



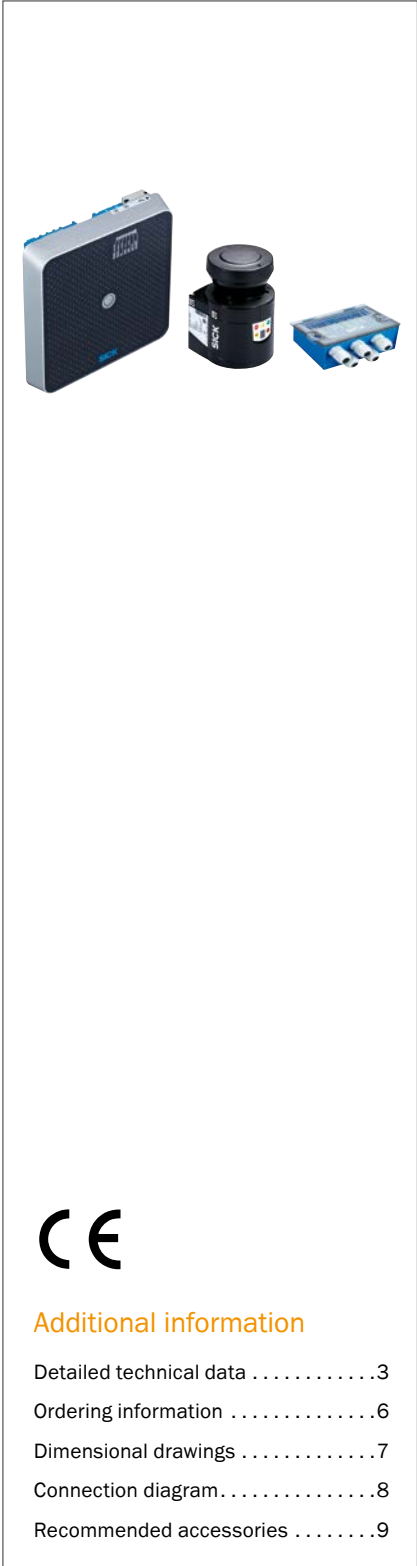
LAC1xx Prime

A VIRTUAL LOCK FOR THE SECURE
MOVEMENT OF GOODS

Security systems

SICK
Sensor Intelligence.

A VIRTUAL LOCK FOR THE SECURE MOVEMENT OF GOODS



Additional information

Detailed technical data3
 Ordering information6
 Dimensional drawings7
 Connection diagram.....8
 Recommended accessories9

Product description

The LAC1xx Prime (Logistics Acces Control) security system is an electronic and fully automatic system for security tasks with virtual access control for gates and access points. The aim is to deny unauthorized persons access to cargo during on-site transport and storage and during the transfer of goods. The system's sensors are capable of detecting persons and vehicles in motion, i.e., while maintaining the flow of material, recording and identifying them with

the help of coded transponder cards. Any unauthorized persons are reliably detected and prevented from entering an area unnoticed. With the help of intelligent filtering algorithms and plausibility functions, the LAC also provides maximum protection against tampering. This ensures that only authorized persons can pass the access control point – and other persons cannot slip in undetected through an open gate, i.e., there is no piggy-backing (tailgating).

At a glance

- Complete solution comprising of laser measurement technology, RFID and integrated software
- Prevents piggy-backing (tailgating) and avoids blockages in the transit areas
- Active laser detection and reliable long-range passive / semi-passive identification (UHF)
- Stand-alone system or network-compatible
- Tamper-proof
- Rugged IP67 enclosure rating

Your benefits

- The flow of goods is not interrupted as it passes the LAC - processes don't have to stop and people don't have to identify themselves.
- Avoids blockages in the transit areas
- Meets the objectives and requirements of the Customs-Trade Partnership Against Terrorism (C-TPAT) and the European "Authorized Economic Operator" (AEO) certificate
- Laser detectors VdS-certified (German security certificate), providing evidence of a reliable technology.
- Safe investment because of the worldwide usage also in tough industrial and logistics environments
- Can be retrofitted and reduce installation costs by quickly integrating sensor components into all common alarm and intrusion systems
- Can be easily adapted to the customer application requirements without using an additional external PC controller or software.

