



Sector Information

Detection and Protection

Laser solutions for access control and building protection



SICK

SICK Sensors connect companies and markets



SICK – one of the world’s leading producers of sensors and sensor systems for industrial applications. SICK is a technology and market leader in factory automation. Founded in 1946 and based in Waldkirch, Germany, the company today has a global presence through numerous subsidiaries, participations and sales offices.

Working together for best results!

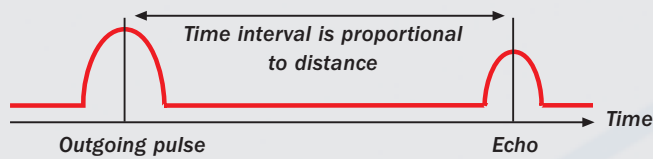
Our understanding of customers’ requirements and technical problems has been the key to our worldwide success in the industrial field. It ensures high-quality products adaptable to your specific requirements in all sectors concerning security, building protection and access control. This experience is now available to you, through the worldwide co-operation with our people. Speak to us!



Laser scanners: virtual barriers to measure, control and protect



SICK is the leader in Time of Flight Technology (TOF). This principle forms the basis of many of SICK's most successful products and systems. TOF makes it possible to measure long distances in straight lines and profiles across a plane. In our product portfolio, we have "1D" TOF Distance Sensors (using a single laser beam) and "2D" TOF Scanners (measuring profiles and areas by means of a rotating laser beam and an encoder).

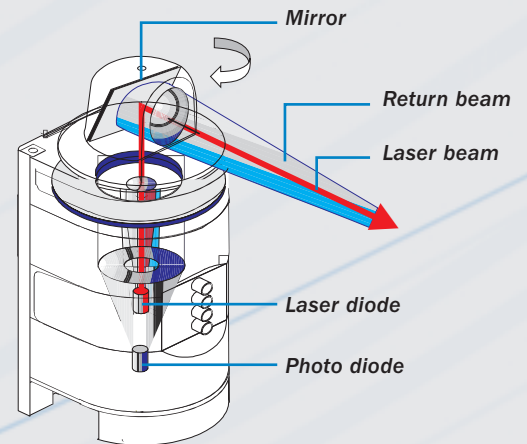


Technology at the speed of light

The distance between the sensor and an object is calculated by measuring the time interval between an outgoing laser pulse and its echo (return signal) reflected by the object. The amplitude of the echo signal can be used to calculate the reflectivity of the object's surface.

"Time of Flight" Laser Scanners are successfully employed in several applications in ports, steel industry, airports, manufacturing industries and traffic control, for detection, protection and measurement. They may be used in building protection and automation, to generate invisible light curtains, which can reliably detect intrusions, provide reliable surveillance of areas and count people.

The LD Laser Scanner:



A large family of TOF Scanners for industrial applications

SICK's product portfolio boasts many different types of laser measuring scanners to fit any possible application. The LMS is designed for outdoor and indoor use in harsh environments. The LMS outdoor is equipped with heating and internal rain/fog correction. The LD OEM/LD PDS represent the latest generation, introducing a new concept in laser measurement. A powerful on-board DSP processor has been included to allow the user to run specific application software and thus making full use of the internal high speed.



	LMS 200/291	LMS 211/221	LD OEM/LD PDS
Range (10 % reflectivity)	80 m (10 m)	80 m (30 m)	80 m (30 m)
Angular resolution	1°/0.5°/0.25°	1°/0.5°/0.25°	1°/0.5°/0.25°/0.125°
Scanning angle	180°	100°/180°	360°
Interface	RS 232/422	RS 232/422	RS 232/422/CANBUS
Dimensions in mm (w x h x d)	155 x 210 x 156	352 x 266 x 229	120 x 222 x 115
Laser class	1	1	1
Switching outputs	3 x PnP	3 x PnP 2 x Relay / 1 x PnP	4 x PnP
Operating ambient temp.	0° to 50°	-30° to 50°	0° to 50°





Controlling access, for security and business

Counting the people that crowd into public areas is essential, for safety and security reasons and also for business: in shopping malls, supermarkets and commercial areas, counting people helps to optimize the use of resources and staff.

SICK's People Counter "LD PeCo":

A revolutionary system based on TOF technology

The LD PeCo is based on our TOF scanner LD linked with a mirror system. A double laser-curtain is generated, which intercepts any person passing through, also detecting the direction of movement. The LD PeCo has high counting accuracy, is simple to install, easy to interface, reliable and maintenance-free. It can be configured to monitor any particular shape of area automatically eliminating any fixed structure within this zone. Unlike traditional IR sensors, the LD PeCo can be installed at almost any height, above normal doors and gates and even in high arcades and halls, directly beneath the ceiling. Unlike camera systems, it is not influenced by illumination and changes in lighting, crowds of people and shadows or other changes in the vicinity.



