



# MRS6124R-131001

MRS6000

3D LIDAR SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
MRS6124R-131001	6065086

Other models and accessories → [www.sick.com/MRS6000](http://www.sick.com/MRS6000)



### Detailed technical data

#### Features

<b>Application</b>	Outdoor, Indoor
<b>Light source</b>	Infrared light (870 nm)
<b>Laser class</b>	1 (IEC 60825-1:2014)
<b>Aperture angle</b>	Horizontal 120°
	Vertical 15°
<b>Scanning frequency</b>	10 Hz
<b>Angular resolution</b>	Horizontal 0.13°
	Vertical 0.625°
<b>Working range</b>	0.5 m ... 200 m
<b>Scanning range</b>	At 10% remission factor 30 m
	At 90% remission factor 75 m
<b>Amount of evaluated echoes</b>	4

#### Mechanics/electronics

<b>Connection type</b>	3 x M12 round connectors (supply voltage, Ethernet, I/O)
<b>Supply voltage</b>	10 V ... 29 V
<b>Power consumption</b>	20 W
<b>Housing material</b>	Aluminum / plastic (PMMA)
<b>Housing color</b>	Gray (RAL 7042)
<b>Enclosure rating</b>	IP65
	IP67
<b>Protection class</b>	III
<b>Weight</b>	2.2 kg
<b>Dimensions (L x W x H)</b>	125.5 mm x 176 mm x 131 mm
<b>MTBF</b>	9.5 years

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	19 years
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## Performance

<b>Systematic error</b>	± 125 mm <sup>1)</sup>
<b>Statistical error</b>	30 mm <sup>1)</sup>

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

## Interfaces

<b>Ethernet</b>	✓, TCP/IP
Function	Raw data interface/parameterization
Data transmission rate	100 Mbit/s ... 1 Gbit/s

## Ambient data

<b>Ambient operating temperature</b>	-20 °C ... +60 °C
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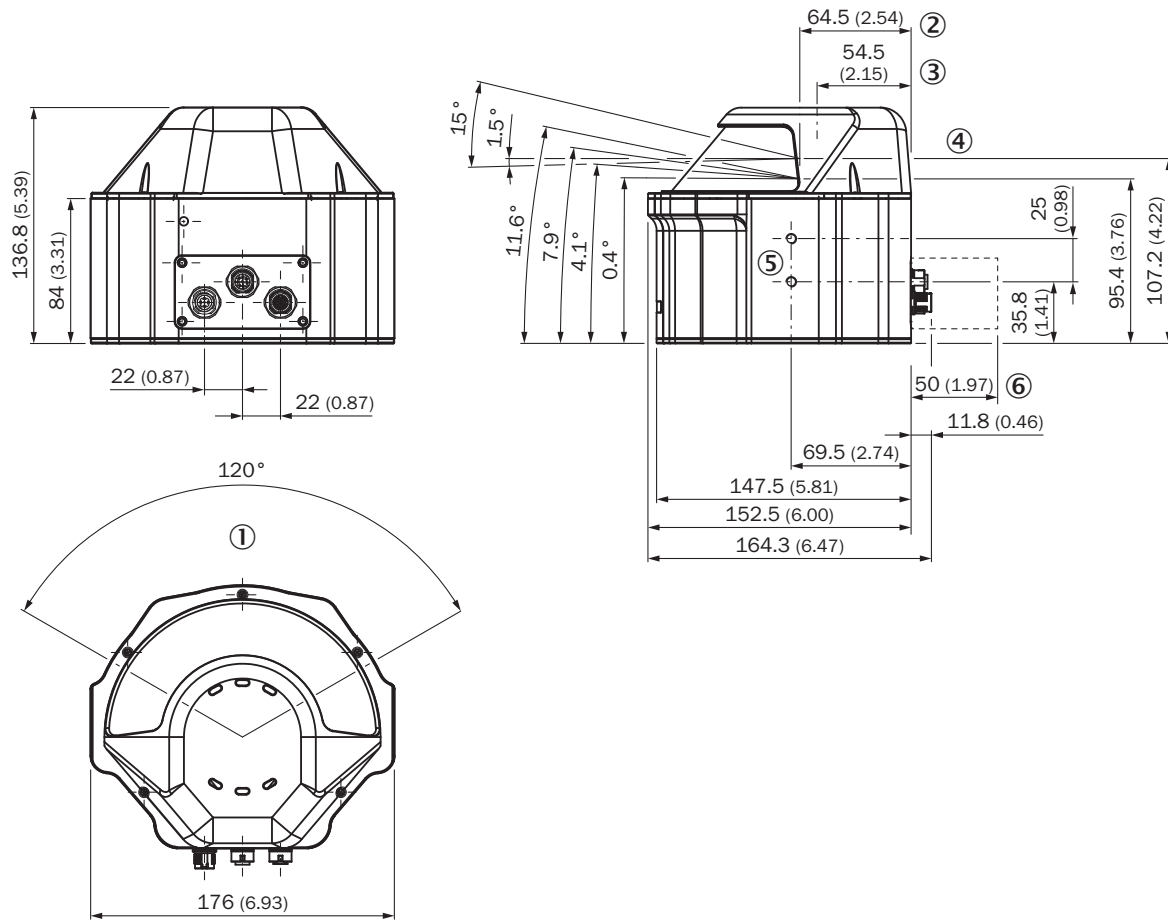
## General notes

