



LD-LRS

2D LiDAR sensor with a large scanning range makes outdoor applications possible

SICK
Sensor Intelligence.



Technical data overview

Application	Indoor / Outdoor (depending on type)
Integrated application	Field evaluation
Aperture angle	
Horizontal	360°
Angular resolution	0.0625°, interlaced 0.125° 0.1875° 0.25° 0.375° 0.5° 0.75° 1°
Working range	0.5 m ... 250 m (depending on type)
Scanning range	
At 10% remission	80 m ... 120 m (depending on type)
Scanning frequency	5 Hz ... 10 Hz
Heating	Yes
Ambient operating temperature	-25 °C ... +50 °C (depending on type)
Ethernet	✓
Serial	✓
CAN	✓
Digital outputs	4 (digital) 1 (digital) 2 (relays)
Weight	4.1 kg / + 9.1 kg (depending on type)

Product description

The superior technology of the LD-LRS 2D LiDAR sensor with scanning ranges of up to 250 m automates ship loading operations when using quay cranes, greatly reducing the time spent in the loading port. The high-performance laser optics system performs non-contact scanning of the container stack and precisely detects all obstacles impeding the movement. The LD-LRS provides precise measurement data to determine the container stack profile, thus saving time and ensuring the highest level of handling reliability during loading.

The profile measurement of the filling state of bulk material stockpiles can be converted into a 3D model in order to determine the exact surface structure of the stockpile for controlling the loading system, which then optimizes removal.

At a glance

- Long sensing range even when detecting dark surfaces
- High angular resolution of up to 0.0625 degrees
- High immunity to solar radiation
- Synchronous monitoring of up to six different fields
- Small laser spot diameter even at long distances

Your benefits

- Reliable operation even in harsh ambient conditions
- Low installation costs due to large monitoring areas
- Reliable detection of small objects at long distances
- Easy installation options for excavators and crane systems
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Fields of application

- Automation of ship loading operations
- Detection of bulk material stockpiles (volume determination)
- Determination of container data such as mass and position
- Monitoring of large roof surfaces, facades, and other areas

Ordering information

Other models and accessories → www.sick.com/LD-LRS

- **Integrated application:** Field evaluation
- **Scanning frequency:** 5 Hz ... 10 Hz

Working range	Enclosure rating	Color	Connection type	Type	Part no.
0.5 m ... 250 m	IP65	Light blue (RAL 5012)	1 x 6-pin terminal block 15-pin D-Sub HD male connector (0.9 m)	LD-LRS1000	1028941
2.5 m ... 250 m	IP67	Gray (RAL 7032)	1 x 20-pin Harting plug	LD-LRS2100	1029041
				LD-LRS3100	1029042
				LD-LRS4100	1029037
				LD-LRS5100	1029038
5 m ... 250 m	IP67	Gray (RAL 7032)	1 x 20-pin Harting plug	LD-LRS2110	1045645
				LD-LRS3110	1046011

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