



# LD-LRS3601

LD-LRS

2D LIDAR SENSORS

**SICK**  
Sensor Intelligence.



Ordering information

| Type       | part no. |
|------------|----------|
| LD-LRS3601 | 1060832  |

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



Detailed technical data

Features

|                         |   |
|-------------------------|---|
| Application             | Outdoor, Indoor   |
| Light source            | Infrared (905 nm)   |
| Laser class             | 1 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021)  |
| Aperture angle          | Horizontal 360°   |
| Scanning frequency      | 5 Hz ... 15 Hz  |
| Angular resolution      | Horizontal 0.0625°, interlaced<br>0.125°<br>0.1875°<br>0.25°<br>0.375°<br>0.5°<br>0.75°<br>1° |
| Heating                 | Yes   |
| Working range           | 2.5 m ... 250 m   |
| Scanning range          |   |
| At 10% remission factor | 80 m  |
| At 90% remission factor | 250 m   |

Mechanics/electronics

|                 |                                       |
|-----------------|---------------------------------------|
| Connection type | 1 x 20-pin Harting plug <sup>1)</sup> |
| Supply voltage  | 24 V DC, ± 15 %                       |

<sup>1)</sup> Harting.

|                               |                                       |
|-------------------------------|---------------------------------------|
| <b>Power consumption</b>      | 36 W, + 140 W heating                 |
| <b>Housing material</b>       | PU (polyurethane rigid integral foam) |
| <b>Housing color</b>          | Gray (RAL 7032)                       |
| <b>Enclosure rating</b>       | IP67                                  |
| <b>Protection class</b>       | III                                   |
| <b>Weight</b>                 | + 9.1 kg                              |
| <b>Dimensions (L x W x H)</b> | 250 mm x 350 mm x 391.1 mm            |
| <b>MTBF</b>                   | 86 years                              |

<sup>1)</sup> Harting.

## Safety-related parameters

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

## Performance

|                                |                       |
|--------------------------------|-----------------------|
| <b>Detectable object shape</b> | Almost any            |
| <b>Systematic error</b>        | ± 38 mm <sup>1)</sup> |
| <b>Statistical error</b>       | 30 mm <sup>1)</sup>   |

<sup>1)</sup> Actual value depends on environmental conditions.

## Interfaces

|                           |                              |
|---------------------------|------------------------------|
| <b>Ethernet</b>           | ✓ , TCP/IP                   |
| Data transmission rate    | ≤ 100 Mbit/s                 |
| <b>Serial</b>             | ✓ , RS-422                   |
| Data transmission rate    | 19,200 Baud ... 115,200 Baud |
| <b>Digital outputs</b>    | 1 (digital)                  |
| <b>Optical indicators</b> | 0                            |

## Ambient data

|                                      |                   |
|--------------------------------------|-------------------|
| <b>Ambient operating temperature</b> | -25 °C ... +50 °C |
| <b>Storage temperature</b>           | -25 °C ... +80 °C |