<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

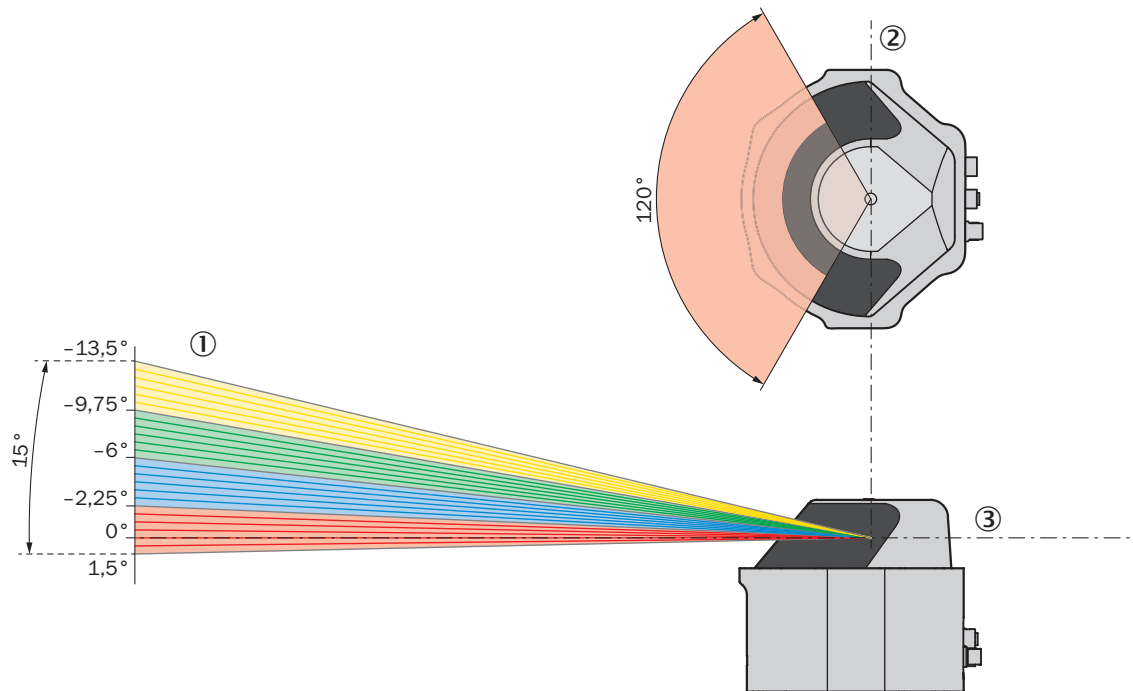
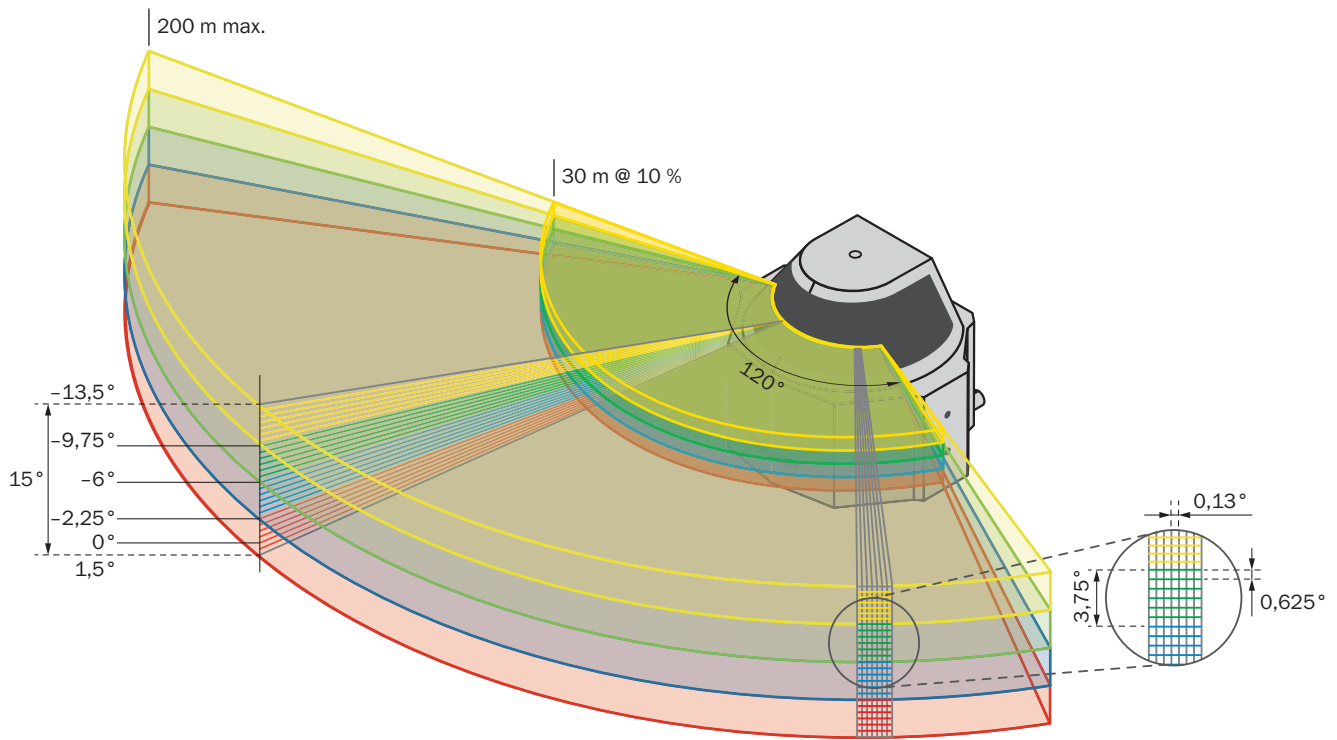
<b>ECLASS 5.0</b>	27270990
<b>ECLASS 5.1.4</b>	27270990
<b>ECLASS 6.0</b>	27270913
<b>ECLASS 6.2</b>	27270913
<b>ECLASS 7.0</b>	27270913
<b>ECLASS 8.0</b>	27270913
<b>ECLASS 8.1</b>	27270913
<b>ECLASS 9.0</b>	27270913
<b>ECLASS 10.0</b>	27270913
<b>ECLASS 11.0</b>	27270913
<b>ECLASS 12.0</b>	27270913
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>ETIM 7.0</b>	EC002550
<b>ETIM 8.0</b>	EC002550
<b>UNSPSC 16.0901</b>	41111615