→ www.mysick.com/en/LAC1xx_Prime

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**LMS102-10000 Security with integrated Applicationsoftware**

General Note

Note on use	Not suitable for personnel protection (safety)
--------------------	--

Features

Version	Short Range
Field of application	Indoor
Light source	Infrared (905 nm)
Laser class	1 (IEC 60825-1 (2007-3))
Field of view	270°
Scanning frequency	25 Hz / 50 Hz
Angular resolution	0.25° 0.5°
Operating range	0.5 m ... 20 m
Max. range with 10 % reflectivity	18 m
Amount of evaluated echoes	2

Performance

Response time	≥ 20 ms
Detectable object shape	Almost any
Systematic error	± 30 mm ¹⁾
Statistical error	± 12 mm ¹⁾
Integrated application	Field evaluation
Number of field sets	10 fields
Simultaneous processing cases	10

¹⁾ Typical value; actual value depends on environmental conditions.

Interfaces

Serial (RS-232)	Function	✓ Host, AUX
	Data transmission rate	9.6 kBaud ... 115.2 kBaud
Ethernet	Function	✓ Host
	Data transmission rate	10/100 Mbit
	Protocol	TCP/IP, OPC
CAN bus	Function	✓ Outputs extension
Switching inputs		2
Switching outputs		3
Optical indicators		1 7-segment display (plus 5 LEDs showing device status, contamination warning and initial condition)

Mechanics/electronics

Electrical connection	1 x system plug with screw terminal block
Operating voltage	10.8 V DC ... 30 V DC
Power consumption	20 W
Housing color	Light blue (RAL 5012)
Enclosure rating	IP 65 (EN 60529, Section 14.2.5)
Protection class	III (EN 50178 (1997;10))
Weight	1.1 kg, without connecting cables
Dimensions	105 mm x 102 mm x 152 mm

Ambient data

Object remission	2 % ... > 1,000 % (reflectors)
Electromagnetic compatibility (EMC)	EN 61000-6-2:2005 / EN 61000-6-4 (2007-01)
Vibration resistance	EN 60068-2-6 (1995-04)
Shock resistance	EN 60068-2-27 (1993-03)
Ambient operating temperature	0 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Ambient light safety	40,000 lx

RFU630-13100

Features

Version	Long Range
Product category	Write/read device with integrated antenna
Frequency band	UHF (860 ... 960 MHz)
Carrier frequency	865 MHz ... 868 MHz
Output power	2 W (ERP, for integrated antenna, alternatively 30 dBm at external antenna ports, output power adjustable)
RFID standard	EPCglobal UHF Class 1 Generation 2, ISO/IEC 18000-6 C
MTBF	14 years
Scanning range	Typ. 5 m ¹⁾
Antenna	Integrated (circular polarized, axial ration typ. 2 dB, 72° field opening, front to back ratio > 17 dB), additionally 3 external antenna ports
Service functions	Parameter cloning with integrated microSD memory card slot or externally via CMC module in CDB620
Further functions	Cloning function (microSD memory card or system), diagnosis, updatable firmware, freely programmable data output format, heartbeat, triggering

¹⁾ Depending on transponder used and ambient conditions.

Interfaces

Serial (RS-232, RS-422/485)	Function	✓ Host, AUX
	Data transmission rate	300 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)
USB	Function	✓, USB 2.0 AUX
	Function	✓ Host, AUX
Ethernet	Data transmission rate	10/100 Mbit
	Protocol	TCP/IP, EtherNet/IP, PROFINET

CAN bus	✓
Function	Host
Protocol	CSN (SICK CAN Sensor Network)
PROFIBUS DP	✓, optional via external connection module (CDF)
DeviceNet	✓, optional available externally
Switching inputs	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Switching outputs	4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)
Optical indicators	8 LEDs, one of them multi-colored (function configurable via SOPAS, alternatively controlling with sw commands, status displays)
Acoustic indicators	1 beeper/buzzer (can be switched off, can be allocated as a result indication function)
Control elements	2 buttons (choose and start/stop functions)
Configuration software	SOPAS

Mechanics/electronics

Electrical connection	1 x M12, 17-pin male connector 1 x M12, 4-pin female connector Ethernet Cylindrical connections
Operating voltage	12 V DC ... 30 V DC
Power consumption	< 20 W, with switching outputs not connected and full transmit power
Housing	Die-cast aluminum
Housing color	Blue, black, silver
Enclosure rating	IP 67
Protection class	III
Weight	3.5 kg
Dimensions	239 mm x 239 mm x 64 mm

Ambient data

Radio approval	Europe, South Africa, Saudi Arabia (EN 302 208-2 V1.4.1)
Electromagnetic compatibility (EMC)	EN 61000-6-4 (2007-09) / EN 61000-6-2 (2009-05)
Vibration resistance	EN 60068-2-6 (2008-02)
Shock resistance	EN 60068-2-27 (2009-05)
Ambient operating temperature	-25 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Permissible relative humidity	± 90 %, non-condensing

