



## Short range distance sensors (displacement) OD Max

OD-25-01T1



**Model Name** > [OD-25-01T1](#)  
**Part No.** > [6030977](#)

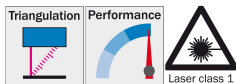


**At a glance**

- Several measurement ranges from 24 ... 26 mm up to 250 mm ... 450 mm
- CMOS receiving element for measurement independent of surface
- High measurement frequency and high linearity
- Variety of selectable integrated calculations based on values from two sensors
- Laser technology for precise measurement or detection of very small objects
- Several output options

**Your benefits**

- Minimum machine downtime due to its reliability on any surface, regardless of brightness or color
- Highly accurate measurement, even during the production process, ensures high product quality
- High measuring frequency of 10 kHz increases processing speeds and reduces cycle times
- Reduce the cost to change your process by making a reference measurement using two sensors
- Comparatively low investment costs for challenging measuring tasks
- An easy-to-read LC display and simple push-button keypad programming ensures simple setup and servicing
- Reduced material costs, when using the distance sensors to control costrelevant production processes



**Features**

System part: Sensor head

**Performance**

Measuring range:	24 mm ... 26 mm, 6 % ... 90 % remission
Resolution <sup>1)</sup> :	0.1 µm
Repeatability <sup>2)</sup> :	0.3 µm
Linearity <sup>3)</sup> :	± 2 µm
Response time <sup>4)</sup> :	0.5 ms
Measuring frequency:	10 kHz
Light source:	Laser, red
Typ. light spot size (distance):	25 µm x 35 µm (25 mm)
Note:	Requires AODG-x
Laser class:	1 (EN 60825-1) <sup>5)</sup>

1) Measurement on 90 % remission (ceramic, white), for OD25-x measurement on mirror; averaging set to: 256 2) Measurement on 90 % remission (ceramic, white), for OD25-x measurement on mirror; averaging set to: 256; constant ambient conditions 3) Measurement on 90 % remission (ceramic, white), for OD5-25x measurement on mirror 4) Automatic sensitivity adjustment  $\leq 2$  ms 5) Wavelength: 650 nm, max. output: 390  $\mu$ W

### Mechanics/electronics

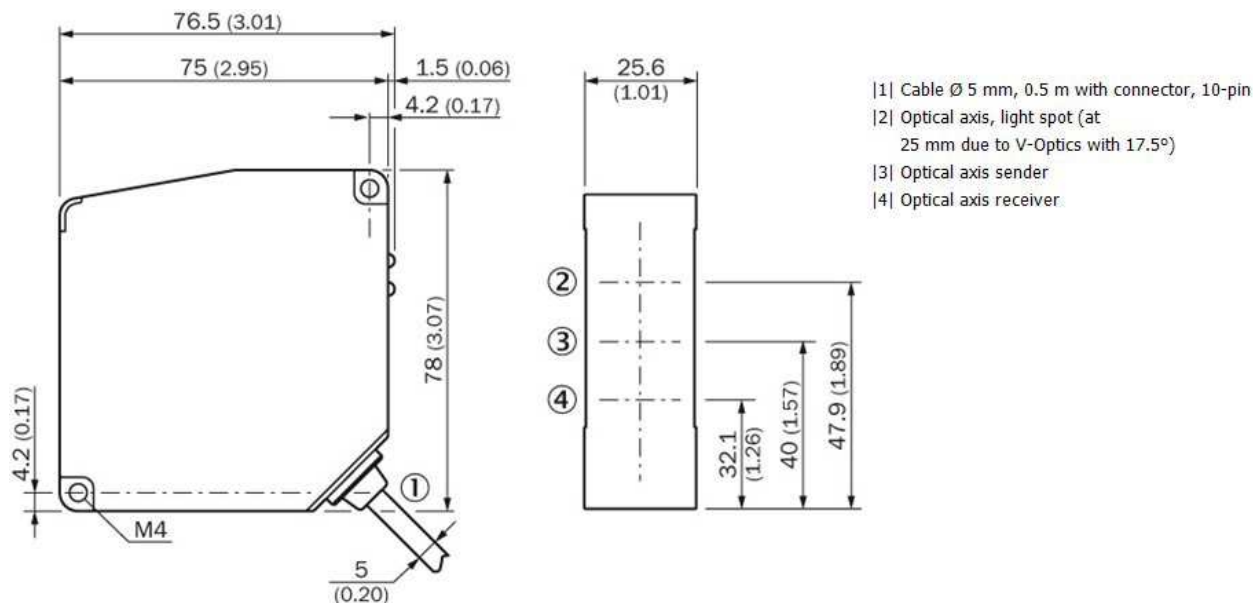
Electrical connection <sup>1)</sup> : <sup>2)</sup> :	0.5 m cable with connector
Warm-up time:	$\leq 5$ min
Indication:	LEDs, 1.4" color-display on controller unit
Weight <sup>3)</sup> :	250 g
Housing material:	Aluminum housing with glass lens

1) Extendable by cable to max. 10 m 2) Sensor must be connected to controller unit 3) Inclusive 0.5 m cable

