

SICK.COM



PRODUCT OVERVIEW

# OD Mini

Laser distance sensors

# SICK

Sensor Intelligence

## DISPLACEMENT SENSORS

## OD Mini

**Optical displacement sensors for tight installation situations and distances of up to 250 mm**

Simple, precise, and economic solutions for measuring tasks; the OD Mini displacement measurement sensors are impressive with their compact and rugged housing, which is available in a light-weight aluminum or a rugged stainless steel. These sensors are equipped with the latest CMOS receiver technology for precise measurement, regardless of the brightness and color of the surface material. The integrated amplifier unit enables the OD Mini to work on a stand-alone basis. For complex measurement tasks up to two OD Mini Pro sensor heads can be connected to one OD Mini evaluation unit and calculate together. The OD Mini is simple to configure due to its intuitive design and display with four status LEDs. The OD Mini can also be remotely programmed via the external teaching input. The large number of available interfaces also simplifies integration into industrial networks. This ensures the highest possible reliability and precision when solving a wide range of measurement tasks.



## OD Mini AT A GLANCE

## BENEFITS

- Cost-saving commissioning through simple operating concept and display
- Small installation size and low weight also allow use in highly dynamic applications
- Calculation of two sensorheads - easy possible over the external evaluation unit
- High machine throughput thanks to reliable measurement, regardless of brightness and color of surface
- The wide range of available interfaces enables simple integration into industrial networks
- Optimum performance even at high production speeds

## FEATURES

- Compact, rugged housing
- Stand-alone use or in combination with the OD Mini evaluation unit
- Display and LEDs on device for visualization of current status
- Different interfaces available
- Simple teach-in using display or external teaching input
- CMOS receiver unit for precise, fast measurement in the  $\mu\text{m}$  range
- Various measuring ranges: Measuring from 10 mm to 250 mm possible

## TECHNICAL DATA OVERVIEW

|                                 |                                                                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Communication interface         | Serial<br>PROFIBUS DP                                                                                                           |
| Sensing distance                | 250 mm 10 mm                                                                                                                    |
| Measuring range                 | 250 mm 10 mm                                                                                                                    |
| Typ. light spot size (distance) | 1.6 mm x 1 mm (35 mm)<br>2 mm x 1,3 mm (150 mm)<br>700 µm x 500 µm (15 mm)<br>6 mm x 12 mm (1000 mm)<br>800 µm x 450 µm (35 mm) |
| Connection type                 | M12 male connector, 5-pin                                                                                                       |
| Housing material                | Metal<br>Stainless steel                                                                                                        |

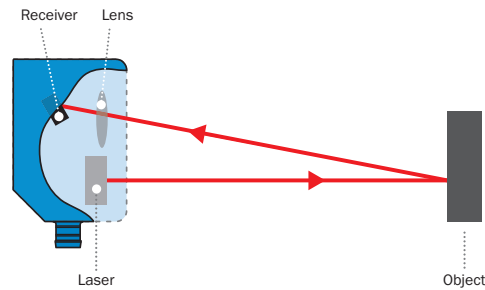
## ADVANTAGES

### Precision meets quality

With expert-developed intelligent measurement technology which proves its worth in industrial applications time and time again, SICK offers the solution to any challenge which demands maximum measurement accuracy and quality. A pioneering spirit founded on our years of experience and our own innovations in optical sensor technology. We ensure efficient processes while fulfilling the demands of even complex measuring tasks – regardless of surface, diameter, thickness, or width, and regardless of whether an object is to be positioned or measured. This is how we ensure that your products are every bit as perfect as you want them to be. Moreover, SICK's measurement technology supports quality assurance processes and delivers cost-saving benefits. Have a look on [www.sick.com/measurement-sensors](https://www.sick.com/measurement-sensors)

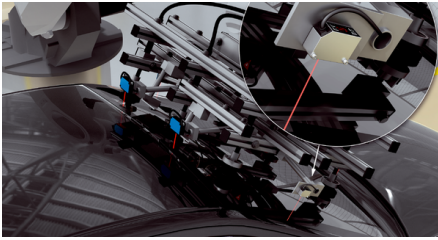
## DISPLACEMENT SENSORS - OD Mini

A point of light is projected onto the measuring object. The light reflected is captured by a light-sensitive receiver at a specific angle. Based on the angle between the send and receive direction, the position of the object is then triangulated (from the Latin “triangulum” = triangle).