The LD PeCo



Improving security and efficiency



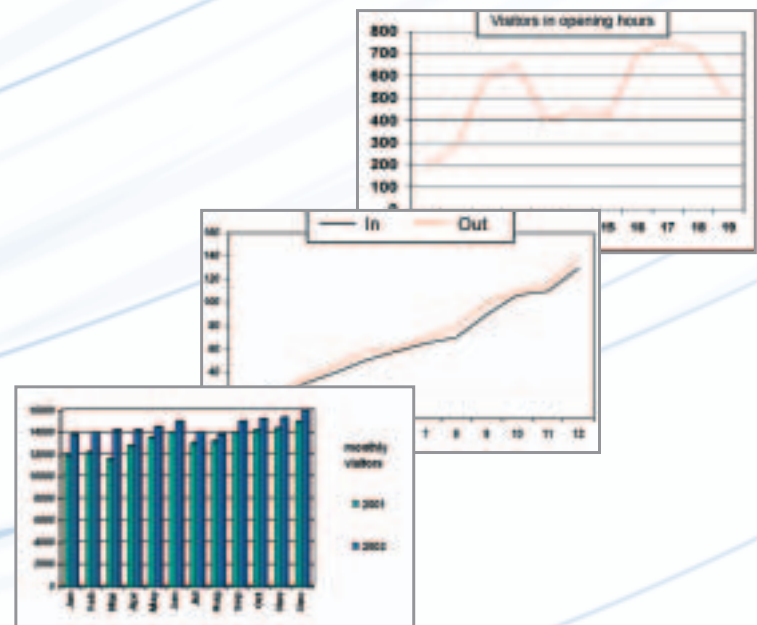
The efficiency of security evacuation plans for airports, stadiums, stations and any other places coping with crowds, is based on the correct estimation of how many people are present. Our PeCo scanner can be easily installed in few minutes, at any height, to provide reliable statistical data on the flow of people through doors, gates, corridors and even through sections of large halls.

A high-performance scanner for a high-performance business

In shopping malls and large supermarkets, it is important to monitor the number of visitors to evaluate properly the efficiency of current marketing campaigns, for staff planning during opening hours, to evaluate the performance of the sales-force and to calculate the relative economic value of each area of the shopping mall. The LD PeCo can help your business by providing reliable data about presence, flow and distribution of customers.

The product advantages

- Precise counting of people regardless of height
- Can detect and count people walking together
- Installation height: up to 15 m and more
- Passage width: up to 26 m and more
- Detects direction, may classify people by height
- Easy to install and interface
- Maintenance-free



The presence of people in a shopping mall and their movement through the complex are continuously monitored and may be easily visualized in charts. The development of business during a period of time can hereby be analyzed.

An invisible protection for your assets



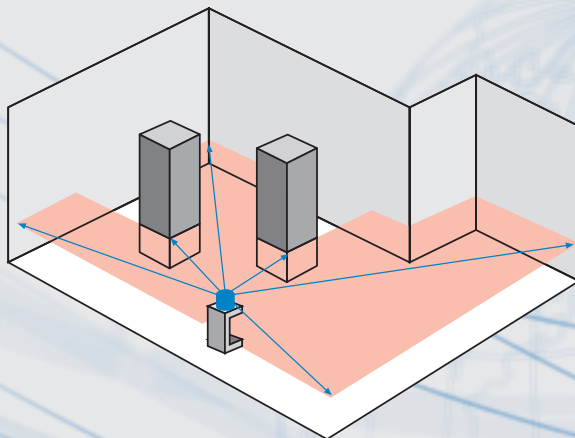
LD PDS

You may protect horizontal or vertical areas from intrusions by installing a laser scanner. By means of a simple configuration software, you can define the shape and size of the area to be monitored, taking into account all fixed features and objects.

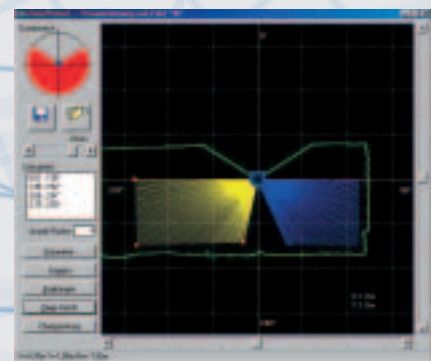
Paintings on a wall can be safeguarded by an invisible vertical barrier generated by a LD PDS Laser Scanner hidden in the ceiling. The scanner will detect any object penetrating the scanned area.

