



LMS531-10100

LMS5xx

2D LASER SCANNERS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
LMS531-10100	1067356

Other models and accessories → www.sick.com/LMS5xx



Detailed technical data

Features

Version	Mid Range
Variant	PRO
Field of application	Outdoor, Security
Resolution power	Standard Resolution
Light source	Infrared (905 nm)
Laser class	1, eye-safe (IEC 60825-1 (2007-6))
Aperture angle	190°
Scanning frequency	25 Hz / 35 Hz / 50 Hz / 75 Hz / 100 Hz
Angular resolution	0.166° 0.25° 0.5° 0.667° 1°
Heating	Yes
Operating range	0 m ... 80 m
Max. range with 10 % reflectivity	40 m
Spot size	11.9 mrad
Amount of evaluated echoes	5
Fog correction	Yes

Performance

Response time	≥ 10 ms
Detectable object shape	Almost any
Systematic error	± 25 mm (1 m ... 10 m) ± 35 mm (10 m ... 20 m) ± 50 mm (20 m ... 30 m) ¹⁾

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

Statistical error	± 6 mm (1 m ... 10 m) ± 8 mm (10 m ... 20 m) ± 14 mm (20 m ... 30 m) ¹⁾
Integrated application	Field evaluation
Number of field sets	10 fields
Simultaneous evaluation cases	10

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

Interfaces

Serial (RS-232, RS-422)	✓
Function	Host
Data transmission rate	9.6 kBaud ... 500 kBaud
Ethernet	✓
Function	Host
Data transmission rate	10/100 MBit/s
Protocol	TCP/IP, OPC
CAN bus	✓
USB	✓, Mini-USB
Function	AUX
Data transmission rate	57.6 kBaud
Switching inputs	4
Switching outputs	4 (4 outputs in relay function)
Optical indicators	5 LEDs (Additional 7-segment display)

Mechanics/electronics

Electrical connection	4 x M12 round connector
Operating voltage	24 V, ± 20 %
Power consumption	22 W, + 55 W heating (typical)
Housing color	Gray (RAL 7032)
Enclosure rating	IP 67 (EN 60529, Section 14.2.7)
Protection class	III (EN 60529, Section 14.2.7)
Weight	3.7 kg
Dimensions (L x W x H)	160 mm x 155 mm x 185 mm

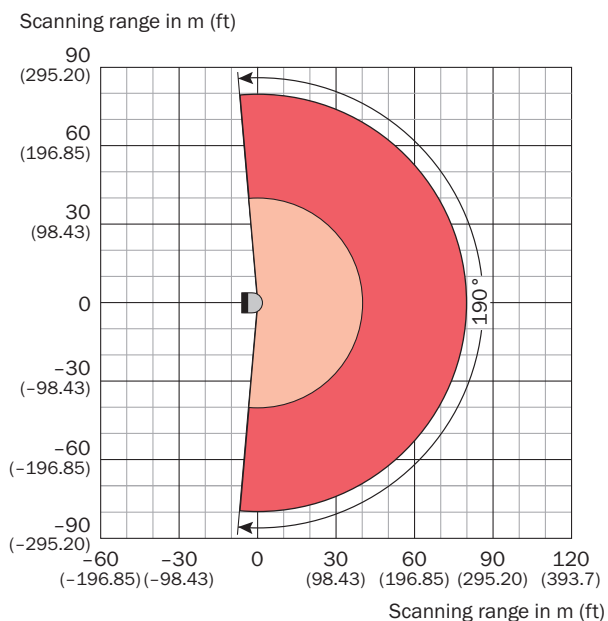
Ambient data

Object remission	2 % ... > 1,000 % (reflectors)
Electromagnetic compatibility (EMC)	EN 61000-6-2:2005 / EN 61000-6-3 (2007-03)
Vibration resistance	EN 60068-2-6 (1995-04)
Shock resistance	EN 60068-2-27 (1993-03) EN 60068-2-29 (1993-04)
Ambient operating temperature	-30 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Ambient light immunity	70,000 lx

General notes

Note on use	Not suitable for personnel protection
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Operating range diagram



- Scanning range max. 80 m (262.47 ft)
- Scanning range for objects up to 10 % remission 40 m (131.23 ft)

Recommended accessories

Other models and accessories → www.sick.com/LMS5xx

	Brief description	Type	Part no.
Device protection (mechanical)			
	Protection hood	Protection cover	2056850
Mounting brackets and mounting plates			
	1 piece, mounting bracket for direct mounting, from the rear, on wall or machine, not adjustable	Mounting kit 1	2015623
Plug connectors and cables			
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: cable Cable: RS-232, RS-422, shielded, 5 m	Connecting cable (female connector - open)	6036153
	Head A: male connector, M12, 8-pin, straight, A-coded Head B: cable Cable: shielded, 5 m	Connecting cable (male connector-open)	6036155

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