## General notes

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

## Certificates

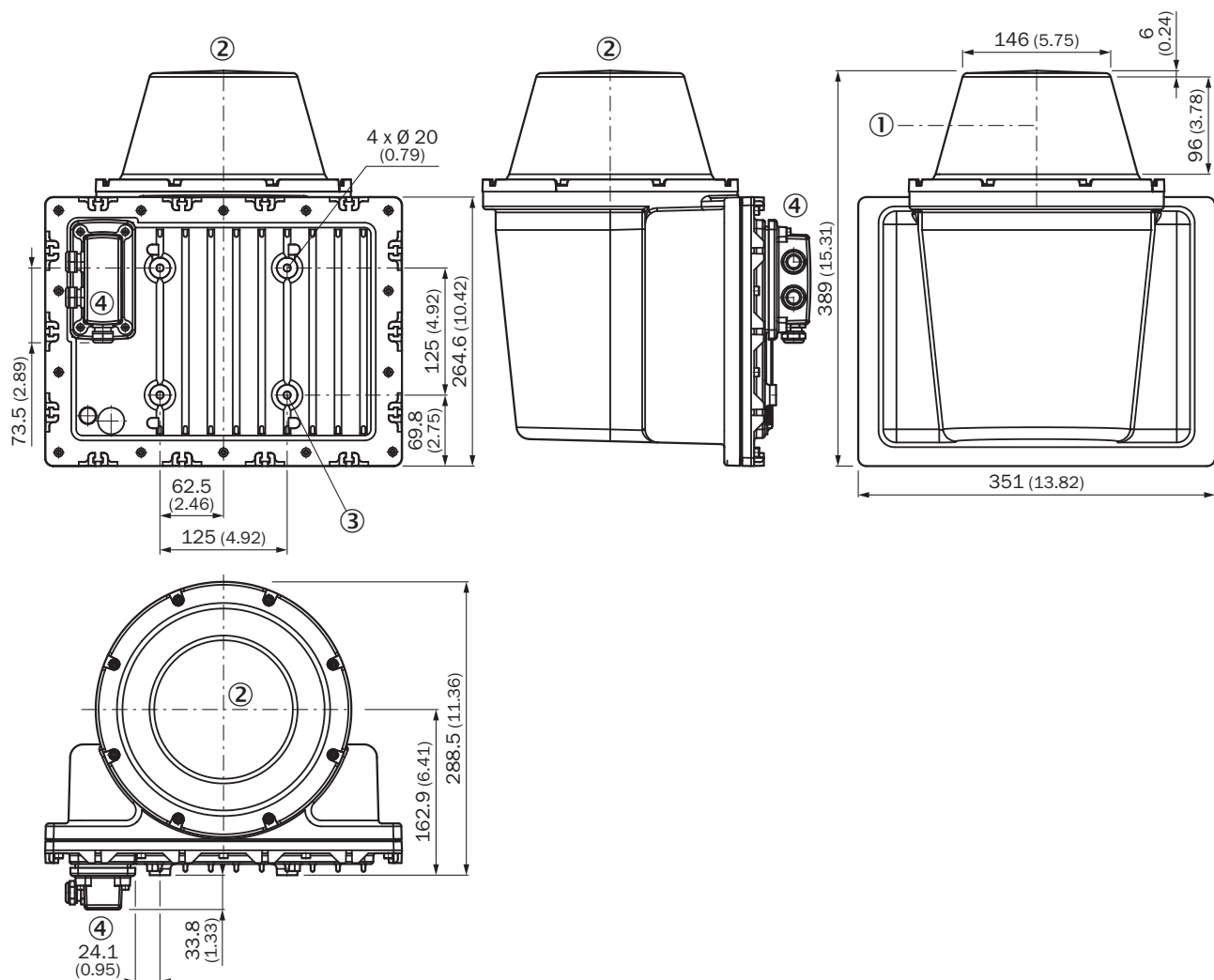
|                                       |   |
|---------------------------------------|---|
| <b>EU declaration of conformity</b>   | ✓ |
| <b>UK declaration of conformity</b>   | ✓ |
| <b>ACMA declaration of conformity</b> | ✓ |
| <b>China-RoHS</b>                     | ✓ |
| <b>KC Mark certificate</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 |

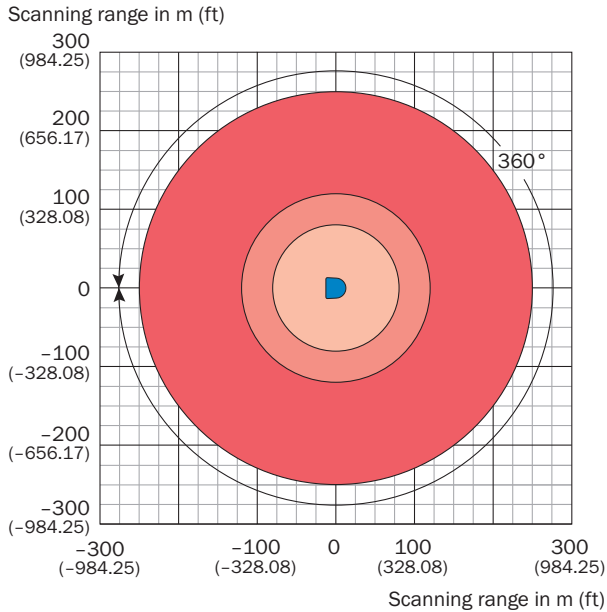
### Dimensional drawing



Dimensions in mm (inch)

- ① Optical axis
- ② Zero level
- ③ Mounting hole M6 threaded –9 mm deep
- ④ RS-232/Ethernet/Power connection (20-pin harting connector)

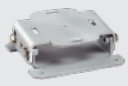
## Working range diagram



- Scanning range max. 250 m (820.21 ft)
- Scanning range white targets  
90 % remission 250 m (820.21 ft)
- Scanning range for objects up to  
10 % remission 120 m (393.70 ft) Extended
- Scanning range for objects up to  
10 % remission 80 m (262.47 ft)

## Recommended accessories

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

|   | Brief description  | Type         | part no. |
|---|--|--------------|----------|
| Mounting systems  |  |              |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting kit for wall-mounting (adjustment bracket)</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, zinc coated (1.0330)</li> </ul> | Mounting kit | 2018303  |

## 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)