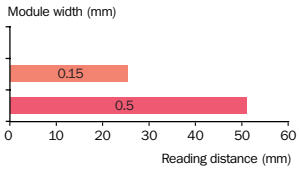
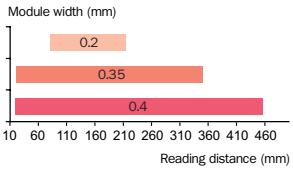
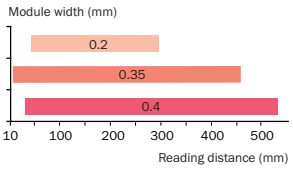
Bar Code Scanners

PRODUCT	CLV480	CLV490
Reading ranges	 Reading width max. 1,200 mm	 ○ HD – max. 1,600 mm ○ LD – max. 2,200 mm Reading width max. 1,200 mm
Application areas	• Automotive industry • Pallet handling • Forklift truck	• Pallet handling • Forklift truck • Automotive industry
Technical data Scanning frequency Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 600 to 1,200 Hz 18 to 30 V DC RS 232, RS 422/485, CAN 6 x IN/4 x OUT 117/117/94 mm 1.5 kg IP 65	 600 to 1,200 Hz 18 to 30 V DC RS 232, RS 422/485, CAN 6 x IN/4 x OUT 117/117/94 mm 1.5 kg IP 65
Special features	● Adjustable focus ● SMART decoder ● Tracking software ● Host and Aux interfaces ○ Oscillating mirror ○ Optional heating for operating temperature down to –35 °C ○ Remote diagnostics	● Auto focus ● SMART decoder ● Tracking software ● Host and Aux interfaces ○ Oscillating mirror ○ Optional heating for operating temperature down to –35 °C ○ Remote diagnostics
Accessories	● CLV Setup Software, CLV Connect Software ○ RDT400 Remote Diagnostic Software ○ CDB420, CDM490 connection modules ○ Gateways for PROFIBUS, DeviceNet, Ethernet ○ External parameter memory ○ Reading trigger sensors ○ Incremental encoder ○ Mounting bracket ○ Mounting bracket with shock-absorber	● CLV Setup Software, CLV Connect Software ○ RDT400 Remote Diagnostic Software ○ CDB420, CDM490 connection modules ○ Gateways for PROFIBUS, DeviceNet, Ethernet ○ External parameter memory ○ Reading trigger sensors ○ Incremental encoder ○ Mounting bracket ○ Mounting bracket with shock-absorber

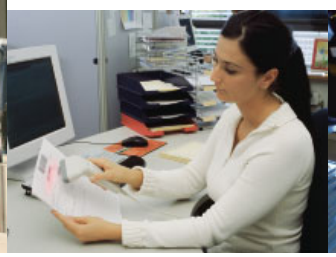
● Standard
○ Optional



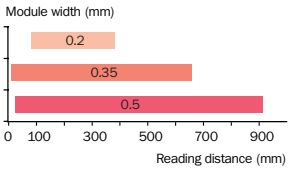
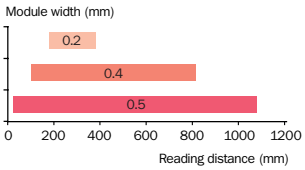
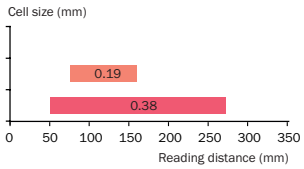
Hand-held Scanners

PRODUCT	TR3080	IT3800	IT3800G
Reading ranges		 LR – max. 240 mm LX – max. 450 mm VHD – max. 240 mm ESD – max. 240 mm PDF – max. 140 mm	
Application areas	• Document processing • Clinical analysers • Library applications	• Part picking • Logistics & distribution • Manufacturing	• Manufacturing • Part picking • Logistics & distribution • Point of sales (POS)
Technical data Scanning frequency Operating voltage Data interfaces Dimensions (L, W, H) Weight Enclosure rating Shock test	 Max. 200 Hz 5 V DC ± 5 % RS 232 TTL, USB, keyboard wedge, wand emulation 64/175/89 mm 225 g – 6 drops from 1.2 m	 270 Hz 5 V DC ± 10 % RS 232 TTL, USB, keyboard wedge, wand emulation 135/152/78 mm 180 g – 50 drops from 1.5 m	 270 Hz 5 to 12 V DC RS 232 TTL, USB, keyboard wedge, wand emulation 110/150/80 mm 160 g IP 41 50 drops from 1.5 m
Special features	● CCD touchreader ● Bar code programming	● Linear imager ● Optical and acoustical Good Read signal ○ RS 232 True	● Linear imager ○ Optical and acoustical Good Read signal ○ RS 232 True
Accessories	● TR Setup Software ○ Mounting bracket	● Visual Xpress Software ○ Mounting brackets ○ Stands	● Visual Xpress Software ○ Mounting brackets ○ Stands

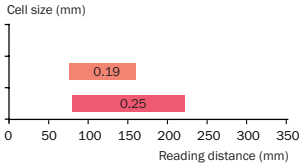
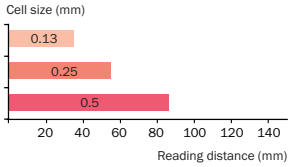
● Standard
○ Optional