CDB650-204

Features

Brief description	Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin socket, all outputs available on screw/spring-loaded terminals, including trigger unit functionality for external illumination of LECTOR®65x
Supports cloning module (CMC)	Yes
Supports display module (CMD)	No
Supports power supply module (CMP)	No
Supports fieldbus gateway (CMF)	No

Interfaces

Serial (RS-232, RS-422/485)	✓, depending on sensor connected
CAN bus	✓, depending on sensor connected
Switching inputs	4 ("SENS / IN 1", "SENS / IN 2", 2 inputs via optional CMC600: "EXT. IN 2", "EXT. IN 2")
Switching outputs	4 ("RES / OUT 1", "RES / OUT 2", 2 outputs via optional CMC600: "EXT. OUT 1", "EXT. OUT 2")
Optical indicators	11 LEDs

Mechanics/electronics

Housing	Polycarbonat
Enclosure rating	IP 65 (IEC 60529 (1989-11))
Protection class	III (EN 60950-1 (2006-04))
Weight	265 g
Scanner connection	17-pin M12 socket, A-coded
Service plug	9-pin D-Sub plug (internal)

Ambient data

Ambient operating temperature	-40 °C ... +50 °C
Storage temperature	-30 °C ... +75 °C
Permissible relative humidity	90 %, non-condensing

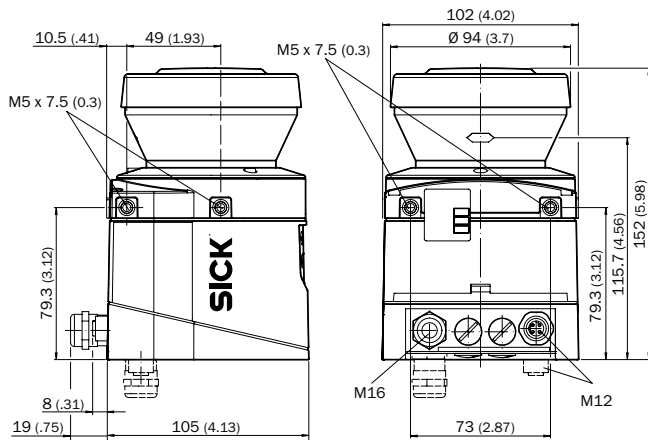
Ordering information

Description	Radio approval	Model name	Part no.
System consisting of: 1 x LMS102-10000 (with integrated application software), 1 x RFU630-13100, 1 x CDB650-204, 1 x ISO card UHF transponder	Europe (EN 302 208-2 V1.4.1) ¹⁾	LAC110-10000	1061586

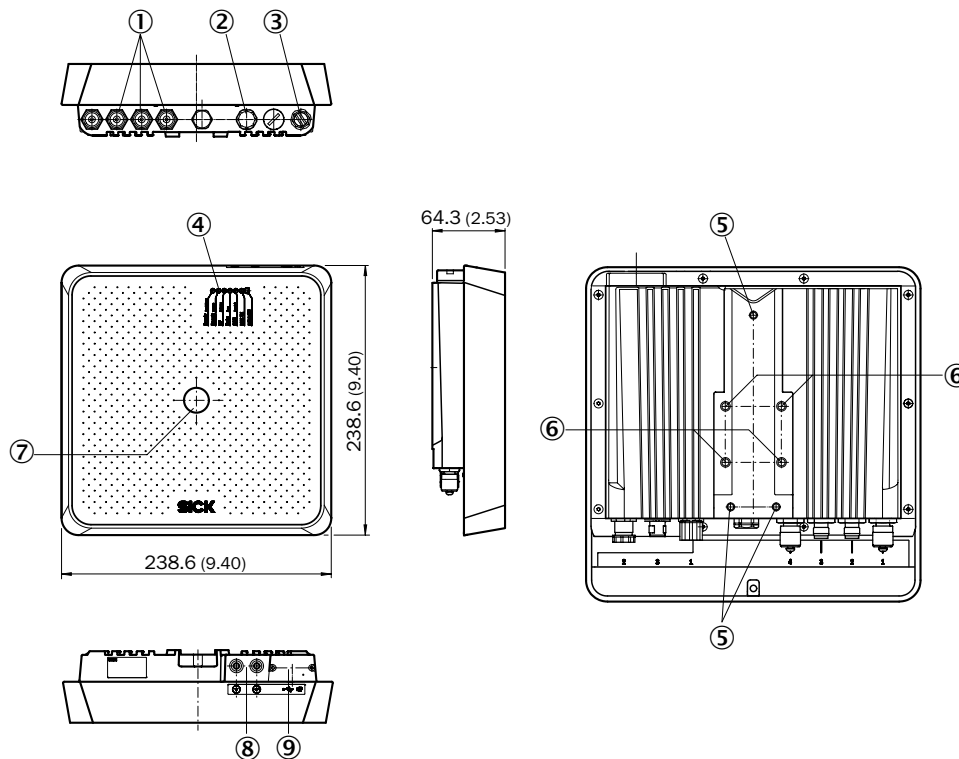
¹⁾ From Firmware version V1.1.

