Product family overview

LMS1xx

Precise, reliable, compact 2D LiDAR sensor for indoor and outdoor applications

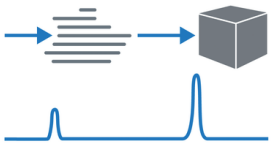
2D LIDAR SENSORS

SICK
Sensor Intelligence.

Advantages

LMS1xx – when you need reliable measurement data

The LMS1xx 2D LiDAR sensor is characterized by efficiency as well as low acquisition and operating costs combined with high reliability and precise measurement characteristics. It also offers outstanding performance with rugged, durable and maintenance-free measurement technology. When it comes to appearance, the sensor impresses with its compact housing and low weight. The LMS1xx: Your reliable "partner" for a wide range of measuring tasks.

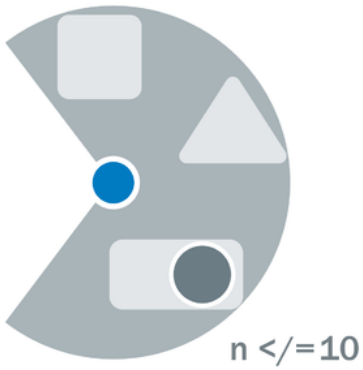


2-Echo technology: High reliability even under adverse ambient conditions thanks to the 2-Echo technology and IP67 variants.

Large working range of up to 50 m.

High shock and vibration resistance thanks to rugged mechanical design.

The LMC1xx was specially developed for class “C” intrusion and hold-up systems which are compliant with VdS and VSÖ. The sensor can be used flexibly as a curtain to protect individual objects such as pictures or even entire walls (vertical field) or to protect ceilings and floors (horizontal field). SICK offers variants for use in indoor and outdoor areas.



High flexibility in applications thanks to the combination of measuring and detecting functions in one sensor and simultaneous monitoring of up to 10 fields.

Easy teach function for automatic teach-in and updates of monitoring fields.

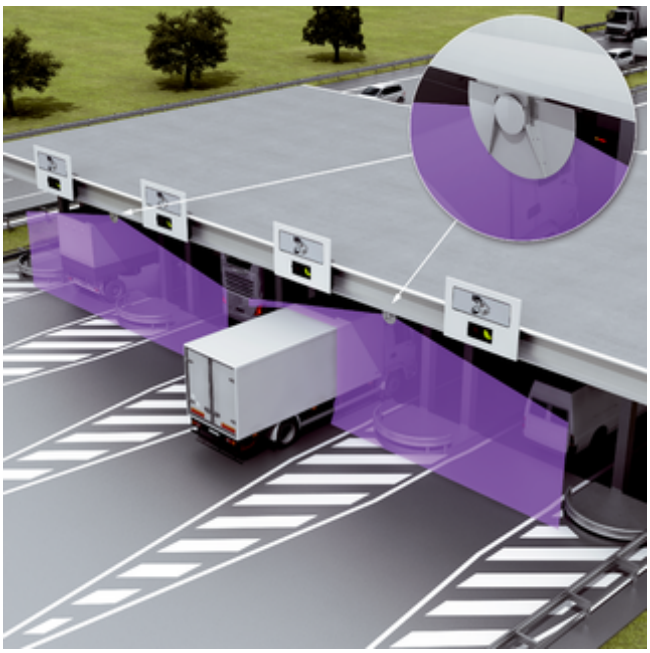
Automatische Feldanpassung für sich ändernde Umgebungsbedingungen wie z. B. die Schneehöhe.

High flexibility: The LMS1xx offers reliability and precision for nearly any sector of industry thanks to the numerous functions available as standard, which can be individually parameterized via Ethernet and serial interfaces.

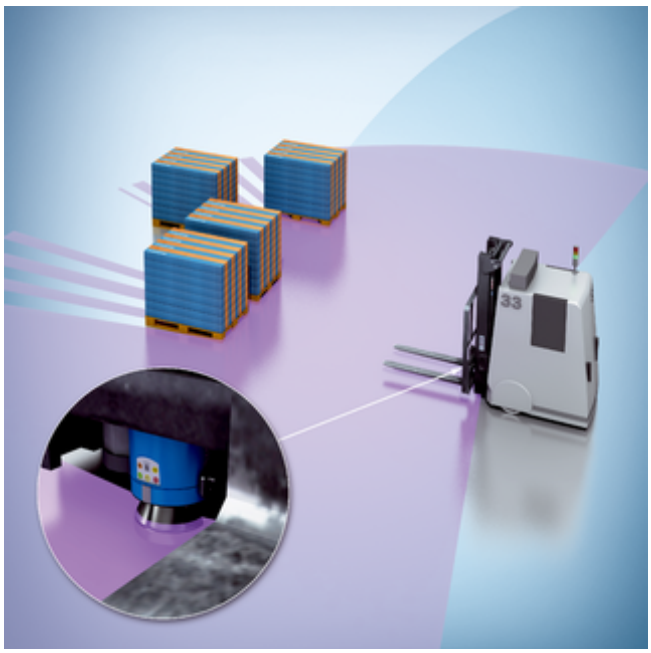
Whether indoors or outdoors, in dusty or very cold environments, the LMS1xx 2D LiDAR sensor impresses in almost all industrial applications, regardless of the location. This means working ranges of up to 50 m are no problem.

Transport vehicles and tractors for port, airport or industrial applications
The LMS1xx LiDAR sensor is suitable for reliably monitoring obstacles and objects along the travel path of autonomous towing vehicles. Even on uneven ground or in adverse weather conditions, the LMS1xx always maintains an overview, detects objects even over long distances and sends a switching signal to the controller as soon as the distance falls below the minimum value. When driving, it prevents unnecessary braking or stopping so that driving tasks can be executed without major delays.