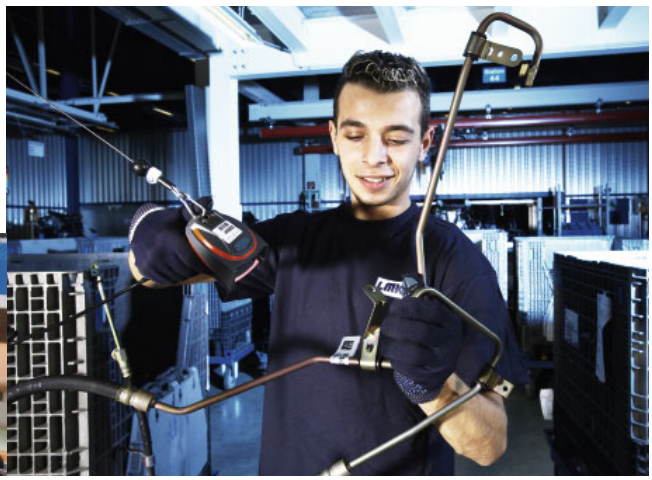
Hand-held Scanners

PRODUCT	IT3820	IT3800I	IT4600G/4820
Reading ranges			
Application areas	• Part picking • Logistics & distribution • Manufacturing	• Automotive industry • Parcel identification • Logistics & distribution	• Electronic manufacturing • Clinical analysers • Document processing
Technical data Scanning frequency Operating voltage Data interfaces Dimensions (L, W, H) Weight Enclosure rating Shock test	 270 Hz 9 V DC ± 5 % RS 232 TTL, USB, keyboard wedge, wand emulation 157/135/81 mm 260 g (incl. battery) IP 41 50 drops from 1.8 m	 270 Hz 4.5 to 14 V DC RS 232 TTL/True, USB, keyboard wedge, wand emulation 160/135/81 mm 213 g IP 54 50 drops from 2 m	 Max. 270 Hz (bar code) 4.5 to 14 V DC RS 232 TTL/True, USB, keyboard wedge, wand emulation 157/135/81 mm 185 g (IT4600G) 260 g (IT4820 incl. battery) IP 41 50 drops from 1.8 m
Special features	● Linear imager ● Li Ion battery ● Cordless Bluetooth data communication V 1.2 ● Bluetooth range 10 m ○ RS 232 True	● Linear imager ● Operating temperature down to –30 °C	● 2D imager (IT4600G cable version/ IT4820 radio version) ● Green aiming line ● Li Ion battery at IT4820 ● Cordless Bluetooth data communication V 1.2 at IT4820 ● Bluetooth range 10 m at IT4820 ○ RS 232 True (IT4820)
Accessories	● Visual Xpress Software ○ IT2020-5 base and charging station ○ IT2020 CB charging station	● Visual Xpress Software ○ Mounting brackets ○ Stands	● Visual Xpress Software ● IT2020 base and charging station at IT4820 ○ Mounting brackets ○ Stands

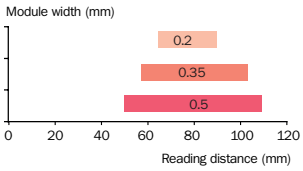
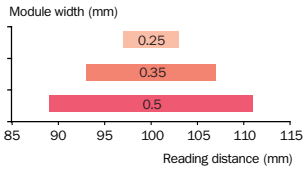
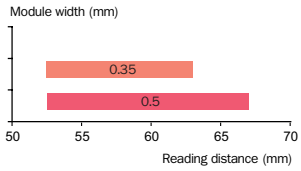
● Standard
○ Optional

PRODUCT	IT4800I	IT6300/6320 DPM
Reading ranges		
Application areas	• Logistics & distribution • Automotive industry • Parcel identification	• Automotive industry • Electronic manufacturing • Aircraft industry
Technical data Scanning frequency Operating voltage Data interfaces Dimensions (L, W, H) Weight Enclosure rating Shock test	 270 Hz 4.5 to 14 V DC RS 232 TTL/True, USB, keyboard wedge, wand emulation 163/135/81 mm 213 g IP 54 50 drops from 2 m	 Depending on application 5 V/9 V DC RS 232 TTL, USB, keyboard wedge 134/84/175 mm 270 g (IT6300) 330 g (IT6320 incl. battery) IP 54 50 drops from 2 m (IT6300) 25 drops from 2 m (IT6320)
Special features	● 2D imager ● Operating temperature down to –10 °C ● Green aiming line	● DPM imager (IT6300 cable version/ IT6320 radio version) ● Flexible illumination ● Decoding of codes on direct marked parts (laser, dot peening, printing) ● Radio range 10 m at IT6320 ○ RS 232 True (IT6320)
Accessories	● Visual Xpress Software ○ Mounting brackets ○ Stands	● DPM Setup Tool ● IT2020 base station at IT6320 DPM

