

OD Precision

Measuring each dimension with high precision

DISPLACEMENT MEASUREMENT SENSORS

SICK
Sensor Intelligence.

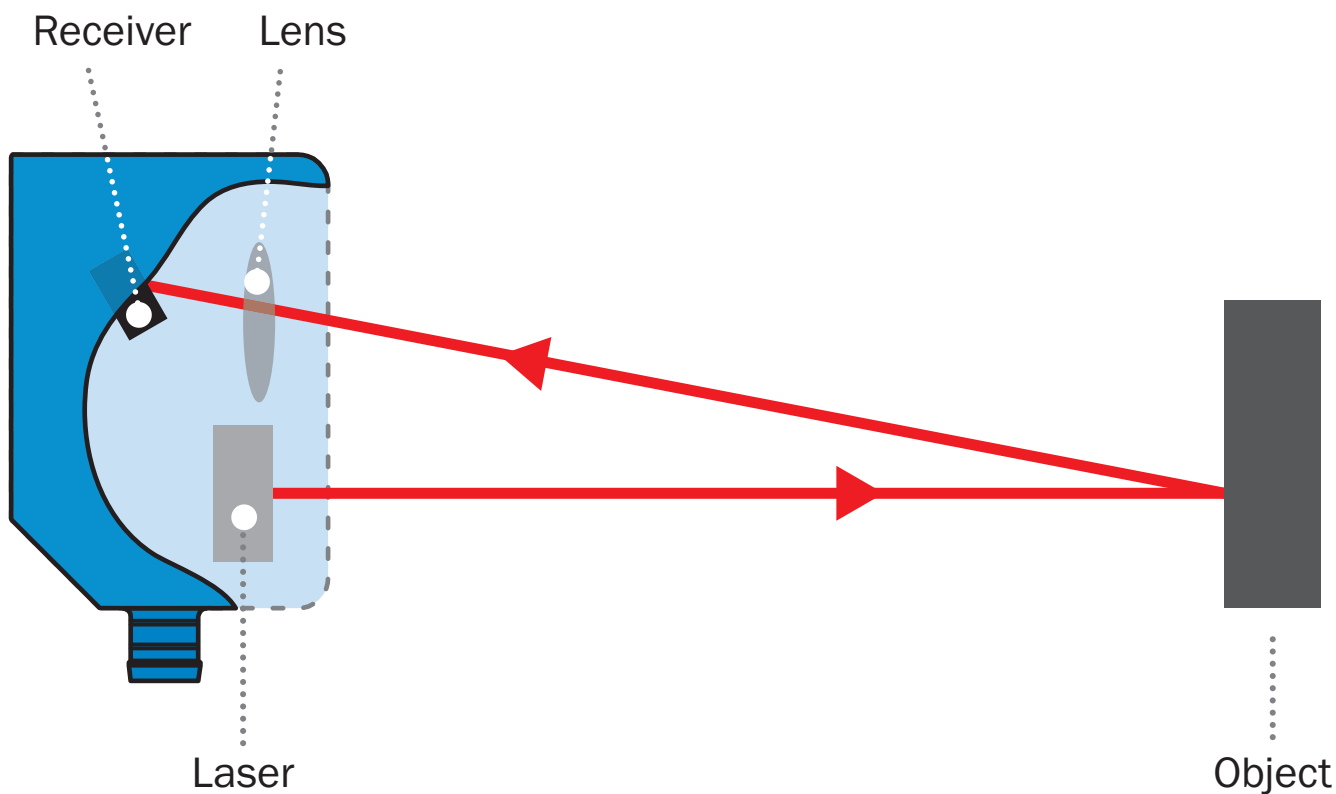
Advantages



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).



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	24 mm ... 700 mm (depending on type)
Linearity	± 1.6 µm ... ± 400 µm (depending on type)
Repeatability	0.02 µm 0.2 µm 1 µm 2 µm 5 µm 10 µm
Response time	≥ 0.1 ms
Output time	≥ 0.1 ms (depending on type)
Measuring frequency	≤ 10 kHz / ≤ 1.25 kHz (depending on type)
Digital output	5 x PNP, NPN
Light source	Laser, red
Type of light	Visible red light
Serial	✓, RS-422
Analog output	Number 3 Type Current output / voltage output
Ambient temperature, operation	-10 °C ... +50 °C

Product description

The OD Precision is a high accuracy, optical measuring system for measuring difficult object surfaces. In addition to glossy and dark black surfaces, it can also measure transparent and semi-transparent materials. The OD Precision is the only displacement measurement sensor that can connect three sensors to one controller, which reduces the amount of hardware required and makes it easier to measure the x-, y- and z-axes., e.g. for measuring the evenness of surfaces. In order to reduce investment costs, the sensor can also be operated via RS-422, thus eliminating the need for a controller unit.

At a glance

- Numerous measuring ranges from 24 mm ... 26 mm to 300 mm ... 700 mm
- CMOS receiving element for measurement independent of surface
- Maximum measurement accuracy and frequency
- Glass thickness measurement with just one sensor head
- Various light spot sizes
- Integrated calculations for up to three sensors
- Stand-alone use via RS-422

Your benefits

- Non-contact measurement improves quality inspection during production
- Surface-independent measurement algorithms ensure minimum machine downtime, regardless of surface gloss or color
- Reduced processing times as a result of the high measuring frequency of up to 10 kHz
- Simple, cost-effective solution for challenging measuring tasks due to a variety of sensor models
- Optional stand-alone operation via RS-422 means the OD Precision offers maximum performance at lower investment costs
- High visibility LC display enables simple, cost-effective setup
- Many interfaces for simple integration into an existing production environment

Ordering information

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

- **Communication interface:** Serial
- **Housing material:** metal
- **Type of analog output:** Current output / voltage output
- **Connection type:** 0.5 m cable with connector (Can be extended to up to 50 m with extension cable.)
- **Digital output:** 5 x PNP, NPN

Laser class	Measuring range	Typ. light spot size (distance)	Type	Part no.
1	24 mm ... 26 mm	100 µm x 700 µm (25 mm)	OD5-25W01	6035976
		25 µm x 35 µm (25 mm)	OD5-25T01	6035975
2	110 mm ... 190 mm	0.33 mm x 1.6 mm (150 mm)	OD5-150W40	6049580
		∅ 180 µm (150 mm)	OD5-150T40	6049579
	250 mm ... 450 mm	700 µm x 2,400 µm (350 mm)	OD5-350W100	6035981
	25 mm ... 35 mm	260 µm x 1,000 µm (30 mm)	OD5-30W05	6035978
		30 µm x 100 µm (30 mm)	OD5-30T05	6035977
	300 mm ... 700 mm	1,000 µm x 3,700 µm (500 mm)	OD5-500W200	6035982
	65 mm ... 105 mm	260 µm x 1,200 µm (85 mm)	OD5-85W20	6035980
		70 µm x 290 µm (85 mm)	OD5-85T20	6035979

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