Collision protection in container terminals or high-bay warehouses
Even when the going gets tough, the LMS1xx really shines when it comes to collision protection or navigation support for industrial vehicles. Whether in container terminals or high-bay warehouses, when used with driver assistance systems or AGVs: The LMS1xx always keeps its eyes open.



Dynamic and static applications
It also scores points in static applications for traffic telematics: The LMS1xx can be installed directly into the road surface and monitors two lanes simultaneously. This makes it suitable for traffic control and camera triggering as well as the classification and separation of vehicles.



Navigation support, pallet measurement and collision protection on industrial vehicles
Lanes for vehicles often have to be kept narrow in order to make the best possible use of storage space. The LMS1xx provides support for navigation and maneuvering both indoors and outdoors – an efficient solution for working ranges of up to 50 meters. The advantages of the LMS1xx speak for themselves: Dynamic field adaptation, rugged housing with IP67 enclosure rating and easy mounting thanks to the low weight.

Both indoors or outdoors: LMS1xx 2D LiDAR sensors impress with their reliable and powerful output of data.

Product description

The LMS1xx 2D LiDAR sensors form part of the extensive portfolio of 2D laser scanner from SICK, and offer an efficient and cost-effective alternative to other solutions for both indoor and outdoor use. SICK offers these 2D LiDAR sensors in a number of variants. The LMS1xx scanners can therefore easily cope with various requirements in terms of sensing range and application software. And there are a number of security versions to round off the wide range of applications. All variants in this product family are marked out by their compact design and dimensions, as well as their light weight. Compact design meets impressive innovation: Multi-echo technology increases the availability of the sensors outdoors and even enables them to be installed behind glass.

At a glance

- Efficient and cost-effective 2D LiDAR sensors for measuring ranges of up to 50 m
- Outstanding performance whatever the weather, thanks to multi-echo technology and intelligent algorithms
- Rugged, compact housing with enclosure rating up to IP 67, integrated heating, and a temperature range of –40 °C to +60 °C
- Variants for security applications with relay outputs and VdS certification available
- Measurement data output via Ethernet interface in real time
- Number of digital outputs can be expanded via external CAN modules

Your benefits

- Straightforward integration and mounting due to compact design
- Low purchase and operating costs: One device monitors areas of over 5,500 m2 in size
- Product family with many variants, which also provide solutions for demanding and specialized applications
- Extended filter options significantly reduce measurement errors caused by conditions such as fog, rain or snow
- Optional CAN I/O module increases number of digital outputs for greater application flexibility
- Ethernet interface makes for easy implementation and remote maintenance

Fields of application

- Navigation and anti-collision sensor for automated guided systems, freely navigating vehicles and robots
- Anti-collision for vehicles and cranes, even in harsh environments
- Traffic applications through quick triggering, vehicle detection and profiling
- Object protection for monitoring facades, roofs and high-security buildings
- Protection for buildings, sculptures and paintings
- Perimeter protection and camera control

Ordering information

Other models and accessories ➜ www.sick.com/LMS1xx

- **Scanning frequency:** 25 Hz, 50 Hz

Working range	Integrated application	Enclosure rating	Color	Connection type	Type	Part no.
0.5 m ... 20 m	Field evaluation with flexible fields	IP65	Light blue (RAL 5012)	1 x system plug with screw terminal block	LMS100-10000	1041113
			Black (RAL 9005)	1 x system plug with screw terminal block	LMS102-10000	1048235
			Gray (RAL 7032)	1 x system plug with screw terminal block	LMS101-10000	1048236
		IP67	Gray (RAL 7032)	1 x M12 round connector	LMS111-10100	1041114
	Field evaluation with flexible fields, easy teach option	IP67	Gray (RAL 7032)	1 x M12 round connector	LMS111-10100S09	1068858
	Field evaluation with flexible fields, security conform parameterization, Easy Teach lite and pro	IP65	Black (RAL 9005)	1 x system plug with screw terminal block	LMS122-10000 Security	1044322
			Gray (RAL 7032)	1 x system plug with screw terminal block	LMS121-10000 Security	1051384
			Signal white (RAL 9003)	1 x system plug with screw terminal block	LMS123-10000 Security	1044321
		IP67	Black (RAL 9005)	1 x M12 round connector	LMS132-10100 Security	1051402
			Gray (RAL 7032)	1 x M12 round connector	LMS131-10100 Security	1051379
			Signal white (RAL 9003)	1 x M12 round connector	LMS133-10100 Security	1051403
0.5 m ... 40 m	Field evaluation with flexible fields, security conform parameterization, Easy Teach lite	IP67	Gray (RAL 7032)	1 x M12 round connector	LMS141-05100 Security Core	1070209
	Field evaluation with flexible fields, security conform parameterization, Easy Teach lite and pro	IP67	Black (RAL 9005)	1 x M12 round connector	LMS142-15100 Security Prime	1070410
			Gray (RAL 7032)	1 x M12 round connector	LMS141-15100 Security Prime	1070409
			Signal white (RAL 9003)	1 x M12 round connector	LMS143-15100 Security Prime	1070411
0.5 m ... 50 m	Field evaluation with flexible fields	IP67	Gray (RAL 7032)	1 x M12 round connector	LMS151-10100	1047607
			Signal white (RAL 9003)	1 x M12 round connector	LMS153-10100	1065550

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. 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 a wide range of 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 complete 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:

Contacts and other locations –www.sick.com

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