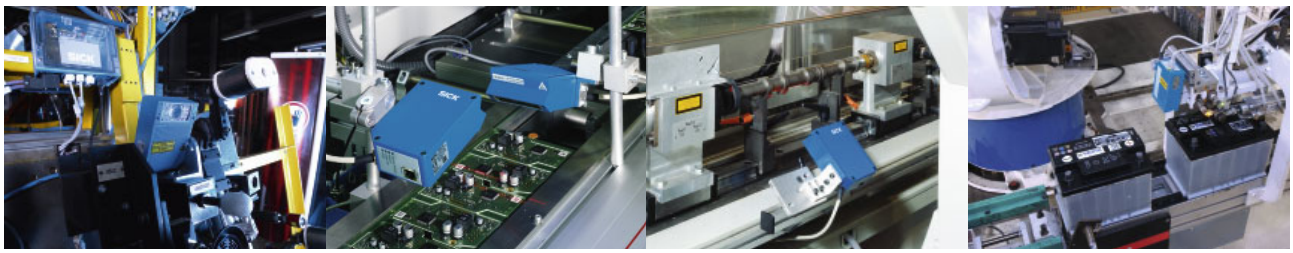
● Standard
○ Optional

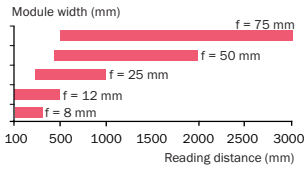


2D Code Scanners

PRODUCT	ICR840	ICR850/852	ICR855
Reading ranges		 ○ ICR 852: focus at 60 mm	
Application areas	• Automotive industry • Electronic manufacturing • Direct part marking	• Electronic manufacturing • Document processing	• Document processing • Packaging industry • Pharmaceutical applications
Technical data Scanning frequency Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 25 Hz 10 to 30 V DC RS 232, RS 422/485, CAN, Ethernet 2 x IN/2 x OUT 112/80/39 mm 900 g IP 65	 15 kHz 10 to 30 V DC RS 232, RS 422/485, CAN, Ethernet 2 x IN/2 x OUT 115/80/39 mm 900 g IP 65	 45 kHz 10 to 30 V DC RS 232, RS 422/485, CAN, Ethernet 2 x IN/2 x OUT 115/80/39 mm 900 g IP 65
Special features	● OMNI bar code and Data Matrix code identification ● Auto Setup ● Ethernet assistant ● Code quality evaluation ● Host and Aux interfaces ● Megapixel CMOS technology	● OMNI bar code and Data Matrix code identification ● Auto Setup ● Ethernet assistant ● Code quality evaluation ● Host and Aux interfaces ○ Minimum cell size 0.1 mm at ICR852	● OMNI bar code and Data Matrix code identification ● Auto Setup ● Ethernet assistant ● Code quality evaluation ● Host and Aux interfaces ● Conveyor speed max. 7.8 m/s at cell size 0.7 mm
Accessories	● CLV Setup Software, CLV Connect Software ○ CDB420, CDM420 connection modules ○ Gateways for PROFIBUS, DeviceNet ○ Reading trigger sensors ○ Mounting bracket	● CLV Setup Software, CLV Connect Software ○ CDB420, CDM420 connection modules ○ Gateways for PROFIBUS, DeviceNet ○ Reading trigger sensors ○ Mounting bracket	● CLV Setup Software, CLV Connect Software ○ CDB420, CDM420 connection modules ○ Gateways for PROFIBUS, DeviceNet ○ Reading trigger sensors ○ Mounting bracket

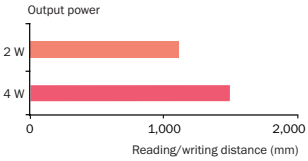
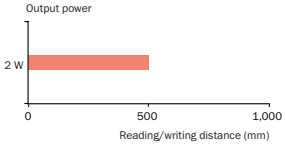
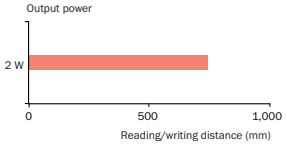
● Standard
○ Optional



PRODUCT	ICR860/862
Reading ranges	
Application areas	• Automotive industry
Technical data Image recording rate Resolution Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 Max. 30 images/second ICR860: 640 x 480 pixel (VGA) ICR862: 1024 x 768 pixel (XGA) 24 V DC ± 20 % Ethernet (UDP), RS 485 1 x IN/3 x OUT 160/55/60 mm 505 g IP 65 (with lens protective cover)
Special features	● Data Matrix code identification ● Suited for CS- and C-Mount lenses ● Ethernet assistant
Accessories	● ICR Setup Software, ImageFTP Software ○ Lenses ○ Protective covers ○ CDB420 connection module ○ Illuminations ○ Reading trigger sensors ○ Mounting bracket

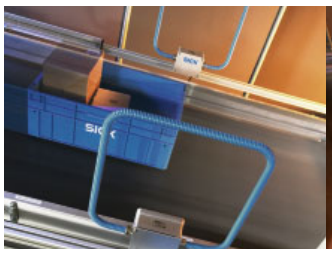
● Standard
○ Optional

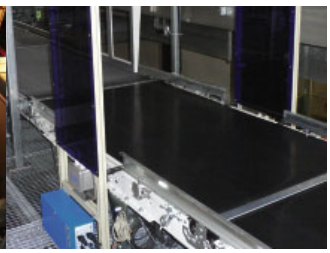
Radio Frequency Identification (RFID) – 13.56 MHz (HF)

