



OD1000

The solution for precise measurement over long distances

DISPLACEMENT MEASUREMENT SENSORS

SICK
 Sensor Intelligence.

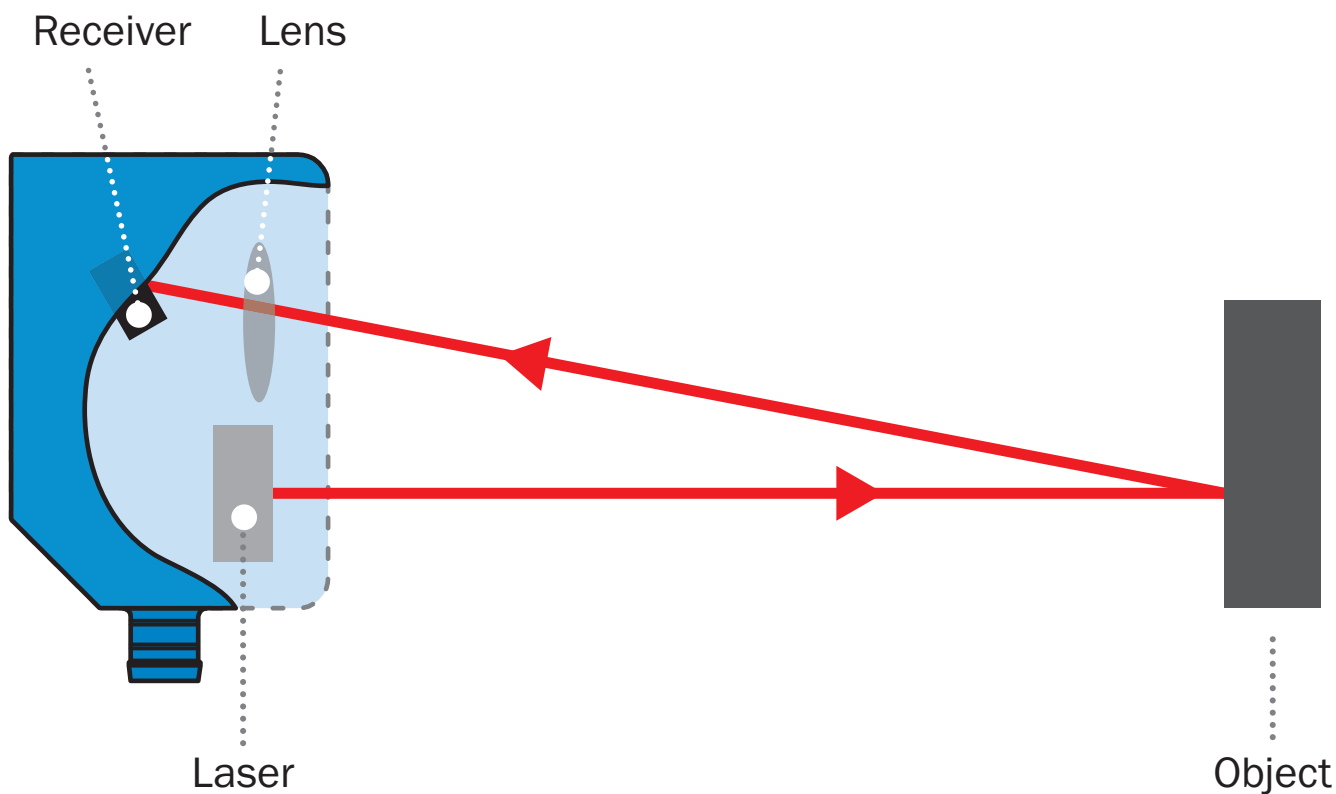
Advantages



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

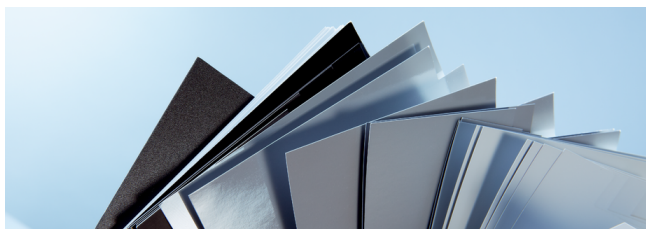
A point of light is projected onto the measuring object. The light reflected is captured by a light-sensitive receiver at a specific angle. Based on the angle between the send and receive direction, the position of the object is then triangulated (from the Latin “triangulum” = triangle).





