



# LMC121-11001 VdS

LMC1xx

2D LIDAR SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type             | part no. |
|------------------|----------|
| LMC121-11001 VdS | 1051314  |

Other models and accessories → [www.sick.com/LMC1xx](http://www.sick.com/LMC1xx)

### Detailed technical data

#### Features

|                                   |  |
|-----------------------------------|--|
| <b>Application</b>                | Security, Indoor                               |
| <b>Light source</b>               | Infrared (905 nm)                              |
| <b>Laser class</b>                | 1 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021) |
| <b>Aperture angle</b>             | Horizontal 270°                                |
| <b>Scanning frequency</b>         | 50 Hz  |
| <b>Angular resolution</b>         | Horizontal 0.25°<br>0.5°                       |
| <b>Heating</b>                    | No   |
| <b>Working range</b>              | 0.5 m ... 20 m                                 |
| <b>Scanning range</b>             | At 10% remission factor 18 m                   |
| <b>Amount of evaluated echoes</b> | 2  |

#### Mechanics/electronics

|                               |   |
|-------------------------------|---|
| <b>Connection type</b>        | 1 x system plug with screw terminal block |
| <b>Supply voltage</b>         | 9 V DC ... 30 V DC                        |
| <b>Power consumption</b>      | Typ. 8 W, 20 W                            |
| <b>Housing color</b>          | Gray (RAL 7032)                           |
| <b>Enclosure rating</b>       | IP65 (EN 60529, Section 14.2.5)           |
| <b>Protection class</b>       | III (EN 50178 (1997;10))                  |
| <b>Weight</b>                 | 1.1 kg, without connecting cables         |
| <b>Dimensions (L x W x H)</b> | 105 mm x 102 mm x 152 mm                  |
| <b>MTBF</b>                   | > 100 years                               |
| <b>MTTFd</b>                  | > 100 years                               |

## Safety-related parameters

|                        |             |
|------------------------|-------------|
| <b>MTF<sub>D</sub></b> | > 100 years |
|------------------------|-------------|

## 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<br>Security conform parameterization |
| <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  |
|                               | Function               | Data interface (read result output)   |
|                               | Data transmission rate | 10/100 MBit/s   |
| <b>Serial</b>                 |                        | ✓ , RS-232  |
|                               | Function               | Data interface (read result output), Service interface  |
|                               | Data transmission rate | 9.6 kBaud ... 115.2 kBaud   |
| <b>CAN</b>                    |                        | ✓   |
|                               | Function               | Extension of outputs  |
| <b>Digital inputs/outputs</b> |                        |   |
|                               | Inputs                 | 4 digital   |
|                               | Outputs                | 3 (2 relay, 1 digital)  |
| <b>Optical indicators</b>     |                        | 1 7-segment display (plus 5 LEDs showing device status, contamination warning and initial condition, both can be activated) |

## Ambient data

|  |  |
|--|--|
| <b>Remission factor</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>       | 0 °C ... +50 °C                            |
| <b>Storage temperature</b>                 | -30 °C ... +70 °C                          |
| <b>Ambient light immunity</b>              | 40,000 lx                                  |

## General notes

|                       |   |
|-----------------------|---|
| <b>Items supplied</b> | LMS12x VdS (Indoor), Mounting protection bracket VdS 2 (short)  |
| <b>Note on use</b>    | The sensor does not constitute a safety component as defined by relevant legislation on machine safety. |

## Certificates

|                                     |   |
|-------------------------------------|---|
| <b>EU declaration of conformity</b> | ✓ |
|-------------------------------------|---|

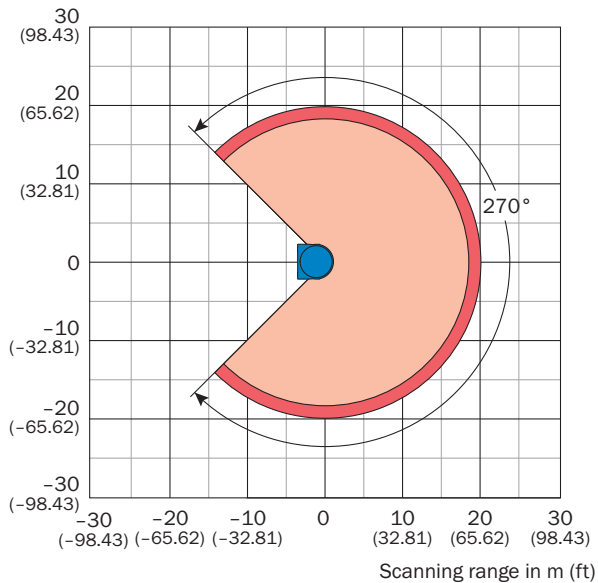
|  |   |
|--|---|
| <b>UK declaration of conformity</b>  | ✓ |
| <b>VDS certificate</b>   | ✓ |
| <b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b> | ✓ |

### 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 |

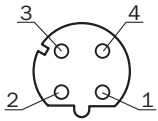
### Working range diagram

Scanning range in m (ft)



- Scanning range max. 20 m (65.62 ft)
- Scanning range for objects up to 10 % remission 18 m (59.06 ft)

## Connection type Ethernet



M12 female connector, 4-pin, D-coded

- ① TX+
- ② RX+
- ③ TX-
- ④ RX-

## PIN assignment Service interface



female connector M8, 4-pin

- ① Reserved
- ② RxD AUX
- ③ GND RS
- ④ TxD AUX

## 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)