PRODUCT	RFI341	RFA331	RFA341
Reading ranges	 Theoretically achievable reading/writing distance. Dependent on the antenna, output power, transponder type and environment.	 Reading/writing distance for 2 W transmitter power measured with ISO-transponder (card) in an optimal environment.	 Reading/writing distance for 2 W transmitter power measured with ISO-transponder (card) in an optimal environment.
Application areas	• High-bay warehouse management • Tote and pallet handling • Automotive parts		
Technical data Radio frequency Transmitter power (TX) Number of antennas Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 13.56 MHz 2 x 2 W (splitter) Max. 2 115 to 230 V AC RS 232 2 x IN/2 x OUT 400/200/120 mm 7.6 kg IP 65	 13.56 MHz Max. 4 W 300/210/33 mm 200/200 mm (effective area) 1.1 kg IP 40	 13.56 MHz Max. 4 W 450/400/71 mm 400/400 mm (effective area) 1.7 kg IP 65
Special features	● RF interrogator (reader/writer for passive transponders) ● Compatible with ISO/IEC-15693, ISO 18000-3 Mode 1 ● Simultaneous reading of max. 50 transponders per second	● Compact high performance antenna for mid-range	● Compact high performance antenna for long-range
Accessories	● RFI341 Demo Software for PC ○ RDT400 Remote Diagnostic Software ○ CDB420, CDM420 connection modules ○ Gateways for PROFIBUS, DeviceNet and Ethernet ○ High-quality, writable ISO transponders RFT331 (card, IP 67) or RFT321 (coin, IP 68)	○ Plastic profile	○ Plastic profile ○ Mounting bracket

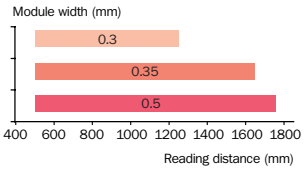
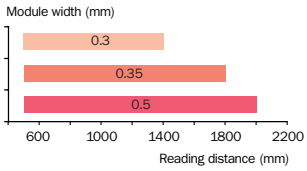
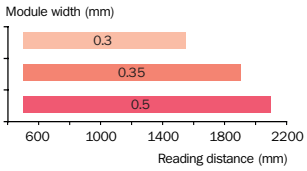
NOTE: Other reading ranges, frequencies and transponders available on request

● Standard
○ Optional



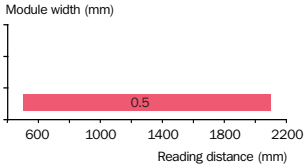
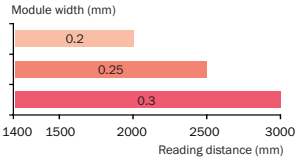


Omnidirectional Bar Code Reading Systems

PRODUCT	CLX490	OPS400	OPS
Reading ranges	 Width max. 400 mm	 ○ HD – max. 1,500 mm ○ LD – max. 1,700 mm Width max. 800 mm	 ○ Variable widths possible ○ Multi-side reading possible
Application areas	• Parcel identification • Logistics & distribution • Mail-order business	• Parcel identification • Logistics & distribution • Mail-order business	• Parcel identification • Logistics & distribution • Mail-order business
Technical data Scanning frequency Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 600 to 1,200 Hz 18 to 30 V DC RS 232, RS 422/485, CAN 6 x IN/4 x OUT 176/208/153 mm 2.0 kg IP 65	 600 to 1,200 Hz 115/230 V AC +10 %/–15 % RS 232, RS 422/485 16 x IN/4 x OUT/1 x relay OUT 530/270/158 mm 10.7 kg IP 54/IP 65	 600 to 1,200 Hz 115/230 V AC +10 %/–15 % RS 232, RS 422/485 16 x IN/4 x OUT/1 x relay OUT Depending on application Depending on application IP 65
Special features	● Compact OMNI bar code scanner ● Auto focus ● SMART decoder ● Tracking software ● Host and Aux interfaces ○ Optional heating for operating temperature down to –30 °C ○ Remote diagnostics	● OMNI bar code scanner ● Auto focus ● SMART decoder ● Tracking software ● Host and Aux interfaces ○ Remote diagnostics	● OMNI bar code scanner ● SMART decoder ● Tracking with separate OTS software ● Host and Aux interfaces ○ Remote diagnostics
Accessories	● CLV Setup Software, CLV Connect Software ○ RDT400 Remote Diagnostic Software ○ CDB420, CDM490 connection modules ○ Gateways for PROFIBUS, DeviceNet and Ethernet ○ External parameter memory ○ Reading trigger sensors ○ Incremental encoder ○ Mounting bracket ○ Mounting bracket with shock-absorber	● CLV Setup Software, CLV Connect Software ○ RDT400 Remote Diagnostic Software ○ Mechanical mounting frame ○ Incremental encoder ○ Reading trigger sensors	● CLV Setup Software, CLV Connect Software ○ RDT400 Remote Diagnostic Software ○ Mechanical mounting frame ○ Incremental encoder ○ Reading trigger sensors