With its sensing range of up to 1 m, the OD1000 displacement measurement sensor sets new standards in precise distance measurement with triangulation. Its high performance ensures a smooth production process and allows a high level of productivity in a wide range of applications, almost regardless of the surface quality, color, or object structure. The clear OLED display with four operating keys simplifies commissioning and optimizes the machine availability. As a standalone device with integrated evaluation, IO-Link interface and additional functions, the OD1000 simplifies machine integration, saves additional evaluation effort, and is therefore a good investment in efficient production processes.

Due to its high-resolution CMOS receiving line technology, the OD1000 is able to precisely differentiate between even the smallest height differences of tenths of a millimeter at a sensing range of up to 1,000 mm. The high measurement sensitivity of the OD1000 and the high measuring frequency of up to 3 kHz offers large performance reserves in challenging applications, for example the measurement of high-gloss objects at a very large angle, on very dark objects or in fast measurement processes. Due to innovative analysis algorithms and additional functions, the OD1000 can be optimized for any application and facilitates evaluation by the control.



Edge height jump

Enables quick counting of measured value jumps, e.g. when counting copies in the printing industry or joint detection during vulcanization in tire production.



distance range

Enables the blanking of certain areas, e.g. of a protective screen between the sensor and the object.

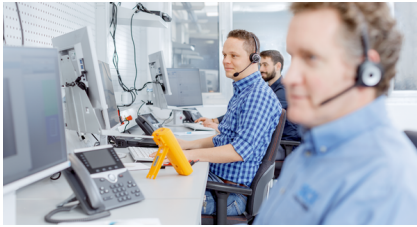


Consistent, high product quality thanks to precise, optical distance measurement regardless of the surface quality, color or object structure.

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.



Technical data overview

Measuring range	200 mm ... 1,000 mm
Linearity	± 1.5 mm
Repeatability	0.4 mm
Response time	≥ 1.5 ms
Output time	≥ 0.33 ms
Measuring frequency	≤ 3 kHz
Digital output	2 x push-pull: PNP/NPN
Light source	Laser, red
Type of light	Visible red light
IO-Link	✓, IO-Link V1.1, IO-Link V1.0
Analog output	
	Number 1
	Type Current output / voltage output
Ambient temperature, operation	-10 °C ... +50 °C, Operating temperature at V _S = 24 V

Product description

With its sensing range of up to 1 m, the OD1000 displacement measurement sensor sets new standards in precise distance measurement with triangulation. Its high performance data ensures a smooth production process and allows a high level of productivity in a wide range of applications, almost regardless of the surface quality, color, or object structure. The clear OLED display with four operating keys simplifies commissioning and optimizes the machine availability. As a standalone device with integrated evaluation, IO-Link interface, and additional functions, the OD1000 simplifies machine integration, saves additional evaluation effort, and paves the way for sustainable production.

At a glance

- Large measuring range of up to 1 m
- Simple setting via OLED display or SOPAS configuration software
- Standalone device without external amplifier unit
- Rugged metal housing
- Adjustable analog output (mA/V) and push-pull digital output with IO-Link
- Precise measurement regardless of color or surface
- Versatile mounting possibilities

Your benefits

- Optimization of the process quality due to high precision and linearity over the entire measuring range
- Quick commissioning due to variable mounting and innovative operating concept
- Simple and cost-saving integration via OLED display and IO-Link interface
- Suitable for harsh ambient condition due to rugged metal housing
- High machine availability thanks to reliable, quick, and precise measurement results on a wide range of surfaces
- Intelligent measured value filter and analysis algorithm for safe and stable measurement in every application

Fields of application

- Diameter check on spools or coils for unwinding tasks
- Board and rough edge measurement in the timber industry
- Precise positioning tasks in robotic, handling, and mounting processes
- Detection of jumps in the edge height for counting tasks
- Double layer detection in metal and paper processing
- Level and empty bay detection for intralogistics applications

Ordering information

Other models and accessories → www.sick.com/OD1000

- **Communication interface:** IO-Link
- **Housing material:** metal
- **Laser class:** 1
- **Measuring range:** 200 mm ... 1,000 mm

Type of analog output	Connection type	Typ. light spot size (distance)	Digital output	Type	Part no.
Current output / voltage output	Cable with male connector, M12, 5-pin, A-coded, 20 cm	1.5 mm x 1.5 mm (200 mm ... 1,000 mm)	2 x push-pull: PNP/NPN	OD1000-6001R15	1075638

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