



# LMS151-10100

LMS1xx

2D LIDAR SENSORS

**SICK**  
Sensor Intelligence.





### Ordering information

Type	Part no.
LMS151-10100	1047607



### Detailed technical data

#### Features

<b>Application</b>	Outdoor
<b>Light source</b>	Infrared (905 nm)
<b>Laser class</b>	1 (IEC 60825-1:2014, EN 60825-1:2014)
<b>Aperture angle</b>	Horizontal 270°
<b>Scanning frequency</b>	25 Hz / 50 Hz
<b>Angular resolution</b>	0.25° 0.5°
<b>Heating</b>	Yes
<b>Working range</b>	0.5 m ... 50 m
<b>Scanning range</b>	At 10% remission 18 m At 90% remission 50 m
<b>Amount of evaluated echoes</b>	2
<b>Fog correction</b>	Yes

#### Mechanics/electronics

<b>Electrical connection</b>	1 x M12 round connector
<b>Supply voltage</b>	10.8 V DC ... 30 V DC
<b>Power consumption</b>	Typ. 8 W, heating typ. 35 W
<b>Housing color</b>	Gray (RAL 7032)
<b>Enclosure rating</b>	IP67 (EN 60529, Section 14.2.7)
<b>Protection class</b>	III (EN 50178 (1997;10))
<b>Weight</b>	1.1 kg
<b>Dimensions (L x W x H)</b>	105 mm x 102 mm x 162 mm

## Performance

<b>Response time</b>	≥ 20 ms
<b>Detectable object shape</b>	Almost any
<b>Systematic error</b>	± 30 mm <sup>1)</sup>
<b>Statistical error</b>	12 mm <sup>1)</sup>
<b>Integrated application</b>	Field evaluation with flexible fields
<b>Number of field sets</b>	10 fields
<b>Simultaneous evaluation cases</b>	10

<sup>1)</sup> Typical value; actual value depends on environmental conditions.

## Interfaces

<b>Ethernet</b>	✓, TCP/IP
Remark	OPC
Function	Host
Data transmission rate	10/100 MBit/s
<b>Serial</b>	✓, RS-232
Function	Host, AUX
Data transmission rate	9.6 kBaud ... 115.2 kBaud
<b>CAN</b>	✓
Function	Extension of outputs
<b>Digital inputs</b>	4 digital (thereof 2 suitable for encoders)
<b>Digital outputs</b>	3
<b>Optical indicators</b>	7-segment display (plus 5 LEDs showing device status, contamination warning and initial condition)

## Ambient data

<b>Object remission</b>	2 % ... > 1,000 % (reflectors)
<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2:2005 / EN 61000-6-4 (2007-01)
<b>Vibration resistance</b>	EN 60068-2-6 (1995-04)
<b>Shock resistance</b>	EN 60068-2-27 (1993-03)
<b>Ambient operating temperature</b>	-30 °C ... +50 °C
<b>Storage temperature</b>	-30 °C ... +70 °C
<b>Ambient light immunity</b>	40,000 lx

## General notes

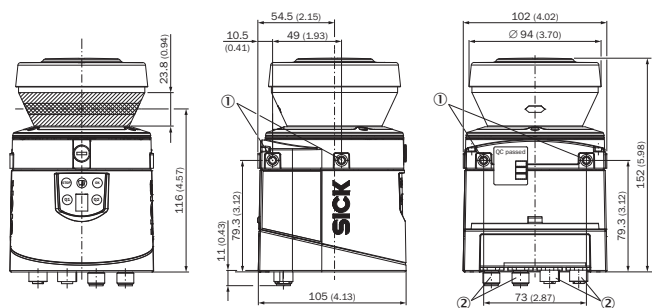
<b>Note on use</b>	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.
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## Classifications

<b>ECl@ss 5.0</b>	27270990
<b>ECl@ss 5.1.4</b>	27270990
<b>ECl@ss 6.0</b>	27270913
<b>ECl@ss 6.2</b>	27270913
<b>ECl@ss 7.0</b>	27270913
<b>ECl@ss 8.0</b>	27270913

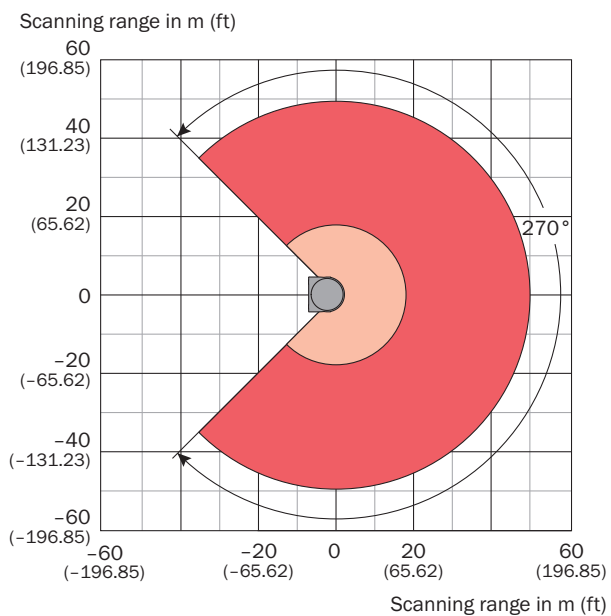
<b>ECI@ss 8.1</b>	27270913
<b>ECI@ss 9.0</b>	27270913
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>UNSPSC 16.0901</b>	46171620

### Dimensional drawing (Dimensions in mm (inch))



- ① Mounting hole M5 x 7.5
- ② Connector M12

### Working range diagram



- Scanning range max. 50 m (164.04 ft)
- Scanning range for objects up to 10 % remission 18 m (59.06 ft)

Recommended accessories

	Brief description	Type	Part no.
<b>Device protection (mechanical)</b>			
	Weather hood, 190°	Weather protection cover 190°	2046459
	Weather hood, 270°	Weather protection cover 270°	2046458
<b>Mounting brackets and plates</b>			
	Standard mounting set for weather hood	Mounting bracket	2046025
	1 piece, mounting bracket for rear mounting on wall or machine	Mounting kit 1a	2034324
	1 piece, mounting bracket for rear mounting on wall or machine with protection of optics hood	Mounting kit 1b	2034325
	1 piece, mounting bracket, adjustable lateral axis, only in conjunction with mounting kit 1a (2034324) or 1b (2034325)	Mounting kit 2	2039302
	1 piece, mounting plate, adjustable longitudinal axis, only in conjunction with mounting kit 2 (2039302)	Mounting kit 3	2039303
<b>Terminal and alignment brackets</b>			
	Quick-action lock system for weather hood 190°/270°	Quick release	2046989
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Power, shielded, 5 m	Connecting cable (female connector - open)	6036159
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: Flying leads 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: Flying leads Cable: PUR, halogen-free, shielded, 5 m	STL-1208-G05MAC	6036155
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, twisted pair, PUR, halogen-free, shielded, 5 m	SSL-2J04-G05ME	6034415

## 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.”



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POSITIONING INTELLIGENCE



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