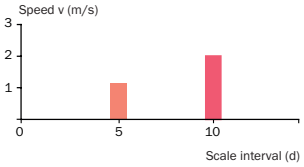
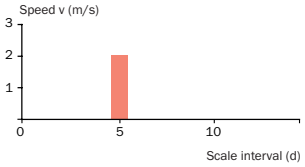
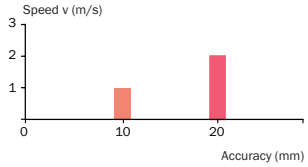
● Standard
○ Optional

Omnidirectional Bar Code Reading and Camera Systems

PRODUCT	ALIS	ICR890
Reading ranges	 Suited for T-codes and linear codes ○ Variable widths and multi-side reading possible	 Suited for bar codes and 2D codes ○ Variable widths and multi-side reading possible
Application areas	• Airport luggage sortation • Airport luggage tracing	• Parcel identification • Logistics & distribution • Mail-order business
Technical data Scanning frequency Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 600 to 1,200 Hz 115/230 V AC +10 %/–15 % RS 232, RS 422/485 16 x IN/4 x OUT/1 x relay OUT Depending on application Depending on application IP 65	 500 to 19,100 Hz 24 V DC ± 10 % RS 232, RS 422/485, CAN, Ethernet, 2 x GBit Ethernet 14 x IN/6 x OUT Depending on application Depending on application IP 64
Special features	● Airport Luggage Identification System ● Bar code identification in all positions ● SMART decoder ● Modular concept ● Host and Aux interfaces ● Scanners will be custom-designed and custom-mounted ○ Remote diagnostics	● High-End CCD Camera System ● OMNI bar code and 2D code identification in all positions ● Real-time image output for OCR and video coding ● SMART decoder ● Integrated focus control ● Tracking software ● Host and Aux interfaces ● External parameter memory ○ Remote diagnostics
Accessories	● CLV Setup Software ○ RDT400 Remote Diagnostic Software ○ Mechanical mounting frame ○ Incremental encoder ○ Reading trigger sensors	● MSC800 system controller ● SOPAS Engineering Tool Software ○ RDT400 Remote Diagnostic Software ○ Mechanical mounting frame ○ Incremental encoder ○ Reading trigger sensors

● Standard
○ Optional

Volume Measurement Systems

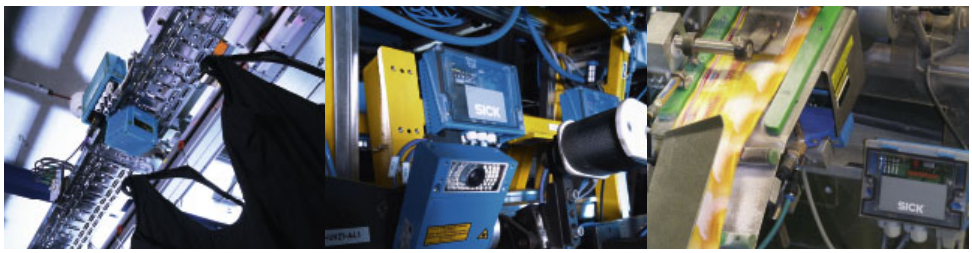
PRODUCT	VMS410/510	VMS420/520	VMS200
Reading ranges	 • Measurement of cubic objects • VMS410: 1 sensor VMS510: 1 sensor, system OIML-R-129 and MID certificated	 • Measurement of cubic and non-cubic objects • VMS420: 1 sensor VMS520: 2 sensors, system OIML-R-129 certificated	 • Measurement of cubic and non-cubic objects • System with 2 sensors LMS200 and control cabinet including IPC and power supply
Application areas	• Parcel identification • Logistics & distribution • Mail-order business	• Parcel identification • Logistics & distribution • Mail-order business	• Luggage measurement • Pallet measurement • Logistics & distribution
Technical data Scanning frequency Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 Max. 500 Hz 24 V DC ± 15 % RS 232/RS 422, Ethernet 6 x IN/4 x OUT 179/130/106 mm 2.3 kg IP 54/IP 65	 Max. 500 Hz 24 V DC ± 15 % RS 232/RS 422, Ethernet 6 x IN/4 x OUT 179/130/106 mm 4.6 kg (2 sensors) IP 54/IP 65	 Max. 75 Hz 115/230 V AC +10 %/–15 % RS 232/RS 422/485, Ethernet 3 x IN/5 x OUT 155/210/156 mm (sensor) 600/478/373 mm (control cabinet) 9 kg (2 sensors) IP 65
Special features	● Object size (L x W x H): min. 50/50/50 mm (1.2 m/s) min. 100/100/50 mm (2 m/s) max. 2.5/1/1 m ● Scale interval: d = 5 mm at v = 1.2 m/s d = 10 mm at v = 2.0 m/s	● Object size (L x W x H): min. 50/50/50 mm max. 2/1/1.6 m ● PTB certificate ● Scale interval: d = 5 mm at v = 2 m/s	● Object size (L x W x H): min. 100/100/100 mm max. 7.5/3/3 m ● Accuracy typical ±20 mm
Accessories	● SOPAS Engineering Tool Software ● Mounting bracket, can be adjusted in 3 axes ○ RDT400 Remote Diagnostic Software ○ CDM420 connection module ○ External parameter memory ○ Reading trigger sensors ○ Incremental encoder	● SOPAS Engineering Tool-Software ● 2 mounting brackets, each can be adjusted in 3 axes ○ RDT400 Remote Diagnostic Software ○ CDM420 connection module ○ External parameter memory ○ Reading trigger sensors ○ Incremental encoder	● 2 mounting brackets, each can be adjusted in 3 axes ○ Interface converter ○ Gateways for PROFIBUS, DeviceNet and Ethernet ○ Reading trigger sensors ○ Incremental encoder