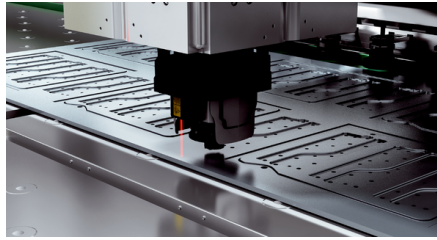
### OD Mini – The lightweight sensor in a compact housing

The OD Mini displacement measurement sensors from SICK use the triangulation principle to very precisely monitor series production in assembly processes. Due to their small design, the sensors are extremely flexible and can be used in many applications, for example when measuring components, for precise positioning, in the inspection of manufacturing tolerances in quality control, for process controls by robot positioning and for classification and sorting (e.g. by length). Since manufacturing quality plays an important role in such applications, the OD Mini is perfect here due to its high measurement precision.



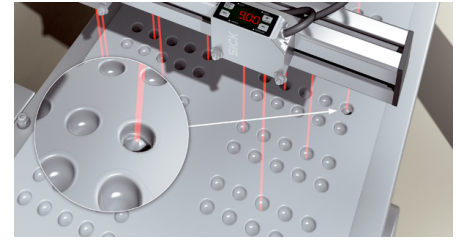
#### Precise positioning

- Typical applications are robot guidance for the installation of front screens and high-precision positioning of carriages
- Typical industries are robotics, handling and assembly, automotive and parts suppliers



#### Collision avoidance

- Typical applications are height positioning and collision avoidance at the cutting head and positioning of grippers
- Typical industries are handling and assembly, machine tools



#### Ensuring quality

- Typical applications are quality control of components and checking the shape of blister packs
- Typical industries are consumer goods, handling and assembly, pharmaceutical and cosmetics manufacturers

→ The OD Mini also impresses when used in highly dynamic applications due to its small size and low weight.



OD Minis are among the world's smallest displacement measurement sensors with display and control elements in terms of their dimensions (44.4 mm x 31 mm x 17 mm). The product family impresses with its measurement accuracy in the  $\mu\text{m}$  range as well as the high-quality fittings, compact size and low weight. The OD Mini is available in two housing designs.



**OD Mini in stainless-steel housing – the rugged version for use in harsh environments**



**OD Mini in aluminum housing – for highly dynamic applications, e. g. robotic arms and grippers**

→ The OD Mini impresses with its measurement accuracy in the  $\mu\text{m}$  range and its rugged and compact housing.

### SICK LifeTime Services

SICK's services increase machine and plant productivity, enhance the safety of people all over the world, provide a solid foundation for a sustainable business operation, and protect investment goods. In addition to its usual consulting services, SICK provides direct on-site support during the conceptual design and commissioning phases as well as during operation.

The range of services not only covers aspects like maintenance and inspection, but also includes performance checks as well as upgrades and retrofits. Modular or customized service contracts extend the service life of plants and therefore increase their availability. If faults occur or limit values are exceeded, these are detected at all times by the corresponding sensors and systems.



#### Consulting and design

Application-specific advice on the product, its integration and the application itself.



#### Commissioning and maintenance

Application-optimized and sustainable – thanks to professional commissioning and maintenance by a trained SICK service technician.



#### Service contracts

Extended warranty, SICK Remote Service, 24-hour helpdesk, maintenance, availability guarantees and other modular components can be individually combined on request.

Select the right product variant and accessories directly online. There you will also find example applications as well as downloads such as CAD dimensional models, operating instructions and software.

[www.sick.com/OD\\_Mini](http://www.sick.com/OD_Mini)



SICK AG  
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# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnership with our customers is more than just a promise: Together, we optimize productivity, elevate quality, protect health and safety, and sustain the future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions.

**SICK**  
Sensor Intelligence