LD-MRS400102S01 HD
LD-MRS

3D LIDAR SENSORS
LD-MRS400102S01 HD | LD-MRS
3D LIDAR SENSORS

Ordering information

<table>
<thead>
<tr>
<th>Type</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD-MRS400102S01 HD</td>
<td>1052961</td>
</tr>
</tbody>
</table>

Detailed technical data

Features

<table>
<thead>
<tr>
<th>Application</th>
<th>Outdoor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aperture angle</td>
<td>Horizontal 85° (Working range with 4 measuring planes, 25° extension of working range with 2 measuring planes to a total of 110°) Vertical 3.2°</td>
</tr>
<tr>
<td>Scanning frequency</td>
<td>12.5 Hz ... 50 Hz, object tracking at 12.5 Hz</td>
</tr>
<tr>
<td>Angular resolution</td>
<td>0.125° 0.25° 0.5°</td>
</tr>
<tr>
<td>Working range</td>
<td>0.5 m ... 300 m</td>
</tr>
<tr>
<td>Scanning range</td>
<td>At 10% remission 30 m At 90% remission 150 m</td>
</tr>
<tr>
<td>Amount of evaluated echoes</td>
<td>3</td>
</tr>
</tbody>
</table>

Mechanics/electronics

<table>
<thead>
<tr>
<th>Electrical connection</th>
<th>Circular plug-in connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>9 V ... 27 V</td>
</tr>
<tr>
<td>Power consumption</td>
<td>8 W</td>
</tr>
<tr>
<td>Housing</td>
<td>Al</td>
</tr>
<tr>
<td>Housing color</td>
<td>Gray (RAL 7032), black (RAL 9005)</td>
</tr>
<tr>
<td>Enclosure rating</td>
<td>IP69K</td>
</tr>
<tr>
<td>Protection class</td>
<td>III</td>
</tr>
<tr>
<td>Weight</td>
<td>1 kg</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>94 mm x 165 mm x 88 mm</td>
</tr>
</tbody>
</table>

Performance

| Detectable object shape | Almost any |
| Systematic error       | ± 300 mm ¹ |
| Statistical error      | 100 mm ¹ |

¹ Typical value; actual value depends on environmental conditions.
### Integrated application

| Integrated application | Object tracking |

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

### Interfaces

<table>
<thead>
<tr>
<th>Interfaces</th>
<th>Function</th>
<th>Data transmission rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethernet</td>
<td>✔, TCP/IP</td>
<td>Raw data interface/parameterization, 100 Mbit/s</td>
</tr>
<tr>
<td>Serial</td>
<td>✔, RS-232</td>
<td>Auxiliary interface, 57,600 Baud</td>
</tr>
<tr>
<td>CAN</td>
<td>✔</td>
<td>Output: Objects, Input: Vehicle ego motion data</td>
</tr>
</tbody>
</table>

### Ambient data

| Ambient operating temperature | –40 °C ... +70 °C |

### General notes

**Note on use**

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

### Classifications

<table>
<thead>
<tr>
<th>Classifications</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECI@ss 5.0</td>
<td>27270990</td>
</tr>
<tr>
<td>ECI@ss 5.1.4</td>
<td>27270990</td>
</tr>
<tr>
<td>ECI@ss 6.0</td>
<td>27270913</td>
</tr>
<tr>
<td>ECI@ss 6.2</td>
<td>27270913</td>
</tr>
<tr>
<td>ECI@ss 7.0</td>
<td>27270913</td>
</tr>
<tr>
<td>ECI@ss 8.0</td>
<td>27270913</td>
</tr>
<tr>
<td>ECI@ss 8.1</td>
<td>27270913</td>
</tr>
<tr>
<td>ECI@ss 9.0</td>
<td>27270913</td>
</tr>
<tr>
<td>ETIM 5.0</td>
<td>EC002550</td>
</tr>
<tr>
<td>ETIM 6.0</td>
<td>EC002550</td>
</tr>
<tr>
<td>UNSPSC 16.0901</td>
<td>46171620</td>
</tr>
</tbody>
</table>
**Dimensional drawing** (Dimensions in mm (inch))

![Dimensional drawing](image)

① Venting element
② "Ethernet" connection, 4-pin female connector
③ Connection data interface / synchronisation, 12-pin female connector
④ Connection "Power", 4-pin female connector

**Working range diagram**

Working range diagram 30 m

![Working range diagram](image)

- Scanning range max. 300 m (984.25 ft)
- Scanning range for objects up to 10% remission 30 m (98.43 ft)
- 2 measuring layers
- 4 measuring layers
### Recommended accessories

<table>
<thead>
<tr>
<th>Brief description</th>
<th>Type</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Terminal and alignment brackets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bracket for LD-MRS, alignment adjustable in 2 axes</td>
<td>Alignment bracket</td>
<td>1047429</td>
</tr>
<tr>
<td><strong>Plug connectors and cables</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Head A: male connector, round plug, 12-pin, straight  
Head B: female connector, D-Sub, 9-pin, straight  
Cable: CAN/CANopen, shielded, 2 m | Connection cable (male connector-male connector) | 2054647 |
| Head A: female connector, round socket, 4-pin, straight  
Head B: Flying leads  
Cable: shielded, 2 m | Connection cable (male connector-male connector) | 2049823 |
| Head A: male connector, round plug, straight  
Head B: male connector, RJ45, straight  
Cable: Ethernet, shielded, 2 m  
Connects the Ethernet interface of the LD-MRS to the Ethernet interface of the PC | Connection cable (male connector-male connector) | 2049826 |
| **Test and monitoring tools** | | |
| Scan finder, receiver to localize infrared scans | Scan-Finder LS-80L | 6020756 |
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.”