● Standard
○ Optional

Connection Modules
Network Controller

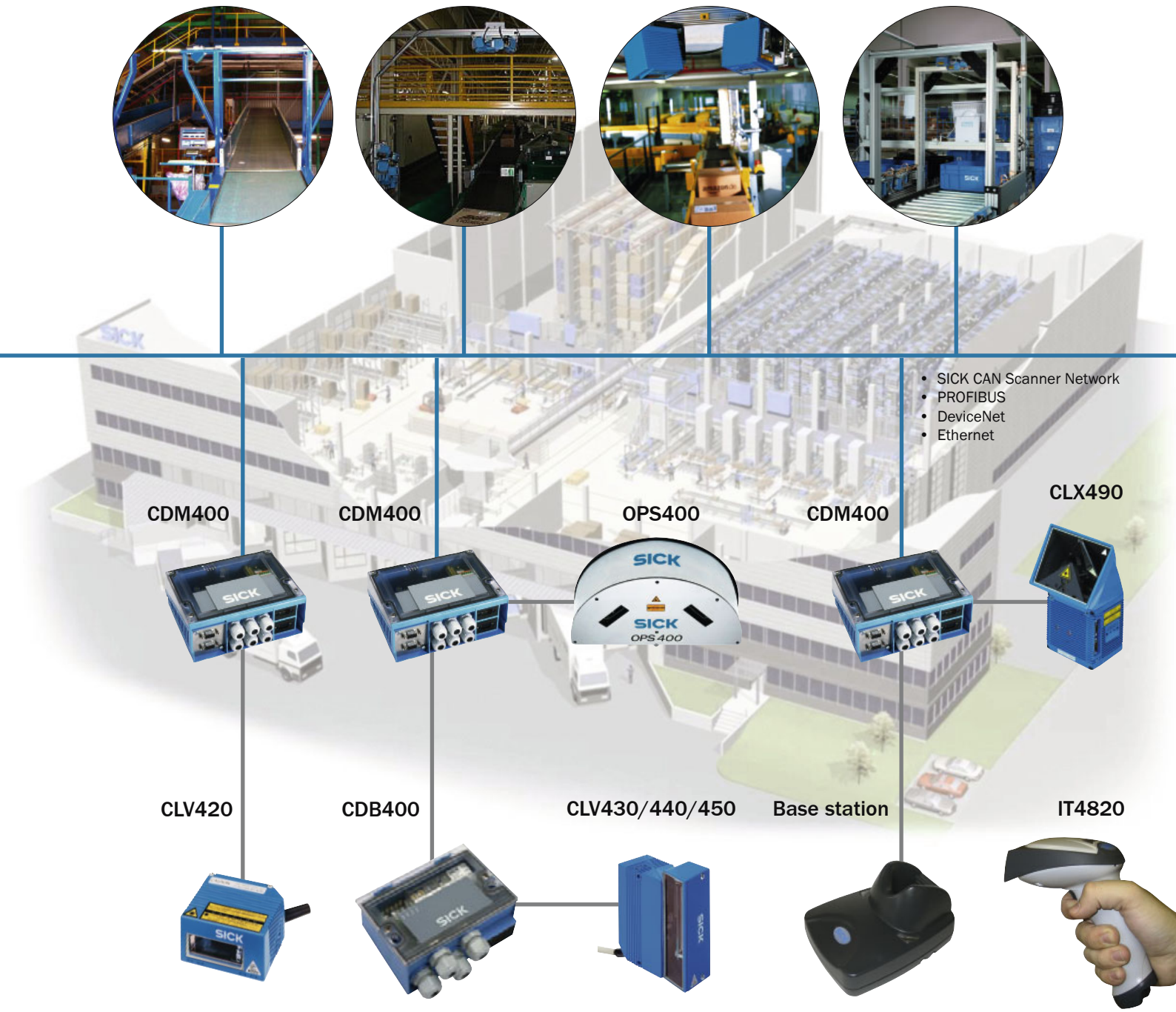
PRODUCT	CDB400	CDM400	MUX400
Versions	• CDB405 for 1 CLV405 • CDB410 for 1 CLV41x • CDB420 for 1 CLV42x to CLV/X490, 1 ICR84x/85x or 1 ICR86x ● 4 x PG cable glands ○ 2 x PG cable glands/2 x M12 for CAN network configuration	• CDM410 for 1 CLV41x • CDM420 for 1 CLV42x to CLV/X 490, 1 ICR84x/85x • CDM490 for 1 CLV/X490 or 1 LMS400 ○ CDM420 for 2 scanners ○ External Host and Aux interface connectors	• Network controller for CLV42x to CLV/X490, ICR84x/85x
Technical data Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 18 to 30 V DC RS 232, RS 422/485, CAN (depending on scanner type), service interface (Aux) 2 x IN/2 (3) x OUT 124/113/54 mm 250 g (without accessories) IP 65	 18 to 30 V DC (100 to 250 V AC) RS 232, RS 422/485, CAN (depending on scanner type), service interface (Aux) 2 x IN/2 (3 or 4) x OUT 192/167/70 mm 870 g (without accessories) IP 65	 24 V DC RS 232, RS 422/485, service interface (Aux) 1 x IN/5 x OUT 237/104.5/120 mm 1.3 kg IP 20
Special features	● Diagnosis LEDs ● Configuration switches ● Termination resistor for network configuration ● Closed lid installation ● Connection diagram integrated in the lid ● Extension slot for additional module	● Diagnosis LEDs ● Configuration switches ● Termination resistor for network configuration ● Closed lid installation ● Connection diagram integrated in the lid ● Extension slots for additional modules	● Network controller for up to 32 scanners ● Diagnosis LEDs ● DUV installation into the control cabinet ○ Connection to fieldbus via CDM420/490 with additional module
Accessories (can also be retro-fitted)	CDB420: ○ External parameter memory CMC400	CDM410: ○ CMP400 power supply CDM420/CDM490: ○ External parameter memory CMC400 ○ CMP400 power supply (CDM420) ○ CMP490 power supply (optional lid, CDM490) ○ CMD400 display module (optional lid) ○ Gateways CMF400 for PROFIBUS, DeviceNet and Ethernet	● CLV Setup Software, CLV Connect Software ○ CDM420, CDM490 connection modules ○ Gateways CMF400 for PROFIBUS, DeviceNet and Ethernet ○ Reading trigger sensors