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



- ① Aperture angle
- ② Zeroset
- ③ Rotation axis
- ④ Horizontal axis
- ⑤ Mounting hole M6 x 10 mm
- ⑥ Area to be kept free for connecting cables


Functional principle



- ① 4 scan planes with 6 layers each
- ② Vertical axis
- ③ Horizontal axis

### Recommended accessories

Other models and accessories → [www.sick.com/MRS6000](http://www.sick.com/MRS6000)

	Brief description	Type	Part no.
Terminal and alignment brackets			
	MRS6000 bracket for mounting from behind, stainless steel, mounting hardware included	Mounting kit	2102120

### Recommended services

Additional services → [www.sick.com/MRS6000](http://www.sick.com/MRS6000)

	Type	Part no.
Commissioning		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> 2D LiDAR sensors, 3D LiDAR sensors</li> <li>• <b>Range of services:</b> Inspection of connection, fine adjustment, configuration of monitored areas, configuration and optimization of parameters as well as tests, Setup of previously defined functions of basic settings, parameters of field application, filters for raw data output and product-specific configuration</li> <li>• <b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Commissioning LiDAR sensors	1680672
Maintenance		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> 2D LiDAR sensors, 3D LiDAR sensors</li> <li>• <b>Range of services:</b> Inspection, analysis and restoring of defined functions, Inspection and adaptation of basic settings, parameters of field application, filters for raw data output, and product-specific configuration</li> <li>• <b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Maintenance of LiDAR sensors	1682593
Extended warranty		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Machine vision, LiDAR sensors, safety camera sensors, Safety laser scanners, Safety radar sensors, Radar sensors, Fixed mount barcode scanners, Image-based code readers, RFID, Mobile handheld scanners</li> <li>• <b>Range of services:</b> The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery).</li> <li>• <b>Duration:</b> Five-year warranty from delivery date.</li> </ul>	Extended warranty for a total of five years from delivery date	1680671

## 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](http://www.sick.com)