In the same way, a horizontally mounted laser scanner can be used at night to prevent intrusions in gardens, on roofs, in rooms and any other areas.

Indoor or outdoor, the laser scanner will detect any person trespassing on your property and report it to you immediately.



Laser scanner for surveillance of rooms



Result of measurement

Vandalism: a nightmare for the world's museums

Acts of vandalism are a terrible threat to any museum throughout the world. It is a common experience that security guards are not enough to prevent or stop vandalism, not even when assisted by cameras. Laser scanners on the other hand can help the patrol service to prevent and stop vandalism of paintings and sculptures. An invisible light curtain is generated vertically in front of the walls, exactly corresponding to the borders of the areas destined for visitors. When a person or even simply a hand interrupts such a curtain, the laser scanner will immediately generate an alarm. No pauses, no distractions: 24/7 hours alert!



A restless, reliable guardian

The LMS Outdoor is used successfully in several applications throughout the world, to provide continuous 24/7 hours surveillance of building facades, roofs and perimeters against intrusion.

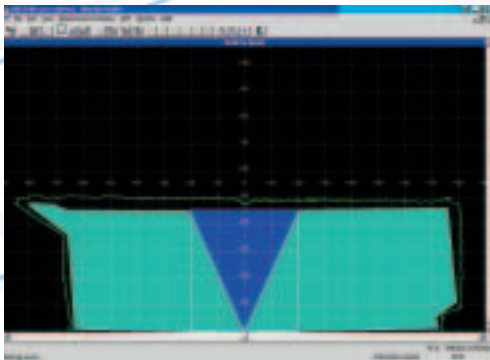
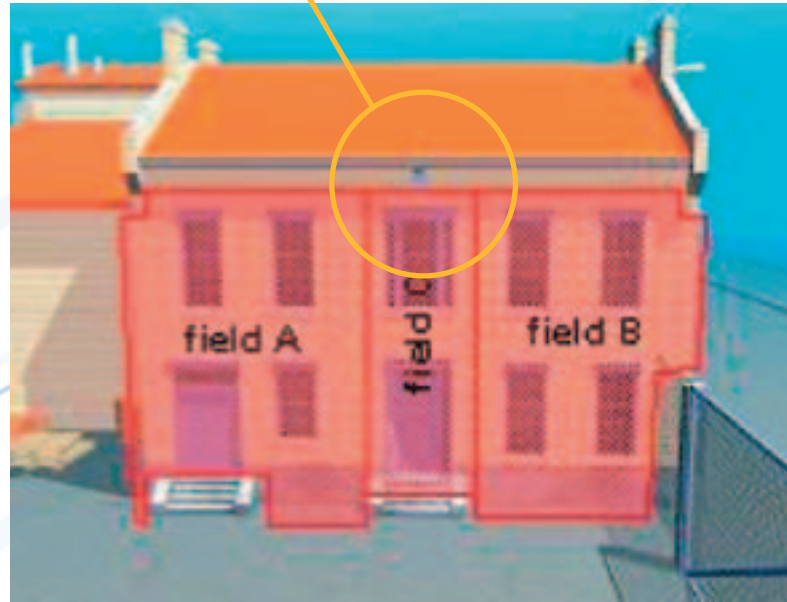
Government offices, historical palaces, jails and museums are some examples of buildings, which must be protected against intrusions.

Protect the facade of your building using the LMS outdoor and you will be relying on a restless guardian, which will never lower its level of attention when preventing unauthorized people from entering the premises.

The LMS Outdoor is most efficient at monitoring very large facades: thanks to its wide measuring range, one LMS can control a very large surface area, with minimum costs per controlled window.



The LMS 221-S07 Outdoor



LMSIBS software

The configuration software allows the definition of numerous alarm fields, so that in case of intrusion, the infiltrated zone can be determined immediately. The ground level or another fixed feature can be used by the LMS to monitor continuously the functionality of the scanning system.

Fewer false alarms with LMS

The LMS software is able to eliminate the influence of rain drops and snow flakes and even filter away the presence of moving objects such as insects or birds. It can be programmed to merely detect the presence of objects of a certain size, so that you can be sure of the "quality" of the alarm.



The dialogue continues.

Copy, complete and fax.

Company

Name

Position/
Department

Address

Post code/
Town

Phone/Fax

Industry/Field
of application

Yes, I would like to
know more about:

- TOF Laser Measurement Technology
- Facade, roof and perimeter protection
- Anti-intrusion systems
- Surveillance of areas
- People Counting

- I am interested in a detailed
consultation with one of your
experts.
Please arrange an appointment
for me.

Other product information as downloads at www.sick.com

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