### Ambient data

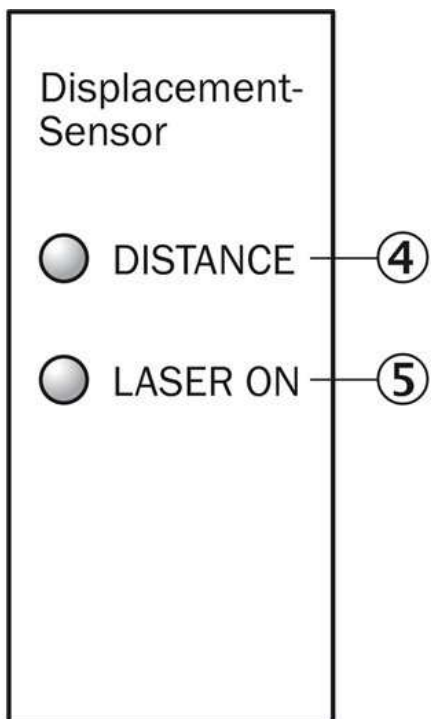
Enclosure rating:	IP 67
Protection class:	III
Ambient temperature:	Operation: -10 ... 45 °C, Storage: -20 ... 60 °C
Temperature drift:	$\pm 0.01$ % FS/K (FS = Full Scale = Measuring range of sensor)
Typ. ambient light safety:	Artificial light: $\leq 3,000$ lx Sunlight: $\leq 10,000$ lx
Vibration resistance:	10 Hz ... 55 Hz (amplitude 1.5 mm, x-, y-, z-axis 2 hours each)
Shock resistance:	50 G (x-, y-, z-axis 3 times each)
Relative humidity (not condensing):	35 % ... 85 %

### Dimensional drawing



**Adjustment possible**

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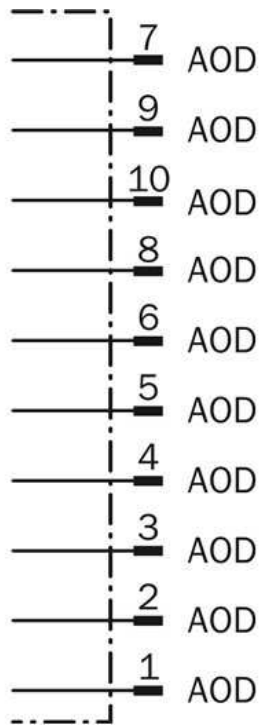
- |4| Distance indicator
- |5| Status indicator laser (laser on)

**Connection type**

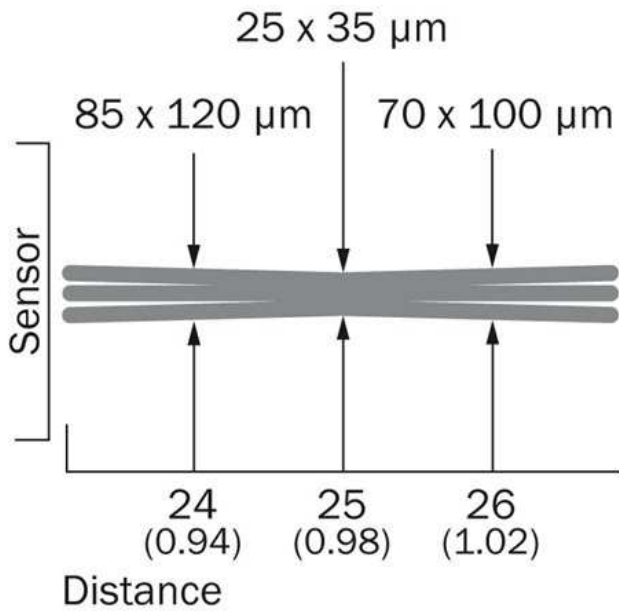
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Connection diagram



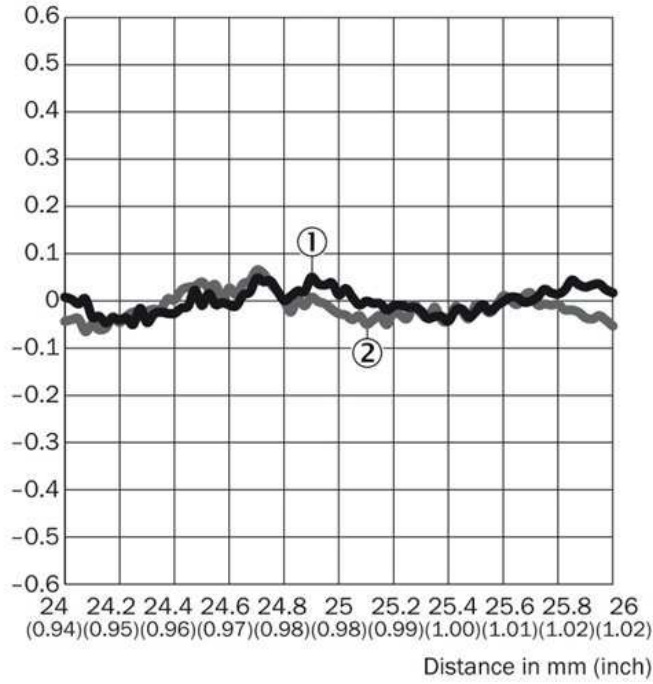
Light spot size



All dimensions in mm (inch)

# Linearity

Linearity [% FS]



- [1] Mirror (SENS = min)
- [2] Glass (SENS = 8)

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