Dimensional drawings (Dimensions in mm (inch))

LMS10x Short Range

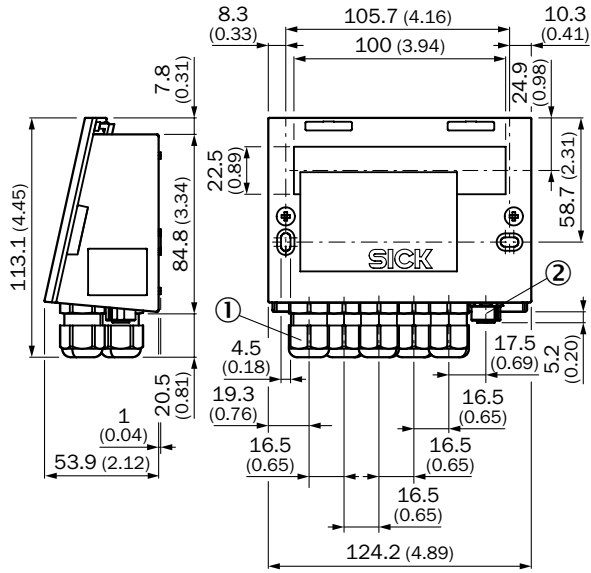


RFU63x



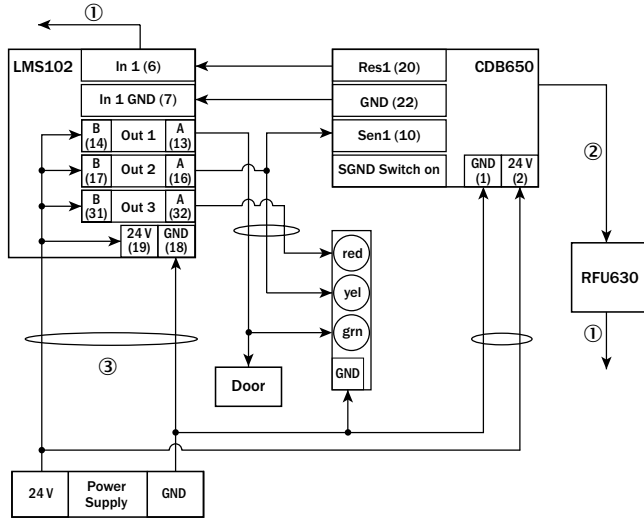
- ① 3 x antenna input ("external", TNC plug, reverse)
- ② "Power/Serial Data/CAN/I/O" connection
- ③ "Ethernet" connection
- ④ 7 x LED for status display
- ⑤ 3 x M5 threaded mounting holes, 8 mm deep
- ⑥ 4 x M5 threaded mounting holes, 11 mm deep
- ⑦ 1 x LED multi-color (process feedback)
- ⑧ Function buttons
- ⑨ Micro USB socket and slot for microSD memory card, behind screw-mounted cover

CDB650



- ① Female connector M12, 17-pin
- ② Cable gland \varnothing 4.5 mm ... 10 mm (5 x)

Connection diagram






- ① Ethernet
- ② 17-pin
- ③ Except 1 + 2 all cables are open wire

Accessories

Necessary accessories


Mounting systems

Mounting brackets/plates

Figure	Brief description	Type	Part no.
	1 , Mounting bracket for rear mounting on wall or machine	Mounting kit 1a	2034324
	1 , Mounting bracket, adjustable longitudinal and lateral axes, only in conjunction with mounting kit 1a (2034324) or 1b (2034325)	Mounting kit 2	2039302
	Pivot mounting bracket, incl. assembly material, for RFU	Mounting bracket	2061737



