



## OD7000

Precise distance measurement for demanding applications

**SICK**  
Sensor Intelligence.



## Technical data overview

<b>Resolution</b>	2 nm ... 400 nm (depending on type)
<b>Analog output</b>	-10 mA ... 10 mA-10 V ... 10 V
<b>Serial</b>	✓, RS-232, RS-422 / RS-232, RS-422 (depending on type)
<b>Ethernet</b>	✓, TCP/IP / TCP/IP (depending on type)
<b>Enclosure rating</b>	IP20 (IEC 60529)
<b>Ambient temperature, operation</b>	0 °C ... +50 °C

## Product description

The OD7000 is a chromatic confocal distance sensor. It measures distances to objects very precisely and cost effectively – regardless of their surfaces and materials. With a resolution of under 25 nm, the high-performance sensor reliably detects whether surfaces are smooth, or whether objects are positioned precisely or have the desired material thickness. Since the sensor head and control unit are separate from one another, the compact OD7000 is easy to install even in tight measurement locations. Thanks to the intuitive user interface, the device can be configured quickly. Its Ethernet and RS-422 interfaces make system integration easy. The OD7000 is available in a range of variants. In one variant, the sensor can be triggered via an encoder signal.

## At a glance

- Scanning frequency: up to 10 kHz
- Scanning range: 0.6 mm, 4 mm, 10 mm
- Resolving power: optionally up to 25 nm, 180 nm or 400 nm
- Linearity:  $\pm 198$  nm,  $\pm 1.4$   $\mu$ m, 4  $\mu$ m
- RS-232 / RS422 and Ethernet interface
- Configuration of the controller via the OD7000 engineering tool GUI, RS-422 interface, or Ethernet interface
- Optional encoder input

## Your benefits

- Allows precise and reliable measurement of distances and material thicknesses while being highly cost effective
- Distance measurement using the chromatic confocal method regardless of surface and material changes
- Saves space due to the compact dimensions of the control unit and sensor heads
- Simple configuration and system integration thanks to the easy-to-use user interface
- Certain variants of the sensor can define an encoder signal as a trigger for measurement data output using the optional integrated encoder input
- Excellent price/performance ratio

## Fields of application

- Measurement of glass thickness and smoothness
- Measurement of thickness of opaque films, foils and plates
- Precise positioning and measurement of components, pastes, adhesives, and machined surfaces
- Precise measurement of the smoothness or thickness of objects
- Detection of thickness of transparent foils

## Ordering information

Other models and accessories → [www.sick.com/OD7000](http://www.sick.com/OD7000)

- **Communication interface:** Serial, Ethernet

Measuring range	Type of analog output	Connection type	Digital output	Type	Part no.
35.5 mm ... 39.5 mm	–	Female connector, RJ-45 Terminal strip, 9-pin	0	OD7000-10401032	6079490
	Current output / voltage output	Female connector, RJ-45 Terminal strip, 9-pin Terminal strip, 8-pin Terminal strip, 15-pin	2	OD7000-10401031	6079489
6.2 mm ... 6.8 mm	–	Female connector, RJ-45 Terminal strip, 9-pin	0	OD7000-10061032	6079487
	Current output / voltage output	Female connector, RJ-45 Terminal strip, 9-pin Terminal strip, 8-pin Terminal strip, 15-pin	2	OD7000-10061031	6079486
64 mm ... 74 mm	–	Female connector, RJ-45 Terminal strip, 9-pin	0	OD7000-11001032	6079492
	Current output / voltage output	Female connector, RJ-45 Terminal strip, 9-pin Terminal strip, 8-pin Terminal strip, 15-pin	2	OD7000-11001031	6079491

## 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)