● Standard
○ Optional

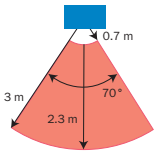
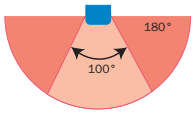
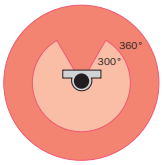


Fieldbus Networks

Different SICK bar code scanners are possible to integrate into a SICK CAN Scanner Network and configured as a total project via the CLV Setup Software.
The use of optional CMF400 fieldbus gateways allows the integration into fieldbuses such as PROFIBUS, DeviceNet or Ethernet networks.



Laser Measurement Systems (Distance Measurement)

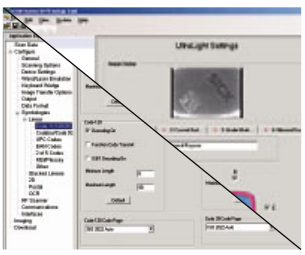
PRODUCT	LMS400	LMS200 to 291	LD-OEM, -PDS, -LRS
Scanning range			
Application areas	• Intralogistics, robotics • Tote and pallet handling • High-bay warehouse management	• Volume/contour measurement • Intralogistics, robotics, traffic • Overhang checking • Collisions prevention/building security	• Intralogistics, robotics • Overhang checking in storage and retrieval systems • Navigation of AGVs
Technical data Scanning frequency Aperture angle Angle resolution Operating voltage Data interfaces Switching inputs/outputs Dimensions (L, W, H) Weight Enclosure rating	 150 to 500 Hz 70° 0.1 to 1.5° 24 V DC ± 15 % RS 232/RS 422, Ethernet 4 x IN/4 x OUT 179/130/106 mm 2.3 kg IP 65	 75 Hz 90/100/180° (type-dependent) 0.25 to 1° 24 V DC ± 15 % RS 232/RS 422 1 x IN/3 x OUT 155/210/156 mm (LMS200) 351/265/236 mm (LMS211) 351/265/228 mm (LMS221) 4.5 kg (LMS200/LMS291) 9 kg (LMS211/LMS221) IP 65 (LMS200/LMS291) IP 67 (LMS211/LMS221)	 5 to 15 (10) Hz 360° or 300° (LRS2100 only) 0.125 to 1° 24 V DC ± 15 % RS 232/RS 422 CAN, Ethernet (OEM, LRS only) 4 (2) x OUT 120/222/115 mm (OEM, PDS) 120/227/118 mm (LRS1000) 350/392/288 mm (LRS2100) 2.4 kg (OEM, PDS) 4.1 kg (LRS)/9 kg (LRS2100) IP 65 (OEM, PDS, LRS1000) IP 67 (LRS2100)
Special features	● Typical range at 10 % reflectivity: 3 m ● "Level Control" application integrated	● Typical range at 10 % reflectivity: LMS200: 10 m (Indoor) LMS211/221: 30 m/43 m (Outdoor) ● LMS211/221: operating temperature down to –30 °C ● "Field monitoring“ application integrated ● External, programmed application possible	● Typical range at 10 % reflectivity: OEM/PDS: 34 m LRS: 80 m ● PDS: "Field monitoring“ application integrated ● OEM: Programmed, customer-specific application can be loaded
Accessories	● SOPAS Engineering Tool Software ○ Mounting bracket, can be adjusted in 2 axes ○ External parameter memory ○ CDM490 connection module ○ Reading trigger sensors ○ Incremental encoder	● LMSIBS Configuration Software ○ Mounting brackets ○ Weather protection hoods ○ Dust prevention shield ○ Reading trigger sensors ○ Purging air fans ○ Scan finder ○ External evaluation units	● SOPAS Engineering Tool Software (OEM, LRS) respectively LD-PDS Configuration Software ○ Mounting bracket ○ Scan finder