Connection systems

Plug connectors and cables

Figure	Connection type head A	Connection type head B	Model	Cable length	Type	Part no.
	Male connector, M12, 17-pin, straight, A-coded	Female connector, M12, 17-pin, straight, A-coded	Unshielded	0.9 m	Connection cable (male connector-female connector)	6052945
				2 m	Connection cable (male connector-female connector)	6052286
				3 m	Connection cable (male connector-female connector)	6051194
				5 m	Connection cable (male connector-female connector)	6051195

Other accessories



RFID transponder

Figure	Brief description	Type	Part no.
	UHF transponder, PVC, 85.6 mm x 54 mm x 0.76 mm, Alien Higgs, for participants	ISO card	6051820
	UHF transponder, plastic, ETSI, 224 mm x 24 mm x 8 mm, NXP UCODE G2XM	On-metal Transponder (224 mm x 24 mm x 8 mm)	6034277
	UHF transponder, global, thermoplastic, 51.5 mm x 47.5 mm x 10 mm, Impinj Monza 4 QT, for metal vehicles	On-metal Transponder (52 mm x 48 mm x 10 mm)	6052346
	UHF lable, self adhesive, tamper-proof, for windshield	Paper label	On request

Optional accessories


Mounting systems

Mounting brackets/plates



Figure	Brief description	Type	Part no.
	1 , Mounting bracket for rear mounting on wall or machine with protection of optics hood, for LMS	Mounting kit 1b	2034325
	1 , Mounting plate, adjustable longitudinal axis, only in conjunction with mounting kit 2 (2039302)	Mounting kit 3	2039303

Connection systems

Plug connectors and cables

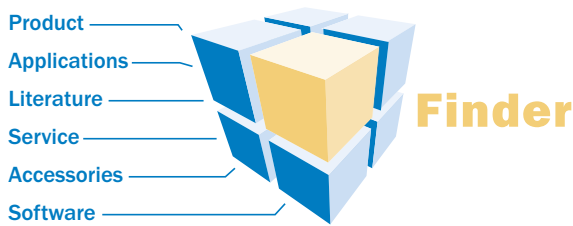
Figure	Connection type head A	Connection type head B	Model	Cable length	Type	Part no.
	Male connector, M12, 4-pin, straight, D-coded	Male connector, RJ45, 8-pin, straight	Shielded	3 m	Connection cable (male connector-male connector)	6044400
				5 m	Connection cable (male connector-male connector)	6034415
			PUR, shielded	2 m	SSL-2J04-G02ME	6034414
				10 m	SSL-2J04-G10ME	6030928
				20 m	SSL-2J04-G20ME	6036158

Signal and display elements

Figure	Brief description	Type	Part no.
	Tower light red, yellow, green, 24 V, incl. mounting and 10 m connection cable, for Building Automation	Tower light for Building Automation	2072744
	Signal alarm for acoustic enhancement to tower light	Signal alarm	On request

WWW.MYSICK.COM – SEARCH ONLINE AND ORDER

Search online quickly and safely - with the SICK “Finders”

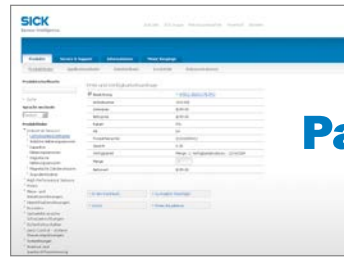


Product Finder: We can help you to quickly target the product that best matches your application.

Applications Finder: Select the application description on the basis of the challenge posed, industrial sector, or product group.

Literature Finder: Go directly to the operating instructions, technical information, and other literature on all aspects of SICK products.

Efficiency – with the E-Commerce-Tools from SICK



Find out prices and availability

Determine the price and possible delivery date of your desired product simply and quickly at any time.

Request or view a quote

You can have a quote generated online here. Every quote is confirmed to you via e-mail.

Order online

You can go through the ordering process in just a few steps.

FOR SAFETY AND PRODUCTIVITY: SICK LIFETIME SERVICES

SICK LifeTime Services is a comprehensive set of high-quality services provided to support the entire life cycle of products and applications from system design all the way to upgrades. These services increase the safety of people, boost the productivity of machines and serve as the basis for our customers’ sustainable business success.



Consulting & Design

Globally available experts for cost-effective solutions



Product & System Support

Fast and reliable, by telephone or on location



Verification & Optimization

Checks and recommendations for increased availability



Upgrade & Retrofits

Uncovers new potential for machines and systems



Training & Education

Employee qualification for increased competitiveness

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for factory, logistics, and process automation. With more than 6,000 employees and over 40 subsidiaries 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

Please find detailed addresses and additional representatives and agencies in all major industrial nations at: www.sick.com