



LMS531-11100

LMS5xx

2D LIDAR SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
LMS531-11100	1055376

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



Detailed technical data

Features

Version	Mid Range
Variant	Lite
Application	Outdoor, Security
Resolution power	Standard Resolution
Light source	Infrared (905 nm)
Laser class	1 (IEC 60825-1:2014, EN 60825-1:2014)
Aperture angle	190°
Scanning frequency	25 Hz / 35 Hz / 50 Hz / 75 Hz
Angular resolution	0.25° 0.5° 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	2
Fog correction	Yes

Performance

Response time	≥ 13 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⁾
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

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

Number of field sets	4 fields
Simultaneous evaluation cases	4

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

Interfaces

Ethernet	✓, TCP/IP
Remark	OPC
Function	Parameterization, Output of measurement data
Data transmission rate	10/100 Mbit/s (measured data output 1 Hz)
USB	✓
Remark	Mini-USB
Function	AUX
Data transmission rate	9.6 kBaud ... 500 kBaud
Switching inputs	2
Switching outputs	3 (2 relay, 1 digital)
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	IP67 (IEC 60529 Edition 2.2:2013-08)
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)	IEC 61000-6-2:2016-08 / IEC 61000-6-3:2006-07
Vibration resistance	IEC 60068-2-6:2007-12
Shock resistance	IEC 60068-2-27:2008-02
Ambient operating temperature	-30 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Ambient light immunity	70,000 lx

General notes

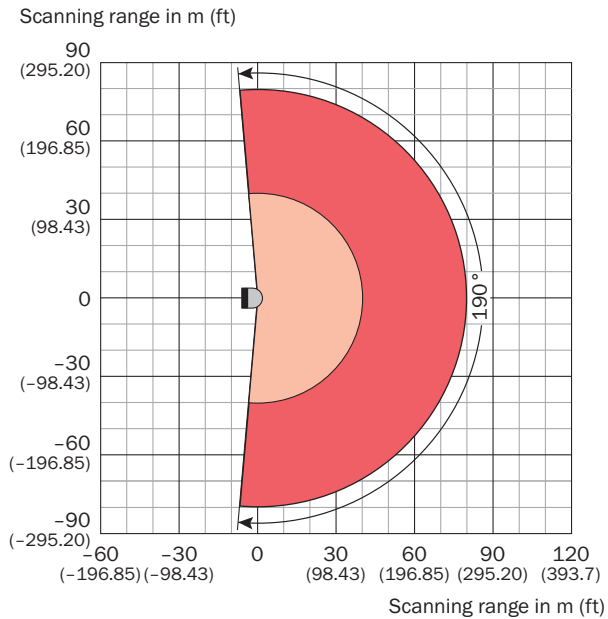
Note on use	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.
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Classifications

ECl@ss 5.0	27270990
ECl@ss 5.1.4	27270990
ECl@ss 6.0	27270913
ECl@ss 6.2	27270913
ECl@ss 7.0	27270913

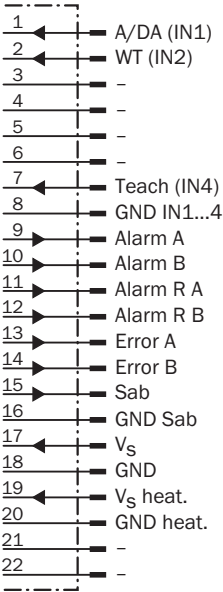
ECl@ss 8.0	27270913
ECl@ss 8.1	27270913
ECl@ss 9.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550
UNSPSC 16.0901	46171620

Operating range diagram





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

Connection diagram



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 plates			
	1 piece, mounting bracket for direct mounting, from the rear, on wall or machine, not adjustable	Mounting kit 1	2015623

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