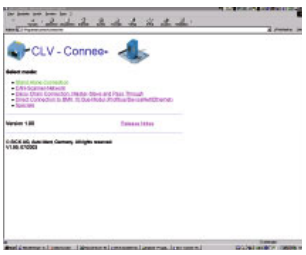
● Standard
○ Optional

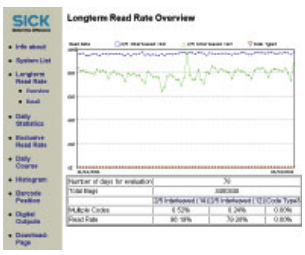
NOTE: For detailed information please see the Product Overview "Laser Measurement Systems" (no. 8009106)

Configuration and Diagnosis Software for Bar Code and 2D Code Scanners

HAND-HELD SETUP	CLV SETUP	CLV CONNECT	RDT400
Function			
Software tools for configuring, optimising and diagnosing the hand-held scanners	Software tool for configuring, optimising and diagnosing of bar code/2D code scanners	Software for a fast construction of application-specific connection drawings inclusive connections to several PLC types	Graphical remote visualisation tool to monitor and control the reading-performance of bar code scanners and other systems
Application areas			
• All hand-held scanners	• CLV405 to CLV/X490 • ICR84x/85x • OPS, ALIS • MUX400 • CMF400 fieldbus gateways	• CLV405 to CLV/X490 • ICR84x/85x • MUX400 • CMF400 fieldbus gateways	• CLV480/490, CLX490 • ALIS, OPS • ICR890 • RFI341 • VMS410/510/420/520
Special features			
• Windows-based Setup Software • Clear visualisation of scanner parameters • Extensive, context based help system • Automatic scanner type detection • Integrated terminal emulation for visualising the online communication • Image download to the PC at 2D hand-held scanners	• Windows-based Setup Software • Clear visualisation of scanner parameters • Extensive, context based help system • Automatic scanner type detection • Integrated terminal emulation for visualising the online communication • Option for printing the scanner configuration as profile bar codes • Configuration of a SICK CAN Scanner Network solution • Image download and demonstration of the reading quality of ICR 84x/85x	• Easy selection of CLV/ICR connection diagrams for connecting to different host computer types • Listing of the CDB/CDM connection modules • Single scanner applications • SICK CAN Scanner Network • Connection to PROFIBUS, DeviceNet, Ethernet • Scanner connection to PLC types S5, S7 • Linking up of CLV/ICR and hand-held scanners	• Visualisation and control of scanner system performance (max. 64 systems each with max. 24 scanners) • Use of existing network infrastructures like Ethernet • Use of standard technologies like TCP/IP • Remote-Access & Remote-Service • Permanent control of system-performance • Automatic control of system read rate • Automatic control of single scanner read rate • Programmable alarms
Download at www.sick.com	Download at www.sick.com	Download at www.sick.com	Download at www.sick.com



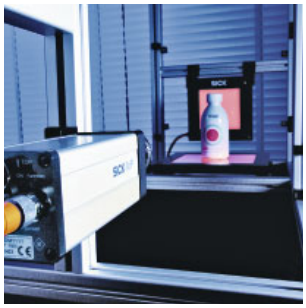




Range of Expertise

Industrial Sensors

Our complete range of sensors provides answers to suit any application in the field of automation. Even under rugged ambient conditions objects are reliably detected, counted and positioned in respect of their form, location and surface finish, as well as their distances established with pin-point accuracy.



Industrial Safety Systems

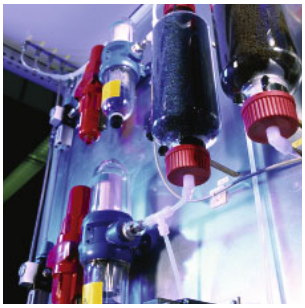
Comprehensive protection for man and machine – advanced SICK products developed and manufactured by a sensor specialist for the protection of hazardous areas, hazardous points and for access protection. SICK is setting new standards with services related to machine safety.

Auto Ident

Whether the tasks involve identification, handling, classification or volume measurement, innovative Auto Ident systems and laser measuring systems function extremely reliably, even under rapid cycle times. They conform to the latest Standards and can be simply and speedily integrated in all industrial environments and external applications.

Analyzers and Process Instrumentation

System control, maintaining setpoints, optimising process control and monitoring the flow of materials – the instruments and services for Analysis and Process Measurement, supplied by SICK MAIHAK, are setting the standards for these applications in terms of Technology and Quality.



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